IMPORTANCE OF CZECH AMATEUER SOCIETY OF OBSERVERS OF VARIABLE STARS & EXOPLANETS

KATEŘINA HOŇKOVÁ

EUROPEAN VARIABLE STAR MEETING 2019, GRIMBERGEN, 14TH SEP 2019

CZECH ASTRONOMICAL SOCIETY

Traditional and largest society of astronomers (members) in the Czech Republic (last year we celebrated 100th anniversary)

~ 700 members in 9 special sections and 10 geographic branches

In head and committee: mostly profesionnal astronomers

Amateur sky tour	Astronautic section	Cosmological section
Section for youth	Section of equipment and optics	Solar section
Section for interplanetary mass	Eclipsing section	Variable star and exoplanet

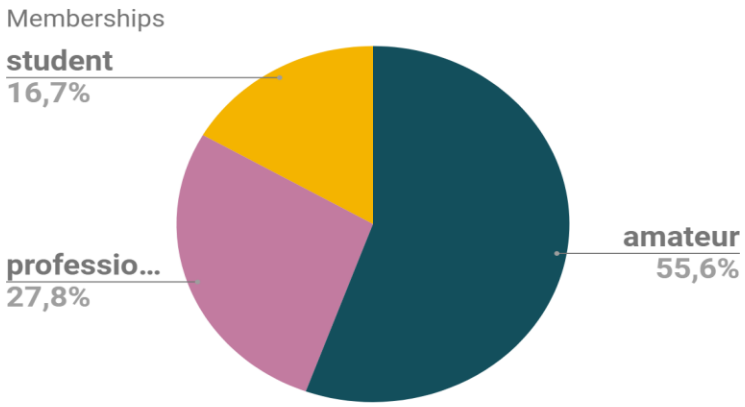
ABOUT SOCIETY

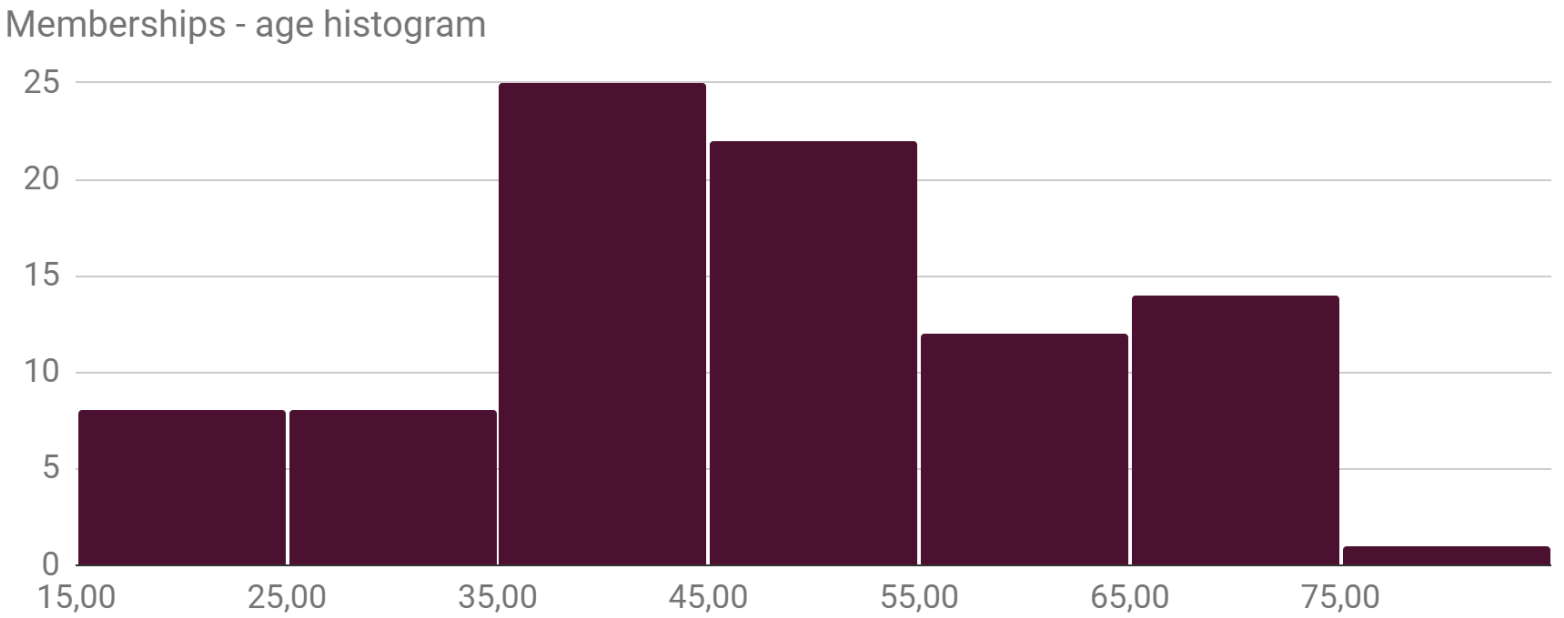
Variable Star and Exoplanet Section of Czech Astronomical Society was found in 1924 (as Variable Star Section of CAS). Since the time, it's an organisation coordinating research and observing of variable stars and exoplanet in Czech republic. Members of our Section are mostly advanced amateur and professional astronomers.

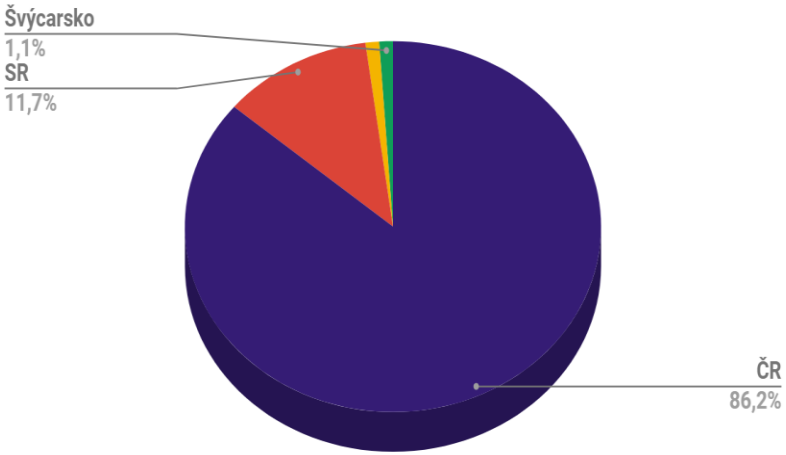
Var2.astro.cz

ABOUT SOCIETY

- Observing variable stars and exoplanets
- Tutorials of data processing and observing (usually in Czech)
- Regular meetings (conferences, summer schools or workshops)
- YouTube channel with presentation from these meetings
- Publication - popular and also scientific - OEJV
- Monitoring the candidates to observe (variable stars and exoplanets)



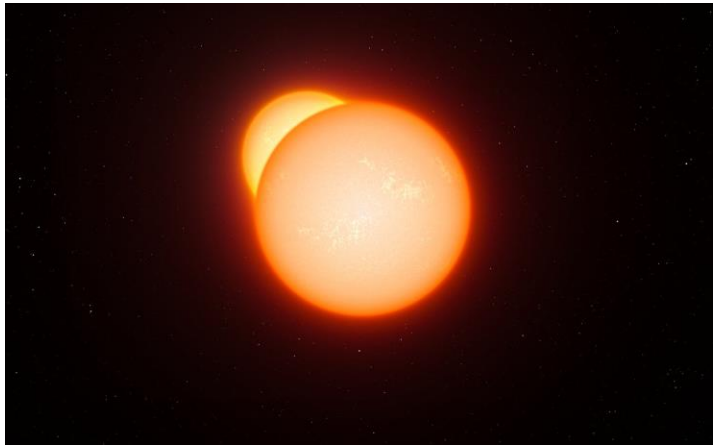




MEMBERSHIPS

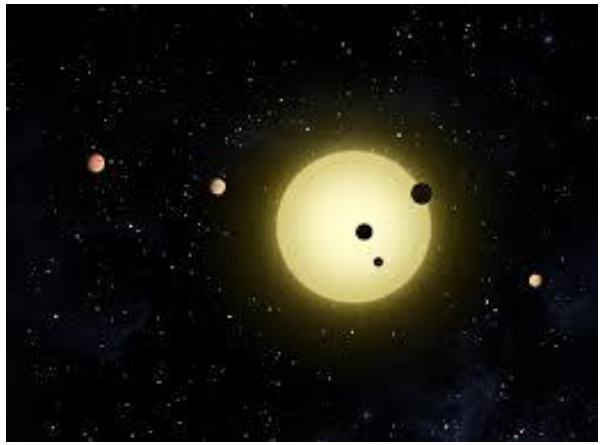
VSES - 99 MEMBERS (ONLY 40% ACTIVE!), CAS – 700 MEMBERS

VSES - 6 €, CAS - 20 €



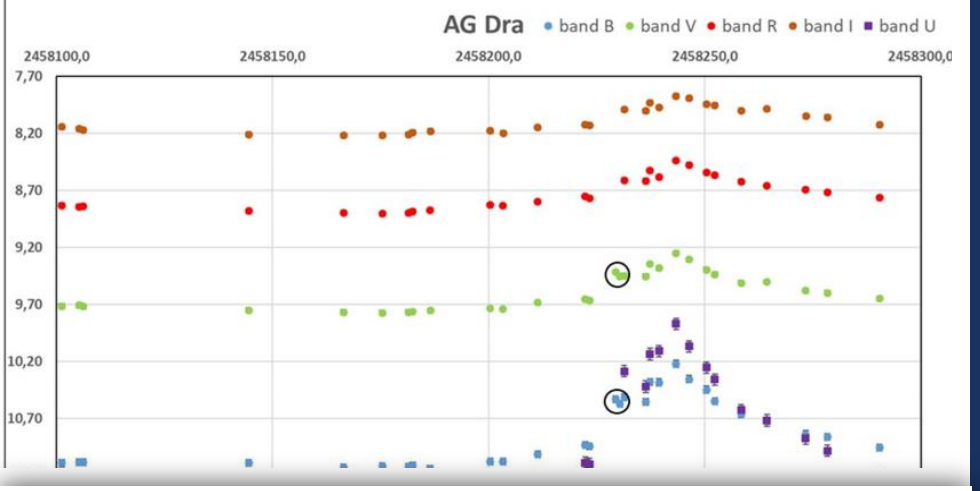
Eclipsing binaries
(B.R.N.O.)

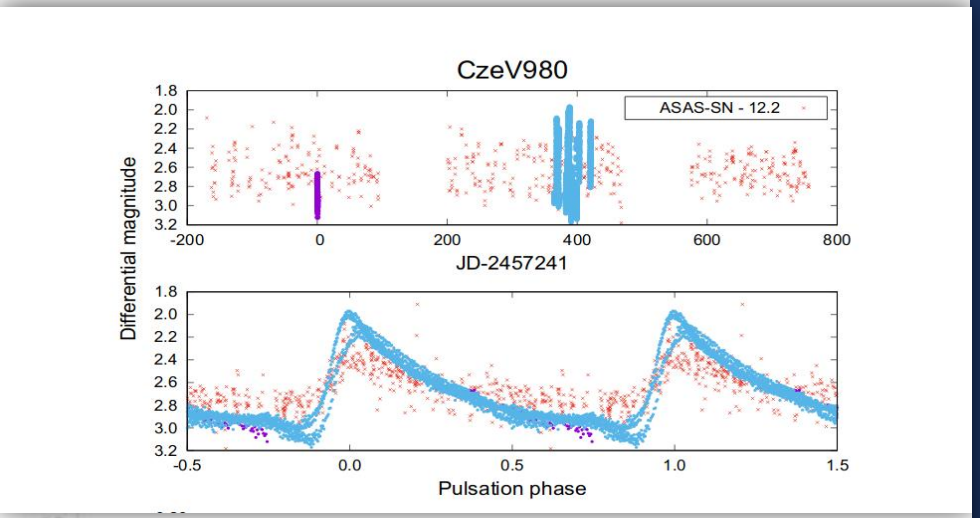
Long-term pulsating
variable stars (MEDÚZA)

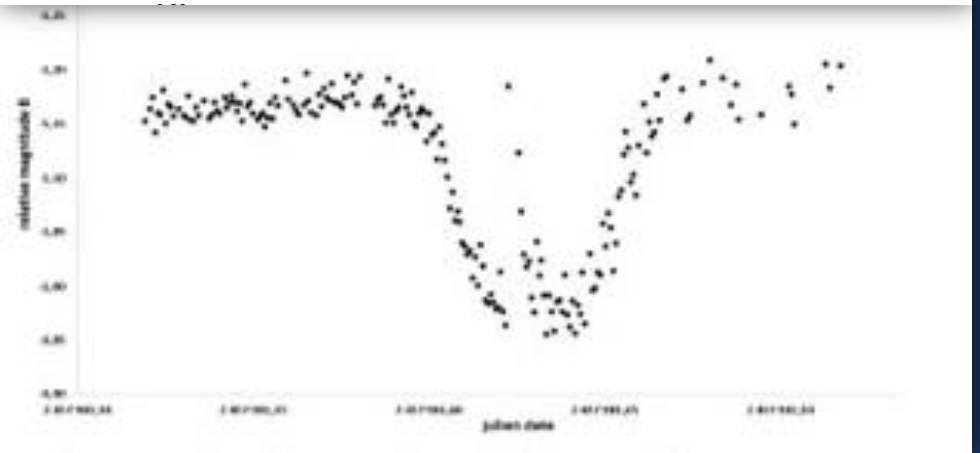


Transits of exoplanets
(TRESCA/ETD)

OBSERVING PROJECTS OF VSES CAS







PUBLISHING RESULTS OF 2018

SYMBIOTIC STARS

- M. Vrašťák, R. Gális: Observing spectri of symbiotic star AG Dra in flare on Spring seminar in Ondrejov observatory CAS. *ATEL*.

CzeV discovered stars – RR Lyrae (Blazhko effect)

- M. Skarka, P. Cagaš 2018: Discovery of the Blazhko effect in V1065 Aql, CzeV980, FI Sge and CzeV1242. *IBVS*.

ERUPTIVE ECLIPSING BINARY

- Šmelcer L. et al, 2018: Eruption activity of a new eclipsing binary TYC 5112-252-1, *OEJV*.

IMPORTANT HISTORIC POINTS IN VSES CAS

ETD

CzeV catalogue

O-C gate

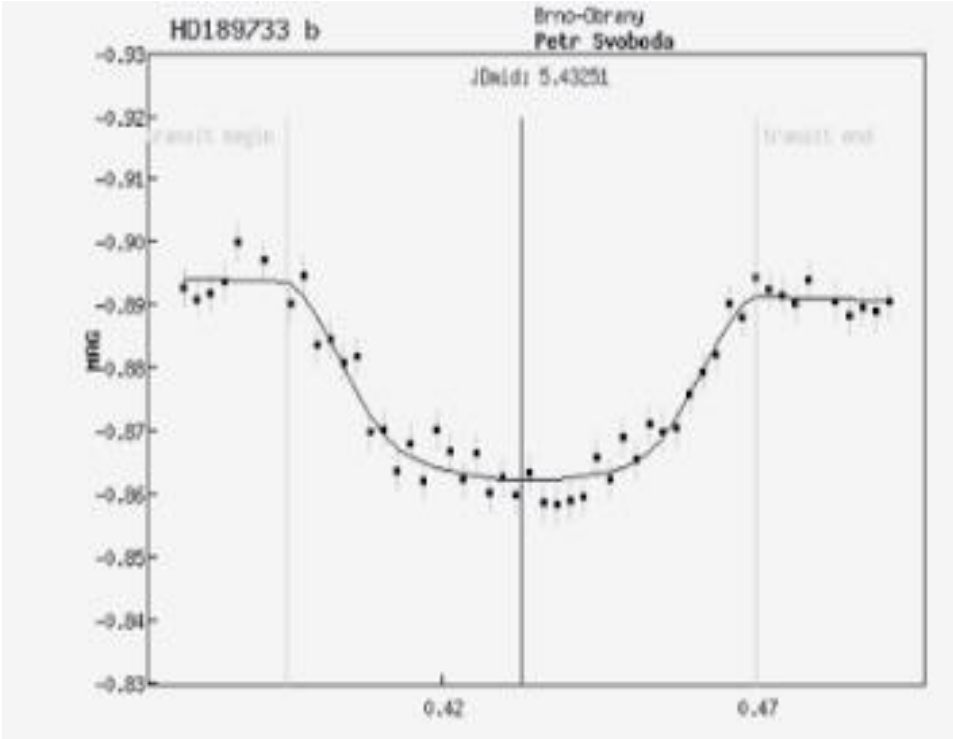
ETD … complete … worldwide … continuously growing … Exoplanet Transit Database

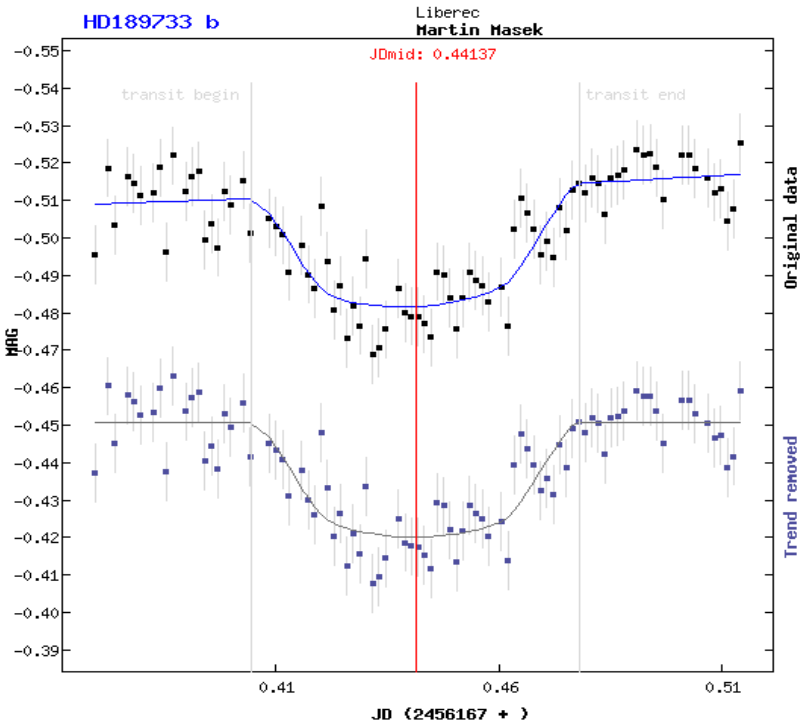
http://var.astro.cz/ETD

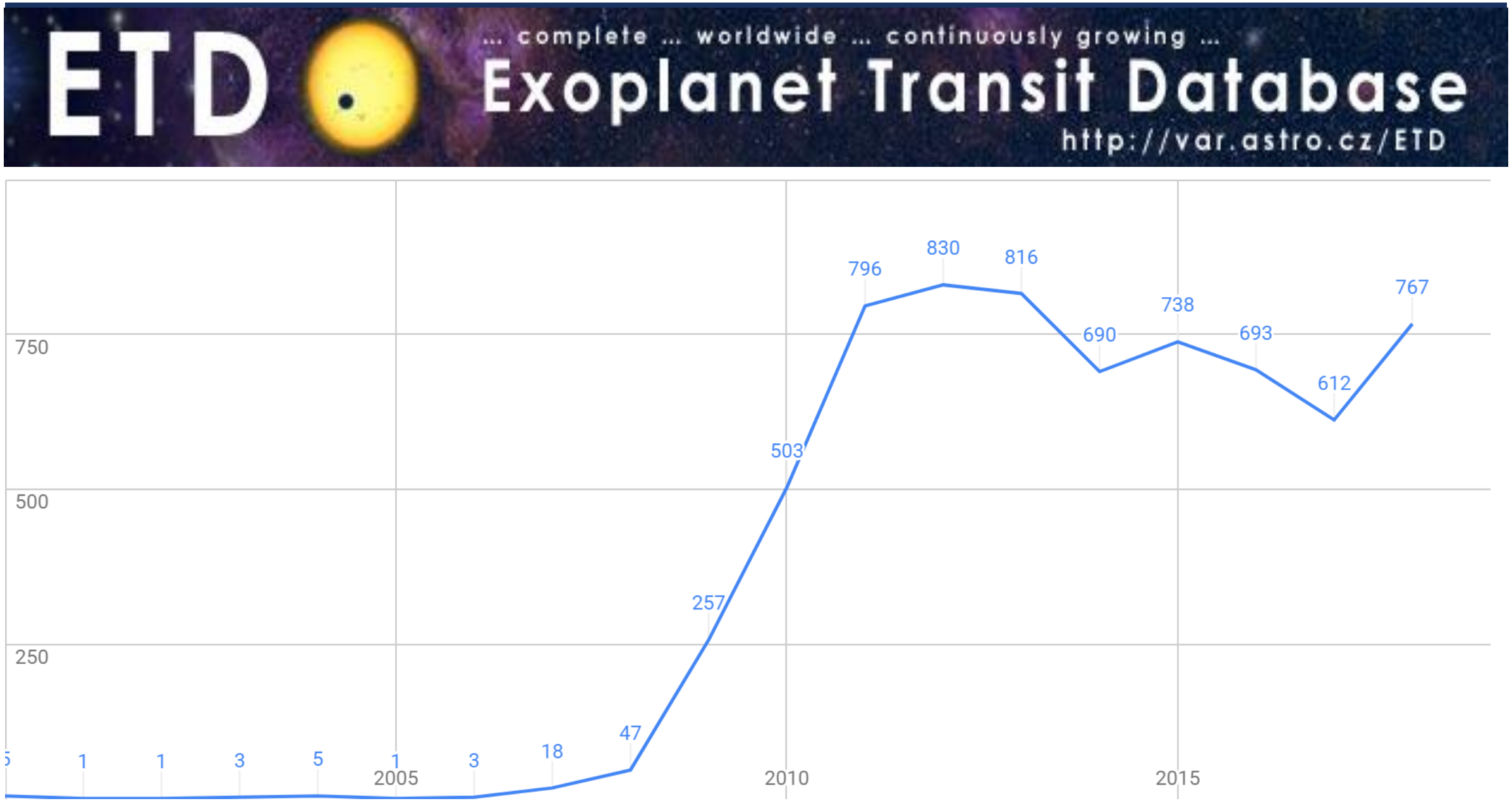
Luboš Brát

Start in 2008 – 25 exoplanets were known, 22 transits observed by Czech astronomers in 2008!

Petr Svoboda in 2008 observed the exoplanet transit with 3.5cm telescope. Observation with DSLR – Canon + Sonnar 180mmM. Masek






ETD
... complete ... worldwide ... continuously growing ...
Exoplanet Transit Database
http://var.astro.cz/ETD
750
500
250
5
1
1
3
5
1
3
18
47
257
503
796
830
816
690
738
693
612
767
2005
2010
2015

7156 transits
1031 observers of group of observers

All prediction
Kepler prediction
TESS prediction

Only ¬ 3 active Czech-Slovak observers :(

Rasteau observatory	225
UAI B10 Baronnies Provençales Observatory	123
Sedlčany	83
Observatori Albany;	78
Gruppo Astrofili Salese Galileo Galilei S.M di Sal...	36
Ribot Observatory	34
Taurus Hill Observatory (A95), Varkaus, Finland	29
MAS MOIXA MPC C86	22

CZEV CATALOGUE

Seznam všech objektů v CzeV katalogu

> Přidat nový objekt

CzeV ...	Shv	Typ	Max	Min	RA (2000)	DE (2000)	Epocha	Perioda (d)	Objevil
1788	Cas	EA	13.62	13.76	004813.42	+610350.3	57975.9983000...	4.7582	Zbyněk Henzl
1787	Cas	EW	12.59	12.66	004011.43	+610348.1	57395.7442999...	0.3208464	Zbyněk Henzl
1786	Cas	EA	12.42	12.6	004038.28	+614646.5	57652.8990000...	3.87663	Zbyněk Henzl
1785	Cas	DSCT	10.87	10.91	003940.37	+615531.7	58029.8325999...	0.08871351	Zbyněk Henzl
1784	Cas	DSCT	10.86	10.92	004823.25	+621732.6	58078.8845999...	0.171038	Zbyněk Henzl
1783	Cas	DSCT	10.75	10.79	005057.19	+621710.4	58380.8051999...	0.1328826	Zbyněk Henzl
1782	Cep	DSCT	13.78	13.91	233819.61	+640715.31	58726.4696999...	0.1763683	Martin Mašek, Michal Posypanka, Vladimír Jakimčík
1781	Cas	EA	13.11	13.34	005317.83	+600941.7	57176.0931000...	10.3082	Zbyněk Henzl
1780	Cas	EA	10.8	10.91	005005.89	+605949.9	57696.9528000...	1.38577	Zbyněk Henzl
1779	Cas	EA	14.63	14.88	004839.29	+612200.5	57587.0506000...	4.40138	Zbyněk Henzl
1778	Cas	EA	14.39	15.04	004432.06	+605950.8	57693.9415000...	4.3042	Zbyněk Henzl
1777	Cas	DSCT	15.82	16.06	005306.17	+604344.0	57324.7066000...	0.094799	Zbyněk Henzl
1776	Cas	EW	15.97	16.45	004452.02	+603641.9	57230.0967000...	0.39977	Zbyněk Henzl
1775	Cas	EW	14.95	15.24	004503.85	+602236.4	57231.9582000...	0.414551	Zbyněk Henzl
1774	Cas	EW	15.54	15.94	004843.86	+603737.0	58066.9216	0.392305	Zbyněk Henzl
1773	Cas	EA	14.53	14.96	005718.48	+600952.3	57410.7116999...	1.40045	Zbyněk Henzl
1772	Cas	EW	14.81	14.93	005742.83	+604907.1	58403.4290000...	0.3087	Zbyněk Henzl
1771	Cas	EA	13.45	13.62	005127.95	+613358.7	58110.7541999...	3.0466	Zbyněk Henzl
1770	Cas	EW	13.15	13.22	005354.31	+602629.2	58318.9852999...	0.25728	Zbyněk Henzl
1769	Lac	DSCT	9.44	0	225618.931416	+385528.23600			Walter F.
1768	Cyg	DSCT	12.12	12.2	200140.4496	+370201.860	57069.7529620...	0.177128	Walter F.
1767	Cyg	EW	14.35	14.48	213708.28	+300316.80	58662.6189999...	0.41905	Martin Tylšar, Martin Mašek, Vojtěch Tlustý, Jakub Hadač
1766	Cyg	DSCT	13.52	13.62	213906.88	+302820.07	58001.8500000...	0.092684	Martin Tylšar, Martin Mašek, Vojtěch Tlustý,

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CZEV – THE CZECH VARIABLE STAR CATALOGUE

Skarka, M.[1,2], Mašek, M.[2,3], Brát, L.[2,4], Cagaš, Pa.[2,5], Juryšek, J.[2,3,6], Hoňková, K.[2], Zejda, M.[2,7], Šmelcer, L.[2,41], Jelínek, M.[8], Lomoz, F.[2,9], Tylšar, M.[15], Trnka, J.[2,10], Pejcha, O.[2,11], Pintr, P.[2,12], Lehký, M.[2,13], Janík, J.[7], Červinka, L.[14], Přibík, V.[2,16], Motl, D.[17], Walter, F.[2,18], Zasche, P.[6], Koss, K.[38], Hájek, P.[19], Bílek, F.[2,20], Liška, J.[2,21], Kučáková, H.[2,6,8,22,26], Bodnár, F.[23], Beránek, J.[23], Šafář, J.[17], Moudrá, M.[18], Oršulák, M.[23], Pintr, M.[12], Sobotka, P.[2], Dřevěný, R.[2,24], Juráňová, A.[7], Polák, J.[25], Polster, J.[7], Onderková, K.[26], Smolka, M.[2,27], Auer, R. F.[2,28], Kocián, R.[2,26], Hladík, B.[2,29], Cagaš, Pe.[30], Greš, A.[31], Müller, D.[32], Čapková, H.[13], Kyselý, J.[33], Hornoch, K.[8], Truparová, K.[26], Timko, L.[34], Brož, M.[6], Bílek, M.[6,8], Šebela, P.[35], Hanžl, D.[36], Žampachová, E.[7], Secká, J.[13], Pravec, P.[8], Mrňák, P.[13], Svoboda, P.[37], Ehrenberger, R.[2], Novotný, F.[8,39], Poddaný, S.[2,18], Prudil, Z.[2,40], Kuchťák, B.[2], Štegner, D.[2,7]

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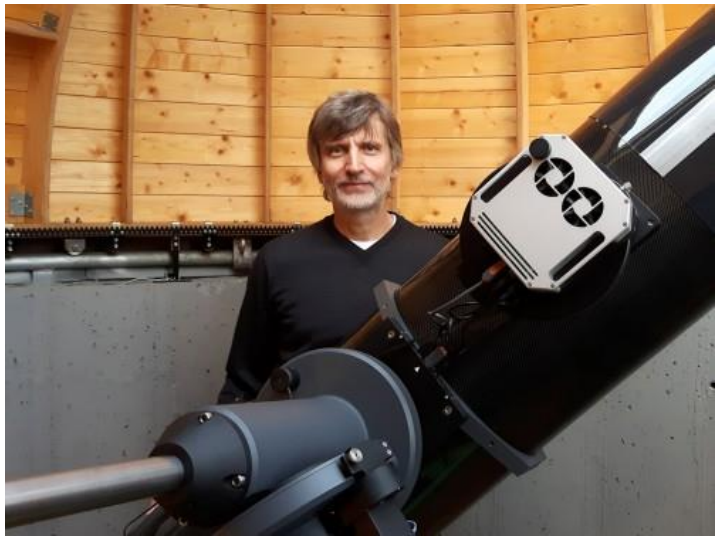
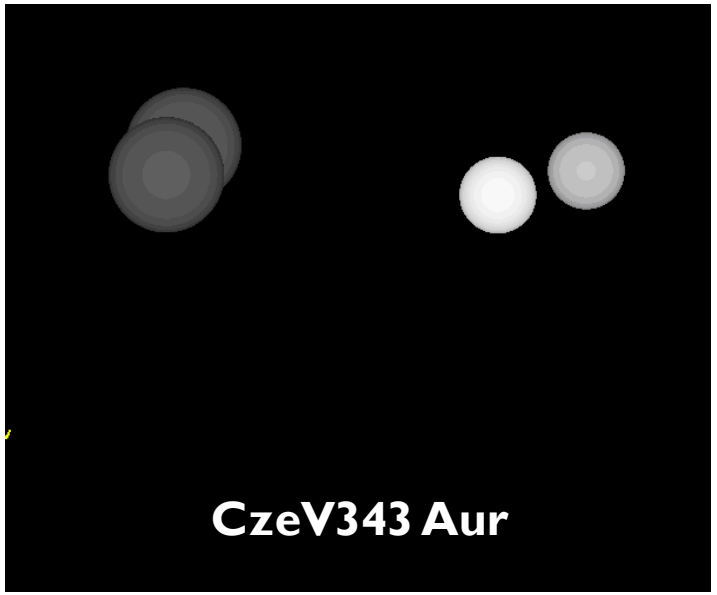
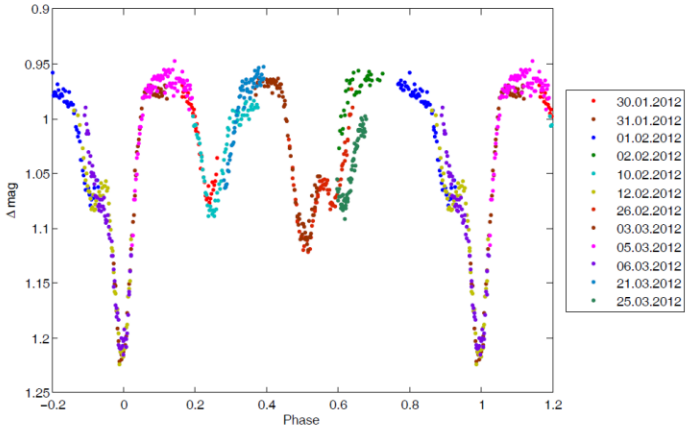
Pavel Cagas





CzeV343 Aur

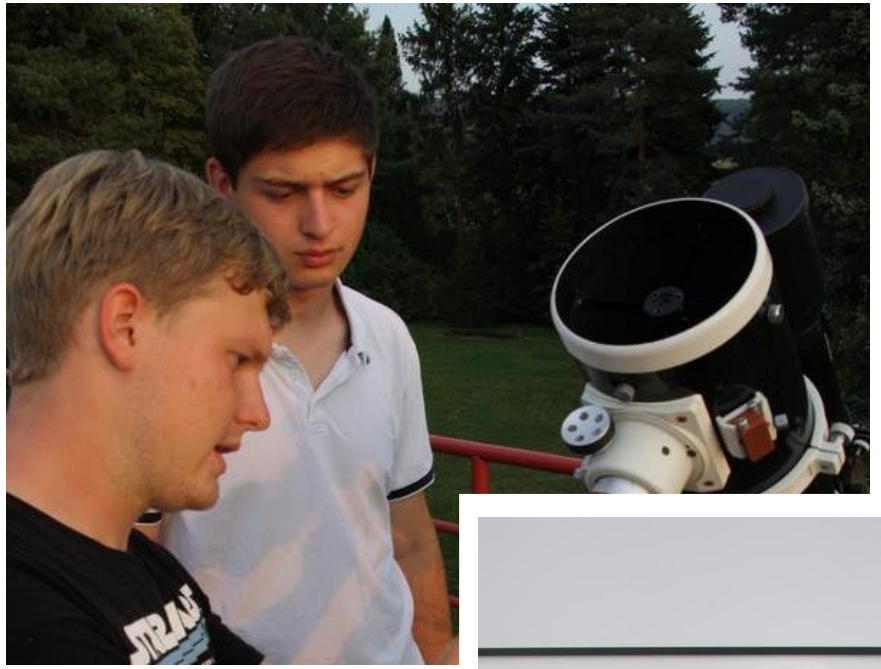


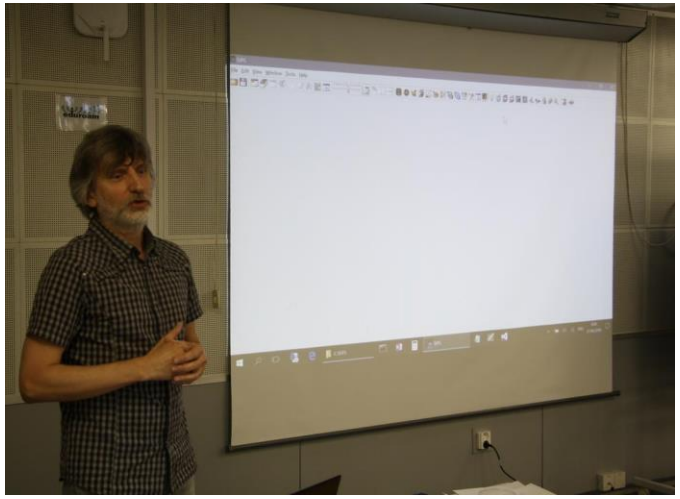
CZEV CATALOGUE (> 1700 NEW VARIABLE STARS)

CzeV stats

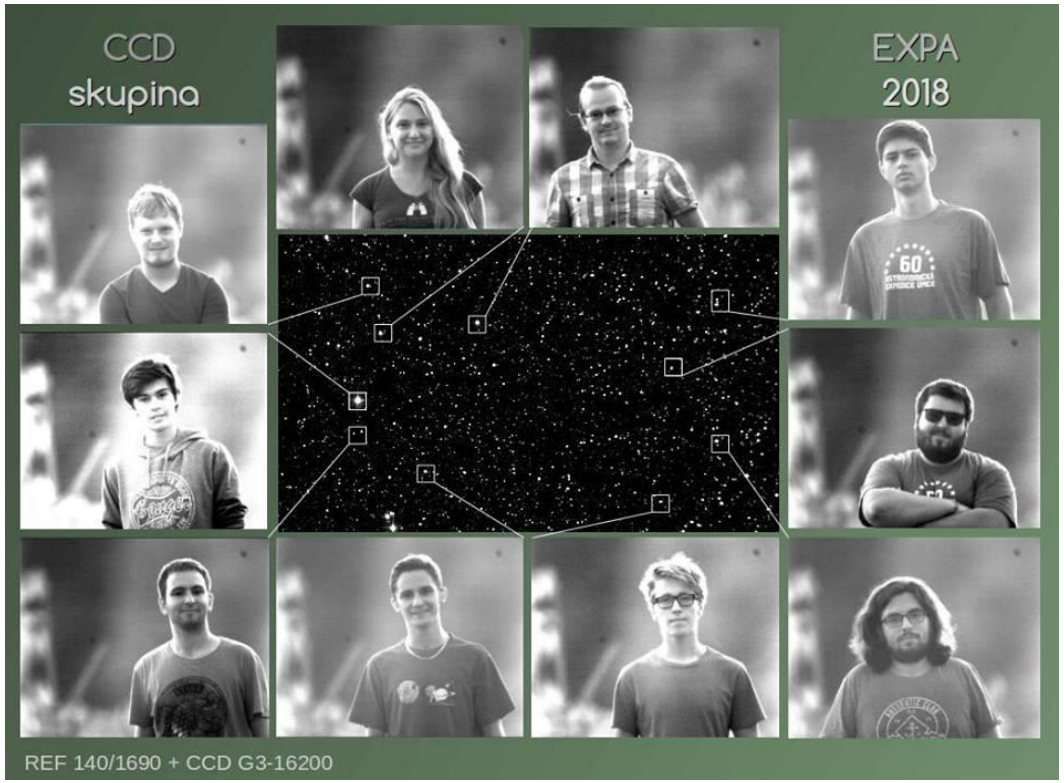
VARIABLE STAR MEETINGS AND WORKSHOPS

- Spring workshops
- Summer school for observers
- International conference on variable star





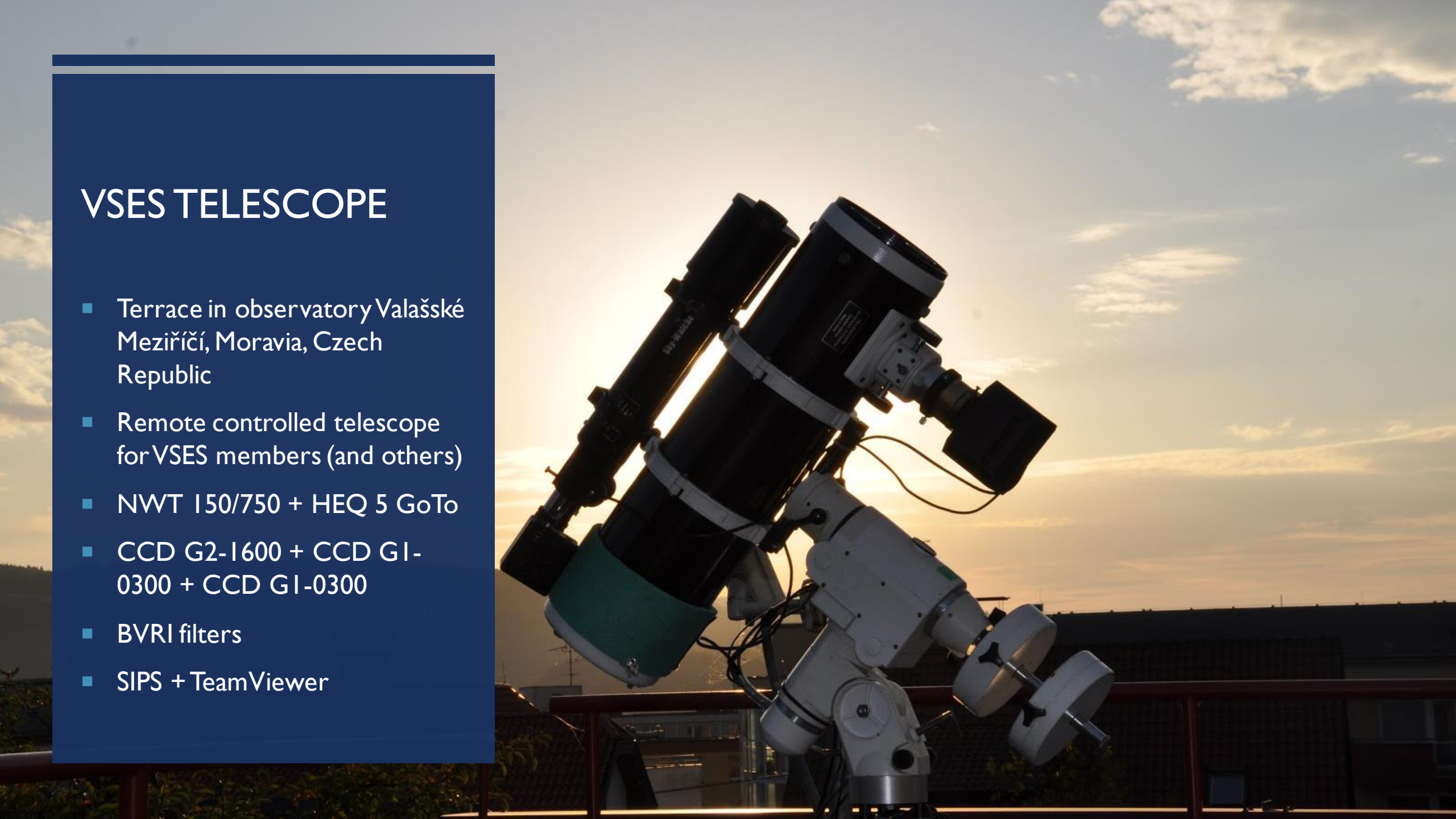
ASTRONOMICAL EXPEDITION IN UPICE OBSERVATORY



- Two-weeks summer camp in Upice observatory (near Giant Mountains National Park) for young people (15-26 age).
- Systematic observing DSO, Moon, meteors and asteroids, astrophotography, radioastronomy and CCD measuring.
- Intensive education in observing of variable stars and exoplanets, data processing and data publication.
- Four semi-professional set of equiptment (cooled CCD cameras, GoTo mounts, 150-300 mm telescopes) for in situ observation.
- Remote observation by VSES telescope or robotic telescope in Argentina, Chile etc.

VSES TELESCOPE

- Terrace in observatory Valašské Meziříčí, Moravia, Czech Republic
- Remote controlled telescope for VSES members (and others)
- NWT 150/750 + HEQ 5 GoTo
- CCD G2-1600 + CCD G1-0300 + CCD G1-0300
- BVRI filters
- SIPS + TeamViewer



NEW HOPE? SEEMS TO SOON!

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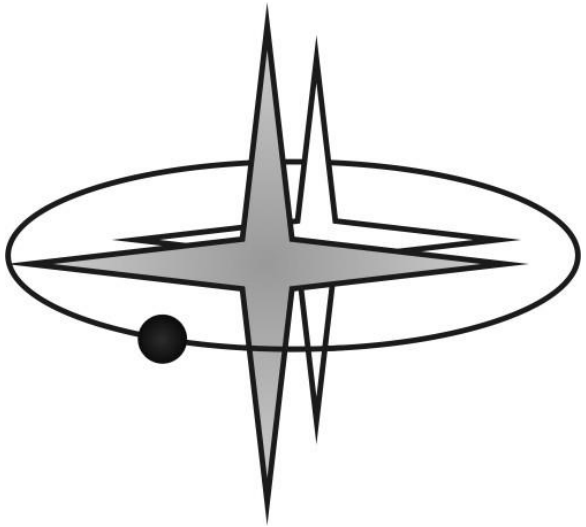

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THANK YOU FOR YOUR ATTENTION

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