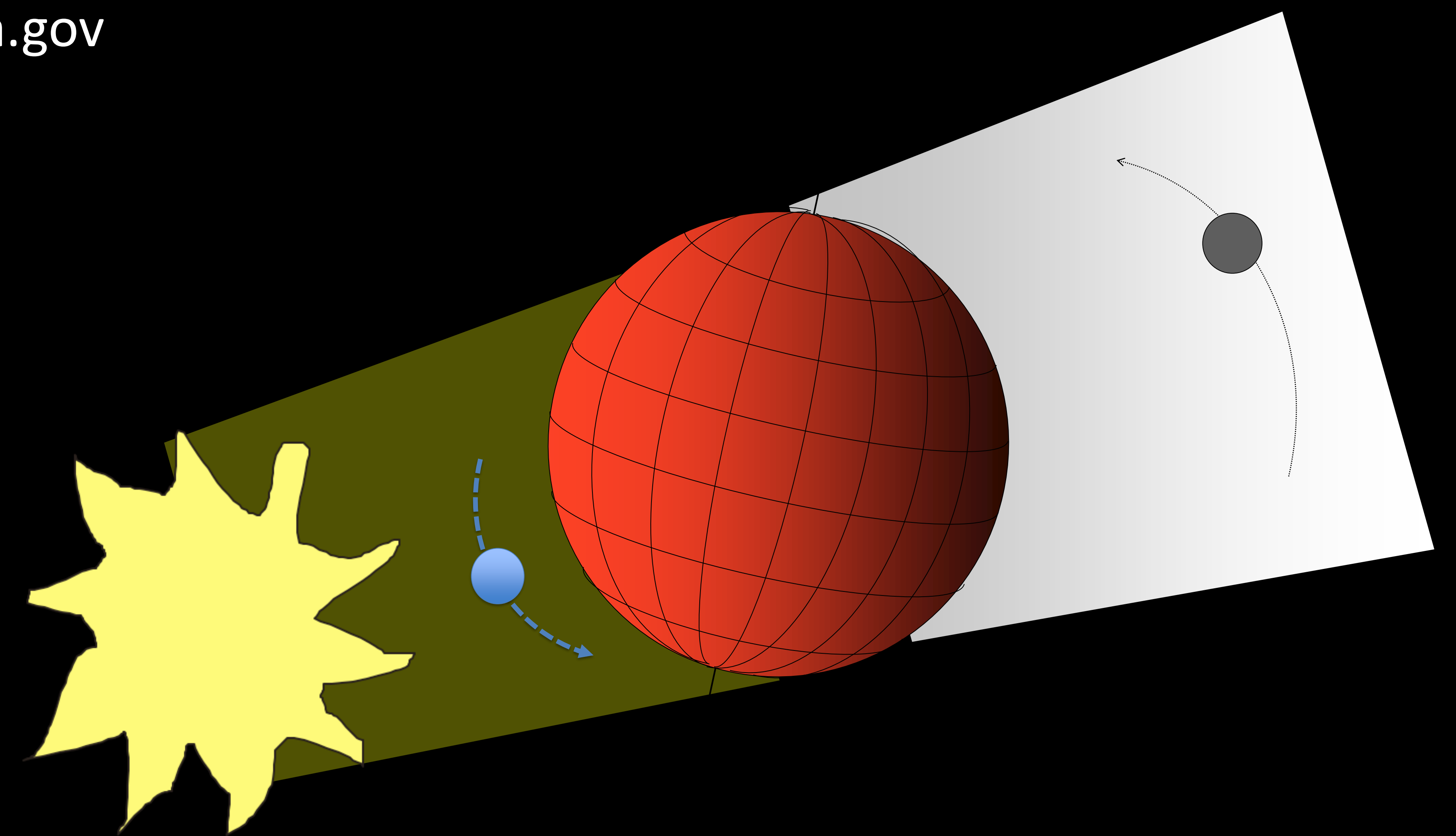
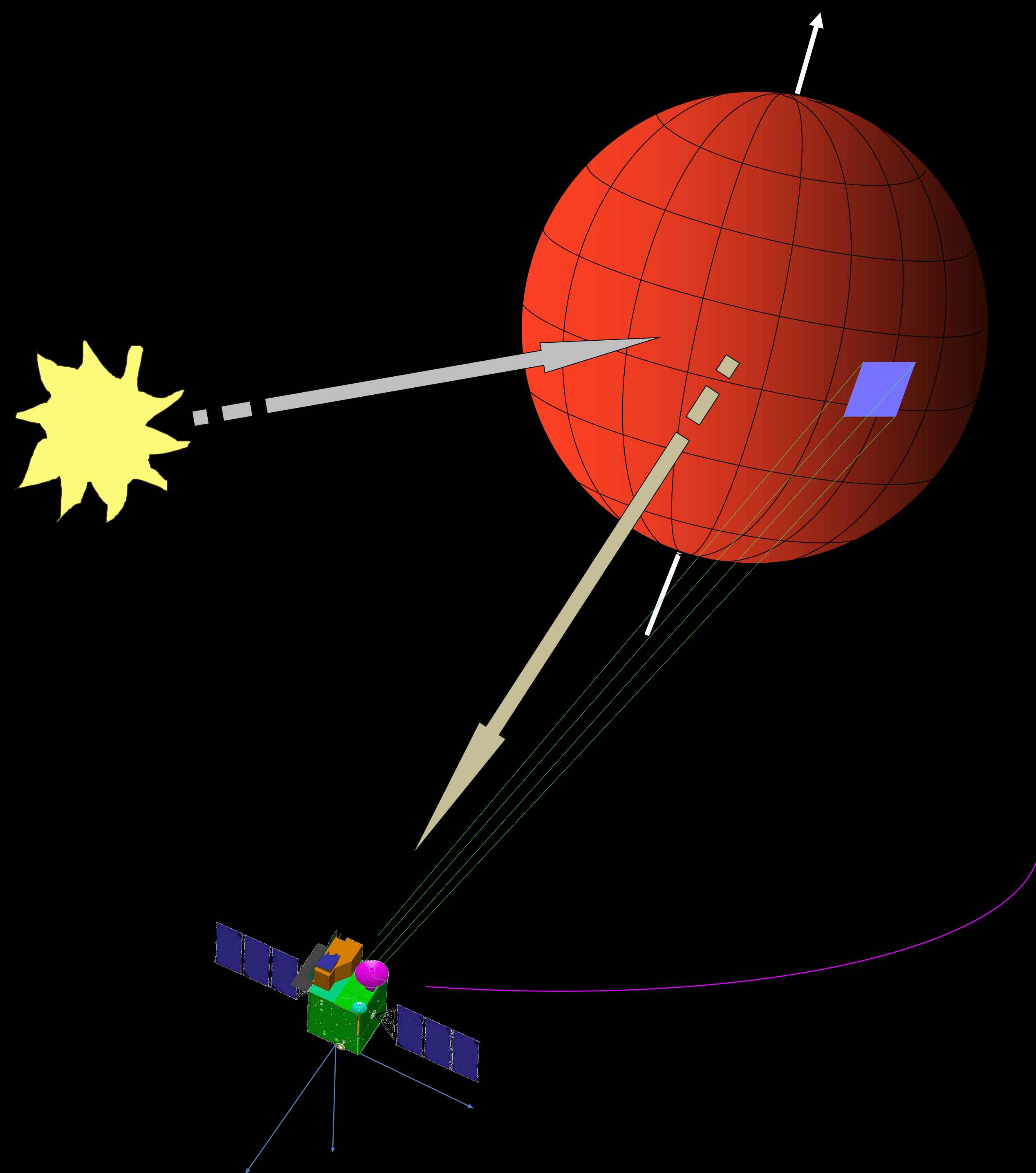


# Observation Geometry for SmallSats

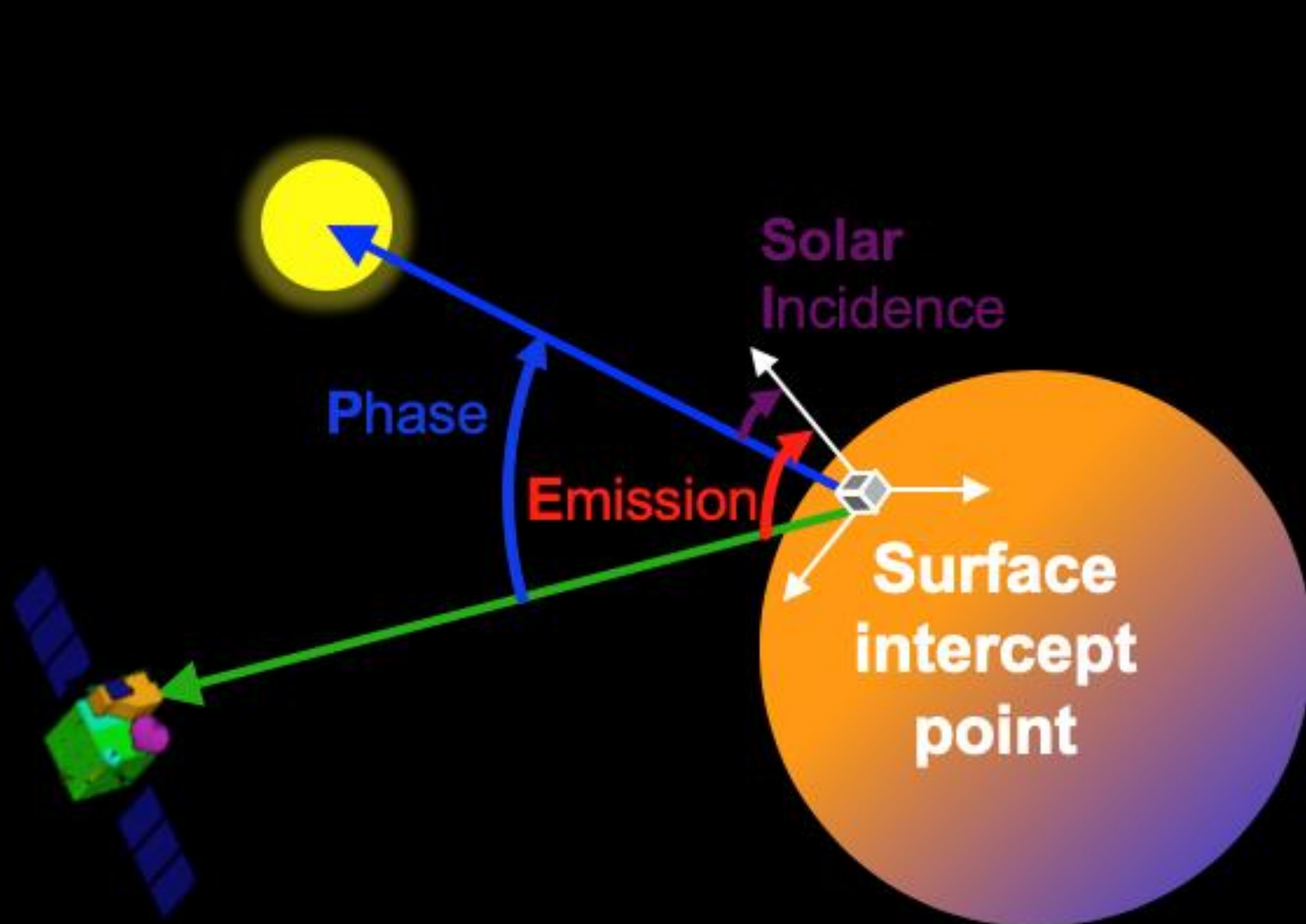


Charles Acton  
Navigation and Ancillary Information Facility  
Jet Propulsion Laboratory/California Institute of Technology  
charles.acton@jpl.nasa.gov

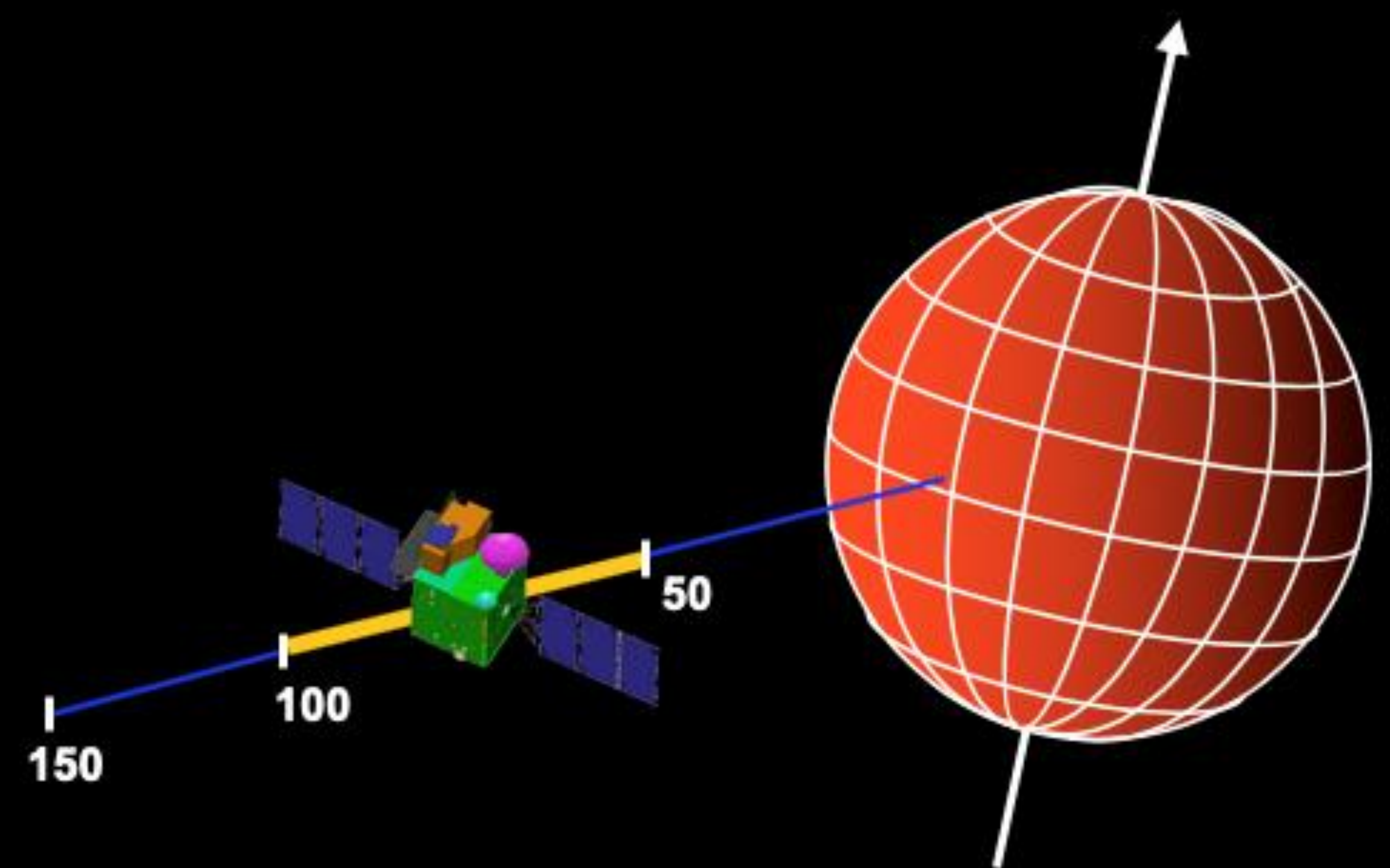


When is an object in  
transit or occultation?

Positions, velocities, orientations  
and field-of-view projections



Lighting angles



When is a spacecraft's  
altitude within a given range?

A few examples of the many kinds of space mission  
geometry you can compute using NASA's free SPICE system  
<https://naif.jpl.nasa.gov>