

Regarding the 1908 Tunguska Event.

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The evidence excluding a comet or asteroid in Earth's atmosphere during the Tunguska Event is a magnetogram recorded by the Irkutsk Observatory on the morning of 30 June 1908 [1], which shows that the disturbance of the geomagnetic field occurred only after the explosion at Tunguska, i.e., with a delay of 6–8 minutes [2]. However, the ionisation trail of the bolide should have intersected the lines of the Irkutsk magnetic meridian before the explosion. Therefore, there was no meteor.

What then caused an explosion precisely over the central vent of the Kulikovsky palaeovolcano near the Tunguska River area on 30 June 1908? All effects, including the fall of trees, are explained by the activation of the mantle plume. These were caused by the combined gravitational influence of the Sun and Moon in connection with a solar eclipse on 28 June 1908. This led to mantle convection starting from the depths of the Permian seismic (LLSVPs) anomaly beneath Eurasia at the Earth's 'core–mantle' boundary [3], the 3-day sky glow, and the myth of the Tunguska comet or asteroid.

[1] Ivanov, K. (1964) *Meteoritika* 24 143 Fig. 2. (in Russian). [2] Pasechnik, I. (1986) *Cosmic matter on Earth*, Novosibirsk, Nauka, 62–69 (in Russian). [3] German, B. (2020) EGU, Vienna doi:[10.5194/egusphere-egu2020-1662](https://doi.org/10.5194/egusphere-egu2020-1662)