**Problems and Tasks Need to Solve for FY 2019 CCMC IRAD**

1. Need to update most recently code in GMAT to CCMC-GMAT code.

The current code of CCMC-GMAT are developed based on the GMAT code version about 1 year ago. It lacks of the recent features and code fixed for bugs. It needs to update to the recent code in GMAT and rebuild CCMC\_GMAT.

1. Need to increase the size of hard drive memory offering to CCMC IRAD in CCMC server.

In the current CCMC computer server, we have experience memory overflow when we develop and test CCMC-GMAT on CCMC server. We need more memory access to CCMC server for our IRAD.

1. Need to improve the performance of TIEGCM Model or any model that has the same problem as TIEGCM model.

TIEGCM Model currently has a poor performance due to the way it handling and processing data when it interpolates density at a given time a location on Earth atmosphere.

1. For any new atmosphere model added into KAMELEON, it needs to know a completed list of Python dependencies before adding to CCMC-GMAT. We experienced this problem when we work with TIEGCM model. When it missed some Python dependencies for TIEGCM, VC++ compiler did not told anything. When we run CCMC-GMAT, it crashed or has error. We very hard to find out what causes the problem.