

複合大域シミュレーションユニット 質疑応答

『複合大域シミュレーションユニット研究成果全体報告』（三浦英昭）

『Nonlinear excitation of energetic particle driven geodesic acoustic mode via resonance overlap in CFQS』（Wang Hao）

Q : Please show the page 12. At phase 2, we see the zero-frequency range of the spectrum. Can you comment on this zero-frequency spectrum and its interaction with the previous phase space?

A : Sorry, we analyzed it a little, but there is no clear conclusion.

Q (follow-up) : What kind of analysis did you do on this?

A : It is weaker when neglecting MHD nonlinearity. Since it is not closely related to the research topic in this work, we didn't pay too much attention to that.

Q (follow-up) : Is zero-frequency normal?

A : Yes, it is zero-frequency.

Q (follow-up) : I'm interested in that as well. If you have some attention, please discuss it more.

A: Thank you. Let's discuss it in more detail later.

『Comprehensive simulations of ICRF-driven bursting shear Alfvén waves and their suppression via phase-space engineering』（Wang Jialei）

Q : I want to ask about the tokamak experiment. Could you tell me the actual ICRF operation in the tokamak? Is it minority heating or second harmonic heating?

A : You mean the NSTX result?

Q (follow-up) : No, you can tell me the tokamak experiment analyzed by the code. Is it NSTX?

A : No, I didn't base on it. I based on a TFTR-like plasma and operated on low field. Actually, I think it's below the real operation of TFTR. Usually, I use high field strength. Now, I want to enhance EP transport. So, I reduced the field strength to 1.5 T.

Q (follow-up) : What are the ICRF heating mode?

A : ICRF heating mode is minority heating.

Q : Thank you very much for your presentation. When you say you implemented particle sources and sink in your code, does that mean you implement particle sink in the phase space? What does particle sink mean in your simulation?

A : I have a slide here about the ICRF kick model. You can understand as a source in phase space. It's trying to change the particles to have a perpendicular velocity.

Q (follow-up) : Let's say power spectrum of the velocity component during the burst event. Do you have any data or something like that? Power spectrum of velocity field during the bursting event? That was my question.

A : I haven't done such analysis.

Q : Thank you very much. Very simple question. Have you applied this in kink mode and fishbone mode?

A : Thank you very much. That's a very good question. With this extended code, we can do a lot of things. Now, we first try to apply on Alfvén eigenmode. So, later, we want to apply this ICRF heating on fishbone.