Hi Professor

This week mainly focus on the mode conversion program ,the experiment is postponed after fixing the power supply of CO2 laser .

I am going to write a manuscript about the algorithm of the methods I used in the code and the results I got from that method. Nowadays I can only solve the problems in cold plasma without significant bifurcation effect, while for case as the wave interaction with hot plasma, I still couldn’t solve such problems. Since such phenomena includes the kinetic evolution and it’s difficult to analysis the interaction process between velocity distribution and plasma. So I can only analyze the situation where the wave phase velocity is more great than the thermal electron velocity, which could be assumed as cold plasma for the wave.

The power supply should be fixed next week ,than hopefully we could continue to do test on our laser system, optimize the control program and measure the beam profile .

Have a good weekend!

Best regards

Xinhang

GPT:

Hi Professor,

This week, I mainly focused on the mode conversion program. The experiment has been postponed until the CO2 laser power supply is fixed.

I am writing a manuscript about the algorithm, the methods I used in the code, and the results I obtained. Currently, I can only solve problems in cold plasma without significant bifurcation effects. I haven’t been able to solve cases involving wave interactions with hot plasma. Such phenomena include kinetic evolution, and it’s difficult to analyze the interaction process between the velocity distribution and waves in plasma. Therefore, I can only analyze situations where the wave phase velocity is much greater than the thermal electron velocity, which allows for the assumption of cold plasma.

The power supply should be fixed next week, and hopefully, we can then continue testing our laser system, optimizing the control program, and measuring the beam profile.

Have a great weekend!

Best regards,  
Xinhang