Pro-Am collaboration in stellar astrophysics „Made in Czech Republic“

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Some historical fragments from two last centuries

Vojtěch Šafařík (1829-1902) – excellent variable star observer (about 20 000 visual estimates) – prof. of chemistry

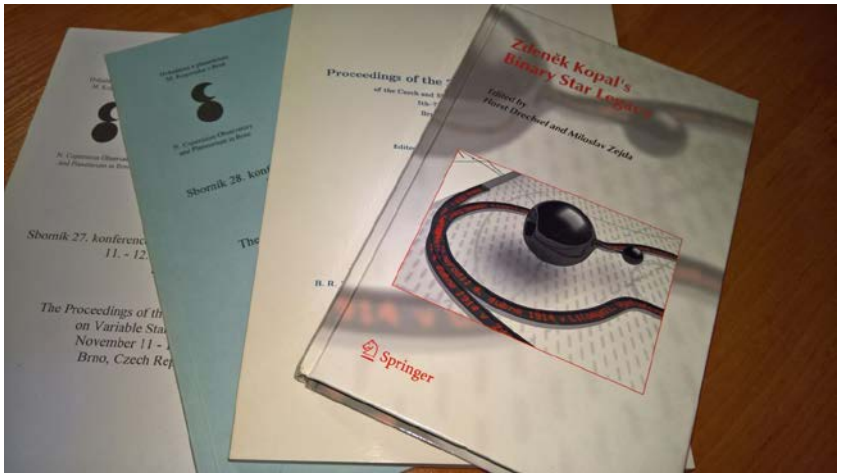
1918 – establishing of the Czech Astronomical Society (CAS)
1924 – Bohumil Hacar (prof. of math, astronomy) – first president of Variable Star Section of CAS
1930 - Zdeněk Kopal – 17 year old student - president of VSS

1960 – Oto Obůrka – prof. of math, founder and director of Brno public observatory and planetarium – re-establishing of VSS
new observational program for youth – short periodic variables, EBs => beginning of the great tradition of mainly amateur variable star astronomy in CZ

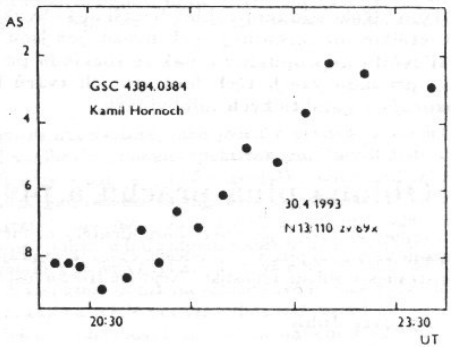
in the observational program – more than 1000 observers, mainly students who were taught how to obtain, process and publish data – future scientists, teachers, … - *the first example Pro-Am collaboration*

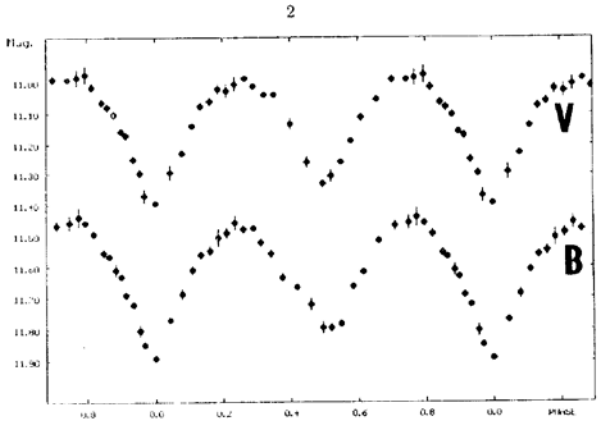
1990‘s – VSS broadened the activities and show usefulness of amateur work for professional

- VSS started to organise international conferences for stellar and variable star astronomers



- Discovery of new variables – e.g. ES UMa – recommended as comparison in world wide campaing of SN1993J (IAUC 5775)

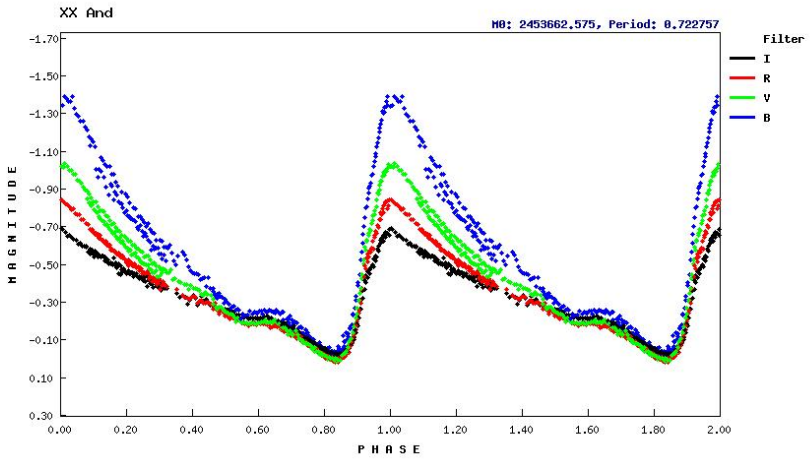


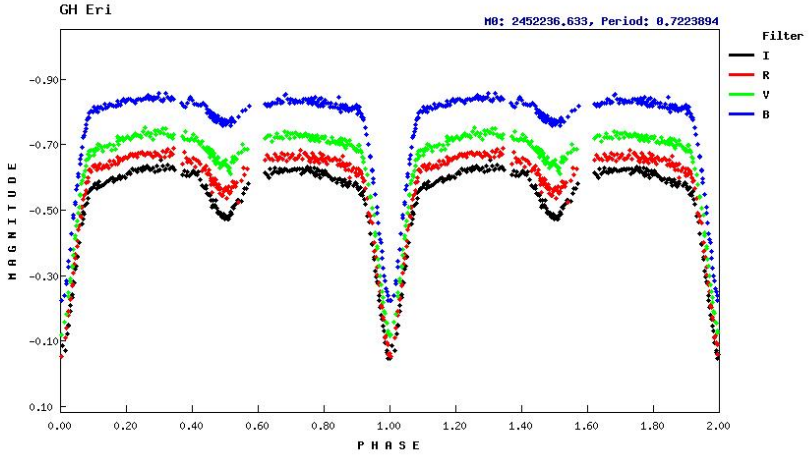


- New programes – not only EBs … - SR, Mira type, exoplanets …

21st century – CCD become widely available for amateurs – any **knowledgeable** amateur can offer data on the same quality than professional observatories

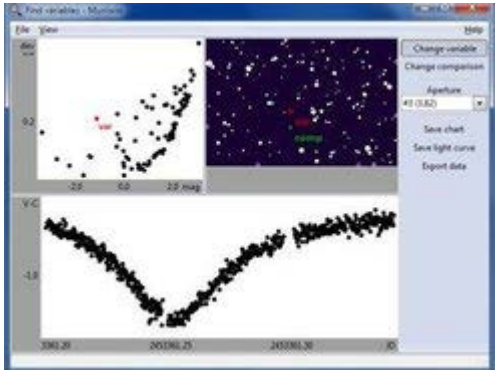
– advantage - no application for observational time
- possible long-time monitoring of objects
- possible campaings
- upon requests observations

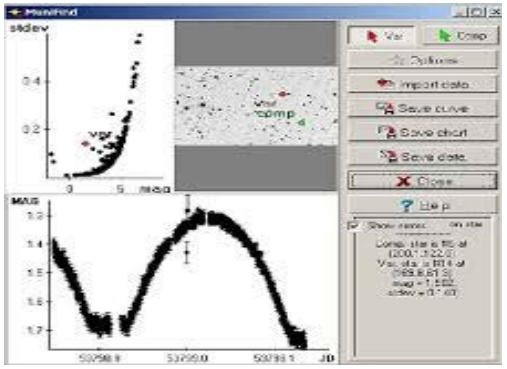




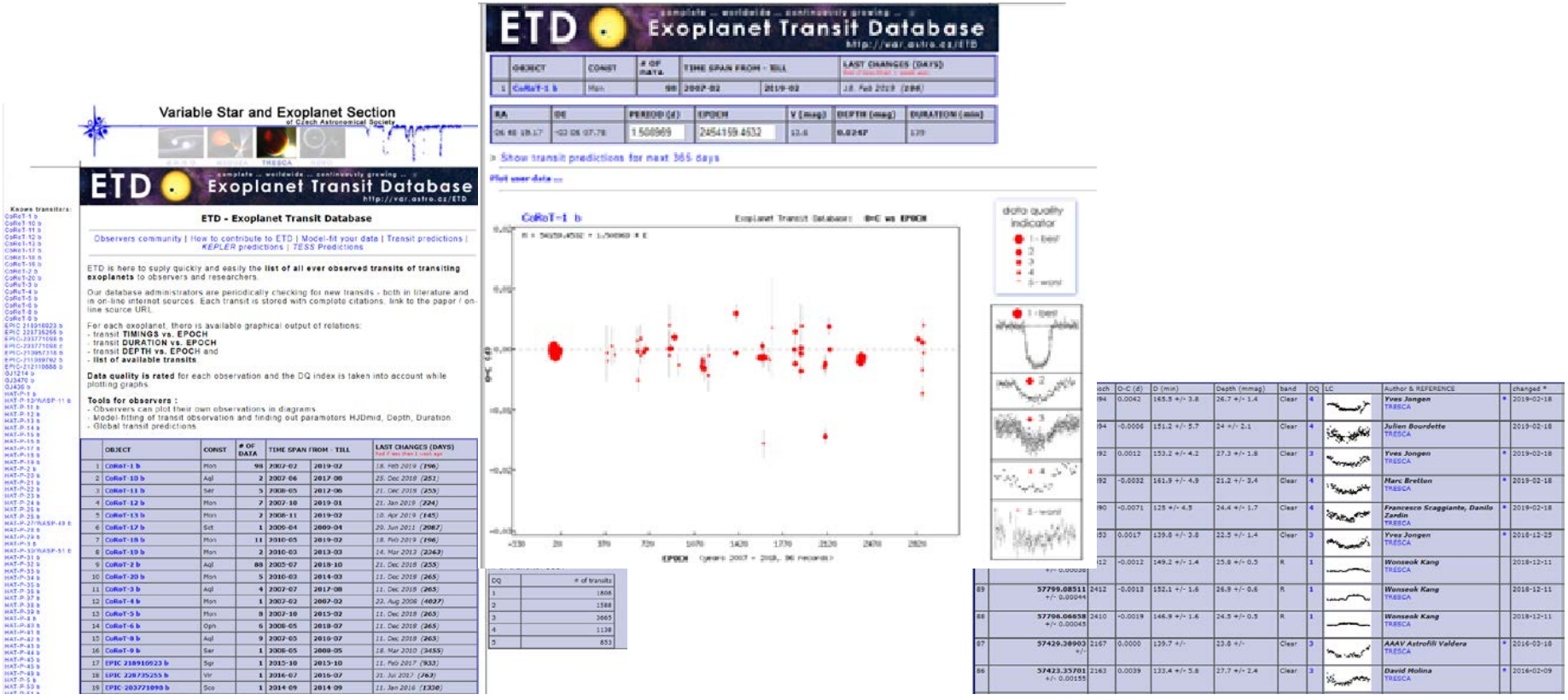
Necessary interaction Pro-Am – not only requests for data, also training!

- developments of tools for observers – e.g. C-Munipack for aperture photometry





- web service, databases – e.g. Exoplanet Transit Database



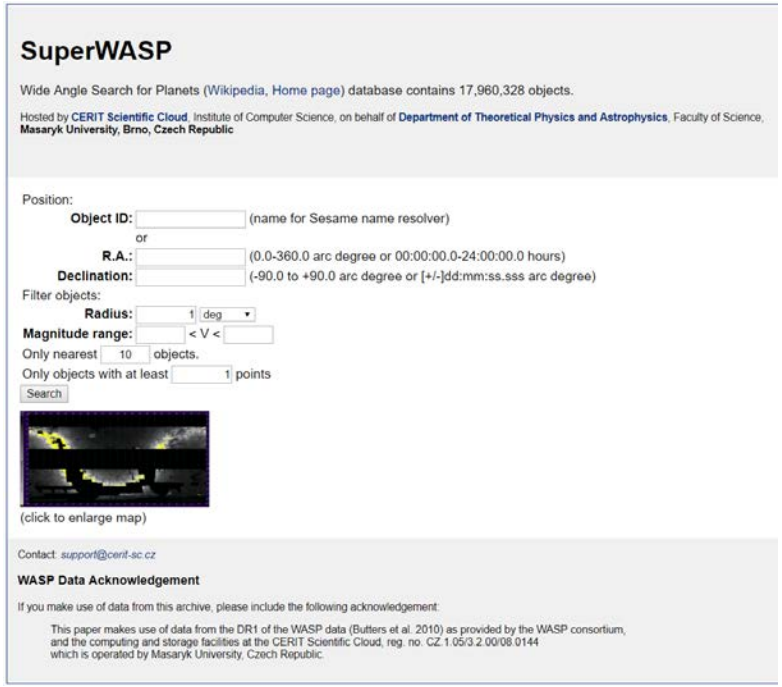
- journal – OEJV – more important after the end of IBVS

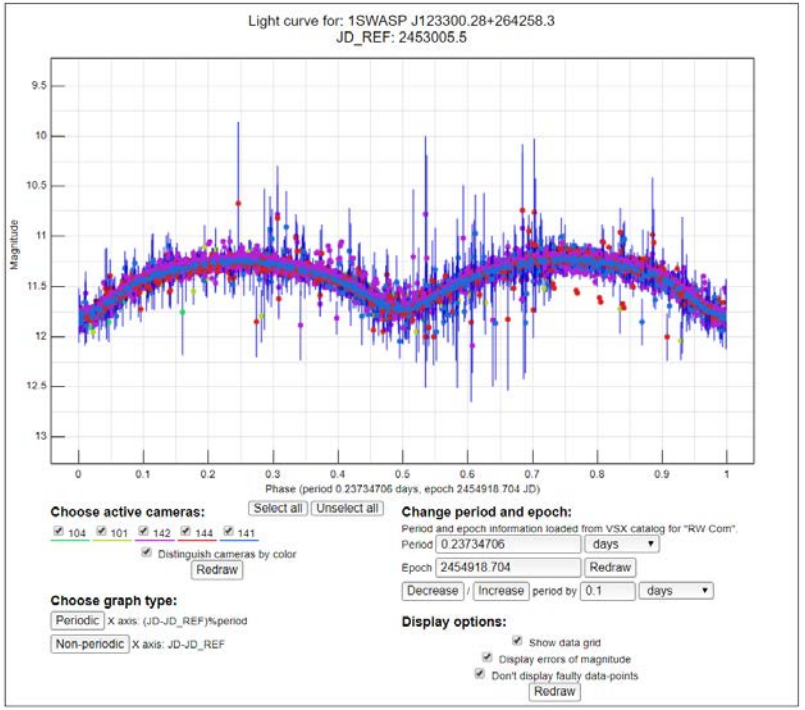
Astronomical amateur – astronomical professional

Astronomical professionals & amateurs – IT amateurs & professionals

IT students – bachelor, diploma thesis for astronomical praxis – the best ones continue as professionals

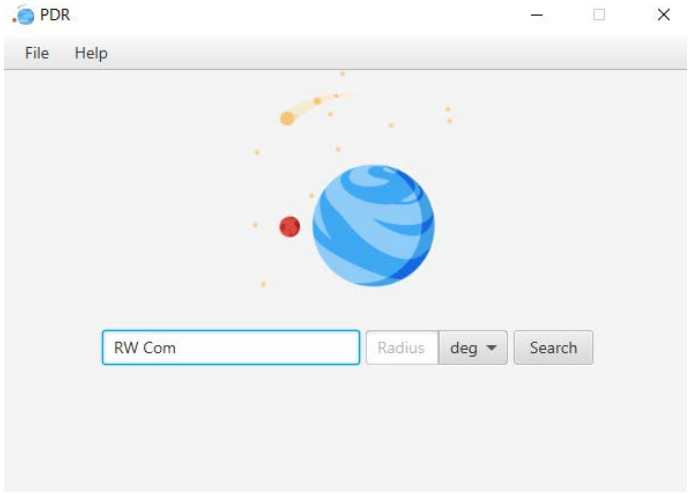
Mirror of SWASP DR1 - https://wasp.cerit-sc.cz

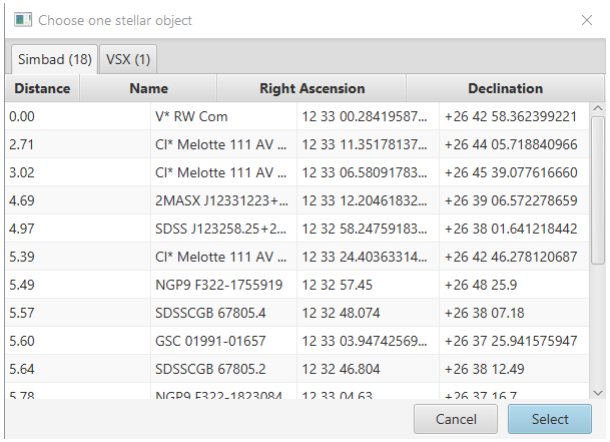


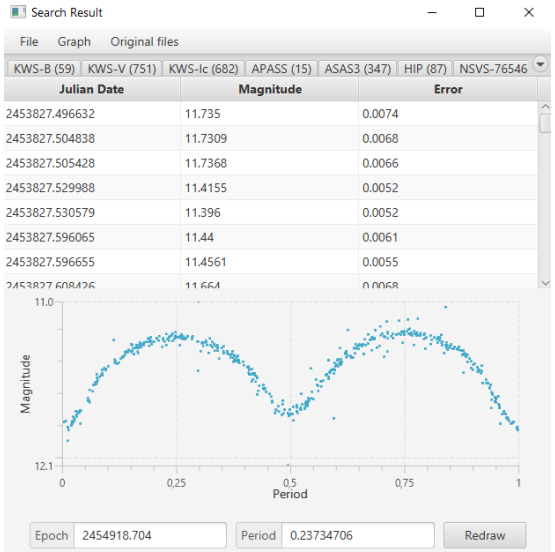


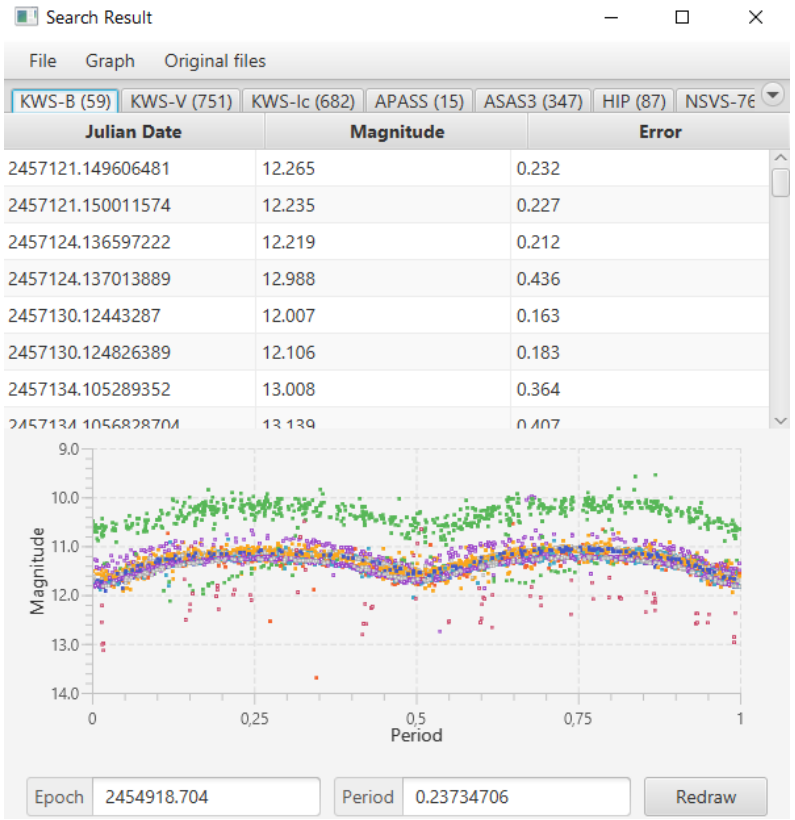
Photometric Data Retriever (PDR)

https://github.com/m-krajcovic/photometric-data-retriever









Archive of Measuremets of PERiodic variable stars

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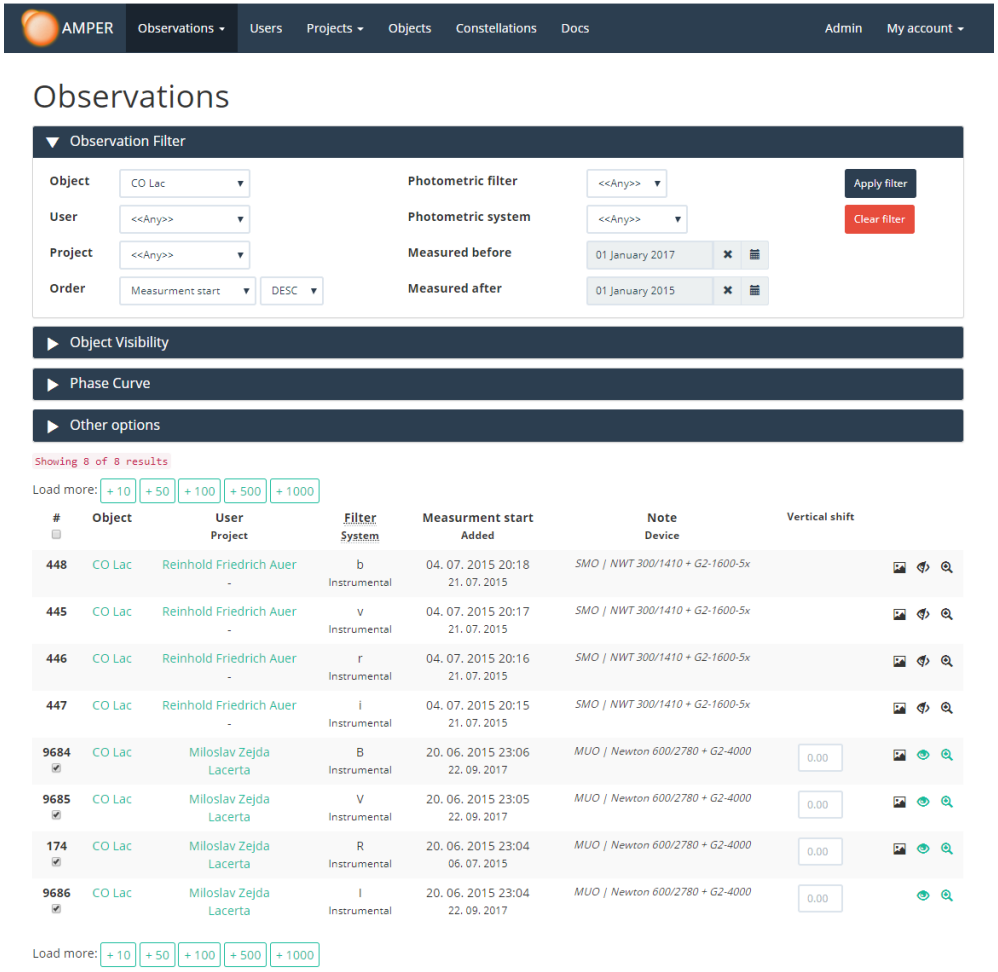
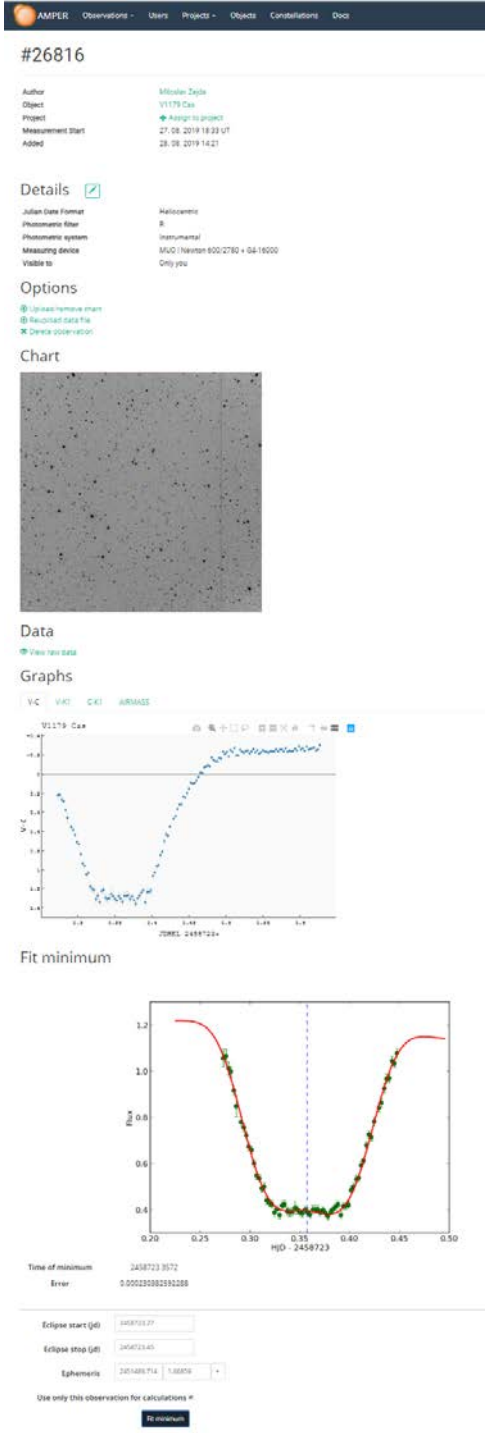
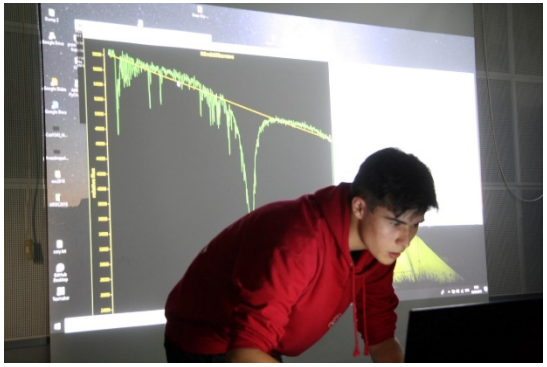




Pro-Am collaboration in the Czech Republic

- could be more intensive, however it is working!
- could be an inspiration for others
- it is mutually advantageous
- just do it!



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RNAAS RESEARCH NOTES OF THE AAS

Discovery of a New Possible Quadruple Star Consisting of Two Eclipsing Binaries with Periods Close to a 3:2 Ratio

Pavel Cagaš[1,2]

Research Notes of the AAS, Volume 3, Number 6

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V348 AND, AND V572 PER: BRIGHT TRIPLE SYSTEMS WITH ECCENTRIC ECLIPSING BINARIES

P. Zasche[1], R. Uhlař[2], P. Svoboda[3], J. Juryšek[4], D. Korčáková[1], M. Wolf[1], M. Šlechta[5], L. Kotková[5]
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ABSTRACT

The eclipsing binaries are still important objects for our understanding of the Universe. Especially these ones located within the more complex multiple systems can help us solving the problem of their origin and subsequent evolution of these higher-order multiples. Photometry and spectroscopy spanning over more than 25 years were used for the first complete analysis of the two bright triple systems, namely V348 And and V572 Per. The light curves in photometric filters were combined together with the radial velocities and analysed simulta-

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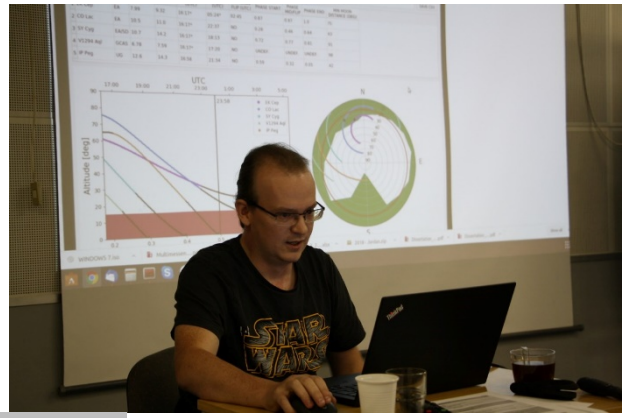

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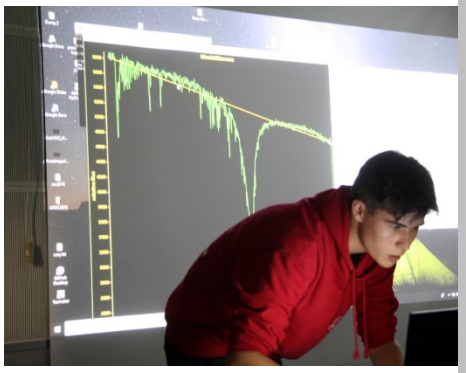
Thanks for your attention!



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