# United Kingdom Meteor Observation Network

Using CCTV to monitor meteors over United Kingdom

#### An Invitation to Join UKMON

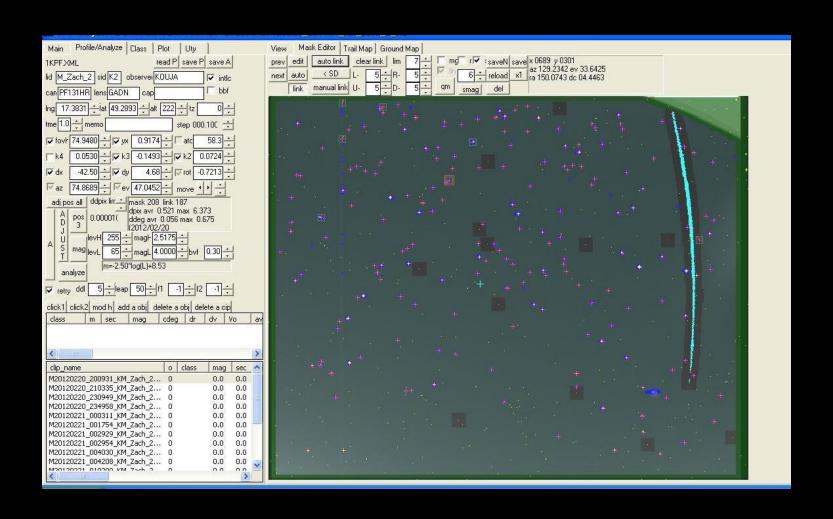
- A collaborative project create network of video based meteor observing stations
- Sharing of data and analysis across UK & Europe
- Acquisition of data of value to the science community
- A fantastic opportunity for individuals, societies, schools and colleges

... and all for less than the cost of a PST!

#### **Data Capture**

- Motion sensing video to capture trajectory
- Calculate the position of the moving object.
- Automatic distortion compensation by comparison with star map.
- Calculate co-ordinates, angular velocity, direction, linearity, magnitude, light curve
- Classify the meteors to a possible shower
- Draw trail map of meteors to find their radiant

#### **UFO Capture Software**



#### Why a UK network?

- Combine data from more than one station:
  - Find simultaneous events
  - Calculate orbital elements of meteors
  - Draw trails on star map or ground map.
  - Draw the orbit in star map
- Several networks exist across Europe but not the UK
- Cumulative data is being requested by variety of professional organisations
  - ASU Ondrejov (Czech republic Academy of science)
  - AGO Modra (Faculty of maths, physics & informatics, Slovakia).
  - Armagh Observatory (Ireland)

### **Building a monitoring station**

•	CCTV camera: KPF 131 HR	£60
•	12V PSU	£10 - £15
•	Fujinon Lens YV2.8×2.8LA-SA2 1/3" 2.8-8mm / F1.4, Auto Iris*/Focus	£45
•	PUSB decoder Dazzle DVC 101	£40-50
•	CCTV Enclosure with heater	£25
•	UFO Capture software program	£150
•	Modest spec. Pentium 4 HT computer	£50

<sup>\*</sup>When camera powers down, IRIS shuts protecting CCD from sunlight.

## Monitoring station #1



#### **Building a community**

- UKMon website in development
- Coming soon:
  - Forum, tutorials, help
  - Central server for sharing of data
  - Live stream from all contributing UK stations
  - Building a database
  - "Pairing up" available stations

#### Want to join?

Or if you just want more information:

Contact Richard Kacerek

info@ukmeteornetwork.co.uk