

Results from the 2010 Perseids meteor campaign using the SPOSH cameras

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Overview

- Perseids campaign history
- The SPOSH camera
- 2010 Meteor Campaign
- Early Results
 - Meteor Rate
 - Trajectories
 - Radiants
- Future Results

Perseids Meteor Campaigns

- 2004 first field-tests (e.g. Perseids, Leonids, Geminids)
- 2005, 2006, 2008...no data!
- 2007 - Joint effort btw DLR - TU Berlin
- 2009 & 2010: one double-station in Greece
 - Favourable weather conditions
 - More observing time
 - Large data volume

The SPOSH camera

(Smart Panoramic Optical Sensor Head)

- Developed by DLR and Jena Optronik
- 1024 x 1024 CCD sensor
- 14bit \approx 16,384 dynamic range
- \approx 7mm focal length
- Fish-eye optics
- 120° x 120° FOV
- Up to 3 fps (1x1 bin. mode)
- Equipped with a shutter

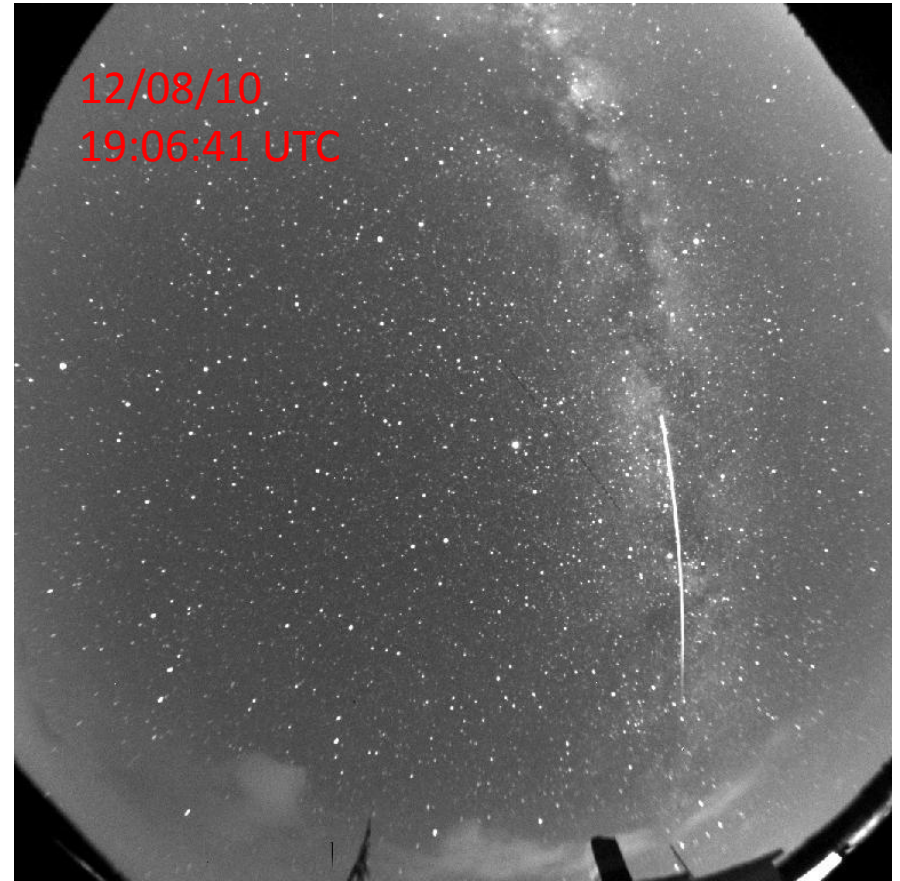
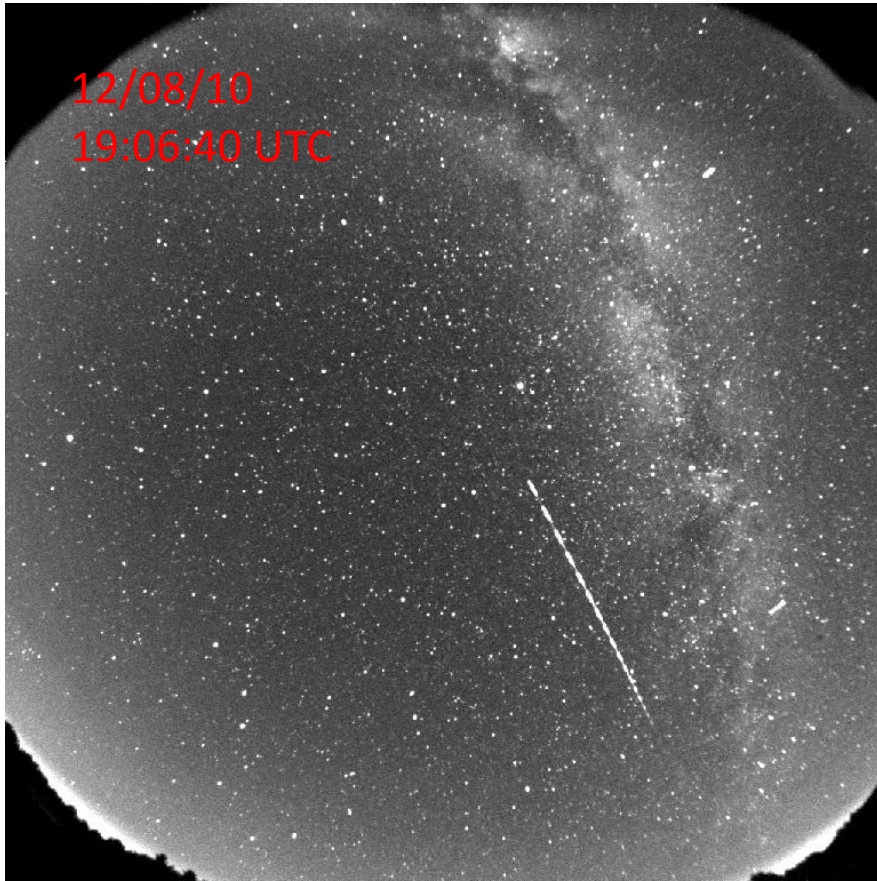


Meteor Campaign 2010 – Outlook

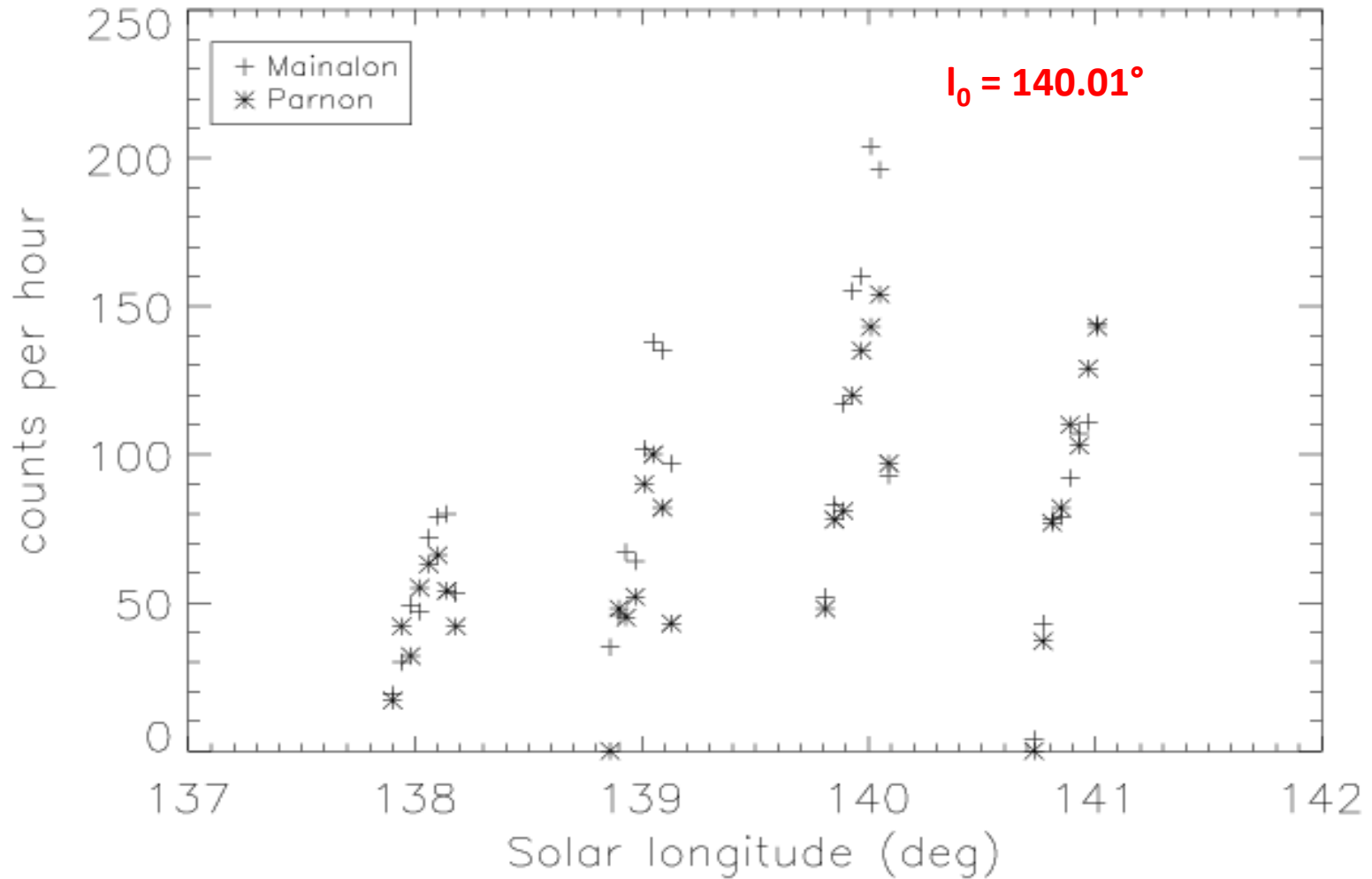
- 4 SPOSH cameras in Greece and Germany-Austria
- Greek stations deployed in the Peloponnese peninsula at *Mainalon* and *Parnon* (~50km baseline)
- 10.08 – 14.08
- ~30h effective observing time
- 5465 meteors
 - Mainalon: 2831
 - Parnon: 2423
 - Gahberg: 211
- 1894 double-station candidates!



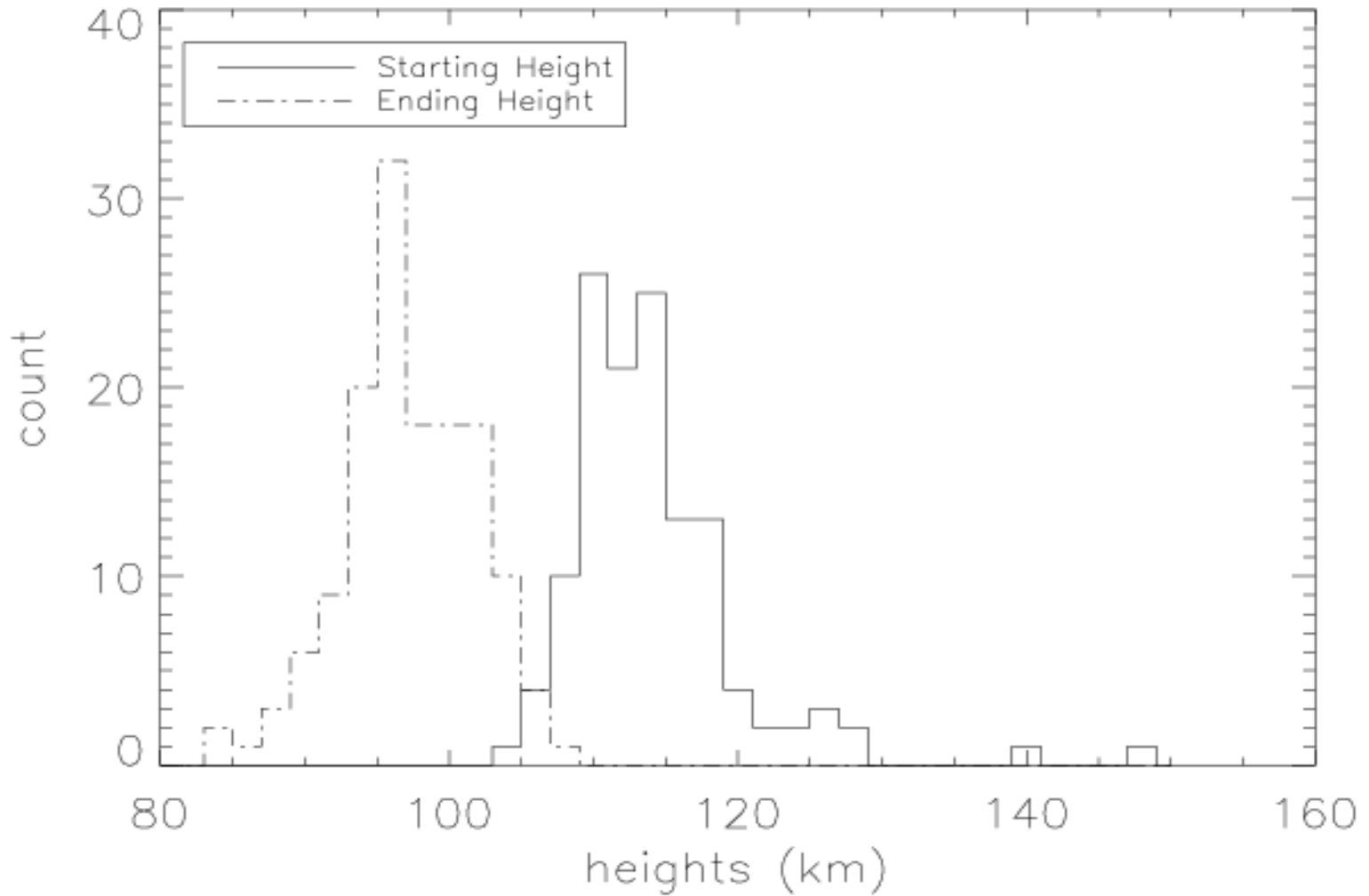
Double-station Meteor



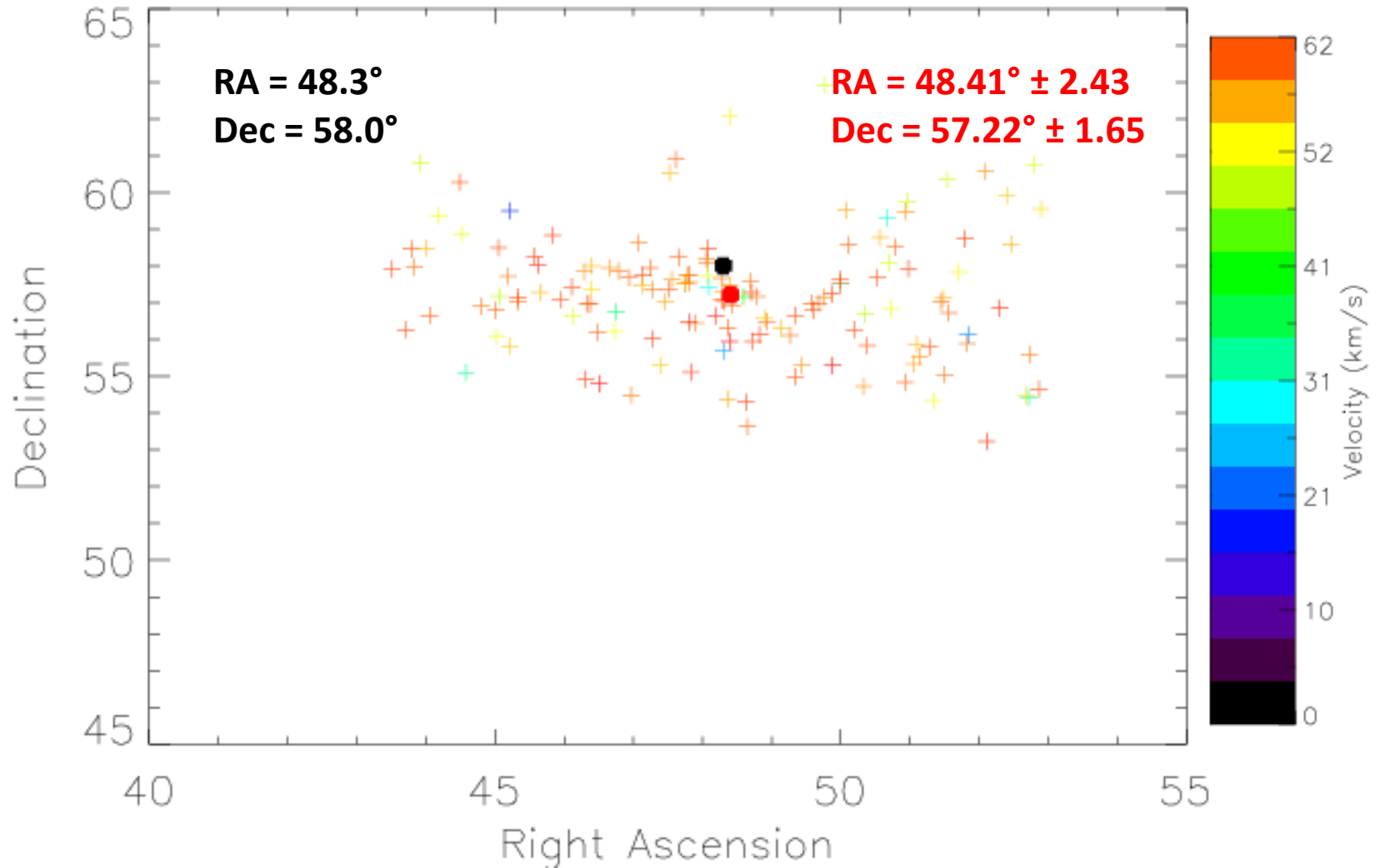
Activity Profile



Height Distribution



Radiant Dispersion



Next Processing Steps

- Data from 4 observing nights
 - Radiants
 - Trajectories
 - Orbits
 - Photometric properties
- Process data from Germany-Austria

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 - Sparta - “Dioskouroi”



Thank you for your attention!