
Midterm 1

Spacecraft Environments Liam Hood

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Pressure

The pressure drops less with altitude for solar maximum because the molecules are hotter so moving more, creating more pressure expanding the atmosphere

Particle Density

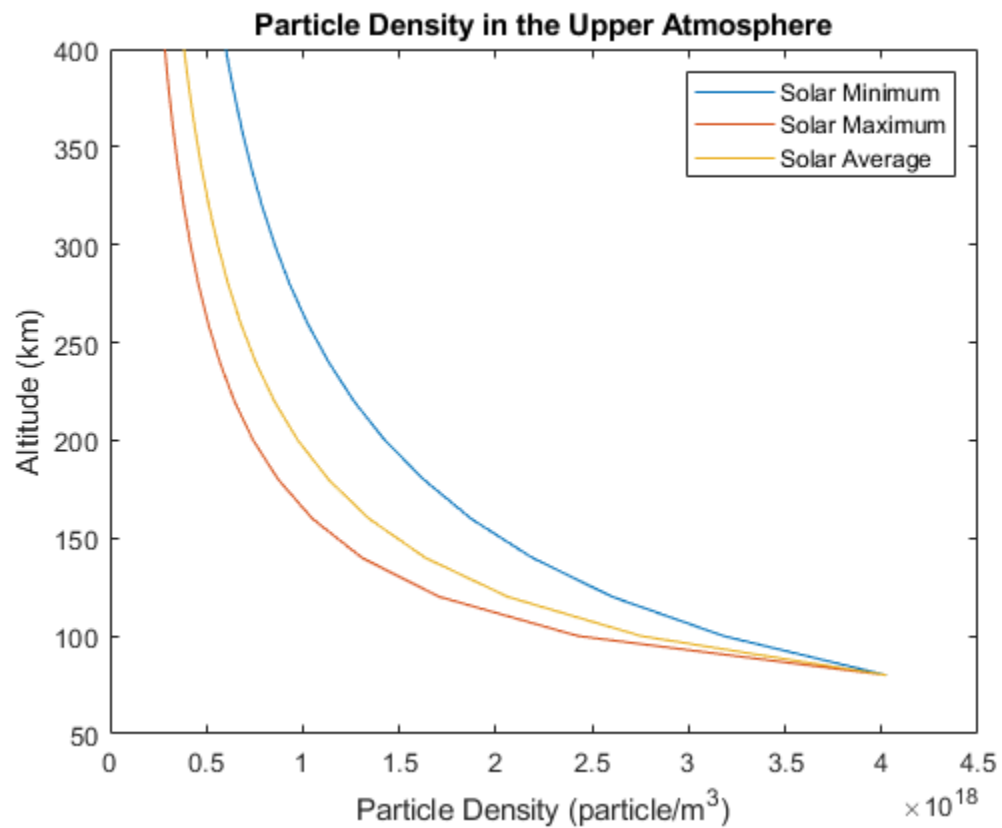
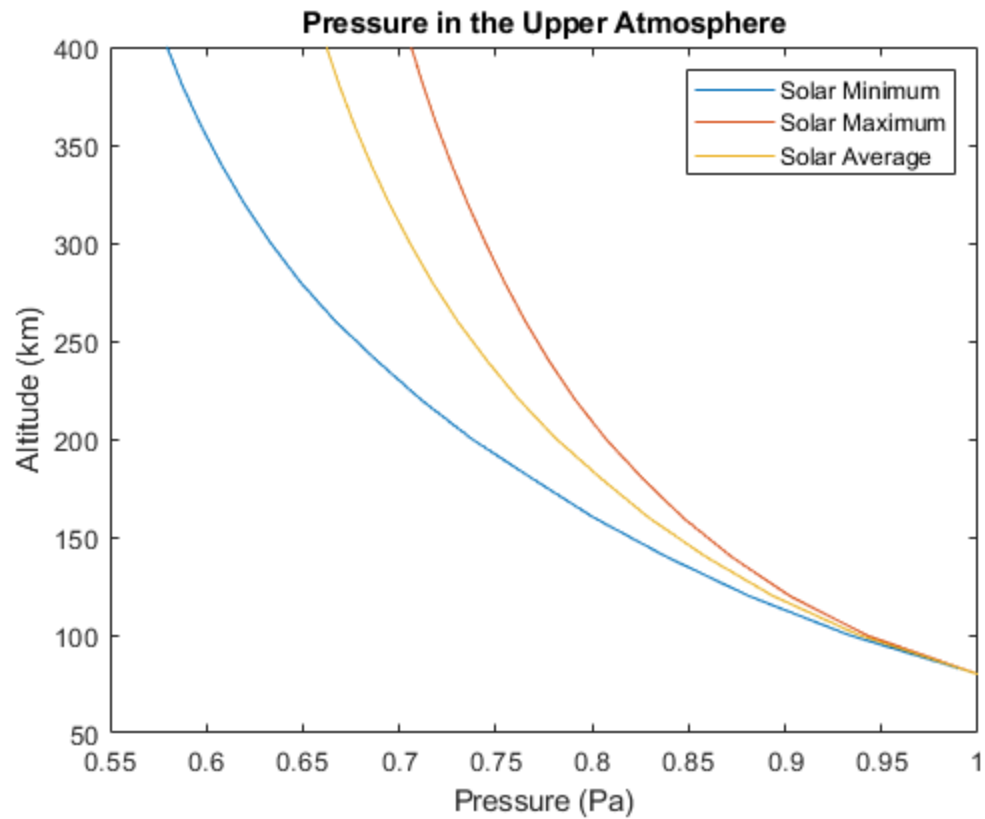
The particle density decreases with altitude. It is faster for solar maximum because the molecules are warmer and collide more often expanding the space between molecules

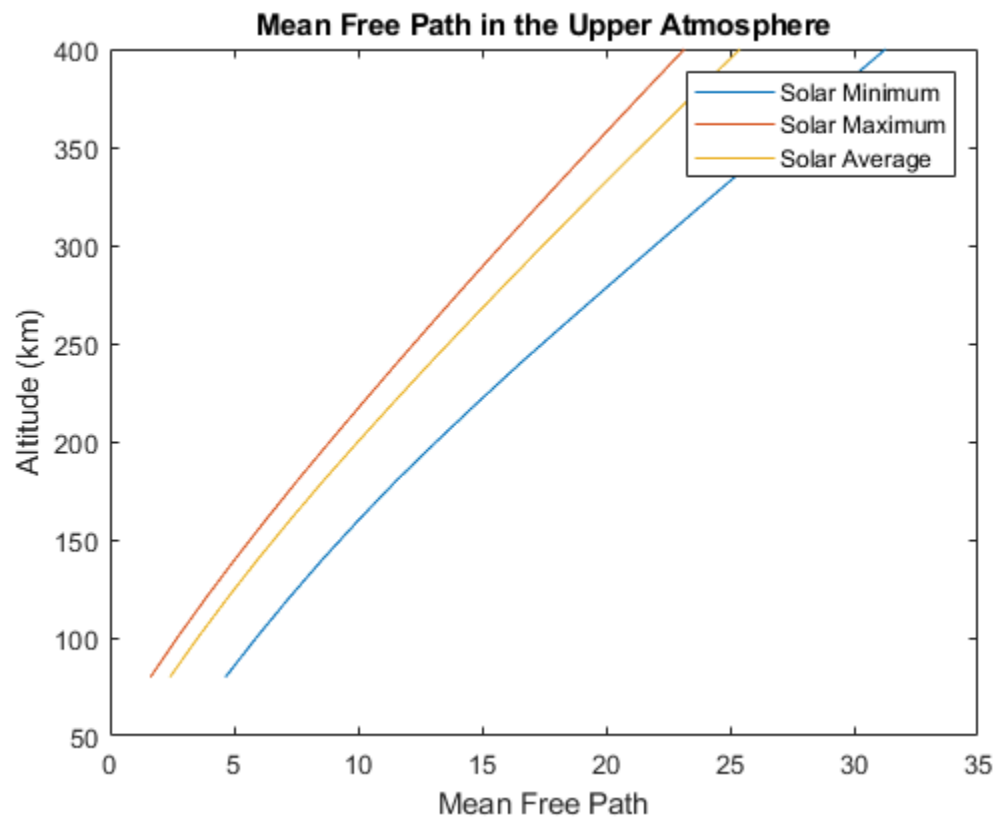
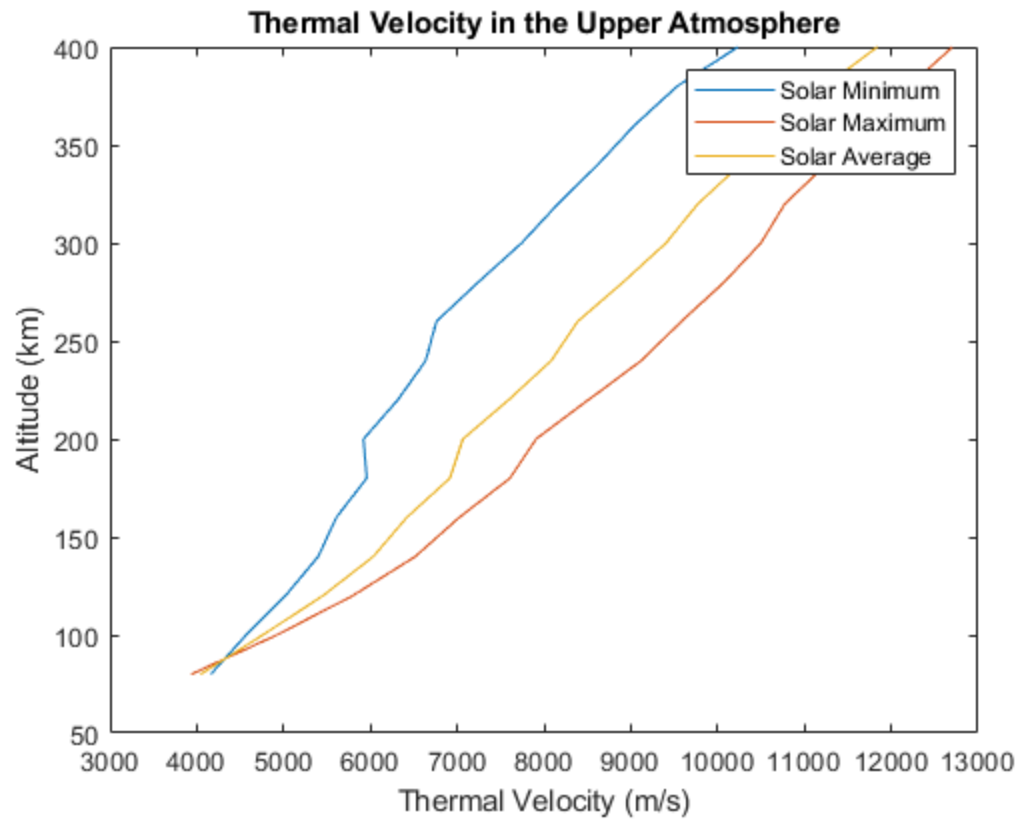
Thermal Velocity

The thermal velocity increases with temperature which makes sense. And they start at about the same velocity because the temperature and composition of the atmosphere is not very effected at lower altitudes. At the high altitude the solar maximum thermal velocity is much higher because the molecules are much warmer. It is weird that the curve is less smooth

Mean Free Path

It makes sense that the mean free path increase with altitude since the partical density of the atmosphere decreases. It also makes sense that solar maximum makes it shorter because the atmosphere expands more with the extra heat.





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