On the return of comet Grigg-Skjellerup

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Abstract

Comet Grigg-Skjellerup must return to its perihelion on November 29, 2002. Before that, it will pass by Jupiter at a distance of 0.5 AU. A simulation of the meteor swarm that is related to this comet in origin has been made for 19 perihelia since 1907. Particles ejected from the nucleus at velocities ±40 m/s in the direction perpendicular to its radius vector are concentrated around the comet and do not approach the Earth, while for particles ejected at velocities ±60 m/s, conditions for the encounter with Jupiter are different; they approach Jupiter to a distance of 0.1 AU, then pass near the Earth's orbit at a distance of 0.01 AU. However, these particles have substantially different radiant coordinates and hardly form a flow of sufficient density.