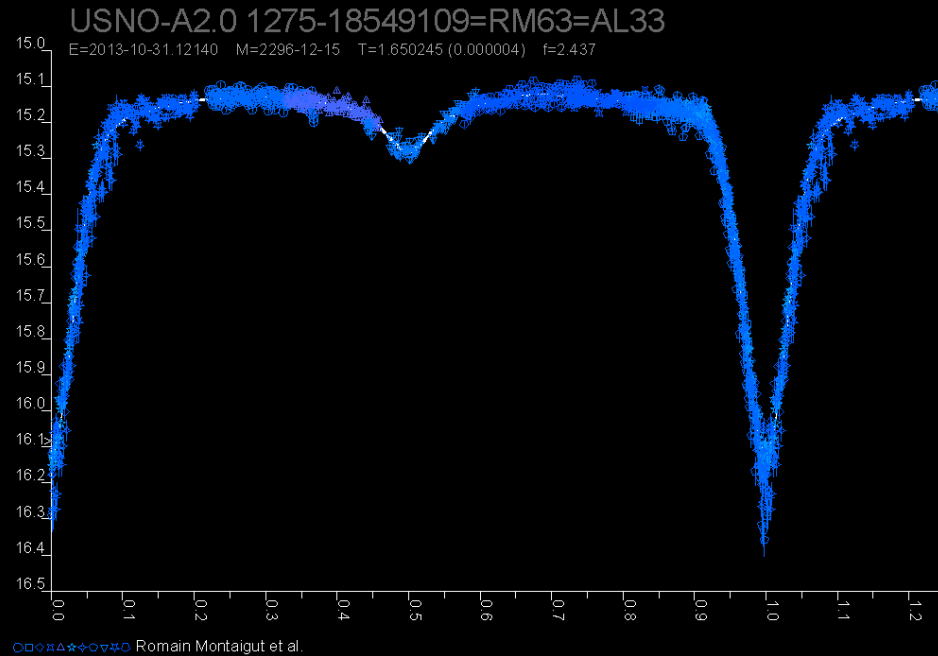


Atelier Photométrie

Détecter les étoiles variables à courtes périodes



©2015 OAG-#8

Contexte



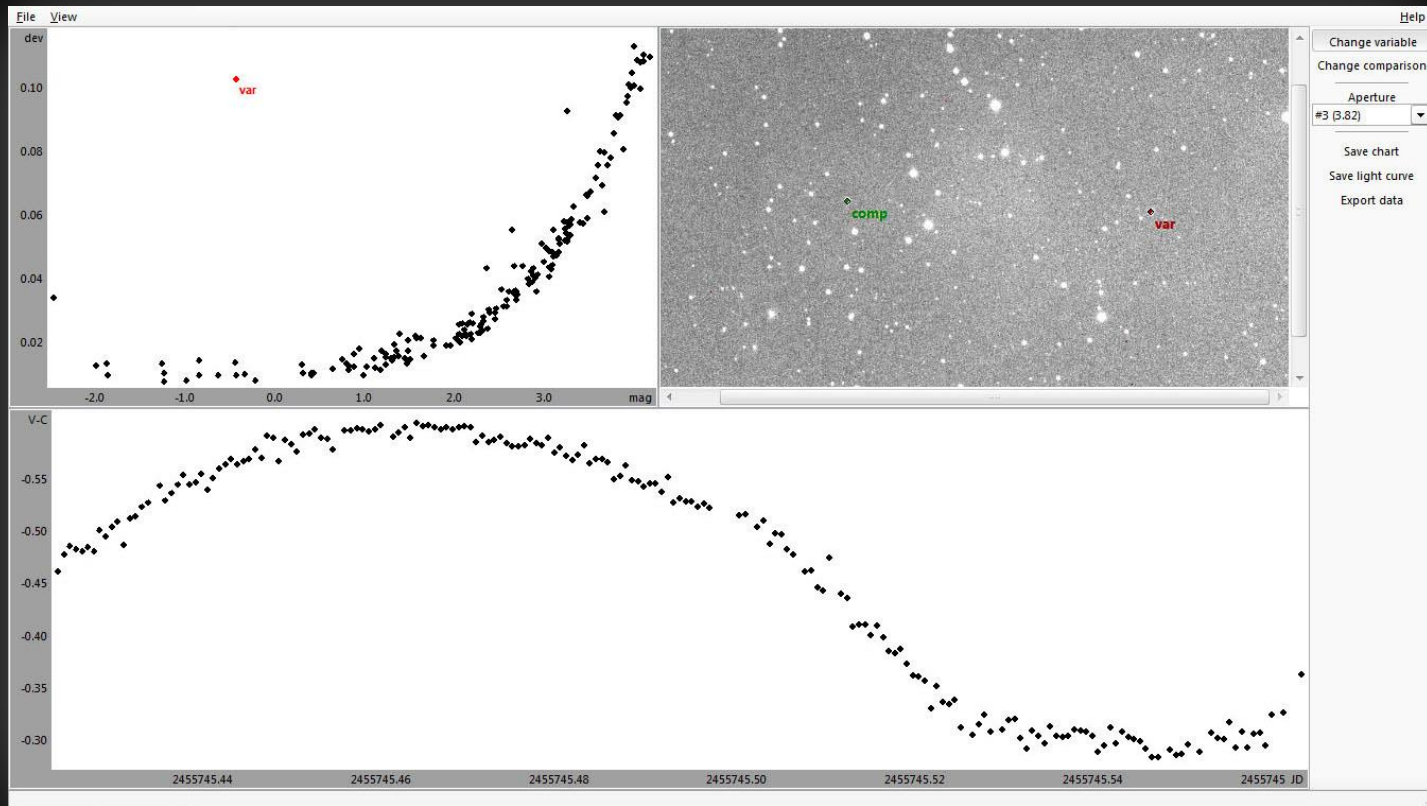
Champ photographié :

- Imagerie CCD ou APN
- Photométrie (CdR, Transit ...)
- Population : 10^2 à 10^3 étoiles

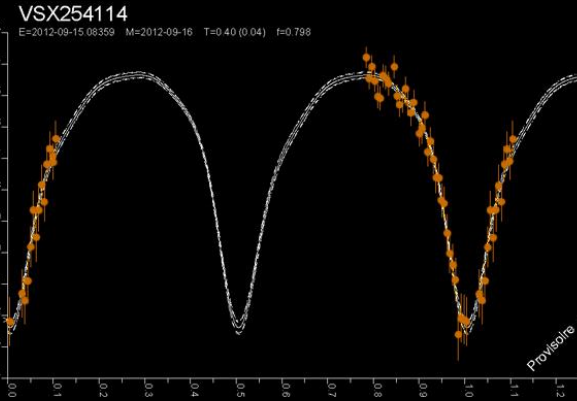
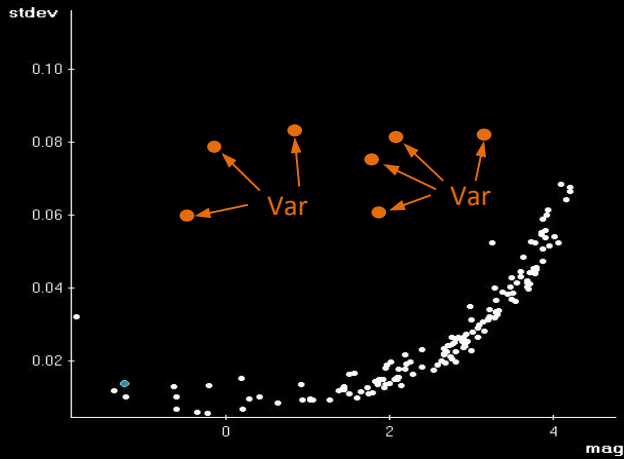
➡ Une quantité d'information non exploitée !

Muniwin

> Find variables :



Muniwin



© Romain Montaignut et al.

astrophysics

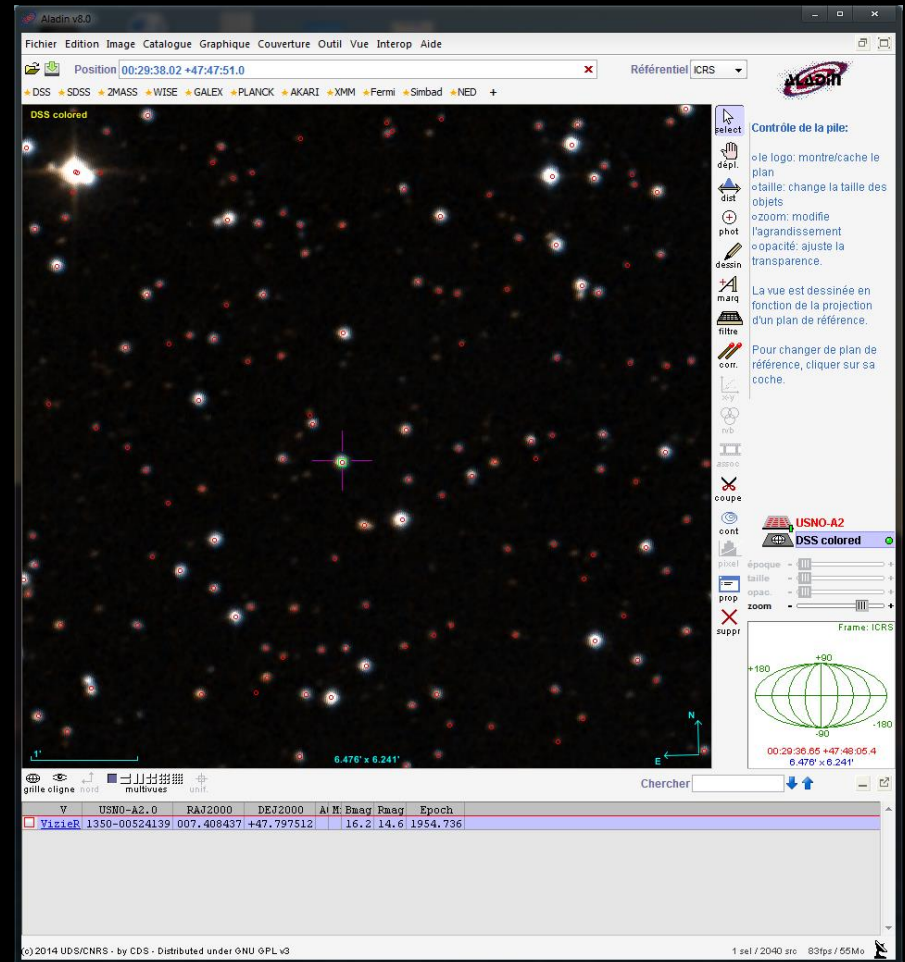


Identification

Astrométrie :

- Récupérer les coordonnées de la variable dans un catalogue (Aladin)

- USNO-A2.0
- USNO-B1.0
- 2MASS
- GCS

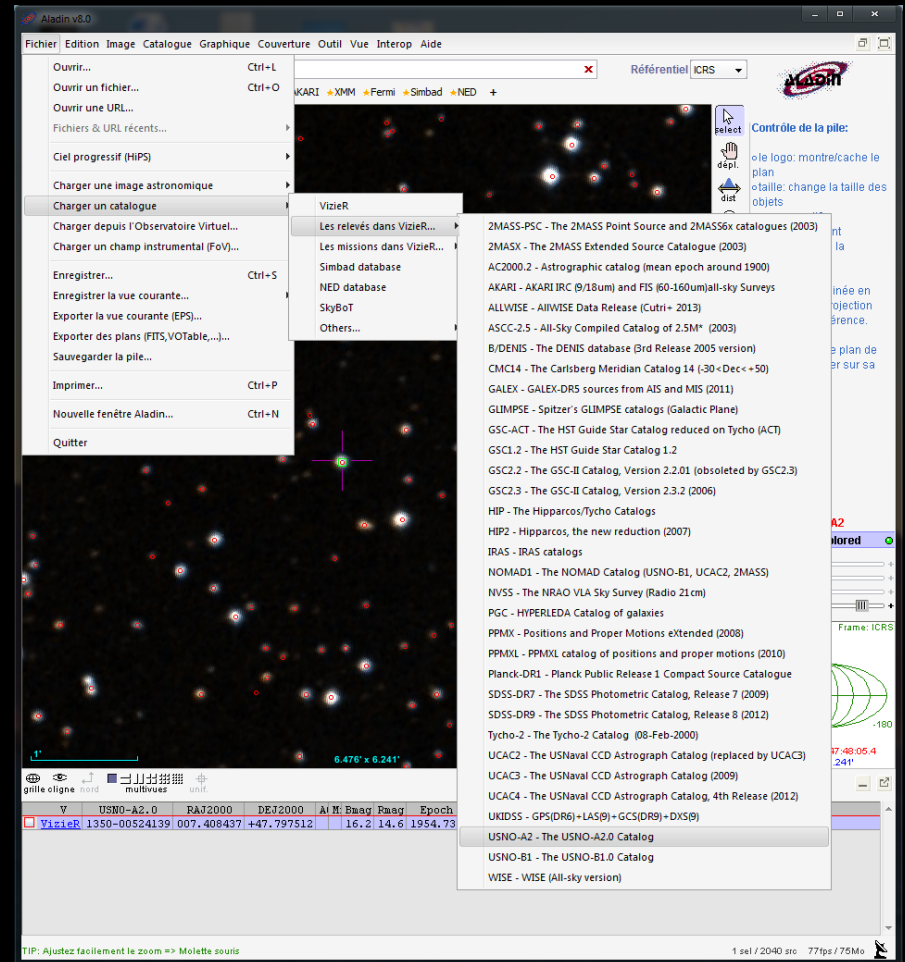


Identification

Astrométrie :

- Récupérer les coordonnées de la variable dans un catalogue (Aladin)

- USNO-A2.0
- USNO-B1.0
- 2MASS
- GCS



Identification

Astrométrie :

- Récupérer les coordonnées de la variable dans un catalogue (Aladin)

- USNO-A2.0
- USNO-B1.0
- 2MASS
- GCS

CDSPortal Simbad VizieR Aladin X-Match Other - Help

VizieR Detailed Page

start AladinLite

[I/252/out](#) The USNO-A2.0 Catalogue (Monet+ 1998) [ReadMe+ftp](#) USNO-A2.0====1350-00524139
The Full Catalogue (526280881 rows)
[Post annotation about this record](#)

Note: USNO-A2.0 contains 526,280,881 sources, and is based on a re-reduction of the Precision Measuring Machine (PMM) scans from POSS-I O and E plates (>=-18°) and SRC-J and ESO-R plates (<=-20°). USNO-A2.0 was created by Dave Monet ([dgm\(at\)navy.navy.mil](mailto:dgm(at)navy.navy.mil)) and collaborators at Flagstaff Station, U.S. Naval Observatory. The major difference between USNO-A2.0 and its previous version USNO-A1.0 is that A1.0 used the Guide Star Catalog as its reference frame whereas A2.0 uses the ICRF as realized by the USNO ACT catalog (Urban et al. 1997). The VizieR search engine uses an on-line compressed version (3.6Gbytes) which was generated at CDS.

Find more around this position in : [Aladin Image](#) [VizieR](#) [Simbad](#) [CDS Portal](#) [table view](#)

Column	Value	Explain (UCD)
_RAJ2000	00 29 38.025 "h m s"	Right ascension (FK5, Equinox=J2000.0) (computed by VizieR, not part of the original data) (pos.eq.ra)
_DEJ2000	+47 47 51.04 "d m s"	Declination (FK5, Equinox=J2000.0) (computed by VizieR, not part of the original data) (pos.eq.dec)
_RAB1950	00 26 55.233 "h m s"	Right ascension (FK4, Equinox=B1950.0) (computed by VizieR, not part of the original data) (pos.eq.ra)
_DEB1950	+47 31 16.86 "d m s"	Declination (FK4, Equinox=B1950.0) (computed by VizieR, not part of the original data) (pos.eq.dec)
_Glon	119.1455 deg	Galactic longitude (computed by VizieR, not part of the original data) (pos.galactic.lon)
_Glat	-14.9139 deg	Galactic latitude (computed by VizieR, not part of the original data) (pos.galactic.lat)

USNO-A2.0	1350-00524139	Original designation in USNO-A2.0 catalogue (Note) (meta.id.meta.main)
RAJ2000	007.408437 deg	Right ascension (ICRS) mean of blue/red plates (pos.eq.ra.meta.main)
DEJ2000	+47.797512 deg	Declination (ICRS) mean of blue/red plates (pos.eq.dec.meta.main)
ACTflag		[A] 'A' when star belongs to ACT (Cat. I/246) (meta.code)
Mflag		[*] '*' magnitudes are probably wrong (meta.code)
Bmag	16.2 mag	Magnitude from blue plate (phot.mag.em.opt.B)
Rmag	14.6 mag	Magnitude from red plate (phot.mag.em.opt.R)
Epoch	1954.736 yr	Mean epoch of position (Note) (time.epoch)

→ Thanks for acknowledging the VizieR Service
→ Rules of usage of VizieR data

© UDS/CNRS
[Contact](#)

Identification


Vérification :

- Entrer les coordonnées sur l'International Variable Star Index (VSX) pour rechercher les variables connues

The screenshot shows the VSX search page with the following elements:

- Header:** The International Variable Star Index logo, navigation links (Search, Submit, Register, Log In, Account, About), and a status bar showing "Current Time: 05 Oct 2015 14:30:45 UTC" and "Welcome, Guest. You are not logged in. >> Log in".
- Search VSX Section:** A dropdown menu for "Special searches" set to "Changes in last week..." with a "Go" button.
- Name Field:** A text input field for the star name, with examples: "SS Cyg, V456 Sgr, NSV 1009", "%And, ASAS %+%, Mis V%", and "Search by AUID also available". A link ">> Capture coordinates for object to Position field" is present.
- Const. Field:** A dropdown menu for constellation, with a note "Filters search results by boundaries of selected constellation".
- Position Field:** A text input field containing "00 29 38.03 +47 47 51.0", with radio buttons for "Sexagesimal" (selected) and "Decimal". Examples include "21 42 42.8 +43 35 10", "07:04:04 -03:50:51", and "118.77167 +22.00139".
- Size Field:** A text input field set to "50" and a dropdown menu set to "arc minutes", with radio buttons for "Radius" (selected) and "Box size".
- Include Checkboxes:** "Variables" (checked), "Non-variables" (checked), and "Suspects" (checked).
- Order by Field:** A dropdown menu set to "Angular sep." and a "Descending" checkbox (unchecked).
- Buttons:** "More", "Less", "Clear", "Reset", and "Search".
- Footer:** Links for "Guidelines", "Variability Types", "Passbands", "Copyright", "Acknowledgments", "Privacy", and "Contact". Copyright information: "The International Variable Star Index © 2005-2015 American Association of Variable Star Observers (AAVSO) Version 1.1 [C] 82.67.48.75".

Identification

The International Variable Star Index  [Search](#) [Submit](#) [Register](#) [Log In](#) [Account](#) [About](#)

Current Time: 05 Oct 2015 14:32:07 UTC Welcome, Guest. You are not logged in.
» Log in

within 50' of 00 29 38.03 +47 47 51.0 Re-order by » New Search

Search Results 12 records (1130 ms) ?

Click Name to display Detail Sheet for star.

Save Search Results as CSV file:

Dist. '	Name	AUID	Coords (J2000)	Const.	Var. type	Period (d)	Mag. range
3.70	V1038 Cas	--	00 29 52.96 +47 50 34.4	Cas	EB	20.30	9.89 - 10.10 R1
11.82	MASTER OT J003026.72+475624.0	000-BLQ-293	00 30 26.72 +47 56 24.0	Cas	UG	--	17.1 - <20.7 CR
17.71	NSVS J0027590+474149	--	00 27 59.00 +47 41 48.6	Cas	L:	89	11.299 (0.501) R1
19.42	T-Cas0-16458	--	00 27 43.72 +47 44 59.0	Cas	EA	1.61562	14.200 (0.089) R
23.10	T-Cas0-08476	--	00 31 51.39 +47 53 36.7	Cas	EC	0.4202076	12.550 (0.082) R
28.60	T-Cas0-15601	--	00 28 39.44 +47 21 01.0	Cas	E	0.786311	13.195 (0.294) R
29.16	HAT-123-0008267	--	00 27 16.65 +47 31 00.7	Cas	VAR	1.959451	14.077 (0.060) V
32.28	T-Cas0-11039	--	00 28 14.12 +48 16 55.6	Cas	EC	0.4504332	13.430 (0.221) R
37.15	T-Cas0-18038	--	00 33 05.83 +47 35 18.9	Cas	EC	0.2487206	13.980 (0.389) R
37.60	V0747 Cas	000-BDK-101	00 28 57.00 +48 24 49.4	Cas	LB:	--	6.89 - 7.16 Hp
41.53	T-Cas0-13655	--	00 27 10.48 +48 21 16.5	Cas	E	1.845491	13.485 (0.915) R
46.51	T-Cas0-18642	--	00 34 09.76 +47 39 10.8	Cas	EC	0.771815	14.005 (0.171) R

Coordinate based link-outs:

» Guidelines » Variability Types » Passbands » Copyright » Acknowledgments » Privacy » Contact

The International Variable Star Index
 © 2005-2015 American Association of Variable Star Observers (AAVSO)
 Version 1.1 [C]
 82.67.48.75

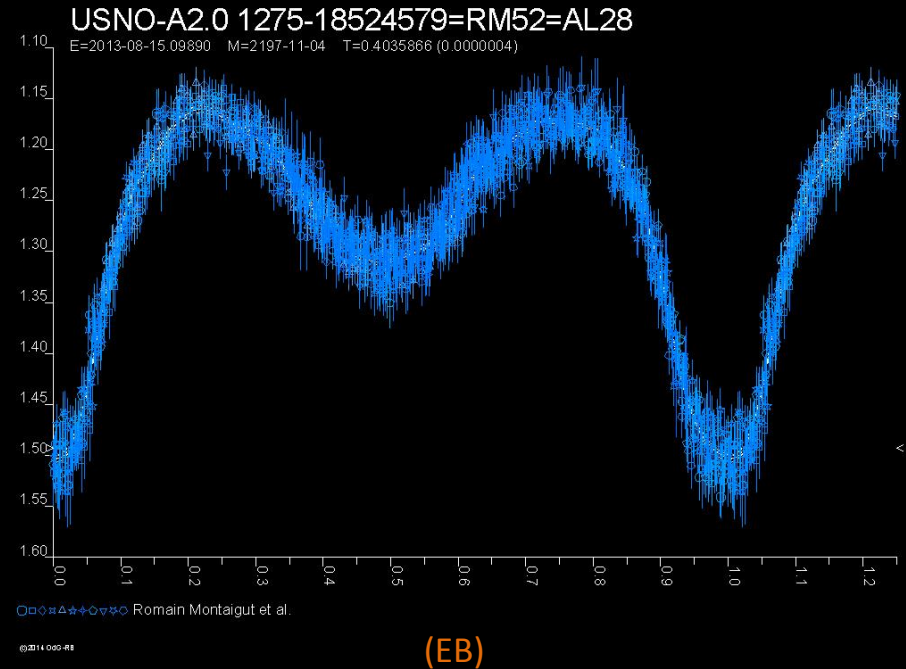
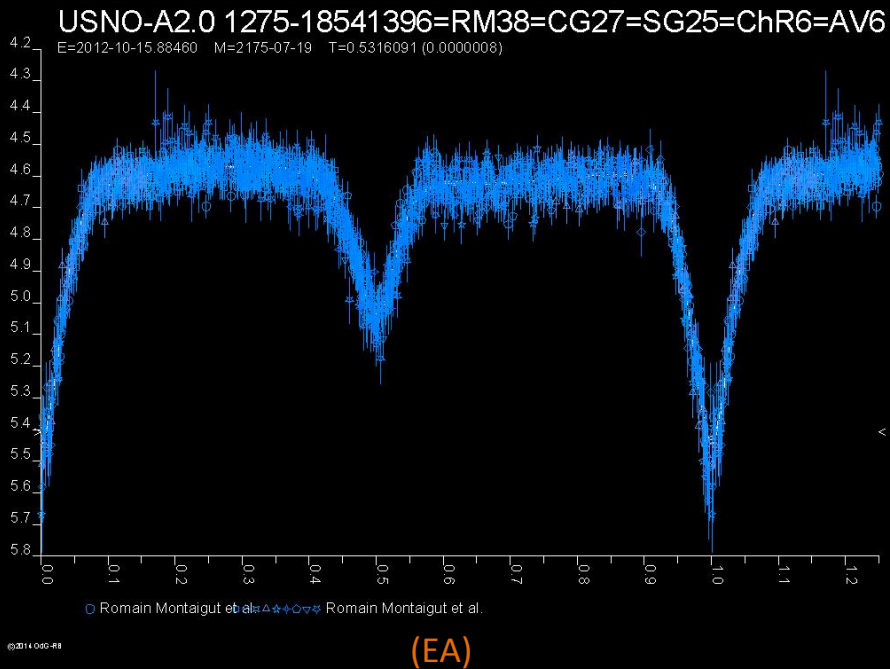
Caractérisation

Observer pour déterminer :

- Période : VStar, Period04 ... CourbRot
- Amplitude : Minimum principal et secondaire dans le cas d'une étoile binaire à éclipses
- Type d'étoile : classification selon la forme de la Courbe de Lumière
- Phénomènes particuliers : binaire à orbite elliptique, RR Lyr à effet Blazhko, pulsante avec multipériodicités, EW avec effet O'Connell...

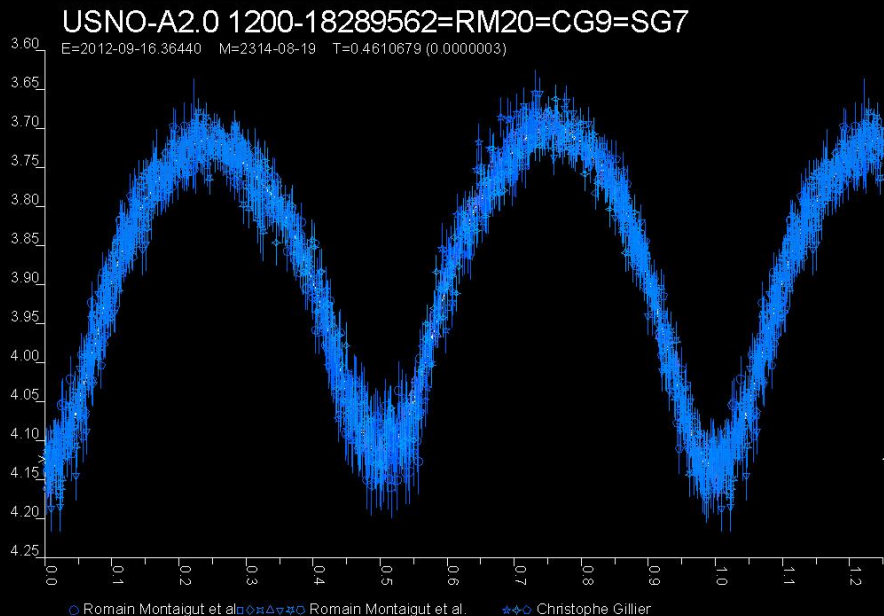
Caractérisation

Etoiles binaires à éclipses :

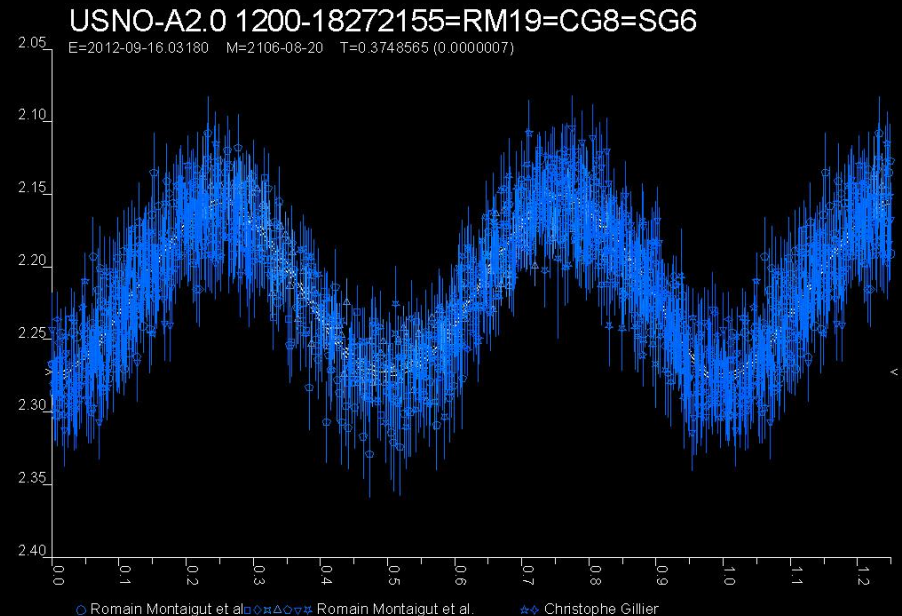


Caractérisation

Etoiles binaires à éclipses :



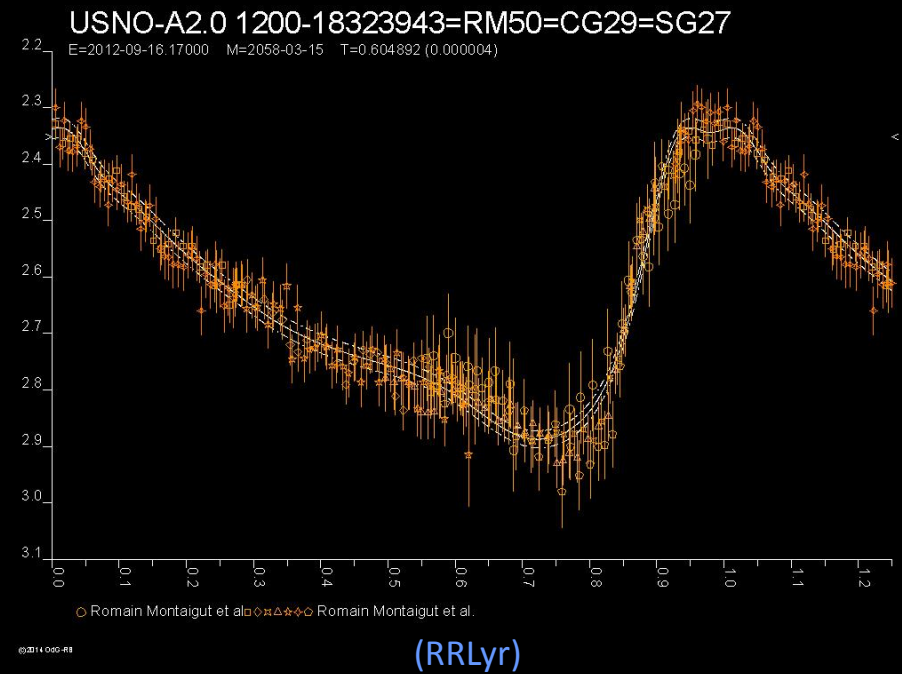
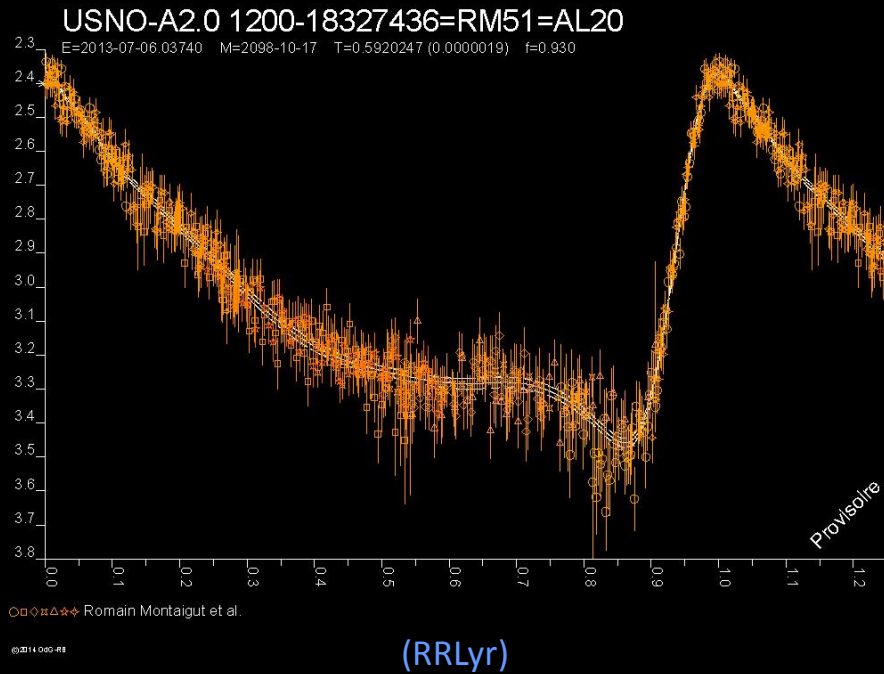
(EW)



(ELL)

Caractérisation

Etoiles pulsantes :

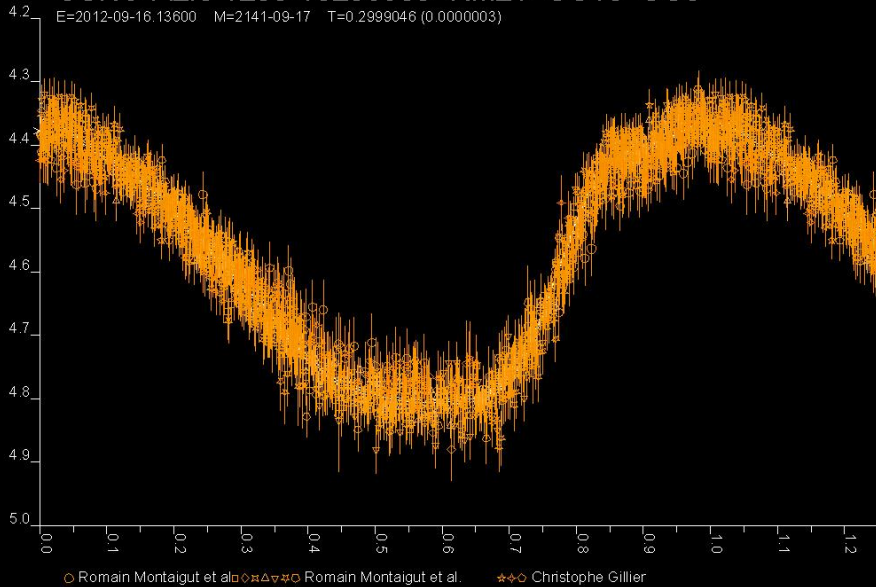


Caractérisation

Etoiles pulsantes :

USNO-A2.0 1200-18296589=RM21=CG10=SG8

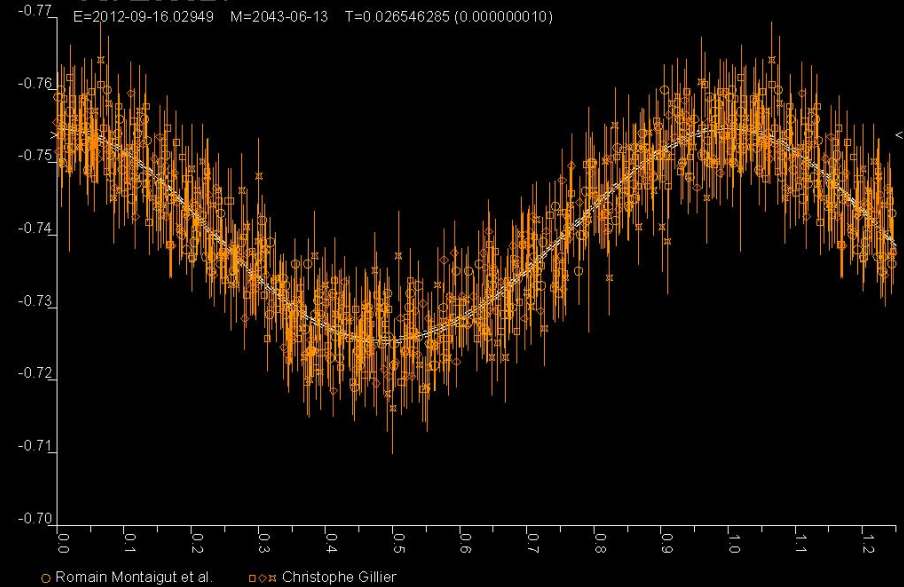
E=2012-09-16.13600 M=2141-09-17 T=0.2999046 (0.0000003)



(RR Lyr)

VSX269821

E=2012-09-16.02949 M=2043-06-13 T=0.026546285 (0.000000010)



(DSct)

Publication

Lorsque la nouvelle variable est bien caractérisée :

- CdR&CdL : envoyer les données à Raoul Behrend (Obs Genève) pour confirmation / analyse indépendante
- VSX : Déclarer la variable sur VSX (AAVSO)
- Publier un article dans une revue à comité de lecture :
 - OEJV : <http://var.astro.cz/oejv/>
 - Peremennye Zvezdy : <http://www.astronet.ru/db/varstars/>
 - IBVS : <http://www.konkoly.hu/IBVS/IBVS.html>
 - JAAVSO : <https://www.aavso.org/apps/jaavso/>

Publication

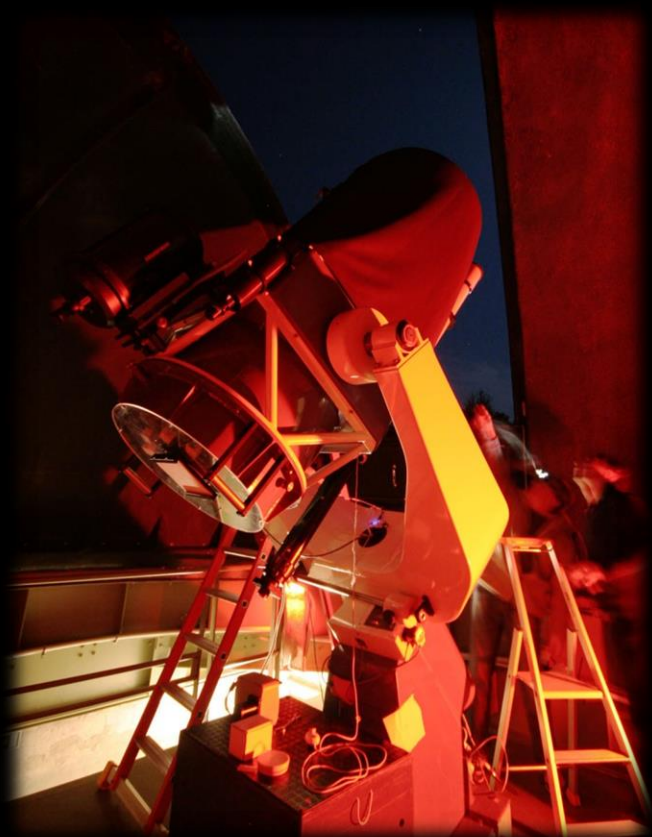
Lorsque la nouvelle variable est publiée :

- **GCVS** : obtenir une désignation dans une nouvelle édition du General Catalog of Variable Stars (catalogue officiel)
- **Continuer à l'observer** : pour mettre en évidence des phénomènes à longue périodicité (diagrammes O-C) et affiner les paramètres

Quelques découvertes

Télescope : TJMS - 600mm - f/3,9

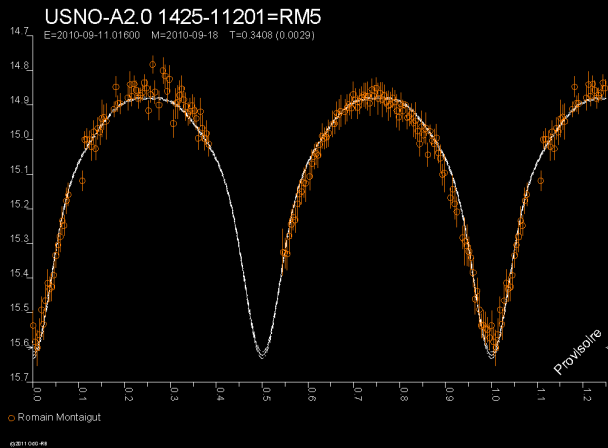
CCD : STL11000 - Bin2x2 - 120s



Quelques découvertes

Télescope : TJMS - 600mm - f/3,9

CCD : STL11000 - Bin2x2 - 120s



Quelques découvertes

Télescope : T60 - 600mm - f/3,4

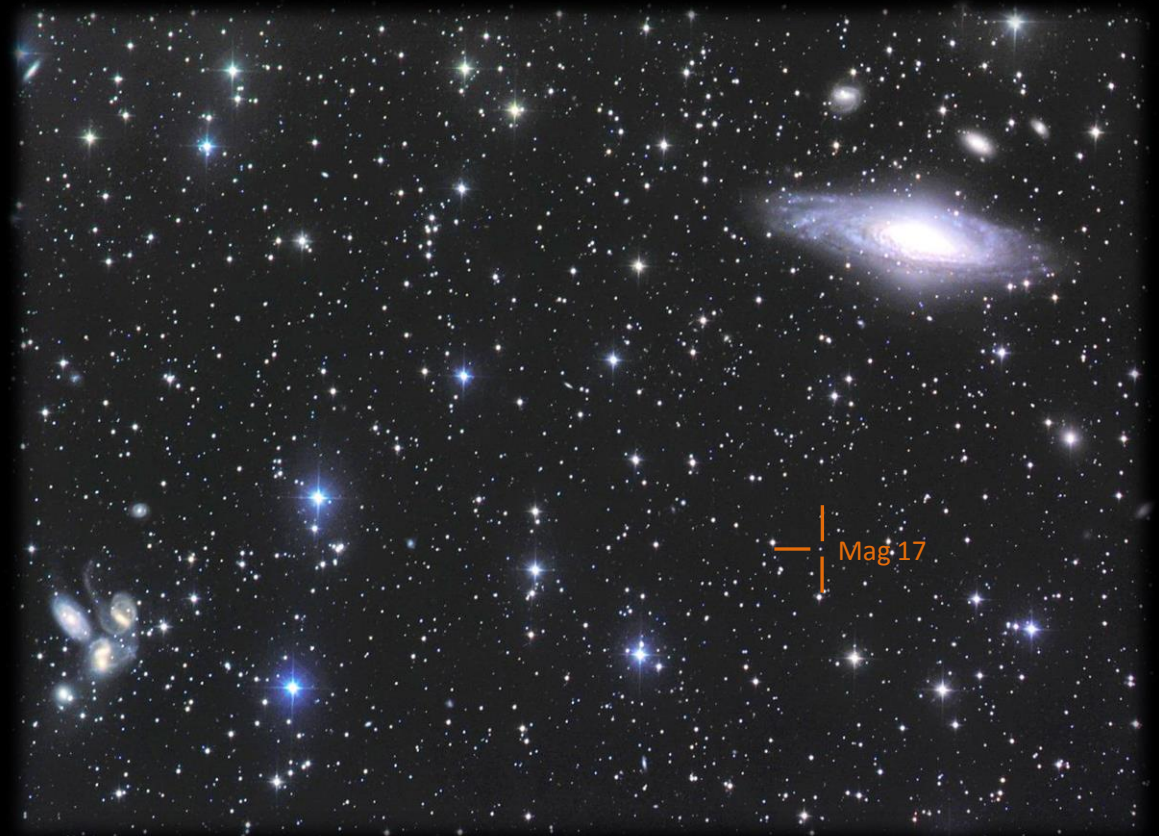
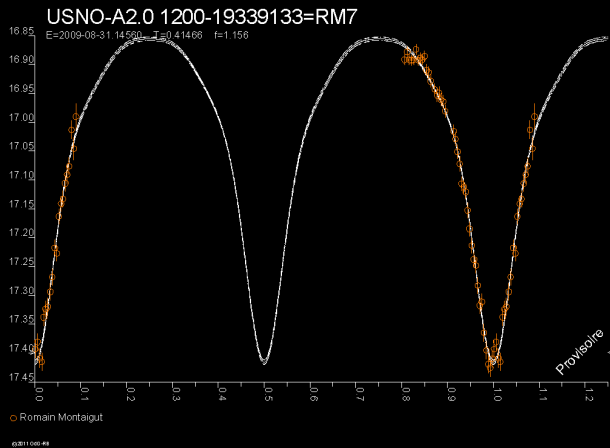
CCD : STL6303 - Bin1x1 - 120s



Quelques découvertes

Télescope : T60 - 600mm - f/3,4

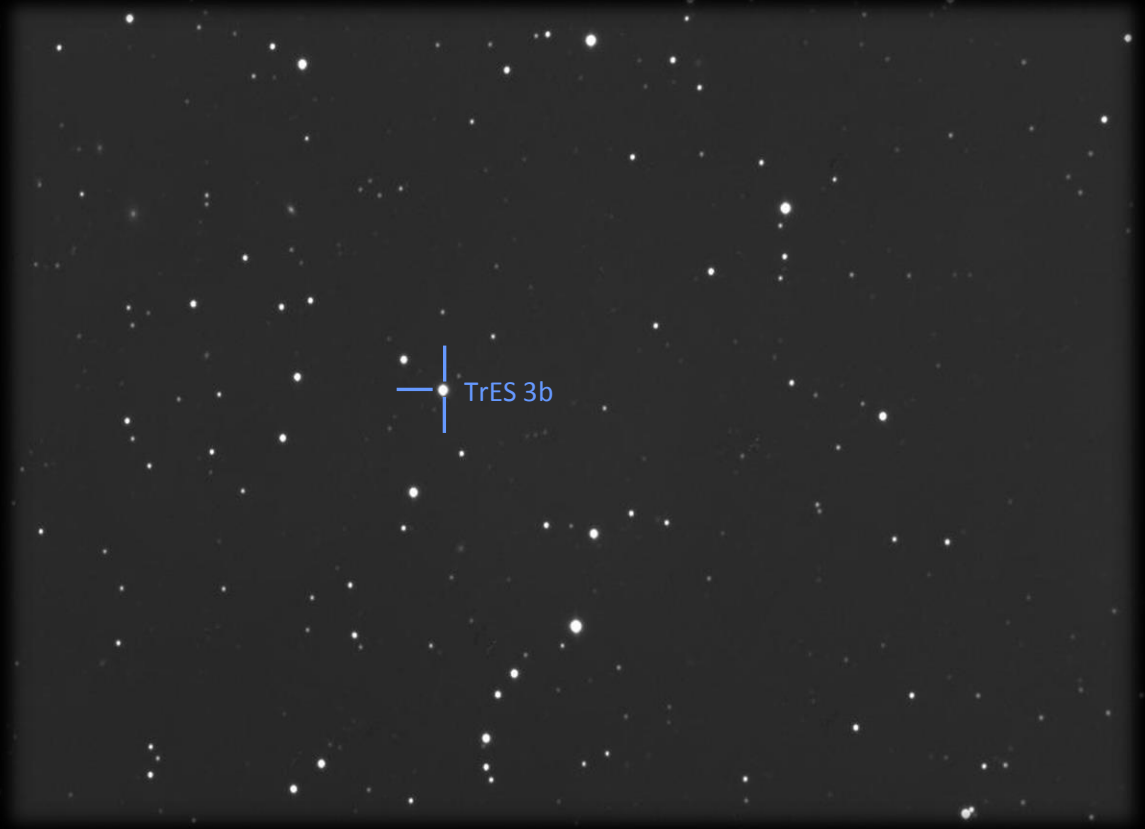
CCD : STL6303 - Bin1x1 - 120s



Quelques découvertes

Télescope : C14 - 355mm - f/6,3

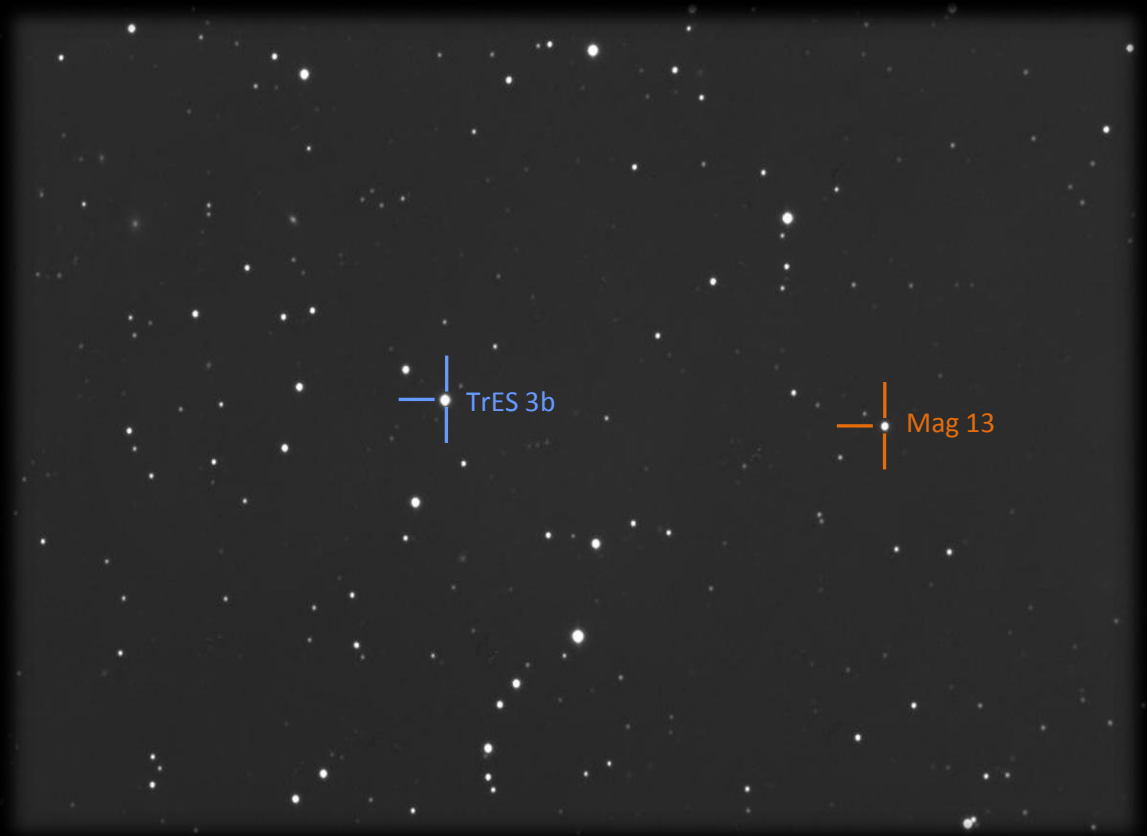
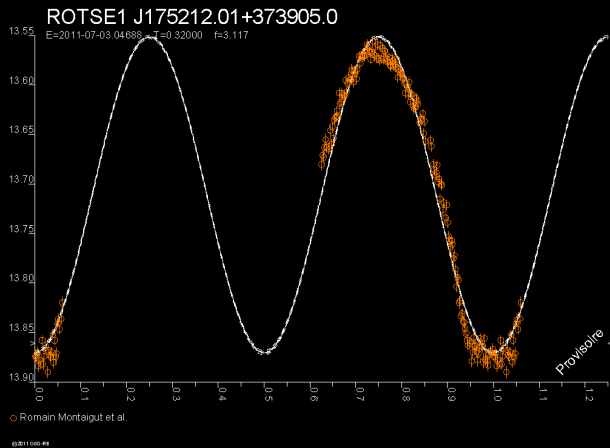
CCD : ST10 - Bin2x2 - 50s



Quelques découvertes

Télescope : C14 - 355mm - f/6,3

CCD : ST10 - Bin2x2 - 50s



Quelques découvertes

Télescope : C8 - 200mm - f/6,3

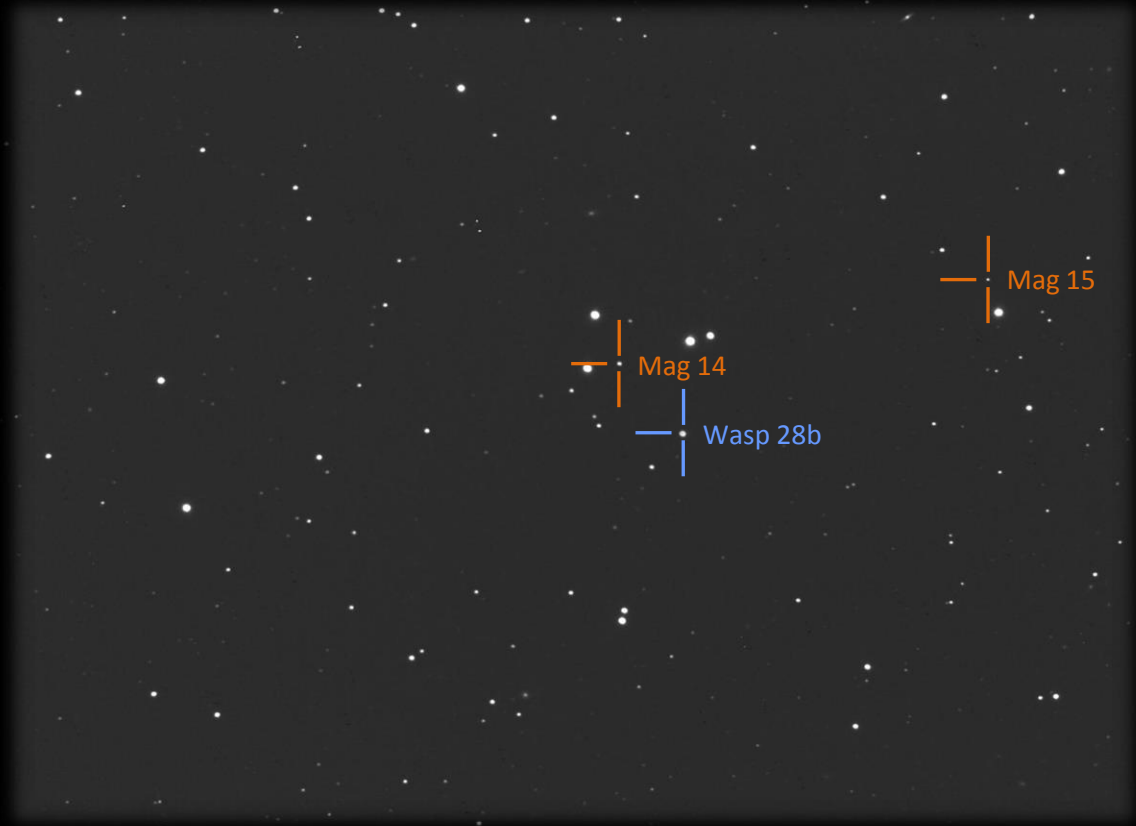
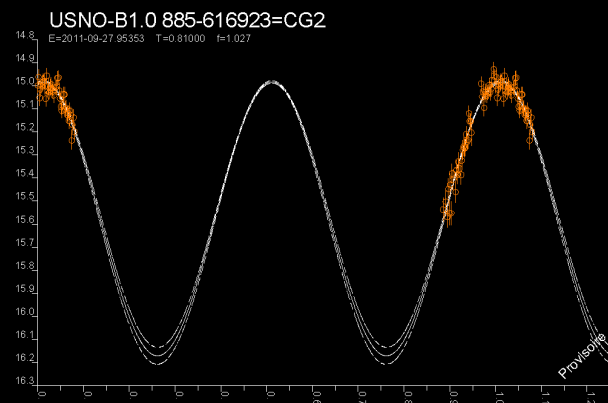
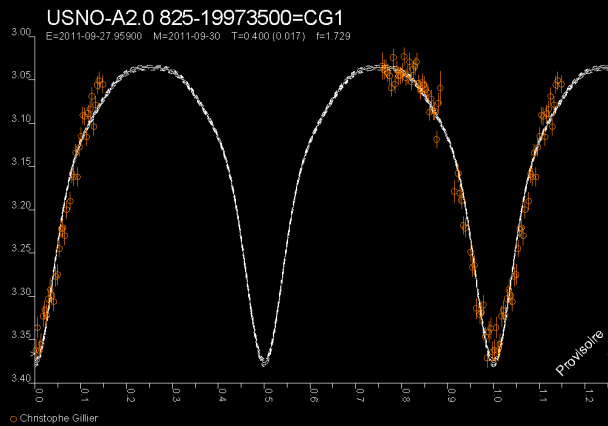
CCD : QSI583 - Bin2x2 - 120s



Quelques découvertes

Télescope : C8 - 200mm - f/6,3

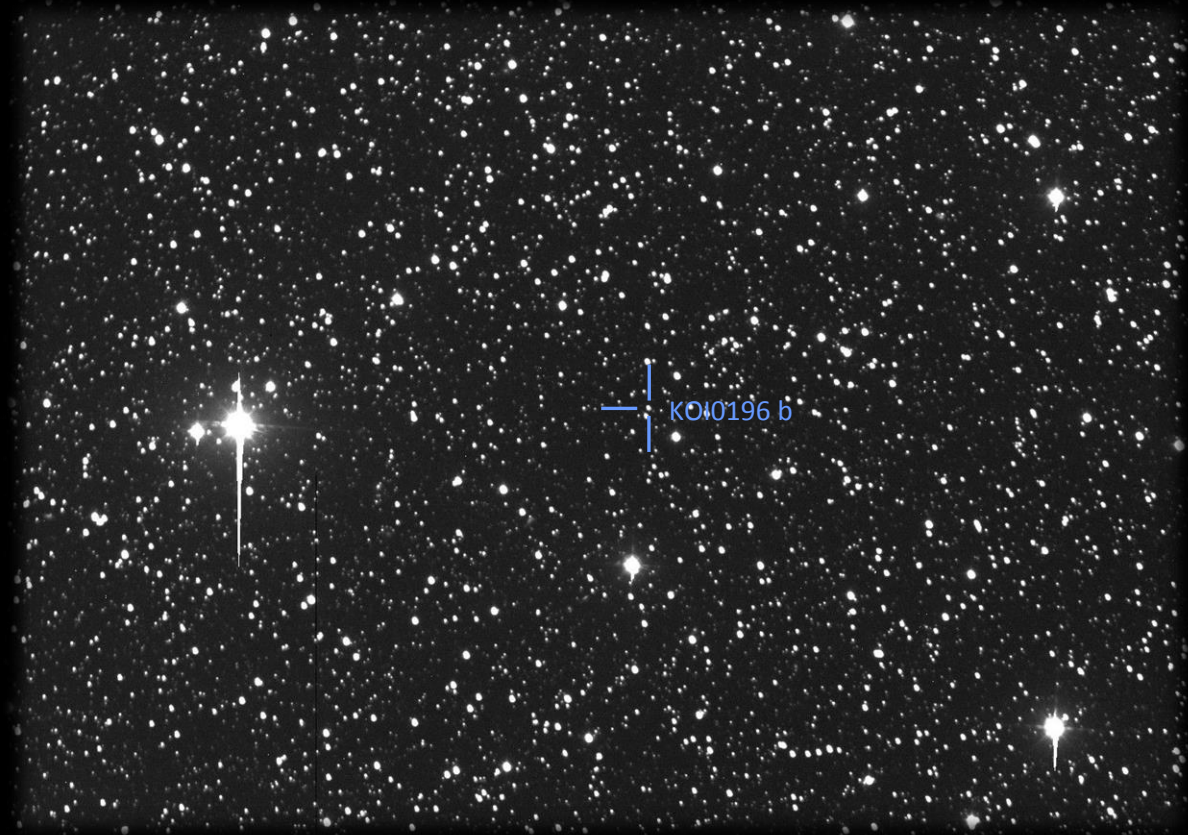
CCD : QSI583 - Bin2x2 - 120s



Quelques découvertes

Télescope : T60 - 600mm - f/3,4

CCD : STL6303 - Bin2x2 - 200s



Quelques découvertes

Télescope : T60 - 600mm - f/3,4

CCD : STL6303 - Bin2x2 - 200s

