ON THE DEVELOPMENT OF NEW VIDEO STATIONS TO MONITOR METEORITE-DROPPING EVENTS OVER SPAIN. J.M. Madiedo[1] and J.M. Trigo-Rodríguez[2]. [1]Observatorio Astronómico de la Universidad de Huelva, CIECEM, Parque Dunar S/N, Matalascañas, 21760 Almonte, España [2]Institute of Space Sciences (CSIC-IEEC). Campus UAB, Fac. de Ciències, Torre C5-p2. 08193 Bellaterra, Spain.

Introduction: The *SPanish Meteor and Fireball Network* (SPMN) is an interdisciplinary project involving several universities and research centres with the aim to study meteor and fireball events occurring over Spain and the bordering countries [1]. Large fireballs can be the precursors of meteorite falls and, so, the establishment of a network of detection systems is very convenient in order to increase the chance of meteorite recovery by tracking their atmospheric trajectories and predicting the corresponding landing sites. To do this it is necessary to record the luminous trail from at least two different locations.

Description of the observing stations: The first automated video station in Spain was setup by the University of Huelva in 2006 [2]. Since then, similar stations have been setup within the framework of the SPMN in order to complement the previously-existing low-scan all sky CCD stations. These are endowed with high-sensitivity video cameras that employ a black and white 1/2" Sony interline transfer CCD image sensor. Fast aspherical lenses (f0.8 to f1.2) are attached to the video cameras in order to maximize image quality and detect meteors as faint as magnitude +2/+3. Their focal length ranges from 3.8 to 12 mm. This technique has proven to be very efficient to study meteor showers and to track large fireballs that can give rise to meteorite falls [3, 4]. One or the latest remarkable events detected by our video stations was the mag. -18 fireball recorded on July 11, 2008 Salamanca (Spain). The data recorded by our systems revealed that it was originated by a fragment of about 1.8 metric tons that was produced during the catastrophic disruption of comet C/1919 Q2 Metcalf [5].

Full coverage of the Iberian Peninsula was planned for 2009 with the establishment of four new video stations. The latest of these started operation in April 2009 from the Astronomical Observatory of the University of Huelva. This is an automated and remote controlled station that employs 12 high-sensitivity cameras to cover the whole sky during the night and also during the day.

Conclusions: Since the first SPMN video station was setup by the University of Huelva in 2006, several stations have been setup throughout Spain to complement the previously existing SPMN low-scan all sky CCD stations. Full coverage of the Iberian Peninsula is planned for 2009 with the development of new observing stations. These systems are intended to increase the chance of meteorite recovery in Spain.

References: [1] Trigo-Rodríguez J.M. et al. 2006. *Astronomy & Geophysics* 47:6, 26-28. [2] Trigo-Rodríguez J.M. et al. 2007. *WGN J. of the IMO* 35:1, 13-22. [3] Madiedo J.M. et al. 2008. *Earth Moon and Planets* 102:133-139. [4] Madiedo J.M. et al. 2008. *Abstract #00321*. European Planetary Science Congress. [5] Trigo-Rodríguez J.M. et al. 2009. *Monthly Notices of the Royal Astronomical Society* 394:569-576.