

Historical Seismic Recordings of the 6 July 1962, Sedan Nuclear Explosion by the Mechanical Seismographic Stations of the National Seismological Service of Mexico

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During the first half of the 20th century, most earthquake ground motions in Mexico were recorded by the Mexican seismological network, equipped with different Wiechert mechanical seismographs on smoked paper. Nowadays, the analogue seismographic collection of Mexico is stored and maintained at the Joint Library of Earth Sciences of UNAM, as part of the Sismoteca-SSN project, to preserve, digitize and reuse these legacy data. Due to the availability this collection, we have found different smoked paper seismograms at the Tacubaya (TAC) Central station for the period from 5 to 7 July 1962. On 6 July 1962, a shallow underground nuclear test was conducted in the Yucca Flat, Nevada. This event, known as the Storax Sedan nuclear test had a yield equivalent of about 104 kilotons TNT. After visual inspection of the seismograms from the astatic horizontal Wiechert seismograph (17 000 kg) in TAC station, at a distance of 2560 km away from the nuclear test site, different possible seismic traces could be related with that nuclear event. In this work we analyse the seismic traces recorded in these smoked seismograms, in order to define if this explosion could have been recorded at this distance by a high sensitive mechanical seismograph in Mexico.

Promotional text

On 6 July 1962, a shallow underground nuclear test was conducted in the Yucca Flat, Nevada. After the inspection of seismograms from the horizontal Wiechert seismograph (17 000 kg) in TAC station, Mexico, different possible seismic traces could be related with that event.

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