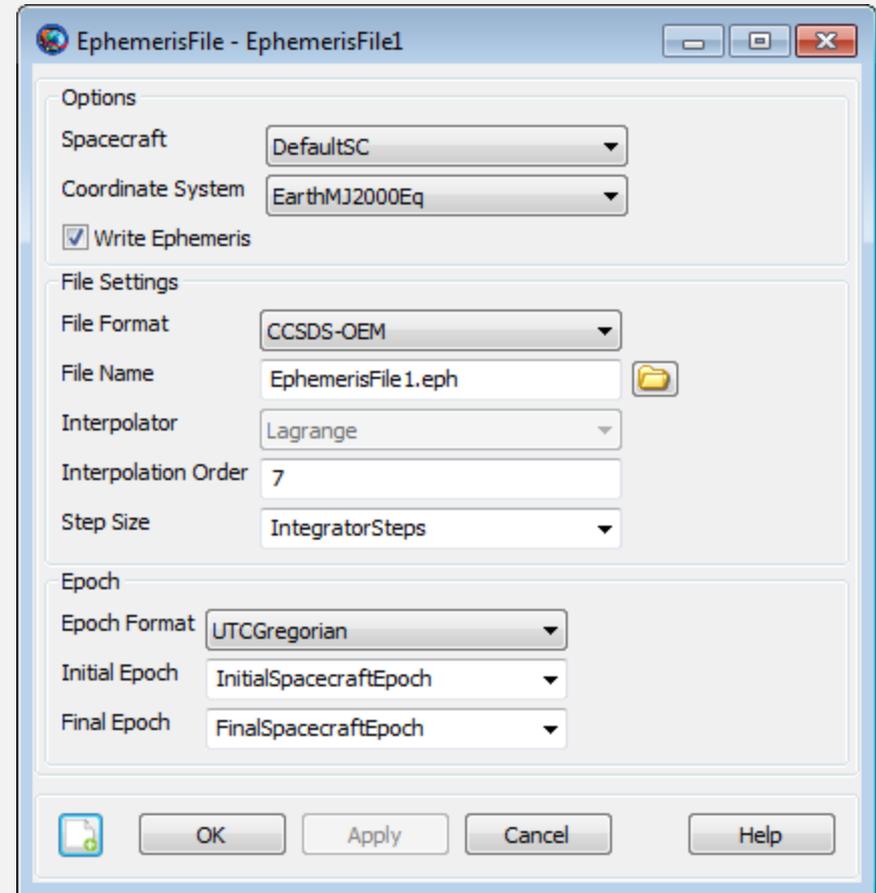
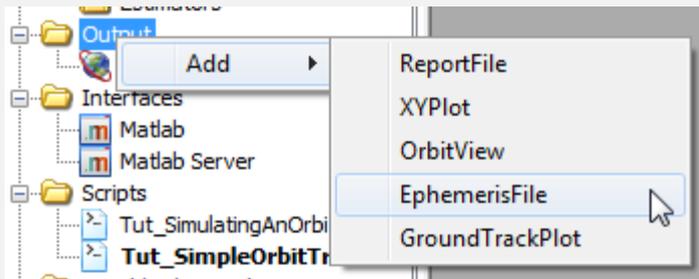


Simple Orbit Transfer (extra exercises)

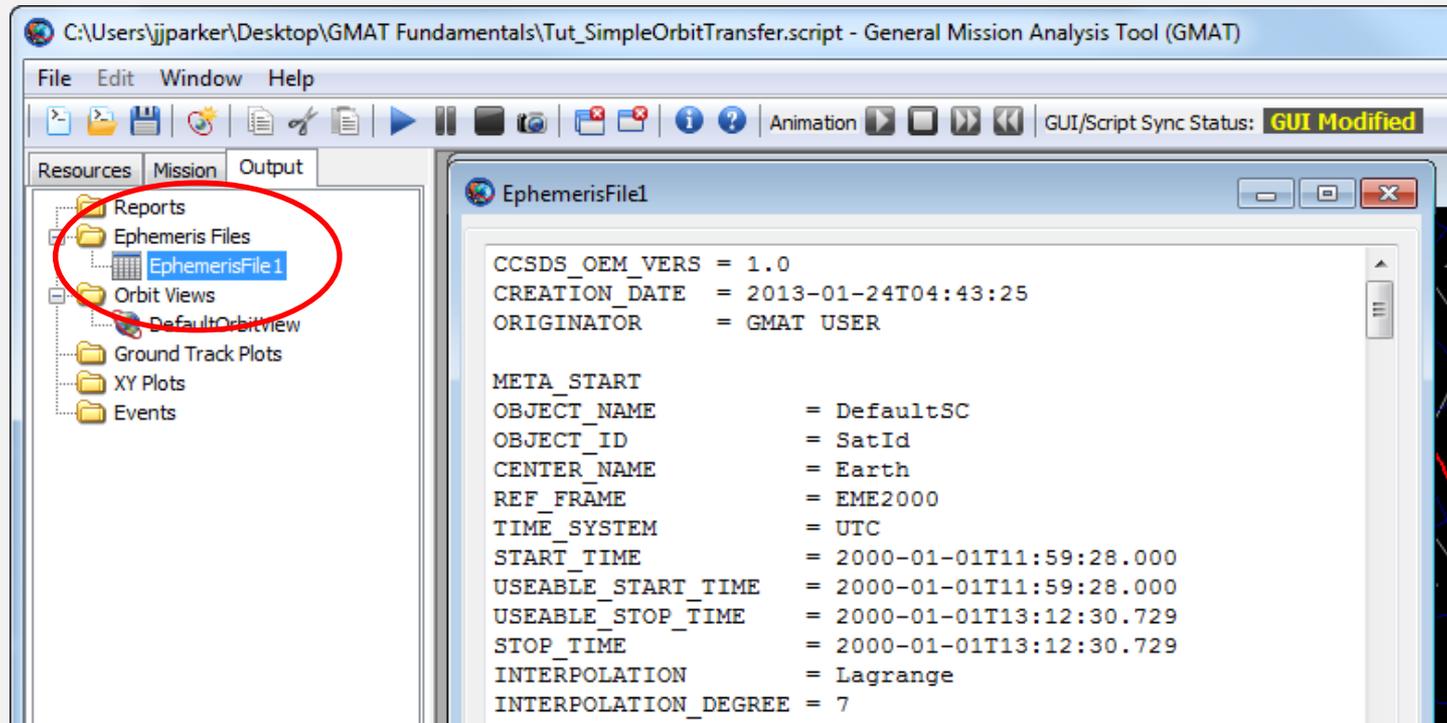
GMAT Fundamentals
Joel Parker
June 30, 2014

NASA Goddard Space Flight Center

1. Write Ephemeris File

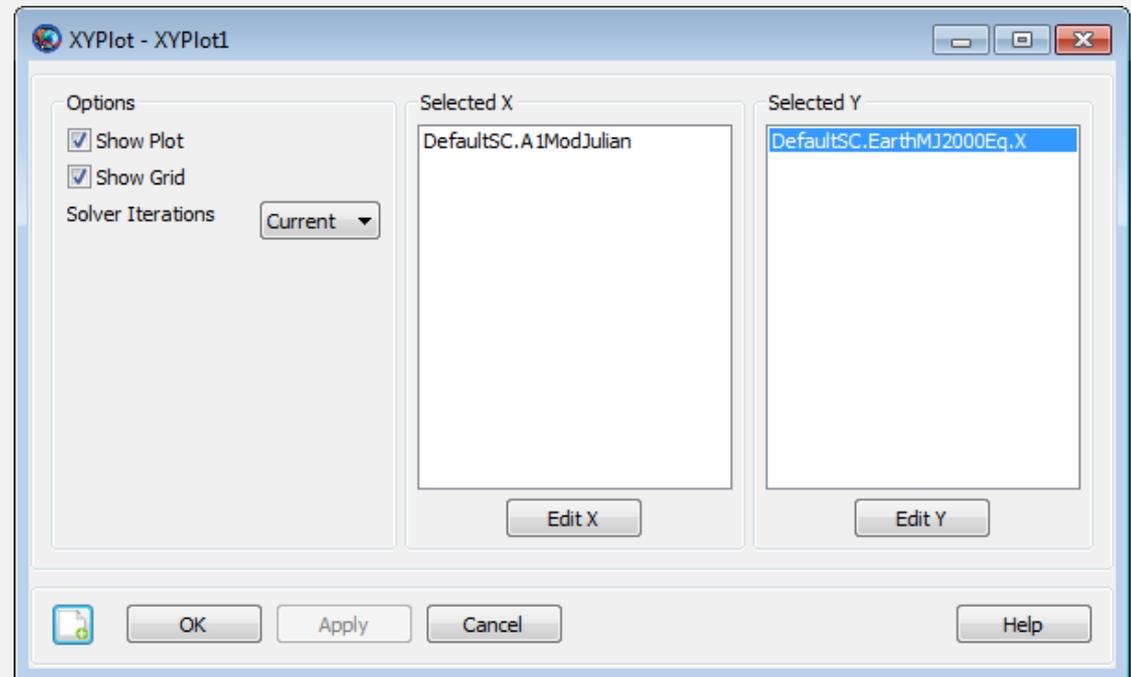
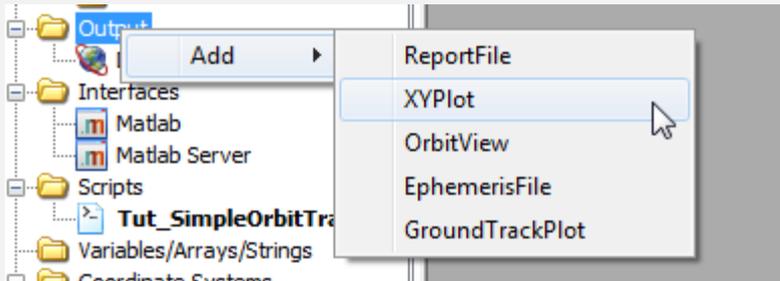


1. Write Ephemeris File

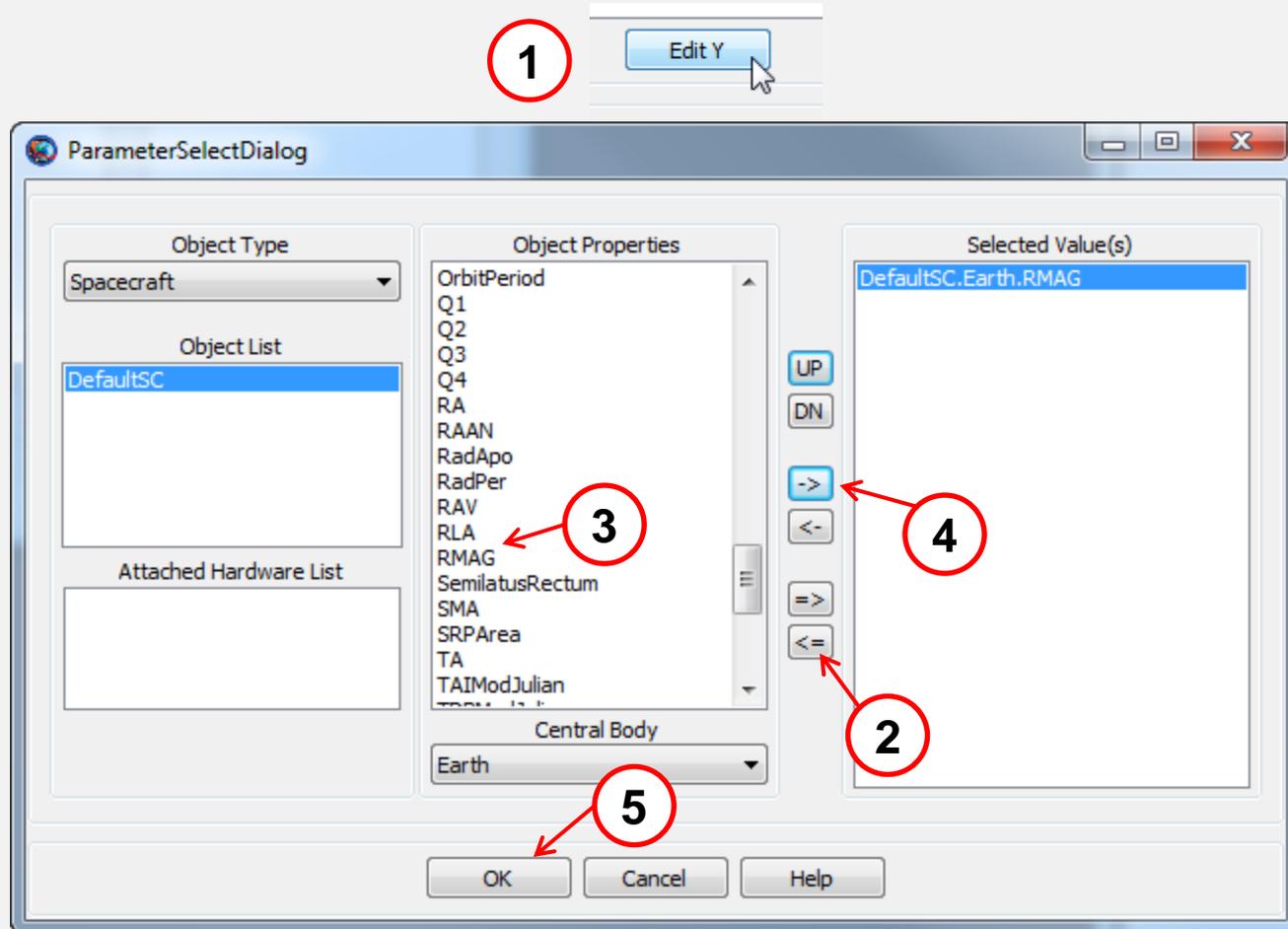


```
Create EphemerisFile EphemerisFile1
EphemerisFile1.Spacecraft = DefaultSC
EphemerisFile1.FileFormat = CCSDS-OEM
```

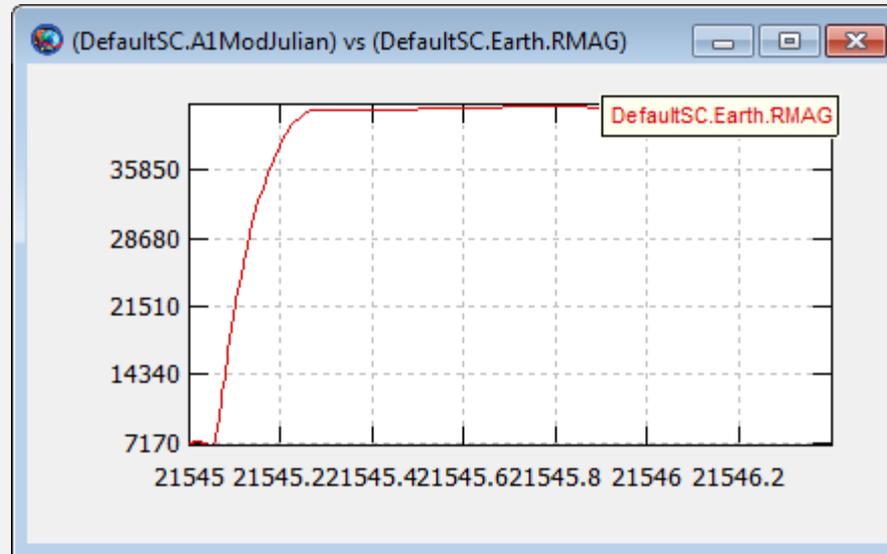
2. Create Plot



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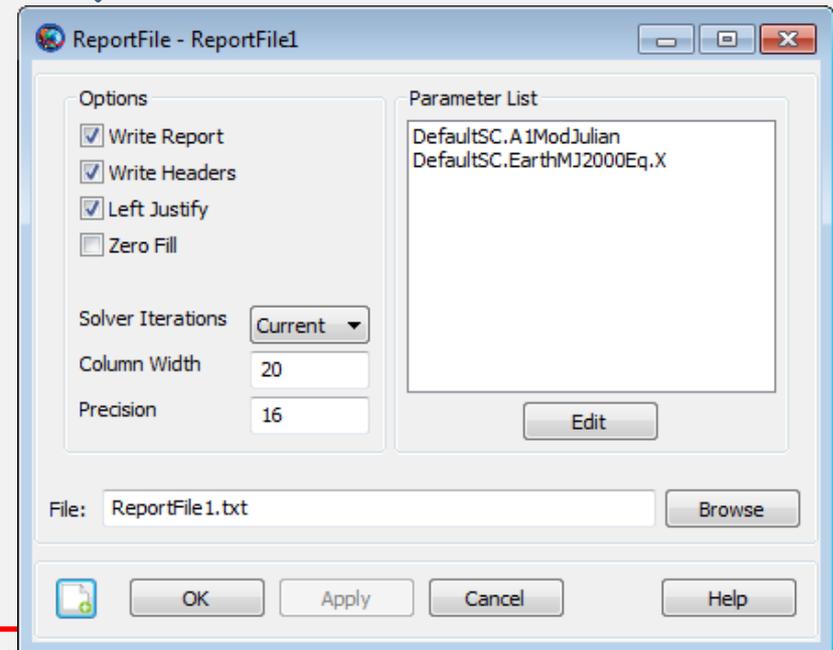
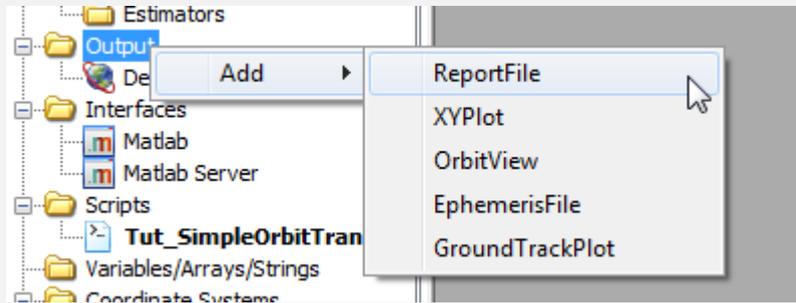


2. Create Plot

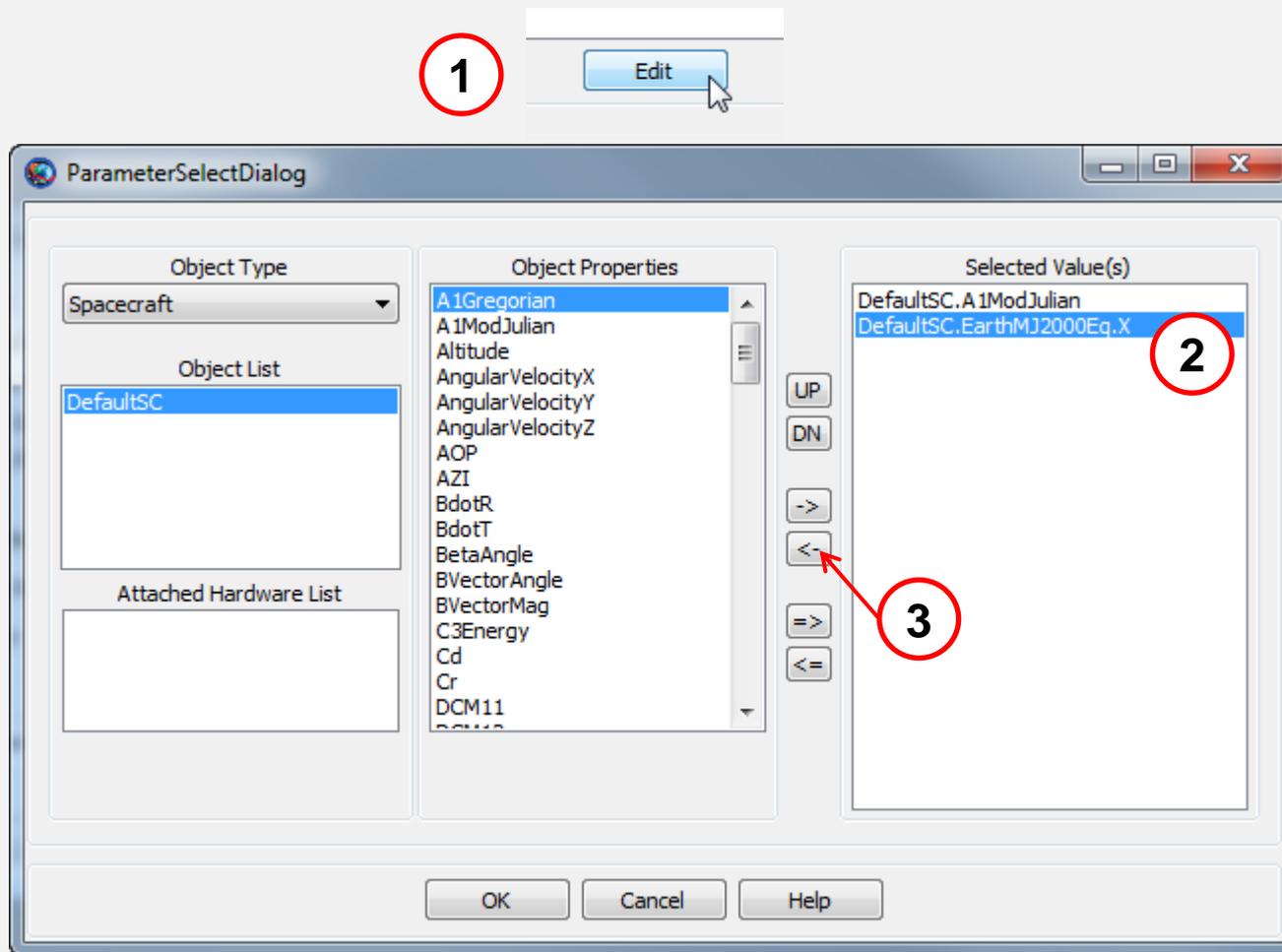


```
Create XYPlot XYPlot1
XYPlot1.XVariable = DefaultSC.A1ModJulian
XYPlot1.YVariables = {DefaultSC.Earth.RMAG}
```

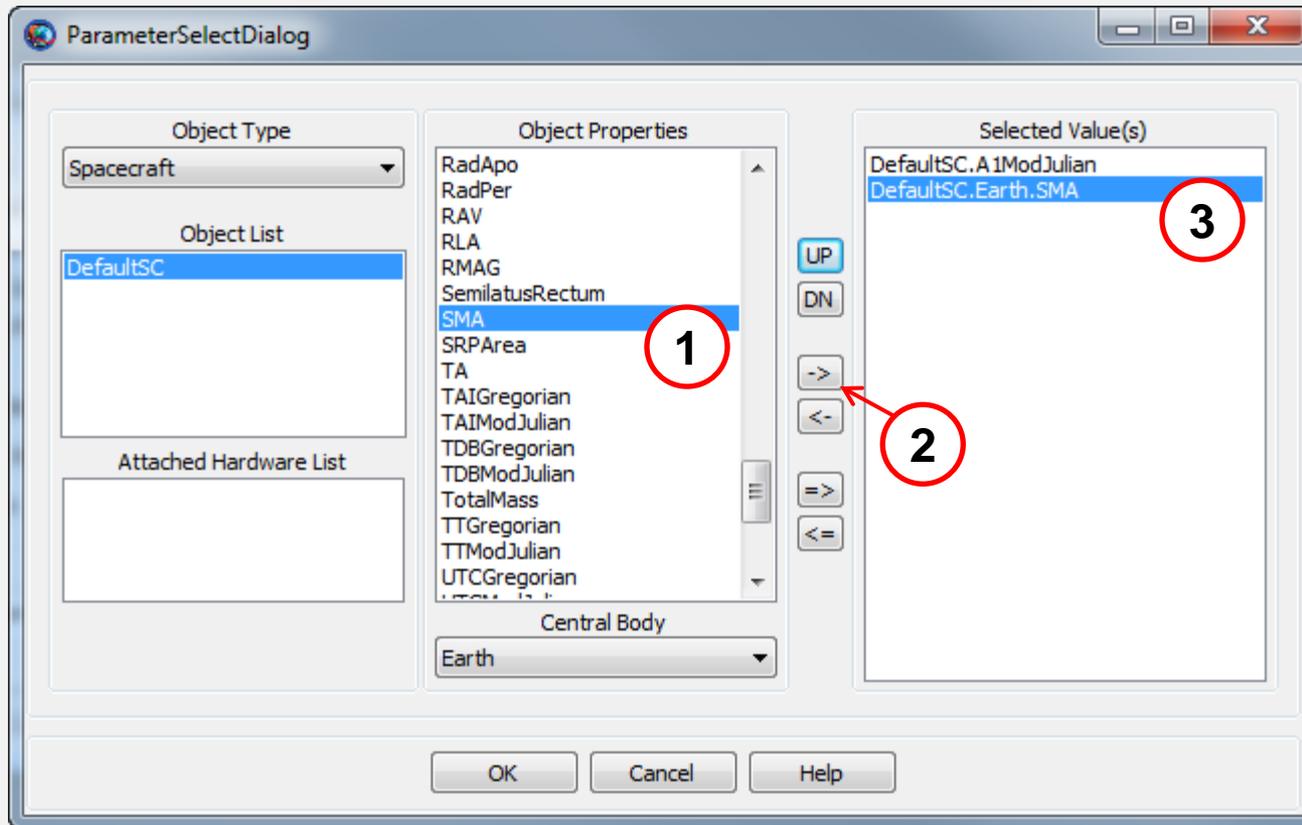
3. Create Propagation Report



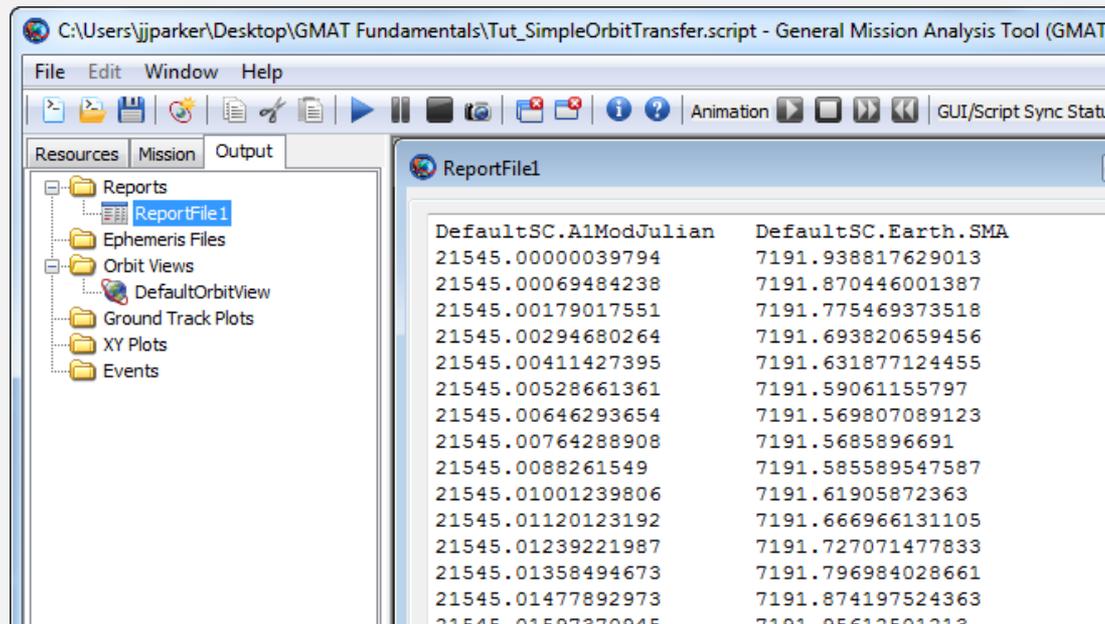
3. Create Propagation Report



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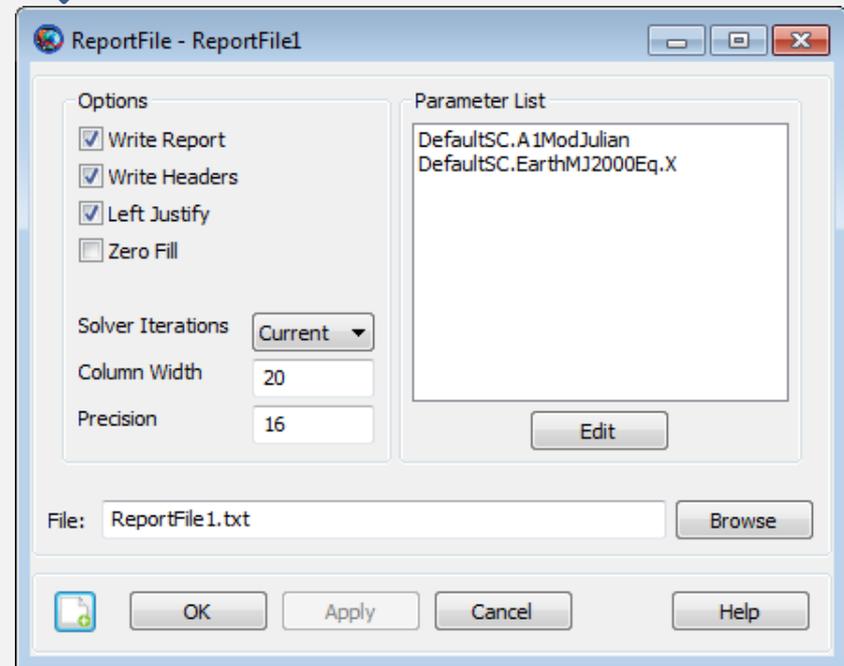
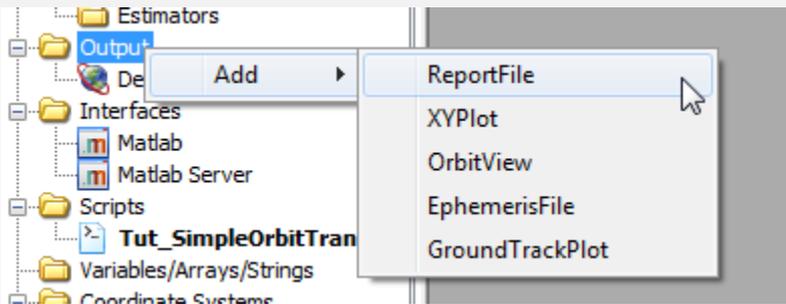


3. Create Propagation Report

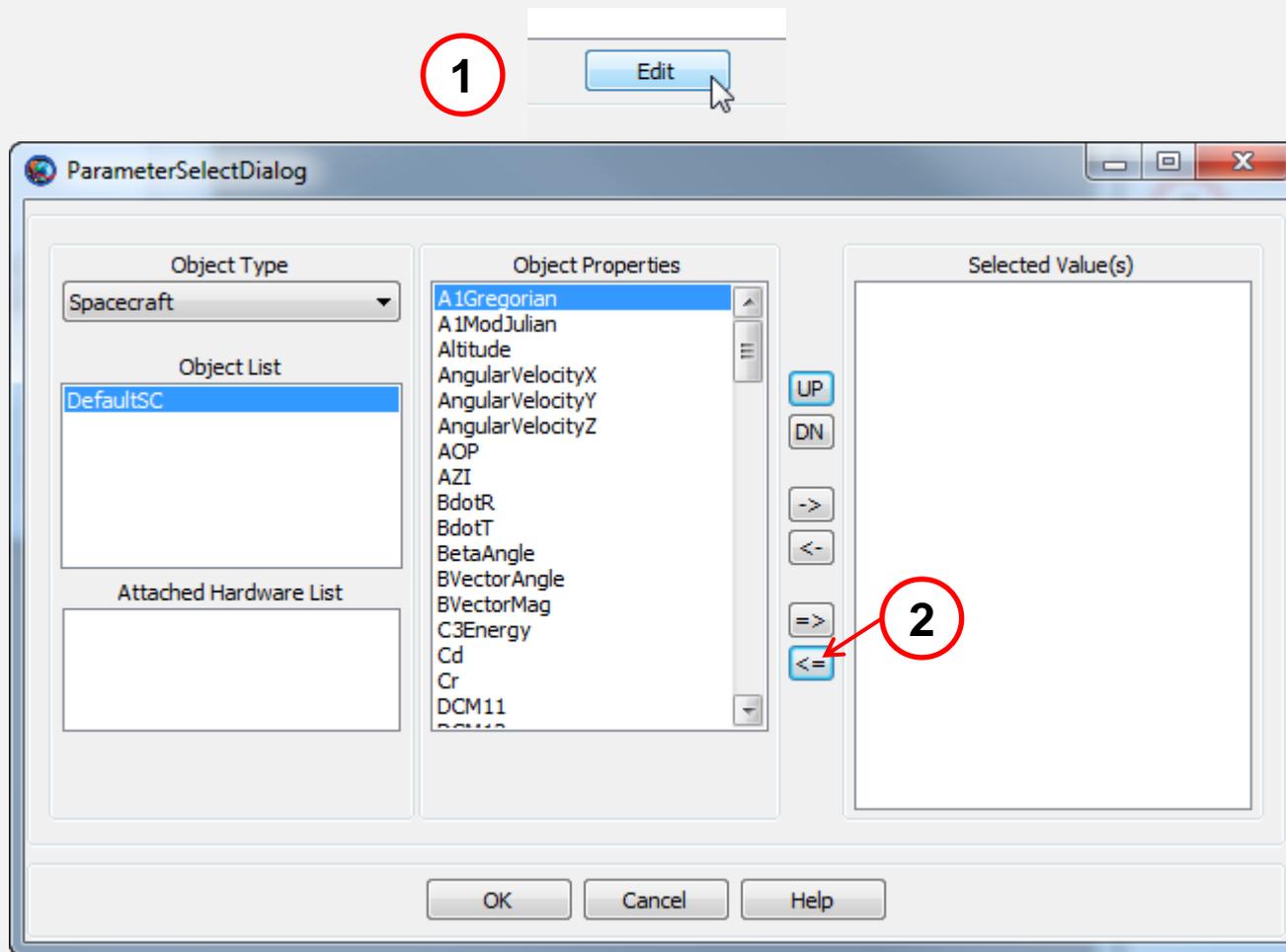


```
Create ReportFile ReportFile1
ReportFile1.Add = {DefaultSC.A1ModJulian, DefaultSC.Earth.SMA}
```

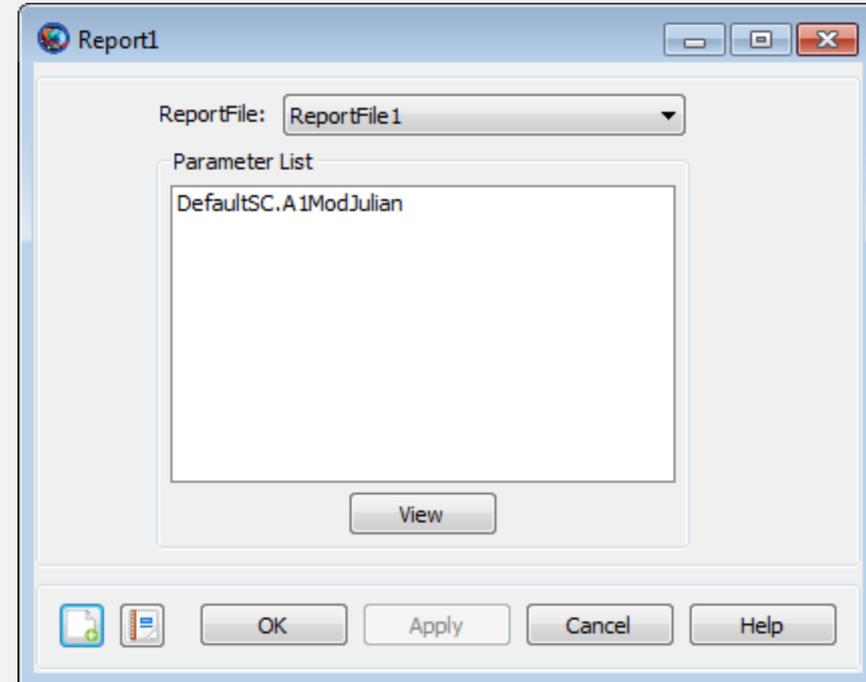
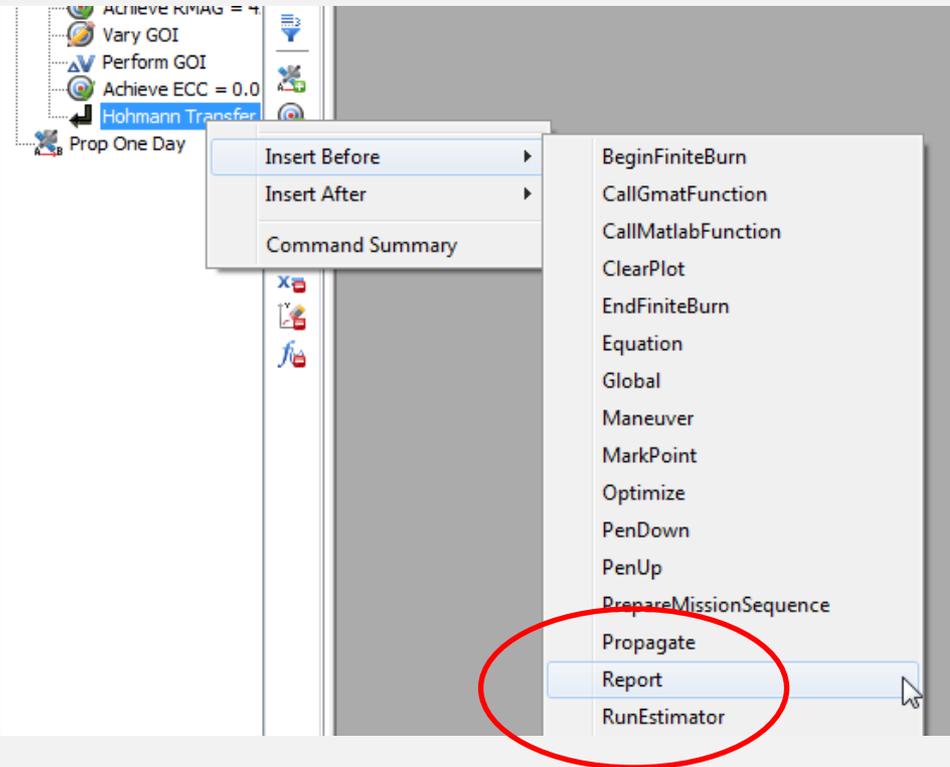
4. Report Values



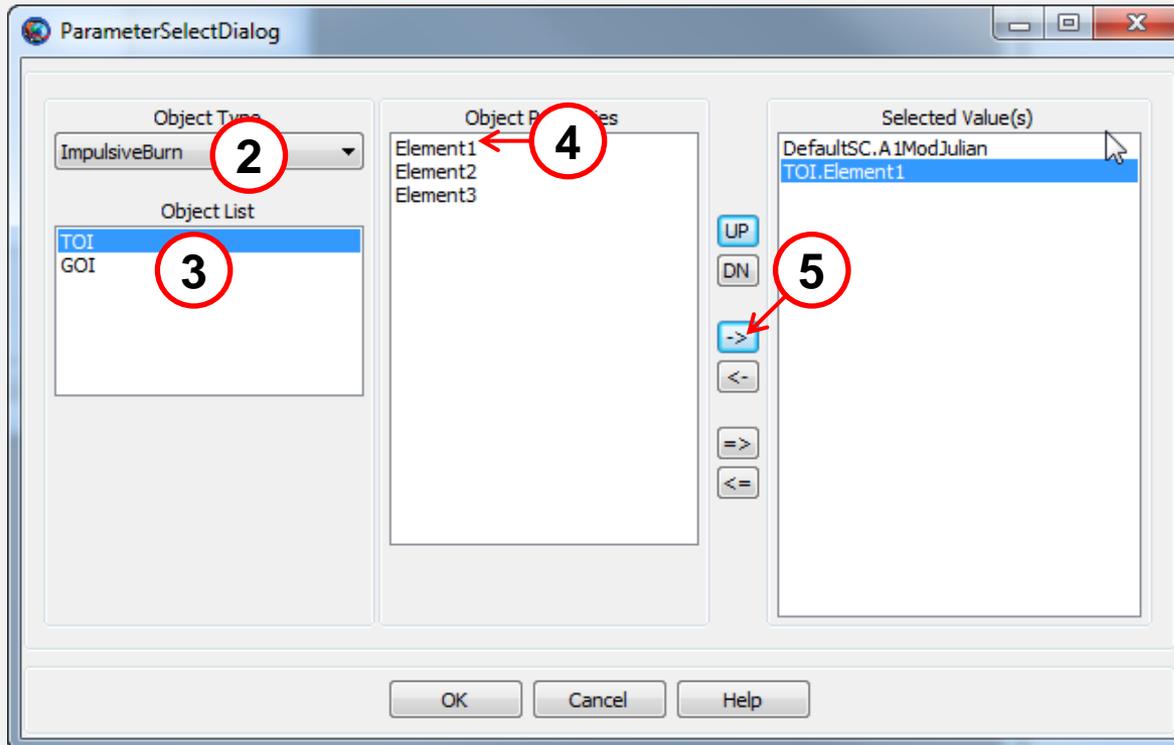
4. Report Values



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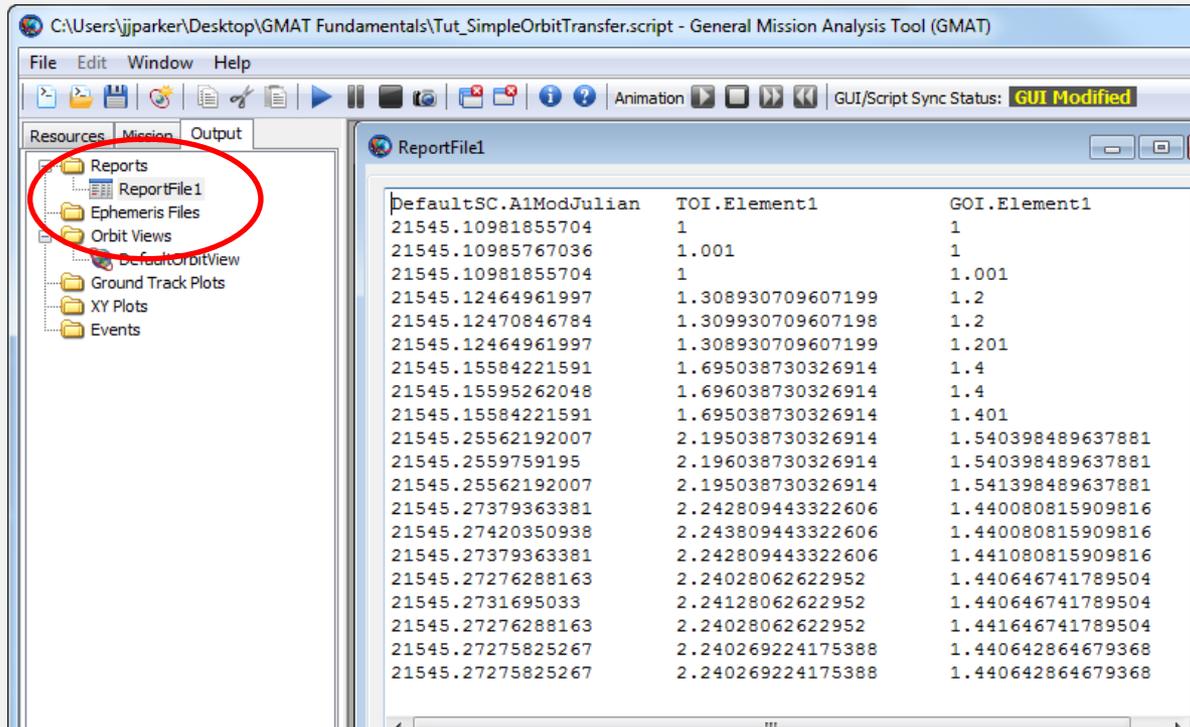


4. Report Values



6 Perform same steps to add GOI.Element1.

4. Report Values



Create ReportFile ReportFile1

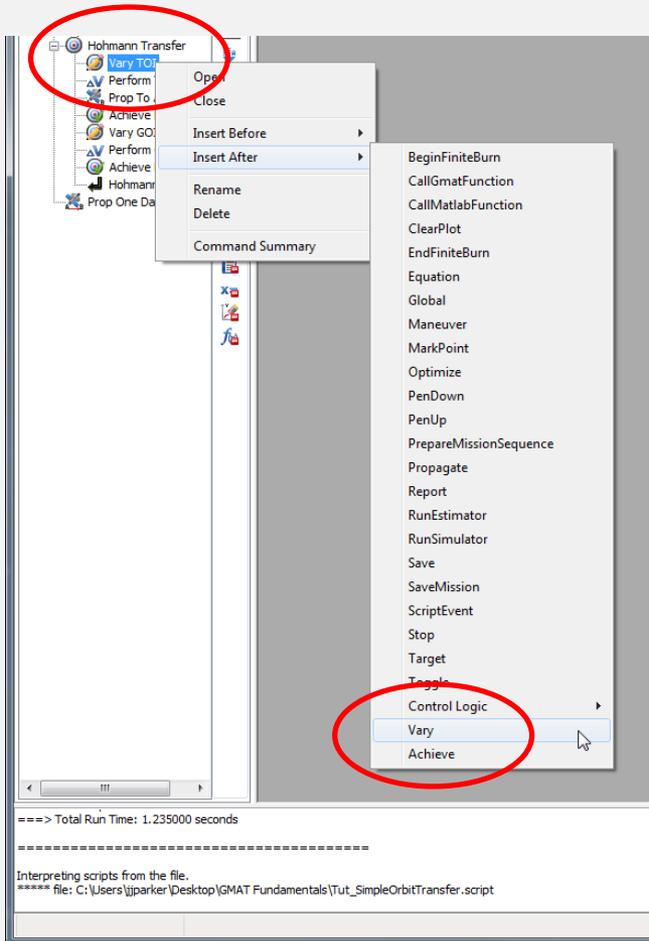
% ...

BeginMissionSequence

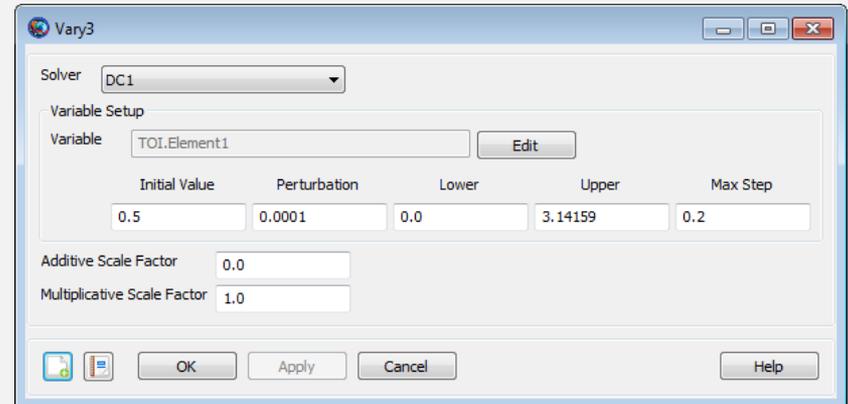
% ...

Report ReportFile1 DefaultSC.A1ModJulian TOI.Element1 GOI.Element1

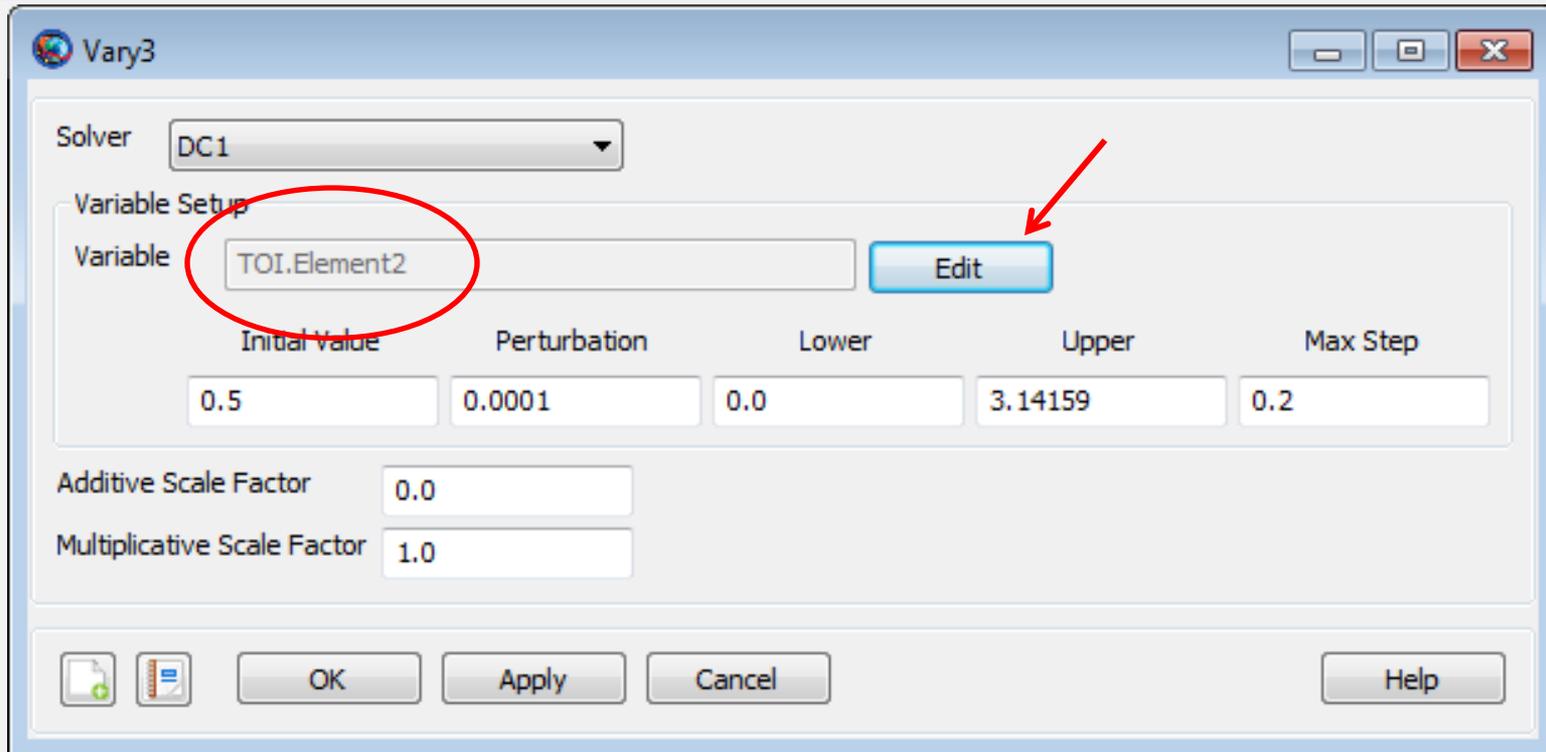
5. Target Inclination



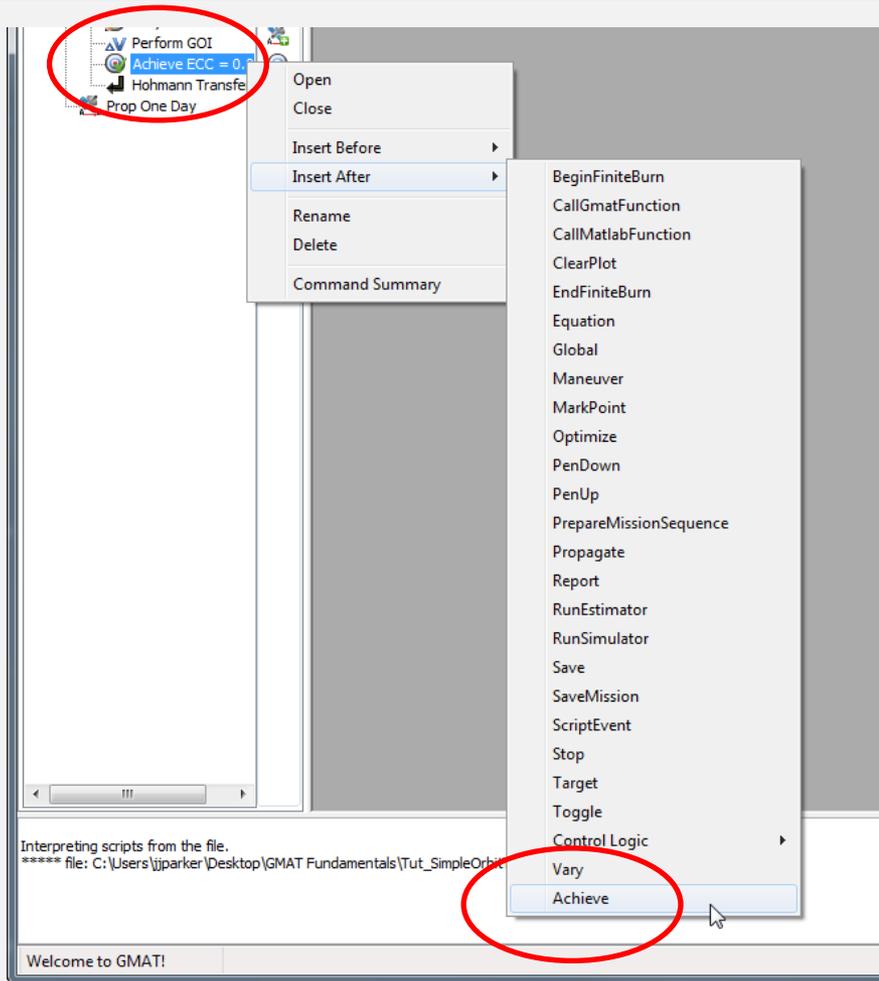
Open new **Vary3**:



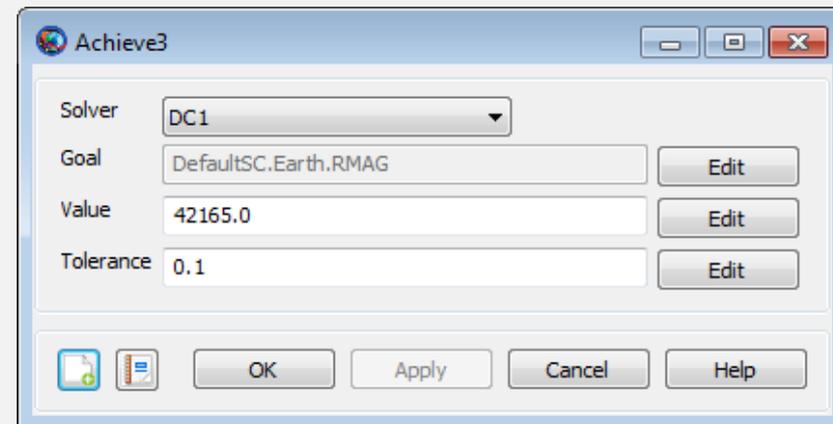
5. Target Inclination



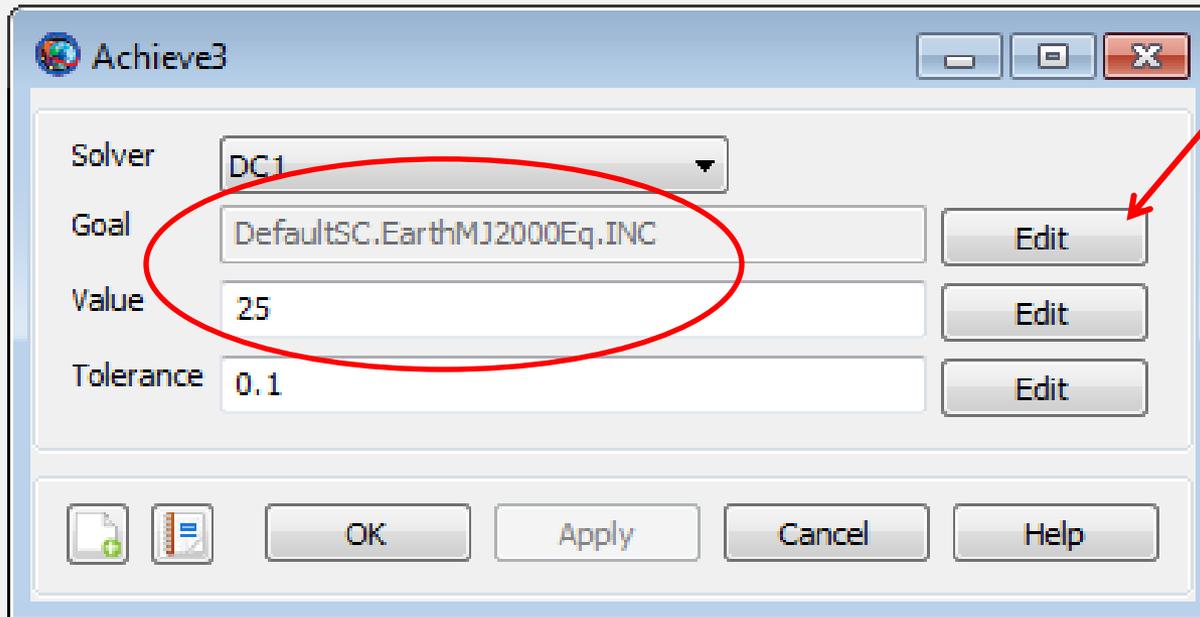
5. Target Inclination



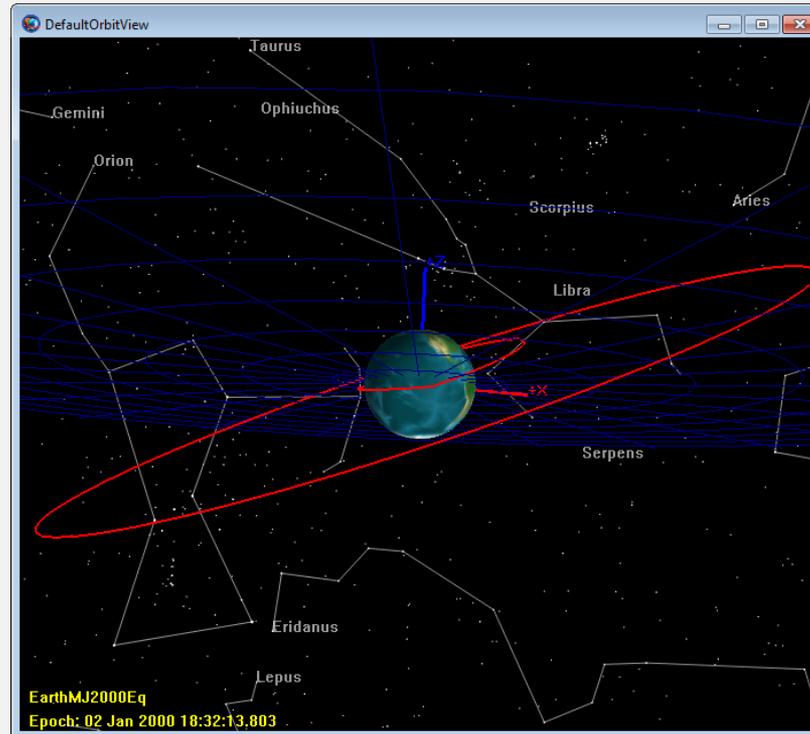
Open new **Achieve3**:



5. Target Inclination



5. Target Inclination



Vary `DC1(TOI.Element2 = 0.5)`

`% ...`

Achieve `DC1(DefaultSC.EarthMJ2000Eq.INC = 25)`