# Thermosphere Tutorial Questions

### How would you simulate the next 2-3 solar cycles in view of the predictability (or lack of) of solar cycles?

### What are the advantages of measurements of solar activity in space? And the disadvantages?

### Over a satellite mission, its mass often decreases (why?). How does that change the atmospheric drag?

### What can you do if you want to minimize atmospheric drag of a future satellite mission? (give solutions for a circular orbit, and for a highly eccentric orbit)

### What can you do if you want to maximize drag? Why would you want to do that?  (give solutions for a circular orbit, and for a highly eccentric orbit)

### Why do the lighter atmospheric constituents become more and more abundant with altitude in the thermosphere?

## BONUS TASK (requires good internet and CCMC):

### Simulate the minimum-to-maximum predicted density with the model NRLMSISE-00 for the same conditions as on slide 7 (DTM2013 250 km 7/6/2002 F=181)

### Simulate density at 800 km, latitude vs local solar time, for low and very high solar activity. What strikes you?