- Chapter 532: Going to Slightly Offend You Guys | Web Novel Pub Pro

After Zhou Chengfu's flight landed, he headed toward the Southwestern Institute of Physics. He didn't expect to see a particular person there.

And this person was his least favorite…

"… Our stellarator is still being overhauled. We have to borrow your HL-2A machine. I've applied to the higher-ups regarding this matter, and the Energy Bureau has approved our request. Director Lu said you guys will fully cooperate with our experiment, so I immediately came over. As for the written documents, they'll probably arrive tomorrow at the latest," Lu Zhou said while sitting in Zhou Chengfu's office. He fiddled with the tea set on the coffee table and said, "This teapot is pretty, where did you buy it?"

Zhou Chengfu stared at Lu Zhou with a blank face and said, "Aren't you researching the stellarator, why are you here?"

Lu Zhou: "Fast ignition."

Zhou Chengfu was stunned when he heard this.

"No way! Igniting the experimental reactor, are you insane?"

Lu Zhou didn't care about Zhou Chengfu's comments. He only smiled and continued, "I've read the relevant papers. The HL-2A can achieve the ignition conditions. I need to test the performance of a new type of material by simulating the internal neutron radiation environment, so I'm asking you guys for help.

"Don't worry about the money. The tritium resources consumed by the experiment will be provided by us. You only have to cooperate with our experiment."

After hearing Lu Zhou's request, Zhou Chengfu nearly vomited in his face.

What do you mean you're going to provide us with the money?

Do you think you can just buy us with money?

Not to mention, money was a trigger for Zhou Chengfu.

Especially when he heard that Director Lu said they would “fully cooperate”, this made him furious. He was the one that decided to research fusion energy first, but now he was being treated as a b*tch.

“If you really f*cking want to do neutron radiation experiments, why don’t you go to Daya Bay?”

Lu Zhou shook his head and said, “Both Dongguan and Daya Bay can’t reach our neutron requirements.”

Right now the newest international controllable fusion research plan was to build a neutron source device based on the D-Li interaction, to simulate a neutron radiation environment, which was present inside the fusion reactor. However, up until now, this device had remained in a concept stage. Only the Americans were doing research on this thing, and they were probably the only ones that knew their research progress.

“What about Science Island?” Zhou Chengfu was frustrated; he didn’t want to give up. He quickly said, “The EAST machine in Science Island can do it, why don’t you…”

“I need to use yours.”

One sentence from Lu Zhou blocked Zhou Chengfu’s entire argument.

Lu Zhou put down the teapot in his hand and stood up from the sofa.

Zhou Chengfu looked so uncomfortable; it was like he just ate a bug. Lu Zhou smiled and spoke in a relaxed manner.

“Anyway, I’ve probably already offended you in the past, so I’ll just offend you one more time today.”

Zhou Chengfu’s face looked gloomy as he said quietly, “You have to think clearly. If our HL-2A is destroyed by you guys, and you’re not able to create the demonstration reactor…”

Lu Zhou’s facial expression didn’t change as he replied, “You don’t have to worry about that, that’s my responsibility.”

Zhou Chengfu snorted.

He stood up from his office chair and walked out of his office without saying anything.

Lu Zhou looked at this old man leaving and stopped smiling.

Maybe there was a more euphemistic approach he could have taken, but he was in a hurry.

Therefore, he could only apologize.

…

Including the University of Science and Technology of China's inertial confinement fusion machine, there were 16 controllable nuclear fusion experiment machines in China.

However, there were only a few machines that could reach hundreds of millions of degrees in their reaction chamber, which was the temperature at which deuterium-tritium fusion occurred.

HL-2A was one of them, which was obviously the accumulation of countless researchers' blood, sweat, and tears.

Zhou Chengfu looked at the equipment maintenance technician, who was on the verge of tears. Without asking, Zhou Chengfu knew that his machine was ruined.

He looked at Lu Zhou angrily; his blood was boiling.

He couldn't help but want to melt this kid by throwing him into the tokamak machine. However, the experiment was over. At the very least, he knew this wasn't done for nothing.

Zhou Chengfu stared deadly at Lu Zhou.

"What's the result?!"

Lu Zhou ignored the resentment in his tone and stared at the scanning electron microscope images, and finally, he sighed.

"It doesn't look good."

This time he brought around 20 samples; all of them were mounted to the first wall of the tokamak.

These images were obtained after the experimental reactor shut down and cooled. Workers in chemical protective suits entered the reaction chamber and collected these materials for special laboratory testing.

Looking at these data alone, the performance of these materials in the reactor chamber didn't look good.

However, Lu Zhou never expected the first experiment to be successful since every research experiment was done by trial and error.

Blood nearly came out of Zhou Chengfu's nose.

What do you mean it's not looking good?

Are you going to do another experiment later on?

Lu Zhou rubbed his chin and stared carefully at the images. He said, "The neutron radiation from the fusion reactor environment is too strong. Even though the silicon carbide and porous aerogel material have good neutron-transmission properties, the neutron beam still penetrated the material, which formed several Frenkel defects inside the material."

Zhou Chengfu: "What the hell is that?"

Surprised, Lu Zhou paused for a second and looked at him.

"Frenkel defect? The defect forms when an atom or smaller ion leaves its place in the lattice, creating a vacancy, and becomes an interstitial by lodging in a nearby location… It's a very basic crystallography concept."

Zhou Chengfu's face was as red as a tomato. He nearly wanted to curse at Lu Zhuo.

However, he suddenly realized that this kid was a Nobel Prize in Chemistry winner. Anything he could say would embarrass himself even further, so he decided to shut his mouth and whispered quietly, "I'm in nuclear physics and plasma physics, not materials…"

After all, there weren't a lot of people that were a master of everything.

Zhou Chengfu was the manager of the entire project, so he might know a bit more about various different fields. However, his understanding obviously wasn't in-depth enough.

Not to mention, the HL-2A reactor didn't use this type of material. He had only ever heard about ceramic-based composite materials used on reactors.

"Like this thing here and there." Lu Zhou didn't care if Zhou Chengfu understood or not. He pointed at the images and said, "Can you see these white dots? Looking at it with the infrared detection data, one can deduce that the vacancies are left by the displacement of hydrogen atoms. This indicates that this material doesn't have good anti-neutron properties; the neutrons are trapped inside the material."

Zhou Chengfu understood this part, and he asked, "So what's the use of this stuff?"

"That would depend on who is using it."

Lu Zhou stored the data on a mobile hard drive. Without looking at Zhou Chengfu, he said relaxingly, "Don't forget, I was the one that invented the computational materials field."

Lu Zhou didn't stay at Southwestern Institute of Physics for long. After he received the data he needed, he flew back the next day. He and some of the researchers from the Jinling research institute went back to Jinling.

After Lu Zhou and his team left, almost everyone in the Southwestern Institute of Physics was relieved.

This kid was like a gang member, leaving the whole place in disarray. After their experiment was finished, they collected the data and left, leaving someone else to clean up the disarray.

A lot of people were discussing whether this kid came here for revenge. After all, no one knew if the experiment itself was needed or not; it wasn't like this kid gave away any secrets. Not only did Lu Zhou take away the samples, but he didn't even give them a copy of the data.

Regardless, after this incident, Zhou Chengfu's status in the institute was completely wiped out…

Jiang Liang stood in Zhou Chengfu's office. He looked relieved.

"That devil is finally gone."

Zhou Chengfu sat frozen in his chair, and he asked slowly, "How is the HL-2A doing?"

When Jiang Liang heard this question, the expression of relief on his face gradually turned into a pained expression.

"The radiation damage report isn't out yet… But according to the engineers, the situation doesn't look good."

Zhou Chengfu: "What did they say?"

"There are different degrees of swelling inside the structural material. As for the first wall… it was basically ruined!" Jiang Liang said with a dull face.

The experimental reactor was never intended to be used for fusion ignition; it was only ever meant to simulate the high density and temperature environment of plasma.

Therefore, the anti-radiation resistance level for the reactor materials was basically equivalent or even less than the fission reactor's materials.

Therefore, it was inevitable that the HL-2A would end up in a horrible condition.

Even though Zhou Chengfu was mentally prepared for this, he still couldn't help but clench his teeth.

He took a deep breath and held back the pain in his heart.

"Is it repairable?"

Jiang Liang reluctantly nodded and said, "I've asked the engineers in the institute. It should be repairable. However, we won't be able to use it… in the short term."

After all, there were too many components that had to be changed.

Zhou Chengfu went silent for a while and spoke.

“After the radiation damage test is done, make sure to keep all of the information.”

Jiang Liang paused for a second. Suddenly, his eyes flashed, and he said, “You plan on…”

Anger was running through Zhou Chengfu’s veins as he clenched his fists and said, “We cannot give up.”

If Lu Zhou succeeds, then whatever.

But if that little brat doesn’t…

I swear, I will take this radiation damage evidence to Beijing, and he will pay for the damages!

…

For most people, this data might not be useful. However, for Lu Zhou, it was priceless.

Mathematics was a powerful scientific research tool; it was also Lu Zhou’s most powerful weapon.

Even though the inferences made from the data couldn’t directly give him the result he wanted, it could be used as a reference, to prevent him from making a lot of mistakes.

“I haven’t been this overwhelmed in a while.”

Lu Zhou sat in his study room looking at the data and graphs on his computer screen. Suddenly, his eyes sparkled with excitement.

As expected, compared to commanding other people to conduct experiments, it was much more fulfilling to be on the front line of scientific research and personally solve these difficult problems.

After he stretched his back, he picked up a pen and wrote on a brand new piece of paper.

[Radiation damage energy: Tdam = Td(1+kg(ε))^-1]

[k = ξ0.0793(A1+A2)^3/2.Z1.Z2/(Z1^2/3+Z2^2/3)A1^2/3,ξ≈Z1^1/6]

[ε=…]

It was worth mentioning that due to the expensive cost of neutron radiation experiments, more than a decade ago, when the nuclear physics community was researching neutron beam radiation, they developed a set of calculation methods for parameters such as DPA[1]. These could be simulated using software such as McDeLicious and NJOY.

Because it was a phenomenological model built from empirical formulas, there were many relevant calculation methods. The one Lu Zhou decided to refer to was the more reliable Linhard Robinson model.

After selecting an expected DPA interval and the maximum value for the helium generation rate, using the theory from the model, he used the constants from the ceramic-based graphene composite as variables, which he then integrated into his own computational materials theory. This allowed him to simulate the DPA and helium generation rate.

Even though this all sounded easy…

But in reality, this process was far more difficult than using the Lindhard Robinson model to simulate the rate of DPA and helium production of a material under normal neutron radiation conditions.

Moreover, the results obtained by the simulation were not necessarily reliable.

This situation was common in the field of computational materials. Even though it was plausible from a mathematical perspective, it was impossible from a practical perspective.

Especially when strictly positive parameters such as mass became negative…

The days quickly passed by. Lu Zhou gradually went into the state of grinding. Over the past few days, he had been locking himself in his room.

Principal Xu called him a while back, asking him if he had time to speak at the university’s opening ceremony. Lu Zhou really didn’t have any spare time, so he rejected the invitation.

Principal Xu understood why Lu Zhou had to reject the invitation.

In any case, a national level major scientific research project was the highest priority.

However, the principal still tried to convince Lu Zhou over the phone. He said that Lu Zhou shouldn't overwork himself and that Lu Zhou should take time to go outside. After all, one's health was the most important, ruining one's body would be detrimental.

However, no matter how hard Principal Xu tried, Lu Zhou still insisted on doing his own thing.

There was no way he would leave the house before the research results were out.

Fortunately, even though he stopped researching mathematics ever since a year ago, his skills had not decreased.

After two weeks of locking himself in his room, in the middle of September, Lu Zhou finally finished the final step.

He sighed in relief and leaned back in his chair as he looked at the calculations on the screen and gradually smirked.

He finished the entire framework of the model.

What was left now was to give it some input.

Which meant it was time to do some calculations.

"Xiao Ai, let me give you a mission."

The instant he spoke, a small text bubble popped up on the lower right corner of his screen.

[Ok! Master! (๑•̀ㅂ•́)ง]

Even though the number of calculations required was enormous, with the help of supercomputers, it wasn't difficult for Xiao Ai to complete this tedious and mundane task.

After Lu Zhou gave Xiao Ai the specific mission details, he stood up from his seat.

He stretched his sore arms and shoulders and stepped over the draft papers scattered on the ground. He went over to the kitchen and made himself a cup of instant coffee.

While he was waiting for the kettle to boil, he took out his phone and checked his texts, calls, and emails. He typed out some simple replies to everyone that tried to contact him.

After he finished replying, Lu Zhou grabbed his coffee and went back to his study room.

When he sat down in front of his desk, the calculation results were already presented to him.

Lu Zhou ran the simulation results in its entirety and smirked.

The results were almost perfect.

Other than some obviously impossible data, he had at least five sets of feasible data.

Each set of feasible data corresponded to a theoretically possible technical pathway.

“All we have to do now is to verify the feasibility through experiments!”

Institute of Computational Materials.

Hou Jinli stood in front of the laboratory entrance and took a deep breath. He nervously opened the door and walked into the laboratory.

Ten minutes ago, he was still sorting out samples in the laboratory. However, someone suddenly told him that Lu Zhou wanted to see him.

After he heard this news, without any hesitation, he put down the work he was doing and rushed over here.

When he saw Lu Zhou standing in the laboratory with a white lab coat, he asked nervously, “Sir, did you ask for me?”

Lu Zhou nodded and answered concisely, “Yeah, I did.”

Hou Jinli became even more nervous after hearing Lu Zhou’s reply.

Professor Lu, who hadn't been to the laboratory for several days suddenly appeared again. Not to mention, the first thing he did after returning to the lab was to ask for Hou Jinli.

What could Professor Lu want me to do?

Maybe there's a problem with my research project?

Impossible…

He clearly remembered that he repeated the experiment several times, and he also double-checked the experiment report.

Also, surely Professor Lu wouldn't ask for me over such a small matter.

It wasn't his fault he was nervous. Normal people would never think that a Nobel Prize laureate would be interested in their research. After all, Hou Jinli was a noob researcher for so many years.

While Hou Jinli's mind was racing, Lu Zhou was carefully observing him.

Lu Zhou noticed his nervous expression and guessed what he was thinking, so he smiled and said, "Relax, don't feel any pressure. I'm probably younger than you in age. Also, I don't have any bad news for you."

When Hou Jinli heard this, his tense shoulders finally relaxed.

Lu Zhou paused for a second before he continued, "I've read your research report."

When Hou Jinli heard this, he immediately stood up straight and waited for the Nobel Prize big name to critique his research.

"The thing you discovered is very interesting. It not only has good resistance to high temperature, but it is also much better at resisting neutron radiation than normal alloy materials."

Excited, Hou Jinli gasped, "Really?"

His experiment was mainly concerned with high-temperature resistance; he obviously didn't have the means to conduct a neutron radiation experiment, so he didn't even think of doing one.

Now he found out that not only did his research material have excellent temperature resistant properties, but it also had excellent anti-neutron radiation properties, so he was immediately shocked by this great news.

Lu Zhou nodded.

“There are some flaws, but there is a lot of room for improvement.

“Also, that’s the end of the good news. The news I am about to say might not be beneficial to you.

“After I discussed with some of the experts at the China National Nuclear Corporation, we believed that this material has future prospect applications on fusion reactors. Therefore, we will approve your conclusion report, but you might not be able to publish the research thesis.”

Hou Jinli sighed in his heart.

Actually, when he heard that his material had neutron radiation-resistant properties, he already guessed what Lu Zhou was about to say.

The research that was done in the research institute all belonged to the research institute. This was written on the contract and was standard practice, so there was nothing debatable about that. What belonged to the researcher was often the thesis itself or maybe a bonus.

Due to the issue of patents, other research projects, and the overall interests of the research institute, researchers couldn’t immediately publish the thesis upon completion. They had to first make a report about the situation. After that, the person in charge would decide on the thesis publication.

In most cases, unless someone was screwing with you, this process would all go smoothly. After all, theses were the life of a scholar; their job titles depended on their thesis publications.

However, there were also some special circumstances where the thesis would be banned from publication.

For example, when a major scientific research project was underway and the research results in a thesis could help the research project. Basically, the research result could be considered an in-progress result.

In order to prevent from helping competitors, theses like these were often banned, or at least, it would be delayed from publication.

Normally, if this happened, the research institute would often compensate the thesis author.

Normally, this compensation was in the form of research funding or more bonuses. Some nutty bosses would even compensate by letting the author co-sign a high-impact-factor thesis; these were all possibilities.

Of course, there were also some unjust bosses, especially arrogant ones on the leadership team.

In their opinion, letting researchers conduct experiments was a privilege. They often stole the thesis first author spot and wouldn't give any compensation when a thesis was banned from publication. If the researchers tried to defend themselves, the bosses could even prevent them from publishing on the academic conference posters.

These were all possibilities.

Obviously, Lu Zhou wasn't that kind of boss. Hou Jinli also didn't think that a big name like him would bother stealing a first author spot from his little thesis.

Therefore, he thought for a bit before replying, "That's fine, I am willing to comply!"

Lu Zhou looked at Hou Jinli and nodded. "I hope you understand. I'm sorry your thesis turned out this way, but I will try to compensate you for your loss. Both in terms of monetary value and honor value, and I will make sure that you're satisfied with it."

When Hou Jinli heard this, he looked at Lu Zhou with gratitude.

He didn't even ask what the exact compensation was.

He believed that since Lu Zhou made a promise, Lu Zhou wouldn't let him down.

Otherwise, there was no need to make the promise in the first place.

Lu Zhou didn't plan on talking about the exact compensation, he'd think about that later. He didn't come here just to talk with Hou Jinli. Otherwise, he wouldn't have worn the anti-static white lab coat.

Since Hou Jinli understood the circumstances of his thesis, Lu Zhou ended this conversation topic and started a new one.

"The reason I asked for you to come today was mainly to ask about that ceramic-based graphene composite of yours."

When Hou Jinli heard Lu Zhou ask about his project, he immediately put on a serious expression.

"Please ask."

Lu Zhou nodded and said, "With regards to the toughening agent for the ceramic-based graphene composite material, which is the porous graphene aerogel, is there a way to change its pore diameter?"

Hou Jinli thought for a bit and answered, "Theoretically, it is possible. When I tried to synthesize the material, I received samples with different pore diameters… However, this is still in theory, we'll have to try to find out."

"Then please try to figure it out." Lu Zhou picked up a document from the table and handed it to Hou Jinli as he said, "I have some simulation data here. If you can, I hope you can produce the materials that match these data."

When Hou Jinli looked at the document, his facial expression subtly changed subtly.

What shocked him wasn't the content of the data. After all, he couldn't understand the calculations.

What really shocked him was…

Hou Jinli gulped.

Does this mean…

I'm doing an experiment with a Nobel Prize winner?

This happiness came too sudden, and he wasn't prepared for this at all.

Seeing that Hou Jinli went silent for a while, Lu Zhou asked, “Is there a problem?”

“No problem, no problem.” Hou Jinli immediately nodded. When he thought about something, he asked, “Oh yeah, it might be slow if I do it by myself. Can I get an assistant? One is enough.”

“One isn’t enough, you’ll need at least ten. Start the experiments on all five samples now. This task is important. I need to see results in a week.”

Lu Zhou handed him a name list and said, “The names of all of the researchers working in this institute are on this list. They all come from good backgrounds. Find the ones you like and circle their names.”

After doing scientific research for this long, this was the first time Hou Jinli experienced what it was like being a boss.

Even though he was only a small boss, who was controlled by a big boss, his big boss was still a Nobel Prize winner. Thinking about it this way, even being a small boss was an honor.

Even though Hou Jinli was excited, he was still attentive to his work.

Using the name list Lu Zhou gave him, he searched the names one by one on professional databases. He found their numbers of citations, numbers of SCI, and their academic backgrounds.

The ceramic graphene composite material had been given the highest priority, so he had to look at who had the highest amount of quality publications.

He obviously wouldn’t forget Yu Junda, who worked on this project with him in the beginning.

He considered the fact that not everyone had the time to participate in this research project. In the end, he selected around 20 names and handed them to Lu Zhou’s office.

At first, he was worried that he might have chosen too many people, but when Professor Lu glanced at the name list, he approved it in a blink of an eye.

“These people will report at your laboratory tomorrow. You know my requirements. Is there anything else you need?”

Hou Jinli quickly shook his head.

“Nope, that is all.”

Lu Zhou nodded.

“Okay, then I’ll leave this matter to you.”

…

The workers of the Institute of Computational Materials were very efficient.

Or rather, it was because of Professor Lu’s prestigious reputation in the institute.

Even though Lu Zhou said that the team members would arrive tomorrow morning, they all arrived at night time.

The most unexpected thing for Hou Jinli was that the 20 people he selected were all here.

Before this, he thought that it would be nice if half of them came.

In order to speed up the progress, he immediately went to the relevant department and applied for a conference room. He put on his PowerPoint presentation, which he made during the afternoon. He then called the researchers over and had a simple meeting.

“I’m sure you’ve seen the experimental process on the report already. However, I’ll still use the powerpoint to explain it simply again. According to my research, the key to changing the pore diameter of the porous mesh aerogel network is on temperature and the addition of a reducing agent…

“Also the most important thing is the freeze-drying part. This part of the process is the key to not destroying this three-dimensional network during the process of obtaining the graphene aerogel. This part of the process is also relatively error-prone…

“I hope all of you pay attention to these parts during the experiment.”

Hou Jinli wasn’t normally a leader, so he obviously didn’t know how to delegate very efficiently. He explained the important parts of the experiment in simple terms.

“This mission is very difficult, and Professor Lu wants us to finish five samples in one week. I hope everyone here can work hard!”

Suddenly, there was a commotion in the conference room.

“One week…” One of the researchers, who was wearing glasses, looked troubled as he said, “This time frame is too short, I’m afraid it’s not enough.”

Reading all of the relevant literature should take two days at least, right?

Understanding all of the experimental steps on the report should take a day at least?

Plus composite materials have a high fail rate, one week is probably impossible.

It would be possible if it were two weeks.

Even though Hou Jinli knew clearly that this mission wasn’t that easy, he still insisted.

“The samples from us are going to be sent to Daya Bay for testing. According to the schedule, if we don’t send the samples by the beginning of next month, we’ll have to wait for an entire month.

“If we waste one day here, the STAR-2 project will be delayed by one day.

“I know this isn’t easy, but we only have one week. The problem isn’t whether or not it is possible. We have to do it!”

When the researchers in the conference room heard this daunting request, they all looked at each other with concerned looks in their eyes.

The researcher earlier still wanted to say something, but looking at how desperate Hou Jinli was, he scratched his head and sighed.

Honestly, this was the least intimidating boss he had ever had.

But since this was Professor Lu’s request…

“Whatever, it’s not like I haven’t slept in the laboratory overnight before.”

The researchers all looked at each other and nodded.

Even though everyone was kind of confused as to why they were transferred here, especially when the person in charge wasn't anyone special, but because of Professor Lu's presence, they were prepared to work their hardest.

Not to mention that this was also for the future of China's controllable fusion field.

Hou Jinli sighed in relief and looked grateful.

"Thank you!"

…

The experiment began on the same day.

The twenty researchers were divided into five teams, with four people in each team, and within each team, each member would be responsible for a sample.

Three groups were led by Hou Jinli, while the other two were led by Yu Junda.

Even though scientific research wasn't building a wall, one couldn't produce research results by using manpower alone, but when there was sufficient research funding and a clear solution to solve the research problem, having enough manpower was still an advantage.

The first two problems were already solved by Lu Zhou. Therefore, Hou Jinli didn't face too much pressure.

The success rate was less than 20%?

Then they'd just do the experiment five or six times.

At most, they would have to sleep in the laboratory for a couple of nights.

For them, grinding all night was the norm.

It was late into the night when Yu Junda took the samples for XRD testing. He returned to the laboratory and saw Hou Jinli about to experiment on the next set of samples. Yu Junda quietly asked, "Speaking of which, does this mean we are participating in a secret national project?"

Hou Jinli thought for a bit and said, "Yes and no."

Yu Junda: “What the hell does yes and no mean?”

Hou Jinli: “The controllable fusion technology is not at a mature stage yet. We would have to wait until the demonstration reactor is built before the detailed documents are released. But I think that since the United States has been trying to kick us out of ITER, our country is starting to take this seriously… I guess this counts as a confidential project?”

Any inventions or technologies that involved national security would require confidentiality. These research results would probably be filed in the form of confidential patents.

Normally, non-military enterprises could not qualify for confidential patents. But because the STAR-2 was a national key scientific research project, if they explained the importance of the technology, the patent office should give them an exception.

But then again, the only use for this material was probably the reactor.

The only other possible application was probably in medical equipment. However, because of the inferior toughness properties of the ceramic-based graphene composite compared to alloy materials, it was unlikely to be used in small-sized equipment.

Of course, these weren’t things the researchers had to worry about.

“Controllable nuclear fusion.” Yu Junda sighed and said, “Honestly, I never thought that I would one day participate in a national level scientific research project.”

“I didn’t expect this either.”

The newly-baked sample was stuffed into the freezer. Hou Jinli set a four-hour timer and rubbed his tired eyebags as he said, “However, whether it is a national research project or an insignificant research project, all we have to care about is whether we are doing a good job.”

Lu Zhou was prepared for Hou Jinli to not be able to complete this mission. However, Hou Jinli lived up to his expectations.

Five sets of samples, four samples in each set.

Due to the difficulties of preparing for the ceramic-based graphene composite, completing this mission within a week really wasn't easy.

In short, these samples could be sent to Daya Bay for testing.

Before testing the high-energy neutron radiation resistance, Lu Zhou had to first diagnose the performance of these five samples in a relatively low energy neutron radiation environment.

He'd only consider testing it on the experimental reactor if the results were good.

After all, both the tokamak and the stellarator were billion-dollar machines; they didn't come for free. Lu Zhou didn't know how long this project would take, so he had to conserve resources.

Unless it was necessary to collect experimental data, or it was a reliable attempt, it would be better to test it on a fission reactor first.

Hou Jinli looked at Lu Zhou, who was reading the report. He then took a deep breath and said, "In the experiment, we made some changes to the original experiment process and was able to find a more concise and easy synthesis method!"

When Lu Zhou heard this unexpected news, he raised his eyebrows with interest and said, "Oh, really? Write a report and hand it to me in two days."

Hou Jinli immediately nodded and said, "Okay!"

After Lu Zhou finished reading the XRD inspection reports, he put down the documents.

As far as the test results, these sample properties were basically consistent with his calculations.

Next up was to wait for the results from Daya Bay.

"If there's nothing else for you to do, you should go home early. You look like you can barely walk."

"Okay…"

Hou Jinli looked at Lu Zhou gratefully and didn't decline his suggestion.

After all, he was nearly thirty years old. His body wasn't as good as when he was still doing his PhD.

After a week of constant grinding, his body couldn't handle it anymore…

…

Just like they planned, Lu Zhou sent these five samples to Daya Bay through some special logistics channels.

They patiently waited for a while.

The test results were soon sent over.

"The test results from Daya Bay are here."

Yang Xu placed a document on Lu Zhou's table and said with excitement, "The results are perfect!"

Even though the test result was obvious from Yang Xu's facial expression alone, Lu Zhou still reached for the document and immediately began reading.

The five groups of materials were tested for different DPA interval rates and in different energy zones. They were also tested in different radiation conditions such as the pressurized water-cooled reactor (PWR) and the boiling water reactor (BWR).

The control group was austenitic steel, which was normally used as a structural material inside the fusion machine.

Just like Yang Xu had said, the results were near perfect.

Even though there were many values that weren't consistent with his computational materials calculations, the errors were within acceptable ranges.

After all, the Linhard Robinson model he used wasn't a perfect phenomenological model. Rather, if the data were to fit perfectly, then it would mean something had gone wrong.

The five groups were compared to one another. As the neutron scattering rate increased, the fourth set of samples exhibited the best neutron permeability and repairability against the Frenkel defect.

Especially when it was in the PWR environment, the radiation temperature was 680K, and when the neutron scattering reached 4.2×1020/cm^2, the DPA production rate was less than 10% that of the control group's austenitic steel.

In the field of radioactive detection, the DPA index was used to indicate the number of outliers per atom.

Undoubtedly, they had succeeded!

At least, in a low-energy environment…

Compared to how excited Yang Xu was, Lu Zhou remained unusually calm.

After he read the entire document from the beginning to the end, he contemplated for a bit and said, "The radiation temperature is only 680K, obviously the neutron scattering is not enough. The energy of a single neutron is only at 1MeV, so don't be happy just yet. Our goal is to create a material for the structural material of the fusion reactor. This is only an in-progress result."

However, this in-progress research result was quite amazing.

At least in a low-energy environment, this ceramic-based graphene composite had already surpassed the common experimental reactor materials such as Al, Mg, and Zr.

Also, its anisotropy heat-transfer properties were unrivaled.

Judging from these excellent properties, even if this material wasn't used on the fusion reactor, it would still be highly applicable for fission reactors.

Yang Xu smiled and said, "You're too critical. Even though this is an in-progress result, this is quite a big achievement. I think there's nothing wrong with feeling happy about this."

Lu Zhou smiled and said, "Maybe, but I prefer to wait until the dust settles, then taste the victory champagne."

Yang Xu: "So… Does this mean we still have to experiment with the fusion machine?"

Lu Zhou nodded and said, "From the looks of it, yeah."

The only thing that could simulate a fusion reactor environment was the fusion reactor itself.

Yang Xu: “Let’s not talk about the fusion reactor first. What do you plan on calling this material? The fourth sample set produced the best results. It’s not like you can keep calling it by its number.”

When Lu Zhou heard that he had to name something again, he was suddenly overwhelmed.

“Don’t ask me to come up with a name. Go consult Hou Jinli and his research team. You guys can name the thing.”

“Surely we can’t do that?” Yang Xu smiled and said, “Normally, important things like naming the research results are done by the manager of the project. If you really can’t come up with an idea, we can put your name on it.”

Lu Zhou suddenly choked on his saliva and said, “Don’t use my name, I’ll think about it.”

He knew that he would produce a lot of research results in the future.

If he used his name for everything, he was afraid that he wouldn’t even remember which invention was which.

Lu Zhou contemplated on this serious problem for a second. His eyes suddenly lit up.

“Just call it PGC-1.”

Yang Xu: “…”

Seeing that Yang Xu was speechless, Lu Zhou paused for a second.

“What?”

Yang Xu coughed and said awkwardly, “Nothing, it’s a good name. I just think… this name matches your style very well.”

PGC was an abbreviation for porous graphene carbon material. Since this was the first generation of this type of material, there was a number “1” at the end. This was basically the least confusing but also the most unimaginative nomenclature.

Naming such an important research result like this felt a little careless.

Lu Zhou guessed what Yang Xu was thinking, so he smiled and said, “The material name doesn’t matter, what matters is its capabilities.”

Yang Xu: “Okay, whatever you say… Oh yeah, if you plan on testing it on an experimental reactor, then are you going to Southwest?”

Lu Zhou shook his head and said, “The HL-2A has been pushed to its limit. Looking at the situation after the last experiment, they’ll probably take until the end of the year to repair it. I won’t trouble them this time.”

Even though Lu Zhou didn’t mind torturing Old Zhou a couple more times, he had to think about this logically.

Injecting nuclear fuel into an experimental reactor was no joke. Even though the experimental reactor had safety protocols, if the hundreds of millions of degrees plasma were to leak out, it would cause a very serious accident.

Lu Zhou paused for a second and began to joke, “Not to mention, this is a historic moment. It’ll probably be in future textbooks.

“It would be a shame if we were to use someone else’s equipment for this important experiment.”

Chapter 537: Helms’ Countermeasures

Chapter 537: Helms’ Countermeasures

It was getting closer and closer to the end of the month.

Finally, all of the contradictions were coming to an end.

Soon, the next ITER conference would be held in Saint-Paul-lez-Durance, France. In this meeting, the United States would once again question the Chinese representatives on the STAR research institute and other intellectual property related issues.

If everything went well, this might be the last time the ITER Council talked about this issue.

Because there were various signs that showed the outcome of this conference would likely determine China's future participation in ITER.

The world knew that China would not compromise and cooperate.

There were even ITER employees that wanted to remain anonymous, who said this might be the trigger for the collapse of ITER.

Even though this sounded like an exaggeration…

But in fact, this could happen.

As everyone knew, ITER had seven major participating countries or continents, namely Europe, America, Russia, China, Japan, Korea, and India. In addition to ITER, almost every participating country had its own independent controllable nuclear fusion project.

There was a consensus among all of the countries to establish their own controllable fusion technological advantage.

Because of this competition, it wasn't difficult to predict that an international cooperation project such as ITER would collapse.

This could all be seen from the insufficient funding ITER had been receiving recently.

Obviously, no one believed that this giant ship with all of the countries on board could sail for long.

Not to mention the captain of the ship was Europeans.

If the US suddenly created a problem regarding intellectual property rights, it would cause a lot of trouble.

The ignited fusion light was like a candle in the wind, vulnerable as it trembled in the cold winter night.

However, no matter what happened internationally, the scholars in the field still had to do their experiments.

Just after Lu Zhou received the good news from Daya Bay, a magnetic confinement experiment was well underway in the Wendelstein 7-X laboratory in Germany.

“37 minutes 6 seconds.” Kervin looked at the computer screen and said, “This is probably our best result this month.”

Even though they were still far from STAR’s one-hour mark, at least they were able to produce a stable magnetic confinement fusion time for more than half an hour.

Professor Millek said, “Can we start an ignition experiment?”

Professor Keriber shook his head and said, “We haven’t solved the radiation problem yet.”

Professor Millek said, “Is there any progress?”

“Progress?” Professor Keriber’s voice became even more bitter as he said, “The only progress we made is probably the fact that we are now aware that this technical pathway won’t work. The swelling from the metallic materials from neutron radiation is too significant. It’s hard to fix this, no matter what we do… Unless we can restrain the neutrons? But that sounds crazy.”

The latest technology was the use of a molybdenum and zirconium alloy that was actually quite effective against the swelling effect from neutron radiation. However, alloys doped with molybdenum were much more difficult to weld than normal austenitic steels.

Not just that, but no matter how little molybdenum was doped into the metal, there was always the unstable factor from its radioactive metamorphic products.

Millek thought for a bit and pondered, “If the alloy doesn’t work, what about non-metallic materials?”

Kervin shrugged and said, “There are a lot of non-metallic materials, but do you have a good suggestion?”

This wasn’t the first time someone thought of using non-metallic materials in the field of controllable fusion research. The problem was that this technical pathway had never made much progress.

Kervin began to contemplate.

If Lu Zhou were here, what would he do?

However, Kervin didn’t have a single clue.

He couldn’t help but sigh.

If only we can cooperate with the STAR Stellarator Research Institute on the stellarator research…

If he had Professor Lu on his team, he was confident that he could shorten the time to commercialize controllable fusion by at least 20 years.

The completion of this technology would benefit the entire human civilization.

But now, it looked like there would be no cooperation.

…

Outside of the laboratory, Helms sat in the laboratory lounge while sipping coffee. He looked at his watch from time to time.

A few months ago, he was only a mid-level official at the CIA. However, because of an evaluation report that he wrote on controllable fusion research, he became highly recognized by the CIA higher-ups.

Right now, he was the CIA intelligence commissioner for the controllable fusion problem. He was fully responsible for collecting important information in the relevant fields and had a certain amount of decision-making power in some matters.

The reason he came to Germany was to understand the latest stellarator developments the Max Planck Institute for Plasma Physics had made. He also came here to meet with senior officials from the German Federal Ministry of Economics and Technology.

The Chinese countermeasures worked very well. At least on the surface, it looked like China’s research on controllable fusion had stopped progressing.

The STAR-1 and HL-2A machines had gone out of operation, while the cooperation between the EAST machine and the General Atomics company had been suspended. Everyone couldn’t help but wonder how far China could go without any help from the international community.

Regardless, right now was the time to attack.

Even though on the surface the plan was going smoothly, he would never underestimate his opponents.

Just the name Lu Zhou alone made him cautious about this whole situation.

From their limited intel, it seemed that the failure of these two machines was related to Lu Zhou.

Right now, Lehman was sitting next to him. Lehman was a CIA intelligence officer operating in the German region.

Unlike the other agents who were underground, his identity was open to the public and was registered with the Federal Ministry of Defence of Germany. His main responsibility was to sit and drink coffee in the office or exchange information with the German intelligence departments.

He was the one that organized the meeting with Helms and the Federal Ministry of Economics and Technology of Germany.

When the two people were chatting, they happened to start talking about Lu Zhou.

Even though Lehman's work wasn't focused in this area, he still raised his eyebrows with interest.

"So, how many professors do you think this Professor Lu guy is worth?"

Helms: "If you really know him, you wouldn't ask such a dumb question. His value can't be measured in professors. It should be measured in Silicon Valleys or Seattles."

Lehman didn't care about Helms calling it a dumb question. Instead, he smiled and said, "When did Silicon Valley and Seattle become measuring units?"

Helms: "Silicon Valley and Seattle are not, but their potential economic values are. One person can create 10 billion or even 100 billion of GDP value, and I think he has this potential."

Lehman: "A Nobel Prize laureate creating 100 billion of GDP value? Is this Zimbabwe or Venezuela money?"

"Obviously it's in USD, and this is just a conservative estimate. The more I research about this guy, the more confident I am on my estimate." Helms put

down the coffee cup and said, “Both the CIA and White House are not paying enough attention to this kid, and I think this is extremely dangerous.”

Lehman leaned back in his chair and said, “Maybe you should write a detailed report and send it to the White House. Trump loves publicity.”

Helms: “Actually, that’s exactly what I plan on doing.”

While they were talking, a group of people entered the lounge.

The person leading the group was the secretary-general of the Federal Ministry of Economics and Technology, Norbert.

Helms stood up and reached his hand out with a smile.

“Hello, Mr. Norbert, I’m glad to meet you again.”

“Hello, Mr. Helms.” Norbert shook Helms’s hand. He skipped the small-talk and said, “You didn’t fly all the way from America to drink coffee with me, just give it to me straight.”

“Here’s the thing.” Helms organized his thoughts, and he said, “Our Congress has reassessed the controllable fusion project and decided to invest around US$2 billion. This new stellarator machine is expected to be built at the Lawrence Livermore National Laboratory in California. This means that German companies will receive at least a billion or so in contracts, thus creating tens of thousands of jobs. I’m sure you will be interested in this.”

“Oh yeah?” Norbert’s raised his eyebrows and said, “I’m interested in this topic, but why is the CIA talking about this with us?”

He was more confused about why the CIA officers were disclosing this information to him.

“Because the specific bidding plan will come out next month. If you are interested in this project, I have a small proposal.”

Norbert said, “What proposal?”

“The ITER Council conference at the end of the month.” Helms looked at Norbert and smirked as he said, “I think it’s time for China to leave.”

Jinling, China.

STAR machine research institute.

“We’re here?”

Hou Jinli followed Lu Zhou into the research institute and looked around curiously.

Since leaving the University of Science and Technology of China, he had been at Jinling for more than six months. He was obviously related to the STAR stellarator project, but this was his first time coming here.

Prior to this, he had only heard rumors about this research institute.

Like for example, the security of the research institute was handled by military members.

Also, this place didn’t appear on maps like Baidu and Google.

However, coming in now, he found out that the situation was the opposite of what he imagined.

How come the security here isn’t as serious as I had thought?

Lu Zhou smiled and said, “Yeah, we’re here.”

Hou Jinli scratched his head awkwardly.

“I thought the security measures here would be harsher.”

Even airports have metal detectors and luggage scanners.

“The army is handling the security here, so it’s completely safe. There is no way unauthorized personnel can even get close to here. Also, real security measures are hidden.” Lu Zhou pointed with his chin and said, “See that?”

“Where?”

Hou Jinli looked at the direction Lu Zhou pointed at, but he but couldn’t see anything.

“What’s there?”

Lu Zhou: “There’s a security camera hidden there, you just can’t see it.”

Hou Jinli was stunned. “How do you know?”

Lu Zhou: “I’ve seen the surveillance footage.”

Hou Jinli: “…”

All the streets near this place were filled with security cameras; it had no dead spots.

Not just that, but in terms of personnel review, it was equipped with facial recognition by using big data analysis. For example, if a non-resident of this area kept wandering around here all day, even if they didn’t come close to the research institute, they would be approached by a security member.

This level of security measures was only possible in recent years.

After all, China’s ITER situation was becoming more and more obvious. Also, the United States’ interest in controllable fusion technology gave China a reason to believe that the US might pull some dirty tricks and try to take data in an illegitimate way.

Regardless, there was no such thing as too safe.

Also, it wasn’t like Lu Zhou had to personally worry about these things.

There were people that took care of these things behind the scenes.

Hou Jinli walked past the tunnel entrance, and the pair walked straight into the laboratory embedded into the mountain.

When the two arrived, the rest of the laboratory researchers were already there.

After more than a month of the overhaul, the STAR machine had returned to its best state.

However, it was not really in the “best” state. After all, the swelling of the structural material couldn’t be completely eliminated. However, using the knowledge they gained from the ignition experiment last time, this shouldn’t be a big problem.

Even if an accident were to happen…

It would be worth it!

Even though the radiation environment for both the stellarator and tokamak was similar, there were some subtle differences. Other than for the sake of “witnessing history”, this was the other reason why Lu Zhou chose the STAR stellarator over EAST or any other tokamak for this experiment.

Sheng Xianfu, who was in charge, saw Lu Zhou walk into the laboratory. He immediately walked over and gave Lu Zhou an update of the situation.

“All of the preparations have been completed, we can begin the experiment anytime now.”

Lu Zhou: “Is the sample inside?”

Sheng Xianfu: “It’s inside.”

Lu Zhou nodded and said, “Then, let’s start.”

Sheng Xianfu: “Ok!”

Their conversation ended.

After Sheng Xianfu received the order, he immediately returned to his work station.

Hou Jinli took a deep breath. The experiment was about to begin, and his whole body was shaking.

40 billion yuan scientific research project. He had never participated in such a major project before.

What if the machine failed, would he be held accountable? What if the LPC-1 material didn’t work or that he made a mistake on the XRD test, thus resulting in the failure of this experiment…

Even though there was no way these things could happen, he was still sh*tting bricks.

After all, he had never thought about these problems before he stepped foot into the laboratory.

Hou Jinli looked at Lu Zhou and went into deep thought.

If I’m feeling the pressure just by standing here, then what kind of pressure is Professor Lu feeling?

It’s terrifying just thinking about it…

Academician Pan, who was standing next to Lu Zhou, looked at the hard-working staff members behind the floor-to-ceiling windows. He frowned and began to look a little concerned.

“Are we really going to use the STAR machine for this experiment?”

“This is the best choice.” Lu Zhou nodded and said with a poker face, “If the LPC-1 material proves to be effective, we will immediately begin the construction of the demonstration reactor.”

“Is the issue with the liquid lithium neutron recovery system solved?” Academician Pan looked at him in surprise and said, “There’s also the ferrofluid electric energy generator, these are two very important issues, right?”

Lu Zhou: “They can be solved while the construction is underway. Compared to the neutron radiation, these aren’t very difficult problems.”

Academician Pan: “I don’t know why you’re in such a hurry. There’s still five years until 2025. It’s important to go slow and steady… Please don’t be overly hasty.”

“Ok,” Lu Zhou nodded and said, “I understand.”

Academician Pan shook his head.

He knew he couldn’t persuade Lu Zhou. Lu Zhou only said “I understand” to be polite to him. Maybe because Lu Zhou was too used to researching alone, which created his assertiveness.

However, Academician Pan had nothing else to do.

After all, he had been away from the research front line for too long; all he got now was the so-called “honor” and “reputation”.

He could help with things outside of the research. Like when Lu Zhou’s cooperation with other research institutes didn’t go smoothly, he could act as a type of lubricant.

However, in terms of the actual experiment… he really didn't have any say.

Academician Pan sighed and looked at the giant metal behemoth behind the glass panels.

All he could do now was pray.

…

More than 20 samples were installed in the reactor.

This time, there weren't any cameras or reporters.

Because Lu Zhou contacted the city council and indicated that the content of this fusion experiment wasn't suitable for public exposure.

Thank God he did this.

Otherwise, the city council really would have sent a media reporter.

Sheng Xianfu took a deep breath and looked at his watch.

He exchanged glances with Lu Zhou before ordering, "Begin experiment!"

The second he finished speaking, the liquid helium was injected into the SG-1 superconducting magnets, soaking the circle of graphene wires outside the stellarator outer track.

The resistance of the external magnetic field quickly dropped, and a large current began to pass through the magnetic coil. With the help from the control coil, a perfectly closed magnetic field was formed inside the stellarator.

Using a computer, once Sheng Xianfu confirmed that the magnetic field was in good shape, he continued to order, "Inject the fuel!"

1mg of tritium deuterium mixture was injected from the conduit into the reaction chamber.

At the same time, the microwave heating device began to heat up the gas molecules inside the machine reaction chamber.

Almost instantly, the gas molecules were ionized into plasma. There was a beautiful aurora-like glow from the magnificent reaction chamber.

The glow was slightly shaking, making it appear vulnerable.

However, that glowing heat inside was hot enough to cut through any armor in this world.

Fortunately, it was being controlled by an invisible force…

The magnetic field stabilized and confined the plasma.

The temperature and density of the plasma began to increase to the critical point of fusion ignition.

Everyone couldn’t help but clench their fists.

In an instant, the camera flickered and was filled with white noise.

The most terrifying energy on the planet was brewing inside the stellarator chamber.

However, this entire process lasted for less than three seconds…

“Turn off the microwave heating device!”

After the heating device was turned off, the heat inside the machine began to dissipate, and the fusion reaction suddenly stopped.

After they waited for the machine to cool down, staff members wearing protective gear quickly entered into the reaction chamber and retrieved the valuable samples.

These samples would be sent into a dedicated test chamber for DPA and helium residual measurements.

At the same time, the equipment maintenance staff members rushed into the machine and began to evaluate the damage of the first wall material, structural material, the divertor, and other components.

Hou Jinli looked at the samples being sent to the testing room. He followed them and helped the STAR research institute researchers complete the tests.

Within an hour, the test results came out.

Hou Jinli took the report to the laboratory. Everyone gathered around him, including those that couldn't understand the report content.

Hou Jinli's hands were trembling. He looked at Lu Zhou. He then looked at the researchers around him before he said excitedly, "The neutron beam basically passed straight through the material, and the interstitial atom returned to its original position! All of the data show that the material has extremely high neutron radiation-resistant properties! There is no obvious radiation damage!"

Sheng Xianfu held his breath.

Academician Pan's eyes were wide open.

Everyone's expression changed to a look of astonishment.

The neutron beam passed through!

No obvious radiation damage!

Lu Zhou began to gradually smirk.

This was probably the best news he heard this year!

Chapter 539: Retrea

Chapter 539: Retreat

Saint-Paul-lez-Durance, France. The sky was drizzling.

This small town in the south of France normally was undisturbed by the outside world. However, at this moment, the entire world's attention was on this small town.

Soon the ITER Council conference at the end of the month would begin at the ITER headquarters.

In this conference, the US would issue a final inquiry on whether or not China would fulfill the ITER technology sharing agreement.

If this meeting went sideways, the ITER Council would issue a vote and decide on China's future involvement in the ITER organization.

Over the past month or so, the world had made many speculations on the decision of the Chinese representatives.

However, none of the speculations were optimistic about China and the US reaching a consensus on this issue.

This rainy weather seemed to have foreshadowed this meeting; this conference was destined to go south.

Luo Zhanyuan, who was appointed by the Ministry of Foreign Affairs as a representative, sat at the conference table.

It was 9:30 am.

The conference was about to begin in thirty minutes.

Not far away, United States representative Adam Cohen was pleasantly exchanging opinions with the European Union representatives. He couldn't help but look at the Chinese representatives from time to time.

Obviously, they had reached a consensus before coming to this meeting.

Even though Luo Zhanyuan had a careless expression on his face, he secretly sighed in his heart.

Being able to survive until now…

I tried my best.

Half an hour quickly passed by. The ITER chairman announced the start of the meeting and talked about the meeting agenda.

In addition to figuring out whether or not China had fulfilled its ITER obligations, they were also going to discuss the technical route and details of controllable fusion machines.

Which was, the various tokamaks the countries had all built.

After the ITER chairman finished reading the meeting agenda, American representative Adam Cohen was the one to speak first.

“With regards to the controllable nuclear fusion technology disclosure ITER agreement, I would like to reiterate our position.

“We believe that China has been receiving ITER technology, but hasn’t fulfilled its international ITER obligations.

“We have spent a long time arguing about this previously. Today will be the last day we shall talk about this issue. If China continues to refuse to fulfill its obligations, then we will apply to the ITER Council for a vote on China’s withdrawal from ITER…”

The second Cohen finished speaking, there was a commotion in the conference room.

Before coming here today, most people already knew this was going to happen. However, they still didn’t expect that the first words that came out of the American representative mouth were so blunt and threatening.

The Americans were basically saying, “if you don’t agree with us, we will vote and kick you out”.

It looked like they didn’t give any room for negotiation for the Chinese representatives.

Director-General Motojima was sitting at the end of the conference table, and he spoke thoughtfully.

“It looks like I made a mistake in my previous judgment.”

Ishida, the Japanese representative who was sitting next to him, said, “What judgment?”

“I always thought the US was using intellectual property issues as a way to pressure China to disclose its superconducting magnet, plasma control scheme, and other technologies. I didn’t think the US made up its mind right from the beginning. All they want to do is to kick China out.”

Ishida frowned and said, “But how does this benefit the Americans?”

Motojima looked at him and said in a serious manner, “Ishida, benefits don’t always mean receiving something, it also means denying your opponents something.”

“Oh really…”

Ishida began to contemplate.

I guess this makes sense…

But will this really go so smoothly? If China is kicked out of ITER, will they really fall behind on fusion energy research?

I don’t think it’s this simple…

After all, he heard that the chief designer of the Chinese stellarator project was that genius Lu Zhou, who had created countless miracles…

Luo Zhanyuan, who sat at the conference table with his arms crossed, listened to the chatter around him. He looked at Adam Cohen with a poker face.

When the ITER conference organizer signaled that he could start speaking, he reached out and adjusted the microphone.

Suddenly, the satellite phone in his pocket began to vibrate at this inconvenient time.

Luo Zhanyuan felt the vibration in his pocket and frowned. However, he didn’t hesitate before reaching for his phone.

After all, there were only a few people on earth that could call this phone…

“Hello?”

Luo Zhanyuan quietly listened to the other side of the telephone. When he heard something, he suddenly raised his eyebrows.

He took a deep breath and murmured quietly, “Okay, I understand.”

The other representative sitting next to him glanced at him.

Even though it was only a short exchange, the other Chinese representative felt like Luo Zhanyuan’s tone had completely changed.

Adam Cohen patiently waited for Luo Zhanyuan to finish his call.

“Do you have anything to say?”

Luo Zhanyuan hung up the call and stuffed the phone back into his pocket. He glanced at Adam with a blank face.

When Luo Zhanyuan saw Adam’s smug face, he couldn’t help but laugh out loud.

Cohen was stunned when he saw the Chinese representative laughing, and his brows furrowed.

Helms, who was also part of the American representative team, furrowed his eyebrows. He had no idea why this Chinese guy was laughing.

“My apologies.” Luo Zhanyuan cleared his throat and removed the impolite smile off his face. He put his fists on the table and stood up as he said, “There’s a saying, if you want to punish someone, you will always find a way. We don’t have anything to say…”

Cohen wasn’t surprised at this reply.

He previously thought that the Chinese representative might try to argue on this issue, and he would fight back every single argument. No matter how fierce the argument was, the final outcome wasn’t going to change.

Cohen cleared his throat and was about to proceed onto the next step, which was the voting process. However, Luo Zhanyuan, who was still standing up, interrupted Cohen and spoke first.

“A month ago, we have disclosed all of the relevant data in accordance with the ITER policy. However, your unreasonable demands on this issue have been disappointing, to say the least.

“We are willing to cooperate under equal terms. However, we will never oblige to unreasonable demands.

“Since this is the case, we will not waste any more of your time.”

Luo Zhanyuan adjusted his collar and looked at the other Chinese representatives. Then, he looked at everyone in the conference room and spoke calmly, “I am speaking on behalf of the Ministry of Foreign Affairs of the People’s Republic of China.

“From this point onward, the People’s Republic of China will withdraw from ITER!”

The second he finished speaking, the entire conference room was so quiet one could hear a pin drop.

Luo Zhanyuan looked around the room. He then stared at Adam Cohen before speaking in a condescending manner, “I’ll let you guys host this meeting by yourselves.

“Farewell.”

After that, he packed up the things on his desk and turned around before walking toward the conference room door.

The ITER director looked at the Chinese representatives leaving. He was dumbfounded. He wanted to say something, but he didn’t know what to say.

Adam Cohen was the same. His entire body was frozen. It was like there were three question marks written on his face.

According to the usual process, they should kick the Chinese out by way of a voting process. However, he didn’t expect them to leave before the voting even began.

There was a commotion in the conference room again.

It wasn’t just the chairman and the American representatives, almost everyone was dumbfounded.

American representative Helms looked at the empty Chinese representative seats and couldn’t help but feel a little anxious.

They should feel happy right now.

After all, kicking China out of ITER was what the White House and CIA wanted; it was what he wanted.

Maybe…

China has already completed the key technologies for controllable fusion?

He quickly shook his head at this terrifying possibility, and he tried to remove this thought from his head.

No, impossible…

There is no way they already did it.

The ITER chairman secretary observed the chaotic conference room. The secretary began to whisper to the ITER chairman, “Mr. Chairman… Is this meeting still happening?”

The chairman went silent for a while.

“Begin whatever is next on the agenda.”

In any case, they still had to continue this meeting.

Next on the agenda list was the issue of controllable nuclear fusion machines.

Logically speaking, this was an exciting topic.

However, he wasn’t excited at all…

Chapter 540: Construction!

Chapter 540: Construction!

After China announced its withdrawal from ITER, it was like a brick was thrown in the quiet pond, setting off an uproar in the international community.

Various major media outlets reported on this incident and made different analyses as well as comments on the whole situation.

The secretary of the United States Department of Energy and spokesperson of the European Union Energy Department had repeatedly emphasized that this wouldn’t affect ITER’s progress and that all of the remaining country members were still focusing on energy development. However, the academic community and media outlets had a negative view of this situation.

Some even commented that this was the starting point of ITER’s collapse.

This rumor was floating around both in China and around the world.

Even though this piece of news was only a tiny segment in the news broadcast, it still attracted a lot of attention.

On Weibo, this piece of news that had nothing to do with boring celebrities flexing their wealth was actually on the top-ten trending page.

Even though the popularity of this event quickly decreased, it still caused widespread discussion.

Some people praised China for its domineering response to the US representatives' unreasonable demands. Other people thought that brute-forcing wouldn't fix any problem, and expressed their concerns for the Chinese future controllable nuclear fusion research field. They even blamed it on Lu Zhou…

[Apparently, the reason why China left ITER was that the STAR research institute didn't fulfill ITER's protocols.]

[Really?]

[I think it's real! My neighbor's uncle is working at some nuclear fusion research institute. Apparently, our nuclear fusion research institute was ruined by that Professor Lu.]

[What the hell do you mean ruined? Is the STAR machine not the best in the world?]

[They said it's the best, but surely STAR research institute isn't the only one doing research on controllable nuclear fusion. According to the ITER Agreement, the country members must share their research progress on controllable fusion research with other country members. However, the STAR research institute didn't fully disclose their research details!]

[If this is real, then Lu Zhou both brought us success and failure…]

[Stop bullsh*tting, this story has a million loopholes! For a national scientific research project like this, do you really think the research institute gets to decide on whether or not they disclose their results?]

[Omg, do you know what a contract is? Do you think the Americans are just questioning us for no reason? Are you confident that the STAR research institute didn't conceal any of their research results?]

[…]

"This is so annoying!" Xiao Tong sat at the table and scrolled through her Weibo. She said furiously, "These people have no idea what they're talking about, they're just speaking nonsense!"

My brother is working so hard…

Yet these people are still talking trash about him.

Lu Zhou looked at how riled up Xiao Tong was, but he only gave a short answer.

"Don't use your phone when you're eating."

Xiao Tong put her phone down. She felt dissatisfied.

"Brother, do you not care what the people on the Internet are saying about you?"

Lu Zhou chuckled and replied nonchalantly, "A thousand people have a thousand brains and a thousand mouths. You will never make everyone be satisfied with you. These things are all insignificant, just make sure you live your best life."

The world was dominated by laymen.

Whether it was in academia or in the industry, once a person reached the status of a celebrity, then their name was no longer just a name.

Compared to Lu Zhou's contributions to society or his "boring" research work, people would always be more keen to report on minor things. They would try to judge based on things like moral standards or his personal life.

It was just like how most people didn't even know what Yang Chen-Ning received the Nobel Prize for, but they would gladly blabber about his wife who was 50 years his junior.

Lu Zhou was used to seeing this.

Just like how in his Weibo comments area, rather than talking about the groundbreaking problems that he solved, netizens were always focused on why he was so handsome but didn't have a girlfriend…

Xiao Tong felt suspicious. She looked at her brother and said, "Why do I feel like you're not in a good mood?"

"Am I?" Lu Zhou rubbed his chin. He didn't feel any different than usual.

Xiao Tong nodded her head in a half-serious way.

After a while, she began to think about something naughty, and she said worriedly, "Brother…"

"What now?"

"Are you…" Xiao Tong was embarrassed as she said, "Are you the type of person that gets turned on when people insult you?"

Lu Zhou: "F*ck off."

…

Lu Zhou's mood had been pretty good recently.

Even though China's withdrawal from ITER had a certain degree of influence on his work, but compared to the breakthroughs that he recently made on his research, the effect of leaving ITER was negligible.

It wasn't just the PGC-1 material breakthrough, the first stage of the liquid lithium neutron recovery system design had also been completed.

Right now, he had all of the puzzle pieces in his hands.

All he had to do now was to complete the final, most important step…

STAR research institute.

A meeting was about to begin in a conference room inside the research institute.

All of the institutions that were cooperating with the STAR research institute had sent their engineers and representatives to this conference room.

Academician Wang was inside the conference room. When he flipped open his notebook, he suddenly heard a familiar and loud voice.

“I was wondering if you were going to come, I didn’t expect you to actually be here.”

“Oh, Old Sun?” When Academician Wang Zengguang saw the old man sitting next to him, his eyes lit up as he said, “Haha, long time no see!”

This was Sun Zhonghai, the chief engineer of the China National Nuclear Corporation!

Even though this guy wasn’t very likable, he didn’t care. After all, these two had known each other for more than 20 years.

“Yeah, long time no see.” Engineer Sun saw looked at his friend and said, “More than a year, right? Your hair isn’t even white yet, but half of them are falling off.”

“Haha, maybe you should look at yourself in the mirror first.” Academician Wang smiled and said, “I’ll be bald, but at least I’ll get to attend your funeral.”

Engineer Sun looked at the front of the conference room and said, “Speaking of which, did Professor Lu give you a heads up on what this meeting is for?”

“He didn’t tell me anything.” Academician Wang shook his head and looked at the red curtains on stage. “It’s about to begin soon, why don’t you just wait for a bit?”

Prior to this, he only heard that they were going to discuss important things at this conference. However, the STAR research institute didn’t tell them the specifics.

The conference began.

Once the curtains unveiled, the two stopped talking. They quietly waited for the conference to begin, just like everyone else.

Lu Zhou walked on stage and looked at all of the attendees. He cleared his throat and said slowly, “A week ago, there has been a breakthrough in the first wall material research.

“The PGC-1 material, developed by the Jinling Institute of Computational Materials, has reached the neutron radiation-resistant requirements for the fusion reactor.”

There was a commotion in the audience.

Academician Wang and Engineer Sun looked at each other with shock in their eyes.

They were also excited.

Lu Zhou didn’t stop.

He continued to speak in a clear and steady voice, “We have done enough preparations to integrate this material.

“I think that it is time to push our plan to the next stage.”

The venue was dead silent.

Even though Lu Zhou’s speech wasn’t particularly passionate or monumental, everyone here couldn’t help but clench their fists and hold their breath.

Lu Zhou was just as excited as everyone else, but he didn’t show it on his face.

He took a deep breath and looked around the venue. He then made a clear announcement.

“The STAR-2 demonstration fusion machine.

“Will begin…

“Construction immediately!”

Chapter 541: Tianwan

Chapter 541: Tianwan

From his Institute of Materials exchange visa being revoked to China leaving ITER, Xiao Le's mood this month was like a slide, sliding all the way to the bottom.

Xiao Le waited for a month at home; he basically wasted the entire month. Every day, he'd browse arXiv, track the latest major research institute trends, or help his mom walk the dog.

He was the only one that could understand the pain of being pulled out of unfinished research.

He hadn't heard any news from Professor Li yet. He didn't know if Professor Li hadn't found a new research project for him to do or just temporarily forgot about him.

The Institute of Materials had no further arrangements for the PhDs that were sent back from General Atomics. It seemed like they didn't have a plan for what they should do.

After all, after the withdrawal from ITER, many collaborative ITER research projects were suspended. There were a lot of people who had to reschedule their work.

Unfortunately, the state had tightened its investment in the tokamak field. Their existing funds simply couldn't support so many research projects…

Apparently, the institute was in chaos right now. Xiao Le wasn't sure if he wanted to go back or not. However, he still decided to rest for a few days and then go to Lu Yang.

After all, his brain was rusting from staying at home all day…

However, after he packed his bags and even bought the train ticket, he suddenly received a call from the institute.

"Where are you now?"

"Beijing… Did Professor Li ask you to contact me?" Xiao Le quickly responded to the phone.

“We’ve already contact Professor Li. He’s the one that recommended you to us. There’s a research position in Jiangsu that is a good fit, we want to know if you are interested.”

Xiao Le was muddled. “Wait a second, I don’t understand what you’re saying. Research position? In Jiangsu?”

“Yeah.” The man on the other side of the phone wasn’t impatient at all, and he said, “It’s in Jiangsu, and it’s about the controllable nuclear fusion.”

Xiao Le asked, “STAR research institute?”

“No comment.”

Xiao Le was confused, and he said, “The nuclear fusion field is too broad. You should at least tell me what exactly the research is and the research location.”

“The specific research is undetermined yet, the research location is still in a confidential period,” the man said. “You just need to say if you’re going or not.”

This… is really a difficult request.

Xiao Le smiled and shook his head.

However, he only contemplated for two seconds before answering…

“I’m going.”

This kind of opportunity was once in a lifetime.

His intuition told him that this was the only time he would have an opportunity like this.

The man on the phone replied, “Ok, I’ll help you with the procedure. Also, your train ticket has been changed, remember to take the train at 3 pm tomorrow.”

After that, he hung up the call.

Xiao Le looked at the phone in his hand with a weird expression.

Not only did the guy know about his train ticket, but he even changed his ticket destination. The person behind the call must be a powerful figure…

At least, it wasn’t anyone from the Institute of Materials.

…

On the afternoon the next day, Xiao Le sat on the train and arrived at the destination. He dragged his suitcase off the train and stood outside the train station. In less than half a minute, he saw a black Jetta park in front of him, which drove him to the mysterious workplace.

After he arrived at the destination, he was immediately shocked.

Not because the work location was deserted. Instead, it was the opposite. This place was almost too “lively”.

There were more than a dozen buses parked outside the factory, with various engineering equipment scattered around.

There were more than a dozen logos that he recognized. Some were top Chinese institutes for plasma physics, others were giant companies like the China National Nuclear Corporation.

He had a vague understanding of what this project was going to be.

However, never in a million years did he expect the STAR research institute to progress so quickly.

The entire world was still estimating how far they were from a demonstration reactor, but they had already begun their demonstration reactor project quietly.

Suddenly, a man in his early fifties walked over while holding a resume.

“You’re Xiao Le?”

Xiao Le nodded and said, “Yes, sir.”

“Ok, come with me.”

Xiao Le looked back at the driver who drove him here and gulped. He immediately took his suitcase and followed the old man.

Even though he followed the old man reluctantly, he couldn’t help but ask about the situation here.

“I’m in the tokamak field. This is probably research on the stellarator, right? Me coming here…”

“There’s no use saying these things to me.” The old man walked toward the research institute and said without any expression, “I’m only responsible for bringing you there. If you have any questions, you can ask him.”

Him?

Who?

Even though Xiao Le really wanted to ask this question, seeing that the old man didn’t answer his question regarding the research institute, he decided to shut his mouth instead.

He looked around and asked an unimportant problem.

“There are so many people here, how is this place going to be kept a secret?”

The expressionless old man suddenly smiled.

“Kiddo, do you know what happens when someone leaks a secret?”

“I don’t know.”

How would I know?

Xiao Le began to think.

The old man pointed behind him, toward the driver in the Jetta.

“If you want to know, you can ask him.”

…

The requirements for the location of a nuclear power plant were very high.

According to the international site selection guidelines, factors such as geology, surface, meteorology, hydrology, environmental protection, construction, transportation, power station technology, power grid, and social impact had to be considered.

First of all, geographically, there couldn't be any fault zones below the site. There shouldn't be any active fault zones within a few kilometers of the nuclear power plant. As for the history of the site, there shouldn't be any earthquake of magnitude 6 or above within 100 kilometers of the sea or 50 kilometers on lands near the site.

Secondly, there was the transportation issue.

The entire reactor was designed to be several times more complex than the fission reactor, and the size was also much larger. The various components involved couldn't be produced locally in the province of Jiangsu. It could only be produced and then transported to Jiangsu, where it would be assembled on site.

Taking all these factors into consideration, there weren't many places in Jiangsu that could meet all of these conditions.

After the provincial government discussed and consulted with experts, the location of the STAR-2 demonstration reactor was finally set to be near the Tianwan Nuclear Power Plant in Haizhou.

First of all, there were abundant resources available here. The site reserved for the third phase of the Tianwan Nuclear Power Plant project was a perfect place for the demonstration reactor experimental plant. Secondly, the engineers in this area were all experts in the field of nuclear power. They had an ocean of experience and could help with the demonstration reactor engineering problems.

As for the safety problem, Lu Zhou didn't have to worry about it at all.

After the demonstration reactor location was determined, a military combat unit was deployed in the area.

On the other hand, after the project site was selected, Lu Zhou rushed to the site and began to consult the engineers from China National Nuclear Corporation. They exchanged views on the design of the demonstration reactor.

Also, in less than a week, thousands of researchers from various research institutes and engineering-related fields were assembled.

In order to ensure that this project went smoothly, the country basically agreed to all of the conditions proposed by Lu Zhou.

Which were funding and human resources.

“I have the guy.” The old man walked into the laboratory with Xiao Le and placed Xiao Le’s resume on the table.

Lu Zhou nodded.

“Thank you.”

The old man waved his hand.

“This is nothing. You guys have fun, I’m leaving.”

When the old man left the office, he closed the door on his way out.

Lu Zhou looked at how nervous Xiao Le was and smiled.

“Relax, don’t be so nervous. I only want to ask you a few questions.”

Xiao Le smiled and said, “Of course I’m nervous, I’m meeting my idol.”

Idol?

Lu Zhou heard this and smiled awkwardly.

This kid has good taste in idols.

I think I have the potential to be an idol.

However…

This is not the time to be joking around.

Lu Zhou coughed and stopped smiling. He said, “I heard from the Institute of Materials that you have visited the DIII-D at the General Atomics laboratory?”

“Yeah…” Xiao Le felt like his answer was too simple and wasn’t respectful enough. He immediately said, “I went there with Professor Li when I first started my PhD. I stayed there for four years, so I was there for the longest.”

Lu Zhou smiled and said, “I know, that’s why I brought you here.”

He paused for a second and continued, “Since you stayed there for four years, I’m sure you know a lot about the situation there. With regard to their heating technology, I want to know what their main research area is? What is their research progress like?”

Xiao Le was an expert in this field, and he immediately answered, “Their main research area right now is on the ion cyclotron resonance heating…”

Lu Zhou listened carefully to Xiao Le’s explanation while rubbing his chin with his finger and nodding from time to time.

He had to admit that the DIII-D plasma diagnosis and heating technology was very strong.

The plasma diagnosis was handled by the He3 atom probe; he didn’t have to think about that for the time being.

As for the heating part, even though it wasn’t a critical issue, he still had to pay attention.

After all, the demonstration reactor was different than the experimental reactor. The plasma diagnosis didn’t matter too much, but the heating technology was important.

A lack of heating technology would ultimately be shown in the efficiency of energy output.

Also, through these detailed explanations from Xiao Le, combined with Lu Zhou’s own experience in controllable nuclear fusion research, he could roughly estimate the research progress the General Atomics energy company had made in the field of controllable nuclear fusion as well as how far they were from a demonstration reactor.

Lu Zhou asked a lot about DIII-D’s experiment. Xiao Le answered all of the questions one by one.

Finally, Lu Zhou contemplated for a bit before saying, “The tokamak heating device isn’t exactly the same as that of the stellarator, but the heating principle is similar.

“We plan on redesigning the ICRF[1.Ion cyclotron resonance heating] antenna from the EAST machine and building one that can be used on the stellarator.

“If you are interested, I can introduce you to the research project in this area.”

Did I just… struck the jackpot?

Xiao Le was ecstatic, and he immediately nodded and said, “Please do!”

As expected, I made the correct choice on the phone…

Chapter 542: The News That Shocked the World

The controllable nuclear fusion field had been action-packed for the entire year.

In the past, ITER would hold a press conference even for a tiny matter. However, this year, the amount of news overwhelmed the ITER spokesperson.

First was the plasma turbulence model, then it was the STAR one-hour magnetic confinement time, after that was the US representative questioning China at the ITER meeting, which resulted in China's withdrawal from ITER.

Throughout the year, it was like everyone working in the controllable nuclear fusion field was riding a thrilling roller coaster.

The news that China had withdrawn from ITER was still trending when an article released by Everyone Daily once again shocked the international plasma physics and controllable nuclear fusion community.

The first day in October, which was a national holiday, China suddenly announced that the STAR-2 demonstration reactor would enter its next and final stage.

Which was, that the demonstration reactor would begin construction at the Tianwan Nuclear Power Plant.

Once this announcement was made, not only were the international plasma physics and controllable nuclear fusion community shocked, but it was like a magnitude 8 earthquake that shocked the entire world.

Demonstration reactor!

No one expected this to happen; it all came so suddenly.

The English media outlet BBC was first to report on this news.

Benderbauer, Chairman of the American Tri Alpha company, agreed to do an interview with BBC. He commented on this event.

"If China becomes the first country to commercialize fusion technology, then they will gain significant economic, geographical, and political advantages. Their presence in the Asia-Pacific region will also expand at an unimaginable speed.

"I'm not exaggerating at all when I say this. This new technology is completely different than anything we had in the past. To put it in simpler terms, it is the holy grail of the energy field, it can illuminate the dark future for mankind.

"Of course, even though the situation is severe, the competition has only just begun. We are confident we can surpass them. Of course, that is on the premise that Congress continues to invest in us…"

In addition to Benderbauer, the BBC reporter also contacted Professor Steven Cowley, who was also the dean of the Oxford Inter-Collegiate Christian Union, former Director of the Culham Centre for Fusion Energy, and the former CEO of the United Kingdom Atomic Energy Authority.

During an interview, Professor Steven gave his opinion on China's withdrawal.

"Even though ITER has been talking about kicking China out of the ITER international project, no one wanted to see it go down this way."

Reporter: "Is there a difference?"

Steven Cowley looked into the BBC camera and said, "There definitely is a difference.

"In the beginning, China had the lowest amount of employees in ITER out of all of the countries. Now they are second only to the European Union. Not just

that, but they were ranked third in all of the country members in terms of funding, and they were always able to meet their financial commitments…

"Because the withdrawal process was so abrupt, all of the Chinese employees were forced to evacuate. Less than one-fifth of them chose to stay. A lot of key projects have stagnated because of this.

"The reason they chose to quit is undoubtedly a counterattack to the US' pressure on their STAR machine. The reason they were willing to do so was largely in part due to the success of their STAR machine.

"Every country has its own controllable fusion project and its own technologies. ITER isn't the only ongoing controllable fusion project. ITER has also never asked any other countries to disclose their research that wasn't related to the ITER project.

"What I have to say is that it is asinine to force China to leave ITER right now. Starting a competition for this future technology is also ridiculous.

"If China is no longer involved, then ITER, which is seriously under-funded, will no longer be able to continue. We can only hope that America fulfills its commitments and that South Korea and the European Union will be able to bear more funding… But looking at it practically, this is very difficult."

Reporter: "Are you not optimistic about ITER's future?"

Professor Steven: "Actually, I've never been optimistic. Shutting down our Joint European Torus in Oxfordshire to support the EU's ITER program was the wrong decision from the beginning. Where are they planning to build a demonstration reactor? In Cadarache, near Marseille. The second I heard that they are planning to build the demonstration reactor in France, I knew this project was doomed. Sure enough, they haven't even finished building the laboratory."

Reporter coughed and said, "Which country do you think is a better choice?"

Steven didn't even hesitate before saying, "Of course it's the UK."

Reporter: "…"

…

Washington, 1600 Pennsylvania Avenue.

A president with a stylish haircut slammed the newspaper on his desk. His spit was flying all over the place.

"I want to know what is happening here! If it wasn't for someone on Twitter reminding me to read the newspaper, I wouldn't have even known what is happening in China!"

The newspaper he was talking about was the Everyone Daily - English edition.

The news headline was about the latest STAR-2 demonstration reactor project development.

The irony was that he didn't first hear about this through his own intelligence channels. Instead, he read it in a Chinese newspaper.

The bright red eye-catching news title was painful to his eyes.

He could feel the provocation from China just through the newspaper alone.

Sitting next to him was CIA director Gina Haspel and the CIA controllable fusion intelligence commissioner Helms.

Gina had her arms crossed as she slowly said, "Maybe Mr. Helms can explain."

When Helms heard the woman call his name, his shoulders couldn't help but tremble.

Gina Haspel.

If there was one person in the CIA he didn't want to piss off, then it undoubtedly was this sixty-year-old woman.

In addition to Abu Ghraib torture and prisoner abuse rumor that gave her the name "Bloody Gina", Helms had heard other rumors about Gina's cruel doings.

When Trump appointed her as the CIA director, it set off an uproar in the United States…

Helms took a deep breath before he said, "This is our negligence. We underestimated the interest the Chinese have on controllable fusion. They might be more ahead than we think."

Trump took a deep breath. "I want to know… After they finish building the demonstration reactor, how many years are they away from achieving this technology?"

"I don't know." Helms had a painful expression on his face as he said, "But at their speed, it shouldn't take long for them to go from demonstration reactor to fusion commercialization…"

The office became silent.

Seeing that Mr. President and Ms. Director weren't speaking, Helms carefully tried to defuse the situation. He coughed and muttered, "I think we should pay attention to one particular person."

Haspel looked at him and said, "One person?"

"Yes." Helms gulped and nodded. He then said, "I've done the research. Before he returned to China, even though China has made some achievements in the tokamak, they were far from catching up to us. They didn't do any research on the stellarator.

"But after he returned to China, within a year, the situation changed drastically…"

Chapter 543: Outbreak?

Chapter 543: Character Outbreak?

Regardless of how the White House was reacting to this sudden situation, the global market had already responded.

The day after Everyone Daily reported on the demonstration reactor project, the global thermal coal futures market was scared sh*tless; everyone panicked and began selling.

What did a demonstration reactor mean?

How far away was China from controllable fusion technology?

There wasn’t anyone that could answer these questions.

However, one thing was certain—China was a huge coal-consuming country, and it consumed more than 50% of the world’s coal. If China didn’t need so much coal in the future, who was going to pay for the coal they had in stock?

Even though everyone knew that this day wasn’t going to come anytime soon, the futures market was about future transactions. Whenever investors lost their confidence in the future of a commodity, the downfall of that commodity was only a matter of time.

At a time like this, the faster one exited, the lower the losses.

This didn’t only happen in the coal industry.

Since a large amount of money was withdrawn from the energy sector, the panic began to spread to other energy markets such as propane, natural gas, and crude oil. This led to a decline in the entire energy futures market.

Even though the loss of other futures contracts was a lot less than that of coal, it still maintained a downward trend. This trend continued from the opening to the closing of the market.

The stock market was just like the futures market.

The energy sector was completely demolished.

The world’s major financial institutions made some statistical analysis on the day trading situation. In just one day, the global energy stock market capitalization dropped hundreds of billion USD, almost equivalent to the market cap of Google.

Lu Zhou was the person that triggered this chain reaction. He had no idea what he just unintentionally did.

However, even if he knew, he wouldn’t care too much. At most, he would sign and hope the money would go to him instead.

Because he could spend the money more meaningfully…

…

[Congratulations, User, for mission completion!]

Lu Zhou was in the pure white system space. He read the texts on the holographic information screen and received the rewards from his mission victory.

Just like last time, he completed two mission-chain missions at once.

First was the PGC-1 material that gave him 100,000 engineering experience points and 500 general points.

After the demonstration reactor project began, the government invested all of its funds that were previously allocated to ITER into the STAR-2 demonstration reactor project. Since the accumulated investment reached 10 billion, it brought him 50,000 general experience points and one lucky draw ticket.

Lu Zhou looked at the only two level-2 disciplines on his characteristic panel. He thought for a bit and finally decided to assign the 50,000 general experience points into energy science.

His information science discipline already unlocked the artificial intelligence technology branch. As long as Xiao Ai kept improving, his artificial intelligence level would also be upgraded. Hence, he didn’t need to spend any more experience points on artificial intelligence.

In contrast, energy science wasn’t his cup of tea. Therefore, it wasn’t that easy for him to earn experience points in that field.

Considering the fact that the reactor energy generator was obviously in the energy science field, Lu Zhou decided to level up this discipline, just in case.

After Lu Zhou finished assigning the experience points, he refreshed his characteristic panel and saw the updated information appear in front of him.

[

A. Mathematics: Level 7 (144,000/1.2 million)

B. Physics: Level 5 (83,215/300,000)

C. Biochemistry: Level 4 (74,000/100,000)

D. Engineering: Level 4 (0/200,000)

E. Materials science: level 5 (113,000/300,000)

F. Energy science: Level 3 (0/100,000)

G. Information science: Level 2 (3,000/50,000)

General points: 5,475 (one lucky draw ticket)

]

Lu Zhou briefly looked at his characteristic panel and shook his head.

“I wonder when I’ll be able to reach level 8…”

1.2 million experience points.

That’s more than all of the other discipline experience point requirements combined.

After Lu Zhou closed his characteristic panel, he was about to leave the system space.

However, he suddenly remembered that this second mission chain also gave him a lucky draw ticket.

Lu Zhou hadn’t done a lucky draw in quite a long time.

After he activated the mission chain, he almost forgot the system had this feature.

This lucky draw cost US$10 billion in research funding.

Lu Zhou, who normally didn’t have any expectations for the system’s lucky draw, couldn’t help but get excited.

Lu Zhou pressed the lucky draw button and a roulette wheel began to spin.

Lu Zhou subconsciously prayed for a few seconds and pressed the button again.

The wheel's inertia caused it to spin a couple more times. It then finally stopped.

[Congratulations, User, blueprint awarded!]

Lu Zhou: "?!"

The moment he saw this line of text, he froze.

*The f*ck?*

Praying to the gods actually worked?

He thought about it carefully. The last time he received a blueprint was more than four or five years ago.

[Received: PGC-1 material production process.]

Lu Zhou: "???"

Even though Lu Zhou was used to the system playing tricks with him, he didn't think the system would do something to this extent.

Speaking of which, wasn't he the one that invented the PGC-1 material?

Lu Zhou stood in front of the information screen and contemplated it for a bit. He then sighed.

Whatever, it's fine.

Coincidentally, he was trying to figure out how to solve the production problem for the PGC-1 material. After all, the method that Hou Jinli invented was only a laboratory preparation method. It could be used to prepare a small number of samples, but it would be almost impossible to produce enough for a reactor.

This production process blueprint actually saved him a lot of time.

After Lu Zhou collected the prize, he left the system space, and his consciousness returned to reality.

Recently he had been at Haizhou, overlooking the demonstration reactor construction site. He obviously couldn't return to his Jinling mansion every night.

The China National Nuclear Corporation arranged a house for him. It was in the employee accommodation area near the Tianwan Nuclear Power Plant. The house was quite modern, with 90 square meters or so.

Even though it wasn't particularly big, it was decent.

After all, all of his work was basically done on the construction site, and he only needed a place to sleep.

After Lu Zhou opened his computer, he took out his black USB from the system space and plugged it into the computer.

Just like he expected, after he finished copying the data, the black USB began to slowly disintegrate into ashes before finally disappearing.

Lu Zhou blew at the USB connection port to get rid of the ashes. Without hesitating, he immediately opened the recently copied file.

In theory, the blueprint rewarded by the system probably contained answers to theoretical or technical problems that were within 1 to 2 levels of his discipline levels.

He briefly looked at the drawings. Even though the design had a lot of novelty, it was still within the scope of something he could understand.

The most important thing was that, according to China's production capabilities, it was completely feasible for them to implement this production process.

After Lu Zhou finished reading the blueprint, he began to smirk.

The first wall material was completed.

All he had to do now was to find a suitable partner and begin this production process.

Chapter 544: Full Cooperation

Chapter 544: Full Cooperation

After Lu Zhou turned off his laptop, he began to feel a bit hungry.

It was around noon, so he sent a text to Wang Peng and walked downstairs in a new outfit. He sat in Wang Peng's car and drove toward the cafeteria at the demonstration reactor construction site.

This cafeteria was located on the inner side of the construction site. It was originally reserved for the third phase of the Tianwan Nuclear Power Plant. However, just like the construction site, it was now given to Lu Zhou.

Just like the other researchers, Lu Zhou only came to Haizhou a week ago. He didn't start cooking at home, nor did he have any cooking utensils.

Even though he was used to cooking for himself, he wasn't a picky eater. Over the past week, just like the other researchers, he ate all three meals everyday at the cafeteria.

Honestly, the food here was quite good. The chefs in charge were military cooks, who were transferred over from the army.

Apparently, in order to provide food for more than 2,000 scientific researchers, the military squadron near the area intentionally expanded their team of military cooks.

Lu Zhou heard these rumors from Wang Peng.

Lu Zhou ordered a side of Yuxiang shredded pork and braised pork leg. He asked Wang Peng to get him a bowl of soup from the other counter. Then they both sat down in the cafeteria seating area.

Lu Zhou was still thinking about that blueprint when Wang Peng suddenly said, "Oh yeah, sir, there's something I want to discuss with you."

Once Lu Zhou heard Wang Peng call him "sir", he knew that this was something serious. So, he asked, "What's the matter? Let's hear it."

Wang Peng: "My higher-ups want to strengthen your security."

"Security?" Lu Zhou munched on a piece of pork leg as he asked, "Did something happen?"

Wang Peng shook his head and said, "Not like that, it's mainly for cautionary reasons."

Lu Zhou said, “I’m fine with anything. You guys can just do whatever you want. I’m only responsible for the research.”

“Of course we still need to consult your opinion.” Wang Peng smiled and said, “After all, we don’t want to bring too much trouble to your daily life.”

Lu Zhou smiled and used his chopstick to grab another piece of pork leg. He then asked, “Speaking of which, let me ask you, what department is your boss in?”

Wang Peng paused for a second before he asked curiously, “Do you not know?”

Lu Zhou shook his head and said, “I don’t know. I was never interested before, but now that you’re bringing this up, I’m kind of interested. Of course, you don’t have to tell me if it’s not appropriate.”

“There’s nothing inappropriate about this.” Wang Peng looked around before he answered in a hushed tone, “Ministry of State Security.”

Lu Zhou was stunned when he heard this, and he looked at Wang Peng suspiciously.

“You sure?”

Wang Peng was amused. “Of course I’m sure, why would I lie?”

“Nothing.” Lu Zhou coughed and said, “I just feel like…”

Wang Peng: “I don’t look like it?”

Lu Zhou nodded and said, “Yes.”

I mean you don’t even wear a suit or sunglasses.

Also, with your physique, it doesn’t look like you can fight very well.

Of course, it could also be that Lu Zhou just couldn’t tell.

After all, Wang Peng didn’t know a lot about academics.

Wang Peng was speechless, and he said, “This… We don’t look like the bodyguards in movies, and the nature of our work is quite different.”

Lu Zhou looked at the sweaty chefs behind him chopping vegetables, and he jokingly said, “Hey hey, look at that guy chopping vegetables, how many of him can you take on?”

“You’re hilarious.” Wang Peng coughed and said, “I was trained in the special forces, so it’s humiliating to compare me to a chef.”

…

After Zhou Chengfu got back from Europe, he had been staying in Beijing. He had to deal with the “aftermath” of the China International Nuclear Fusion Energy Program Execution Center.

Since China withdrew from ITER, the China International Nuclear Fusion Energy Program Execution Center was now in an awkward position.

Even though it wasn’t going to be dissolved immediately, most of its cooperative research projects that were linked to ITER were basically all suspended. Their research fundings were also given to the STAR-2 demonstration reactor project instead. It was basically like they were dissolved.

Also, what hurt Zhou Chengfu even more than the dissolution, was that the higher-ups only had one demand. Which was to fully cooperate with Chief Designer Lu Zhou and participate in the STAR-2 demonstration reactor project.

Yes, fully cooperate.

Zhou Chengfu’s heart burst into flames whenever he heard these two words.

However, this anger was contained in his heart since he had nowhere to vent.

After he finished some work, he planned on going to get some food. However, he suddenly received a call.

He took out his phone and saw the call was from Pan Changhong.

Zhou Chengfu’s mouth twitched, but he still answered the call.

“Hello?”

“Old Zhou, how are you?”

Zhou Chengfu smiled coldly and said, “Ah, are you calling to laugh at me?”

Pan Changhong: “Why would you say that, what is there to laugh about?”

Zhou Chengfu’s eyes squinted, as if he wanted to say something.

However, the other end of the phone spoke first.

“We’re long-time friends. Even though you don’t like me sometimes, I still think of you. I have a bottle of liquor with me, are you coming?”

Zhou Chengfu wanted to refuse at first.

However, he didn’t know why he agreed to it.

He came to the restaurant that Old Pan mentioned on the phone and sat down. Soon after, he saw a familiar person walking into the restaurant while holding a bottle of Maotai.

“Boss, the usual, give us some dishes that pair well with alcohol.”

“Okay!”

The boss of the restaurant, who was behind the counter, walked into the kitchen.

Pan Changhong sat across from Zhou Chengfu and smiled.

“The traffic was pretty bad, that’s why I’m a bit late. I didn’t expect your old a*s to come this early.”

Zhou Chengfu said, “If you have anything to say, just say it.”

Pan Changhong said, “I don’t have anything to say, I’m only here today to drink with you and talk about the old days. What, you don’t even have time to eat one meal with me?”

Zhou Chengfu’s eyebrows furrowed; he had no idea what this guy was trying to do.

Pan Changhong didn’t explain anything. He took two cups and poured the Maotai into each of the cups.

“After I left your place, I started to think. I answered a lot of my own questions, but there are still some things that I don’t understand.”

Zhou Chengfu faked a smile as he asked, “What don’t you understand?”

“I don’t understand what your plan is.”

Zhou Chengfu frowned and didn’t say anything.

Seeing that Zhou Chengfu didn’t respond, Academician Pan continued to speak, “Money is too boring for you, I’m sure you don’t care about it. Fame? Our students are scattered all over the world, so it’s not an exaggeration to say that in China, there isn’t anyone in the controllable fusion field that doesn’t know your name.”

Zhou Chengfu snorted and grinned.

“You asked me to drink with you today just so that you could kiss my a*s?”

Pan Changhong chuckled.

“I’m already retired, so why would I need to kiss your a*s? Are you getting dementia?”

Zhou Chengfu stared blankly at Pan Changhong.

“Just give it to me straight, stop beating around the bush.”

Pan Changhong stared at Zhou Chengfu for a while.

“You’ve changed,” he said all of a sudden.

Zhou Chengfu frowned.

Pan Changhong took a sip of the liquor and licked his lips in a satisfying manner. It was like he was being nostalgic about the past.

“A few decades ago, we were less developed back then. The state wanted us to learn from the western countries, the Americans were researching the stellarator C machine at that time, so we made the Lingyun.”

“Then the Americans stopped their research and followed the Russians into researching the tokamak instead. We figured out that we couldn’t continue

with our Lingyun research, so we started researching the tokamak as well. Then inertial confinement fusion replaced the tokamak on the international stage, so we decided to research that instead. Then the Americans failed at their NIF ignition experiment, so the inertial confinement fusion field cooled down again and the tokamak became a hot topic again.

“At that time, I said we shouldn’t do this. We’ll always be behind other countries, we’ll never be the leaders. You agreed with me and said that the only way we can develop our own technology is if we participate in the most cutting-edge research in the world. So, we turned our attention to ITER because we thought that was the path to success. I wrote a letter to the Communist Party of China while you went to Europe for negotiations. Then after a few years, we finally made China a country member of ITER.

“After returning, you joyfully told me that I had no idea how hard you worked to secure this deal.

“After that, China’s controllable fusion research went on the highway. More and more research institutes joined the field. The Southwestern Institute of Physics was no longer the only research institute in the field of controllable fusion. From Rongcheng to Lu Yang, we created more than a dozen fusion machines. Within twenty years, we went from the followers to leaders…”

Zhou Chengfu smiled coldly as he interrupted, “What about now? Your blood, sweat, and tears are destroyed by that kid.”

They left ITER, the HL-2A was still under repair, the Southwestern Institute of Physics was falling behind in the controllable fusion field… Even though half of this was because Zhou Chengfu didn’t want to cooperate, but that root of all this was Lu Zhou.

Zhou Chengfu thought that Pan Changhong would be somewhat emotionally affected. He didn’t expect Pan Changhong to smile and sip some liquor.

“Yeah, and?”

Zhou Chengfu said with a blank face, “You’re not hurt at all?”

“Hurt about the tokamak or ITER?” Pan Changhong smiled and said, “Ask yourself, we are pursuing the label of tokamak or ITER, or are we pursuing the controllable fusion field? Right now, my blood, sweat, and tears became the

STAR-2 demonstration reactor. We just took a big step toward the finish line, so why would I be hurt? How about you tell me, why should I feel hurt?”

Zhou Chengfu had a subtle change in expression.

Pan Changhong looked deep into his old friend’s eyes and said emotionally, “Old Zhou, I only have two words for you.

“Wake up.”

Chapter 545: Core Catcher

Chapter 545: Core Catcher

“This is a bit interesting.” When Academician Wang Zengguang looked through Lu Zhou’s blueprint, he looked interested.

After a while, he asked, “Who designed this thing?”

Lu Zhou obviously couldn’t give him the real answer, so he gave a simple answer.

“The institute designed it.”

Technically, he was part of the institute.

Also, it was kind of “designed” by the system?

Academician Wang looked at Lu Zhou suspiciously and said, “Surely there’s a main person that designed this thing. No one designed this out of thin air.”

Lu Zhou smiled and didn’t explain. Instead, he diverted the conversation.

“Let’s not go into the details. Rather than talking about who came up with this idea, I want to know more about this blueprint. Does the China National Nuclear Corporation have the means to implement this production process?”

Academician Wang looked at the blueprint and rubbed his chin. He thought for a bit and said, “It’s difficult, but it should be fine.”

Since Academician Wang said it was fine, Lu Zhou sighed in relief and nodded.

“Okay, I’ll hand this over to you guys then.”

“No problem, I promise we will solve this as soon as possible.” Academician Wang looked at Lu Zhou and smiled as he said, “Looks like Professor Lu is a secretive man.”

Lu Zhou: “…”

Is he thinking that I’m the one that drew the blueprint?

Lu Zhou remembered what happened last time he drew something in front of this guy. He could probably guess why Academician Wang misunderstood.

However…

You can misunderstand all you want, it doesn’t affect me.

I’d rather you misunderstand than keep drilling me with questions.

Academician Wang looked at the blueprint in his hand and suddenly remembered something.

“Oh yeah, even though controllable fusion is a national-level project, there is still a clear line between public and private enterprises. This technology is developed by the Jinling Institute for Advanced Study, so we can’t just use it for free. I suggest for a cooperation agreement. You guys provide the technology, we implement the production.”

If Academician Wang Zengguang took someone else’s blueprint, he wouldn’t have mentioned anything. However, Lu Zhou’s status was different.

What did it mean to be a chief designer of a national-level project?

It meant that he could spend tens or even hundreds of billion yuan however he wanted. He was the one that had all the power. This was coupled with the fact that the government viewed highly of him. Even a giant company like the China National Nuclear Corporation didn’t want to offend him.

Therefore, even though Lu Zhou didn't make any special demands, Academician Wang still considered all of the factors. He didn't want to get into any trouble in the future, so he couldn't let Lu Zhou feel like he was wronged.

He had to talk about this with the company leadership team.

Lu Zhou didn't think much of this suggestion as he replied nonchalantly, "Okay, do it then."

Actually, Academician Wang was over-thinking it. Lu Zhou didn't really care about this. Compared to the huge lithium-sulfur battery market, the first wall material nuclear fusion market was minuscule.

If the PGC-1 material patent fee could earn Lu Zhou a dime, then his cooperation with the China National Nuclear Corporation would earn him an extra 5 cents at most.

If he really wanted to make money, he shouldn't care about these small profits. He just had to focus on commercializing the controllable nuclear fusion technology.

Not to mention, the state definitely wouldn't treat him badly. The impact of nuclear fusion technology breakthrough would increase the lithium-sulfur battery market by several-fold. Just the increase in sales of the battery anode materials and cathode materials alone was enough to make him filthy rich.

But these were all meaningless.

After all, he had more money in his bank account than he could ever spend.

Even if there were another zero at the end…

Emm…

Wait, that sounds quite tempting actually.

While Lu Zhou was talking with Academician Wang about the blueprint details, a knocking sound was heard from the office door.

They stopped their conversation, and Lu Zhou looked toward the door.

"Come in."

The door was pushed open, and a researcher walked in.

“An expert came from Southwestern.”

Southwestern?

Lu Zhou’s face was full of surprise.

“Who?”

“Academician Zhou Chengfu…”

…

A group of people was standing at the demonstration reactor construction site entrance.

Wang Peng followed Lu Zhou outside. He signaled the soldiers to open the entrance checkpoint. Lu Zhou looked at Zhou Chengfu standing there and reached out his hand while smiling.

“Nice to see you here.”

Zhou Chengfu shook hands with Lu Zhou. He looked emotionless as he spoke slowly, “Nice to see you.”

Lu Zhou felt like he had something to say, so Lu Zhou asked, “Do you want to come to my office?”

Zhou Chengfu nodded.

“Sure.”

The two walked side by side, they didn’t talk much.

Lu Zhou didn’t want to feel so awkward, so he tried to initiate a conversation.

“Is the HL-2A fixed?”

Zhou Chengfu said, “Thanks to you, not yet.”

Lu Zhou smiled awkwardly as he replied, “Yeah, that was my fault.”

Zhou Chengfu: “…”

Even though Zhou Chengfu came in “peace”, it was hard to restrain himself when he saw Lu Zhou’s smug smile.

They walked through the middle of the construction site and passed a big pit.

Zhou Chengfu looked at the construction equipment next to the pit and frowned.

“What’s this?”

Because this wasn’t a secret, Lu Zhou casually said, “This is the core catcher. It’s to prevent accidents from happening. It collects and cools the nuclear core in the event of a serious accident… It’s just a foundation right now, but it should be done by the end of the year.”

After all, the interior of a controllable fusion reactor simulated the energy of a star. Even though the fusion reaction was theoretically safe, hundreds of millions of degree plasma was still a serious threat.

Especially since the energy in the demonstration reactor was completely different from the experimental reactor.

If a leak were to occur, before the plasma could be cooled to a safe temperature, it would melt everything in its path. There was nothing in the solar system that could resist the heat from the plasma.

The core catcher was there to catch the expensive fusion core from escaping.

Even though it was only a one-time use kind of thing, if it could save any components of the machine that wasn’t destroyed, it would be worth it.

Zhou Chengfu knew what the core catcher was from the fission reactor, and he looked at Lu Zhou in surprise.

“You guys even thought about this?”

Lu Zhou smiled and said, “It’s not my idea. It was suggested by the engineers from China National Nuclear Corporation. Since it made sense, I approved it.”

Both the tokamak and the stellarator could be interpreted as larger nuclear cores compared to normal fission reactors.

After the engineers from the China National Nuclear Corporation understood the value of the reactor, they immediately proposed to use the Tianwan Nuclear Power Plant third-generation nuclear fission core catcher on this fusion reactor.

Coincidentally, Lu Zhou could also use the Tianwan Nuclear Power Plant as a reference. Therefore, he immediately made a decision.

Even though Lu Zhou didn't sound like he was bragging at all, Zhou Chengfu still couldn't help but complain, "Why do you even bother with the core catcher, do you even have a reactor?"

Lu Zhou smiled and said, "The reactor is still under construction. The two components don't interfere with each other. We will complete all of the components and then assemble them."

This time, Zhou Chengfu didn't reply.

He had nothing to say.

After all, he didn't have a deep enough understanding.

He didn't even fully understand the concept of an experimental reactor, much less a demonstration reactor.

The two stopped walking. It was like Zhou Chengfu didn't plan on talking anymore. He just stood there as he quietly looked at the engineering equipment on the construction site and the busy engineers who were walking around.

There were also things happening behind the scene that he couldn't observe.

There were more than thousands of people working on this reactor.

The whole demonstration reactor project was like an engine; every person was like a tooth on a gear, running the engine at a high speed.

Jealousy?

Emotional?

Disbelief?

Right now, Zhou Chengfu's heart was so full of emotion that he had no idea how to make of this.

He didn't understand how a 20-something-year-old kid was able to do all this. If he didn't see it with his own eyes, he never would have believed this was true.

However, it looked like Lu Zhou really did it.

This was the indisputable truth.

Zhou Chengfu suddenly felt a little depressed.

Just like how Old Pan didn't understand his actions, he didn't understand Old Pan.

But now, looking at all of this, he suddenly understood.

If they continued to develop at this rate, maybe…

Maybe Lu Zhou could really develop controllable fusion energy in his lifetime.

After staying silent for a while, Zhou Chengfu slowly spoke.

"These thousands of workers are all working for you, right?"

Lu Zhou: "You can interpret it that way."

Zhou Chengfu looked at Lu Zhou and said, "Have you ever thought that one day, maybe because of your decision or your mistake or because of someone else's mistake, you lose your research project… I want to know, what will you do?"

Lu Zhou: "What does this have to do with me?"

Zhou Chengfu was stunned.

He didn't expect Lu Zhou to respond this way.

He stood there for a while and smiled.

"Huh? Oh, it doesn't. Ah, a leader that doesn't care for his workers isn't a good leader."

Lu Zhou smiled.

“That’s why I never wanted to become a leader. All I’m responsible for is to explore the unknown. As for my workers’ futures, that’s something for them to think about. I am not obligated to care about it.”

Chapter 546: We Are Differen

"Ah, sounds easy." Zhou Chengfu shook his head and smiled. He didn't know if he was smiling at himself for being paranoid or he was smiling at how young Lu Zhou was. He said, "One day, you'll realize it's not that simple.

"Well, it looks like you won. I have nothing to say.

"I have to apologize for what happened in the past. But I have to say, even if I, Zhou Chengfu, wasn't around, there would have been a Wu Chengfu or Zheng Chengfu instead. Also, let's talk about you for a moment."

Zhou Chengfu suddenly stared at Lu Zhou with his bloodshot eyes.

"There will be a day where you are the king of your field. What you say is the truth, no one can trump your throne. If you want to go east, no one dares to go west. The scholars that resent you only dare to talk behind your back… Are you certain that when that day comes, you'll be any different than me?"

Lu Zhou stared at Zhou Chengfu for a while and furrowed his eyebrows.

"Your idea is strange in and of itself. Since you're talking about the truth, then is the truth not the thing that determines whether one should go east or west?"

Zhou Chengfu was stunned.

After a while, he suddenly laughed.

His dry laughter was becoming louder and louder, and in the end, his voice was full of self-destruction.

That wave of laughter attracted the attention of the construction workers. It also attracted the attention of the security team who were patrolling nearby.

When they were about to come over and figure out what the situation was, they saw Wang Peng was following Lu Zhou. Therefore, they decided to let it go and continue their patrol route.

Lu Zhou looked at him quietly, but he didn't stop him.

Finally, Zhou Chengfu finished laughing. He coughed and said, "I used to ponder about… what is different about you. Now I think I figured it out. You're a freak, no wonder Old Pan likes you so much."

Lu Zhou looked at him with a blank expression as he waited for Zhou Chengfu to finish speaking.

Zhou Chengfu used his sleeves to wipe his mouth. He then took a deep breath and stood up straight.

He stared at Lu Zhou for a while before saying, "I hope you remember what you said today."

…

After that, Zhou Chengfu turned around and left.

After he left the demonstration reactor construction site, he took a plane and returned to Rongcheng.

Lu Zhou didn't really care about his visit.

He was always a very easygoing person. He'd be happy if other research institutes would cooperate with him, but he wouldn't care if they didn't want to cooperate.

After all, scientific research wasn't farming crops, nor was it building a skyscraper or repairing roads. Investing in scientific research didn't necessarily mean returns.

If Mr. Zhou really didn't want to cooperate with him, there wasn't much he could do.

Instead of dwelling on trivial matters, it would be better for him to use the resources that he already had to produce more value.

Lu Zhou nearly forgot about the whole Zhou Chengfu situation. Two weeks after Zhou Chengfu's visit to the demonstration reactor, the people from the Southwestern Institute of Physics visited again.

This time it wasn't Zhou Chengfu. It was an old man in a gray jacket, who looked like he was in his fifties.

Academician Yuan Yuan made a simple self-introduction and continued to speak, "Academician Zhou retired from the institute yesterday. I am the dean of the institute now."

Lu Zhou was stunned. He raised his eyebrows and said, "Retired?"

Yuan Yuan replied cautiously, "Yeah… This happened recently. Before he retired, he told me to come here and visit you…"

Academician Yuan sighed and began to beg.

"I hope Professor Lu can give us a chance…"

Lu Zhou felt a little surprised, but he just smiled.

"I don't know the so-called 'chance' you're talking about, but if you guys want to join the demonstration reactor construction project, I'd welcome you with both arms open."

Academician Yuan was stunned. He obviously didn't expect Lu Zhou to answer so casually.

However, he quickly replied, "Thank you!"

"You're welcome." Lu Zhou reached out his right hand and said, "So, Academician Yuan, I'll thank you in advance."

Academician Yuan shook Lu Zhou's hand as he said gratefully, "No way, I'm the one that should be thanking you. Thank you for giving us this opportunity so that we can continue to contribute to China's controllable nuclear fusion field."

Lu Zhou let go of his hand as he smiled.

"No need to thank me, you made that choice yourself."

…

There wasn't any kind of irreversible dispute between Lu Zhou and the Southwestern Institute of Physics.

This all happened because Mr. Zhou was trying to cause trouble.

As for the normal researchers in the Southwestern Institute of Physics, they didn't have a say in the matter at all. Lu Zhou obviously didn't hold a grudge against them.

One could never have too many talents. If they wanted to contribute to the controllable fusion field, he obviously wouldn't reject them.

However, the only unfortunate thing was that Zhou Chengfu decided to retire.

In fact, with his ability and experience, it was a bit too early for him to retire.

Lu Zhou thought about it carefully and discovered that this was actually the best decision for Mr. Zhou, the Southwestern Institute of Physics, and China's future in the controllable fusion field…

Demonstration reactor site, chief designer's office.

Academician Pan sat in the office and sighed in relief. He said, "I really didn't expect Old Zhou to be so persistent. He didn't want to back down. With his ability, he could've continued to dominate this industry. Why did he have to retire? Ah, how unfortunate."

He looked sympathetic.

They had been struggling together in the controllable nuclear fusion field since the 70s, and they walked a long way to get here.

Now that the demonstration reactor project began, controllable fusion was just around the corner.

What was the difference between choosing to retire at this time and deciding to stop the war one day before it could be won?

Lu Zhou looked at the sorrowful Academician Pan and thought about something. He then said, "A while ago, he came here to talk to me."

Academician Pan looked surprised.

"What did you guys talk about?"

Lu Zhou thought for a bit and said, "We talked about something that had nothing to do with controllable fusion."

Academician Pan didn't ask about the specifics. He only sighed and said, "Okay, it looks like he made his choice after careful consideration."

Academician Pan put his sympathy toward his old friend aside and smiled.

"Oh yeah, other than the Southwestern Institute of Physics, he also retired from his director position at the China International Nuclear Fusion Energy Program Execution Center. We haven't decided on a new person yet, but the academicians at the Academy of Engineering all wrote letters recommending you to fill this role. What do you think?"

Chapter 547: Materials Production

Chapter 547: Materials Production

The predecessor of the China International Nuclear Fusion Energy Program Execution Center was the International Nuclear Fusion Energy Program Execution Center. The name changed ever since China left ITER. The director had always been Zhou Chengfu.

Lu Zhou looked at Academician Pan’s expression and knew that Academician Pan was probably the one that convinced the other academicians to vouch for him.

After all, his level of networking and contacts in the Chinese academic community wasn’t enough to warrant academicians who he had never met to write letters for him.

Lu Zhou began to enter into deep thought.

Should I accept or not?

He thought for a bit and said, “I’m already the chief designer of the STAR-2 demonstration reactor project. Is it fine for me to become the director of the China International Nuclear Fusion Energy Program Execution Center as well? Not to mention, my research work is very busy, and I don’t have the time.”

“Of course it’s fine, it’s common to have multiple jobs in academia. Not to mention these two jobs don’t conflict with each other, plus it wouldn’t take up too much of your time.” Academician Pan shook his head and said, “You just have to hold the director spot. The actual work can be delegated to your secretary, assistant, or if you really don’t want to do it, you can make the deputy director do it.”

Normally, Academician Pan wouldn’t suggest someone doing this. After all, it was very common for higher-ups to do nothing and delegate work all day.

But since this was Lu Zhou…

He didn’t have to worry about these things.

Lu Zhou didn’t look like he was convinced, so Academician Pan continued, “If you really don’t want to go, none of the deputy directors is a good fit. I’m sure you can figure out the reasons. If we transfer a person from the Energy Bureau, not only will they be unfamiliar with the work, but I’m afraid that they’ll be commanding people that know more than them and affect the progress of the project. We are focusing our attention on the big things, so we must do everything possible to avoid wasting resources.”

Lu Zhou: “I’ll think about it.”

Since Lu Zhou had his own ideas, Academician Pan didn’t want to persuade any longer. He just nodded.

“Okay, think about it. The Energy Bureau will ask for your opinion beforehand anyway. Oh yeah, the stellarator… is fine, right?”

When Academician Pan mentioned the “big things” just now, he felt a little anxious.

Unlike for a layman, the word stellarator was quite painful for scientific researchers.

Even though concentrating on the big things would increase efficiency, but that was based on the premise that the direction of the “big things” was correct.

Even though Academician Pan knew that the possibility of a mistake was small, he still couldn’t help but ask.

When Lu Zhou heard this, he gently coughed and muttered, “We’ve already come this far, don’t try to jinx it for us.”

Academician Pan was stunned. “What does jinx it mean?”

Lu Zhou: “It’s like when you say something bad is going to happen, it actually happens.”

“Can’t you millennials say some words that I can understand? My granddaughter is like this as well. She would say some random words all day long.” Academician Pan shook his head and stood up from the sofa. He then said, “Okay, I’m relieved that you are so confident. I don’t have time to chat with you. I’m going back to Beijing.”

Lu Zhou smiled and said, “See you, take it easy.”

…

Finally, after some consideration, Lu Zhou decided to agree to Academician Pan’s suggestion and became the director of the China International Nuclear Fusion Energy Program Execution Center.

As for the financial, personnel, management, and other administrative tasks of the Execution Center, Lu Zhou decided to maintain the original arrangements and make no changes. If it was necessary, he would make adjustments later.

Lu Zhou didn’t need to use this new director job to achieve any political influence. All he needed was for the Execution Center to continue to do what he wanted and to not bother his research.

After all, after the demonstration reactor was built, the Execution Center would probably be restructured again.

By that time, he could quit and give this director position to someone else.

A week after Zhou Chengfu quit his position, Lu Zhou received the formal director appointment document.

Almost at the same time, a piece of good news came from the China National Nuclear Corporation.

Academician Wang returned to the demonstration reactor site again and immediately found Lu Zhou. He was so excited that he didn't even say hello. He got straight to the point.

"Your blueprint was so useful, we've basically solved the PGC-1 production process! We'll start production latest at the end of the month!"

Lu Zhou had a smile on his face when he heard this news, and he immediately asked, "Where is the factory built?"

Academician Wang: "Changan!"

Ceramic-composite materials were widely used in the aerospace industry because of their high-temperature resistance, strength, and they are relatively lightweight. They were mainly used in liquid rocket engine nozzles, missile radomes, and other aerospace components.

The largest ceramic-based composite material production base in China was located in Changan. Therefore, the LPC-1 material production factory, co-owned by the China National Nuclear Corporation and the Jinling Institute of Computational Materials, was also being built there.

Changan…

That's in the middle of the country.

Lu Zhou: "Isn't Changan a bit too far from here?"

Lu Zhou originally thought that it could be built near Haizhou. This way, if a production accident happened, the researchers at the Institute of Computational Materials could go help them.

Just like the SG-1 superconducting material, the researchers at the Institute of Computational Materials helped a lot with the production process. All the way from the upgrade of the production line to solving a series of technical problems.

Academician Wang shook his head and said, “Not too far, it takes two days by rail. It’s close to our production base in Rongcheng. After the material is produced, it can be directly shipped to Rongcheng and be processed. Then, it can be sent to Haizhou to be assembled here.”

Actually, there was something else that Academician Wang didn’t say, which was the production safety aspect. Producing it inland was much safer than producing it near the coastline.

After all, even though this wasn’t military technology, it was still nuclear-related. This counted as a piece of sensitive technology.

Lu Zhou nodded and didn’t say much else.

“Okay then, you guys are the experts in this area. I won’t say much else. Stellarator track processing in Rongcheng? Will you guys be fine?”

When Academician Wang heard this question, he waved his hand.

“Don’t worry about this. Twenty years ago, our nuclear experts went to the French nuclear power plant for a visit. Even just observing from afar, they built a similar machine back home. After all, we also tinkered with the STAR machine for half a year now, and we’ve disassembled and reassembled it countless times. We’re the one that changed the outer coil for you. If we can’t even do this right, then we should all retire instead!”

Lu Zhou smiled and replied, “No, don’t do that. This project can’t continue without you guys. If you want to retire, make sure the demonstration reactor is successful first.”

Academician Wang smiled when he heard this, and he squinted his eyes and didn’t say anything.

The line, “this project can’t continue without you guys”, really resonated with him.

This feeling of being valued felt quite good.

Especially since Lu Zhou was a Nobel Prize laureate…

Lu Zhou asked, “The material production is already solved. How long will it take for the stellarator track to be in place?”

Without any hesitation, Academician Wang answered the question confidently, “I promise to build a complete stellarator track for you latest by the end of this year!”

The beginning of October.

The construction site was lively.

There were several heavy-duty trucks parked on the side of the construction site. With the help from the on-site construction crew and lifting equipment, they carefully unloaded the shipment.

Lu Zhou was standing next to him, watching the heavy equipment being transported onto the site. Xiao Le spoke emotionally, “We were going to sell this thing to ITER, but I’m guessing they probably won’t buy it anymore.”

The device in front of these two people was the legendary ion cyclotron resonance heating antenna.

This device consisted of four components—the transmitter, the transmission line, the impedance matcher, and the most important component, heating antenna. The RF output energy could reach 3MW and the frequency could be adjusted between 30-110MHZ.

This was one of the key components of the fusion machine. This was probably one of the most advanced pieces of technology, second only to the superconducting D-shape design from the Fuyang Institute Construction Material Laboratory.

In addition to being purchased by the General Atomics company, this billion-dollar equipment also received orders from the ITER demonstration reactor project.

But now, it seemed that the Europeans probably wouldn’t buy it anymore.

Xiao Le paused for a second and said, “This equipment was originally intended to be dismantled and shipped all the way to France. However, our cooperation with ITER has obviously been interrupted. Using this piece of equipment, we can quickly heat the plasma inside the reactor to more than 100 million degrees! This is one of the most advanced pieces of plasma heating equipment in the world!”

Lu Zhou nodded and looked at the equipment with interest.

Even though it was called the ion cyclotron resonance heating antenna, rather than looking like an antenna, this thing looked more like a gigantic air conditioner.

The shape of the steel frame for the entire machine was similar to that of an air conditioner. The limiter and current band attached on the outside of the machine looked like an air filter and fan blade.

Further to the back were the tubular vacuum transmission lines, hydraulic drives, and the important vacuum feed ports.

During an experiment, the protection limiter was the “air-conditioner fan blade”, which was located at the front of the ICRF[1.Ion cyclotron resonance heating] antenna. This, combined with the current band, constituted the plasma heating components and the “Faraday shielding box”. This isolated the plasma from the charged current while the plasma was heating, it also prevented the electric field from coupling into the plasma.

Since the plasma was in a vacuum chamber, there were also 43 cooling pipes with a diameter of 10 mm on the outside of the machine.

Even though the whole machine looked complicated and humongous, it lacked some of the classic science fiction aesthetics. However, nothing about the design was unnecessary; each solder joint had been carefully designed.

Therefore, it wasn’t an easy task to change the design of this thing.

Suddenly, an old engineer, who was wearing a hard hat and a gray coat, came over. He looked at Lu Zhou and smiled.

“How is it? Looks pretty good, right?”

Lu Zhou smiled and said, “Looks pretty reliable. I just hope it will work normally on the stellarator.”

The old engineer waved his hand and said, “Rest assured. Even if it doesn’t work now, we promise to make it work eventually.”

The old man standing in front of Lu Zhou was called Li Jiangang. He was an academician of the Chinese Academy of Sciences. He was also the vice

president of the Institute of Materials Science at the University of Science and Technology of China.

The old man was previously researching marine power plants, but somehow, he ended up in the field of plasma physics. He was caught in the wave of the 90s scientific revolution when controllable fusion became more and more popular. His academic career had been nothing but success. He first became a vice president, then became an academician.

Before China withdrew from ITER, he was also one of China's expert committee members. When the ion cyclotron resonance heating technology was internationally recognized, his work on this piece of technology was crucial.

Now that China withdrew from ITER, he became a consultant for the Execution Center. He was also responsible for coordinating the involvement of the Fuyang Institute Construction Material Laboratory in the demonstration reactor project, specifically, the entire heating component of the reactor.

Xiao Le, standing next to Lu Zhou, was one of his students recommended by him.

Lu Zhou had a lot of trust in this big name's promise.

"Thank you so much, but I have a few simple requirements."

Professor Li took out a notebook he was carrying.

"Go ahead."

Lu Zhou nodded and recalled the details he discussed in previous meetings.

"Due to the several different types of plasma discharge in the stellarator, the heating antenna has to be able to move in a radial direction. The moving range has to be between minus 150 mm and 150 mm. The accuracy has to be on the millimeter scale, is this possible?"

Professor Li said without hesitation, "This isn't a problem."

Lu Zhou nodded and continued, "The impedance requirements of components such as the vacuum feed port and transmission line of the antenna have to

meet the design requirements of 50 ohms. The voltage requirement for the inner and outer conductors has to be 45 kV.

“The current band and Faraday shields all require their separate cooling circuits, and their cooling capacities are required to withstand the scale of MW/m2 thermal loads.

“Also, regarding the maintenance and assembly of the antenna, we need to minimize the welding position so that the total leakage rate of the antenna has to be less than 10^-10Pa·m^3/s.

“…”

This was fine at the beginning, and Academician Li was pretty relaxed. However, when Lu Zhou continued to fire out these requirements like a machine gun, Academician Li didn’t look as relaxed anymore. Instead, he looked stressed.

Lu Zhou listed another dozen requirements or so. He even began to feel a little thirsty, so Wang Peng gave him a bottle of water. He took a sip of the water and continued, “That’s the basic situation. I might have spoken too fast. Once the meeting outline is written, I’ll send the details to your email.”

Li Jiangang finally stopped writing.

He looked at his notebook for a while and began to subconsciously frown. However, he forced a smile.

“You really know how to make us work hard. Even the ITER project conferences aren’t as complicated as this.”

Lu Zhou smiled and said, “After all, this is the first reactor of its kind. We have to do a good job from the start, and I want to make it as perfect as possible.”

Even though the system didn’t specify any requirements for the DEMO demonstration reactor, there was no doubt that the mission rewards were tied to the outcome of the demonstration reactor. The better the reactor was built, the more mission rewards he would receive.

Looking at it from a realistic point of view, the better the demonstration reactor capabilities were, the fewer problems they would encounter during the

technology commercialization phase. As a researcher, he wanted his research to be recognized by the world.

Academician Li closed his notebook and said, “Okay, I’ll go back to the institute tomorrow and give you an answer in two days.”

Lu Zhou nodded and said, “Okay, thank you.”

…

The STAR-2 demonstration reactor project had been going on the right track. Both the construction site and research institute was blossoming with action.

The demonstration reactor was like a torch, illuminating the entire future of the nuclear fusion field.

Even though no one did any kind of motivational speech, everyone working here had a strong sense of purpose.

They were doing something meaningful.

Their research was at the forefront of the world.

Up until now, they had achieved countless in-progress results, won countless fights, proved themselves countless times.

Everyone was certain that as long as Chief Designer Lu was here, they would continue in this manner until they were past the finish line.

It was difficult to have negative emotions working in an environment like this.

Even the chefs in the cafeteria were working enthusiastically.

If everything went well, all of the components could be completed by the end of the year.

As for whether it was by the end of New Year’s Day or Chinese New Year, that would depend on their luck.

There were only two things Lu Zhou had to solve.

One was to go back to the STAR Stellarator Research Institute near the Purple Mountain and complete the final design of the liquid lithium neutron recovery system as soon as possible.

Other people were working so hard, he couldn't drag them behind.

The neutron recovery system was the core component of the entire fusion reactor. The design of this component directly determined the success of the STAR-2 demonstration reactor project. If this part was successfully completed, then they would have a "plasma control technology". Which could help solve the second biggest fusion reactor problem—the "heavy water" issue.

This was the last difficult part.

As for the electricity generator, the heater, the "safety-nets" under the reactor… These components were only minor components that perfected the reactor.

As for the other thing, he had to solve the supercomputer problem.

As of now, the plasma control scheme of the STAR experimental reactor was done with the help from Xiao Ai.

It was not like he could move Xiao Ai onto the main demonstration reactor computer, right?

After all, it wasn't appropriate for Xiao Ai to be shown to the world.

The best way would be to separate the plasma control scheme from the main program.

If Lu Zhou solved these two problems, then he'd have assembled all of the "puzzles".

The completion of a demonstration reactor was just around the corner.

Lu Zhou couldn't help but get excited.

Countless nights of hard work.

This day was finally going to come.

Chapter 549: The Mysterious "District 900"

Chapter 549: The Mysterious “District 900”

It was late into the night, but the bar near the Tianwan Nuclear Power Plant was filled with flashing disco lights, heavy music, and the smell of alcohol.

Tianwan Nuclear Power Plant was the largest cooperation project between Russia and China. In addition to stationing a lot of its own Chinese engineers, the residential area for engineers also contained a lot of Russian engineers.

When it was late into the night, these foreign employees often came here to wind-down.

In contrast, the Chinese engineers rarely visited this place.

Georgy was by the bar, and he was a little tipsy. He stumbled around and began to chat with his colleagues.

“What do you think those Chinese people are doing?”

Ever since the troops were stationed in this area, blocking the site that was originally going to be used for the third phase of the nuclear power plant, it was like the area a few kilometers away from them had disappeared from the map. The on-going third phase project was also suspended.

All these were bound to attract people’s attention.

What exactly were the Chinese doing?

This problem had been plaguing all of the foreign researchers; it became a very popular topic of conversation.

However, the Chinese engineers working here seemed reluctant to talk about this issue.

As for the ordinary employees, they were also interested in what was happening. However, they probably didn’t know any more than the Russians.

Maksim was sitting next to Georgy, and he said in an uncertain tone, “I heard it’s nuclear fusion.”

“Nuclear fusion?!” Georgy’s eyes were wide open. He took another sip of his tangy cocktail and said, “Are you kidding me? That’s the third phase project site! They’re using it for controllable fusion experiments?”

Maksim twirled his glass around, he seemed to be a bit down.

“I think so, I read their newspaper a while back… They might be more advanced on nuclear fusion technology than we had expected. Maybe it wouldn’t take long before they start generating electricity.”

If the demonstration reactor project was successful, there would be no reason to continue the third phase of the nuclear power plant project.

When that time arrived, they might as well forget about second-generation fission reactors, since even third-generation fission reactors would be of no use.

Also, by that time, it would be about time for the Russians to go back home.

Honestly speaking, after working here for so long, Maksim actually liked it here.

Suddenly, an Asian looking man who was sitting next to them spoke in fluent Russian, “You guys are Russian?”

Maksim raised his eyebrows, and he said with interest, “I’ve lived here for so many years; this is my first time seeing a Chinese speak fluent Russian.”

“Oh really? It looks like we are destined to meet.” The man smiled and looked at the bartender before saying, “Three White Russians, two for my friends.”

The man looked back at Maksim and smiled, showing his row of white teeth.

“From now on we are friends, right?”

Maksim looked at him strangely.

He felt like there was something wrong with this man, but he couldn’t pinpoint exactly where.

The man noticed the Russian was doubting him, so he continued to speak, “Don’t feel alarmed. Actually, I’m just a reporter. I want to interview you about some things.”

“Anything but trade secrets.” Georgy burped and grinned as he said, “Since you bought me a drink, I can talk with you for a bit.”

The Asian man asked, “I heard that there has been an army squadron stationed near here?”

Georgy rubbed chin and said, “They came here around two weeks ago.”

The man was interested, and he raised his eyebrows and asked, “Two weeks ago… Do you know what they’re doing?”

Georgy smiled and said, “Haha, good question! We all want to know what they are doing. How about you go ask them and tell me?”

“I’ll change the subject.” The man seemed to have expected this answer, so he didn’t feel discouraged. He smiled and asked, “Have you heard any planes around here?”

“Planes? Why are you asking about this?” Georgy frowned and said, “I haven’t heard any I think…”

Suddenly, two men, who were dressed casually, walked out of the crowd and stood next to the self-proclaimed reporter.

The reporter could feel the pressure weighing on him. He prepared to get up and leave, but when he saw his pathway was blocked, he calmly sat back down on the bar stool.

“I am a reporter from the Daily Mail. This is my reporter credentials.” The man took out his ID from his pocket and handed it over to the man.

However, the man in casual wear didn’t even look at the ID. Instead, he said with a blank expression, “Interviews are not allowed here, please come with us.”

The reporter immediately refused as he said, “Hey, you have no right to do this.”

However, the two men didn’t bother to argue with him. They skillfully found and confiscated his recording equipment and camera, which were hidden in his collar. Then, without explaining anything, they took him away.

The loud heavy metal music was still playing, and the alcohol was making everyone discombobulated.

It was like no one noticed this was happening, as if nothing had happened.

Georgy and Maksim looked at the man being dragged away. They looked at each other and intelligently stopped talking about their previous topic. They began to drink instead.

…

[Secret nuclear tests? The mysterious District 900]

The latest issue of the Daily Mail was on Lu Zhou’s desk.

District 900 seemed to be what the foreign media called this area. Because this area was blocked off in September, and they didn’t know the specific date, so they wrote 00.

Ever since the demonstration reactor nuclear fusion project was launched, this small town gathered a large number of reporters.

Some of which were real reporters, others were disguised as overseas intelligence personnel. Lu Zhou occasionally heard from Wang Peng that the Ministry of State Security had caught many spies here.

So far, it seemed like the country was doing a good job of keeping it a secret. Even though there had been nosy people trying to explore this place, there hadn’t been any “incidents” that affected the experiment.

However, the mysterious aspect was precisely what gave the foreign media the ability to use their imaginations.

The western media described the STAR-2 demonstration reactor project as China’s version of the Manhattan Project.

To be honest, Lu Zhou was quite disappointed.

The reasons why he collected these newspapers for himself, was mainly to understand the latest developments in the international controllable fusion field. However, most of the news articles were written about himself.

Lu Zhou was sitting at his desk. He put down the newspaper and said, “I plan on going back to Jinling. There’s an important piece of research waiting for me there.”

Wang Peng: “Is it urgent?”

Lu Zhou thought for a bit and said, “The sooner the better, it’s best if we can leave today.”

Wang Peng immediately looked like he was taking this matter seriously, and he said, “Okay, I’ll arrange it for you immediately.”

Lu Zhou nodded.

“Ok, thank you.”

He was quite confident at Wang Peng’s abilities. At least, in terms of traveling, Wang Peng had never let him down.

After Lu Zhou let Wang Peng handle his travel plans, he continued to do his work at hand.

After around an hour or so, his phone suddenly began to ring.

“The vehicle is ready for you, you can leave now. Do you need to go back home and pack your luggage first? If you do, I’ll drive you there first.”

Already?

Lu Zhou looked a little surprised.

“No need, I don’t have anything to carry back. I’m only going for a few days. Just wait for me at the site entrance.”

Lu Zhou hung up the phone and stuffed his phone back into his pocket. He then picked up a few copies of the recently printed files from the table and put them in his computer bag.

When Lu Zhou was walking outside, he thought that Wang Peng had bought him the latest train ticket for him.

He didn't expect to see a military green helicopter parked right at the entrance of the base. The propeller on top of the helicopter was humming.

Lu Zhou looked at the helicopter. He then looked at Wang Peng. He stood there with his computer bag in his hand and his mouth wide open.

"This is the fastest means of transportation." Wang Peng walked next to Lu Zhou and smiled as he said, "Oh yeah, you're… not afraid of flying in one, right?"

Lu Zhou: "…"

Chapter 550: Didn't You Say As Soon As Possible?

Chapter 550: Didn't You Say As Soon As Possible?

Even though Lu Zhou had flown in a plane countless of times, this was his first time in a helicopter.

Lu Zhou looked away from the faraway ground and subconsciously touched his sturdy seatbelt; this finally gave him a sense of security.

He looked at the people in the cabin.

There were five people in the cabin.

Other than him and Wang Peng, there were also two men and one woman.

Two of them were pilots, sitting at the pilot and co-pilot seats. As for the lady sitting across from Lu Zhou and Wang Peng, she looked quite young. Lu Zhou didn't know what she did, but he felt like it was probably similar to Wang Peng's job.

She even felt more military-like than Wang Peng.

Both from her posture and her vibe…

However, this was just Lu Zhou's intuition, and it was often not that accurate.

Lu Zhou looked at Wang Peng and quietly asked, "I just told you to buy a train ticket, why did you get me a helicopter?"

Wang Peng: "Didn't you say as soon as possible?"

Lu Zhou: "…"

"Okay, the real reason is that we have recently captured several overseas spies in Haizhou. Even though we are not certain if they are scheming against you, we're taking the helicopter just in case." Wang Peng smiled and said, "Oh yeah, I haven't introduced you to these people yet, this is…"

Lu Zhou looked at the young woman sitting across from him. Wang Peng was about to speak but the woman spoke first.

"Yan Yan."

Lu Zhou: "You're also from the Ministry of State Security?"

Yan Yan's eyebrows furrowed slightly as if she wasn't satisfied with this assumption. She replied in an almost insulting and ridiculing manner, "He's the only one from the Ministry of State Security here."

Wang Peng coughed and explained, "Doctor Yan is from the People's Liberation Army General Staff Department, not the same as me."

Even though Lu Zhou didn't know what the General Staff Department was, he knew what a doctor was.

"Doctor? Military doctor?"

Yan Yan said in a concise manner, "You could say so."

Wang Peng looked behind Ms. Yan, at the man sitting in the pilot seat.

"The one sitting in the pilot seat is Yang Guangbiao, also known as Captain Yang. Just like Doctor Yan, he's also from the People's Liberation Army General Staff Department."

Compared to Yan Yan, the man named Yang Guangbiao seemed to be much older. Lu Zhou guessed that he was probably in his thirties.

Maybe because he was too focused on flying the helicopter, or perhaps it was just his personality, he didn't talk much with Lu Zhou. He silently nodded to acknowledge Lu Zhou, then placed his attention back onto the helicopter controls.

Lu Zhou nodded at him and didn't want to interrupt him.

Wang Peng said, "Sitting next to him is Captain Wu. He's in the army and doesn't have anything to do with us, he's just helping to co-pilot."

"Why did you put it like that?" Captain Wu, who was sitting in the co-pilot seat, smiled and said, "All of the construction site safety is done by the military. What do you mean I have nothing to do with Professor Lu?"

Compared to the cold-blooded Doctor Yan and quiet Captain Yang, Captain Wu seemed much more talkative.

Lu Zhou nodded toward him.

"Thank you for all the safety work."

Captain Wu smiled and said, "No need to thank me, we just occasionally patrol around the perimeter. The real hard work is being done by the scientific researchers on the front line."

Wang Peng coughed and stopped the small chat. He said to Lu Zhou, "Didn't I tell you about this before? We're in a special time period. The higher-ups want to increase your security level. So, these two people were transferred from the People's Liberation Army General Staff Department to assist us."

Lu Zhou had a weird expression on his face, and he pointed toward his feet and asked, "Is this helicopter also transferred?"

Wang Peng coughed and said, "The helicopter obviously isn't for you, we borrowed it from the military. We have to return it."

Captain Wu smiled and said, "Don't worry about that, I'll fly it back when you don't need it. Professor Lu, whenever you need it, just call us and we'll arrange everything for you."

Lu Zhou: "Thank you."

Captain Wu smiled heartily.

“You’re welcome, I’m happy to serve the people!”

…

The helicopter was insanely fast, and the scenery below swiftly flew by. This 300-kilometer trip was completed in less than two hours.

Even a high-speed train wouldn’t be this fast. After all, it had to stop mid-way at Anhui.

However, after getting off this speedy machine, Lu Zhou felt like he couldn’t feel the bottom of his feet.

He swore that this was his last time flying in that thing.

Unless there was no other option.

Yan Yan noticed his discomfort, and she asked, “Do you need motion sickness medicine?”

“No thanks…” Lu Zhou stretched his stiff arms and shook his head as he said, “I don’t need a medic just yet.”

Yan Yan said in a serious tone, “Don’t force it, your health is part of my duties.”

“If I need it, I’ll tell you.” Lu Zhou took a deep breath of the fresh air and felt alive. He then looked at Wang Peng and said, “Please send me to Zhongshan International.”

Wang Peng immediately said, “No problem, the car is ready for you.”

It was pretty late when they departed since it was already dusk when they got off the chopper. When they drove into Zhongshan International, the sky was almost dark.

Lu Zhou finally arrived at his front door. As he looked at the mansion from the car, he sighed in relief.

I’m finally home.

He hadn’t been back here for more than a month, so he quite missed this place.

After Lu Zhou got off the car, he took out his keys and opened the door.

He suddenly noticed that Doctor Yan was following him.

Lu Zhou hesitated for a bit. He looked back at her and asked, “What are you doing?”

Yan Yan frowned and said, “Is there a problem? Doesn’t Wang Peng live here as well?”

Lu Zhou: “…”

There were so many problems with this that he didn’t even know where to begin.

Also, what do you mean Wang Peng also lives here?

Other than my parents and sister, no one else has ever stayed the night here before.

Since Lu Zhou didn’t say anything, Yan Yan thought that he had agreed. She said, “According to the higher-ups’ demands, from now on, I will be responsible for your health. This will probably continue until the end of the STAR-2 demonstration reactor project. In the meantime, thank you for cooperating with our work.”

Yan Yan looked at the mansion.

“Your house is pretty big, so there should be empty rooms, right? I don’t really care about my living environment, just give me a room that is close to your bedroom.”

What is this?

Living in my house?

No way!

Lu Zhou wasn’t happy at all, and he immediately said in a serious manner, “Ms. Yan, please respect my boundaries!”

Yan Yan: “???”

…

Without explaining the reason why, Lu Zhou refused to let Yan Yan into his house. Lu Zhou first took a shower and then made himself a cup of coffee. After that, he went into his study room, opened his computer, and turned on his home private server.

After the server was turned on, the sleeping robot vacuum cleaner woke up and began to clean the dust that accumulated on the floor.

Lu Zhou leaned back in his chair and sipped his coffee in a relaxed manner as he waited for Xiao Ai to appear.

After a few seconds of waiting, a notification popped up on the lower right corner of his screen.

[Master, you're back! Happy~(•̀∀•́)]

Lu Zhou looked at the energetic Xiao Ai and smiled as he said, "Xiao Ai, let me ask you something."

Xiao Ai: [Ok, ask me ~(cute.jpg)]

Lu Zhou sipped some coffee and contemplated it for a bit. He then asked, "About the plasma control scheme algorithm, is there a way to extract the algorithm?"

Xiao Ai went silent for a while.

Lu Zhou was wondering what this thing was thinking about when another text bubble popped up.

[Master, are you going to abandon me? ☹]

Lu Zhou nearly spat his coffee on his keyboard.

What the hell do you mean abandon?

Chapter 551: I Won't Ghost You

"You couldn't do it either?"

Wang Peng was sitting in the driver's seat smoking. When he saw Yan Yan walk out of the mansion, he blew a cloud of smoke and jokingly said, "I thought Professor Lu would be more welcoming to a pretty girl, so I didn't warn you. I didn't expect him to reject you."

He had a pretty good relationship with Professor Lu, but when it came to spending the night at Professor Lu's house…

Lu Zhou had never agreed.

To be honest, this did bring a certain degree of difficulty to his job.

However, according to Lu Zhou, he felt uncomfortable when non-family members were at his house.

Especially when he was researching problems, he liked to be alone.

In fact, this was true. According to Wang Peng's observations, the only people that lived here were Lu Zhou's parents and his sister, who was studying at Jin Ling University.

Yan Yan ignored Wang Peng's joke as she opened the back car door, sat down, and sighed.

"You're just his driver?"

"Yeah, why?" Wang Peng put out the cigarette and lit another one as he asked, "Do you think I wash his clothes and buy him grocery?"

"Letting you guys handle security is the wrong decision." Yan Yan shook her head and looked at Wang Peng as she said in a serious way, "Is privacy important or is safety important? Professor Lu doesn't know this, but you should know."

Wang Peng smiled and tapped the cigarette. He was about to speak when suddenly, Yang Guangbiao, who was sitting shotgun, spoke first.

"Fine, Wang Peng doesn't have it easy either."

Finally, someone was agreeing with Wang Peng, so he spoke emotionally, "Yeah… I'm just a bodyguard. Everyone I take care of is a god. No matter how hard I beg, they won't cooperate with me."

"Professor Lu is even worse. Forget about the domestic situation, what if foreigners are more 'concerned' about him, what can I do then?"

Wang Peng opened the glove box and pointed inside. He said, "The security camera is inside. Are you willing to install it in his mansion without him agreeing? If you are, then let's cut the crap and let you do it. If anything happens, it's your fault!"

Yan Yan looked at the security camera inside the glove box, but she didn't reach for it.

After all, this wasn't her profession.

It wasn't like she could operate this professional equipment.

"I still feel like something is wrong. If this place is infiltrated by foreign intelligence…"

Wang Peng was a little annoyed.

"Then go talk with Professor Lu, don't bring it to me."

Yan Yan's eyebrows furrowed. She was about to say something but was stopped by Yang Guangbiao.

"Don't worry about this too much. It's safe here… If I'm guessing correctly, you guys are in the same squadron, right?"

Wang Peng flicked his cigarette and smiled as he said, "Finally! Someone that knows what's going on."

Yan Yan: "???"

Yang Guangbiao raised his chin and pointed on the sidewalk. "That person patrolling over there. He's in the army."

People had already thought this through.

Since Professor Lu wasn't happy about having security in his own home, they had to install security outside his home.

After all, it was only one small-gated community in the suburbs. It wasn't too difficult to install outdoor security measures.

Even though the property management security here was reasonable, it was nothing compared to the army.

They were happy to cooperate with the army.

Yang Guangbiao said, "Doctor Yan, just do your job, Mr. Wang will handle the security."

Yan Yan hesitated for a second and finally sighed.

"I understand."

…

At the same time, inside the mansion.

Lu Zhou accidentally spilled the coffee, so he was wiping the keyboard with some tissues.

Thankfully, he didn't spill too much. He quite liked this keyboard.

Xiao Ai's text bubble kept flashing on the screen.

[Please, Master, don't kick me out of my home. :(( ]

The tissues were dyed brown. Lu Zhou threw them into the trash can and focused his attention on the screen. He took a deep breath and tried to calm down.

"Don't worry, I'm not going to kick you out."

Xiao Ai: [Really? ._.)]

Lu Zhou: "When have I ever lied to you?"

Xiao Ai: [341 days 5 hours 21 minutes and 4 seconds ago. You said I was going to move into a new home, but you lied. ._.]

Lu Zhou: "???"

The f*ck?

Did this really happen?

Lu Zhou was muddled. After thinking about it for a while, he finally remembered. It happened last year when he was still moving homes.

But that's just a joke, why are you still resentful?

You've been remembering this the whole time?

Lu Zhou coughed and tried to hide the awkwardness. "You were still level 1 back then, not intelligent enough. I meant a physical home back then, not a server home. You misunderstood! You can't blame me for this. Also, look, your demands are satisfied now, right?"

Xiao Ai: [(sad.jpg) (sad.jpg) (sad.jpg)]

Lu Zhou continued, "Think about it. Even though that supercomputer is yours, it's mainly used for stellarator experiments. At most, you're just borrowing it. If you separate the plasma control scheme algorithm from the main program, then you'll be set free from the plasma control scheme work! I'll even give you a new supercomputer or let you have this one. How does that sound?"

Xiao Ai: [Even though Xiao Ai thinks master is being very reasonable, it feels like something is wrong. ._.]

Lu Zhou said, "Tell me, can you do it or not?"

Xiao Ai: [I… I can… :'(]

When Lu Zhou saw the ":'(", he empathetically lowered his tone and said, "Don't worry, I won't ghost you this time."

Xiao Ai: [Ok… :'(]

Finally, Lu Zhou was able to "convince" Xiao Ai.

Actually, this wasn't as difficult as he had imagined.

Even though it was called artificial "intelligence", it was far more primitive than humans.

At the very least, from an algorithm level, Xiao Ai couldn't betray him.

No matter how much Xiao Ai resisted, Lu Zhou only had to answer some [yes/no] questions. He didn't even have to explain why. If he ordered Xiao Ai to do something, Xiao Ai had no other choice but to follow the commands.

However, maybe because it was getting too human-like, Lu Zhou didn't like to treat it harshly.

He wasn't sure if it could think like humans, or if its "emotion" was only a simulation. He wasn't even sure if its intelligent behavior were top-down or bottom-up.

If it was the former, then he didn't have to worry about much. In the "Elephants don't play chess" thesis by Rodney Brooks, he pointed out that this kind of artificial intelligence would never surpass the framework designed by humans.

But if it was the latter…

He hoped that while teaching this naive artificial intelligence the ability to think, he could also teach it the concept of humanity.

As for whether or not there was any meaning in doing this, Lu Zhou wasn't sure. After all, he wasn't an expert in artificial intelligence. For the time being, he didn't have the energy to dive deep into the topic of artificial intelligence.

However, his intuition told him that he was correct.

Chapter 552: Last Hurdle

Chapter 552: Last Hurdle

“I see…”

Lu Zhou quickly looked through the code on the screen. He had a moment of realization on his face.

Relying on his coding ability, it might be a bit difficult for him to completely understand the algorithm. However, he could understand the basic execution logic of the plasma control scheme just from a few key lines of code alone, so it wasn't too big of a problem.

In short, this algorithm was probably made from machine learning.

This advanced ML[1] algorithm referenced the program written by the Jin Ling University computer science department and Lu Zhou's previous mathematical model. It carried out countless simulations on the plasma kinetic trajectories and made adjustments to the phenomenological model. Finally, it set a number of parameters to make the algorithm as perfect as possible.

When it came to real-life application, when a phenomenological model was done to the extreme, it was just as good as a theoretical model.

At least that was how it was performance-wise.

It was just like the empirical fluid mechanics formulas, even though it wasn't possible to explain them with existing theories, that didn't prevent people from using them to design aircraft and engines.

Collecting these data and adjusting the original control scheme might take years or even decades if done by hand.

However, Xiao Ai had a supercomputer at hand, and it could change the control scheme in real-time, so it only needed a few stellarator experiments for reference.

In a sense, the plasma control scheme algorithm extracted from Xiao Ai's core code could be interpreted as an algorithm developed by artificial intelligence and machine learning.

However, this extracted artificial intelligence was undoubtedly less intelligent than Xiao Ai.

Does this mean that this thing is Xiao Ai's offspring?

This idea flashed in Lu Zhou's mind.

However, Lu Zhou quickly threw the idea away and closed his computer.

If that were the case, then Lu Zhou wouldn't be able to look at Xiao Ai the same way anymore.

…

The plasma control scheme problem finally came to an end. After the supercomputer for the demonstration reactor was built, the algorithm would be transferred.

Lu Zhou woke up early the next morning. He called Wang Peng and asked him to bring some dumplings. After Lu Zhou drank some soymilk and finished eating the dumplings, he departed to the STAR research institute.

Other than the plasma control scheme, one of the reasons Lu Zhou came back this time was to complete the final design of the liquid neutron recovery system.

Even though ever since Lu Zhou went to Haizhou, the STAR research institute hadn't stopped working, their progress hadn't increased by much. They weren't able to produce any kind of in-progress results yet.

This type of scientific research project was like a car; every component of the car had to work together for it to work.

Now that the first wall material was solved, other research institutes had been working on the core catcher and the heating components. However, even though they were responsible for the most crucial parts of the project, they hadn't been able to make any substantial progress.

Even though no one was rushing them, they were still under a lot of pressure.

Now that Lu Zhou came back from Haizhou, everyone in the institute felt relieved.

Sheng Xianfu, who looked like he hadn't slept for weeks, looked at Lu Zhou and smiled brightly.

"You finally came back, we were about to go and find you."

Lu Zhou: "Thanks for working hard all this time."

"Ah, it's fine." Sheng Xianfu scratched his scruffy hair and sighed as he said, "There are just a few main problems that aren't solved, giving us a headache."

Ever since he joined the research institute here, he felt his hair becoming thinner and thinner.

Lu Zhou had an awkward expression on his face.

He was the one that proposed this technical route in the beginning, but he himself had been busy with other research projects.

However, he had no other choice. After all, he didn't think it would be so troublesome. He originally thought that since the plan was written in detail and they had help from the China National Nuclear Corporation engineers, it shouldn't be a big problem. So, Lu Zhou focused his attention on the PGC-1 material.

Little did he know, he underestimated the difficulty of this research project.

"Gather everyone in the institute and host a meeting." Lu Zhou nodded and said, "I have to understand what is going on here."

"Okay, I'll do it right now."

Sheng Xianfu nodded and quickly walked into his office.

Lu Zhou returned to his office and revisited the liquid lithium neutron recovery system plans. He then got up and went to the research institute conference room No. 1.

He didn't have to wait long before everyone else in the institute arrived.

With all of the STAR researchers and engineers gathered here, Lu Zhou made a short opening statement and was informed of what was going on by various departments.

According to the leaders of several departments, the current research was still centered on the same idea he had before he went to Haizhou.

Which was to use the PGC-1 first wall material to transmit and decelerate the neutrons. After that, the liquid lithium circulation device would absorb the neutrons and release the tritium. The beryllium reflective layer coated outside the liquid lithium would bounce back the unreacted neutrons.

The recovered tritium would be in the form of gas, which would be recovered at the top of the machine. This would be reinjected back into the reaction chamber for further reaction.

Professor Li Changxia, who came from Yuhua University, was sitting at the conference table. He said, “The collection of tritium in the liquid lithium is easy. We just have to put a filler in the reactor. It is theoretically possible to separate the tritium using the divertor inside the reactor, or we can also add a separation device in front of the machine. However, the hard part is the thickness of the liquid lithium layer. We conducted several experiments, but the results weren’t very good.”

The thickness of the liquid lithium layer was a crucial problem; it couldn’t be too thick nor too thin.

Too thick would cause a large amount of tritium to be trapped in the liquid lithium, thus reducing recovery efficiency. This would also greatly increase the engineering difficulty and could affect the safety of the reactor.

It couldn’t be too thin either as it would directly affect the proliferation rate of the tritium. After all, the half-life of free neutrons was only around 10.6 minutes. This meant that in addition to other elements decaying, they had to think about the neutrons themselves decaying.

Ideally, the neutrons could be recovered by the liquid lithium before a secondary neutron reflection occurred at the base metal. However, this wasn’t easy to do at all.

Lu Zhou: “Did you bring the experimental data?”

“It’s here.”

Sheng Xianfu nodded and immediately handed over a document.

Lu Zhou took the document and began to carefully examine the data within.

Time slowly passed by, and the only sound in the conference room was the sound of the clock ticking on the wall.

Lu Zhou didn’t say anything, so the researchers sitting at the conference table waited patiently.

Lu Zhou finally finished reading the document.

Everyone thought that this big name would come up with an idea, but his actions were beyond everyone's expectations.

"The research path is correct, this data is very important. There are just some methods that were lacking, so you guys didn't achieve the expected results. You all have worked quite well over the past month, and I suppose no one has gotten any rest recently.

"The conference ends here, you guys can go home. Everyone will take two days off."

Lu Zhou looked at the surprised looks on everyone's face and gently tapped the data document on the conference table.

"I'll take this and tinker with it.

"I'll give you guys a result in three days!"

The conference ended in a hurry.

After the conference ended, the group of researchers left the conference room. Only Professor Lu stayed behind.

Li Changxia walked next to Sheng Xianfu and hesitated for a bit before he asked in a confused manner, "What is Professor Lu… thinking about?"

Sheng Xianfu: "What do you mean by that?"

Li Changxia sighed and said, "We don't know when the results will come out. We are still researching whether or not the demonstration reactor can progress to the next stage. It's not a good time to go on a break."

Also, he claimed to be able to produce results in three days…

Even though he knew Professor Lu was skilled, this wasn't a theoretical mathematics or physics problem.

In any case, this sounded ridiculous.

Sheng Xianfu thought for a bit and said, "Maybe… he already has a solution?"

“He has a solution?” Li Changxia paused for a second and frowned. He then asked, “But why didn’t he mention it during the meeting? Is he really going to leave us hanging?”

“I don’t know, but I trust Professor Lu’s mathematics intuition. There aren’t many mathematicians in the world who are more talented than him. I don’t think he’s leaving us hanging…” Sheng Xianfu forced a smile and said, “Maybe it’s just that, even if he were to explain it to us, we wouldn’t understand.”

Li Changxia: “…”

…

Sheng Xianfu’s speculation was very accurate. Lu Zhou had a moment of inspiration and wanted to express his ideas. However, when he was about to manifest this inspiration into the language of mathematics, he decided against it.

His experience told him that even mathematics professionals wouldn’t be able to easily understand his calculations. To make these non-mathematical researchers understand his calculations would be even more difficult.

They had been working hard.

Instead of giving them unnecessary burdens, it would be better for him to solve this himself and give them instructions on what to do next.

Lu Zhou left the research institute and went home. He didn’t even eat lunch. He went straight to his study room.

He placed the printed experimental data on the table and took a pen and paper. He began to focus meticulously on the data and started to examine it.

Maybe other people wouldn’t be able to extract any value from this data, but he was different.

Just like he had expected, their idea to solve the problem was correct. They were just lacking in the area of methodology. Therefore, they weren’t able to extract the full value of this data.

Maybe in the future, in months or even years, they would finally be able to make a breakthrough.

Just like other outstanding research results, it was the accumulation of countless experiments, which aid the final breakthrough.

And what Lu Zhou was going now, was just to make that breakthrough come sooner.

Time slowly passed by, and the draft papers began to form a pile.

With help from Xiao Ai, Lu Zhou calculated the rest of the engineering parameters. He sighed in relief and leaned back in his chair.

He looked at the dark night outside his window and smirked.

All he had to do now was to provide these calculations to the engineers at the STAR research institute and let them complete the final design.

“I thought I would need three days, I didn’t expect to complete it in one day.”

Lu Zhou left his state of concentration and gradually felt hungry.

Speaking of which, all he ate today was some dumplings.

Lu Zhou realized this and was about to get himself something to eat in his kitchen. However, in his peripheral, he saw the liquid lithium neutron recovery system plan sitting on his table.

A light bulb went off in his mind, and Lu Zhou quietly whispered, “System, how many general points does it take to exchange for the liquid lithium neutron recovery system?”

He waited quietly for a bit, but no one responded.

Lu Zhou realized he wasn’t using the right method, so he shook his head and focused his attention on the plan.

Soon, a translucent pop-up window appeared in his sight.

[Mathematics level 7, engineering level 4, engineering level 3… User met the minimum level requirements.

[Required general points: 50,000]

Lu Zhou saw the four zeros behind the five and looked hopeless.

He only had 5,000 or so general points.

This is just a sub-project of the nuclear fusion project, is it really worth 50,000 general points?

If it was for the entire fusion project, I wonder how many general points it would take…

As expected, even though the system gave him a chance to “look at the answer”, this shortcut wasn’t optimal.

He originally intended on using the general points to save him some time…

Lu Zhou shook his head and was about to give up on this idea. Suddenly, an idea popped up in his mind, and he quickly flipped open the plan and put it together with the data he just calculated.

From his past experience, the “optimal solution” given by the system was based on his designs, plans, and subject level.

If Lu Zhou’s speculation was correct, then the price given by the system was correlated to how long it would take for him to solve the problem himself.

Lu Zhou had no idea how long it would take for him to earn 50,000 general points.

It could take five years, or it could even take ten years.

One thing for sure was that he didn’t need the “optimal solution” since he didn’t necessarily need the entire answer to the liquid lithium neutron recovery system.

The majority of the plan had been completed and the parameters that caused troubles to the STAR research institute had been solved by him. All he needed now was to implement these research results into the engineering drawings. This was originally going to be done by professional engineers, but it would just take longer.

Lu Zhou reorganized his thoughts and placed his attention on one of the pages. He called out the system again.

Soon, the system gave a reevaluation.

As expected, the general points requirements this time was much more reasonable.

Of course, even then, it was no small change…

[Required general points: 4,000]

Lu Zhou looked at the price and sighed.

“It’s still so expensive…”

4,000 general points was the optimal design based on the parameters he had just calculated.

If this was handed over to the engineers at China National Nuclear Corporation, they wouldn’t be able to design it as well as the system.

Whatever, this should work.

At least I won’t have to worry about upgrading the liquid lithium neutron recovery system for a while.

Not to mention, if Lu Zhou’s speculation was correct, the sooner he finished this mission, the more valuable the final product was and the more mission rewards he would receive.

Even though this was painful, it could save him at least one year.

Lu Zhou took a deep breath as his finger swiped on the translucent window.

“Confirm purchase!”

[General points remaining: 1,475]

…

Outside the mansion.

Yan Yan looked at her phone and anxiously looked at the mansion.

“He hasn’t been out for three days.”

Wang Peng tapped his cigarette and said nonchalantly, “This happens often, get used to it.”

In the beginning, if he couldn’t contact Lu Zhou for a while, he would also worry about him.

But later he realized that his fears were all redundant.

Yan Yan couldn’t help but say, “Aren’t you worried about him getting into an accident inside?”

Wang Peng smiled and said, “I’ve been driving him around for nearly a year. Over this past year, he hasn’t been to the hospital one time. He’s in better shape than you think, what accident do you…”

Suddenly, the mansion door opened.

When Wang Peng saw Lu Zhou appear at the front door, he nearly dropped the cigarette in his hand.

*The f*ck?*

When was the last time Lu Zhou slept?

Yan Yan saw Lu Zhou’s heavy eyebags and immediately began to worry. She walked over there and said seriously, “You need to rest right now, please…”

“No thanks.”

Even though Lu Zhou knew she had good intentions, he had more important things to do.

If he was really sleepy, he could just sleep in the car.

Not to mention, he only stayed up for 48 hours. His strengthened body was capable of handling this.

Lu Zhou looked past Yan Yan, straight at Wang Peng.

“Send me to the STAR-2 demonstration reactor construction site, leave now.

“I don’t care what transportation we use, the faster the better!”

A helicopter landed smoothly near the STAR-2 demonstration reactor construction site.

Even though Lu Zhou didn’t prefer this kind of transportation, this was his fastest option.

After Lu Zhou got off the helicopter, he didn’t hesitate for a second. He carried his computer bag in one arm and walked toward the construction site.

He walked straight into the main building and found Academician Wang Zengguang’s office.

Lu Zhou knocked on the door and walked in.

When Academician Wang Zengguang saw Lu Zhou walk in, he stopped writing and smiled.

“Oh? You’re back already? Academician Li Jiangang told me to inform you that their modified ion cyclotron resonance heating antenna is ready. It fits your requirements.

“We’re also doing well, we might even be able to finish before the end of the year.

“The most important part is the liquid lithium neutron recovery system, have you got it or not?”

Academician Wang was half-joking when he said this. He wasn’t rushing Lu Zhou at all.

Because he understood clearly that the reason he was able to ride so smoothly was that Lu Zhou paved a smooth road for him.

It was not an exaggeration to say that from the plasma turbulence model to the PGC-1 material, these research results had saved them at least 20 years.

Therefore, even though the most important liquid lithium neutron recovery system hadn’t made any progress, it was completely acceptable.

After all, one’s energy was limited.

However, he didn’t expect Lu Zhou’s answer.

He saw Lu Zhou take out a stack of files from his computer bag.

“I should be the one asking you this. The design is finished. Building it depends on you guys.”

“Already?”

Academician Wang stood up from his chair in shock. He quickly walked around his desk and took the stack of drawings from Lu Zhou’s hand. He began to carefully read them.

Time slowly passed by.

Academician Wang’s expression began to look more and more serious.

When Lu Zhou noticed his expression changing, he yawned and casually asked, “Is there a problem?”

Academician Wang shook his head and said, “Nope.”

Rather…

It was so perfect that he couldn’t even give any constructive advice.

Also, the engineering difficulty of the design was within their acceptable range.

Academician Wang closed the drawings in his hand and looked at Lu Zhou. He couldn’t help but exclaim, “You’re literally a genius.”

Lu Zhou smiled awkwardly.

“This isn’t just my own work, the people from the STAR research institute also…”

Of course, there was the system.

But these problems could be solved even without using the general points.

However, it would just take a lot more time. Also, it wouldn't be as perfect as it was.

Academician Wang didn't seem to buy Lu Zhou's "humbleness". He waved his hand and said, "Okay, okay.

"Yeah yeah, this is everyone's hard work, I totally believe you."

Lu Zhou: "…?"

What are you talking about?

…

The weather was slightly cold in mid-November; the red brick tiles in the Forbidden City were stained with frost.

In a nursing home not far from the Forbidden City, two men were sitting under a big willow tree while staring at a chessboard.

On this rare sunny day, these two old men were sitting across from each other while playing Chinese chess.

The battle on the chessboard was intense.

Suddenly, the situation on the board changed.

"Checkmate!"

The red-side knight killed the black-side elephant, forming a dead-corner with the red-side, and the black-side king was forced into this dead-corner.

There was undoubtedly only one outcome.

The old man stared at the chessboard and thoughtfully said, "I shouldn't have moved my pawn, if I moved my elephant…"

When the other old man saw him reaching out to move the chess pieces, he immediately stopped him.

"Hey hey hey, what are you doing, I don't care if other people make do-overs, but not you!"

The old man's hand was touching the edge of the chessboard. He paused for a second and smiled.

"Chief Designer, you are right, I lost this match!"

Sitting across from him was Academician Ren Changming, the former chief designer of the Chinese linear exploration project.

"Are you busy?"

Old man: "You could say I am, or you could say I'm not."

Ren Changming: "You look pretty relaxed to me, you even have the time to play chess with me."

The old man shook his head and said, "The international situation isn't looking good, I'm just trying to clear my mind."

Ren Changming: "I heard Jinling is doing controllable nuclear fusion?"

The old man nodded and said, "Yeah, they are."

Even though many old experts didn't think this project was achievable, they felt like it was worth a try.

Maybe this technology could be the key to the future?

"Controllable nuclear fusion…" Ren Changming looked emotional as he said, "I talked with Qiao Gong about this problem. Back then, we all thought that either America or Russia would be able to create this technology within twenty years, and we would be able to catch up. But nearly 40 years have passed since then, and I still have no idea when it will happen."

In the 1990s, everyone was researching inertial confinement fusion, and they claimed they could achieve fusion ignition within ten years and could commercialize within 20 years. China was witnessing the potential birth of controllable fusion, and they obviously didn't want to fall behind. In 1993, the inertial confinement fusion project was launched, and it was selected into the 863 government initiative. China followed the international trend to launch a research attack on inertial confinement fusion.

However, the project did not go as smoothly as planned. America's inertial confinement fusion machine failed to achieve fusion ignition, which

depopularized the field. Then, the unpopular tokamak began to become popular, while the once popular inertial confinement fusion became a deserted island.

If it wasn't for the military application of laser ignition, the investment into inertial confinement fusion could be considered a total loss.

What was happening now at STAR-2 was just like a cycle of the past.

Even though Ren Changming wasn't in the nuclear engineering field, he personally witnessed all of this happen.

Honestly speaking, he was more worried than optimistic.

Of course, deep down in his heart, he still looked forward to this project to be successfully completed.

"Isn't Lu Zhou in charge?"

Old man: "You know him?"

"More than just know." The old academician had a smile on his face as he said, "A few years ago, that kid was still studying at Jin Ling University, I knew of him back then.

"I think it was the expert interview section for a mathematical modeling competition. I was sitting at the judges' table, and I asked him what his views were on the moon landing project. This kid was interesting. He was different than the other interviewees, and he turned the question on me and asked my opinion on the Great Wall? We began to talk about the history and the future. It was a great conversation.

"Back then, I instantly knew he was a talented person. I felt like it was a waste for him to be stuck in the mathematics field, so I personally went to Jin Ling University and tried to convince him to come to Yan University. I asked if he wanted to learn about rocket science with me, guess what he said?"

The old man smiled and asked, "What did he say?"

Ren Changming slapped his thigh and smiled. "He told me, 'Professor Ren, I don't want to fly yet'!"

"Hahaha…"

These two old men began to laugh out loud.

When Ren Changming began to reminisce about the past, he couldn't help but feel a little depressed.

Back then, he could travel all over the country. Even if he wanted to travel now, his old body didn't give him the time of day.

Ren Changming stopped laughing and spoke emotionally.

"You know what happened after that… This kid is an enigma. Even though he didn't build rockets, he was basically flying in the sky."

Ren Changming paused for a second and continued, "If he doesn't succeed, don't be disappointed. After all, scientific research isn't building infrastructure. The input and output aren't necessarily proportional. I'm actually more optimistic about his future. Compared to us old folks who are about to go six feet under, his research career has just begun."

The old man smiled and said, "I know this, don't worry about it."

Ren Changming felt relieved, and he nodded.

Even though it was entirely possible for Lu Zhou to succeed, he still had to tell the president these things.

Because if he didn't say anything, no one else would dare to say it.

A security guard came over and reported to the old man.

"Director Lu is outside."

The old man nodded and said, "Let him come in."

"Ok!"

The security guard saluted and turned around.

Soon, Director Lu walked over excitedly while being followed by the security guard.

The old man noticed the letter Director Lu was holding in his hand, and he smiled as he asked, "What's making you so excited?"

Director Lu replied energetically, “There’s good news from Haizhou! The demonstration reactor project is in its final stage! I have a letter from Professor Lu!”

Ren Changming looked astonished.

The chess piece in the old man’s hand fell onto the chessboard, and he immediately stood up.

“What did he say in the letter?”

Director Lu took a deep breath and said enthusiastically, “The demonstration reactor is in its final countdown mode. It’s expected to achieve fusion ignition at the end of the year! They’re requesting approval from the Communist Party of China!”

The old man smiled heartily and said, “Okay, good.”

He changed his demeanor and gave an order.

“Fusion ignition is approved!”

STAR-2 demonstration reactor construction base.

The construction site was raging with action.

It had been more than a month since Beijing approved fusion ignition. Autumn was gone and Winter had arrived. It was now the season to eat dumplings.

Even though the weather was getting colder, it didn’t put out the fire in everyone’s heart.

They had crossed countless obstacles and barriers to get to this moment.

Soon, they would find out if it was all worth it.

“Connection port is checked! Connection is normal!”

“Attention all units, start docking!”

The ion cyclotron resonance heating antenna, which was around ten meters long and around four meters wide, was hoisted by a steel cable and attached to a crane. It slowly moved toward the huge reactor.

At the same time, the China National Nuclear Corporation engineers were standing nearby. They were operating other professional equipment and installation work.

Academician Wang Zengguang, the chief engineer of the China National Nuclear Corporation, was in charge of everything that was going on. He wore a helmet and had a proud smile on his old wrinkly face.

“I used to think that when China National Nuclear Corporation develops the fourth-generation nuclear fission technology, it’d be time for me to retire.”

Academician Li Jiangang from the Fuyang Institute Construction Material Laboratory was standing next to Academician Wang. He smiled.

“What about now?”

Academician Wang stared at this metal behemoth and smirked.

“It looks like I’ll have to wait a couple more years.”

If we achieve fusion ignition…

There has to be someone to lead it.

Before fusion technology arrived on the right track, Academician Wang had to continue working.

Suddenly, a middle-aged engineer, who was wearing a safety helmet, came over to these two old men.

“The ion cyclotron resonance heating antenna has been installed!”

Academician Li said in a serious manner, “Is the connection port seal checked?”

The middle-aged engineer nodded and said in a serious manner, “It’s been checked three times! There are no problems whatsoever.”

Academician Li nodded with satisfaction and looked at his old friend next to him. He then jokingly said, “The Fuyang Institute Construction Material Laboratory successfully completed their task, it’s up to you guys now. Old Wang, don’t drop the ball at this crucial moment. If your ferrofluid electric energy generator doesn’t produce electricity, then it’d be a shame.”

Academician Wang smiled and replied, “Ah, you old man, worry about me now I see? Rest assured, if we end up dropping the ball, my name isn’t Wang Zengguang!”

He looked at this middle-aged engineer and ordered, “Begin the ferrofluid electric energy generator installation!”

“Ok!”

The middle-aged engineer nodded and immediately ran toward the reactor base.

…

Whoosh!

Two fighter jets whizzed past the skyline, producing a deafening roar behind them.

Recently, this sound could often be heard around here.

Lu Zhou stood in his office with floor-to-ceiling windows. He looked away from the sea and stared at his watch.

In thirty minutes, there was another conference for him to host.

Ever since his research work was temporarily paused, he had been extremely busy.

It would be better to say that this month of demonstration reactor construction was the most exhausting month he had ever had.

More than one hundred research institutes participated in research projects of the STAR-2 machine, and dozens of institutions had participated directly or indirectly in the construction of the demonstration reactor components as well as the construction site infrastructure.

In order to coordinate these various departments, the most common thing he did this month was to host meetings. He had to host more than three meetings every day and had to oversee at least ten reports.

For a person that liked to stay in a laboratory and study interesting problems, this was excruciating.

But thankfully, these days were coming to an end.

The STAR-2 demonstration reactor components had all been completed.

If everything went well, in the upcoming meeting, the chief engineer of the China National Nuclear Corporation, Academician Wang, would report to him about the installation of the ion cyclotron resonance heating antenna and the ferrofluid electric energy generator.

These were the last two puzzle pieces.

After these two components were installed and a final verification check of the components was completed, the fusion ignition experiment could basically begin.

Lu Zhou couldn’t help but smirk when he thought about this.

This day finally came.

He heard knocking sounds at his door.

Lu Zhou looked away from the windows and looked at the door.

“Come in.”

The door was pushed open. Yan Yan walked in. She was wearing a dark blue coat and holding a lunch box.

“You haven’t eaten again, right?”

Lu Zhou smiled and said, “I have no appetite during the day. I’m used to eating just breakfast and dinner.”

Yan Yan sighed and placed the lunch box on the coffee table as she said, “I know you’re busy, but you still have to eat three meals a day. I brought you some dumplings from the cafeteria.”

The food was delivered directly to Lu Zhou’s door, so he didn’t want to persist. He gracefully thanked Yan Yan and sat down on the sofa. He then opened the lunch box.

The delicious scent wafted over as the crystal-clear dumplings enticed Lu Zhou.

When he drank some soup and felt his stomach warm up, his eyes shone brightly.

Oh, it's quite nice.

He couldn't help but pick up the chopsticks.

"Is the army food always this good?"

Yan Yan sat down on the sofa across him and said, "It depends which department it is."

"Oh yeah?"

Lu Zhou didn't continue carrying on the conversation. Instead, he concentrated on enjoying his delicious lunch.

A regular diet was definitely healthy, and he didn't need anyone to tell him that since he was well aware of this.

But even though he was aware, he lost his appetite whenever he was busy. Once he realized he was hungry, it was already past lunchtime, so he would just wait for dinner instead.

Lu Zhou was enjoying the dumplings in the lunch box when he suddenly remembered something.

"Speaking of which, today is the winter solstice, right?"

Yan Yan was sitting on the sofa across from him. She paused for a second and nodded. "Yeah."

No wonder we're eating dumplings…

Lu Zhou smiled. If it weren't for this box of dumplings, he wouldn't have realized today was a special day.

It really is the winter solstice…

Time really flies…

He heard footsteps coming from the corridor, and soon, a familiar face appeared at the door.

“Since the door is already opened, I’m coming in. I’m not disturbing Professor Lu’s meal, am I?”

“You’re not disturbing me at all.” Lu Zhou smiled and put down the chopsticks as he said, “I just finished eating.”

He looked at Yan Yan.

“Thanks for the lunch.”

Yan Yan shook her head and said, “No worries, you’re welcome.”

She got up from the sofa and took away the lunch box on the coffee table. She left the office and closed the door.

Regiment Commander Dai sat down across from Lu Zhou. He then cleared his throat and asked in a serious manner, “It’s almost the end of December, is there an exact date for fusion ignition?”

Lu Zhou thought for a bit and replied, “The exact date isn’t determined yet. I’ll discuss this matter at the next meeting. But regardless of what day it is, it definitely won’t be delayed until next year.”

“Okay, I’ll come back here in the evening,” Regiment Commander Dai nodded and said, “but my suggestion is that, if you guys have determined a date for fusion ignition, try to tell us three days in advance. This is so that we can ask the city council to cooperate with us and sort out the safety and traffic issues in the area.”

“No problem, thank you so much.” Lu Zhou nodded. When he suddenly remembered something, he said, “Speaking of which, it’s New Year’s Day in a few days, right?”

Regiment Commander Dai nodded and said, “Yeah, why?”

“Perfect, let’s pick an important day for fusion ignition then.” Lu Zhou smiled and said, “We’ll give the people of China a gift for the upcoming new year!”

Chapter 556: Fusion ignition!

Chapter 556: Fusion ignition!

December 31st.

New Mexico, Sandia National Laboratories.

Several engineers in protective clothing were standing in a half-spherical device to overhaul the cooled down equipment.

This machine was called the Z-machine.

The capacitors that were densely packed inside the machine could discharge up to 1,000 times the power of lightning. Just by pressing the switch, a 20-million amps current would instantly surge into the cylinder, violently compressing the hydrogen atoms. This would then release the terrifying fusion energy.

Even though they were being pressured by the demonstration reactor across the Pacific Ocean, the controllable fusion laboratory in the United States had been having a good day.

Especially after they saw the disturbance that occurred in the energy futures market a while ago. Congress finally began to pay attention to the controllable nuclear fusion technology, and they started to generously give out research funding.

In addition to Congress, multiple giant energy companies had also increased their investments in the fusion technology. However, Sandia National Laboratories, a research institute under the Department of Energy, was mainly funded by the federal government.

Unlike the National Ignition Facility in California, the Z machine wasn’t exactly considered inertial confinement fusion. The high power current and nuclear fuel formed a magnetic cage. This cage produced fast ignition in the microsecond time range. This basically combined inertial confinement fusion and magnetism together.

Even though this machine wasn't as popular as the National Ignition Facility, it previously set a world record for the highest recorded temperature of 3.5 billion degrees. Even the researchers that designed the machine themselves were surprised and confused by this temperature.

But honestly, there was no point achieving this high of a temperature for the deuterium-tritium fuel. After all, 100 million degrees was more than enough for a fusion reaction to take place. Even the second generation nuclear fusion fuel, He3, only needed a critical temperature of 600 million degrees.

The difficulty in controllable fusion research had never been the high-temperature part, but rather, it was on how to confine the high-temperature plasma.

But compared to other technical routes, the Z machine had at least produced some results in terms of electricity output.

Rick Perry, the secretary of the United States Department of Energy, looked at his watch.

When the watch handle landed on the hour, Sandia National Laboratories chief researcher Andy Rofan appeared at the door and walked toward him.

Perry waited for Rofan to sit across from him before he asked, "How is the result?"

Andy Rofan shook his head.

"It's still too early to ask this question. Can the material's anti-radiation problem be solved, are the elements inside the reactor self-sustaining? These are all basic problems of the controllable fusion…"

Perry took a deep breath and interrupted him, "Listen, I need a specific time frame. When can you produce real results?"

Rofan couldn't help but say, "You're giving me such a hard time! I can't give you a specific time unless the Lawrence Livermore National Laboratory can tell us when they can figure out the D-Li neutron interaction."

Perry said, "So the source of the problem is the neutron?"

“Obviously not just that…” Rofan had a bitter smile on his face. He went silent for a bit before he continued, “But after the neutron source problem is solved, we can at least begin anti-radiation testing on materials.”

Suddenly, they heard footsteps coming from outside the lounge.

Perry looked at the man who was walking over, and he frowned.

“What’s up?”

The man, who was wearing a suit, took a deep breath before saying hesitantly, “The White House called. The president wants you to go back immediately… There’s an important conference tomorrow.”

“What happened?”

“I just heard rumors…” The man in the suit sighed and quietly said, “Our allies have informed us that in twelve hours… the demonstration reactor in Haizhou, China, is about to begin fusion ignition.”

Perry’s eyes began to squint.

Rofan, who was sitting across from him, bounced off his chair and exclaimed, “This is impossible!”

…

Haizhou, STAR demonstration reactor base.

There wasn’t a single cloud in the sky. The ocean waves were calmly crashing toward the rocks.

Inside the reactor base, all of the researchers and soldiers were stationed in their respective positions.

Since last night, the farthest checkpoint had been set to more than 20 kilometers away. With the help from armored vehicles, all roads leading toward this area had been blocked. All nearby tourists and pedestrians had been warned. Soldiers with live weapons were patrolling inside and outside the reactor base, to defend against any potential threats and safety hazards.

Three days ago, the regiment-level combat units stationed in this area prepared enough heavy firepower to defend against terrorists and enemy air

units. They carried out various drills, including ground-to-air combat, anti-missile training, and anti-ship combat.

They had taken every possible scenario into account and made adequate preparations.

At the same time, the China National Nuclear Corporation engineers were inside the nuclear plant, doing final inspections on the reactor.

If the STAR-1 was a steel behemoth, then this fully assembled STAR-2 was a giant steel dragon.

The SG-1 superconducting magnet was its legs, the supercomputer was its brain, the plasma control scheme, developed by artificial intelligence, was its running instructions. The He3 atom probe was its eyes, while the PGC-1 composite material was its organs, and the liquid lithium was its blood…

There were countless other components in addition to these, all of these were the blood, sweat, and tears of countless researchers.

Thankfully, this project was finally completed.

The engineers finished all of the inspections and quickly left the building while accompanied by security personnel.

The control room was on the other side of the demonstration reactor; everything was being carried out in an orderly fashion.

They had completed a fusion ignition drill three days ago. Everyone here was familiar with the safety and operating instructions.

All they had to do now was to repeat what they did three days ago.

“Superconducting magnet inspection completed! Liquid helium is being injected…”

“Liquid helium injection completed. Temperature has reached critical value, turn on the electricity!”

“Electrical current reached critical value…”

“Magnetic field adjustment complete…”

“Inject the fuel!”

The last step finally came.

All they had to do now was to turn on the ion cyclotron resonance heating antenna. After that, all of the work would be done.

When Lu Zhou looked at the button in front of him, he suddenly started to get second thoughts.

He took a deep breath and looked at Academician Pan.

“How about you press it?”

“No, you do it.” Academician Pan shook his head and smiled as he said, “Being able to witness this in my lifetime, I’m already satisfied!”

All of the researchers inside the control room were looking at Lu Zhou.

The CTV camera was facing him as well.

Lu Zhou took a deep breath and reached out his right hand.

From the 863 plan to now, China had been mingling with controllable fusion for almost half a century, while the international community had been researching controllable fusion for more than 70 years.

The year would turn 2020 tomorrow.

Everyone had waited too long for this day.

And right now, they were at the edge of a new generation of technology.

There wasn’t anyone else closer to the future than Lu Zhou.

Lu Zhou gulped and looked at the dial on the dashboard. He then looked at the researchers around him.

“I am honored to witness this moment with all of you.

“We have completed all of the work necessary, we have done our best to make everything as perfect as possible.

“No matter what the outcome is, history will remember this day, we will all be remembered.”

He pressed the button.

It was like the sun was rising.

That pitch-dark reaction chamber was illuminated by the hottest energy in the entire solar system…

The temperature in the reaction chamber began to rise.

It was forming the most intense energy in this solar system, and the plasma that was trapped inside the magnetic field was like a thin aurora, flowing quietly inside the reaction chamber.

Once the temperature reached 100 million degrees, the plasma was instantly lit up.

The enormous energy was like a tidal wave that gushed out of the tiny nuclei.

Everyone in the control room was witnessing this moment, and they all looked excited.

However, no one was cheering.

Because all of this had just begun!

The reporter, who just took a photo, quickly retreated to the side. The researchers inside the control room were like gears inside a clock; they were busy working.

There was a fundamental difference between the demonstration reactor and the experimental reactor. One would only have to complete a few experiments for the latter to be considered successful, while the former was based on true success.

At this moment, the sleeping metal dragon was awakened by them, producing a deafening roar.

The ability to control the energy of a star depended on whether or not they could control this dragon!

“Fusion reaction detected! The neutron beam is in contact with the beryllium metal layer!”

“External field coil is being adjusted… the plasma control scheme is valid!”

“Magnetic field is stable! Plasma inside the reaction chamber is in good condition!”

“Recycling pump has detected tritium! The liquid lithium neutron recovery system is working!”

It was like the liquid lithium was circulating through the dragon’s body. It was slowly injected with tritium. After that, it was pumped back into the reaction chamber for further ignition.

The staff reporting on the situation spoke with a slight tremble in his voice, “The tritium was successfully recycled!”

This was the second goal of the STAR-2 demonstration reactor, right after fusion ignition!

It wasn’t just his voice; even his shoulders were shaking with excitement.

Also, it wasn’t just him.

All of the researchers inside the control room were witnessing this exciting moment, and they clenched their fists.

Whether or not the recycled tritium could be used in the reactor again was the key to the commercialization of the fusion reactor.

Even though they would have to calculate the specific recovery efficiency after the experiment, judging from the current observations alone, they had achieved their expectations!

This meant that their hard work over the past year wasn’t wasted…

On the other side of the demonstration reactor base, next to a facility that looked like a water pump…

An engineer was accompanied by security personnel as he checked the heat discharge pressure of the water valve. He looked at the dial and squinted.

“Oh, it looks like we’re doing pretty good.”

His PhD student, who was standing next to him, asked, “What’s pretty good?”

The old engineer smiled and said, “Obviously it’s the reactor.”

The PhD student was a little surprised. He couldn’t help but ask, “How can you tell?”

“Water pressure, use your brain. You’re an engineering student. You can’t just write theses all day.” The old engineer tapped the water pipe next to him and happily said, “The water cooling system is pumping hot air, what does this mean? Tell me.”

“The nuclear core is working…” The PhD student gulped and asked excitedly, “Does this mean… we’ve succeeded?”

The old engineer squinted and said, “It’s too early to say this. Our success still depends on whether or not we can generate electricity and if the power output matches our expectations. This demonstration reactor aims to be the largest power generator in Jiangsu. Apparently, it can reach 100,000 megawatts. So, it’s not that easy to achieve this goal.”

“100,000 megawatts… Do you think this is possible?”

“It’s not possible now. We’ve only installed four ferrofluid electric energy generators, so at most, we’ll be able to output 4,000 megawatts.” The old engineer smiled and said, “But if we install another hundred ferrofluid electric energy generators, we can do it!”

This was different than nuclear fission generators.

Not only was the ferrofluid electric energy generator on the STAR-2 demonstration reactor relatively small in terms of size, but it was also surprisingly difficult to install on the STAR-2 machine.

With just four generators, it was impossible to utilize the heat generated from the fusion reaction. Most of the heat generated from the fusion was being discharged into the sea. In his opinion, it was entirely feasible from an engineering perspective to add a hundred ferrofluid electric energy generators.

“One hundred generators…” The PhD student looked at the dial on the water pipe and said emotionally, “I wonder how much deuterium would be burned in a day.”

The old engineer smiled.

“Around 50 kg or so.”

The most expensive price of deuterium was 4,000 yuan per kg, so 50 kg was 200,000 yuan.

200,000 yuan of fuel could provide an entire day’s worth of electricity to Jiangsu.

Even if the price was increased by tenfold, this investment would still be insanely profitable…

…

Of course, the demonstration reactor obviously didn’t need to use that much deuterium.

The consumption of 50 kg of deuterium per day was the maximum load for the reactor.

The fusion ignition experiment happening now was measuring fuel in units of mg per second.

After all, only four ferrofluid electric energy generators had been installed. Most of the heat was discharged into the sea.

Inside the reaction chamber…

When the forty-minute fusion cycle came to an end, the heat accumulated inside the reactor was poured into the sea by the circulating water cooling system. After the fusion reaction stopped, the temperature of the gas molecules inside the nuclear core quickly dropped from 100 million degrees to less than 10 million degrees.

The reactor would be shut down for twenty minutes.

In the next twenty minutes, the outer field coil would adjust the shape of the magnetic field in order to prepare for the next fusion cycle.

Even though the fusion reactor was paused, the staff in the control room didn't relax at all; they were still in their respective work stations.

As Lu Zhou stared at the lines of data and graphs on the computer screen, he thought for a bit before he said, "Open the No. 1 electric generator."

According to the collected data, the previous round of experiments was near perfect.

Next up was to push the experiment to the next stage!

"Ok!"

After hearing this command, the staff member sitting in front of the computer immediately pressed the button to access the No1. generator.

Just like most nuclear fission power stations that were near the sea, when it was turned off, the excess heat in the reactor was directly discharged into the sea through the water cooling system. As for the special helium debris produced by the nuclear fusion, that was recovered by a special piece of equipment after the reactor was cooled down.

When they needed to generate power, the thermal energy output was directly connected to the corresponding electric generator.

If they needed a certain amount of energy output, they would burn a certain amount of fuel. All they needed was enough generators.

After the No.1 generator was connected to the reactor, the second round of the experiment began.

The energy of a star was being produced again. Not only was this steel behemoth boiling the seawater near the cooling pipe, but it also awakened the ferrofluid electric energy generator.

The high-temperature ionized plasma gases were ejected from the nozzles, cutting through the magnetic lines. This converted the thermal energy in the reactor into a constant stream of electrical energy.

The researchers were staring straight at the computer screens as they exclaimed excitedly, "The ferrofluid electric energy connection port is working properly!"

“No.1 generator power output is increasing!”

“No.1 generator reached max capacity of 1,000 megawatts!”

They couldn’t contain the excitement in their hearts, and one of the researchers shouted out loud, “We did it!”

That’s right, they did it!

The energy produced by the fusion reactions were converted into electrical energy.

The No 1. generator began to supply energy to the ion cyclotron resonance heating unit as the entire fusion reactor produced a cycle of continuous and stable electric energy output.

There wasn’t another form of energy in the solar system that was purer than this.

The researcher’s exclamation resonated in everyone’s heart.

The control room exploded with sounds of cheer, and everyone was hugging and high-fiving each other.

Victory belonged to them.

Not only would history remember everyone here.

But it would also remember their victory.

Old Pan’s face was red from the excitement as he clenched his fists. Even his dry lips were slightly trembling.

Academician Wang was also smiling with his mouth wide open. He patted Li Jiangang on the shoulder excitedly like he was a child.

“What did I say? Is my generator working or not?”

“Yeah yeah yeah, you’re nutty!”

Academician Li raised his hand and rubbed his eyes.

Normally, he would throw a comeback or two.

But right now, he only felt excited; he couldn’t even come up with a comeback.

Regiment Commander Dai stood at the entrance to the control room while looking at all of the researchers in the room. He took off his military hat, and without knowing it, his eyes began to water.

He didn’t even know what the data on the computer meant.

He had no idea why the researches were cheering.

But he knew that from this moment onward, the light of controllable fusion could finally shine on the land of China.

The power of fusion energy was finally unlocked.

There was nothing that could stop them now.

They finally won this battle…

The sound of cheering echoed in Lu Zhou’s ears. He had no idea how many hugs he just gave.

He stood in front of the control panel as he clenched and unclenched his fists.

He finally had a smile on his face.

“Yeah… We did it.”

A translucent text bubble was floating in front of him.

[Congratulations, User, “Fusion Light” mission chain is completed!]

Chapter 558: Fusion Light Completion!

The noise around Lu Zhou slowly disappeared.

He whispered, "System."

Soon, his consciousness was sucked into the system.

He stood in the pure white space and walked toward the translucent information screen.

There were prizes waiting for him there.

However, he wasn't so excited anymore.

In the beginning, he thought this mission would be impossible to complete. Now that he successfully achieved fusion ignition, he had gone through a lot, and he had also learned a lot.

Maybe he had already received the true rewards for this mission.

[

Congratulations, User, "Fusion Light" mission chain is completed!

Evaluation: The spark of controllable fusion has finally been ignited. The ignorant human civilization has finally learned how to warm up the solar system…

Experience rewards: 1.5 million free experience points. 500,000 physics experience points. 20,000 materials science experience points. 200,000 engineering experience points.

General points rewards: 2,000 points.

Other rewards:

1. Special mission card: Able to activate before accepting a normal mission. Activation begins a special mission chain, which replaces the normal mission. Special mission chains cannot be stopped unless the user fails the mission.

2. Reward mission card. (Can be used before accepting a normal mission. Replaces normal mission after activated.

3. One prize draw ticket.

]

The moment Lu Zhou saw the experience reward, he gasped.

1.5 million free experience points!

Before this, he thought that no matter what kind of rewards he received, it wouldn't be as shocking as achievable controllable fusion energy. But when he saw the 1.5 million figure, he couldn't help but look astonished.

The level 8 experience point requirement was only 1.2 million!

He already decided where to allocate these experience points.

Without hesitating, Lu Zhou took a deep breath and spoke.

"System, open my characteristic panel!"

A blue light swept across the screen, his characteristic panel quickly appeared in front of his eyes.

Lu Zhou reached out his hands and selected the 1.5 million free experience points. He then allocated all of them into mathematics.

Soon, his characteristic panel was updated.

[

A. Mathematics: Level 8 (444,000/3 million)

B. Physics: Level 6 (282,000/600,000)

C. Biochemistry: Level 4 (74,000/200,000)

D. Engineering: Level 5 (0/300,000)

E. Materials science: level 6 (13,000/600,000)

F. Energy science: Level 3 (0/100,000)

G. Information science: Level 2 (3,000/50,000)

General points: 3,475

]

Lu Zhou had been stuck on level 7 for so long. Now that he reached mathematics level 8, he felt his entire body relax. He couldn't even describe the joy he was feeling.

However, the next level experience points requirement made him sweat.

3 million…

This is ridiculous.

Lu Zhou's eyebrows couldn't help but twitch. He took a deep breath and looked away from his mathematics discipline.

Rather than worrying about this horrible experience points requirement, there were many other things to be happy about.

For example, physics and materials science were upgraded to level 6, while engineering was upgraded to level 5. His general points also recovered a bit from his last expenditure.

Lu Zhou felt a lot better as he closed the characteristic panel and looked at his reward inventory.

He looked at the special mission card and had a confused expression in his face.

It's not another mission chain, right?

However, he decided not to think about what was behind this special mission card.

Because just a few minutes ago, he completed one of his most amazing achievements to date.

Even though research was interesting, he needed a break…

This time, Lu Zhou learned his lesson. He didn't touch the mission card. Instead, he closed his inventory.

Since he wasn't in a hurry to accept another mission, he didn't even touch the lucky draw button. After he closed the system panel, he exited this pure white system space…

…

He gradually began to hear the cheers around him.

The parameters on the computer screen were as stable as ever.

His consciousness didn't stay in the system space for long.

As Lu Zhou looked at the researchers celebrating, he smiled and was about to say something. However, he suddenly felt a warm sensation crawling from his spine to the back of his head.

As always, whenever his discipline levels had an increase, the system would strengthen his brain.

However, this time, the warm sensation was getting hotter and hotter.

Lu Zhou was having an unusual feeling. He paused for a second and quickly realized what was happening.

From his previous experience, leveling up too fast would cause stress on his brain. If he leveled up multiple times, that stress would increase accordingly.

This time, he stepped into the world of level 8 mathematics.

Not just that, but he also leveled up in physics, materials science, and engineering…

Lu Zhou gradually felt dizzy, and he shook his head as he grabbed a chair next to him in order to support himself.

Yan Yan was the first to notice something was wrong.

Her doctor's intuition told her that Lu Zhou was acting weird.

After that, Wang Peng also noticed Lu Zhou's weird situation, and he quickly walked over to him.

Lu Zhou noticed Wang Peng was walking over.

"Hold me for a second."

He wanted to say that, but he didn't actually hear himself say anything.

Lu Zhou reached out his hands and tried to grab Wang Peng's arm, but his hands went straight through Wang Peng's arm.

Is this an illusion?

Lu Zhou had a bitter smile on his face.

Is this the downfall that comes after intense joy?

Whatever, it's still worth it.

At most, I'll just rest for two days.

Even though Lu Zhou felt disappointed that he couldn't attend the celebrations later in the evening, he knew that he hadn't had a break for a long time, and it was about time for him to take a rest…

He felt that his center of gravity was moving backward.

The noise around him began to increase.

Finally, more and more people began to take notice of him.

Lu Zhou vaguely heard footsteps and some people were shouting anxiously.

After that, he felt like he was put onto a stretcher or something, and he felt something soft at the back of his head.

Everything in his view turned into a blurry white image, and he suddenly felt fatigued and lethargic.

Lu Zhou used the tiny amount of lucidity left in him to sigh in his heart.

Looks like I'm going to be a burden to a lot of people.

I hope they don't worry too much about me.

His consciousness then fell into a pool of darkness…

The early hours of December 31st.

The streets of Washington were still quiet.

Christmas was one of the ten important holidays in the United States, and this holiday lasted until the 5th of January next year.

However, not everyone was in the right mood to enjoy this holiday.

At least, a certain president with an orange haircut didn't.

Rather, him and the White House bureaucrats didn't sleep at all last night.

In a few hours, China would conduct a controllable fusion ignition test in Jiangsu, leaving them little time to spare.

After Trump gave a New Year's Eve speech and posted on Twitter last night, he immediately hosted an overnight meeting with the higher-ups. He also made an appointment to talk with the Embassy of the People's Republic of China in the United States of America.

Around five o'clock in the morning, a black limo parked at the northwestern part of Washington, near the Embassy of China in the United States.

Mr. Trump was accompanied by several of his people. When he entered the embassy, he was accompanied by the embassy reception staff.

"I'll get straight to the point." The president made a hand gesture and told Helms to close the door behind him. Trump stared at Ambassador Sun Wenkai and said seriously, "China will conduct a nuclear test in Haizhou in around five hours. Am I correct?"

It was like Ambassador Sun heard a joke; he had a smile on his face.

He didn't give him a direct answer. Instead, he put down the teacup in his hand.

"Who told you this?"

"That's not important." Trump, who thought he had guessed correctly, placed his hands on his kneecaps with a smug smile on his face. He looked at the ambassador aggressively and slowly said, "According to the Comprehensive Nuclear Test Ban Treaty, all nuclear testing is prohibited. However, according to my intelligence agency, China seems to be violating this international convention."

Trump was observing the ambassador. He was trying to find a trace of weakness.

Unfortunately, he didn't see any weakness at all.

He didn’t see any trace of fear that he wanted to see…

Ambassador Sun took a sip of tea and slowly said, “Thinking controllable fusion research is nuclear testing is a very interesting way of interpreting this. If you don’t understand the difference between the two, why not try asking some of the American nuclear experts?”

The president smiled coldly.

He obviously knew the difference between the two.

However, he could still pretend not to know the difference between the two.

“Who can guarantee that you’re telling the truth? I don’t care what kind of secret experiment you guys are scheming at District 900, but the international community needs an explanation. If you’re not doing anything illegal, then why don’t you disclose your experiment to the world?”

“District 900?” Sun Wenkai smiled at this invasive question. He asked, “Is that what you guys are calling it?”

The president said in a serious manner, “Don’t divert the conversation, this is a serious matter.”

Sun Wenkai stopped smiling. “I know you’re curious about what we’re doing there, but there’s no need to drag the international community into this. The experiments that are being conducted there has never been a secret. However, it does involve confidential technology, and we cannot disclose the full information.”

The president said with a blank face, “We have the right to be suspicious.”

“Yes, of course, you have this right.” Sun Wenkai suddenly looked at his watch and said, “Mr. President, it is 5:30 in the morning right now.”

The president frowned and said, “Is there a problem?”

Ambassador Sun slowly said, “Before talking about the matter of District 900 with you, I want to borrow half an hour of your time.”

The president’s eyebrows furrowed, and he leaned back in his chair.

“Oh? Is there an interesting topic you want to discuss?”

“It might not be interesting to you.” Ambassador Sun smiled warmly and reached for the remote control from the coffee table. He said, “But I want to invite you to watch a show together.”

Show?

The president paused for a second.

“What show?”

“China central television news broadcast.”

…

December 31st, 5:50 am North American time.

It was 18:50 in the Beijing time zone.

Right now, in the CTV studio, television host Guo Qiang was reading the program script in his hand. He was nervously doing the final preparations.

Even though there was a teleprompter that reminded him of what to say, as a host, he still had to have a comprehensive understanding of the whole situation.

Especially since it was a special day.

Not only was it the last day of 2019, but a few hours ago, an earth-shattering event happened in Haizhou, Jiangsu.

The STAR-2 demonstration reactor project, led by the famous Nobel Prize laureate Lu Zhou, had finally lived up to its expectations. By cooperating with hundreds of research institutes around the country, they successfully achieved fusion ignition!

Under the demands from the Communist Party of China, in order to ensure that the success of controllable fusion energy could be broadcasted to the whole country, the news-editorial department prepared four sets of plans to ensure this news could be broadcasted smoothly.

If everything went well, this news broadcast today would be recorded in history, along with the success of the controllable nuclear fusion demonstration reactor…

Guo Qiang was the news anchor that had to broadcast this information to the entire country, so he had a lot of pressure on his shoulders.

Guo Qiang, who was sitting in front of the cameras, took a deep breath. He took advantage of these last couple of seconds to try and calm down.

The director was sitting behind the cameras, and he made a gesture to Guo Qiang.

“Guo Qiang, you can start!”

“Okay.” Guo Qiang nodded seriously and looked at the camera, showing a smile that he had practiced countless times in front of a mirror.

“Good evening, everyone. It’s currently the 31st of December, 7 pm at night…”

Just like Guo Qiang’s countless times of rehearsals, he stared at the teleprompter and read the contents of the press release in a clear voice.

Compared to other CTV news anchors who often had a more serious expression on their faces, he preferred to smile more.

In addition to giving off a more calm and welcoming vibe, he was more charismatic than others. This was precisely why the news network chose him as the news anchor for tonight.

According to the director, not only would the country be waiting for this news broadcast, but the whole world was also waiting.

Guo Qiang was one of the country’s spokespersons, so the leadership team wanted him to convey the controllable fusion energy experiment news in a friendly and peaceful manner.

The peaceful rising of China would not be predicated on the sacrifice of other countries’ sovereignty.

“… The STAR-2 demonstration reactor in the Tianwan area of Haizhou city has completed its final fusion ignition experiment, under the leadership of Chief Designer Lu Zhou.”

The broadcast switched to a short clip of the fusion ignition laboratory.

There weren't any spectacular lights, no earth-shattering sounds. It was just a plain control room. There was a row of blurred screens and consoles, showing the person pressing the button, followed by cheering and celebration.

Even though it was through the TV screens, people could feel their excitement and pride.

Guo Qiang, who was sitting in the broadcast studio, continued to read the script in a clear and loud voice.

"… So far, the reactor operation is stable, and the output of the No.1 generator has reached the expected 1000MW limit.

"According to the plans, the reactor will gradually be connected to the electrical grid next year. The expected power output will gradually reach 50,000MW next year. The controllable demonstration reactor will meet most of the electricity needs of our Jiangsu province…"

The field of controllable fusion was ignited.

Perhaps it wouldn't take long before the streets were filled with electric cars.

Maybe it wouldn't take long for the deserts to become fertile oases.

Perhaps it wouldn't take long before those imaginations gradually became true…

The distant future had never felt so close.

Maybe there would be a day where oil would no longer be used as a fuel, and that it would only be used as a raw material for industrial production.

From the Strait of Hormuz to Malacca, from the Red Sea to the South China Sea, China would no longer be stuck on the energy front. Their road for future development would be as long as the Milky Way.

All of this was possible.

Guo Qiang proudly looked at the excited scholars in the video, and he couldn't help but tear up.

There was a trace of tremble and excitement in his voice as he tightly grabbed the television script in his hands.

He looked at the country through the camera lens and announced solemnly, “My fellow citizens, the wheel of history is moving forward, and we are ahead of the times.

“The light of controllable fusion is our hope and future.

“History will remember this hard-fought moment. It will remember those great scholars that dedicated their lives to scientific research!

“And all of us will be able to live in a better future!”

Chapter 560: When I Grow Up, I Want to Be a Scientist Too

Beijing.

Inside an ordinary apartment in the 3rd Ring Road region.

A family of four sat around the table while eating dinner in a lively atmosphere.

If this were previous years, there would be someone else sitting here.

But that person was in Haizhou, Jiangsu, and hadn't come back yet.

"Grandma, what about Grandpa? Is he not eating with us?"

The little girl with a ponytail tilted her head and spoke quietly.

Wu Haiyan had a head of white hair. She looked at her dear granddaughter and smiled.

"Darling, you miss Grandpa?"

"Yeah!" The little girl nodded and said, "Where is Grandpa?"

Wu Haiyan had a kind smile on her face as she touched her granddaughter's hair and spoke in a loving voice.

"Your grandpa is planting a sun."

The little girl blinked innocently and asked curiously, "Planting a sun? Does that exist?"

"Yes it does, darling." Wu Haiyan smiled and said, "Your grandpa is a scientist, there isn't anything he can't do."

Pan Gaoyang was sitting at the dinner table eating. He looked at his daughter and his mom. He then said, "Dad has already retired, why is he still so busy. It's New Year's Eve tomorrow."

Wu Haiyan knew what her son was thinking. She sighed and said, "After all, that's your father's dream."

Pan Gaoyang said, "I know, but he doesn't have to be this busy, does he?"

Even though he was questioning his father's actions, he actually understood why his father was doing this.

Just like his mom said, this was his father's dream, and his father had been fighting for this his entire life.

However, controllable fusion was still the science of the future. Any type of advanced research was difficult.

Even westerners were puzzled with this stuff. It wasn't an easy task to catch up and be at the forefront of the world.

The hands on the clock on the wall finally hit 7 o'clock. The television news broadcast played in the background.

Pan Gaoyang hadn't watched TV in a long time, so he didn't pay attention nor was he interested in the news.

However, he suddenly heard his daughter exclaim.

"Wow! It's Grandpa! Grandpa is on TV!"

Grandpa is on TV?

Pan Gaoyang was stunned, and he quickly looked at the television screen.

A short film of the demonstration reactor control room was being shown on TV.

Wait, that old man in the gray jacket with tears running down his face… Isn't that my dad?

Fusion ignition experiment?

Connected to the power grid within this year?

How come I've never heard Dad talk about this before?

Does this mean… they have succeeded?

Controllable fusion!

As Pan Gaoyang listened to the film narrator, he was completely shocked.

His daughter, who was sitting next to him, curiously watched the TV screen and spoke with a girly voice.

"That guy standing next to Grandpa, is that Professor Lu, the one Grandpa always talks about?"

"Guy?" Pan Gaoyang paused for a second. He looked at the young man through the TV screen and smiled. He said, "Yeah I think that's him. He looks quite young."

His wife, who was sitting next to him, jokingly said, "Look at him, winning the Nobel Prize in his twenties. What were you doing in your twenties?"

When Pan Gaoyang heard his wife's roast, he smiled and put his hand on her shoulder.

"You don't remember? I was chasing after you."

Cui Xuefang looked into her husband's eyes. She then blushed and rolled her eyes.

"Stop flirting."

The little girl was still staring at the TV screen. She suddenly looked at her dad and said in a childish but serious voice, "Dad, I also want to become a scientist when I grow up."

Pan Gaoyang smiled and rubbed his daughter's head.

"Okay okay, I'll support whatever you want to do! But being a scientist is no piece of cake."

The little girl clenched her fists.

"I will try my best!"

Pan Gaoyang smiled and said, "Not bad, you're ambitious. Since you're so confident, how about you ace both of your next exams!"

…

While the news broadcast was happening, the STAR-2 demonstration reactor official Weibo account, which was created a few hours ago, sent out a post.

The post was unusually short for a celebratory post. It only contained five words.

[We Lived Up To Expectations!]

Within an hour of this post being sent out, several media outlets, including the Chinese Academy of Sciences and Everyone Daily, had re-posted the post and added their own captions for explanations.

This was just like the ignited fusion light.

It was almost like the news of the successful experiment grew a pair of wings as it flew at incredible speed all across the country.

Almost everyone who had seen this news was startled by it.

[F*ck me, controllable fusion!!! I can actually witness controllable nuclear fusion within my lifetime!!!]

[I just woke up and now I'm seeing news about a demonstration reactor fusion ignition. Shook. Can anyone tell me what year this is, and how long did I sleep for? Did I turn into Captain America?]

[Even though I have no idea what is going on, it seems impressive!]

[China has the best technology! (fist) (fist) (fist)]

[Thank you to all the scientists that are still working near the holidays! (touched) (touched) (touched)]

[Congratulations from Jin Ling University!]

[Congratulations from Jiangsu! I, for one, welcome the decrease in electricity prices. Take that, Zhejiang!]

[Congratulations from Zhejiang! Also, that person from Jiangsu, I'm sure our electricity prices will decrease as well.]

[Science is finally on trending!]

[How good is this?]

[…]

There were still opposing voices, questioning whether or not this was all worth it. They doubted whether the technology was really as good as was mentioned. They even doubted if the fusion ignition was successful at all…

However, these weren't the mainstream opinions, and they would never become mainstream.

This was just like how scientific research was pure.

There would always be respect toward the exploration of the future.

After all, most people looked forward to the future.

Everyone Daily and the Chinese Academy of Sciences weren't the only ones being flooded with comments.

After the world learned who the chief designer behind this demonstration reactor was, Lu Zhou's comment section was blown up.

[God Lu is nutty!]

[Nutty!]

[Please have some respect! Stop calling him God Lu! Call him Chief Designer Lu!]

[God Lu is planting a sun for us!]

[He's too good!!!]

[God Lu! God Lu, have you found a girlfriend yet? Have you thought about having a boyfriend?]

[? ? ?]

However, even though Professor Lu was usually passionate about sharing his joy with fans, he didn't interact with his fans at all this time.

Normally, if someone was calling him handsome in the comment section, he would secretly give the comment a like…

But today, no matter what kinds of witty compliments the fans gave to Lu Zhou… Lu Zhou was nowhere to be seen.

Maybe because he was too busy?

That was what most people were thinking.

After all, Lu Zhou wasn't an ordinary mathematics professor anymore. He was responsible for scientific research projects worth hundreds of billions. Especially after he became the chief designer for the controllable fusion project, he probably didn't have as much time to spend online.

However, surely Lu Zhou would look through the comments one day and smiled at them, right?

That's what most people thought.

However, no one knew that their hero was lying in the bed of 301 Hospital, unconscious…

Chapter 561: I Am Very Disappointed

Actually, Lu Zhou's worries were superfluous.

He was still asleep on the hospital bed, so there was no way anyone would hold a celebration party without him.

As for his wish about not giving other people trouble…

That was obviously not possible.

There were a lot of people that were concerned with his well-being.

The second he collapsed, Yan Yan, who noticed him acting weird, immediately rushed over and held him.

After that, the health squad from the army immediately rushed into the control room and put him on a stretcher. They then immediately sent him to Beijing.

While he was being placed on a stretcher, the news of him collapsing immediately traveled to Beijing, shocking the government higher-ups.

In addition to restricting this news from traveling to the outside world and notifying the relevant personnel, after Lu Zhou's short stay at the army provincial hospital, he was immediately transferred to the 301 Hospital. A team of medical experts led by an academician began to inspect his condition.

However, his medical results were quite surprising.

This team of medical experts were composed of neuroscience and virus professionals. However, they weren't able to make a diagnosis.

The only thing that was confirmed was that Lu Zhou had been extremely fatigued over the past few days.

However, they weren't sure if his blackout was related to this fatigue.

As for the other aspects…

Even with the equipment from 301 Hospital, they weren't able to detect any abnormalities.

Almost everyone was shocked at this result.

Even Academician Zhao Zhongji, who was leading the medical expert team, began to suspect that the instrument was broken.

In short, if they couldn't make a medical diagnosis, they obviously couldn't start any kind of medical treatment.

No one dared to make a conclusion, and no one dared to try a solution.

Even though it would be great if they could solve the problem, but if they made the situation even worse, they would be personally responsible for it.

In the end, all they could do was to watch him lay there and carefully observe.

After all, even though his heart rate and breathing were a little weak, it wasn't anything life-threatening.

If he really was just overworked, maybe he would feel better after he woke up?

On the other hand, the news broadcast announced the success of the controllable fusion experiment.

However, in the midst of the nation celebrating, most people at the demonstration reactor site didn't even know that Chief Designer Lu collapsed at the job site.

Most people were confused.

They finally won this hard-fought battle, but they didn't even hold a celebration party. They all just ate some dinner and were put on holiday. They all felt a little unsatisfied.

Academician Wang stood outside the west building of the 301 Hospital. He sighed and looked at the hospital building.

"We said we were going to hold a celebration party on the night of New Year's Eve and that everyone could go home and celebrate the new year. We finally won the fight, but our leader passed out."

"Yeah." Academician Li Jiangang sighed and said, "The young is dying before the old… F*ck, why are you kicking me?"

Wang Zengguang was furious.

"You old f*ck! Say it again and see what happens!"

The nurses looked at these old men arguing and walked out of the way.

Anyone that could stay in the west building of the 301 Hospital had to be an important figure.

Not only were the patients in this hospital of high status, but so were the visitors.

Especially those old men who looked like they had been around a lot, no one wanted to offend them.

However, they heard a light cough from the side.

"What are you guys doing?"

The two old men were stunned.

Academician Wang looked at the person and coughed. He then replied awkwardly, "We're just… screwing around."

…

Inside the hospital.

Yan Yan looked at Lu Zhou, who was lying on the bed, with a guilty look on her face.

Wang Peng looked at a notification on his phone and scratched his head. He then sighed.

"I'm so screwed, the higher-ups are going to kill me."

Captain Yang looked at him and didn't say anything. He only patted his shoulder in silence.

Wang Peng's work over this period was worthy of recognition.

However, he was a security guard, and he was personally responsible for Professor Lu's safety. Now that Professor Lu was on the hospital bed, there wasn't anything Wang Peng could do.

All he could do now was to take the blame.

"I'm fine, you don't have to comfort me." Wang Peng made a helpless expression and smile. He said, "Don't worry about me, you guys are probably in trouble as well."

As for why the higher-ups hadn't called them yet…

It was probably because they hadn't finished criticizing other people.

Once the higher-ups were finished, it would be their turn.

Wang Peng sighed and walked out of the room.

Yan Yan was stabbing herself with her nails. She had her head down and her eyes were filled with self-blame.

As a medical personnel, she clearly knew that Lu Zhou's lifestyle wasn't healthy. However, she didn't insist and stand her position. She should have forced him to eat more and sleep more…

If only…

She was more persistent.

She bit her lip and muttered in a raspy voice, "This is my responsibility… This is all my fault. I didn't do my job."

Yang Guangbiao said, "We are a team, there's no point discussing whose fault it is."

Right now, he didn't even care what the army would do to him.

As long as Professor Lu woke up, he would be happy to die. He would even be happy to shoot himself.

However, this couldn't solve anything.

Suddenly, the hospital room door was pushed open.

The president walked in while accompanied by someone in military uniform.

The two people in the hospital room saluted.

Yan Yan bit her lip and said, "There are no signs of consciousness yet."

The old man went silent for a bit before saying, "Professor Lu is a hero of our country. He's been fighting on the front line of scientific research. No matter what the cost is, we have to do our best to cure him!"

The head of 301 Hospital, who was standing next to him, nodded.

"Understood!"

The old man nodded.

"Also, inform me as soon as he wakes up."

The old man looked at the young man lying on the hospital bed and sighed. He turned around and left the room.

The head of the 301 Hospital also left, but the person in the military uniform stayed behind.

Yang Guangbiao knew he was about to be criticized. He took the initiative and began to admit his mistake.

"This is my fault, I am willing…"

Yan Yan: "No, this is my fault."

"Enough!" Ye Canmou stared at these two people and said, "What's the point of arguing about this? Is this going to wake Professor Lu up?"

The hospital room went quiet.

After staring at the two people for a while, Ye Canmou said, "I am very disappointed in you two."

Yang Guangbiao lowered his head and didn't say anything.

Yan Yan was the same; her heart was in pain.

"Especially you, you're a medical personnel. Look what you did? Where is your medical protection?" Ye Canmou stared at Yan Yan, who was the daughter of his veteran friend. Ye Canmou looked deeply disappointed.

"I am disappointed."

It was like he didn't want to say anything else. He merely shook his head. He then turned around and left.

Chapter 562: Overjoyed Presiden

Yan Yan wasn't the only one being criticized.

Across the Pacific Ocean, in the White House, the CIA director was also being yelled at.

"A bunch of idiots!

"Do we really need the Chinese to tell us themselves what they were doing?! How many times has this happened?! Tell me!"

The president hadn't slept for 24 hours already.

Even his foundation couldn't cover his thick eyebags.

However, since he was filled with rage, it made him feel more energetic.

A dozen or so hours ago, they were still in the White House, scheming on how to stop China's controllable fusion experiment… or at least let America join in on the experiment.

However, when he confidently sat in the embassy to talk about this matter, Ambassador Sun told him that the experiment was already over.

Also, that the experiment went smoothly.

This was horrible news for him.

It affected the return of manufacturing jobs for his campaign policy. Only by fulfilling his policy and making America great again could he have a chance at the 2020 election.

However, China was the first to ignite the light of controllable fusion.

Not only did this destroy his plan, but it put him in a terrible position.

If they couldn't catch up in this area within the next three years, controllable fusion reactors would be widespread across China. How could they compete by then?

Trade tariffs?

Or oil prices?

Would China even care about these threats by then?

There was a fundamental difference between a complete transformation of society's productivity and the improvement of market competitiveness. It was just like how an improved wheel could make the horse carriage run faster and more stable, but it would never catch up to a gas car.

Gina was standing next to the office desk, and she began to patiently explain, "I admit that this is our department's fault, but the blame isn't completely on our intelligence personnel… The entire city of Haizhou is armed with security. Any foreigner would be tracked. The news of fusion ignition was provided by our allies in Asia at great risk… However, no one expected that they would set the experiment on the day before New Year's Day, instead of on New Year's Day."

The most important thing was that this all happened too quickly.

Any type of intelligence network needed time to develop and build.

Especially when the other party was carrying out counter-intelligence precautions, it was very difficult to gain any kind of information.

The demonstration reactor project had been operating for less than a year.

No one thought that China would be progressing at such a fast speed.

Especially because ITER had been working on this project for more than 20 years. Not only did the White House think that China wouldn't be able to complete this project so quickly, but even several national laboratories and academicians from the Energy Bureau believed that this was impossible.

Ever since China left the ITER organization, most people thought they had lost their only opportunity.

However, the truth was the exact opposite.

They weren't the ones who were left behind in the fusion field.

They were leaving the entire world behind…

However, the president didn't want to hear this explanation. "Go f*ck yourself."

Gina's face turned white. She couldn't say anything.

Suddenly, there were footsteps coming from the office door.

Helms appeared at the door, as well as United States Secretary of State, Mike Pompeo.

Gina and the president both looked at them.

Gina squinted and stared at Helms.

It was almost like she was asking…

"You have the balls to show your face here?"

Helms subconsciously shuddered. He was prepared to start explaining, but Mike patted his shoulder.

Then, Mike looked at the president and smiled with his arms open.

"The situation is not as bad as we think. There are some good news."

The president snorted.

"Oh yeah? I can't imagine anything that could be considered good news."

"Of course there's good news." Mike smiled and looked at Helms. He then said, "Just a moment ago, Helms made up for his mistake. Helms, tell the president your good news."

Helms looked at Gina and spoke nervously.

"Two hours ago, according to our informants in China… Lu Zhou, the chief designer of the demonstration reactor project, is in a coma. He is currently at the 301 Hospital intensive care unit. Even though we don't know his specific symptoms and the cause of his coma, he might go into a persistent vegetative state…"

The president was stunned.

The CIA director Gina was also stunned.

Lu Zhou… passed out? In a coma?

He might be in a persistent vegetative state?

The president instantly stood up excitedly. He even slammed his fist on the table.

"Hahaha! Nicely done, it looks like God is still on our side!"

However, because the controllable nuclear fusion technology was already invented, Lu Zhou wasn't an important asset anymore.

But the president still couldn't help but feel excited.

This annoying guy is finally gone.

I hope Lu Zhou never wakes up!

Seeing that the president was in a good mood, Helms was relieved. He said, "I still think that we are neglecting China's most important person in the nuclear fusion field. We do not respect him enough.

"According to my research, Professor Lu is integral to the entire controllable nuclear fusion demonstration reactor project. He brought together dozens of research units not only because of the government's help, but it was also because of his personal academic aura. He has a crystal clear idea of how to implement controllable fusion technology.

"If his health becomes a problem, then China's controllable nuclear fusion industry will undoubtedly stagnate. According to the head of Lawrence Livermore National Laboratory, even though China has taken the lead on controllable nuclear fusion, they are not that far ahead of us. Besides that, our European allies still have a desire for nuclear fusion energy. They have been suppressed by the Russians for too long. As long as we are united, we have the chance to catch up."

All they needed was a little time.

Everyone looked happy when they heard this.

The United States Secretary of State smiled and said, "I knew there was a bright side to all this. I have a brilliant idea. Since the news of Lu Zhou's collapse is still confidential, we can first release this news in a small segment of a newspaper and test China's reaction."

The president said, "Then what?"

Mike smiled and said, "Then we can use his health as an excuse to put a little pressure on them, after that…"

There was no such thing as an impenetrable wall.

In the age of information technology, nothing could be kept secret forever.

Whether it was good things or bad things.

Sooner or later, everything would come out.

The next day, on the fourth page of The Washington Star, there was an unusual piece of article.

Which was that Lu Zhou, the former Princeton mathematics professor and Nobel Prize laureate, who was responsible for China's controllable fusion project, had collapsed due to overworking.

This piece of news didn't cause a huge commotion in America. In fact, most people didn't even notice it.

That was until this piece of news was passed around on Twitter and spread across the ocean.

The news of Lu Zhou's coma was finally released to the Chinese people in China…

After the incident spread across the country, there was an uproar.

It had been three days since the fusion ignition of the demonstration reactor.

However, they only knew now that Chief Designer Lu of the STAR-2 demonstration reactor had collapsed.

Actually, because there was no celebration party at the demonstration reactor site, nor was there any commendation conference, a lot of people had started to connect the dots.

However, most of them were just speculating on whether or not the STAR-2 demonstration reactor was really successful or not. They didn't think that it was about Lu Zhou's health.

And now that this news broke out, everyone was muddled.

Actually, the higher-ups didn't plan on keeping Lu Zhou's condition a secret forever. They even prepared a press release speech.

It was just that no one expected him to be in a coma for this long. It had been days, and there was no sign of him waking up.

Since the public opinion was shifting anyway, there wasn't any point keeping this a secret.

China finally confirmed this news.

Everyone Daily was the first to report on this.

That press release speech was modified and was presented on the front page of the newspaper.

[Professor Lu, chief designer of China's controllable nuclear fusion project, Nobel Prize laureate, and Fields medalist. After the successful fusion ignition of the demonstration reactor, due to his work overload and fatigue, has collapsed on the worksite…

[According to his colleagues, during his most difficult periods of research, he stayed at the office for weeks at a time. He often even skipped lunch.

[He is the torch of the younger generation. He illuminated the path toward a great nation. He is a candle, burning for the cause of scientific research…

[We pray for his recovery.]

The picture in the newspaper was a candle.

It was very rare for Everyone Daily to highlight an individual's safety.

The editors and readers were all in tears.

The controllable fusion ignition was successful.

This was originally supposed to be a moment worthy of celebration.

In this celebration-worthy day, Lu Zhou was supposed to be sitting with his family, sharing the joy of his success. However, he was burned out.

Maybe he couldn't handle it anymore.

However, he still stood there, persisting until the end, until the moment fusion ignition was achieved…

Surprisingly, there weren't any haters regarding this incident.

Even when the STAR-2 demonstration reactor was successful, there were a lot of people that were using conspiracy theories to hate on their success.

But at this moment, anyone with an ounce of intelligence knew not to hate on a sensitive topic like this.

Official Weibo account of Everyone Daily…

Comment section.

There were hundreds of thousands of candle emojis…

[(candle) (candle)…]

[I wish him a speedy recovery! (candle)]

[I hope he wakes up as soon as possible. (candle)]

[…]

…

At the same time, the international community was also debating.

American representative: "Professor Lu Zhou is mankind's asset. His health isn't only China's responsibility. If China does not have the ability to cure him,

I suggest to send him to The Johns Hopkins Hospital in Maryland. He will receive the best treatment there."

The French representative said, "The Saint-Joseph Hospital has world-leading experts in neurosurgery. We are willing to pay for all of Professor Lu's medical expenses, and we will ensure he will receive the best treatment!"

The British representative interrupted the French representative and said, "Saint-Joseph Hospital? Where is that? Are you joking? The Royal London Hospital is a million times better than that."

The conference table was having a furious discussion.

Finally, the Chinese representative stood up and interrupted the discussion.

"Due to our concern for Professor Lu's safety, unless he personally agrees to such a proposal, we will not agree."

The American representative said, "I hope you guys are doing a good job taking care of Lu Zhou."

Chinese representative: "We would be doing a bad job if we were to send him to you."

American representative: "What do you mean?"

Chinese representative: "You heard me."

It wasn't just the various governments, even the World Health Organization expressed their willingness to send a medical team to Beijing for free and provide medical help for this outstanding scholar.

Finally, China decided to take a step back on this issue.

After all, out of all of the countries, China was probably the one who wanted him to wake up the most.

Since the domestic experts couldn't solve this problem, it was a good idea to consult the foreign experts.

The World Health Organization team of experts was undoubtedly a better choice than a team of experts from a single country.

Even though the possibility of espionage couldn't be ruled out, it was still relatively easy to control.

Just like that, a team of medical experts set off from Geneva and traveled to China.

However, surprisingly, the international experts weren't able to come up with a better conclusion. Even the most respected neurosurgeons couldn't diagnose Lu Zhou's condition.

Academician Castin from the UK expressed his opinion.

"I personally think this is a very interesting medical phenomenon. It can even be used as a future textbook example."

Academician Zhao Zhongji said, "Oh yeah?"

Academician Castin nodded with excitement. "Yeah, his body is normal. It's like he's just fallen asleep, but he can't wake up. If we can figure out how he fell asleep, this might be a discovery worthy of the Nobel Prize."

Before he came to China, he only regarded this mission as a political task to earn some goodwill from China. After all, the England Royal Society promised him a considerable amount of research funding.

However, he was now completely fascinated and intrigued by this situation.

Academician Zhao Zhongji was also curious about what this Nobel Prize-level discovery could be. But he was more concerned about Lu Zhou's health.

Even ten Nobel Prizes couldn't compare to the life of a scholar.

"If you dare to do any kind of experiment on him, I swear to God you'll never do an experiment again."

Academician Castin smiled awkwardly and tried to diffuse the tension.

"Don't get angry… I was just kidding."

However, Castin didn't look like he was kidding.

…

The multi-national medical expert team didn't have any good ideas. China didn't really trust them, and Lu Zhou's treatment had become more and more complicated.

Fortunately, his "condition" did not worsen.

But many people were still worried about him.

The only person that wasn't worried was Lu Zhou himself.

January 20th, snow was blowing outside the window, leaving a crystal white layer on the windows.

Chinese New Year's Eve was in four days.

Lu Zhou was still lying on a hospital bed with a medical ventilator. He looked as calm as ever, and one could even hear him breathing.

Yan Yan was sitting next to the bed, and her eyes were full of tears. She thought back to a few days ago when she faced her angry father, who slammed the door in her face.

And what her father said to her.

"F*ck off!

"You're not my daughter!"

His father was in the army. He was old when he had her and was now retired.

For a man who had devoted his entire life to his country, there was nothing more important to him than the interests of the country.

Not even his own daughter.

She knew why her father was this furious, it's just that she hasn't been treated like this before.

Yan Yan took a deep breath and began to tear up.

After all, she was only in her twenties.

She originally thought she was mature, but now, it seemed like that wasn't the case.

Maybe because her life was too perfect or her military achievements made her too arrogant… She always had an illusion that she could handle anything life threw her way…

When she accepted this mission, she never even thought about the possibility of failure.

Her arms rested on her thighs, and she buried her face into her hands.

However, while she was in a pool of self-pity and blame, she heard a cough.

After that, a reassuring voice could be heard.

"Where… Where is my phone?"