Sequential paired strikes of Comet Cluster Encke

Stuart L. Harris, January 2013

In 1982 Clube and Napier[1] proposed that 20,000 years ago, Jupiter deflected a 100 km diameter comet from beyond our solar system, tore it into fragments, and sent the string of fragments into an elliptical orbit around the sun. The comet and its resulting fragments carry the name Comet Encke and Comet Cluster Encke, after German astronomer Johann Franz Encke who first computed their orbit in 1819, based upon a suggestion by Jean-Louise Pons. **This paper provides exact dates of collision between Comet Cluster Encke and Earth for the last 18,000 years.**

The original orbit of Comet Cluster Encke did not lie in the plane of the planets, nor was it stationary. Like a pendulum, the plane of the orbit around the Sun swung back and forth, pulled by Jupiter's gravity. Most of the time the comet string circled the Sun out of harm's way, but whenever the plane of the comet fragments aligned with that of Earth, collisions could occur. Earth would intercept a fragment, break it into smaller pieces with gravity, then suffer widespread damage from the resulting spray of debris.

Men called these malevolent comets 'Sky Gods', and maintained vigilant watch for their approach. If the position of an approaching comet remained stationary against the background stars, then a collision was imminent. On the predicted night of impact, everyone extinguished their fires so as not to attract attention, climbed a hill to avoid death by drowning, and sang and prayed for the Sky Gods to strike somewhere else. All night they endured explosions in the sky, earthquakes, cosmic lighting, hail and trumpeting shrieks. If still alive at dawn, they ceremoniously thanked their personal deities, lit new fires and returned home. Those not so lucky suffered incineration or a host of secondary perils.

The plane of the comet string did not quite align with that of Earth, so an interception would occur first in the Fall, then 89.5 years later in the Spring, or vice-versa depending on which way the comet orbit was swinging: Spring-Fall, long wait; Fall-Spring, long wait; Spring-Fall, long wait; Fall-Spring, etc. These twin strikes separated by 89.5 years are the signature of Comet Cluster Encke.

In 2008, Mike Baillie[2] discovered that a comet strike leaves a spike of ammonia (NH_4) in Greenland ice cores. To a first approximation, the bigger the comet, the bigger the ammonia spike. Using the 89.5 year separation as a guide, the sequence suddenly becomes measurable down to the year of impact (Figure 1 and Table 1).

---

[1] Victor Clube, William Napier, 1982, The Cosmic Serpent, Universe Books

[2] Baillie, Mike, 2008, "Chemical signature of the Tunguska Event in Greenland Ice, Greenland International conference: 100 years since Tunguska Phenomenon: past, present and future; Moscow, p. 80. Baillie correlated peak NH4 with several comet strikes, including the 1918 Tunguska impact in Russia. The peak occurred within a month of the strike.

Figure 1: Magnitude of paired strikes from Comet Cluster Encke for the last 18,000 years based on ammonia peaks in GISP2 ice core.

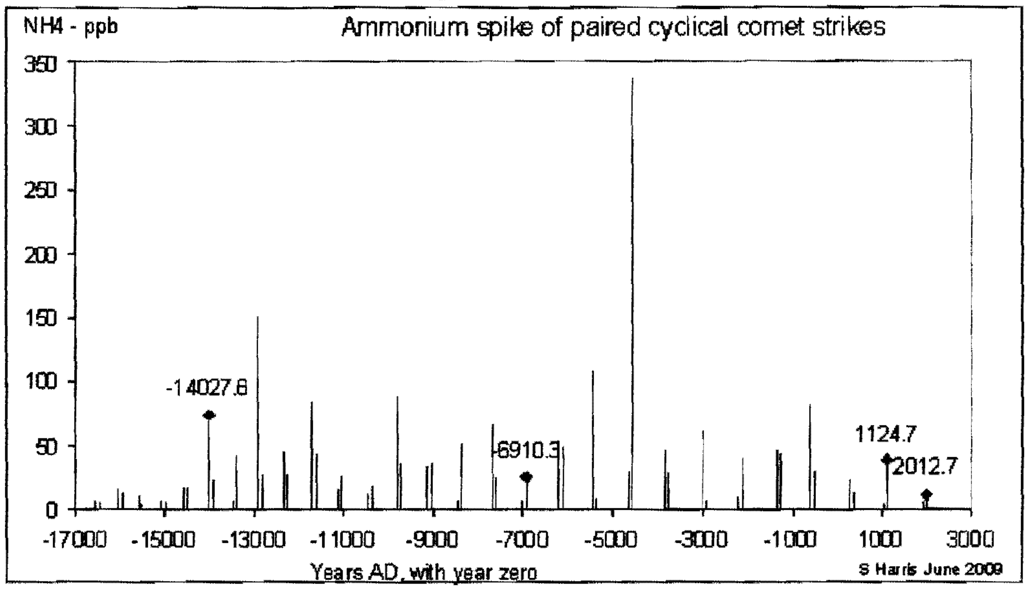
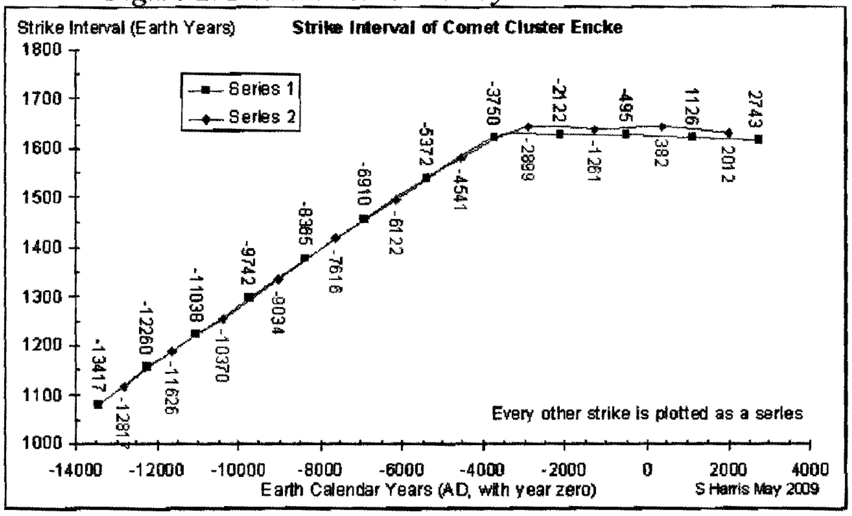


Table 1: Comet Cluster Encke dates of impact.

Older Yrs AD	Younger Yrs AD	Diff. Yrs	Older Yrs AD	Younger Yrs AD	Diff. Yrs
1923.2	2012.7	89.5	**-9124.8**	**-9035.3**	89.5
1035.2	**1124.7**	89.5	**-9831.8**	**-9742.3**	89.5
285.2	**373.7**	88.5	-10460.8	-10371.3	89.5
-585.8	**-496.3**	89.5	-11130.8	**-11041.3**	89.5
-1352.8	**-1263.3**	89.5	**-11718.8**	**-11629.3**	89.5
-2211.8	**-2122.3**	89.5	**-12352.8**	**-12263.3**	89.5
-2988.8	-2926.0	62.8	**-12909.8**	**-12820.3**	89.5
-3841.8	**-3760.3**	81.5	-13505.8	**-13416.3**	89.5
-4643.0	**-4560.0**	83	**-14027.8**	**-13938.3**	89.5
-5462.8	-5373.3	89.5	-14589.8	-14500.3	89.5
-6212.8	**-6123.3**	89.5	-15074.8	-14985.3	89.5
-6999.8	**-6910.3**	89.5	-15606.8	-15517.3	89.5
-7705.8	**-7616.3**	89.5	-16060.8	-15971.3	89.5
-8455.8	**-8366.3**	89.5		-16471.3	

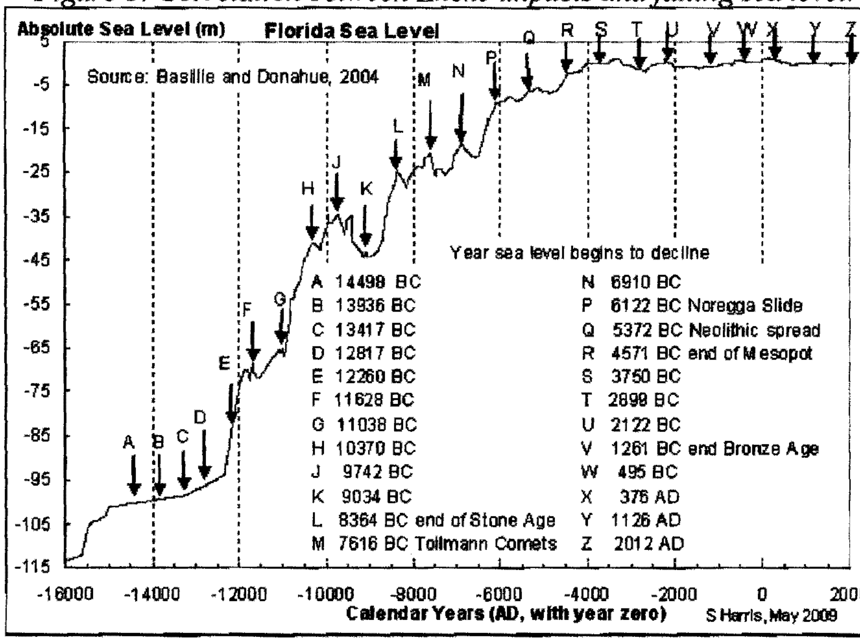
A plot of the interval between every other impact yields a straight line (Figure 2). The straight line suggests that ice core dating is much more accurate than anyone dares to admit. Every other impact is plotted because the swinging pendulum orbit is not exactly symmetrical with respect to Earth's orbit. Notice that a collision with another body around 3100 BC changed the slope of the straight line. As to why or how the strike interval steadily increased, I have no idea. The comet remnants now orbit every 3.3 years, which suggests a close encounter with the comet tail 10 and 20 years after the strike date.

Figure 2: Interval between every other Encke strike.



Nearly every Encke strike led to temporary cooling of the planet for 20-40 years, growth of glaciers and lowering of sea level. This can be seen in a curve of absolute sea level for the Gulf of Mexico by Balsillie and Donoghue[3], who combined a host of previous studies. Instead of a smooth curve, they found numerous inflection points between rising and falling sea level. Many inflection points match those of an Encke impact. Beyond 12,000 BC, detail disappears because a mega catastrophe erased the evidence. The reason for prolonged cooling is unknown.[4]

Figure 3: Correlation between Encke impacts and falling sea level.



You are invited to contact Stuart Harris at stuhar at onlymyemail.com; 650-888-1859

[3] James H. Balsillie and Joseph F. Donoghue, 2004, High resolution sea-level history for the Gulf of Mexico since the last glacial maximum, Florida Geological Survey, Tallahassee.

[4] This curve first led me to look for periodic comet strikes.

Correspondence address:
stuhar@onlymyemail.com