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Meteor project II: Things in the air, Perseid, 87.5Mhz

Sound Installation, 2016

In 1832, Michael Faraday discovered electromagnetic induction.
In 1861, James Cleck Maxwell described how electromagnetic fields are generated and altered.
In 1887, Heinrich Hertz proved the existence of airborne electromagnetic waves.
In 1895, Guglielmo Marconi sent the world's first ever wireless communication over open sea.
In 1919, in The Netherlands, the first commercial radio station, PCGG, started broadcasting.

In 1931 Karl Jansky made the discovery of the first astronomical radio source. As an engineer with Bell Telephone Laboratories, he was investigating static that interfered with shortwave transatlantic voice transmissions. Jansky noticed that his analogue pen-and-paper recording system kept recording a repeating signal of unknown origin. Since the signal peaked about every 24 hours, Jansky originally suspected the source of the interference was the Sun crossing the view of his directional antenna. Continued analysis showed that the source was not following the 24-hour daily cycle of the Sun exactly, but instead repeating on a cycle of 23 hours and 56 minutes. By comparing his observations with optical astronomical maps, Jansky eventually concluded that the radiation source peaked when his antenna was aimed at the constellation of Sagittarius, the densest part of the Milky Way.

1. The comet Swift-Tuttle has a 133.28 years orbit.
2. Every time the comet passes through the inner solar system, the sun warms and softens the ice in the comet, causing it to release fresh comet material into its orbital stream.
3. The Perseid meteor showers occur every year during the end of July and most of August, when the Earth passes through the path of Comet Swift-Tuttle and its debris.
5. When meteoroids hit the upper atmosphere and hurtle towards the Earth's surface, friction between the meteoroid and air molecules often produces a brief trail of light.
4. Meteor trails can reflect radio waves from distant transmitters back to Earth, so when a meteor appears one can sometimes receive fragments of broadcasts from radio stations up to 2000 km away from the observing site.
5. Medium size meteorites retain their orientation as they speed through the earth’s atmosphere, which causes only the front part to melt and flow toward the rear. The result is a iron object having the shape of a rough pyramid or cone.
6. To the ancient Egyptians, meteorite was known as Benben stone. It was said to represent the cosmic seed of all life produced from the ‘sperm’ of *Atum*, the Supreme God.
7. The Benben stone was a sacred stone in the temple of Ra at Heliopolis where the first rays of the sun fell. It is thought to have been the prototype for later obelisks, and the capstones of the great pyramids were based on its design. The capstone or the tip of the pyramid is also called pyramidion.