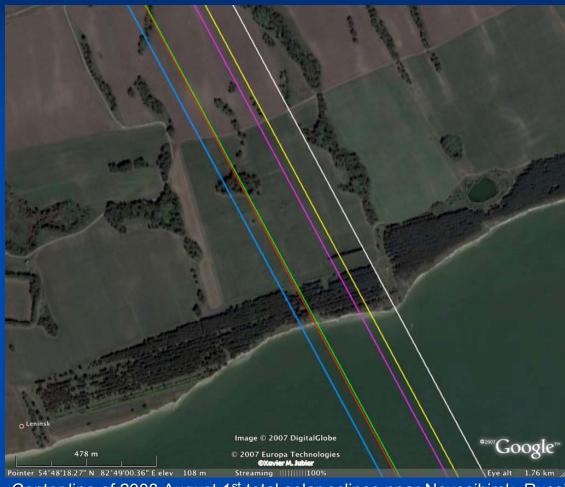
## Solar Eclipse Mapping – On and Off the Web

Xavier Jubier (and John Tilley)
Revised page 6 with NASA TP 2007-214149 Rev1
SEC2007 — Los Angeles Griffith Observatory

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## **Ephemeris and 2008 TSE**



Center line of 2008 August 1<sup>st</sup> total solar eclipse near Novosibirsk, Russia Different ephemeris and calculations with  $\Delta T$ =65.3s show a spread of some 200 meters:

- |-| ~50 meters difference
- |-| ~200 meters difference

- Different ephemeris
- Same value of ΔT
  - White track = Espenak NASA TP 2007-214149 – JPL-DE200/LE200
  - Magenta track = Espenak NASA TP 2007-214149 Rev1 – JPL-DE200/LE200
  - Yellow track = JPL-DE406
  - Green track = Jean Meeus 5MC ELP2000-82-mod2002
  - Red track = Luca Quaglia and John Tilley – numerical integration based on Prof. Aldo Vitagliano
  - Blue track = Xavier Jubier 5MCSE database VSOP87D/ELP2000-82B of the Bureau des Longitudes, Paris

Refer to "An approximation to the errors in the planetary ephemerides of the Astronomical Almanac", E. M. Standish at CalTech/JPL and "Lunar Tables and Programs from 4000 B.C. to A.D. 8000", Michelle Chapront-Touzé & Jean Chapront, published by Willmann-Bell