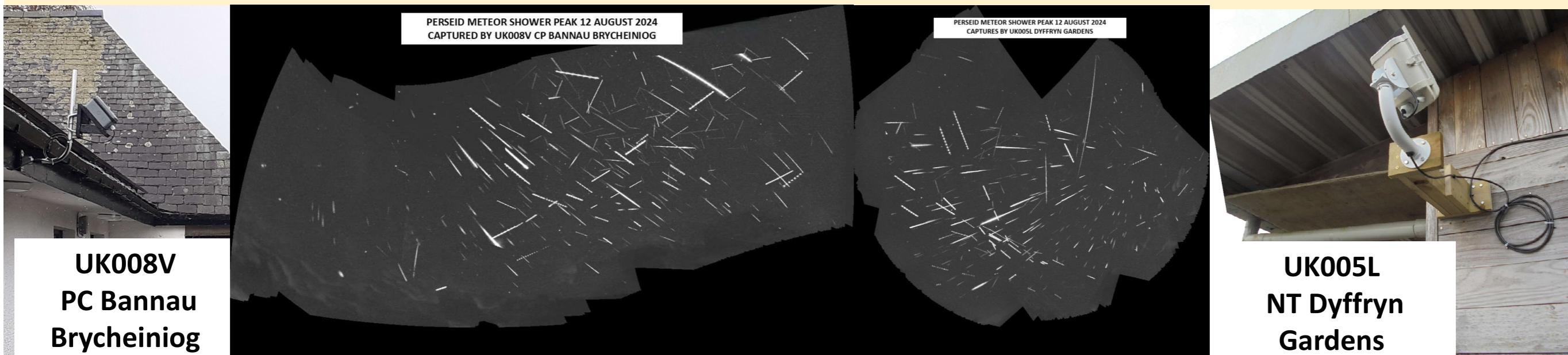


CARDIFF ASTRONOMICAL SOCIETY (CAS) CONTRIBUTION TO AND PURPOSE OF THE UK METEOR NETWORK (UKMON) AND THE GLOBAL METEOR NETWORK (GMN)

CAS have been contributing video meteor observation data to UKMON since November 2013 initially using analogue technology. In recent times these cameras have been replaced with new technology based on Raspberry Pi (RPi) single board computers in conjunction with low light level security video cameras. CAS continue to support two cameras one at National Trust Dyffryn Gardens, the other at the Parc Cenedlaethol Bannau Brycheiniog Mountain Centre, Libanus. These new systems report daily automatically over the internet to UKMON and GMN (University of Western Ontario, Canada).



Nightly, the RPi starts recording video from the camera shortly after local sunset continuously compressing and storing the video data locally. Each morning before sunrise, after capture is complete, the RPi analyzes the video and extracts the nightly station's meteor observations. These extracted video "clips" of detected meteors are then archived and uploaded to servers (UKMON & GMN). The clips can total hundreds of megabytes on a "busy" night (e.g. in a heavy meteor shower). The servers find meteors which were observed by more than one station, this enables the servers to triangulate the meteor trails in 3D and calculate the orbits of the meteors. The archives are open access save for the need of appropriate acknowledgement.

There are many reasons for collecting and analysing the nightly data recorded by in our case 230+ UKMON cameras monitoring the skies of the UK. Principal among these reasons is the provision of accurate tracking information that can inform those endeavouring to recover fresh meteorite samples for scientific analysis which contributes to our understanding of the Solar System. The meteorite's strength, density and composition can be compared with its path through the atmosphere to learn more about the physics of meteorite and comet impacts.

<https://archive.ukmeteors.co.uk/>



<https://globalmeteornetwork.org/>



<https://www.cardiff-astronomical-society.co.uk/>

