

FIG. 1. Distribution of 1932-dust in the orbit of comet 55P/Tempel-Tuttle at the time of the encounter in 2006, as seen from two perspectives: in the ecliptic plane (right) and perpendicular to the ecliptic plane (left).

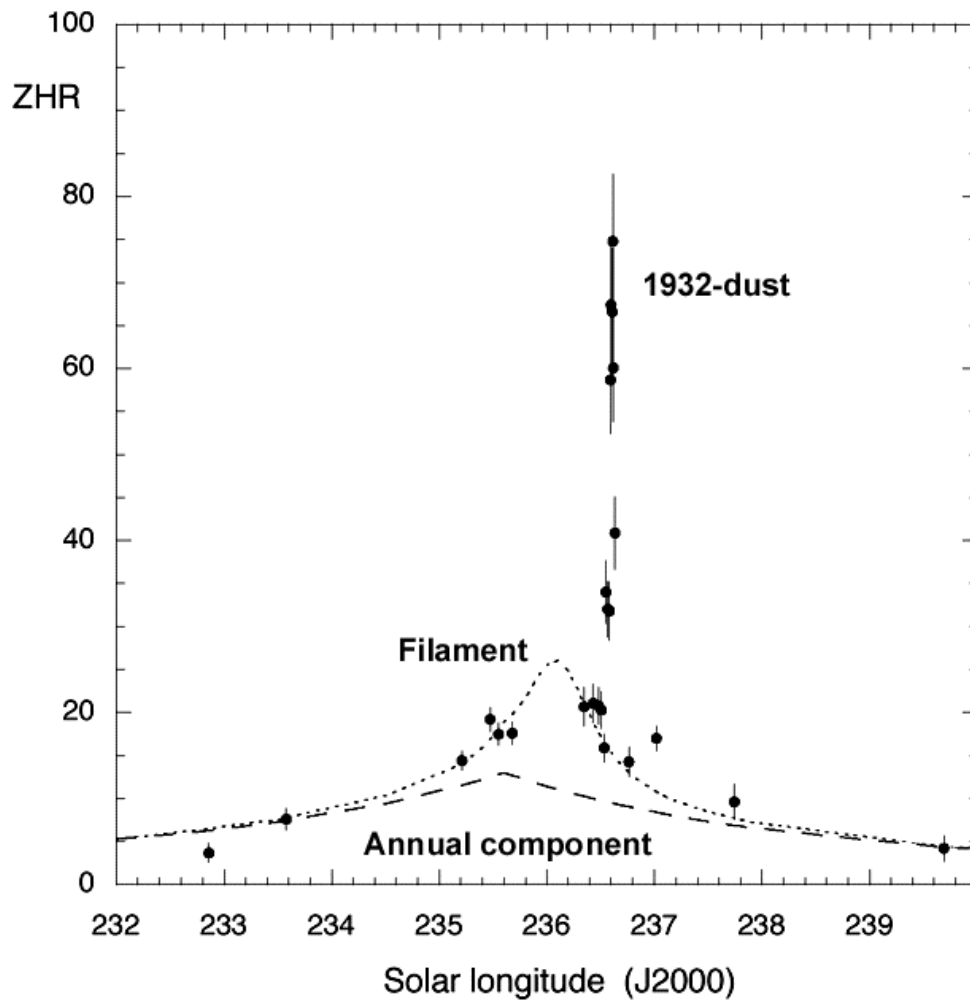


FIG. 2. The rate of Leonid meteors on November 16 - 20, 2006, from visual observations collected by the International Meteor Organization (Arlt & Barentsen 2006).

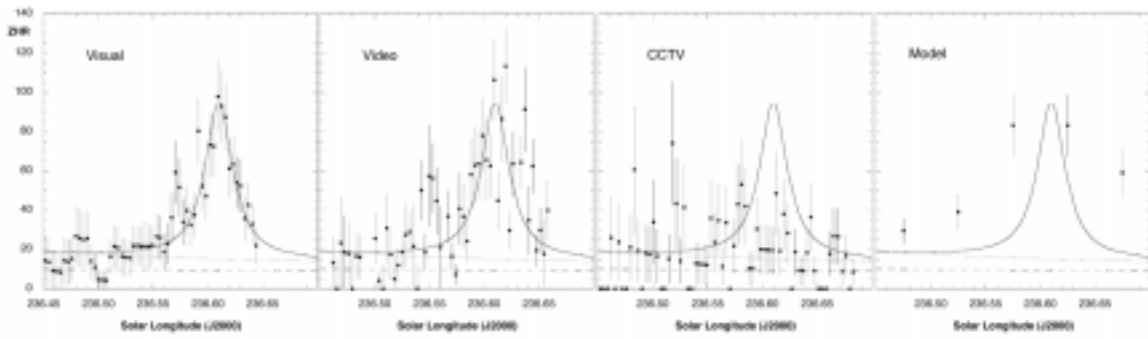


FIG. 3. The rate of Leonid meteors in the night of November 19 (all expressed in terms of Zenith Hourly Rate) as observed by visual observers at Orgiva ($\sim +4$ absolute magnitude), by intensified video cameras ($\sim +5$ magnitude), by low light level CCTV cameras ($+0$ magn.), and the predicted nodal distribution of small $+6$ to $+11$ magnitude Leonids from our model (scaled to the observed peak rate).

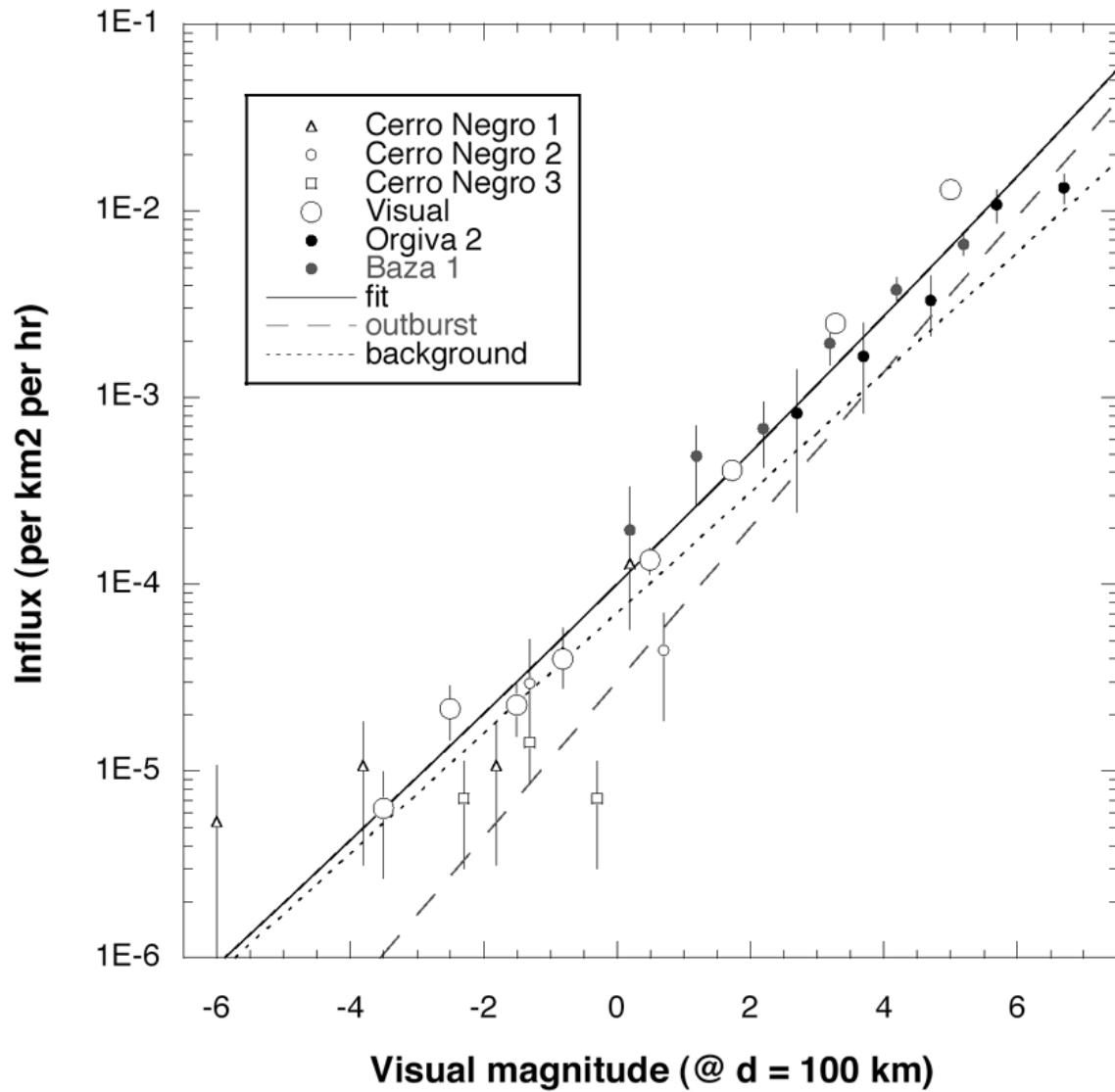


FIG. 4. The mean Leonid influx (corrected to a radiant position in the zenith) between 03:30 and 06:00 UT, Nov. 19, measured by a range of different cameras. Dashed and dotted lines depict the contribution from the Filament background and 1932-dust trail outburst, respectively. The solid line is the sum of both.

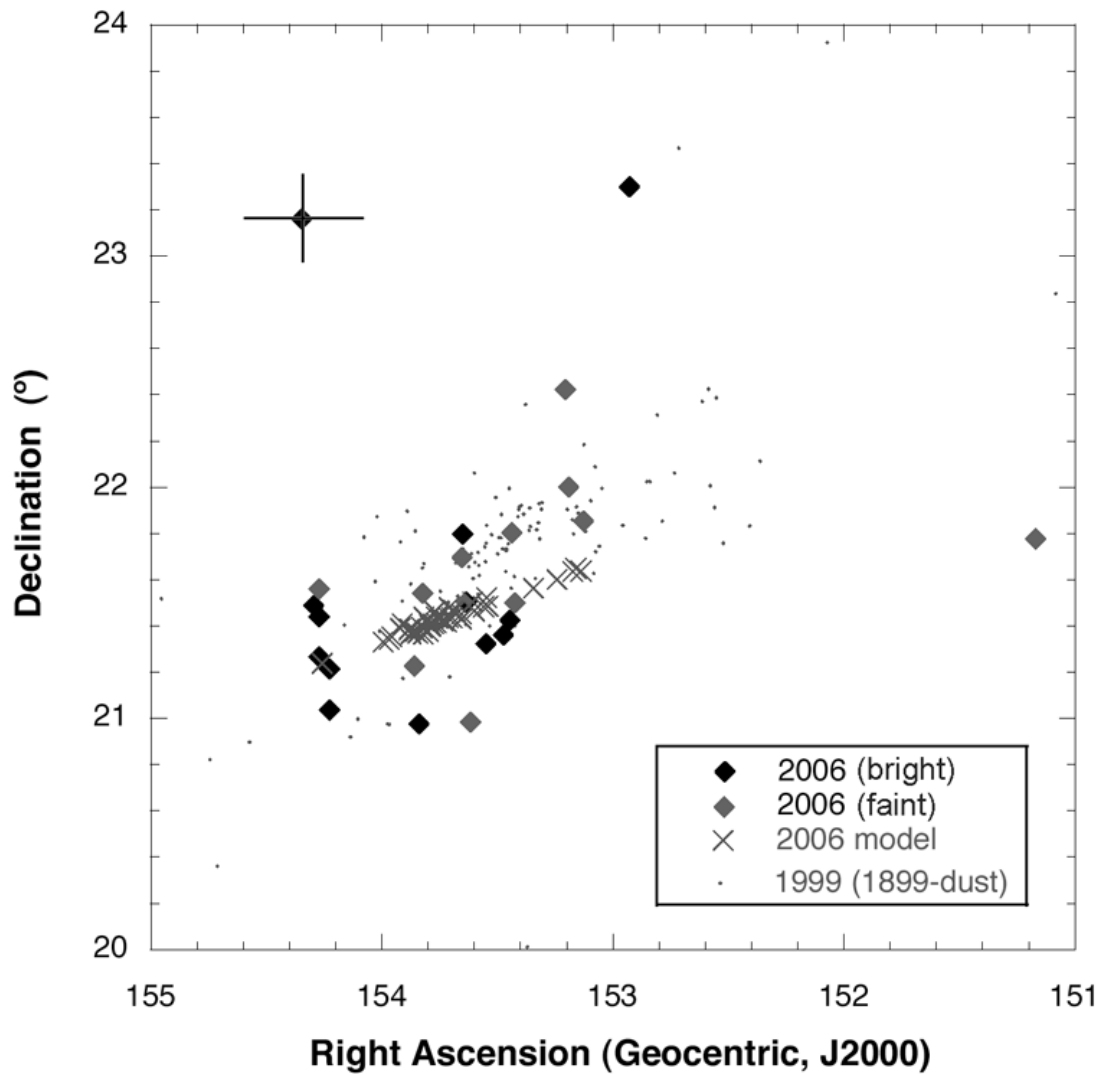


FIG. 5. The radiant positions of 2006 Leonids (diamonds, dark = 12 brightest meteors, light = 12 faintest meteors) compared to those measured with similar techniques during the 1999 encounter with the 1899-dust trail (© 2007 model calculations are plotted as crosses). All radiant positions (Table I) were corrected for radiant drift to a common solar longitude 235.0.

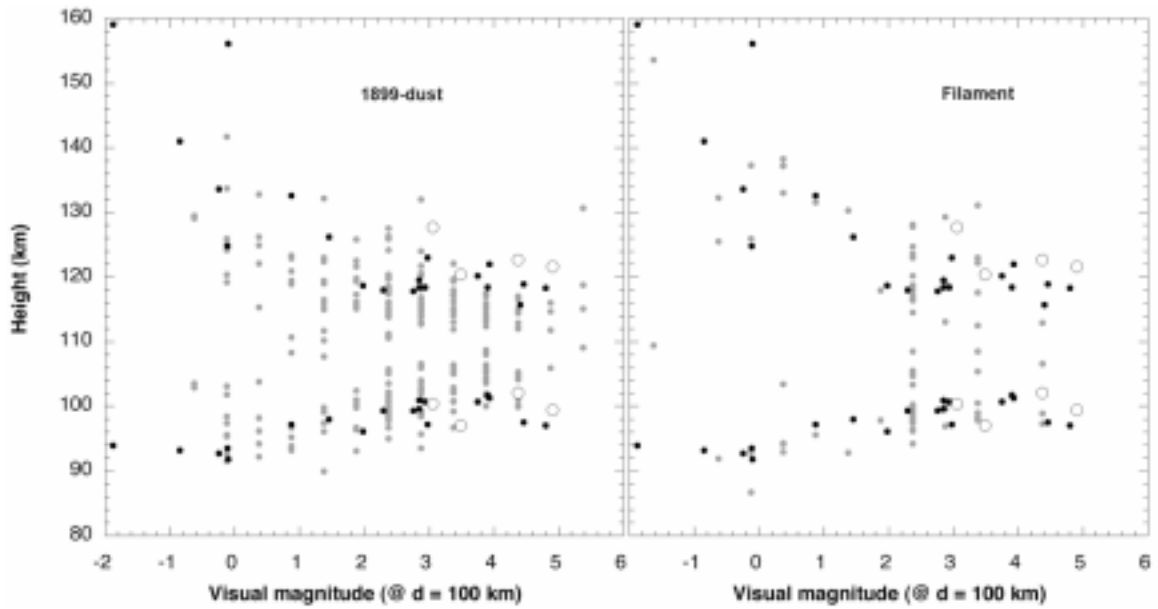


FIG. 6. The beginning and end heights of video Leonid meteors (\odot) as a function of absolute meteor brightness, compared to observations of the fresh 1899-dust encountered during the 1999 Leonids (left) and the older Filament dust seen in 1995, 1998, 2001, and 2002 (right). Four likely 1932-dust meteoroids from 2006 are discussed in the text (open circles).

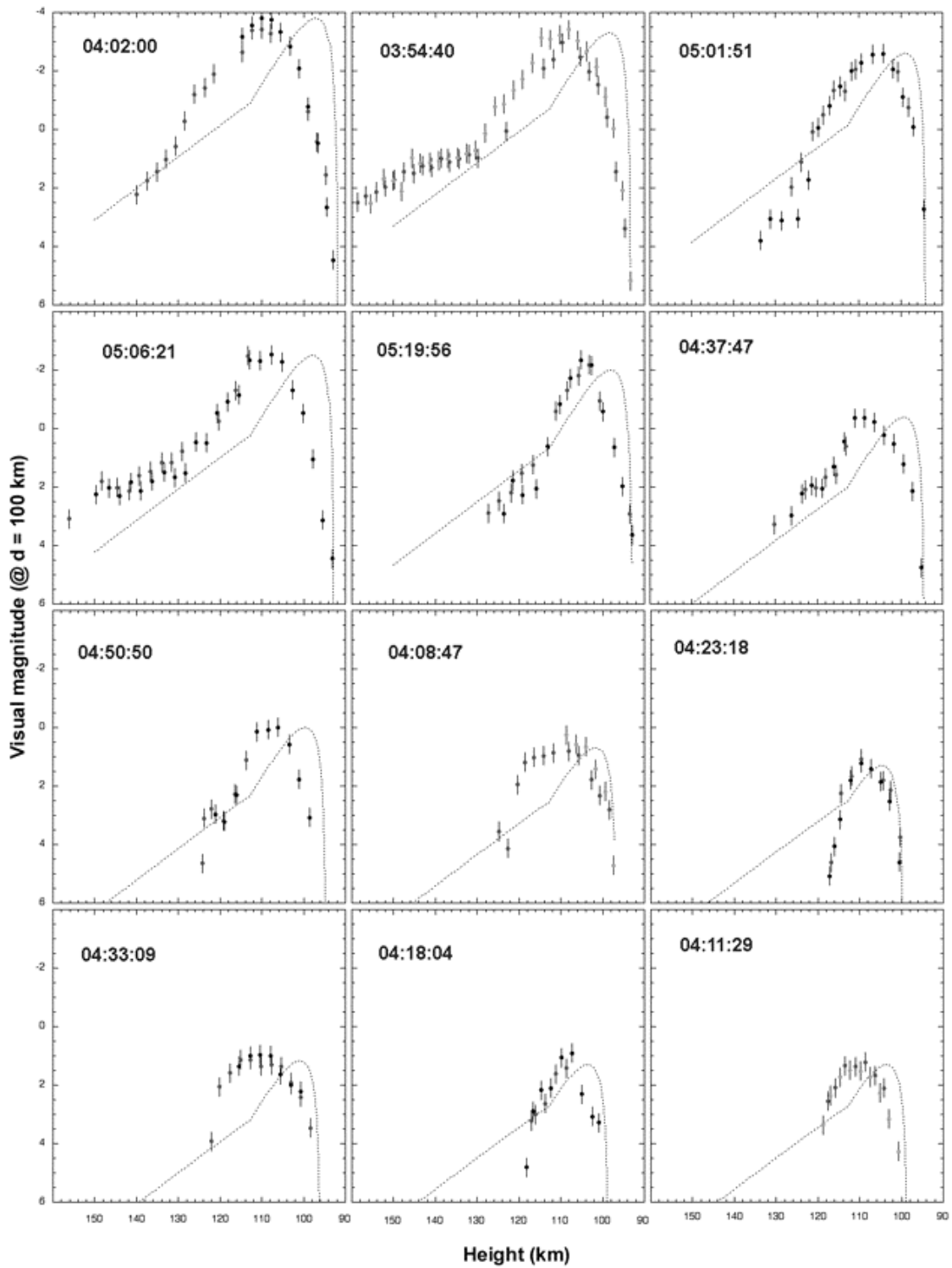


FIG. 7a. Light curves of 2006 Leonid meteors that were filmed from two observing sites simultaneously.

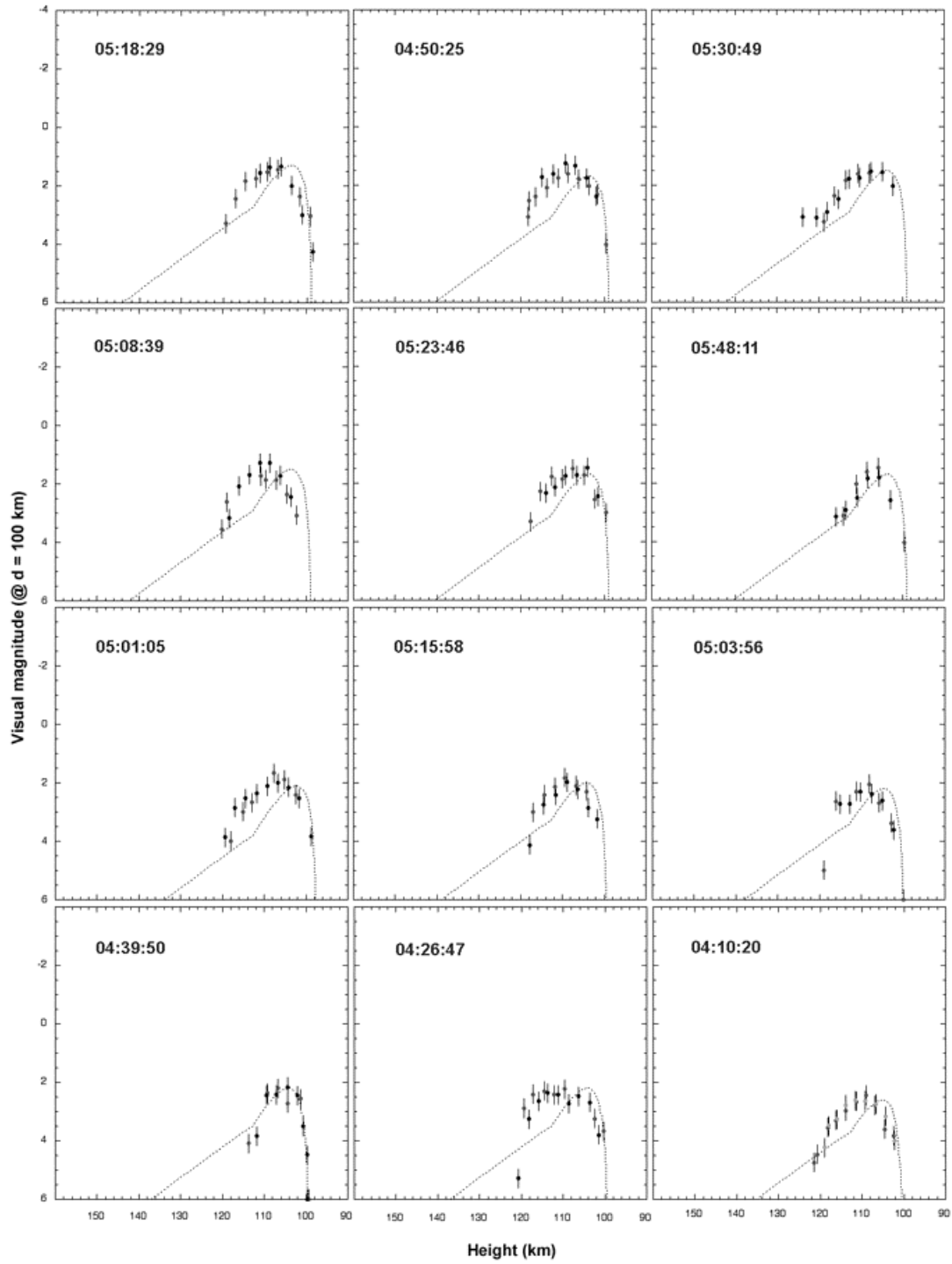


FIG. 7b. (cont.)

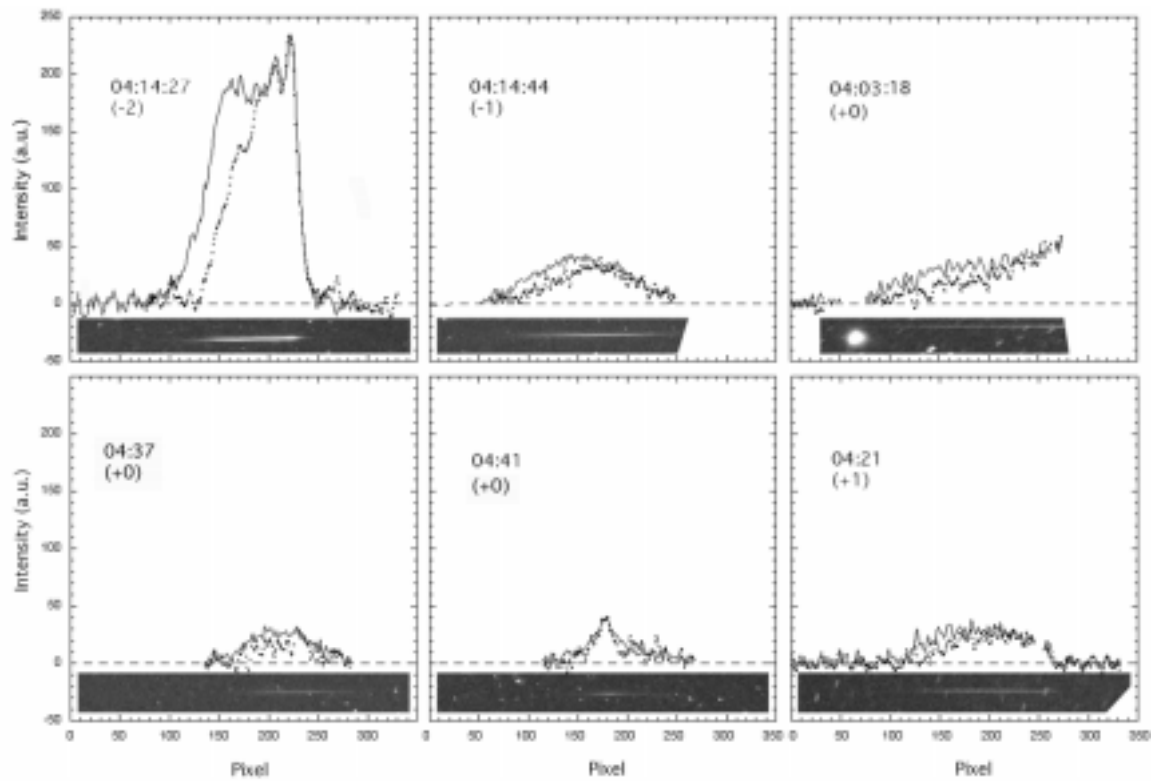


FIG. 8. Light curves of single-station photographed Leonids at Orgiva. The meteors move from left to right. Apparent magnitudes (between brackets) and times (in UT) are estimates by visual observers.

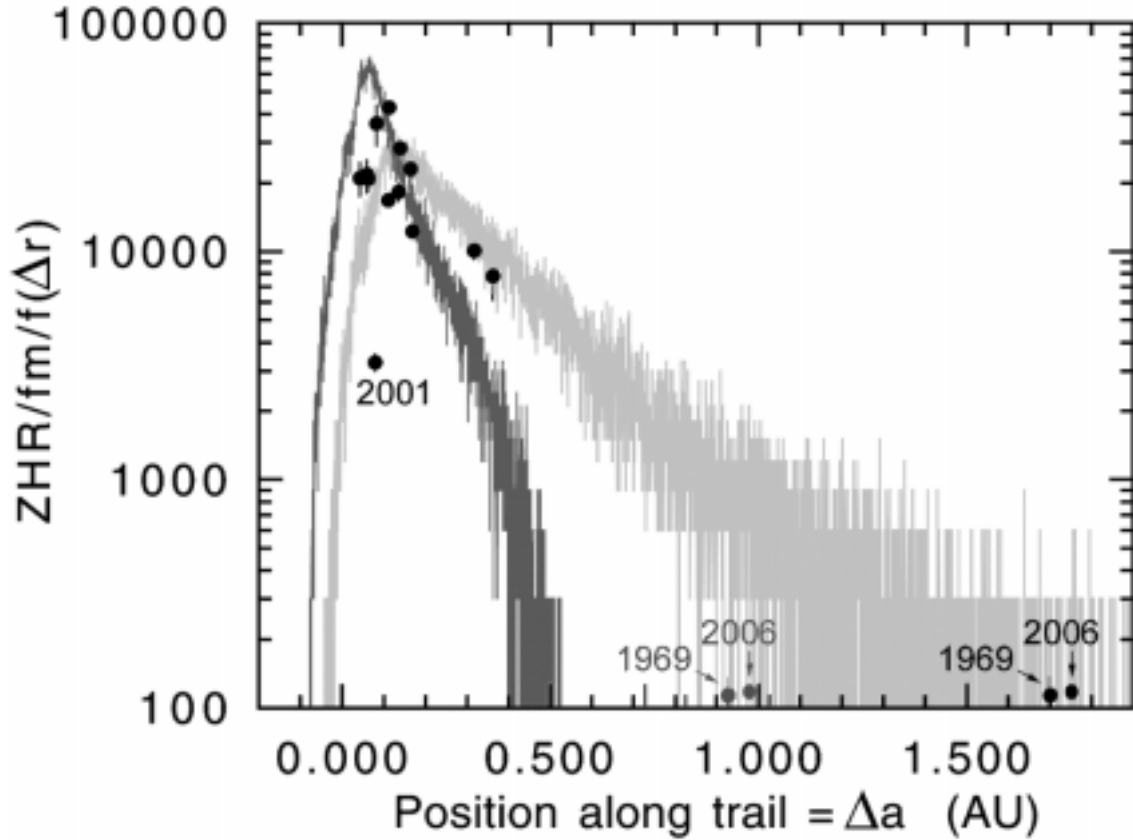


FIG. 9. The variation of dust density along the dust trail (in terms of Δa), reproduced from Jenniskens (2006, Fig. 15-34), with the new data point from 2006 included. The positions along Δa of the 1969 and 2006 observations are given in terms of Δa calculated by Vaubaillon (Jenniskens 2006) and that calculated by McNaught & Asher (1999). Gray lines are model calculations for particle sizes of 0.2 - 1 mm (light gray) and 1 - 2 mm.

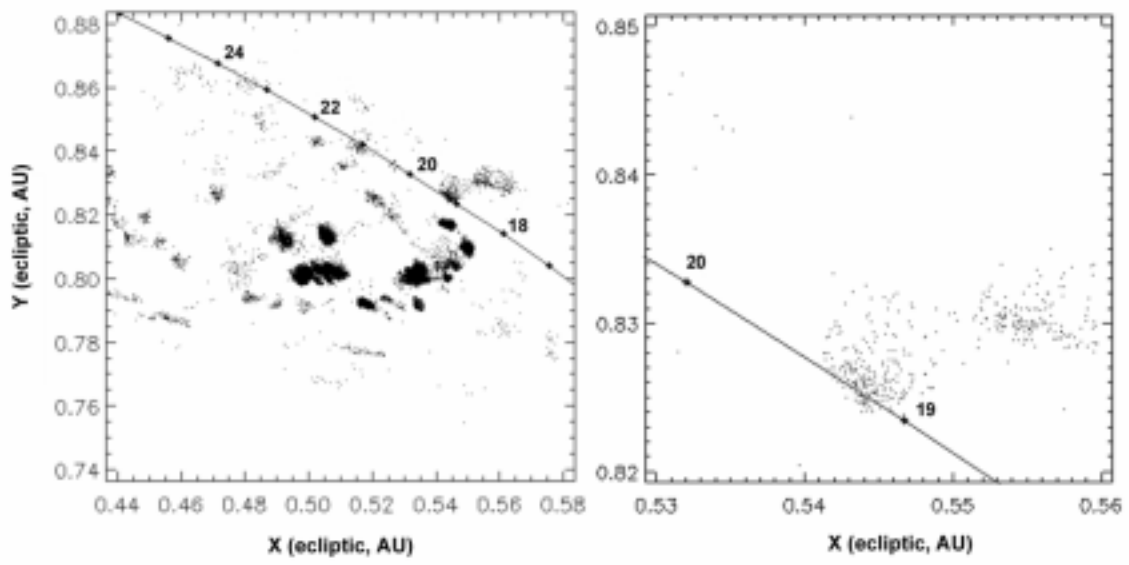


FIG. 10. The location in 2006 of all dust trails ejected by 55P/Tempel-Tuttle during the returns of 866 - 1965 A.D.. The 1932-dust trail is well isolated in the Earth's path. The line is Earth's path with dates (November 2006, 0h UT) marked.