

TWO PUZZLING SUPERBOLIDES. M.C.L.Rocca-Mendoza 2779-16A,Ciudad de Buenos Aires,Argentina (1428DKU),maxrocca@hotmail.com

Introduction: Superbolides are meteors brighter than mag -17. Bolides or fireballs are used for meteors from mag -4 and brighter. Superbolides are rare events (1). Infrared and visible wavelengths sensors aboard DOD satellites have detected and recorded a number of superbolide events in the past decade (2).

As part of a search in old scientific publications two oceanic superbolide events have come to light.

The first is the most enigmatic:

The following account of unusual phenomena was received March 10, at the Hydrographic office, Washington, from the branch office in San Francisco. The bark Innerwich, Capt. Waters, has just arrived at Victoria from Yokohama. At midnight of Feb. 24, in latitude 37d north, longitude 170d 15m east, the captain was aroused by the mate, and went on deck to find the sky changing to a fiery red. All at once a large mass of fire appeared over the vessel, completely blinding the spectators; and, as it fell into the sea some fifty yards to leeward, it caused a hissing sound, which was heard above the blast, and made the vessel quiver from stem to stern. Hardly had this disappeared, when a lowering mass of white foam was seen rapidly approaching the vessel. The noise from the advancing volume of water is described as deafening. The bark was struck flat aback; but, before there was time to touch a brace, the sails had filled again, and the roaring white sea had passed ahead. To increase the horror of the situation, another 'vast sheet of flame' ran down the mizzen-mast, and 'poured in myriads of sparks' from the rigging. The strange redness of the sky remained for twenty minutes. The master, an old and experienced mariner, declares that the awfulness of the sight was beyond description, and considers that the ship had a narrow escape from destruction (3).

The mention that the sky got red BEFORE the event is puzzling but it is not the only one in the literature. Concerning the Brazilian Superbolide at Curuca River we read:

"On the morning of the 13th August 1930 the sky was clear and glorious equatorial sun had risen to usher in the new day...

Suddenly, at about 8 o'clock, the sun became blood-red and darkness spread over everything, almost as if a thick cloud had intercepted the sun's rays...but there is no cloud...only the appearance of reddish dust in the atmosphere, giving the impression of an immense fire that would reduce to ashes all the elements of nature.

Fine ash begins to fall on the plants of the forest and on the waters of the river...when suddenly a multiple hissing noise is heard coming from the high, sounding like whistles or artillery shells...and the hissing noise comes closer and closer to the earth...

Some fisherman did have courage, and while standing in the middle of the river raised their eyes to the sky and saw large fireballs of fire which fell from the sky like thunderbolts.

They landed in the centre of the forest with a triple shock similar to the rumble of thunder and the splash of lightning. There were 3 distinct explosion each stronger than the other causing earth tremors like those on an earthquake." (

4), (5).

This event could be interpreted both as a meteoritic one or, perhaps, as the consequence of some kind of plasma interaction in the high atmosphere (6).

The second event is a superbolide falling in the sea:

"When the Phoenix Line Steamship St. Andrew arrived from Antwerp yesterday, Captain Fitzgerald reported that the steamer had passed a meteoric shower at 4:30 o'clock on Tuesday (October 30, 1906) about 600 miles NE of Cape Race. The largest meteor observed fell into the sea less than a mile away. Had it struck the St. Andrew all hands would have perished. Yesterday afternoon Chief Officer V.E. Spencer, who was on the bridge when the meteors appeared, told what he saw there. 'On Tuesday afternoon,' said Mr. Spencer, 'the weather was clear and bright, although there was little sunshine. Just after one bell, 4:30 o'clock, I saw three meteors fall into the water dead ahead of the ship one after another at a distance about 5 miles. Although it was day light, they left a red streak in the air from zenith to the horizon. Simultaneously the third engineer shouted to me. I then saw a huge meteor on the port beam falling in a zig-zag manner less than a mile away to the southward. We could distinctly hear the hissing of water as it touched. It fell with a rocking motion leaving a broad red streak in its wake. The meteor must have weighed several tons, and appeared to be 10 to 15 feet in diameter. It was saucer shaped which probably accounted for the peculiar rocking motion. When the mass of metal struck the water the spray and steam rose to a height of at least 40 feet, and for a few moments looked like the mouth of a crater. If it had been night, the meteor would have illuminated the sea for 50 or 60 miles. The hissing sound, like escaping steam, when it struck the water was so loud that the chief engineer turned out of his berth and came on deck, thinking the sound came from the engine room. I have seen meteors all over the world, but never such a large one as this'.

Careful searches in old journals may offer new examples of interesting superbolide events.

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