



Eruptive stars spectroscopy

Cataclysmics, Symbiotics, Novae, Supernovae



ARAS Eruptive Stars
Information letter n° 2 - 16-03-2014

News

Nova Cephei 2014

Discovered the 2014 Mar.
8.792 UT at mag 11.7 (C)
by Koichi Nishiyama
(Kurume, Japan) and Fujio
Kabashima (Miyaki, Japan)
Nova Cep 2014 shows a Fe
II spectrum

Contents

Novae

Nova Cen 2013 (V1369 Cen) : new spectra by T. Bohlsen
Nova Del 2013 (V339 Del)
Nova Sgr 2014 -
Nova Cep 2014 : first spectra by R. Leadbeater and C. Buil

Symbiotics

TX Cvn (D. Boyd) , UV Aur (J. Montier)

Supernovae

Ungoing campaign SN2014 J (declining at mag 12.3)- 3 new spectra

Cataclysmics

Transient in Orion (dwarf nova outburst), new spectrum by Joan Guarro

Aknowledgements : V band light curves from AAVSO photometric data base

ARAS Spectroscopy

ARAS Web page

<http://www.astrosurf.com/aras/>

ARAS Forum

<http://www.spectro-aras.com/forum/>

ARAS list

<https://groups.yahoo.com/neo/groups/spectro-l/info>

ARAS preliminary data base

http://www.astrosurf.com/aras/Aras_DataBase/DataBase.htm

ARAS BeAM

<http://arasbeam.free.fr/?lang=en>

Please :

- respect the procedure
- check your spectra BEFORE sending them
Resolution should be at least $R = 500$
For new transients, supernovae and poorly observed objects, SA spectra at $R = 100$ are welcomed

1/ reduce your data into BeSS file format
2/ name your file with: `_novadel2013_yyyymmdd_hhh_Observer`
novadel2013: name of the nova, fixed for this object
yyyy: year
mm: month
dd: day
hhh: fraction of the day, beginning of the observation
Observer: your pseudo/name
Exemple: `_chcyg_20130802_886_toto.fit`

3/ send you spectra to

Novae Symbiotics : François Teyssier
Supernovae : Christian Buil
to be included in the ARAS database

[Submit your spectra](#)

Nova Cen 2013 = V1369 Cen

Luminosity

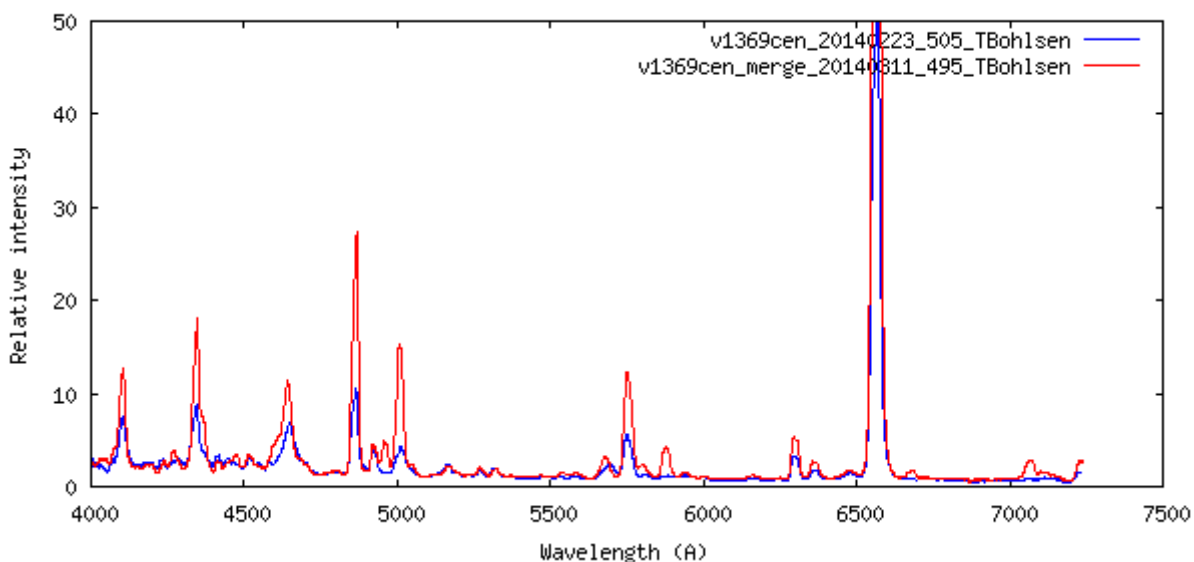
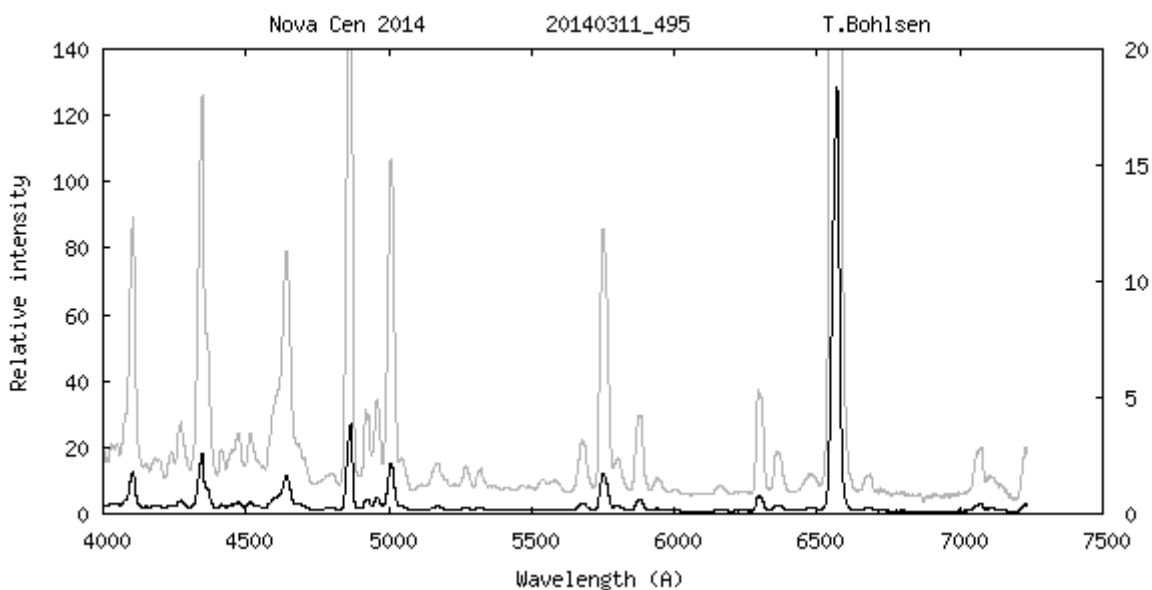
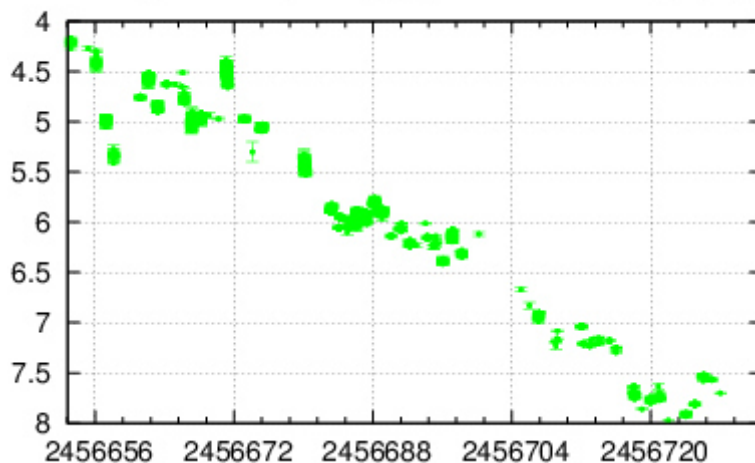
Mag V = 7.6 (10-03-2014)

Rebrightning a mag 7.6 after a minimum at 8.0 (05-03-2014)

Observing

New spectra from Terry Bohlsen (08 and 11/03)

AAVSO DATA FOR V1369 CEN - WWW.AAVSO.ORG

**Observers**

Terry Bohlsen
 Malcom Locke
 Jonathan Powles
 Ken Harrison
 Julian West
 Tasso Napoleao
 Rogerio Marcon

Evolution from 23-02 to 11-03 : Helium and [O III] flashes

Nova Del 2013 = V339 Del

Luminosity

Mag V = 11.9 (15-03-2014)

Slow decline (about -0.06 mag/week)

Observing :

One spectrum a week required

X and UV observations

ATel #5967, K.L. Page & al., 10-03-2014

March 4 (day 202), count rate ~0.8 count s-1

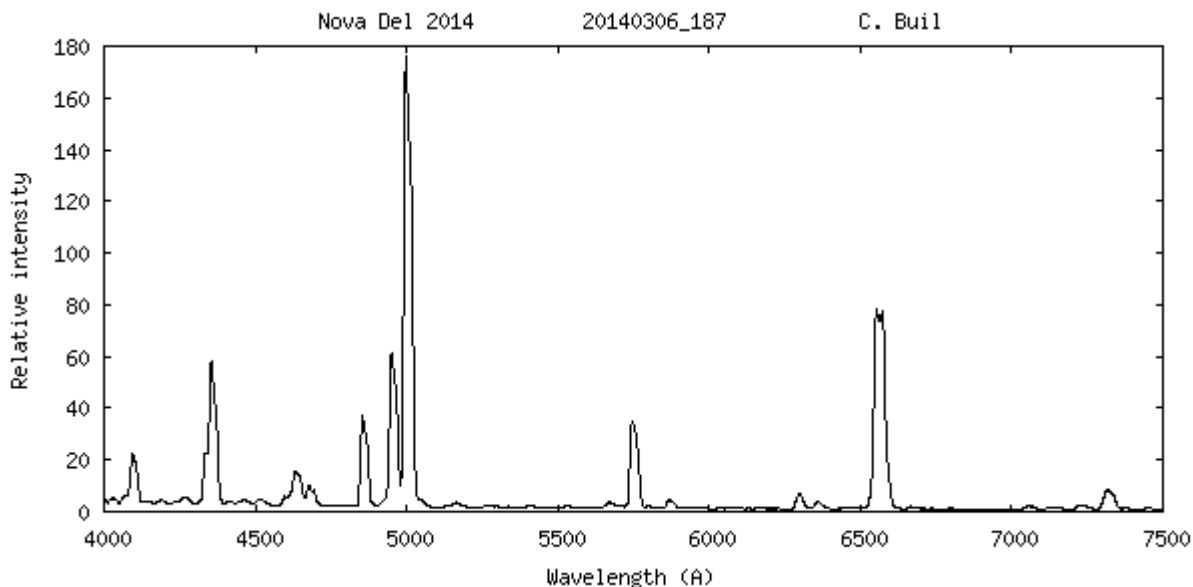
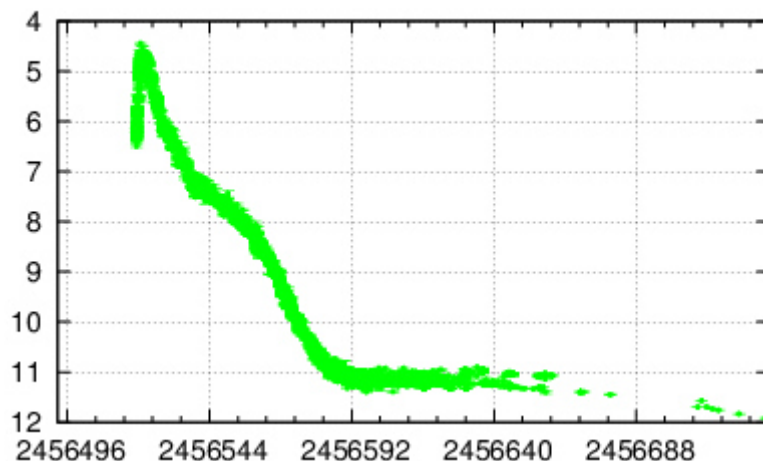
March 9 (day 206-207) count rate ~0.4 count s-1

(2014 January 6: X-ray count rate of ~40 count s-1)

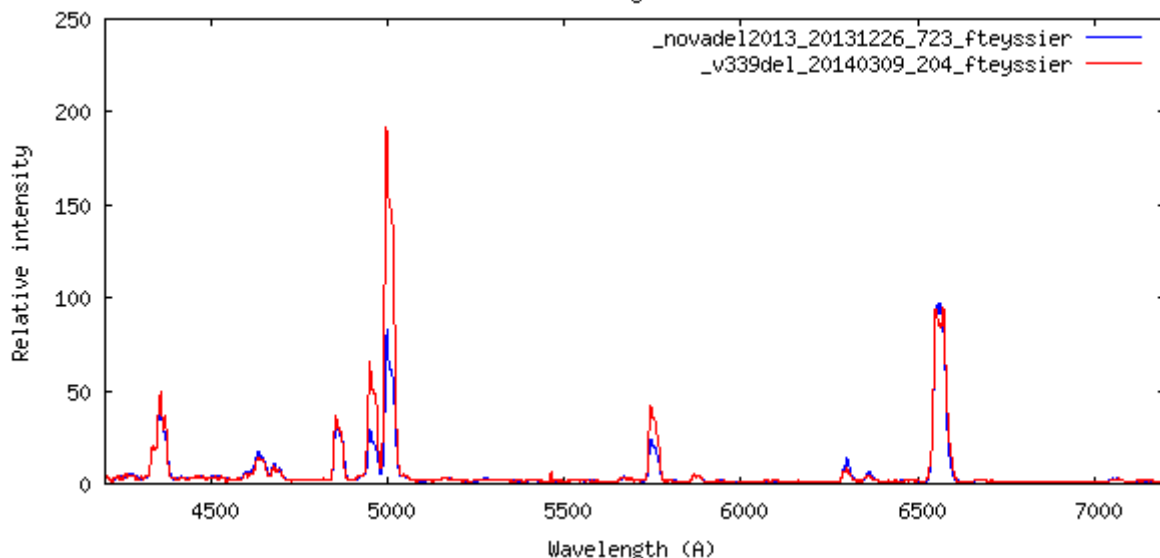
Swift-UVOT : the grism UV spectrum shows a weak continuum with bright emission lines of N III (1752 Å), weak Al III (1860 Å), C III] (1909 Å), N IV] (2151 Å), [O III] (2321 Å), O II] (2471 Å), Mg II (2800 Å) and Ne V (3426 Å).

<http://www.astronomerstelegam.org/?read=5967>

AAVSO DATA FOR V339 DEL - WWW.AAVSO.ORG



Strong enhancement of [OIII] lines during the period of non-visibility behind the sun



Observers (2014)

- C. Buil
- F. Teyssier

**N
O
V
A
E**

Nova Sgr 2014 = PNV J18250860-2236024

Luminosity

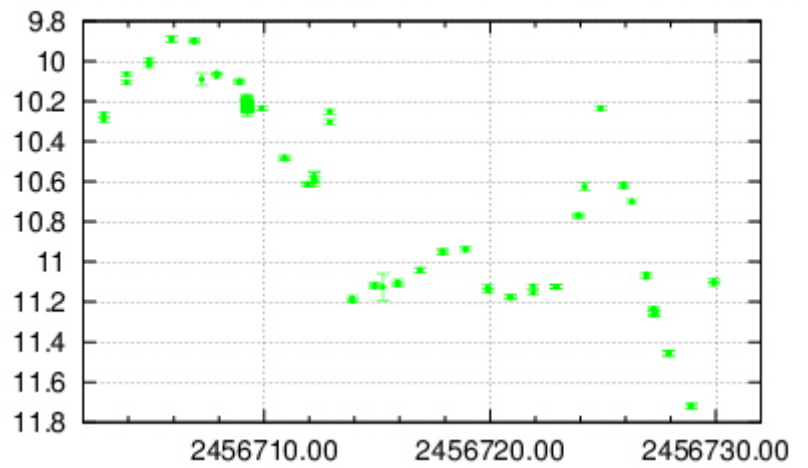
Mag V = 11.1 (10-03-2014)

Strong oscillations

Observing

No new spectrum

AAVSO DATA FOR NOVA SGR 2014 - WWW.AAVSO.ORG



Observer

C. Buil

Nova Cephei 2014

Discovered the 2014 Mar. 8.792 UT
at mag 11.7 (C) by Koichi Nishiyama
(Kurume, Japan) and Fujio
Kabashima (Miyaki, Japan)

CBAT Transient Objects

<http://www.cbat.eps.harvard.edu/unconf/>

followups/J20542386+6017077.html

AAVSO Alert notice #498

<http://www.aavso.org/aavso-alert-notice-498>

Coordinates (2000.0)

R.A. 20 54 23.75

Dec. +60 17 06.9

Luminosity

Mag V = 11.5(15-03-2014)

Strong oscillations

Observing

Spectra near min and max
of oscillations
should be very interesting

Fire Ball stage

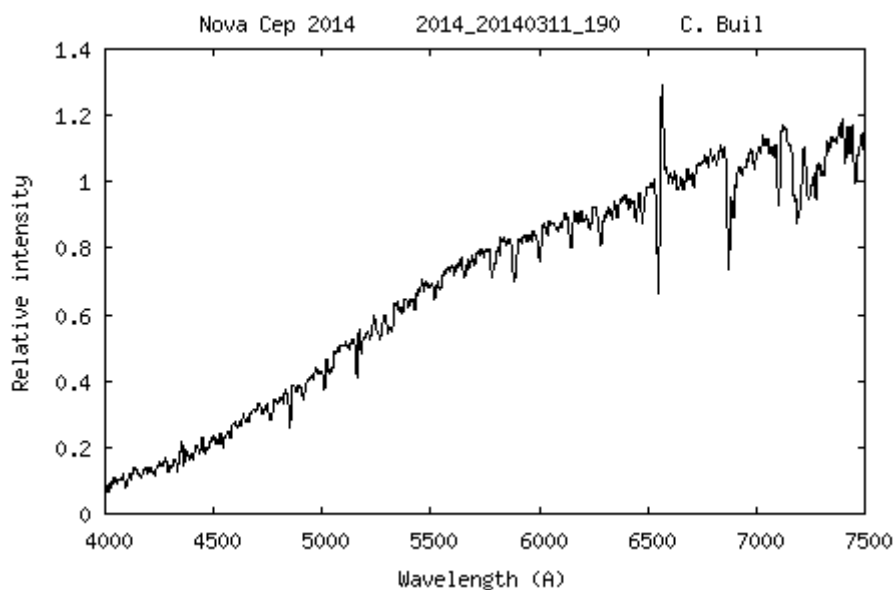
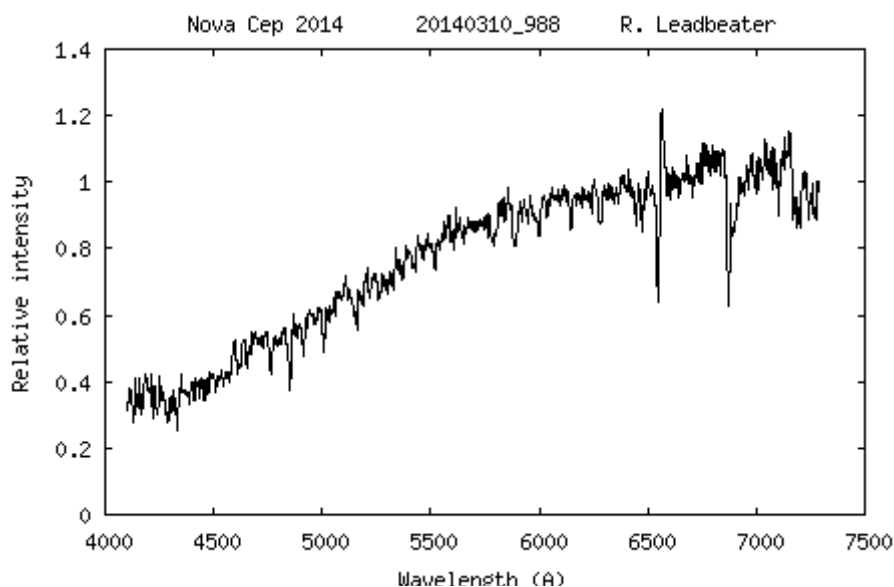
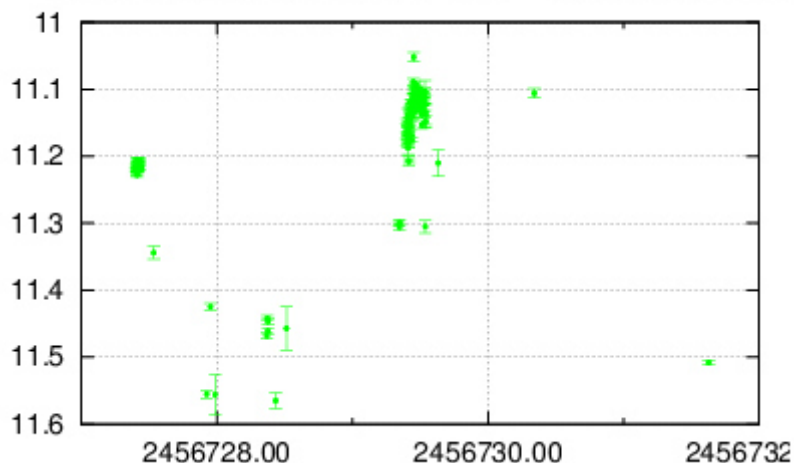
Absorption spectrum
Emission of H alpha with P
Cygni profile

Observers

C. Buil

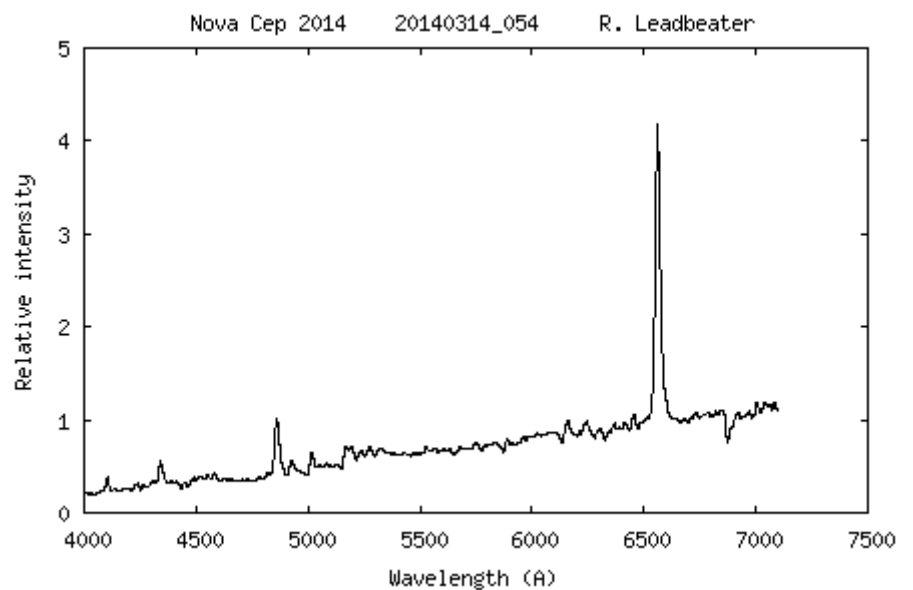
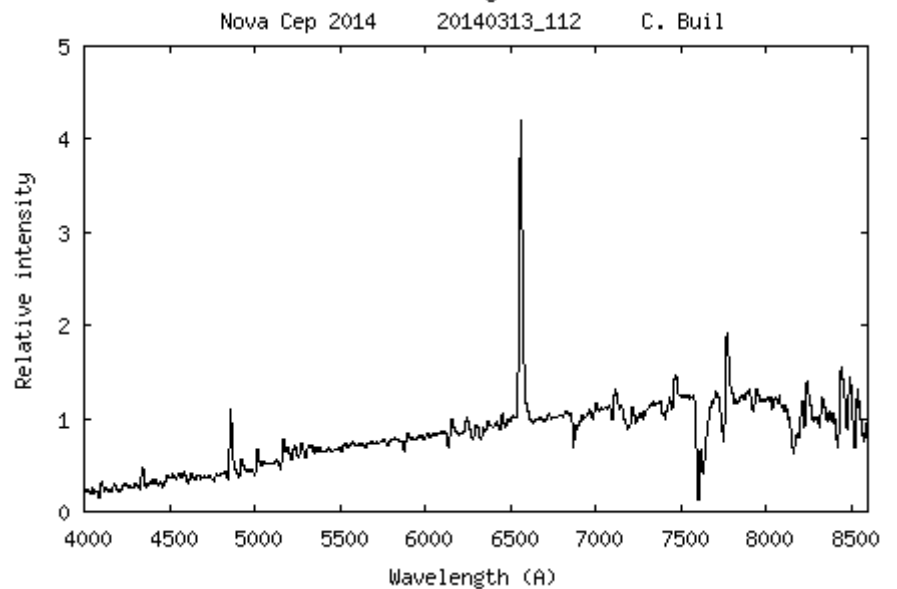
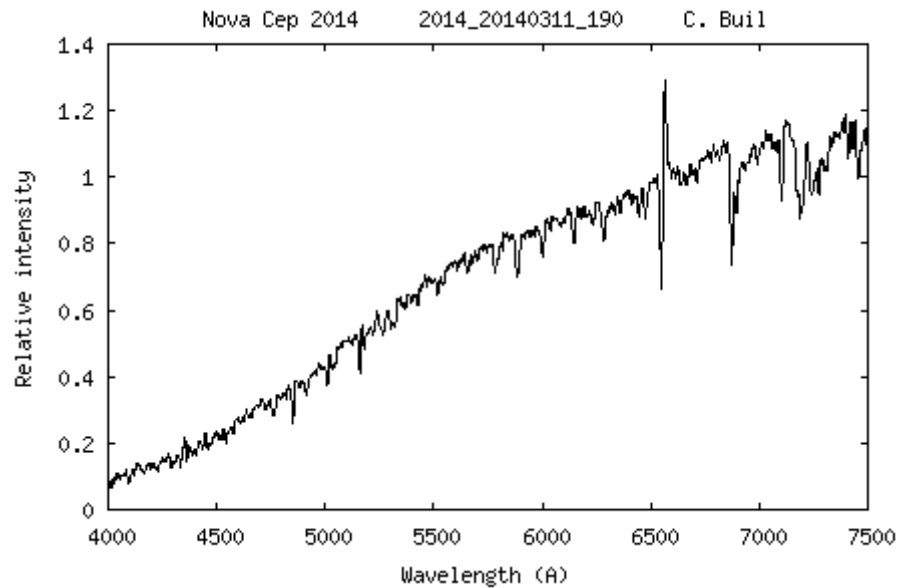
R. Leadbeater

AAVSO DATA FOR NOVA CEP 2014 - WWW.AAVSO.ORG



Fast development of emission spectrum (Fe II type)
 Disappearance of P Cygni profile
 The continuum remains red
 Note the OI lines in near IR (7773 and 8446) and Ca II 8498 and 8542 in C. Buil's spectrum

Spectra at R = 650 with
 Alpy 600
 spectroscop



Observers

C. Buil
 R. Leadbeater

Observing Targets of interest

In the evening :

- **V694 Mon** - The goal is to detect high state of this "exotic star"

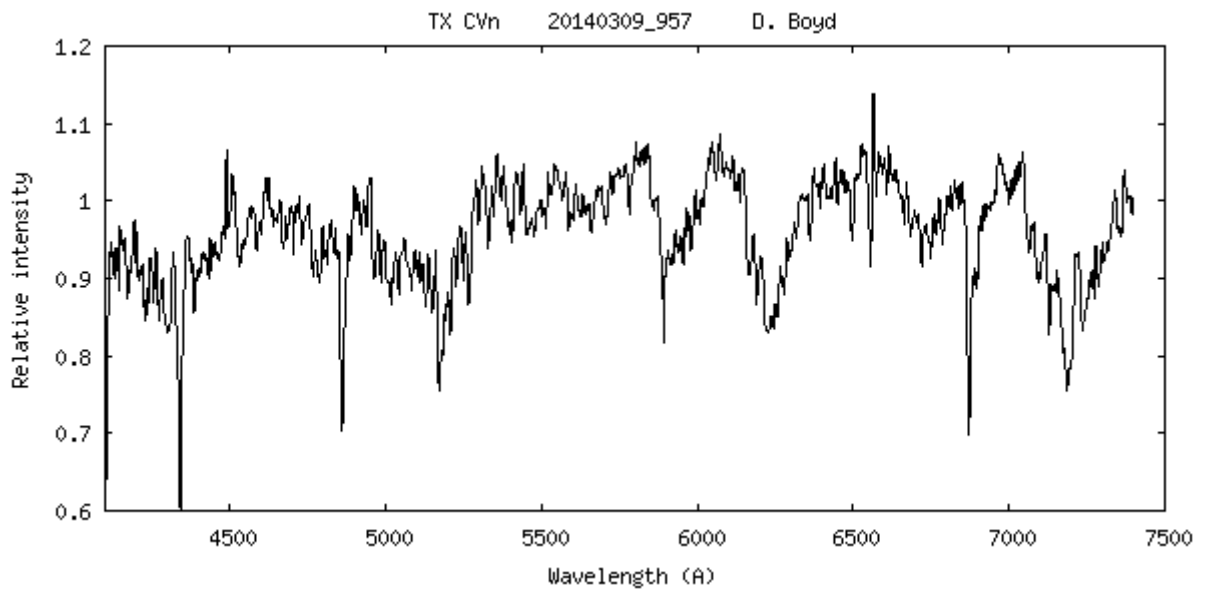
See : <http://www.astronomie-amateur.fr/feuilles/Spectroscopie/SyS/V694Mon.html>

- **BX Mon**

T CrB, AG Dra, YY Her

In the morning, stars of cygnus :

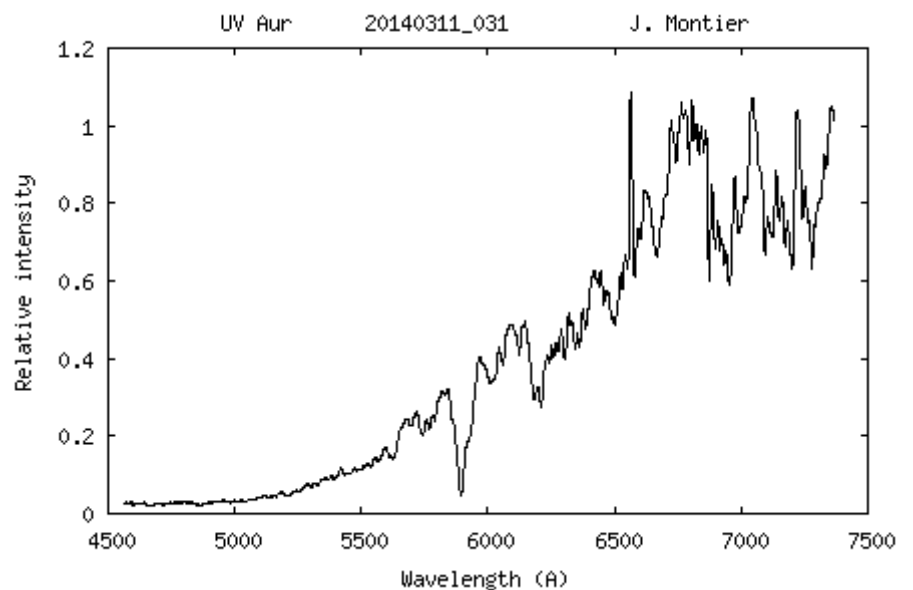
CI Cyg, CH Cyg, V407 Cyg, BF Cyg



TX CVn by D. Boyd LISA R = 1000

A series of symbiotics by
Jacques Montier
(AG Dra, BD Cam)

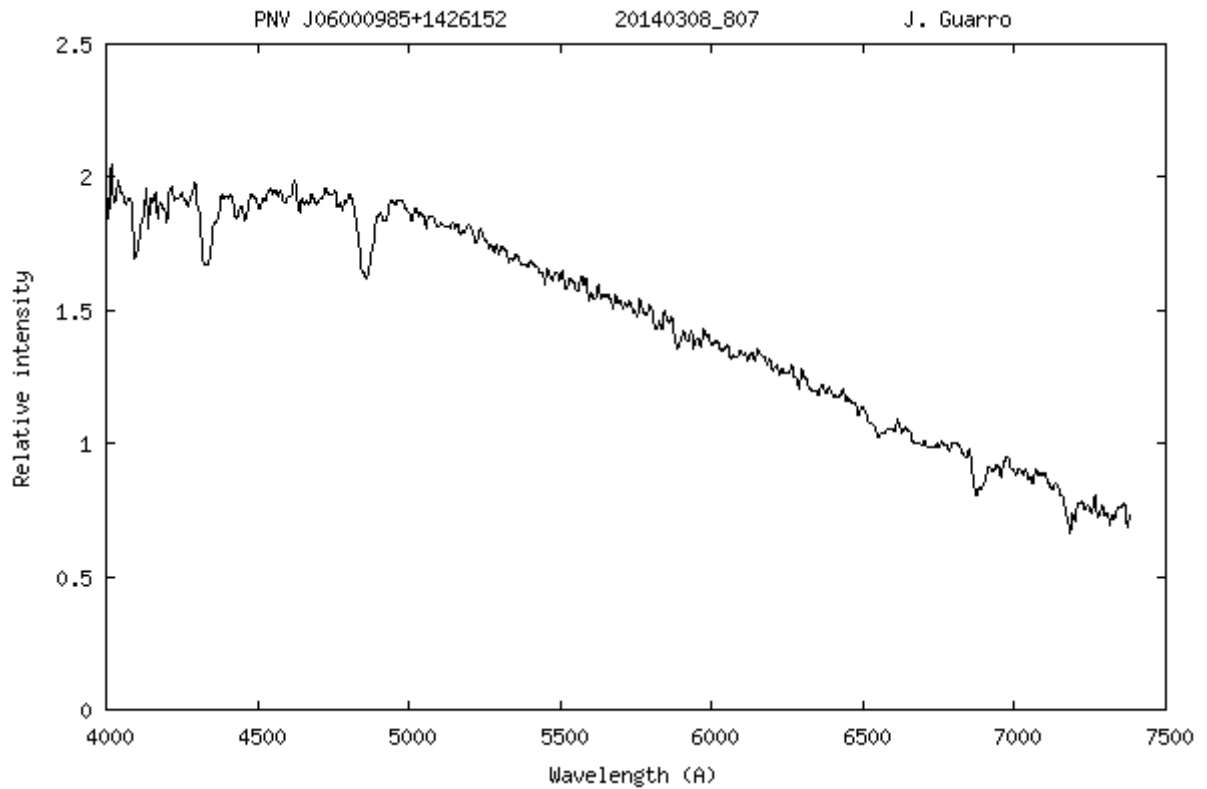
UV Aur : a symbiotic with a
Mira C



News

Transient in Orion

PNV J06000985+1426152

<http://www.cbat.eps.harvard.edu/unconf/followups/J06000985+1426152.html>

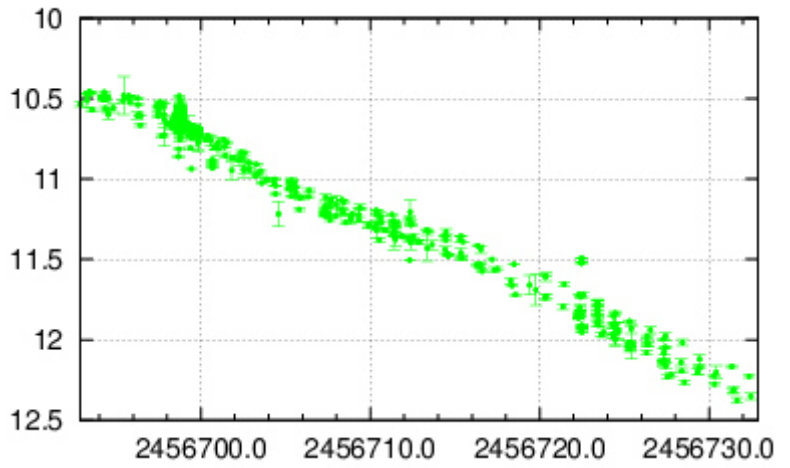
PNV J06000985+1426152 by Joan Guarro with a home-made spectroscope
Lon exposure to get a correct SNR : 14 x 600 sec

SN 2014J in M 82 Type Ia

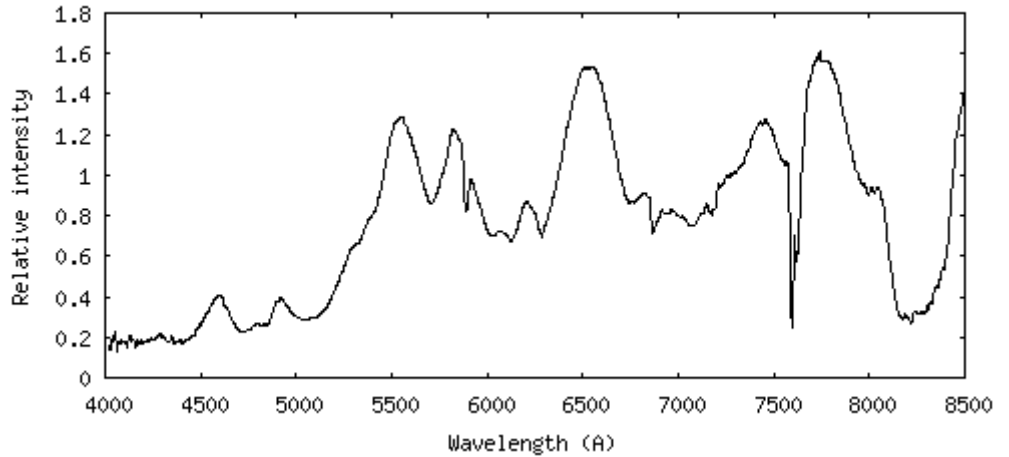
Luminosity
Mag V = 12.3 (15-03-2014)

Observing
 Ungoing campaign
 54 spectra in ARAS data base
 New spectra from J. Guarro, R. Leadbeater and C. Buil

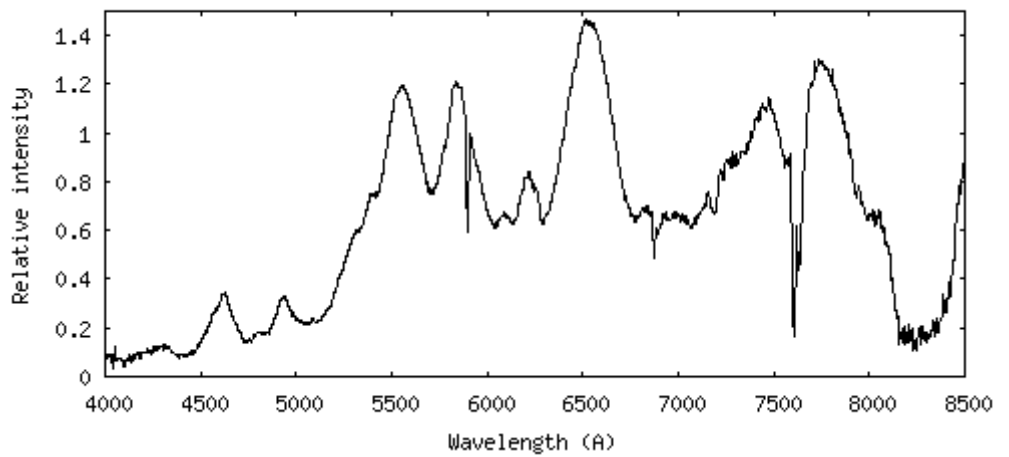
AAVSO DATA FOR SN 2014J - WWW.AAVSO.ORG



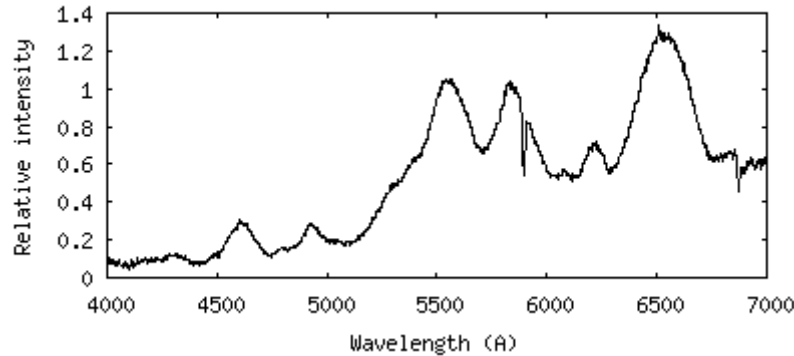
SN 2014J 20140308_946 J. Guarro



SN 2014J 20140312_792 C. Buil



SN 2014J 20140310_876 R. Leadbeater



Observers

- P. Berardi
- D. Boyd
- C. Buil
- P. Gerlach
- J. Guarro
- O. Garde
- A. Heidemann
- R. Leadbeater
- J. Montier
- JP Nougayrede