



Saturnian Comets

Before searching ancient traditions for any possible association of Saturn with the Deluge, let us notice that the idea that Saturn may have anything to do with the origin of some of the comets of the solar system is not without a theoretical foundation. A group of short-period comets carries the name of “Saturnian family of comets” ; they revolve on ellipses that approach closely the orbit of Saturn. A larger family of short-period comets carries the name “Jovian” and Jupiter is regarded as having something to do with their origin: their orbits come close to the orbit of Jupiter.

The usual explanation for the Saturnian and Jovian families of comets is that they had originally traveled on extremely elongated or even parabolic orbits and, passing close to one of the large planets, were changed into short-period comets, traveling on ellipses—it is usual to say that they were “captured.” However, the Russian astronomer K. Vshekhsviatsky of the Kiev Observatory, one of the leading authorities on comets, has brought strong arguments to show that the comets of the solar system are very youthful bodies—only a few thousand years old—and that they originated in explosions from the planets, especially from the major planets Saturn and Jupiter or their moons. By comparing the observed luminosity of the periodic comets on their subsequent returns, he found it failing and their masses rapidly diminishing by loss of matter to the space through which they travel; the head of the comet emits tails on each passage close to the sun and then dissipates the matter of the tails without recovery. Thus Vshekhsviatsky concluded that comets of short duration originated in the solar system, were not captured from outside of that system—a point to which the majority of astronomers still adhere—and that they came into existence by explosion from Jupiter and Saturn, and to a smaller extent by explosion from the smaller planets, like Venus and Mars. [\(1\)](#)

In order to originate in this manner from a planet the exploded mass must overcome the gravitational pull of the parent body; the larger the mass of the planet, the greater must be the initial velocity of the exploding matter, the velocity of escape. For this reason the idea of explosion of comets from the planets is preferred to the idea of their explosion from the sun. Due to the great mass of the sun the velocity of escape from there must be in the approximation of xxx kilometers in the first second, and from Saturn only 35 km. But even these velocities are rather high, so that Professor Vshekhsviatsky acknowledged that there must have been unusual circumstances which he did not try to determine, but the existence of which he claimed on the basis of the effects produced, namely the short-lived comets reaching to the orbits of Jupiter and Saturn every time these comets recede from the sun to their farthest points (*aphelia*). [\(2\)](#)

The sentence in the Tractate Brakhot that ascribes the cause of the Deluge to the cometary bodies that erupted from the planet Saturn no longer appears as fantastic as when we first understood the meaning of Khima in that sentence.

The explosion of cometary bodies from Saturn and Jupiter is claimed on the basis of purely astronomical observations and calculations; the circumstances of such explosions must have been admittedly extraordinary; the time when this happened must be measured in thousands of years, not tens of thousands or millions. Will we also be able to establish with the help of collective human memory what were the extraordinary conditions?

But should we not first, as intended, place ourselves on firmer ground by showing that the statement in the Tractate Brakhot is not a lone testimony unsupported in the traditions and beliefs of the ancient races of the world?

References

1. K. Vshekhsviatsky, *Publications of the Astronomical Society of the Pacific* Vol. 74 (1962), p. 106.
2. [Su-ma Chien, the Chinese historian (ca. -145 to ca -80) wrote that the planet Jupiter, “if it is not in the place where it should be” may produce different types of cometary bodies. (*Les gouverneurs du ciel*, transl. by E. Chavannes). The origin of comets from conjunctions of planets was postulated by several Greek philosophers, among them Democritus and Anaxagoras. (Aristotle, *Meteorologica* I, 6; Diogenes Laertius; Seneca, *Quaestiones Naturales*).]

