AN UNNOTICED METEORITE FALL IN PRAT DE CABANES (CASTELLÓN) ON AUGUST 5th, 1916.

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Introduction: Meteorite falls are rare phenomena that are often unnoticed, and only represent around 2% of the known meteorites. However, the recent case of Ardón is an example of how the fall of small meteorites, even with witnesses, can remain unnoticed. A 5.5 g specimen was collected *in situ* by a young lady just after the fall on July 9th, 1931 and characterized 83 years later as a fresh L6 ordinary chondrite [1]. In our country the recoveries of meteorite falls are statistically lower than the expectations made on the basis of fireball networks statistics, and some meteorite falls remain unnoticed [1]. Meteorite falls are announced by huge bolides, and sometimes also by loud sounds and seismic effects that are recorded by the press or eyewitness reports. We are looking for historic evidence about other falls.

In fact, it is possible that another meteorite fall occurred in Prat de Cabanes, Castellón, on 1916. We have been behind this event since we had knowledge of some peculiar nail-like droplets that were once present in Joaquim Peris Fuentes archaeological collection, in Burriana (Castellón) [1]. Unfortunately it seems that such collection disappeared among the family successors. We started to search for additional information about the origin of these tiny stones collected from a fall and we found a report in a yearbook of the *Ateneo de Castellón* [2]. A 2-page short report written in Catalan describes how, according to a contemporary eyewitness report, on the twenties of the 20th century occurred a meteoric event that produced a rain of solid drops over a location called Ribera de Cabanes [2]. Few lucky eyewitnesses reported that, after hearing several detonations and a long thunder, noticed a short but intense rain of iron droplets. They collected just a few of them that were given to the historian Joaquim Peris Fuentes.

The daylight bolide was observed from the *Observatorio del Ebro,* in Roquetes (Tarragona), and compiled in the journal Ibérica n. 137 [3] and in [4]. This report describes literally: "Fall of a bolide: On the 5th of this month an aerolite was seen fall not very far from the mouth of Ebro river (little bit towards SW). The luminous path, quite cushioned by solar light, was observed from the Observatorio del Ebro a little bit after 2:15 pm, with direction N to SSW; a long smoky trail remained indicating the trajectory of the bolide during several minutes until it was dissipated by wind…" Other reports describing the event are being analyzed.

Conclusions: On August 5th, 1916, a very bright bolide was seen over the Tarragona and Castellón provinces. In fact, few people located in a remote area near the coast described a curious rain made of "nails" because of the peculiar shape of the surviving samples. To our current knowledge the collection of Joaquim Peris Fuentes has not been preserved, but the event probably requires further study as a larger mass could have survived.

References: [1] Trigo-Rodríguez J.M. 2014. *Meteoritics & Planetary Science,* in press. [2] Esteve. F. 1995. *Anuario* 94-95, N. 8. [3] Anonimous 1916. *Ibérica* 137: 99. [4] Faura i Sans M. 1921. *Bull. Centre Excursionista Catalunya* 322: 270-288.