

2.2-P20. The role of infrasound technology in meteorite detection: a case study in Sudan

During the last century, Sudan witnessed numerous fall of meteorite bodies in different parts of the country. The first fall of meteorite reported in Sudan dates back to 1932; that was a 3.2kg body known as the Khor Temiki meteorite. The second meteorite fall was in 1966 referred to as the Umm Ruwaba meteorite with a mass of 1.7kg. The Kingai meteorite, which is the third one, hit the earth in 1976 and weighs 450g. The fourth one was the 1983 Kidairat meteorite in northern Kordofan, which weighs 100kg. In 1994 the fifth meteorite fell in New Halfa; it has a mass of 12kg. The most famous one is the Almahata Sitta meteorite which fell down in the Nubian Desert on the 7th of October 2008 forming a large fireball, big enough to be noticed by the locals in the surroundings. The Infrasound detector in Kenya distinguished a sound wave corresponding to 1.1 to 2.1 kilotons of TNT (~1/10 the size of the Hiroshima atomic bomb). The rich history of meteorites falls in Sudan reveals the necessity to introduce meteorite detection technology in the country through the installation of infrasound station as one of the verification regime of the CTBTO.

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