Global Astrophysical Telescope System
a new tool for photometry and spectroscopy

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Global Astrophysical Telescope System

Poznan Spectroscopic Telescope 1 (PST1)

- binary 2 x 0.5m Newtonian Telescope
- fibre-fed echelle spectrograph
  - resolution R~35000
- CCD camera
  - back-illuminated
  - 2k x 2k
  - Andor DZ 436

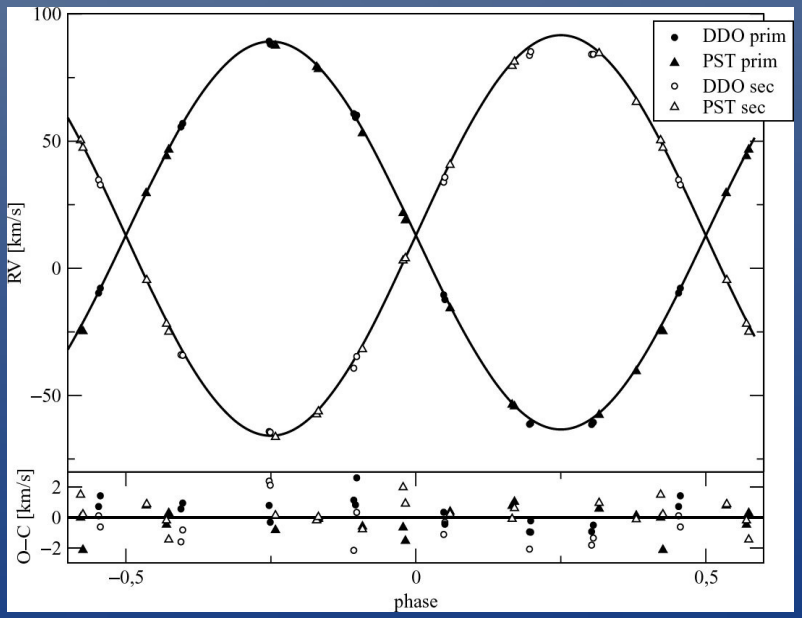
Examples of the science results of PST1

Monthly Notices
of the
ROYAL ASTRONOMICAL SOCIETY

Mon. Not. R. Astron. Soc. **402,** 2424–2428 (2010) doi:10.1111/j.1365-2966.2009.15971.x

Absolute properties of the main-sequence eclipsing binary FM Leo

M. Ratajczak,[1★] T. Kwiatkowski,[2] A. Schwarzenberg-Czerny,[2,3] W. Dimitrov,[2]
M. Konacki,[1,2] K. G. Hełminiak,[1] P. Bartczak,[2] M. Fagas,[2] K. Kamiński,[2]
P. Kankiewicz,[4] W. Borczyk[2] and A. Rożek[2]



Parameters of the system

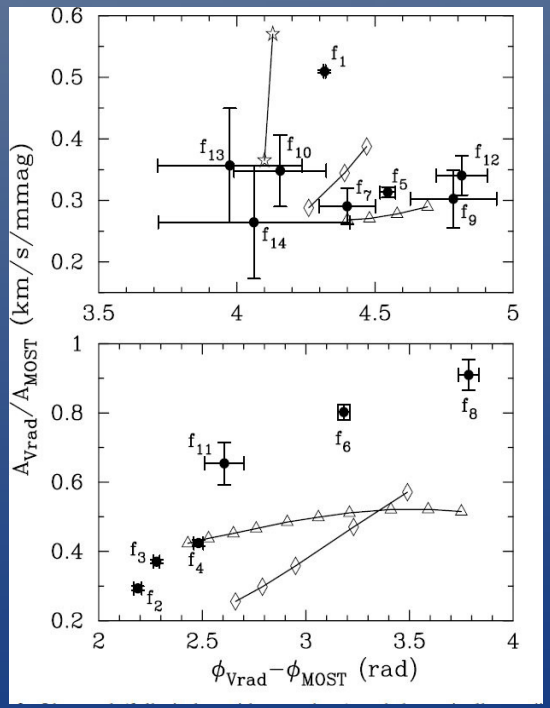
$$M_1 = 1.318 \pm 0.007\, M_o$$
$$M_2 = 1.287 \pm 0.007\, M_o$$
$$R_1 = 1.648 \pm 0.043\, R_o$$
$$R_2 = 1.511 \pm 0.049\, R_o$$
$$age \sim 3\, Gyr$$

Examples of the science results of PST1

THE ASTROPHYSICAL JOURNAL, 698:L56–L59, 2009 June 10 doi:10.1088/0004-637X/698/1/L56

ASTEROSEISMOLOGY OF HYBRID PULSATORS MADE POSSIBLE: SIMULTANEOUS *MOST* SPACE PHOTOMETRY AND GROUND-BASED SPECTROSCOPY OF γ PEG*

G. HANDLER[1], J. M. MATTHEWS[2], J. A. EATON[3], J. DASZYŃSKA-DASZKIEWICZ[4], R. KUSCHNIG[1], H. LEHMANN[5], E. RODRÍGUEZ[6], A. A. PAMYATNYKH[1,7,8], T. ZDRAVKOV[7], P. LENZ[1], V. COSTA[6], D. DÍAZ-FRAILE[6], A. SOTA[6], T. KWIATKOWSKI[9], A. SCHWARZENBERG-CZERNY[7], W. BORCZYK[9], W. DIMITROV[9], M. FAGAS[9], K. KAMIŃSKI[9], A. ROŻEK[9], F. VAN WYK[10], K. R. POLLARD[11], P. M. KILMARTIN[11], W. W. WEISS[1], D. B. GUENTHER[12], A. F. J. MOFFAT[13], S. M. RUCINSKI[14], D. D. SASSELOV[15], AND G. A. H. WALKER[16]



γ Peg:
- single star
- hybrid pulsator

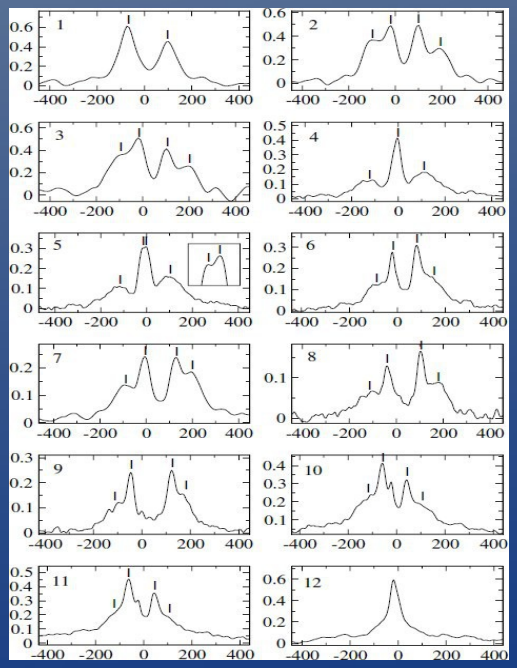
Examples of the science results of PST1

A&A 564, A26 (2014)
DOI: 10.1051/0004-6361/201321280

Astronomy & Astrophysics

Spectroscopy of HD 86222 – a quintuple system with an eclipsing component⋆,⋆⋆

W. Dimitrov[1], M. Fagas[1], K. Kamiński[1], D. Kolev[2], T. Kwiatkowski[1],
K. Bąkowska[1,3], A. Rożek[1,4], P. Bartczak[1], W. Borczyk[1], and A. Schwarzenberg-Czerny[1,3]



components of HD 86222:

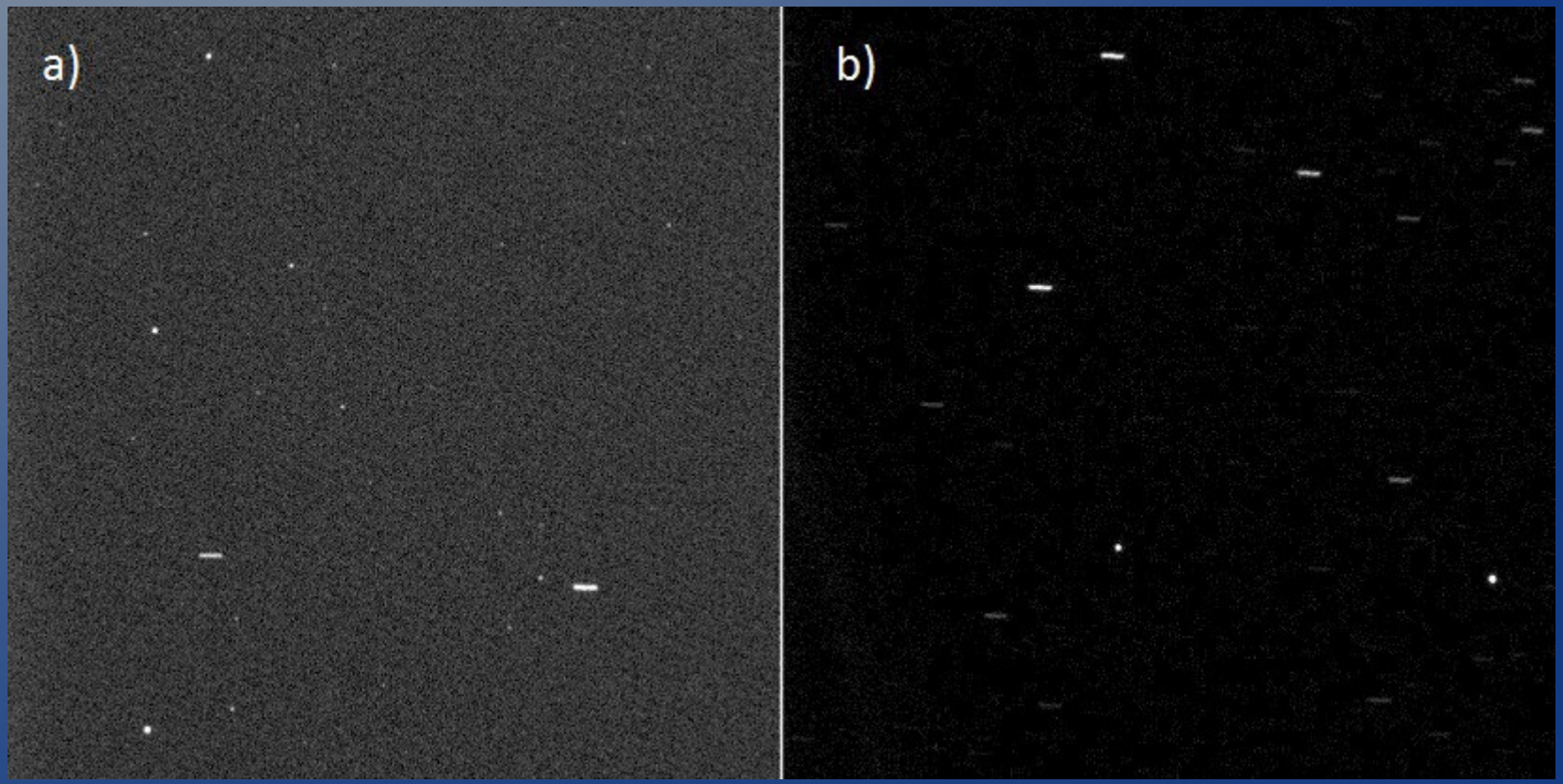
- A, B and C – already known
- A, B – binary systems
  - eclipsing pair
  - spectroscopic system

Poznan Spectroscopic Telescope 2/ Roman Baranowski Telescope (PST2/RBT)

- 0.7m primary mirror
- fibre-fed echelle spectrograph
- CCD camera
  - Andor iKon-L
    - back illuminated
    - 2k x 2k
  - Andor iXon3
    - back illuminated
    - 1k x 1k

Examples of the science results of PST2

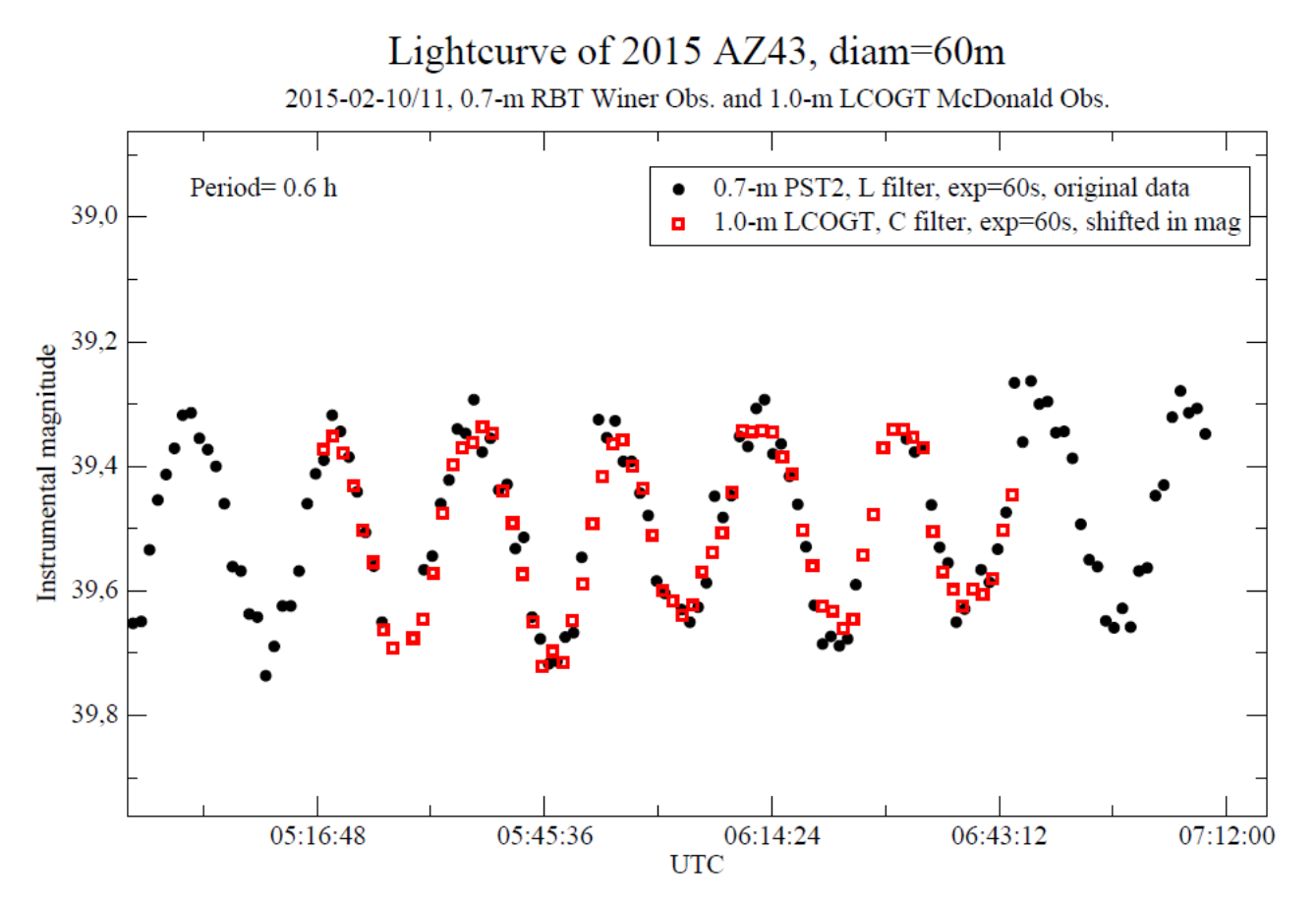
Geostationary satellite Directv 8 (28659)



star-tracking

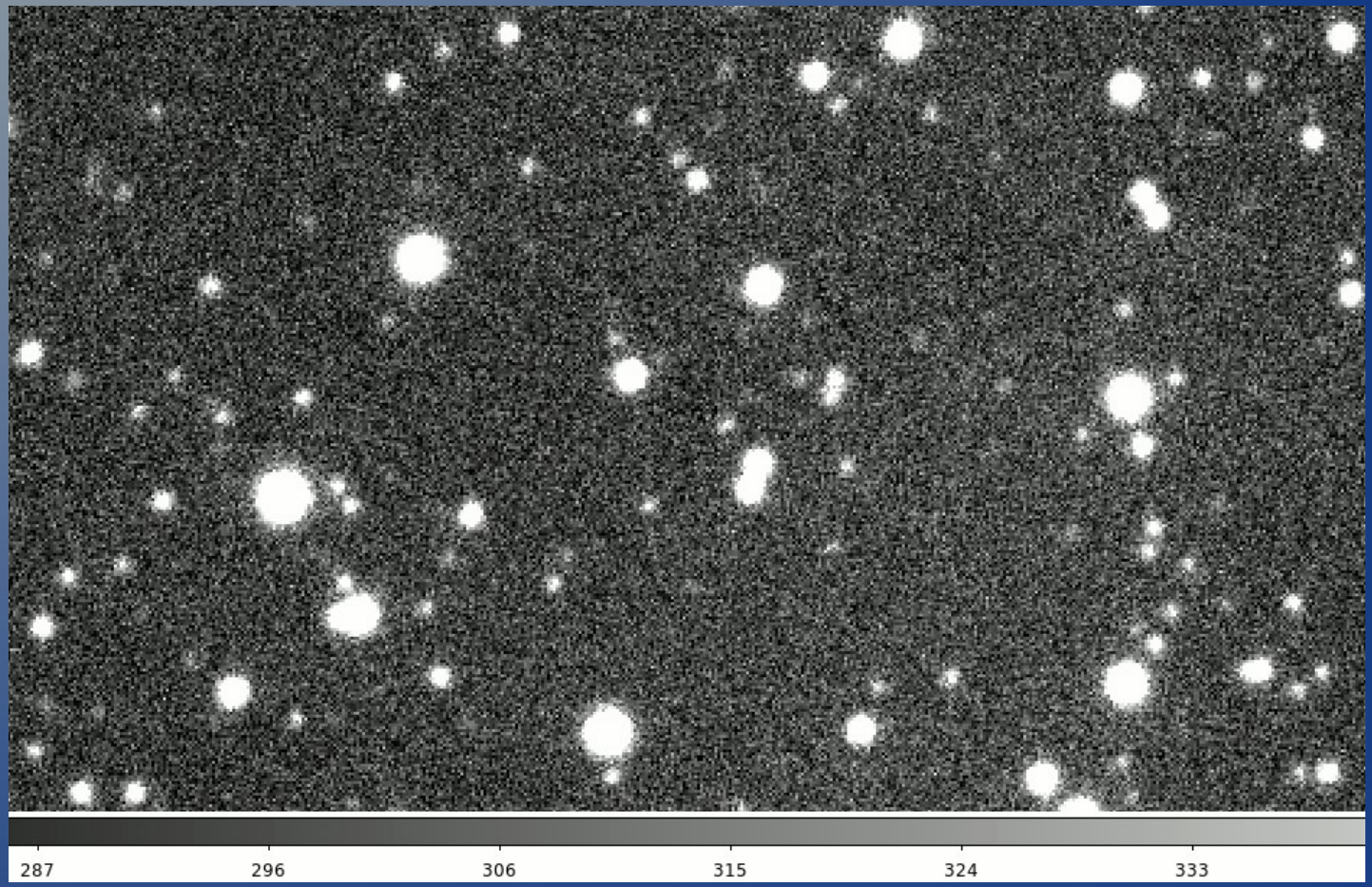
satellite-tracking

Examples of the science results of PST2



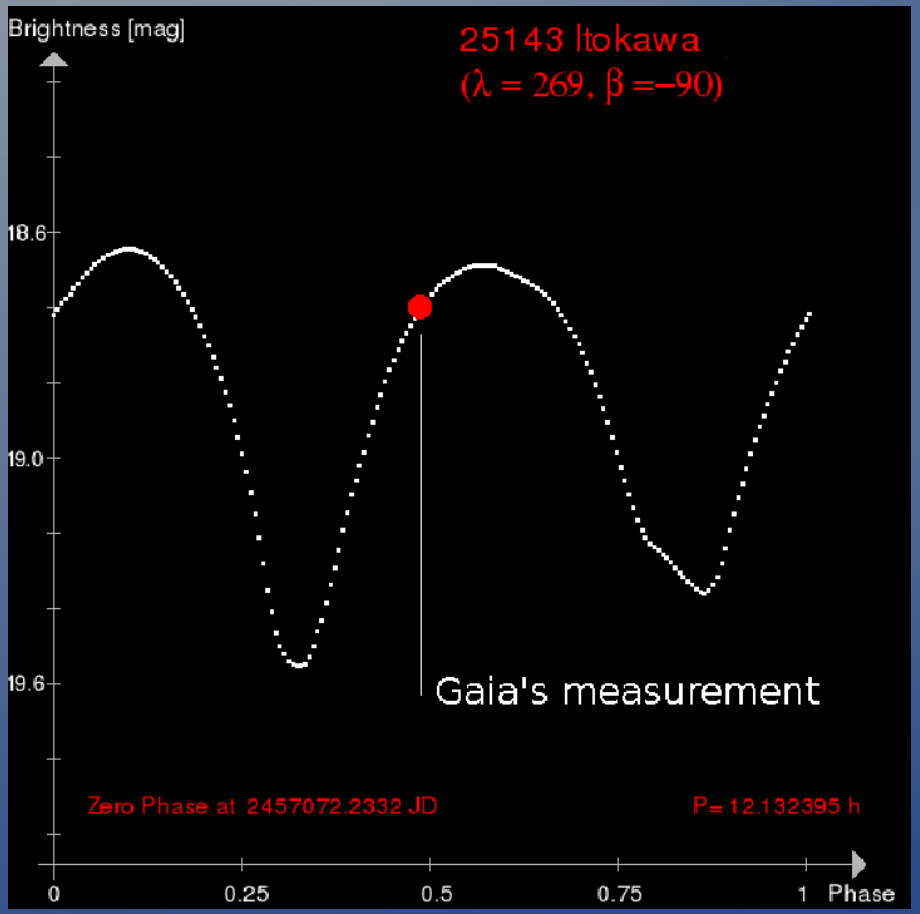
observations of near Earth asteroid
2015 AZ43

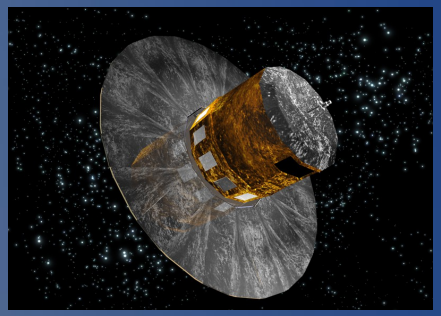
Examples of the science results of PST2



2014VP, 20mag, 20s C (Vaduvescu et al. 2015)

Follow-up observations





Credit: http://gaiaverse.eu/

Tkank you for attention!