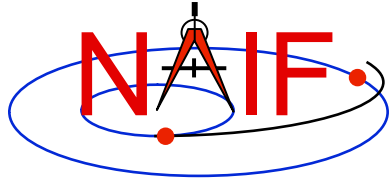


Navigation and Ancillary Information Facility

Geometric Event Finding Programming Lesson

September 2016

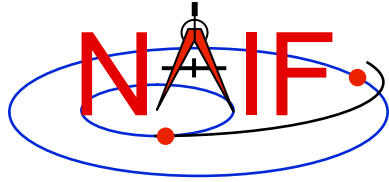


Geometric Event Finding: Overview

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- **Problem statement:**

- Determine when the ExoMars-16 Trace Gas Orbiter (TGO) is visible from ESA's New Norcia station, within the time interval
2018 Jun 10 TDB
2018 Jun 14 TDB
- For the spacecraft to be considered visible, the apparent spacecraft position relative to New Norcia station must have elevation of at least 6 degrees in the station's topocentric reference frame NEW_NORCIA_TOPO.
 - » Use light time and stellar aberration corrections to compute the spacecraft position relative to New Norcia.
- Account for possible occultation of the spacecraft by Mars.
- Compute a SPICE window representing the visibility period.
- Display the start and stop times of each time interval in this SPICE window.



Visibility Geometry

Navigation and Ancillary Information Facility

