



#### Les Léonides 2011 Par

#### **Robert Saint-Jean**

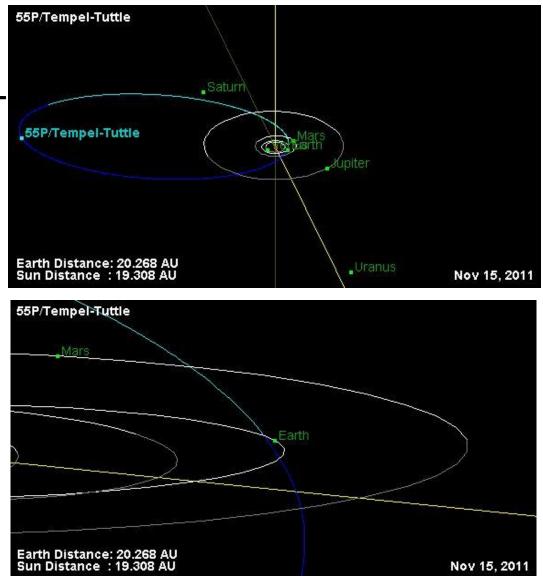




# **55P/Tempel-Tuttle**

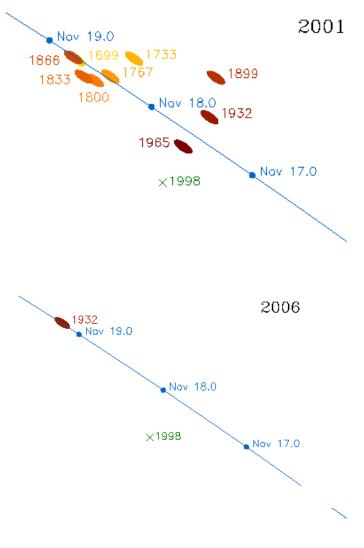
La comète périodique **Tempel-Tuttle** a été indépendamment découverte par Ernst Tempel (19 déc. 1865) et par Horace P. Tuttle (6 jan. 1866).

C'est le corps d'origine de l'essaim des Léonides.



#### **55P/Tempel-Tuttle**





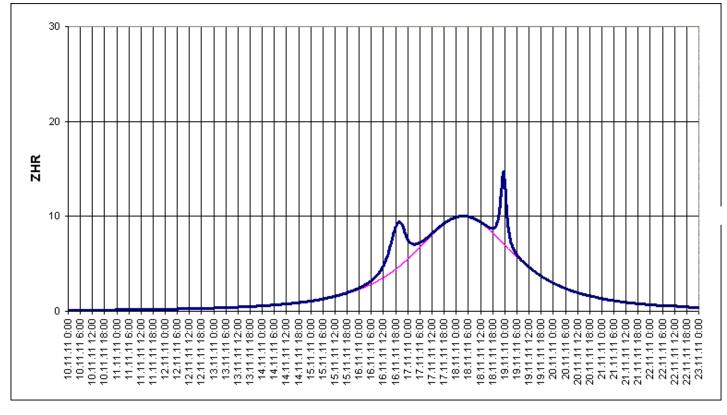
## Les Léonides

- The **Leonids** of mid-November (max: November 17-19) are quite unpredictable, with rich displays occurring roughly every 33 years.
- The last Leonid storm period occurred from 1998 through 2002. Studies have shown that no Leonid storms will occur in either 2033 or 2066.
- We will have to wait until 2099 for a return of the activity recently seen during the past few years.

### Les Léonides

- The Leonids are best known for their 33-year peaks, during which 100s of meteors per hour can be observed. The last of these peaks occurred in 2001. Normal peak rates are 15-20 fast meteors (72 km/s).
- Mostly blue or green in color, with many leaving persistent dust trains behind them upon disintegrating.

### Léonides 2011



In 2011 a usual Leonid return is expected with overall maximum ZHR up to 15. However, there is a possibility of three local peaks, two of which will be caused by interaction with trails and the third is the background one.

 The first local peak will be caused by 1800 trail. Its own ZHR is 4-5, and adding to the background activity this should give ZHR ~10 around 19:58 UT on 16 November. The encountering parts of 1800 trail have ejection velocity of ~45 m/s, that means low meteor brightness around this submaximum time and possibility of higher activity on radio. Then some decrease in activity is expected with local minimum of ZHR=7 around 3:24 UT on 17 November.

