

THE SECOND YEAR OF CROATIAN METEOR NETWORK

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<http://www.astro.hr/hmm/index.html>

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Introduction - hardware: 1004x surveillance camera



- 1004x B/W surveillance camera (1/3" EXView HAD CCD chip)

sensitivity 3 mLux at F/1,2

modification (by Filip Lolić): gain is fixed at about 90% of maximal

lens: 4 mm F/1,2 with FOV of 48x64 deg.

run at 25 fps

Introduction - hardware 2: transparent dome and light shield



Introduction 3: camera control software

- freeware program Sky Patrol (written by Mark Vornhusen) is used to capture images from our cameras.
- it works with almost any image capture card.
- old PCs (pentium 500MHz and up) with Win 98 SE and up to the Win-XP are suitable.
- images are integrated for 1 min (1500 frames), but as a difference to still CCD images, exact times of each pixel brightening are stored, allowing to reconstruct events during the exposure.

Introduction 4: limiting magnitude 3 to 4

comet Holmes

α Per 1^m8

– κ Per 3^m8

– ε Per 2^m9

– ξ Per 4^m0

Pleiades

Video network 1:



**Situation
September
2008:
14 cameras**

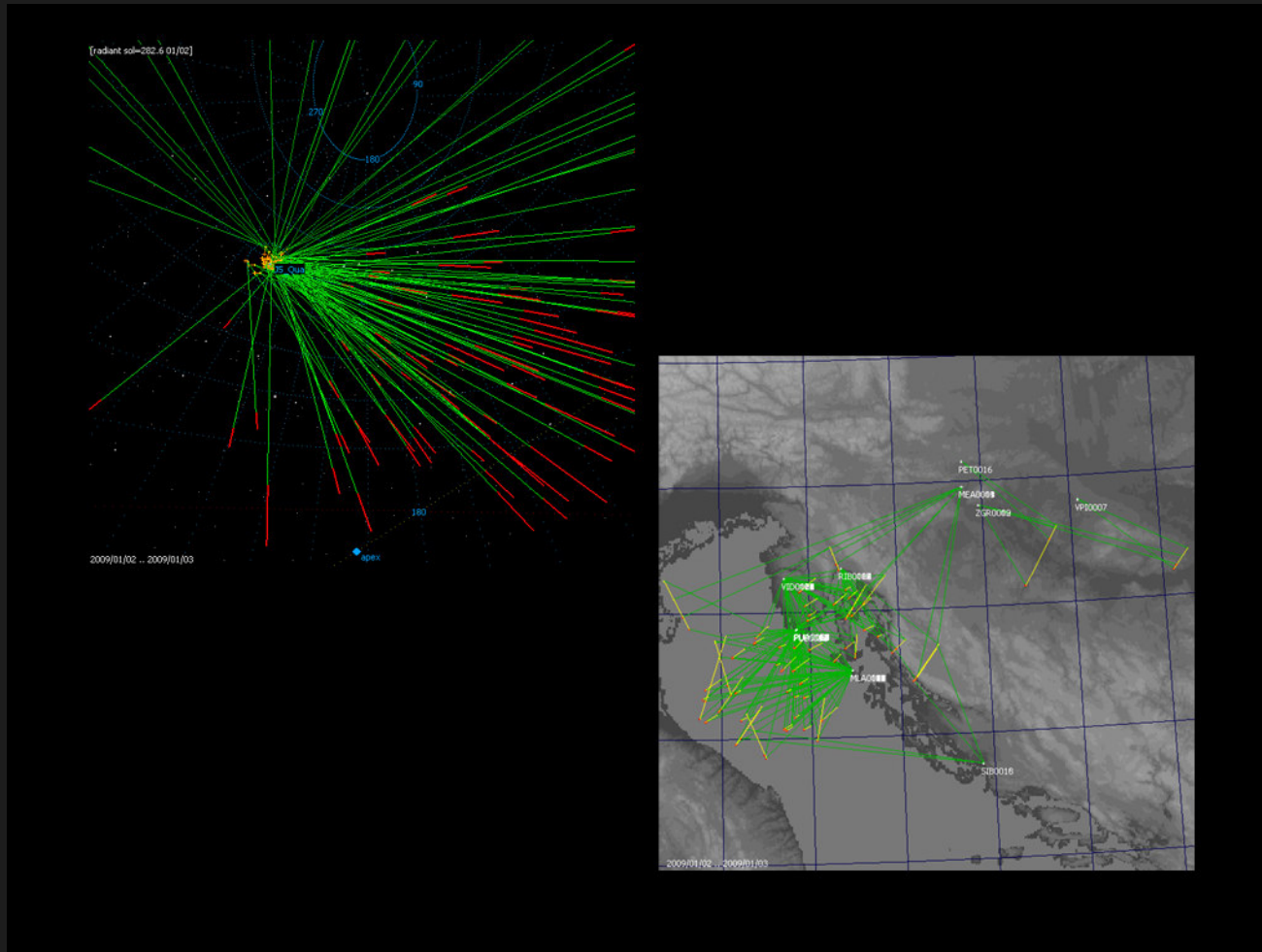
**Situation
September
2009:
22 cameras**

Sky coverage (at h=100 km)



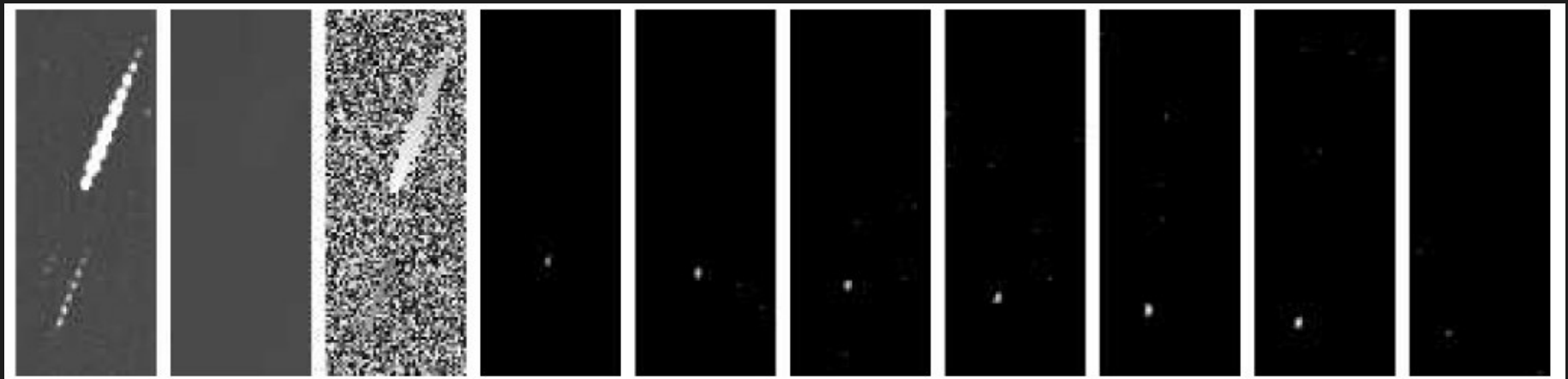
Software development 1:

- fall of 2008: our export data format is UFOorbit R80 input format



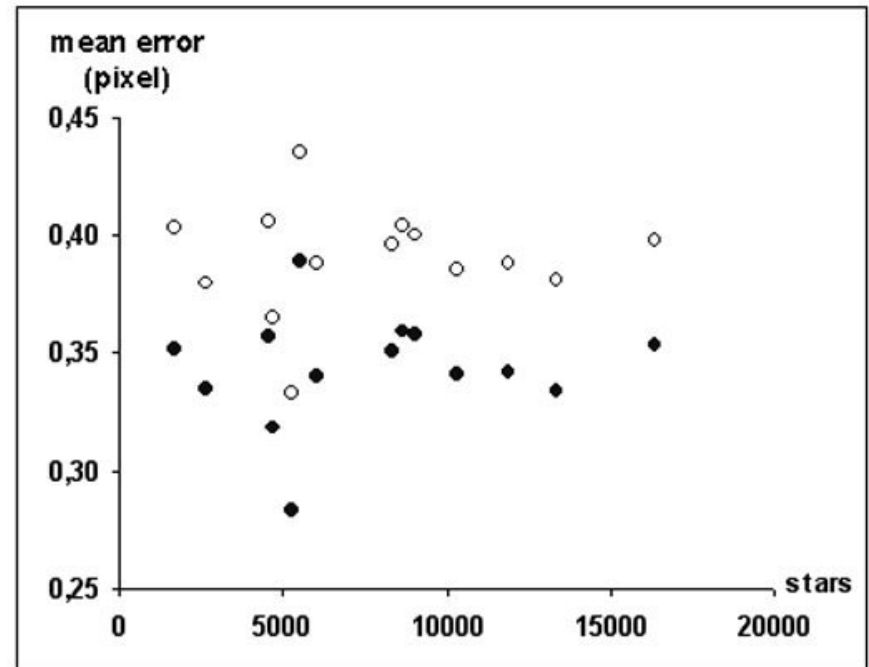
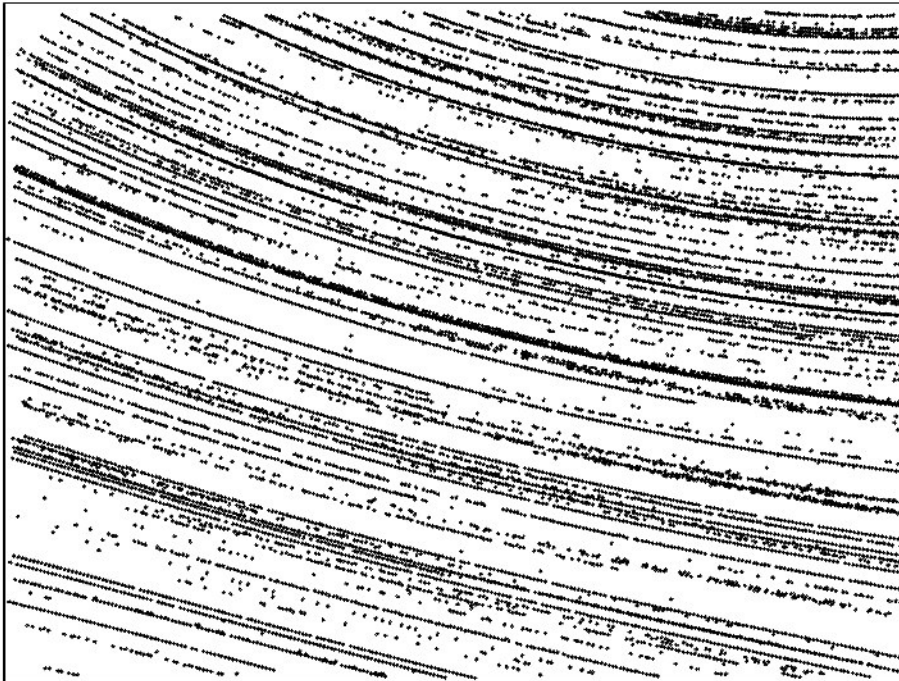
Software development 2:

- End of 2008: Peter Gural wrote MTP_detector, a software that extracts meteor trails from our images with sub-pixel precision.



Software development 3:

- beginning of 2009: Damir Šegon wrote a new astrometry/photometry software for astrometric calibration of images based on all stars recorded during the whole night (typ. 10 000 stars)



Publication of results:

- fall of 2008: most interesting data are published regularly in WGN, work on complete data base started.



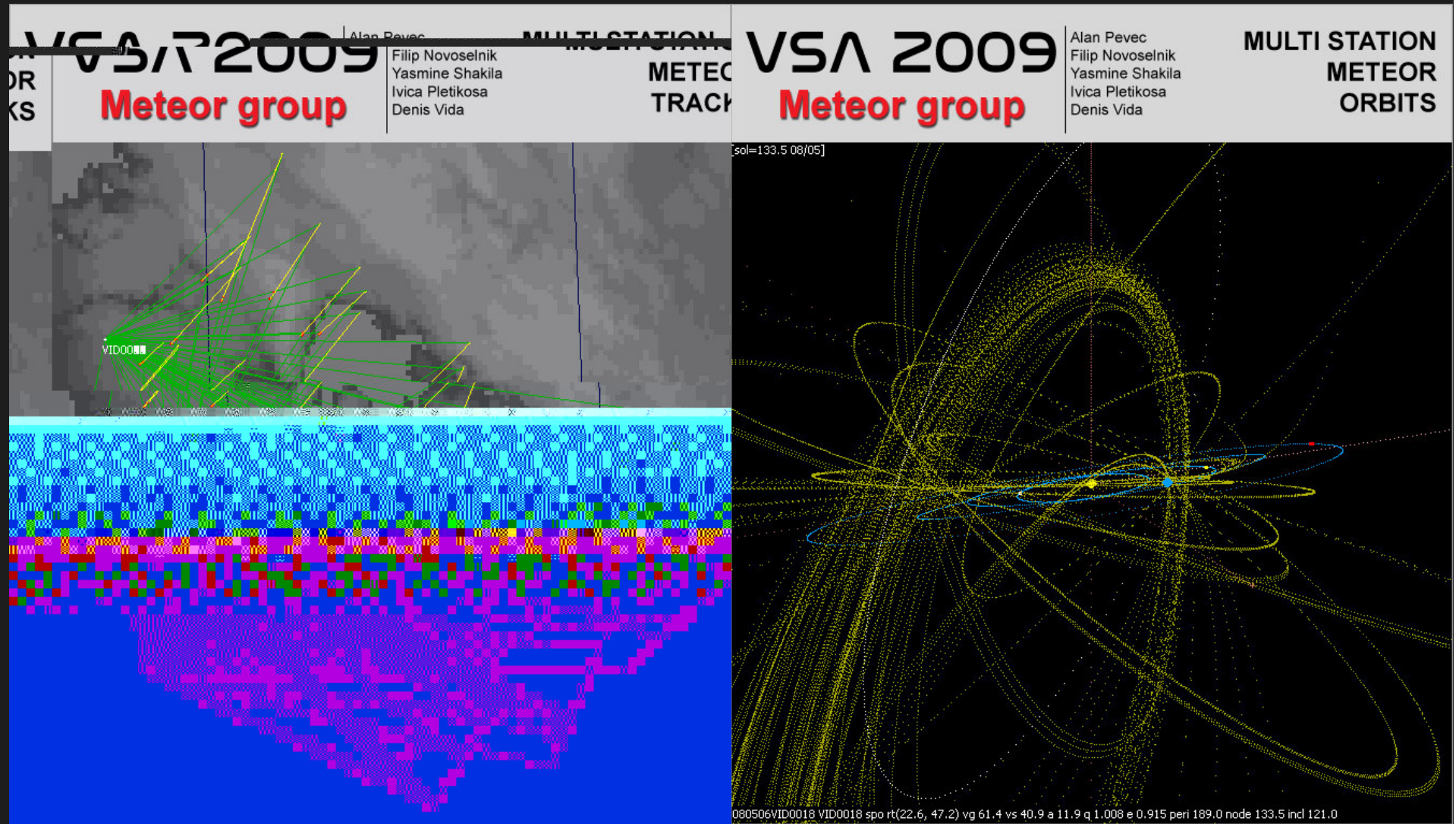
Educational role of CMN 1: regular local meetings



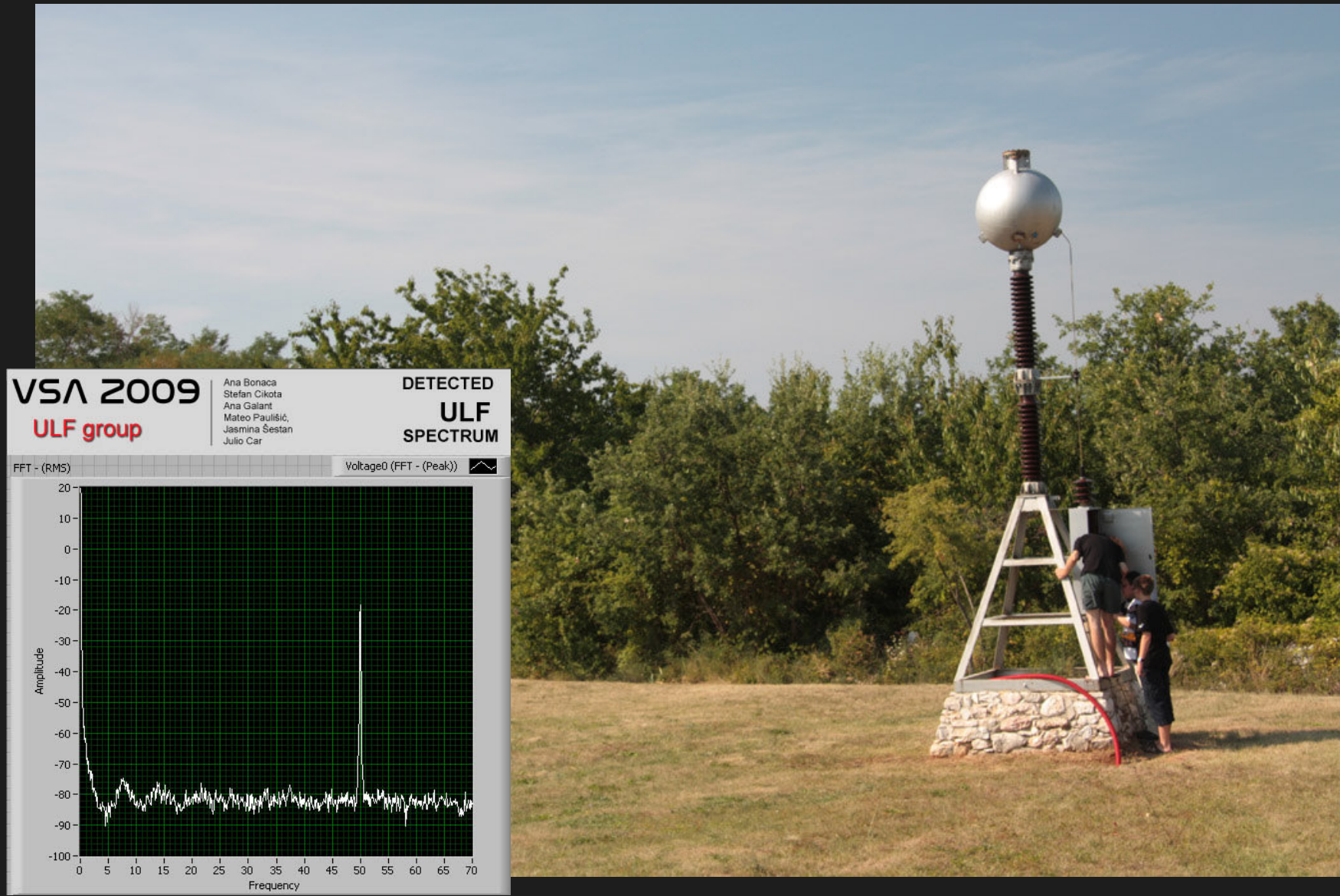
Educational role of CMN 2: VSA meteor group



Educational role of CMN 3: VSA meteor group

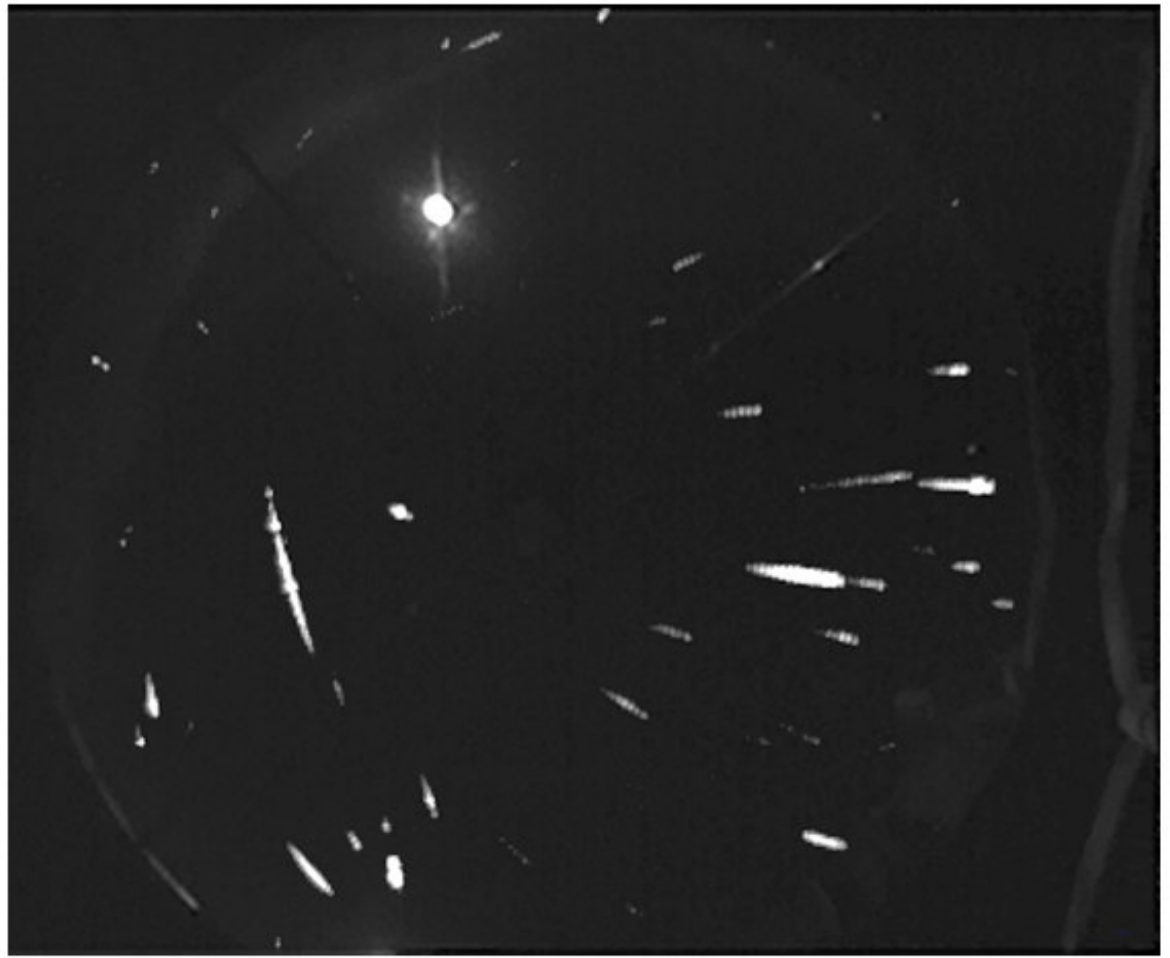
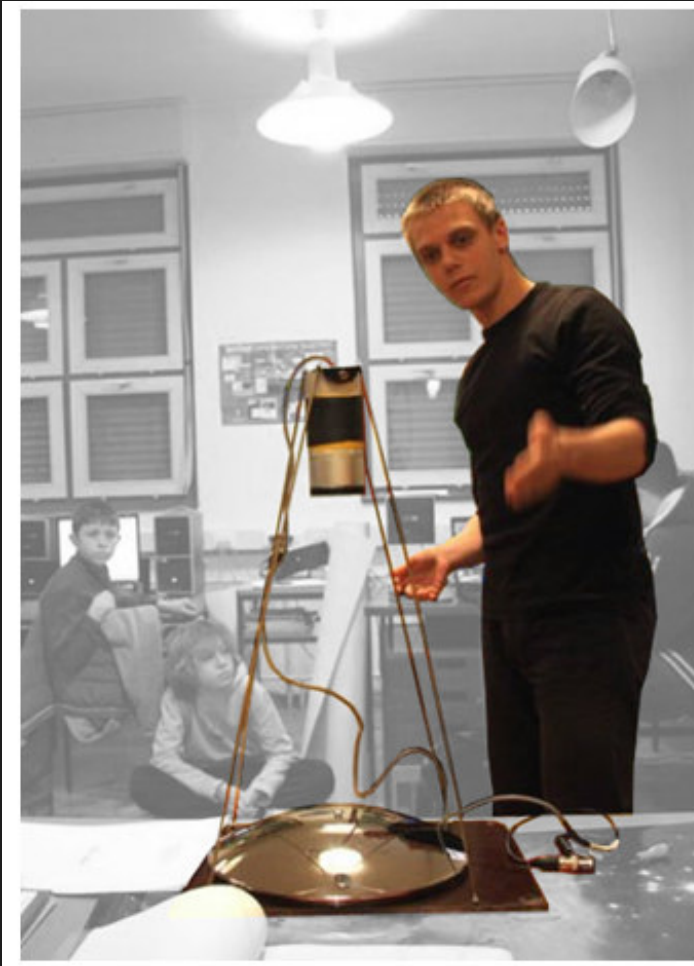


Educational role of CMN 4: VSA ULF group



What next?

- build and test new instruments:



What next 2?

- recording of non-meteor natural phenomena



What next 3?

- build a database of meteor recordings and putting it on-line
- build a database of meteor orbits
- enlarge scientific team (still 3 persons, very limited time)
- wait for meteorite falls and try to retrieve them

Thank you for your attention!

Questions?