Hi Professor

This week I mainly worked on the receiver optical geometry program of High-k scattering system.

Based on the work of Calvin and Xianzi ,I extend the geometry relationship between the Interaction Region and our stepper motor position .the Interaction region should be calculated based on the parameters which are most precise and easy to check in the real word to avoid any errors between cad draft during the installation .and I also talked with Calvin and Jon about the alignment method and some important measurement during the installation ,for example measure the direct angle from launch mirror and receiver mirror which we need known to prevent any receiver antenna exposing from the launch beam .

Plan to do :Upgrade the control program in labVIEW

What I am going to do next is to write the coordinate relationship formula in Python and use LabVIEW to call Python to calculate the coordinates. I need combine the program with our control system so that when we input the interaction region parameters (or stepper motor positions), the system will provide the corresponding stepper motor position (or interaction region and receive angle) and automatically move the stepper motor to the correct position. The scattering wavenumber will also be calculated in the LabVIEW program and display in control panel.

Also the automatic program to find the best stepper motor position for the formic laser is also under development .I have finished the first generation of the program ,but faster and more timely adjustments still require time to test and develop .

This is the main works I do this week and have a good weekend!

Best Regards

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