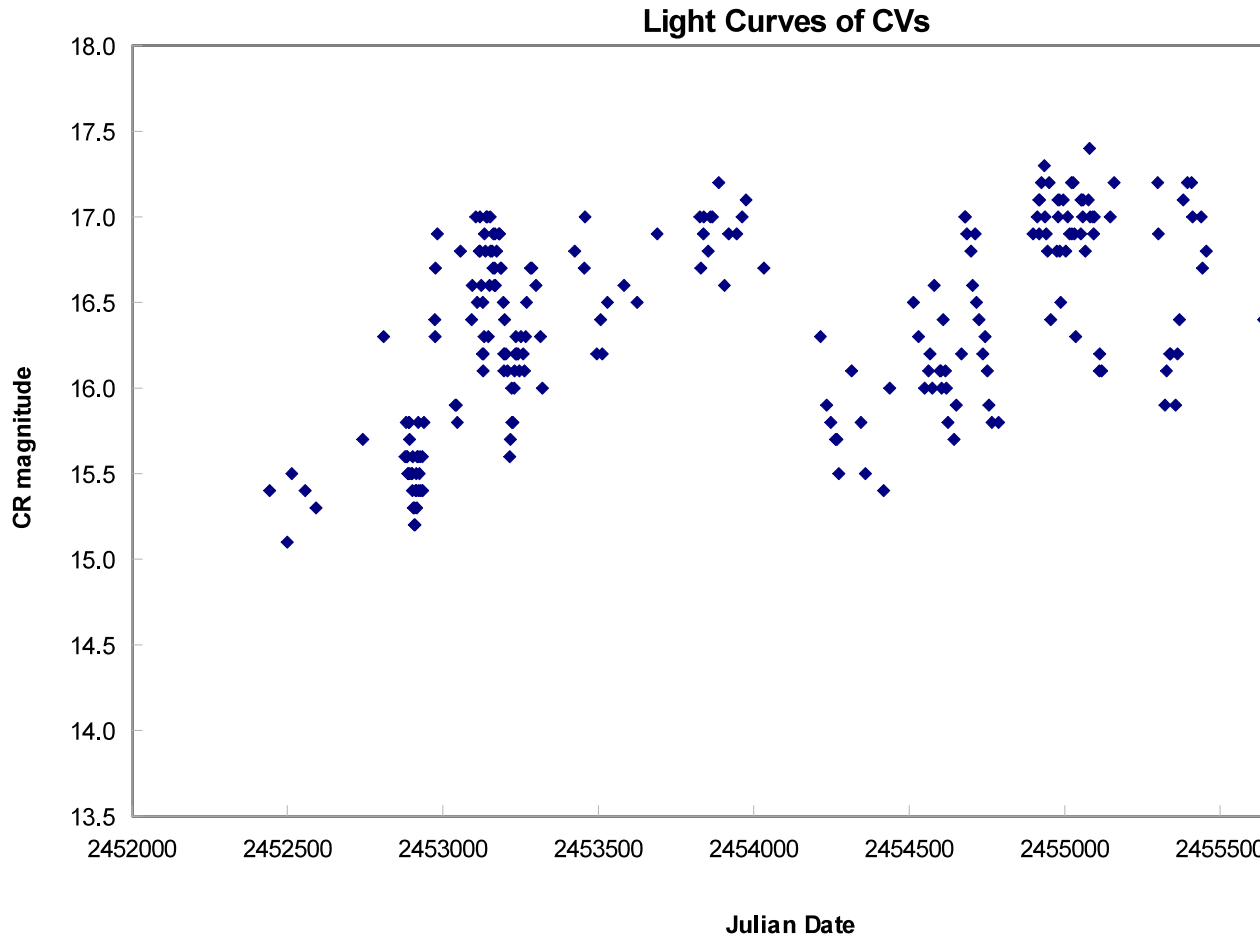


QS Telescopii

- **GCVS Name:** QS Tel
- **Other Name:** RE 1938-461
- **RA:** 19:38:35.80
- **DEC:** -46:12:56.6
- **Object Type:** am
- **Magnitude Range:** 15.2 V - 17.4 V
- **Period:** 0.097187d

Long term light curve of pola



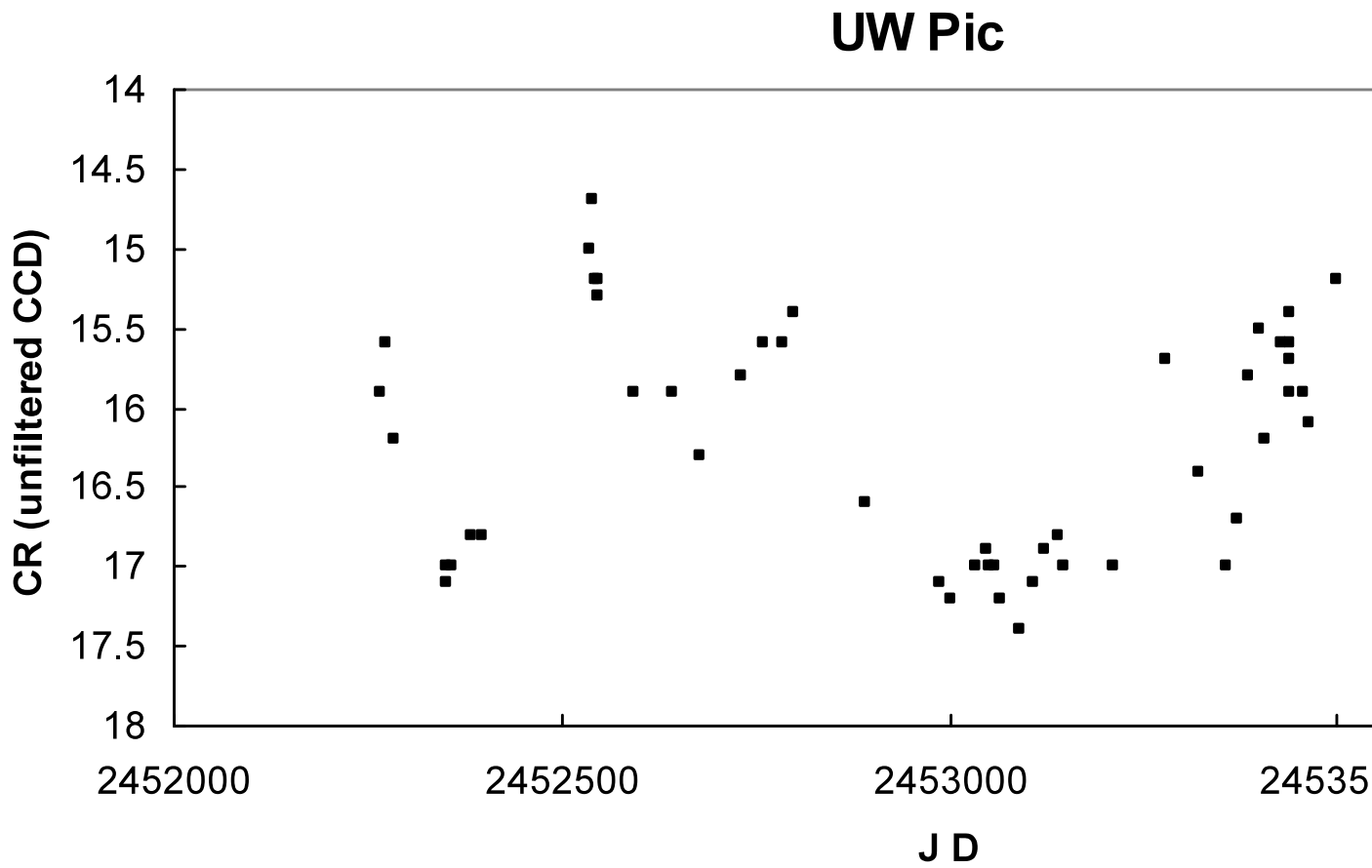
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UW Pictoris

- **GCVS Name:** UW Pic
- **Other Name:** Pic1; RX J0531-4624
- **RA:** 05:31:35.59
- **DEC:** -46:24:05.9
- **Object Type:** am
- **Magnitude Range:** 16.4 V - 17.2 V
- **Period:** 0.09264d

Long term light curve of polar U



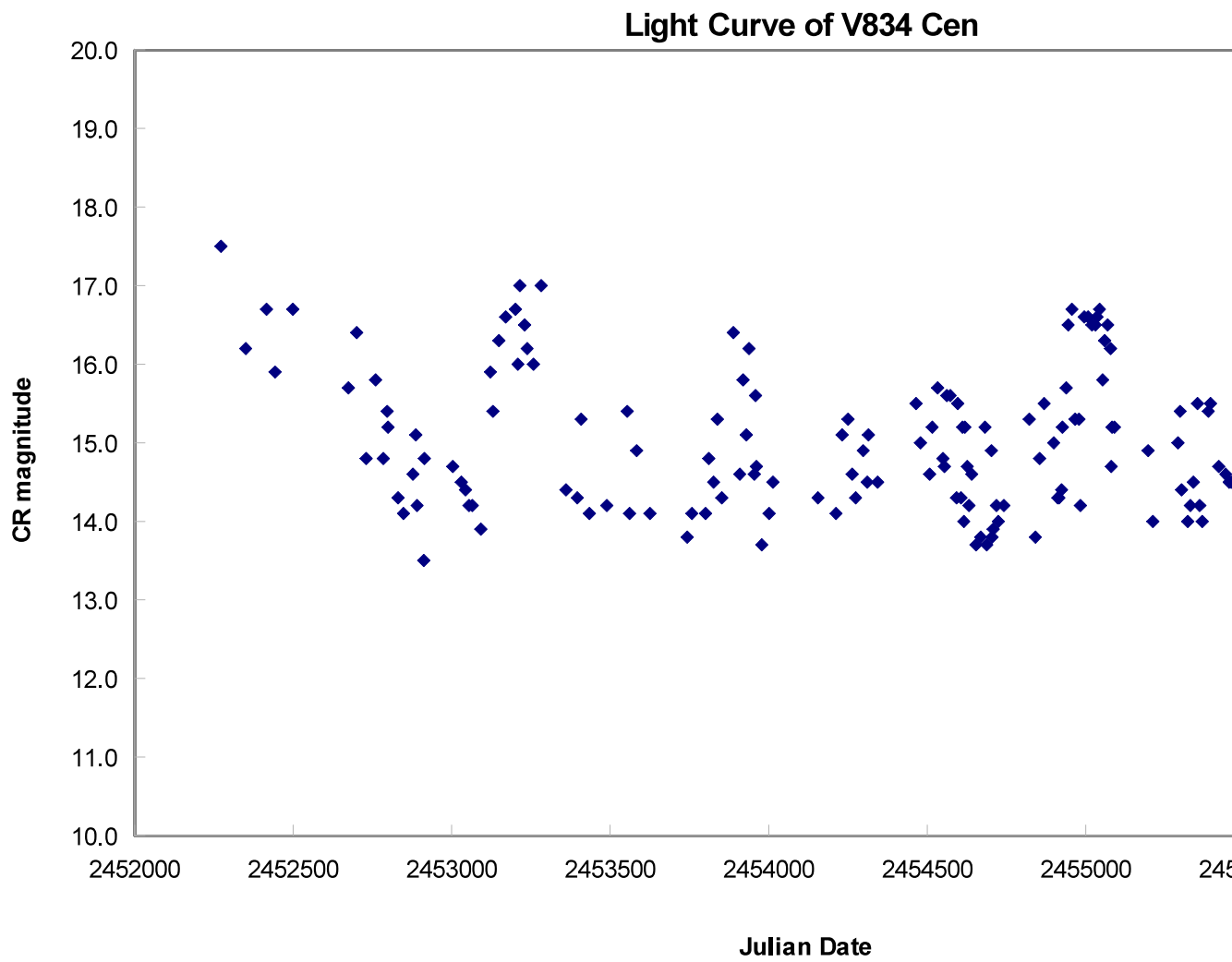
October 2012

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V834 Centauri

- **GCVS Name:** V834 Cen
- **Other Name:** 1E 1405-451
- **RA:** 14:09:07.30
- **DEC:** -45:17:16.2
- **Object Type:** am
- **Magnitude Range:** 14.2 V - 17 V
- **Period:** 0.070498d

Long term light curve of polar V83



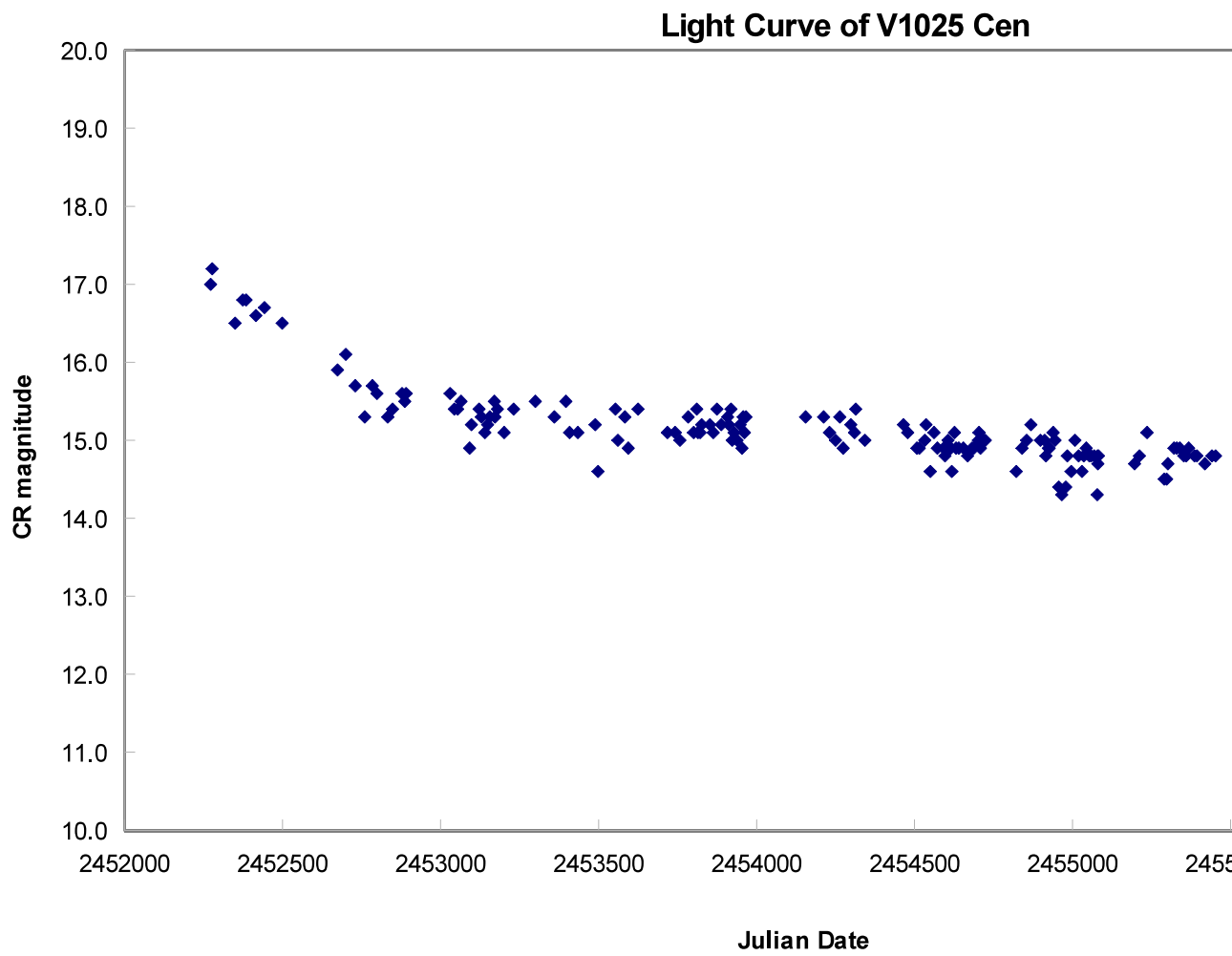
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V1025 Centauri

- **GCVS Name:** V1025 Cen
- **Other Name:** RX 1238-38
- **RA:** 12:38:16.38
- **DEC:** -38:42:46.0
- **Object Type:** dq
- **Magnitude Range:** 16.1 V -
- **Period:** -

Long term light curve of intermediate polar



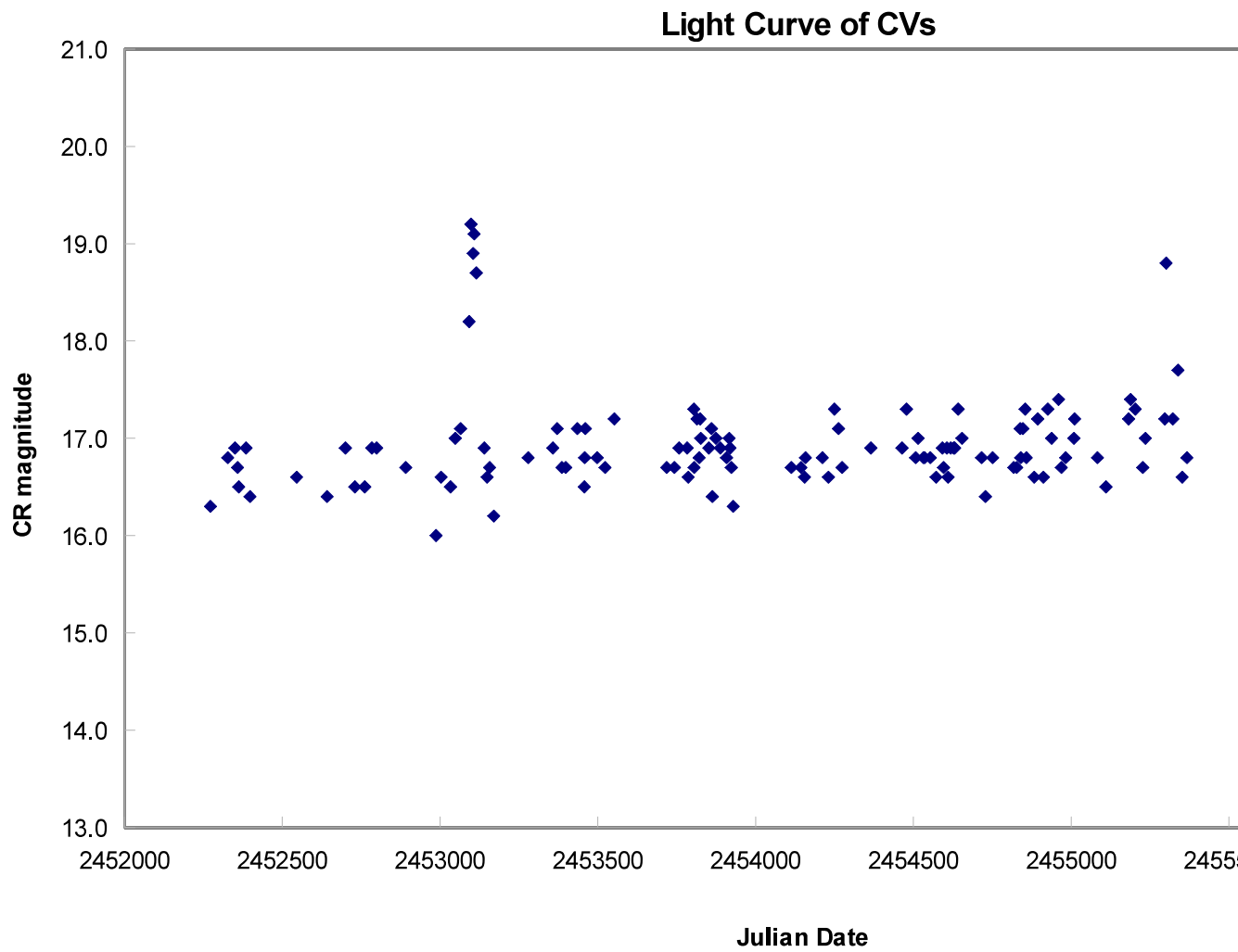
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WX Pyxidis

- **GCVS Name:** WX Pyx
- **Other Name:** Pyx2; 1E 0830.9-2238
- **RA:** 08:33:05.74
- **DEC:** -22:48:32.2
- **Object Type:** am:/dq
- **Magnitude Range:** 16.2 V - 17.7 V
- **Period:** 0.2307 d

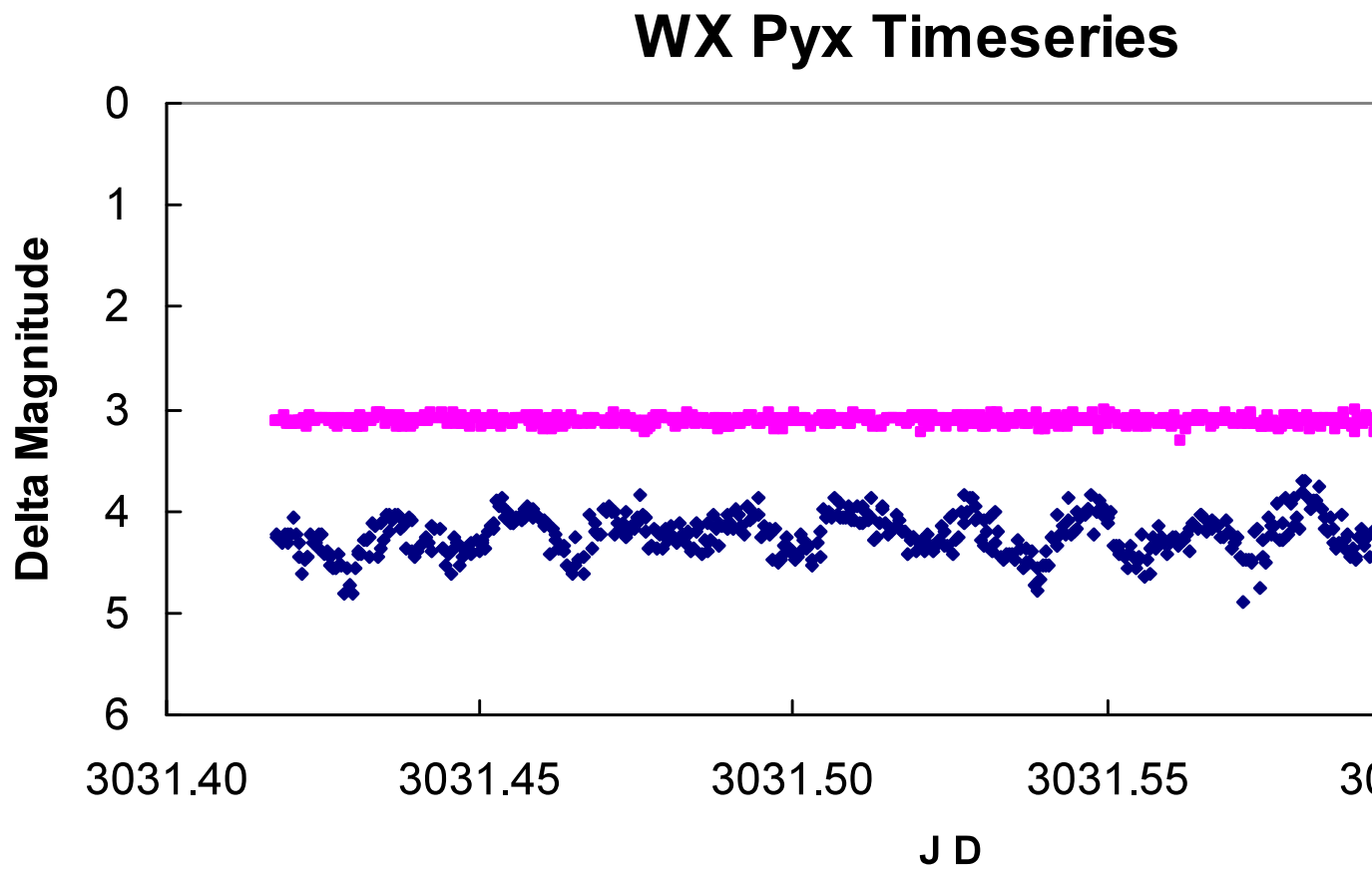
Long term light curve of magnetic CV V



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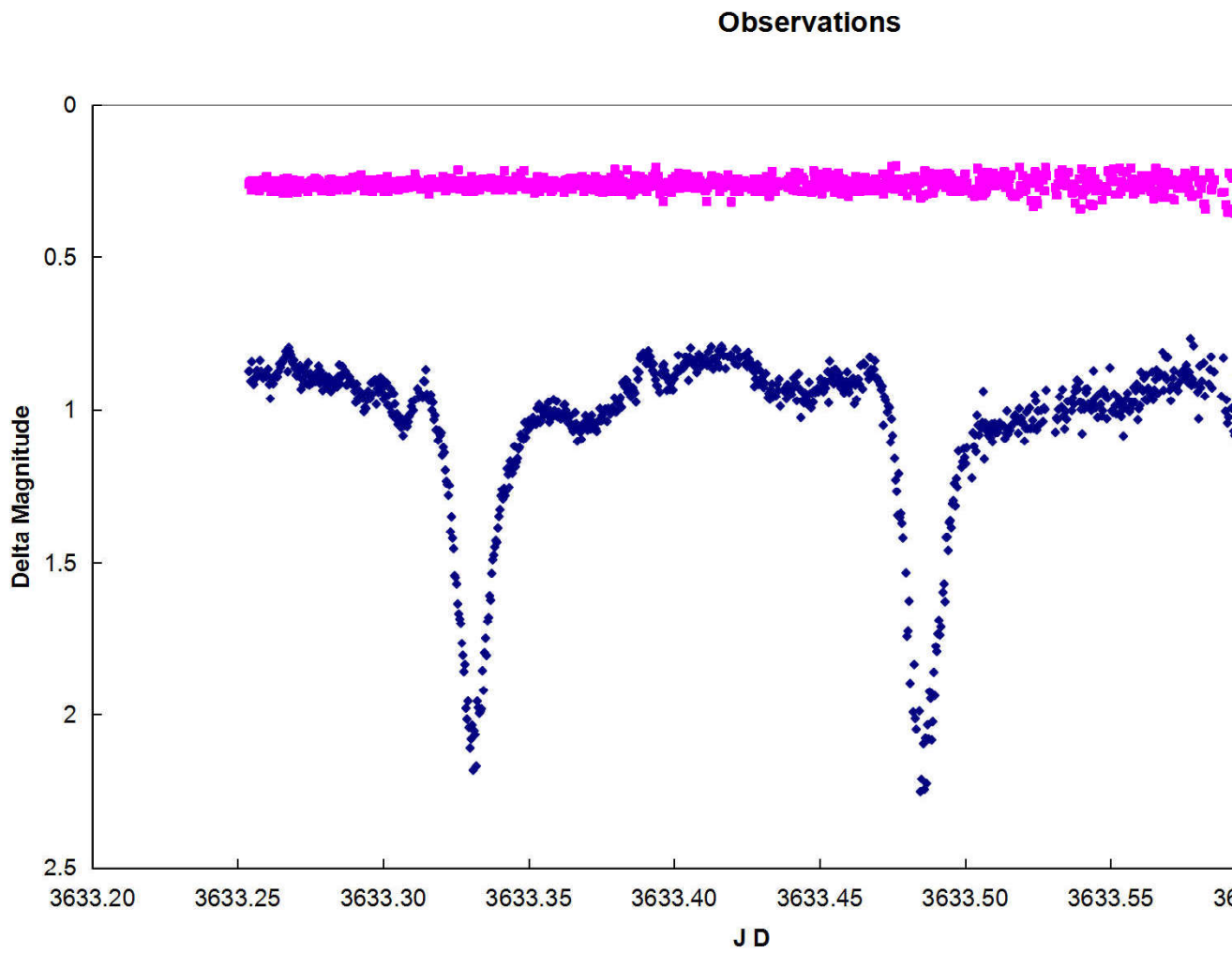
Timeseries photometry of WX Pyx



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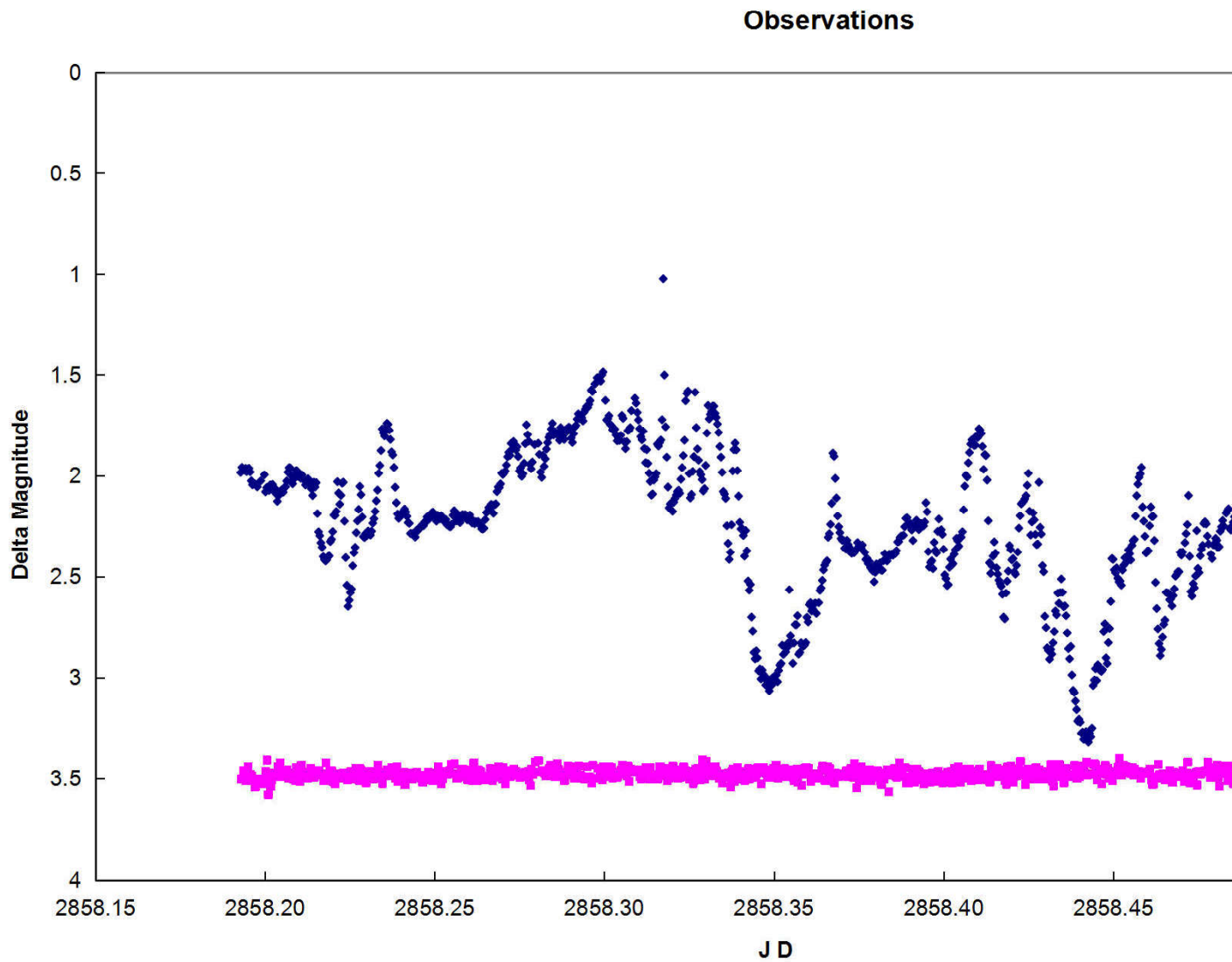
Eclipsing system in Ind



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8h of microquasar activity (V46)

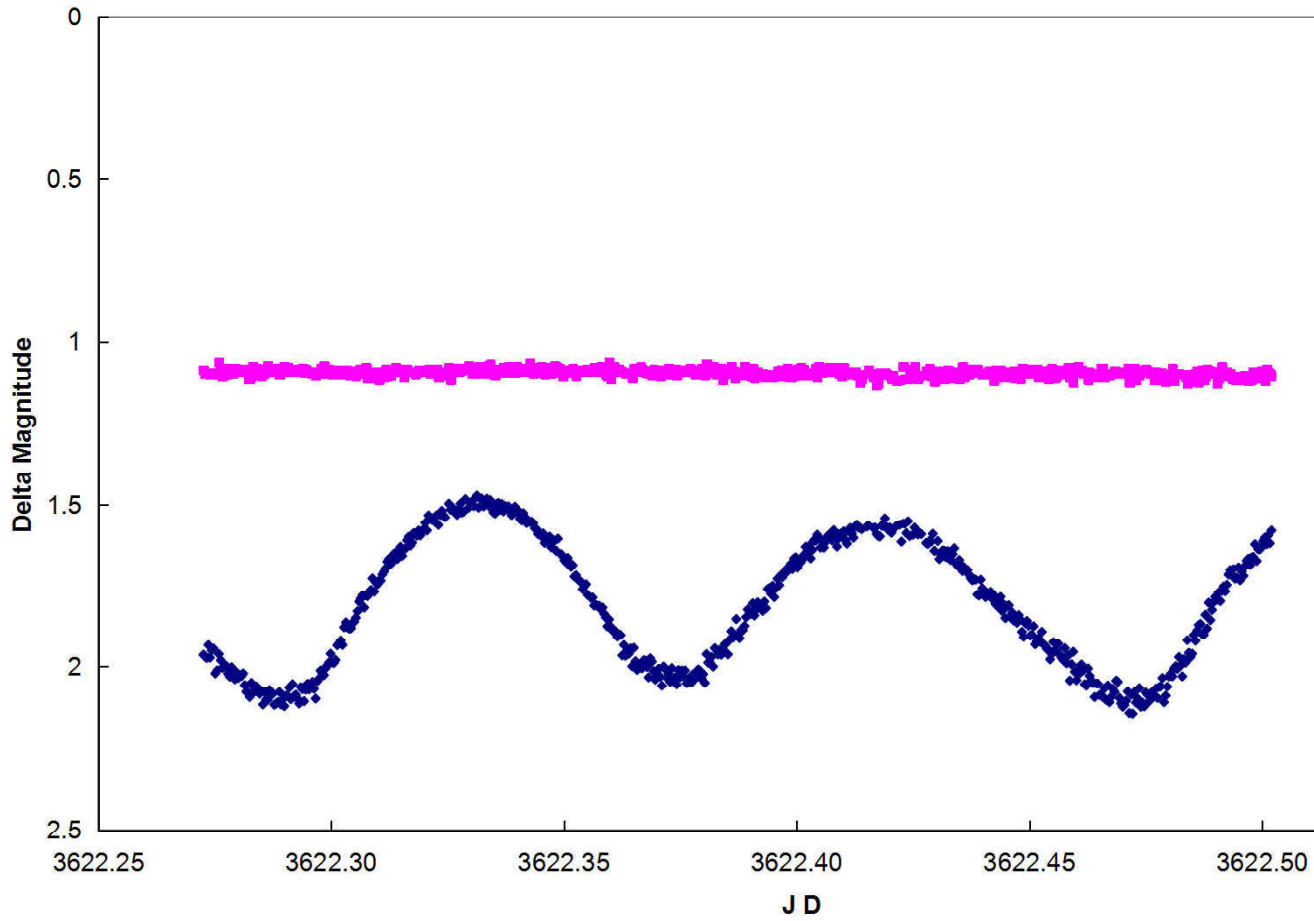


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Minor planet Atossa

Observations

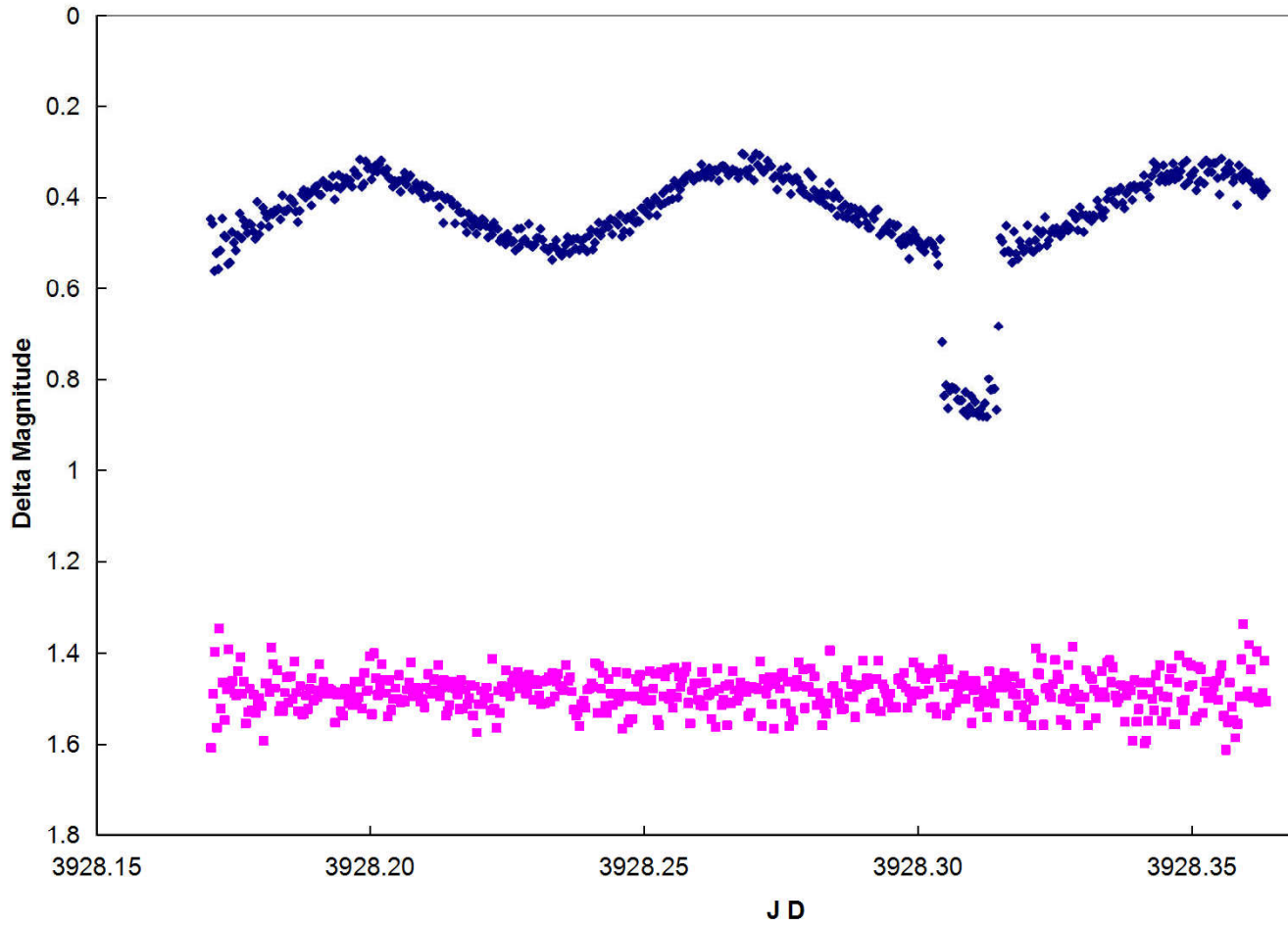


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EC 13471-1258 / peculiar system

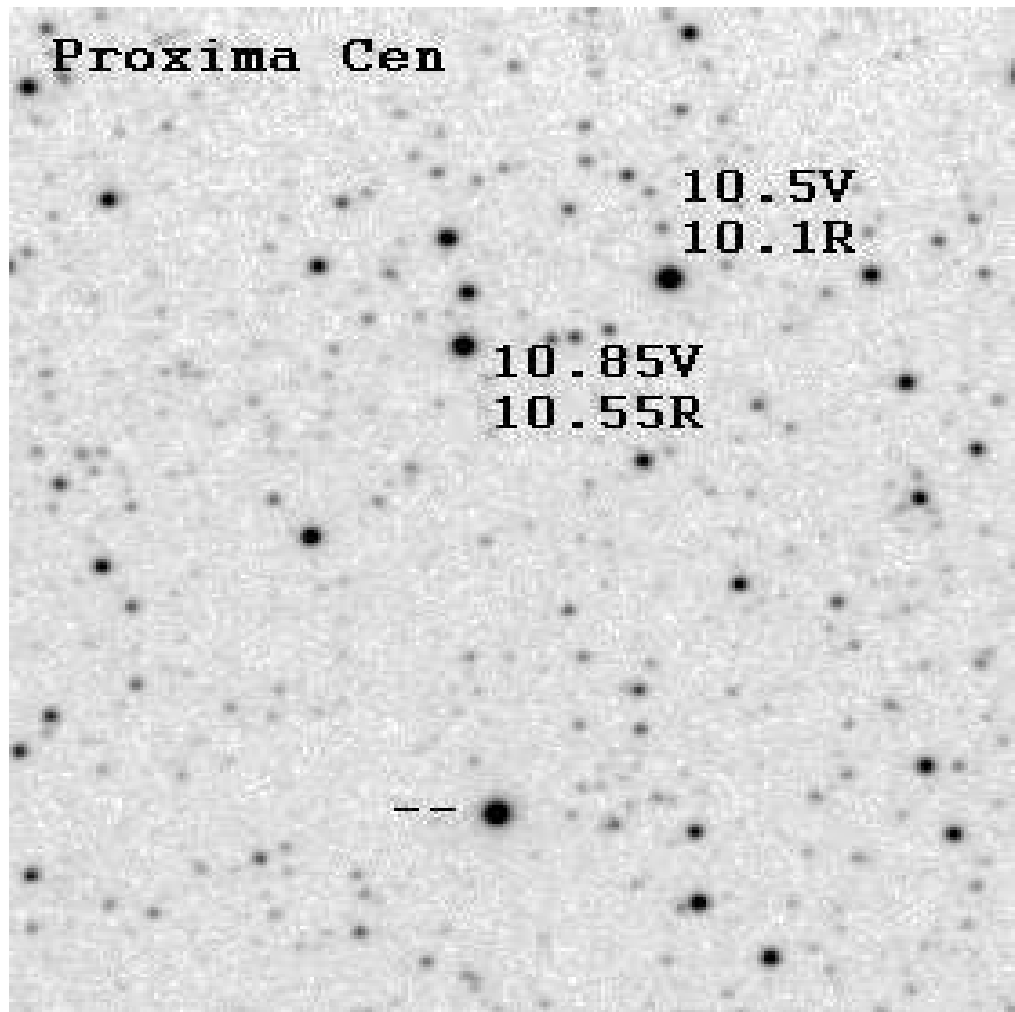
Observations



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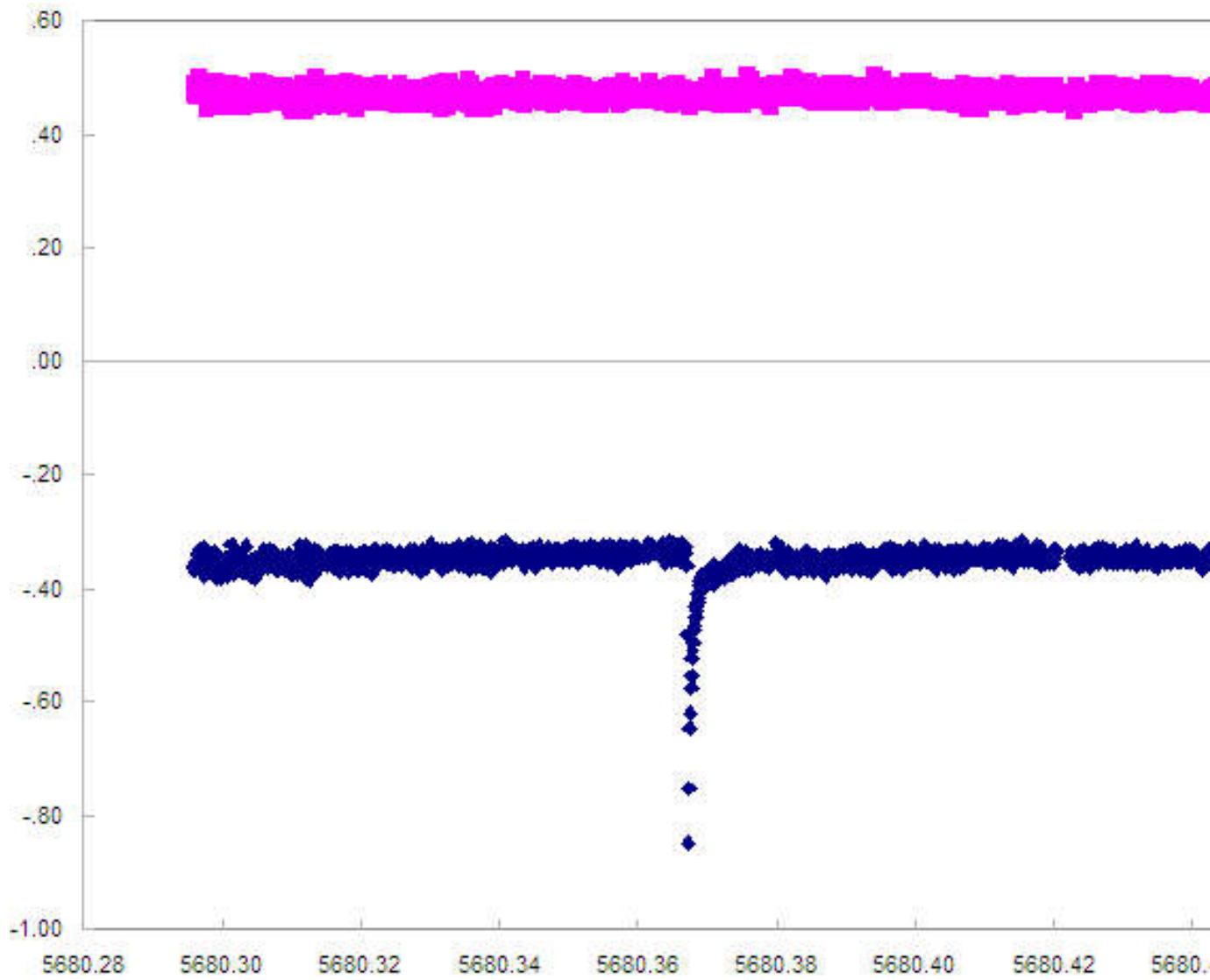
Proxima Cen star field



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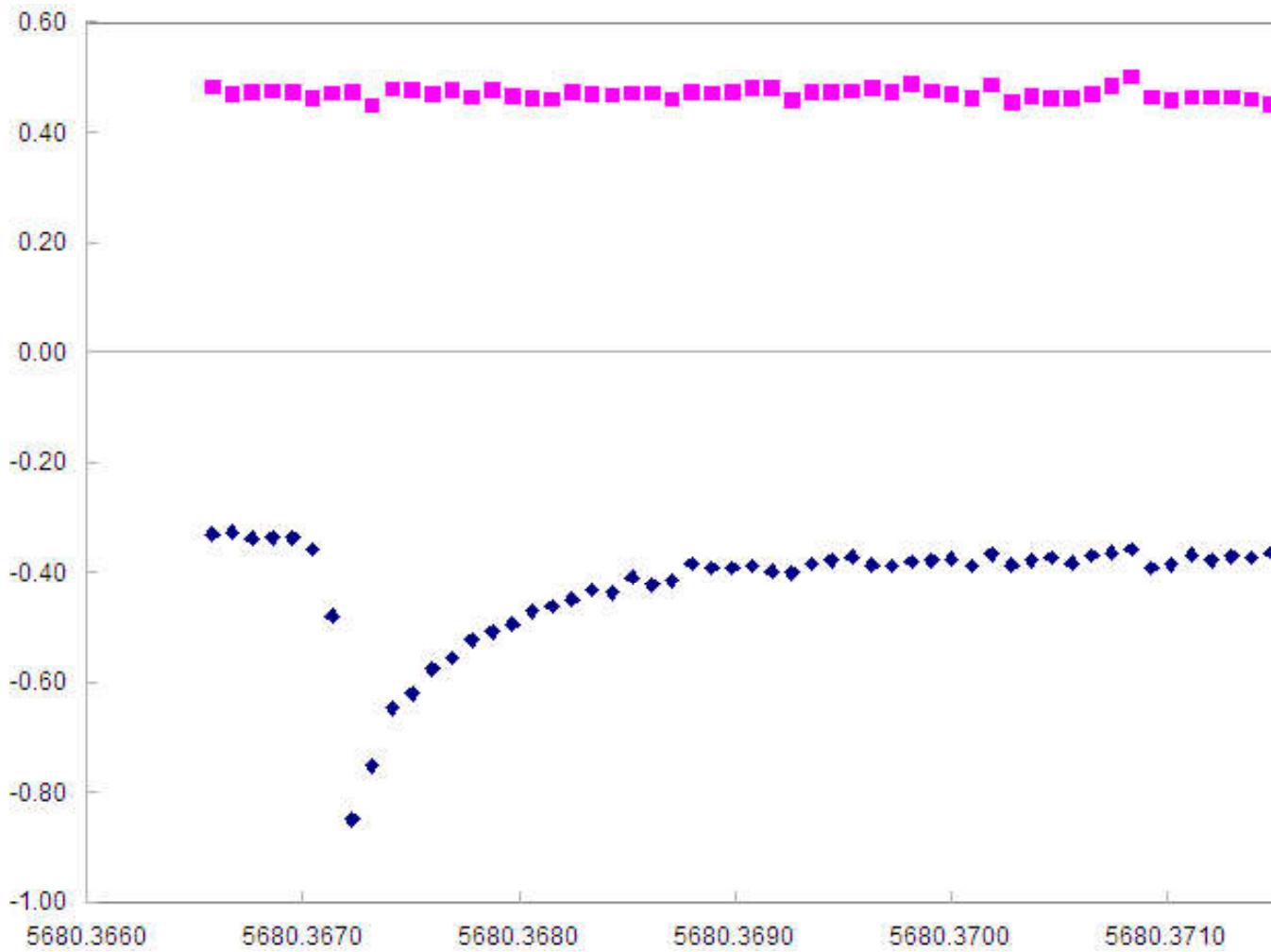
Proxima Centauri on 28 Apr 2012



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Bright flare on Proxima Cen on 28 Apr (KK Obs, R filtered CCD, 8 sec cadence)



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Divers merits of these progr

- Detailed study of CVs (CBA publ
- Identification of the suspect
- Characterization (ugsu, RRab)
- Frequency and level of outburst
- A hint to an idea of evolution of
of activities of polars
- All kinds of interesting behaviou

CCD Observing Programme

Supernova Searching

To discover SNe in nearby galaxies by r searches

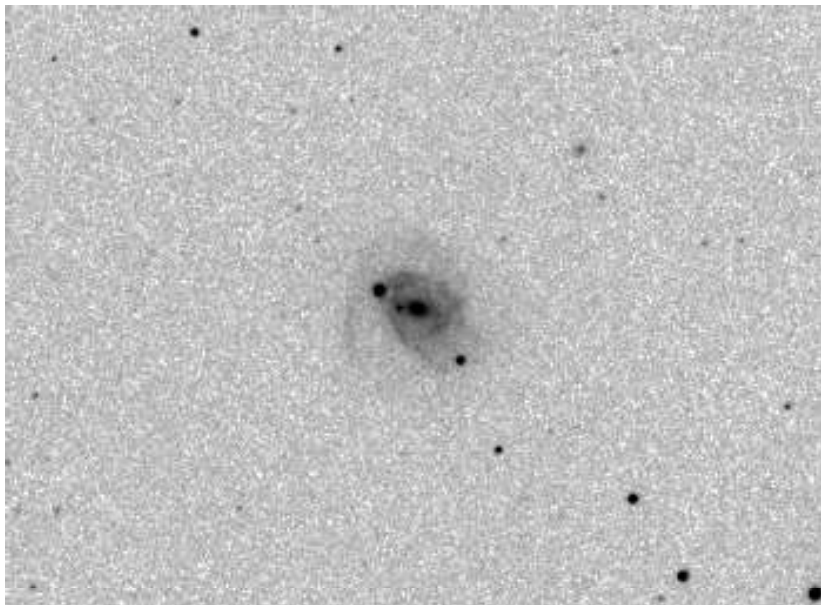
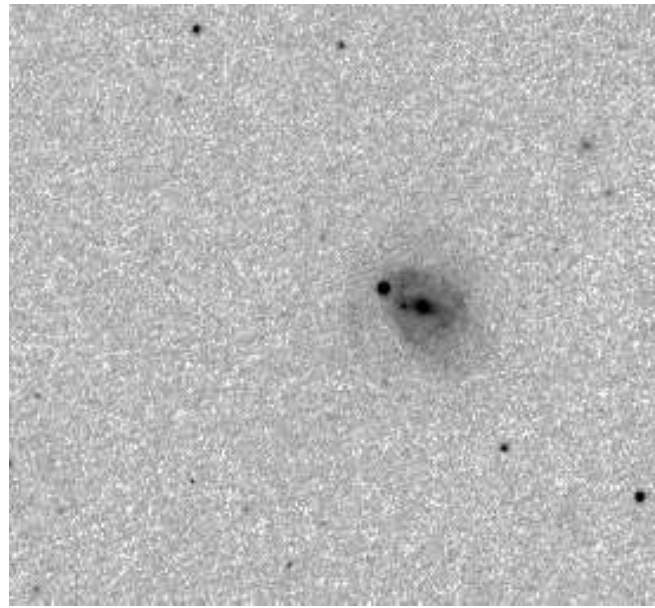
- Executing a well researched target list
- Observing frequency dictated by 'calcu productivity of the individual target ga
- Observing depth determined by estim distances (co-adding images)
- Quite successful: 126 discoveries to da

Two types of Supernova

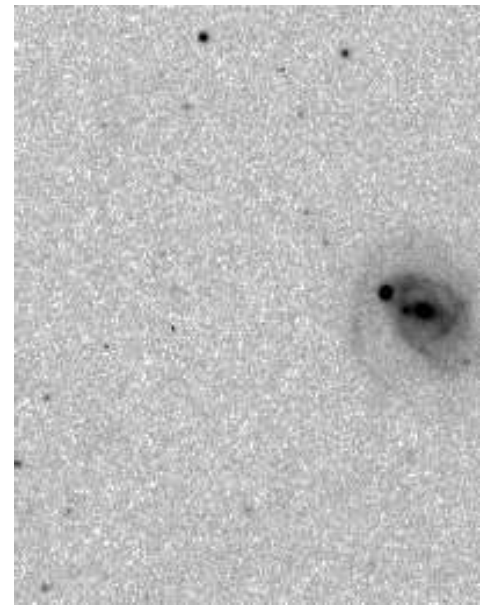
- **Core collapse SNe: type II, Ib/c : energetic**
- stars of initially 8+ sun masses end a short violent implosion
- remnant: neutron star or black hole

- **Type Ia: desintegrating WD after reaching sun mass: less energetic but 2 mag brighter**
- WDs increase their mass as part of an accretion binary system
- remnant: none

SN 2011eb in NGC 782



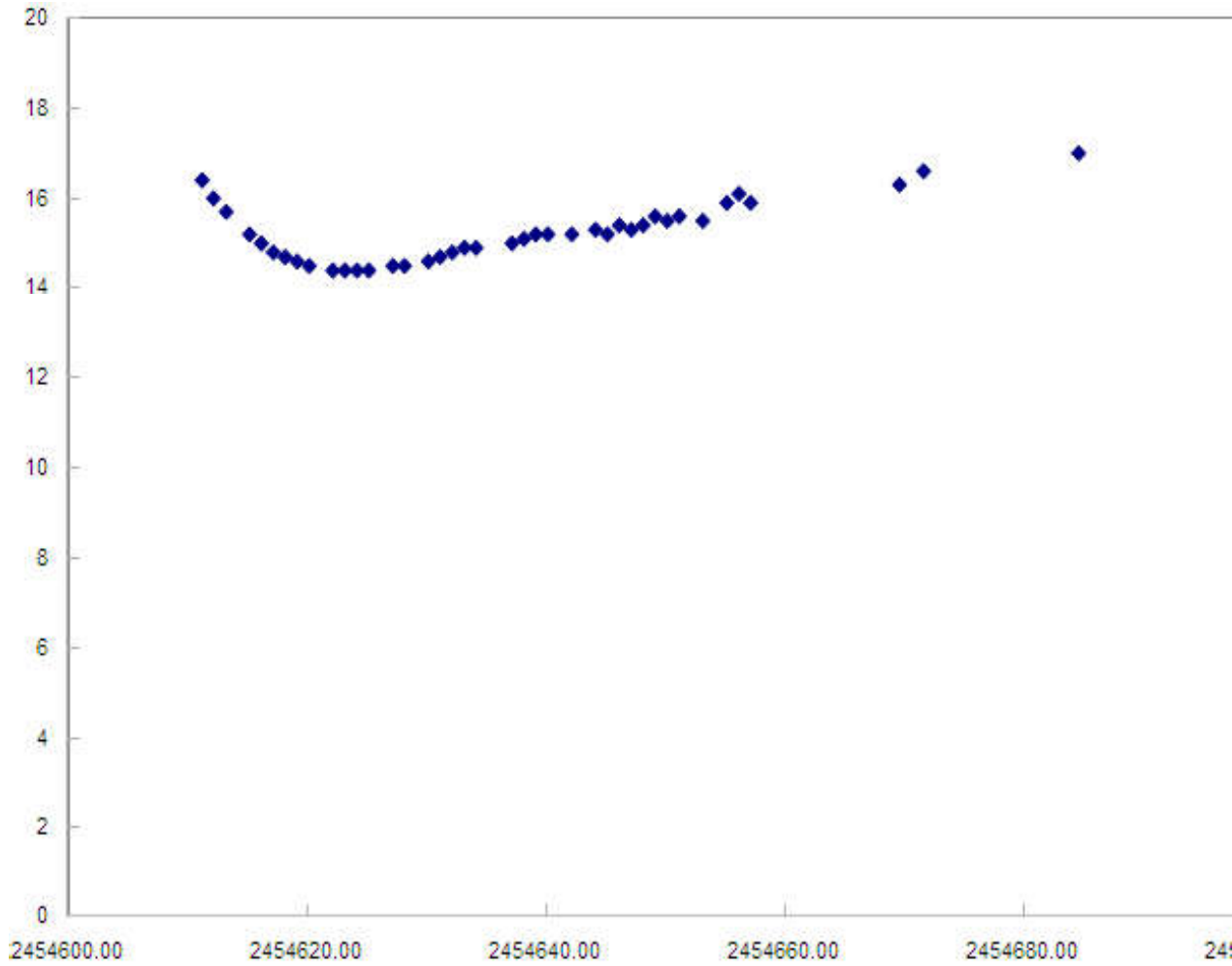
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SN 2008cm (NGC 2369) light curve

Unfiltered CCD (Rmag)



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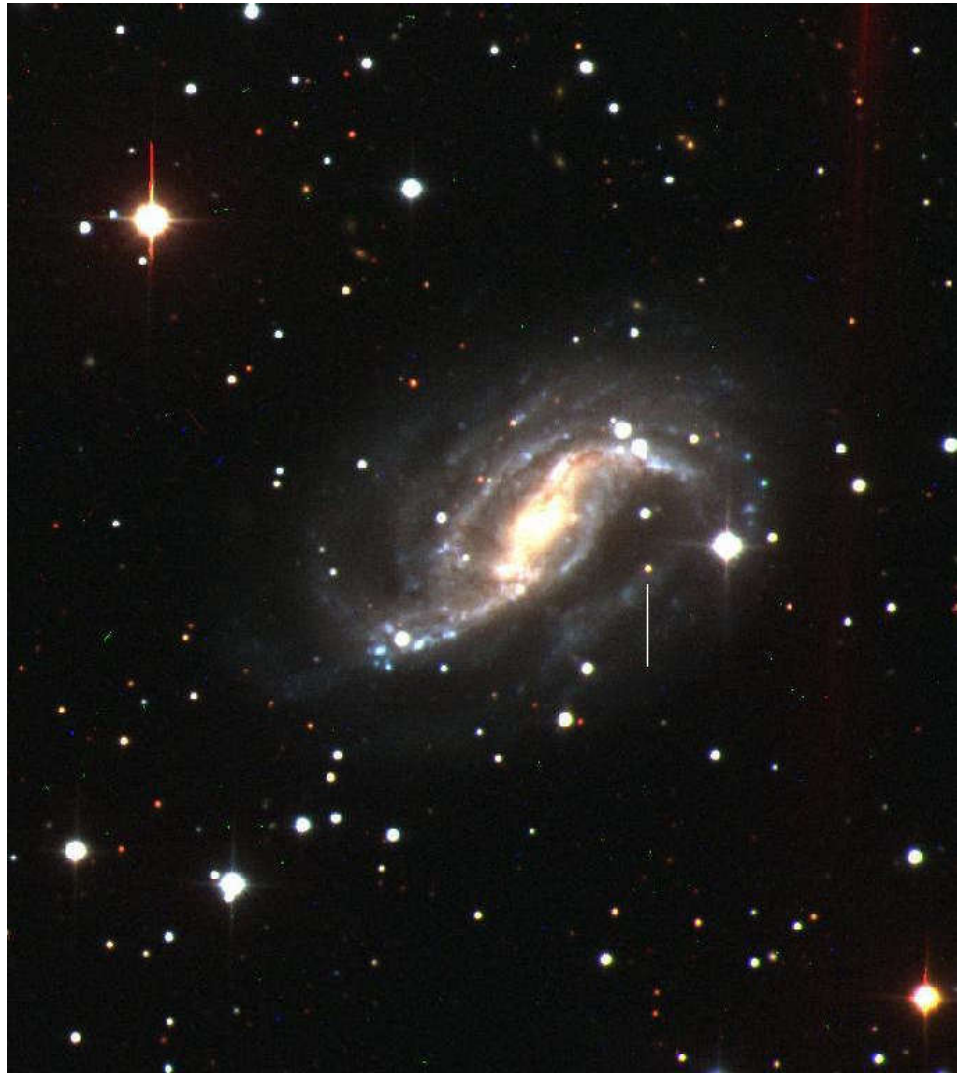
SN 2001el in NGC 1448



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SN 2004ej in NGC 3095 / CSP im



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SN 2004gt in NGC 4038 (Antennae) /



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SN 2005Q and SN 2005me in ESO 244-31 /



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SN 2006T in NGC 3054 / CSP im



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SN 2006ba in NGC 2980 / CSP in



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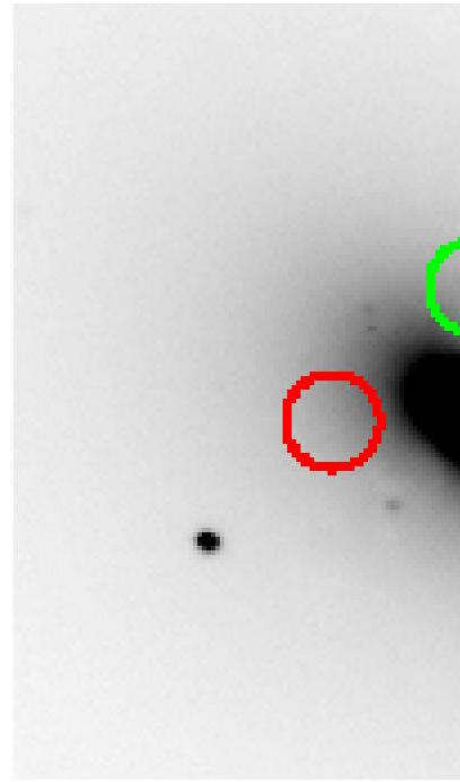
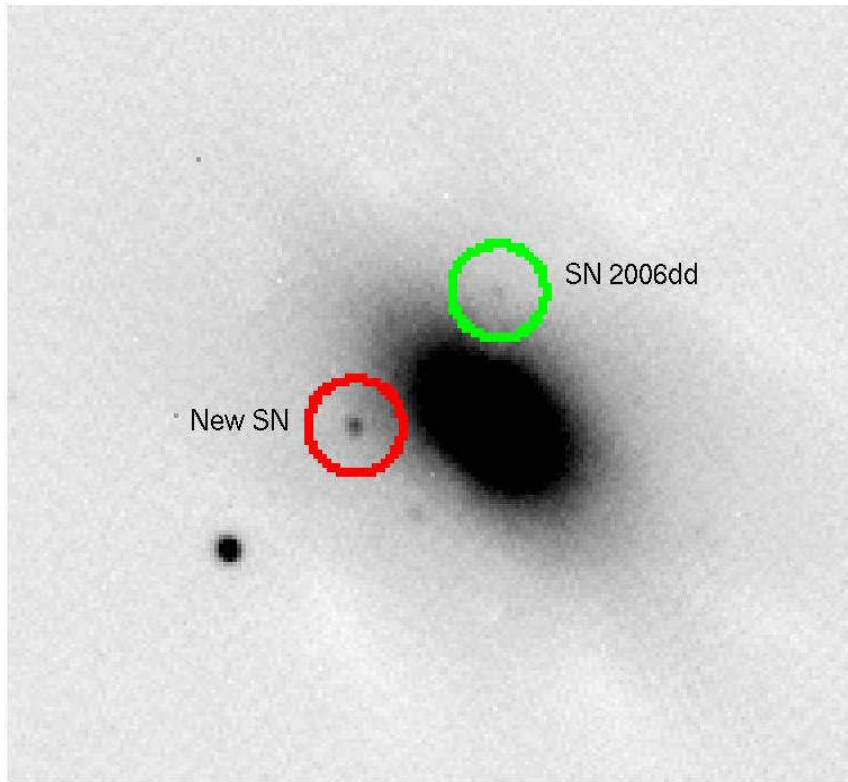
SN 2006bh in NGC 7329 / CSP in



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SN 2006dd and SN2006mr in nearby NGC 1316 (Fornax A)



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SN 2007X in ESO 385-32 / CSP in



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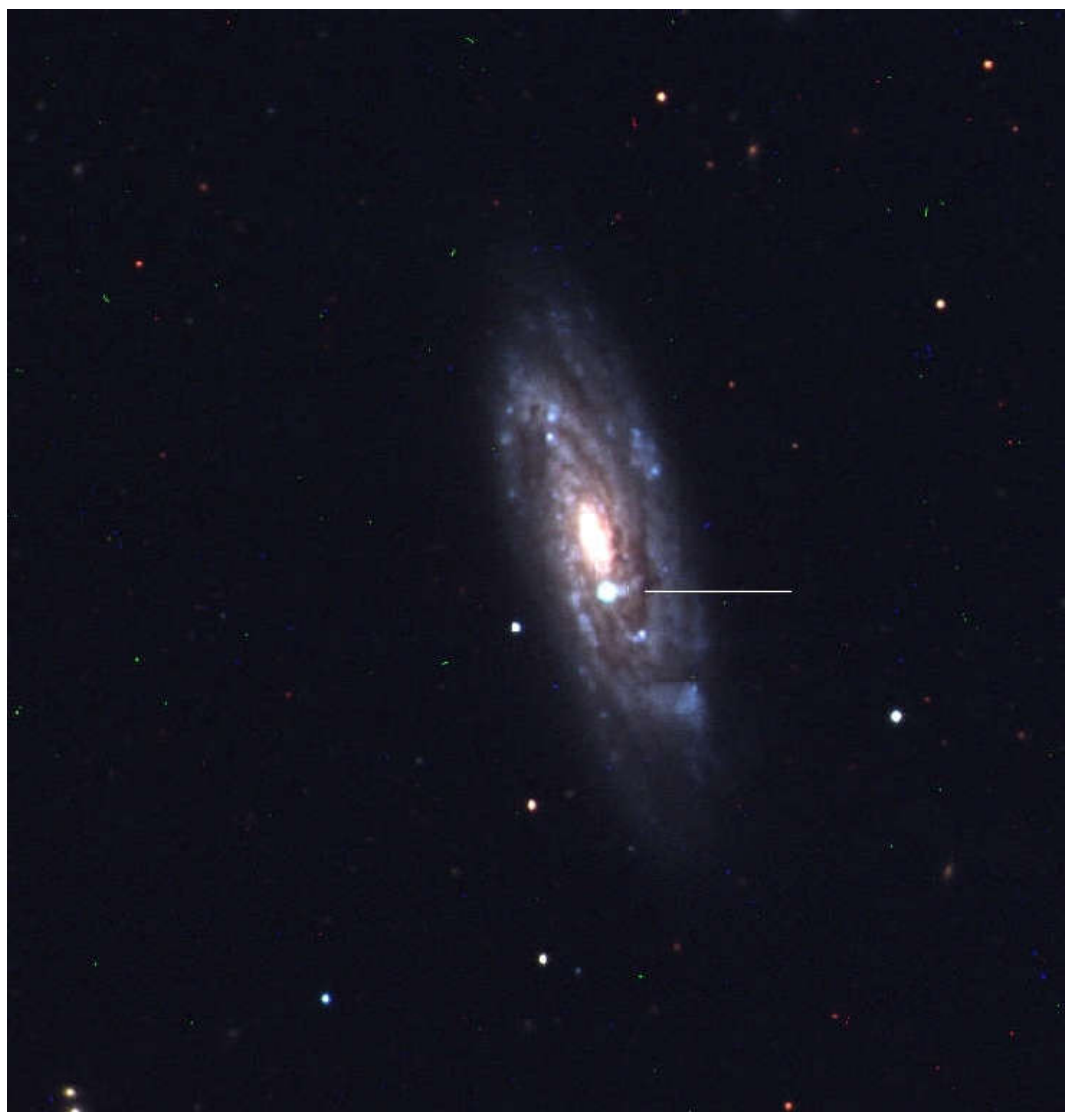
SN 2007Y in NGC 1187 / CSP im



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SN 2007le in NGC 7721 / CSP im



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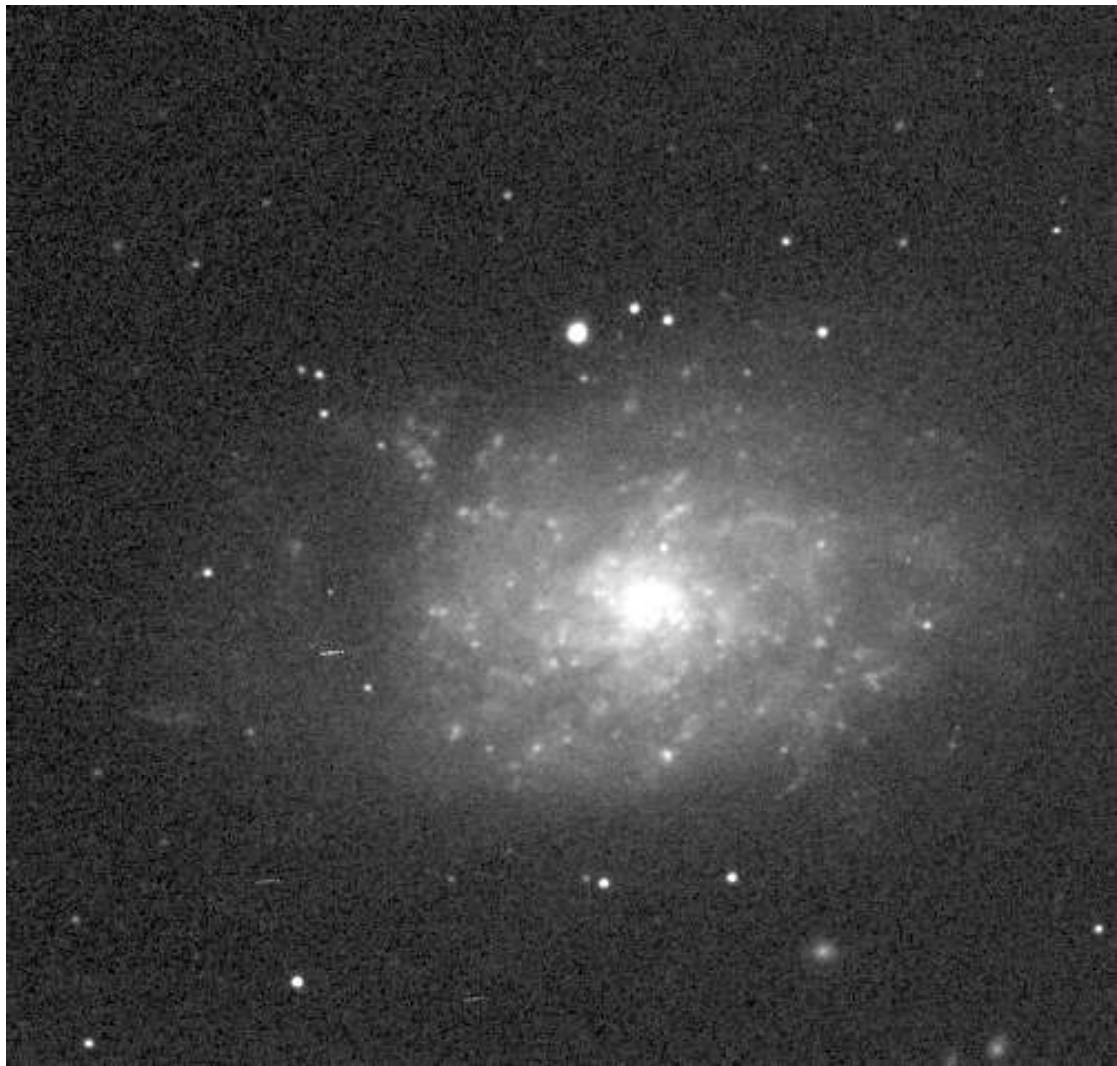
Discovery image of SN 2008bk in I



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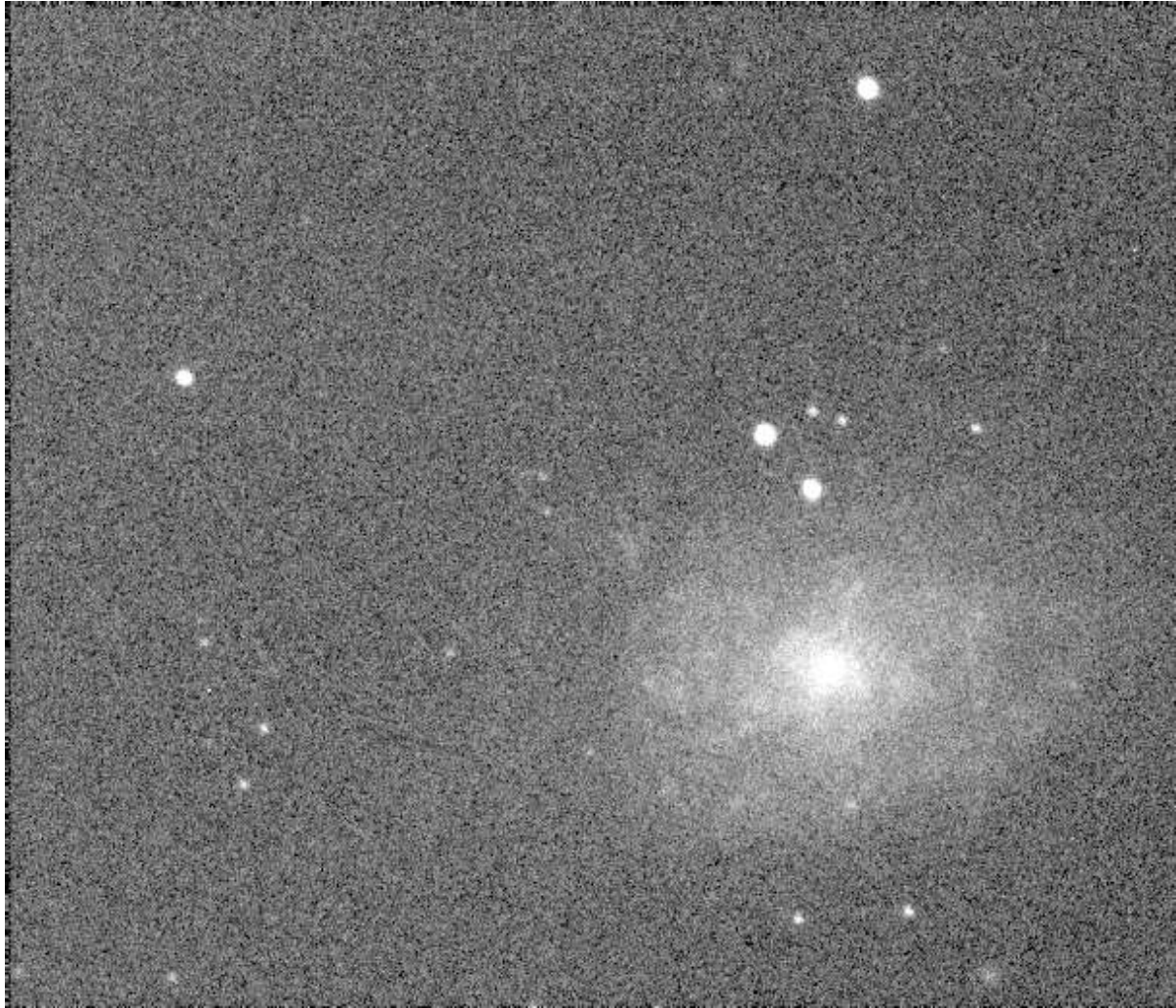
NGC 7793



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SN 2008bk two weeks later



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Crab Nebula (M1): SN remnant in t



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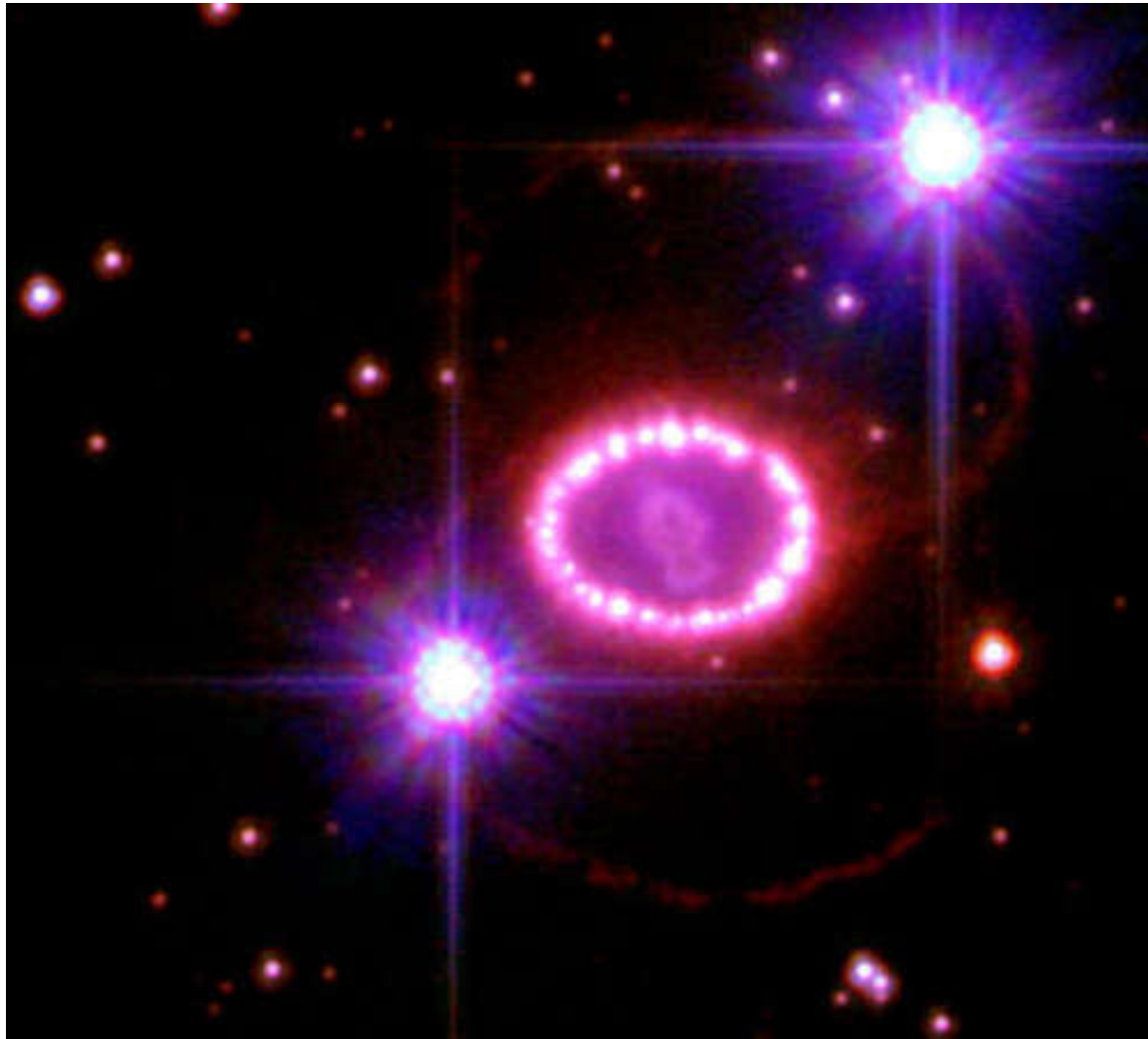
M1 / Crab Nebula / Opt-Xray



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SN 1987A remnant



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Sculptor Galaxy NGC 30



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Optical Transient of 2008 in NGC



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CCD Observing Programmes

Southern Symbiotic Stars

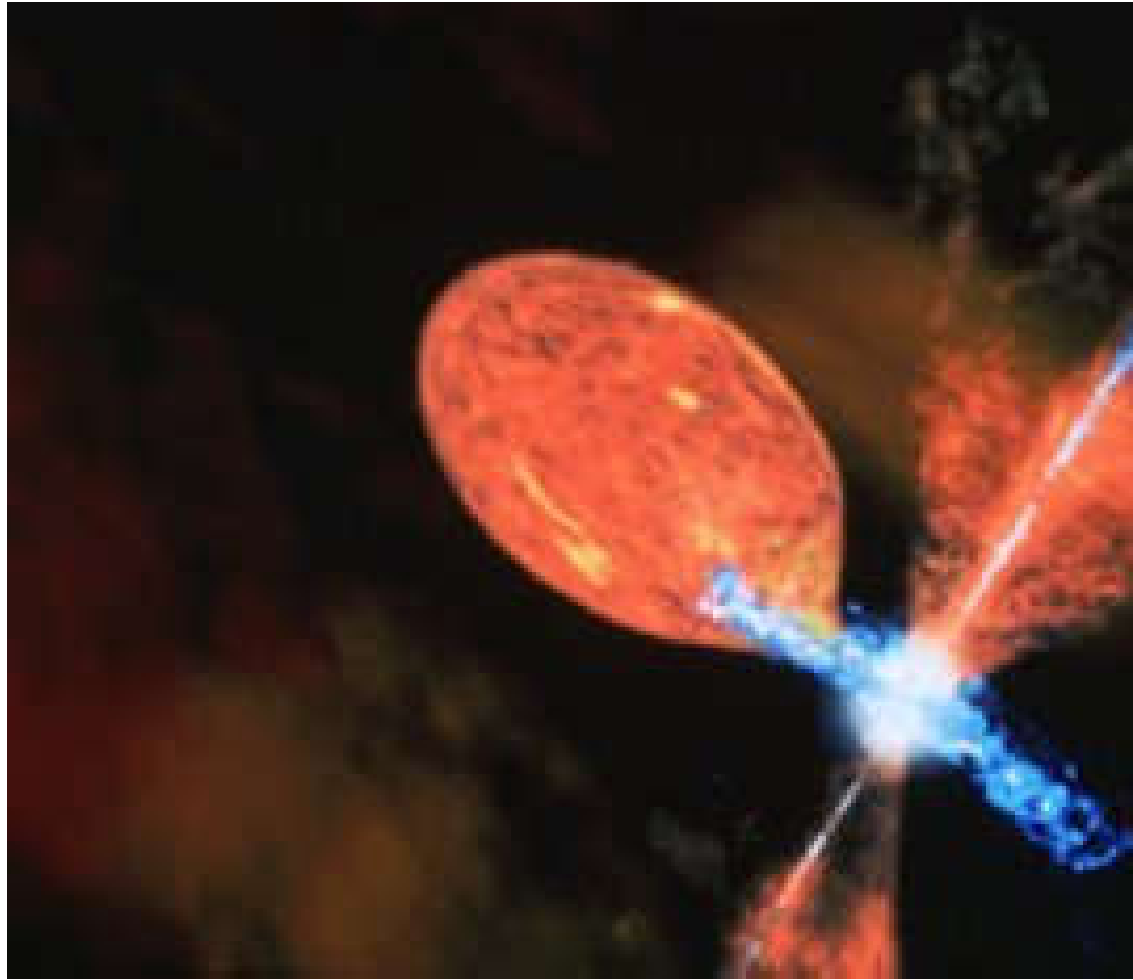
Periodic monitoring of known and suspected Z Andromeda stars (+ other types)

- 200+ targets since end 2004
- Observed (bi-)monthly
- Observed in V band

Symbiotic stars = Z And

- Eruptive stars, similar to CVs
- Much larger systems
- Red giant + WD (or other companion type)
- Approximate size of system: $\sim 10^3$ sun
- Orbital period : months to years

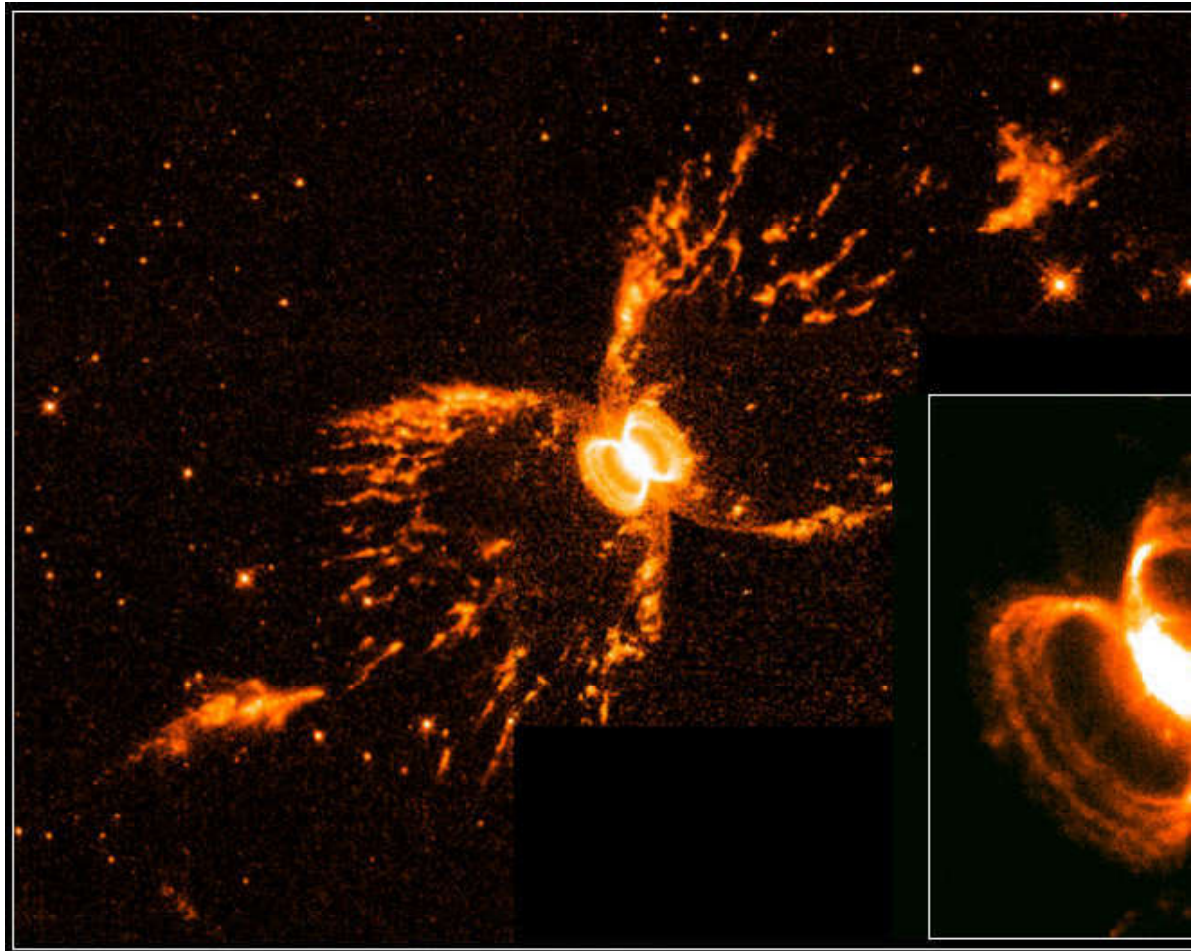
R Aquarii



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Symbiotic star system V852



Southern Crab Nebula • He2-104

PRC99-32 • STScI OPO • R. Corradi (Instituto de Astrofísica de Canarias) and NASA

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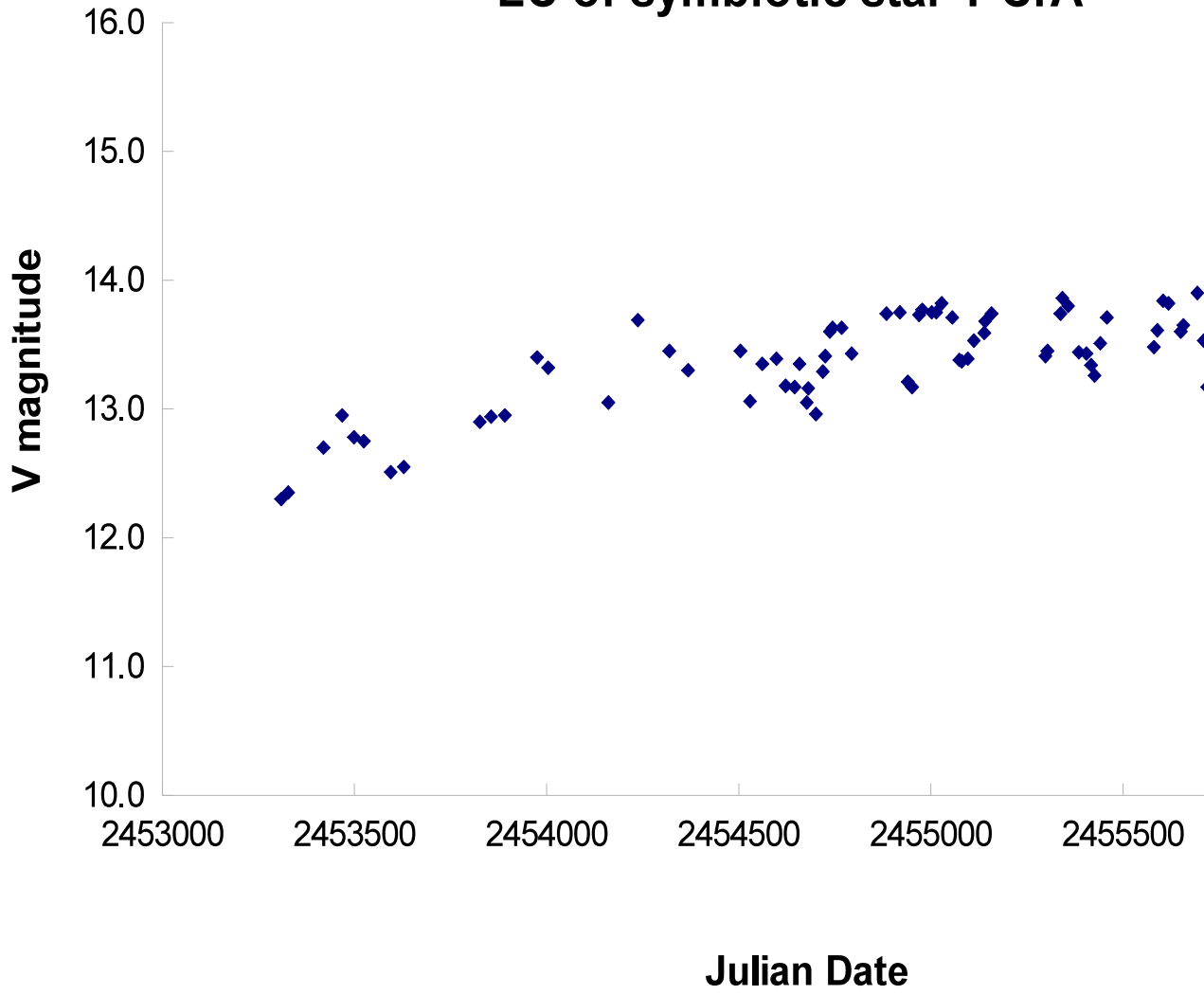
Planetary Nebula



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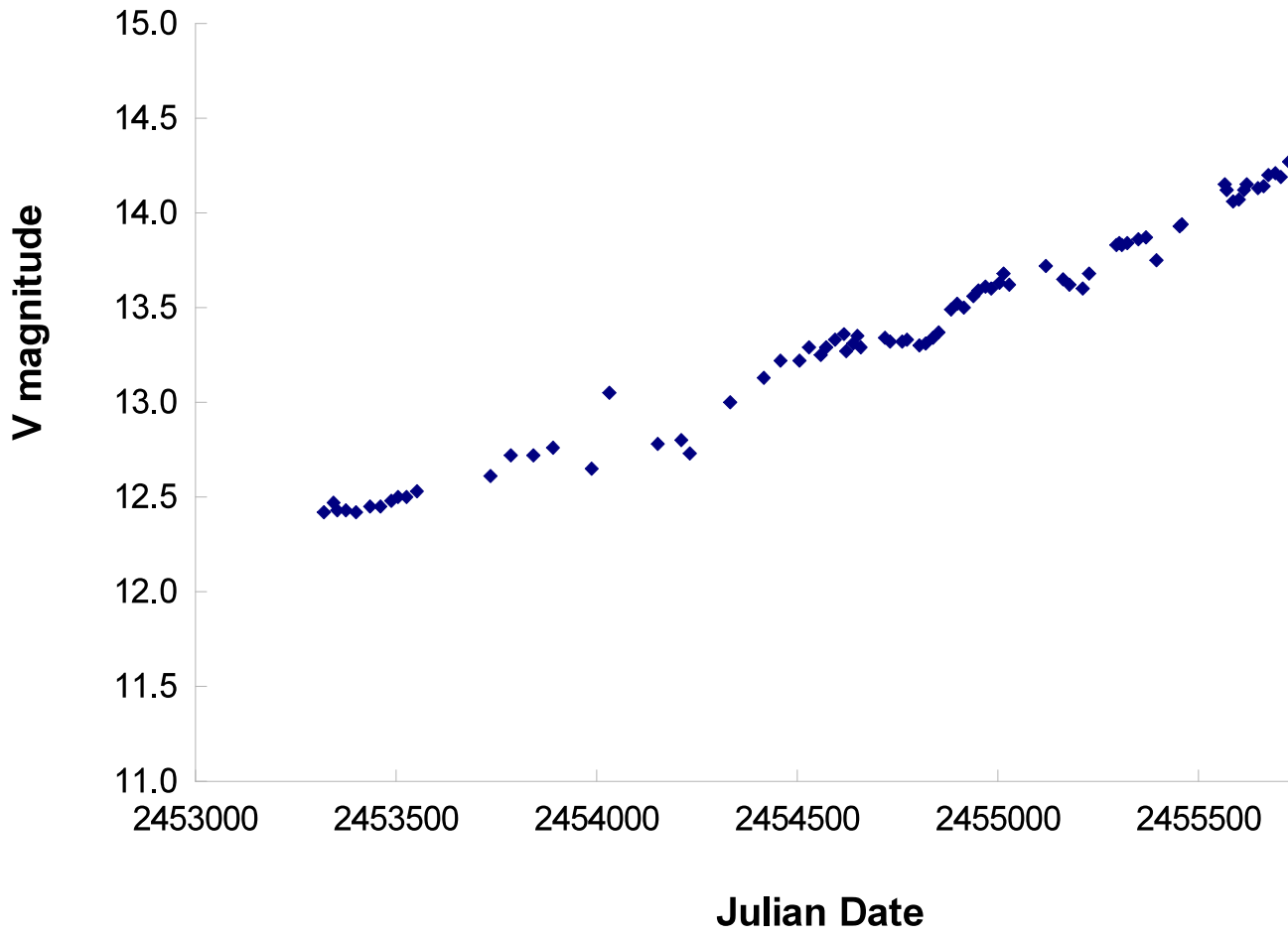
LC of symbiotic star Y CrA



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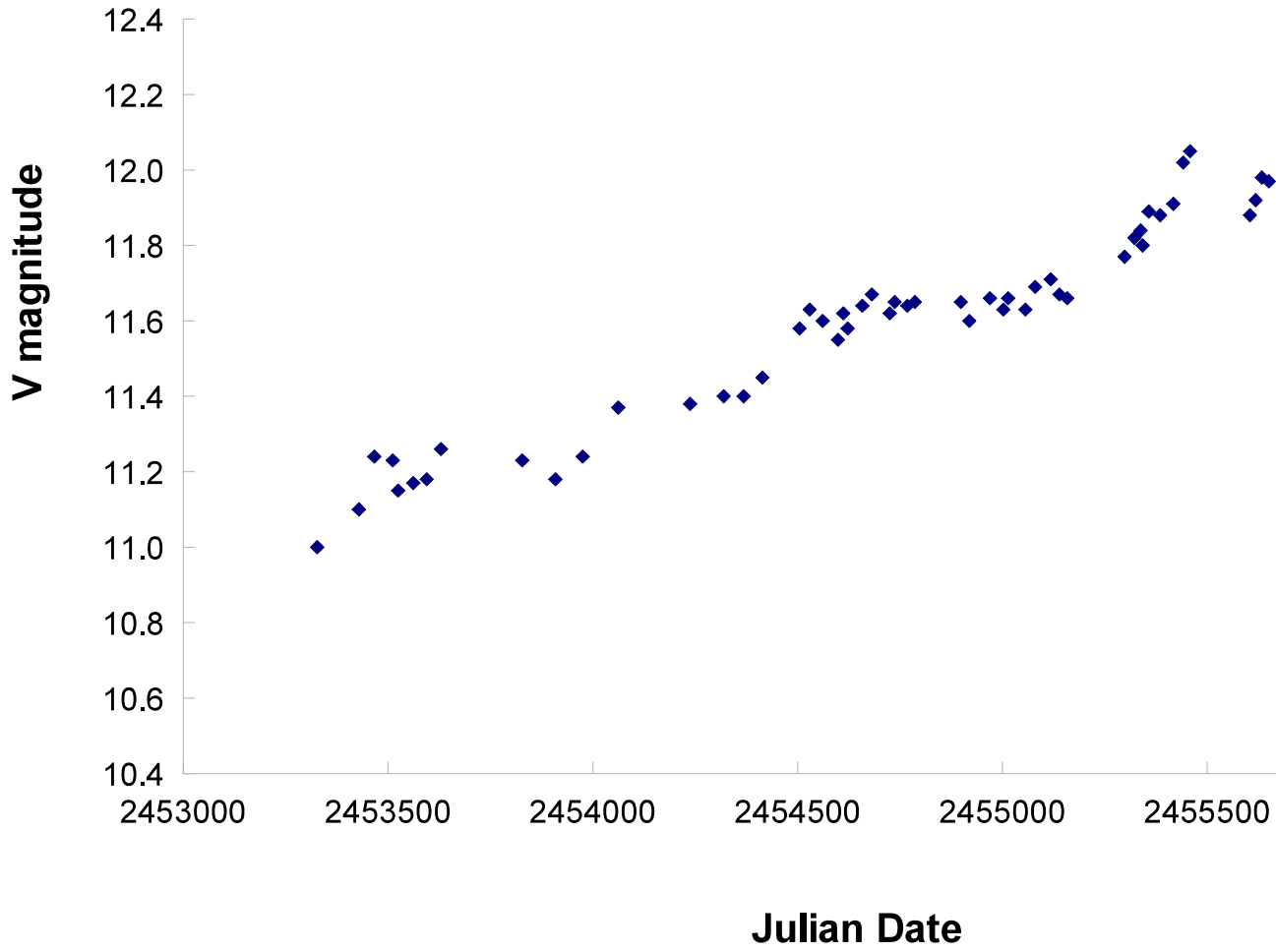
LC of of symbiotic star RX Pu



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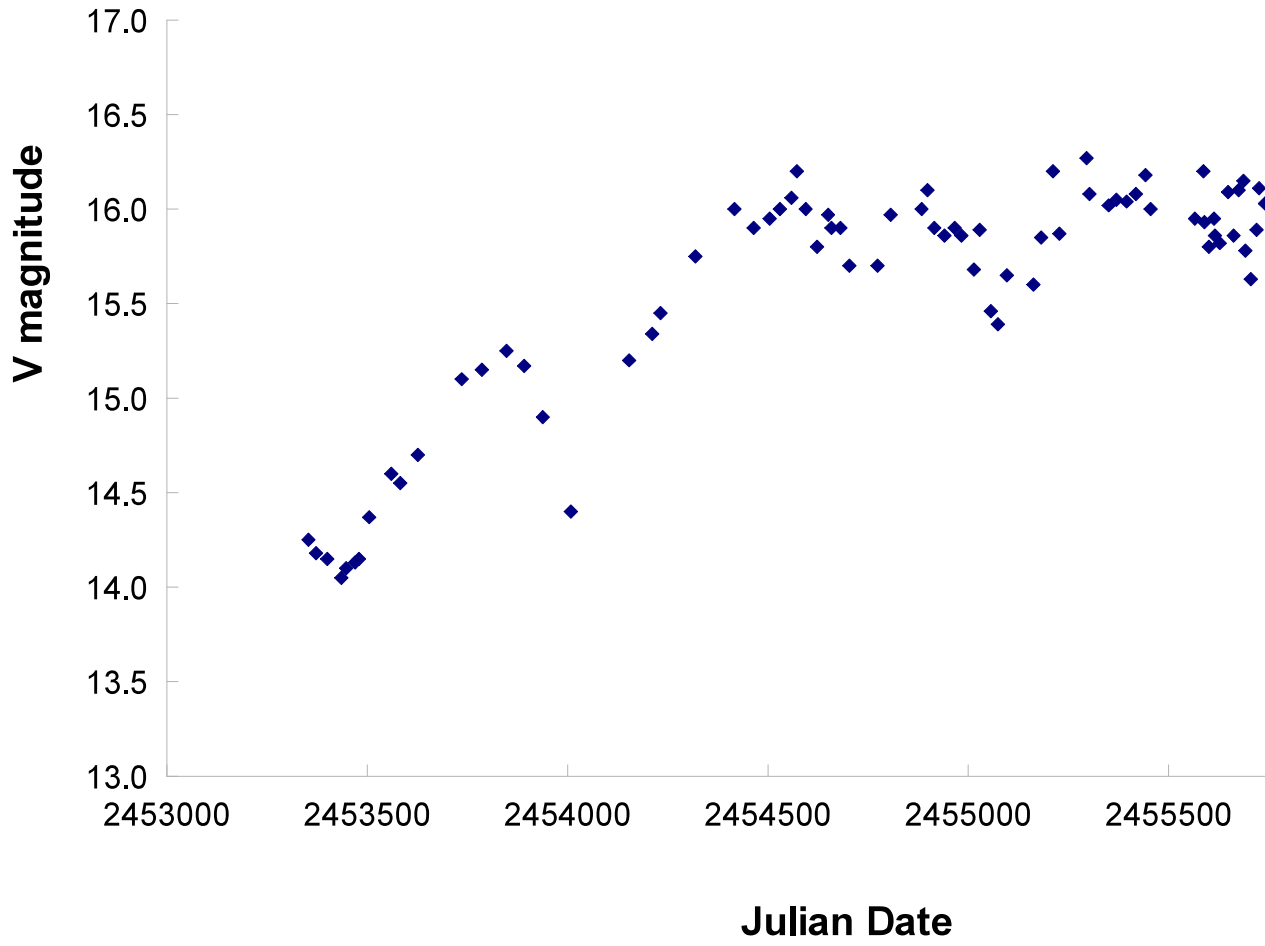
LC of symbiotic star V4368 Sgr



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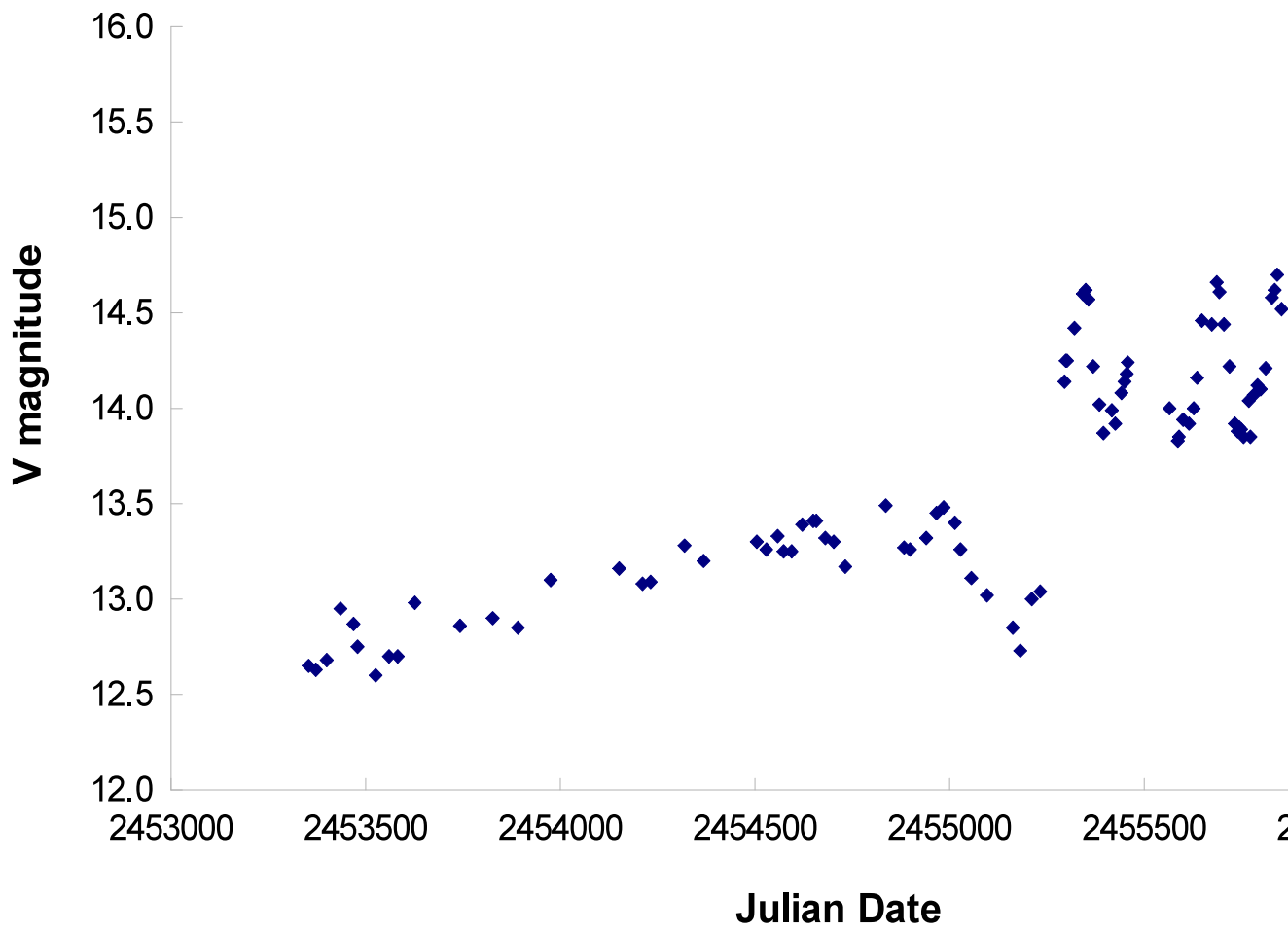
LC of symbiotic star ST 2-22



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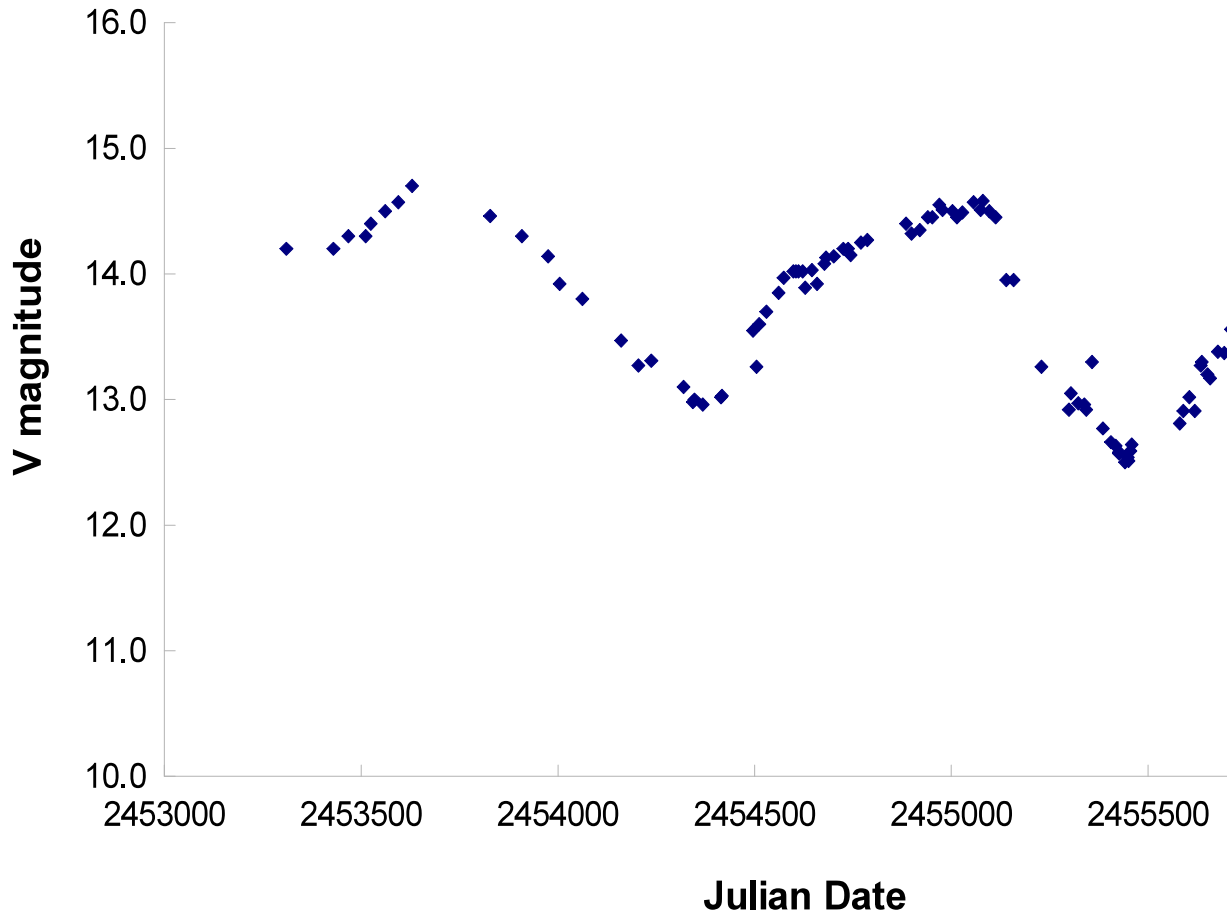
LC of symbiotic star AE Cir



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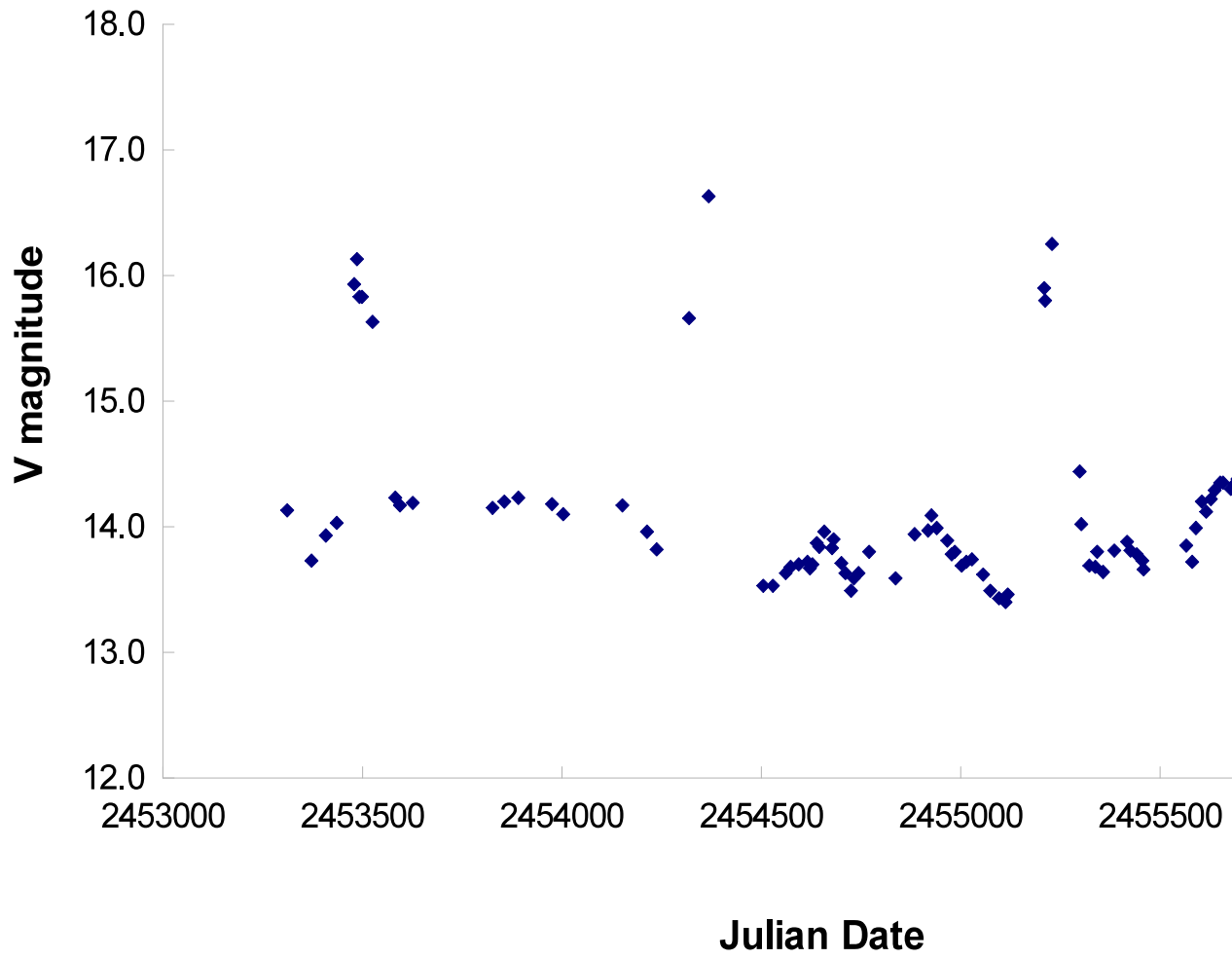
LC of symbiotic star AS 288



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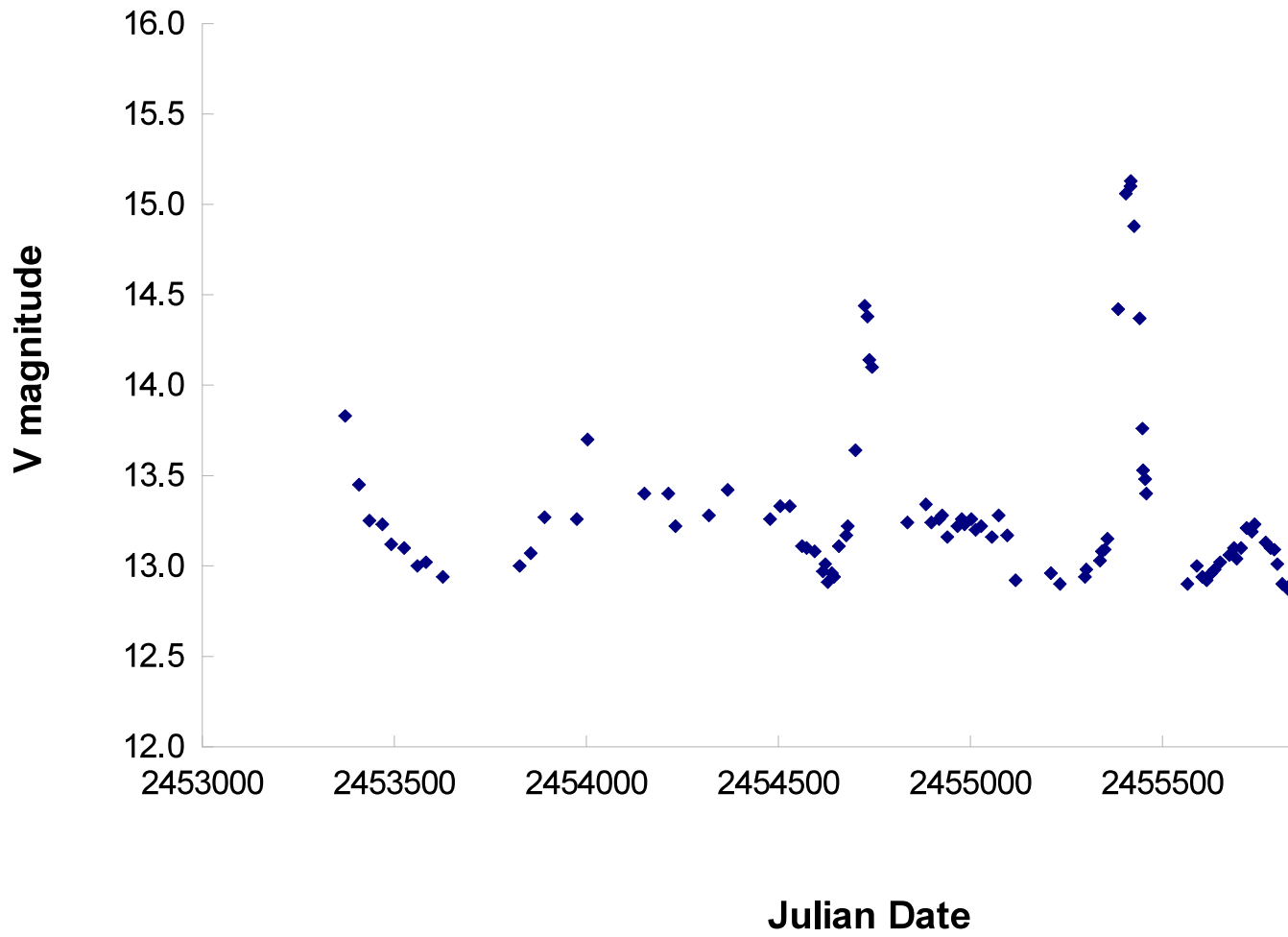
LC of symbiotic star Hen 2-173



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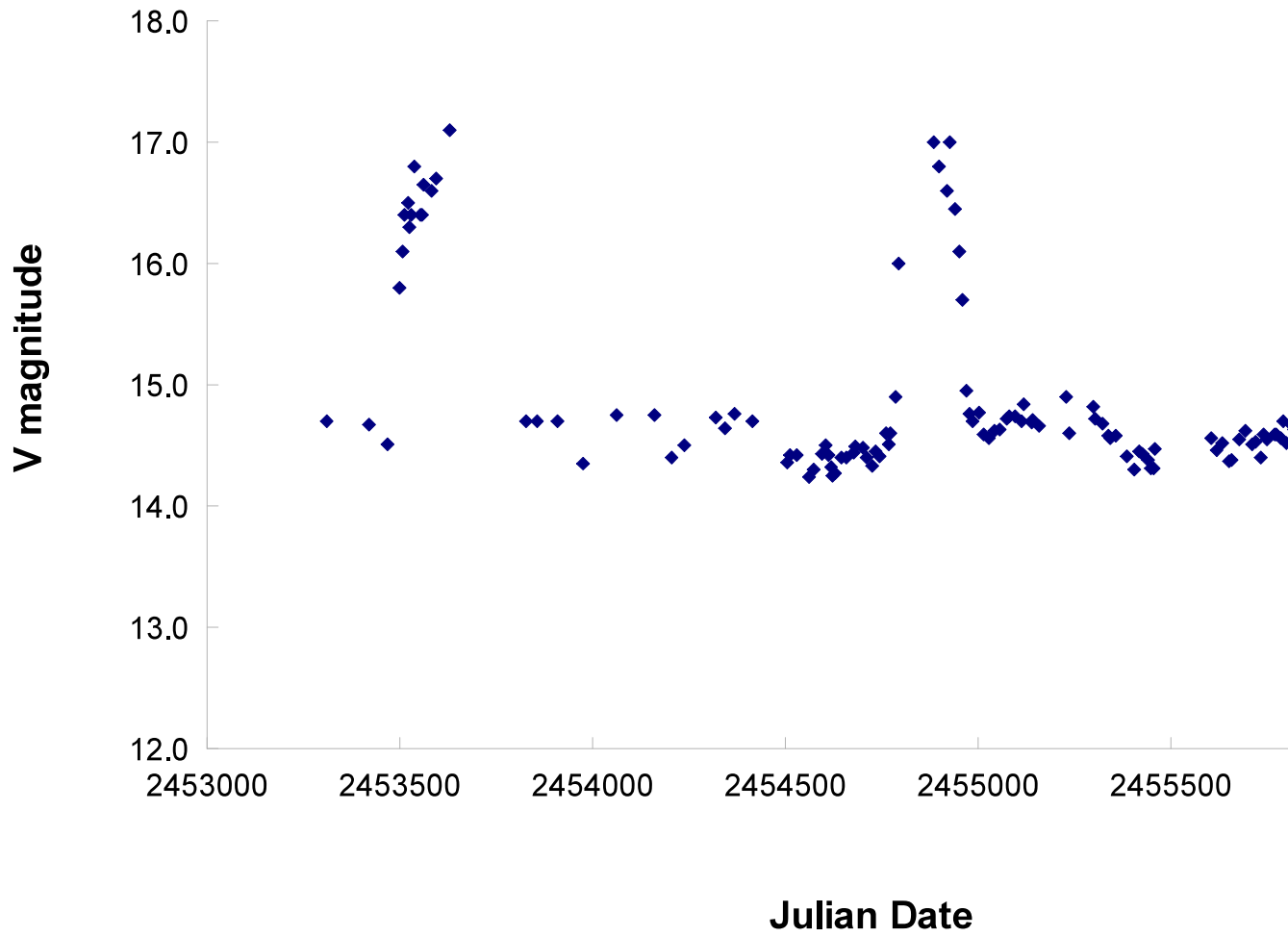
LC of symbiotic star QS Nor



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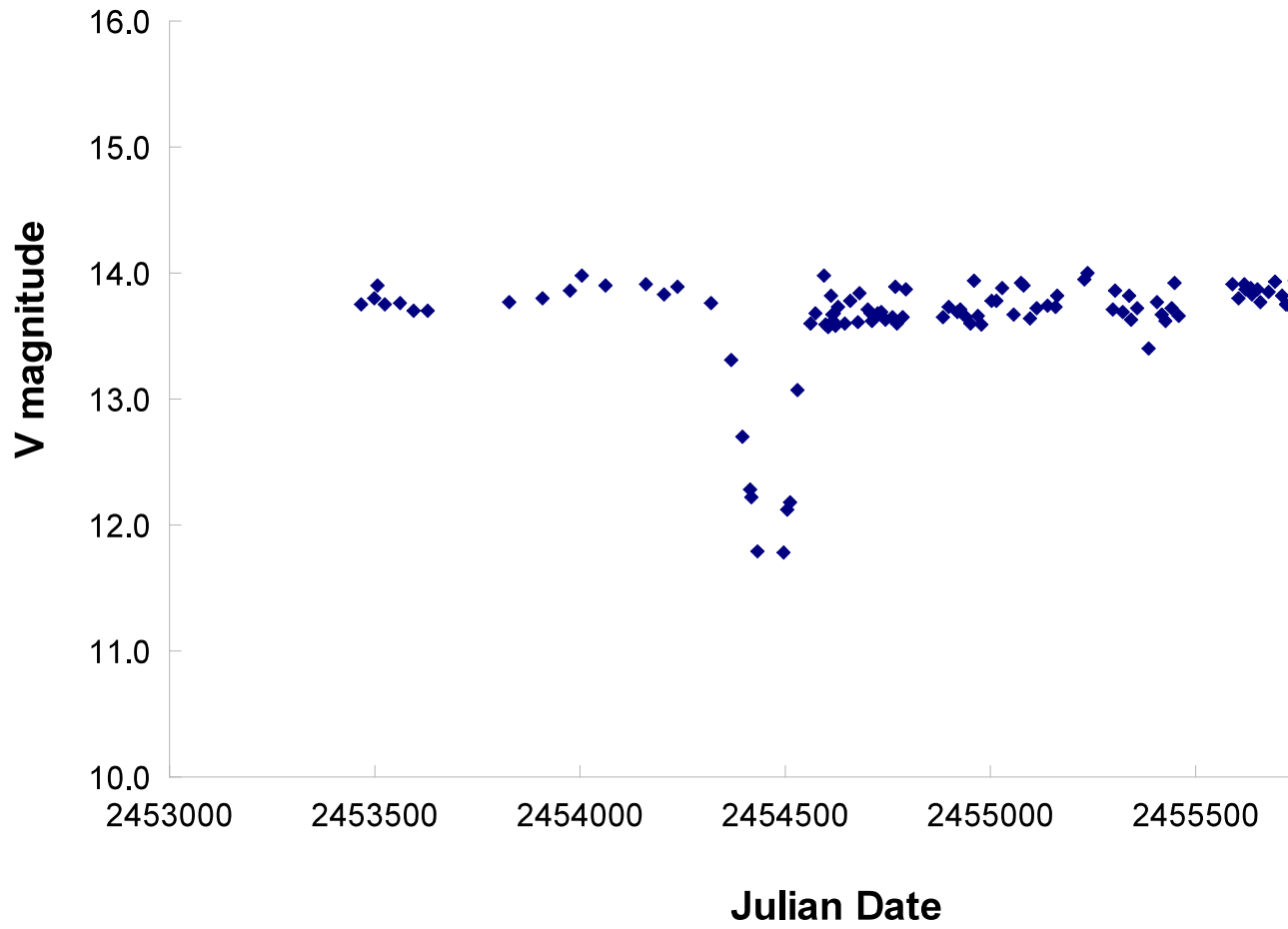
LC of symbiotic star V3811 Sgr



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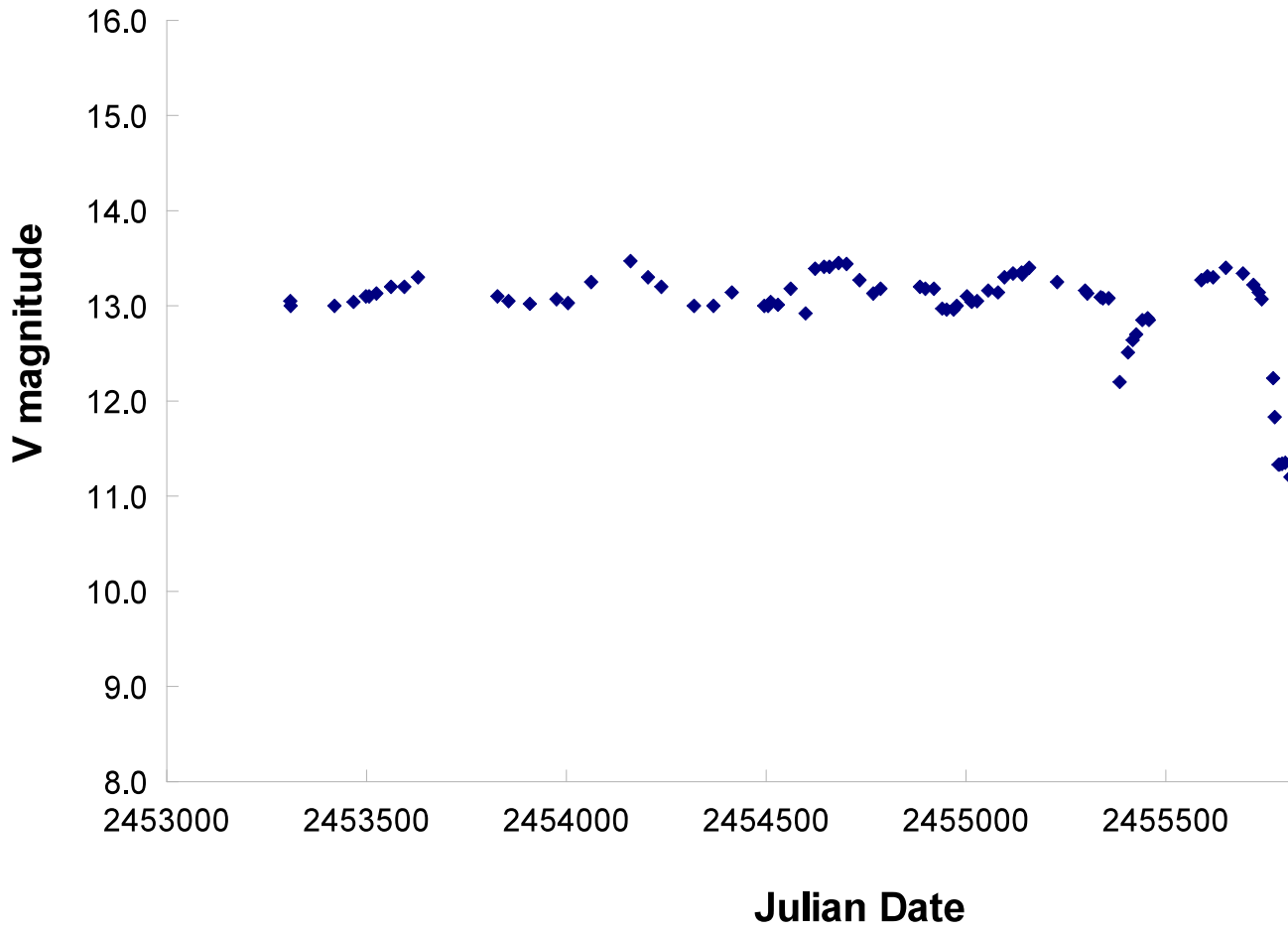
LC of symbiotic star V1017 Sgr



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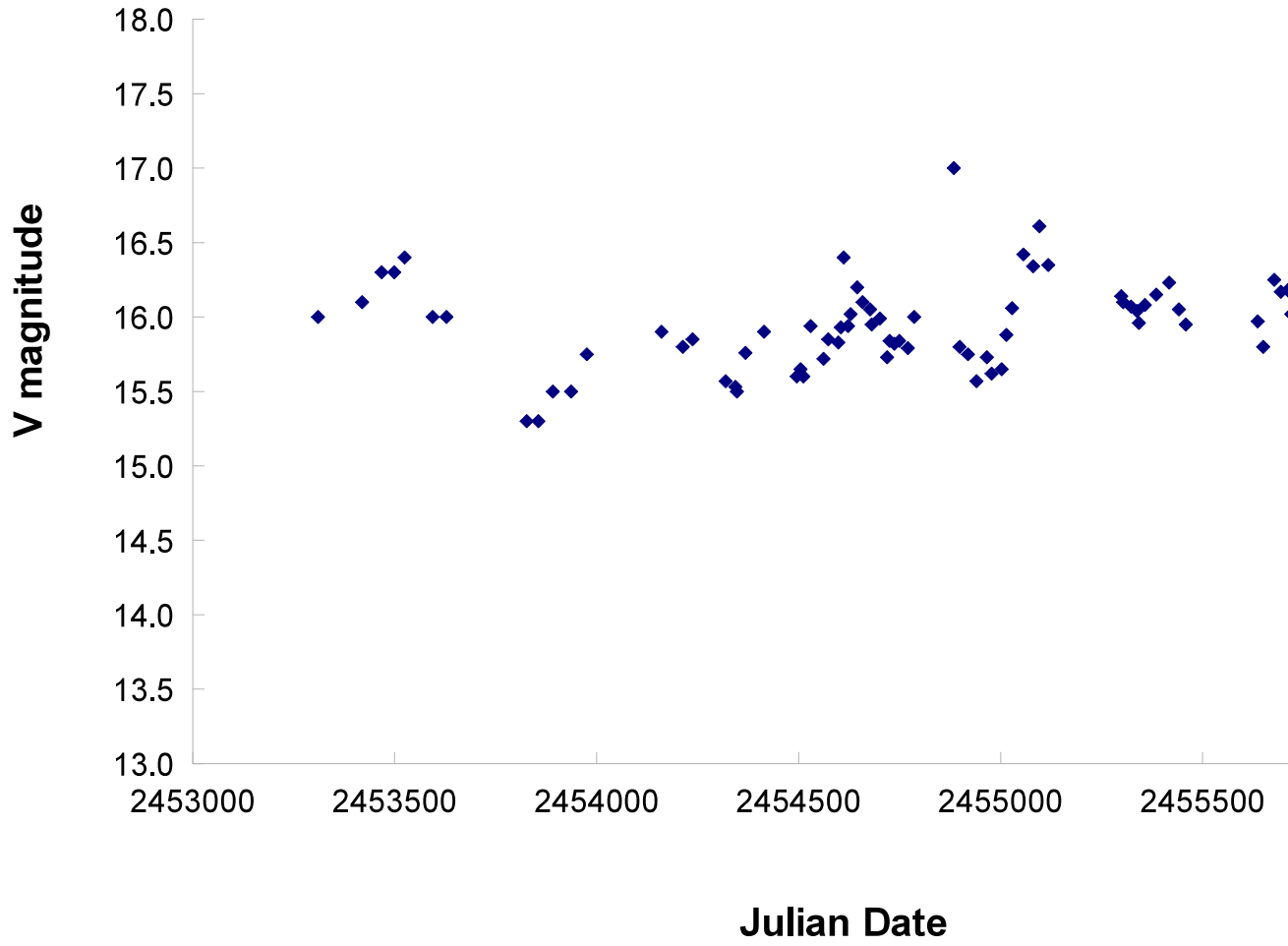
LC of symbiotic star V4018 Sgr



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LC of symbiotic star Ve2-57 (starting an



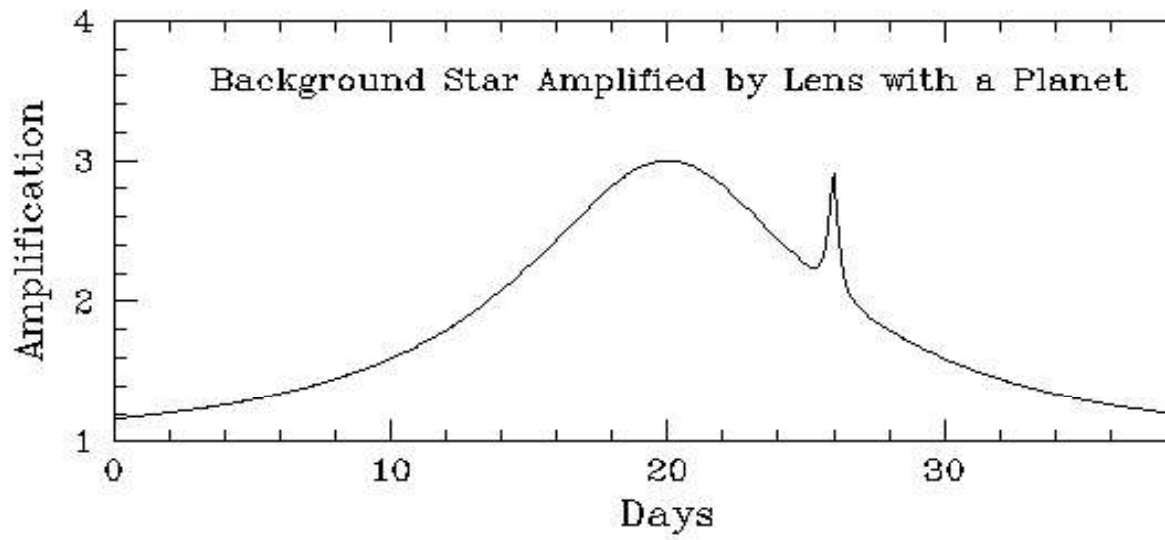
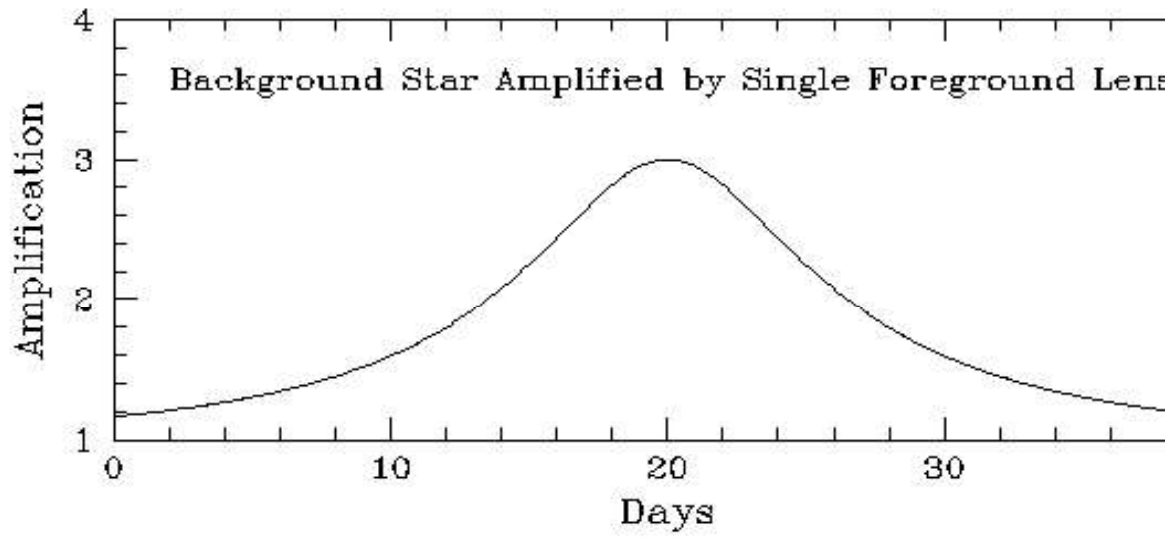
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CCD Observing Programmes

Gravitational lensing (microlensing)

- As participant since 2006 of the microlensing network (uFUN), with HQ at the Astronomical Department of the Ohio State University
- Continuous monitoring of the galactic bulge stations MOA (New Zealand) and OGLE (Chile)
- Candidate microlensing targets are scrutinized and selected for dense observations by the network observatories
- In case of high magnifications ($>50x$) signatures of exoplanets around the lens star may show.

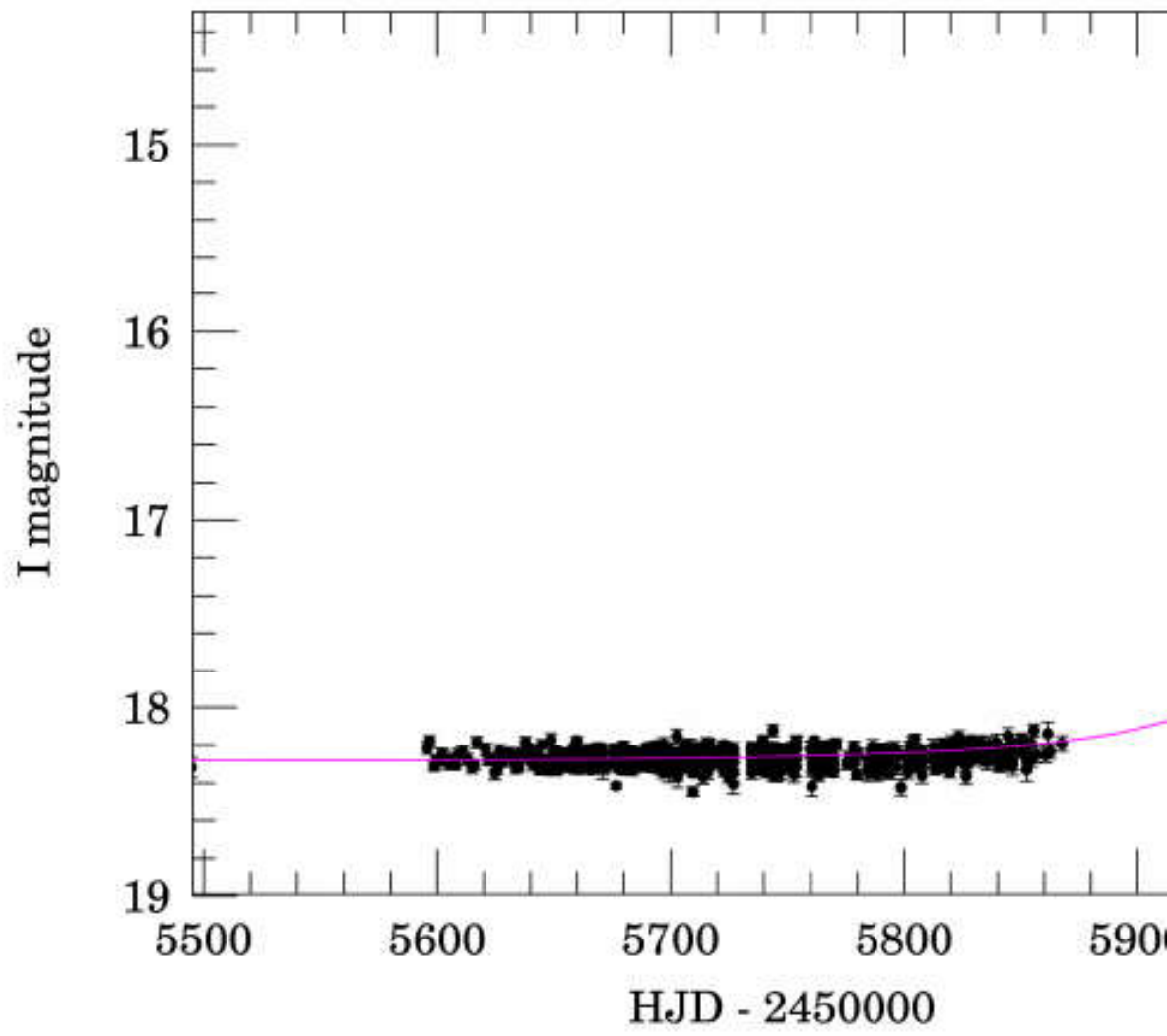


- OGLE-2012-BLG-0026
- Field BLG611.23
- Star No 43368
- RA (J2000.0) 17:34:18.70
- Dec (J2000.0) -27:08:33.9
- Remarks

- Tmax 2455990.993 ± 0.004 (2012-03-03)
- tau 165.231 ± 4.400
- umin 0.000 ± 0.000
- Amax 11293076.0 ± -
- Dmag 17.632 ± 0.000
- fbl 0.170 ± 0.005
- lbl 18.286 ± 0.001
- IO 20.212 ± 0.031

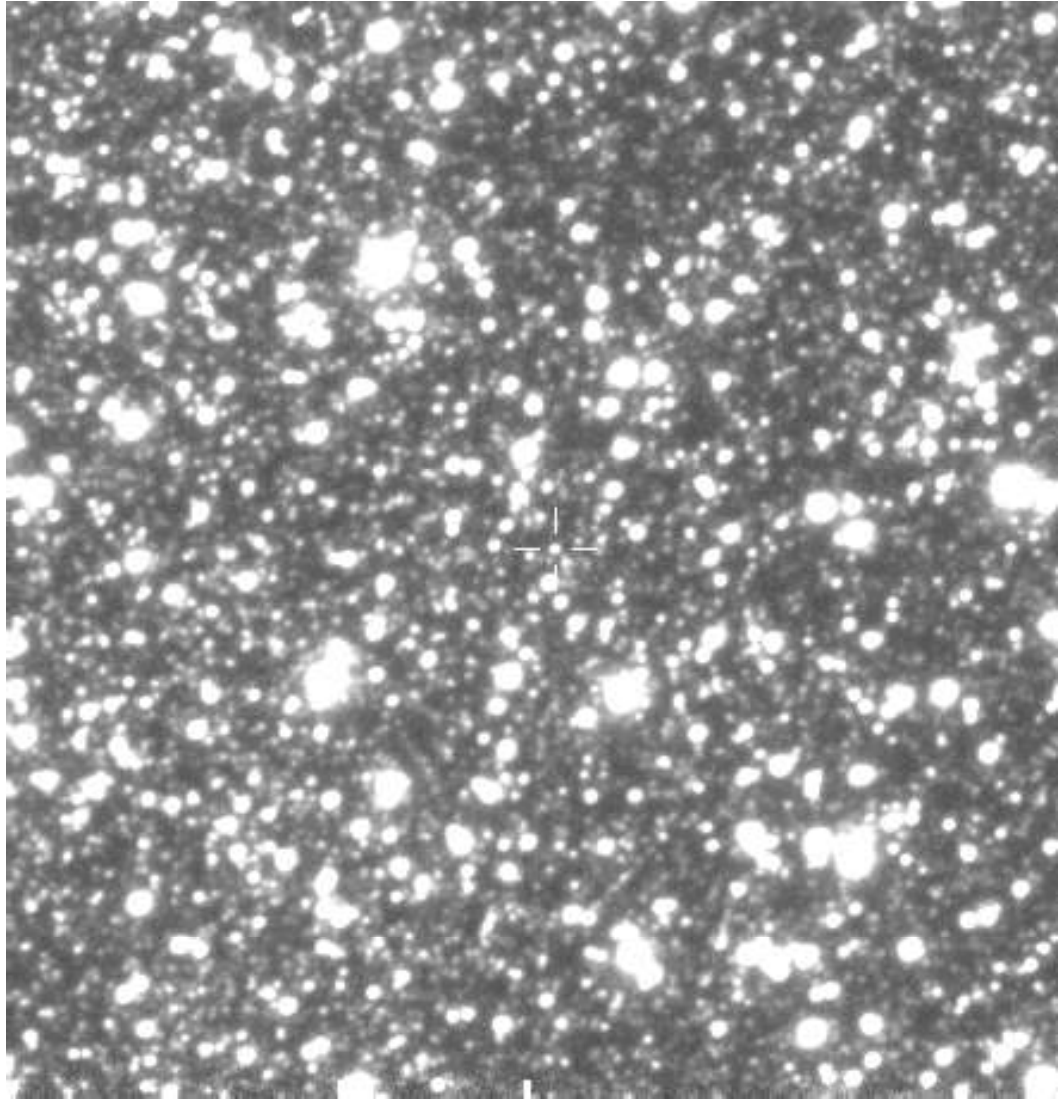
- Last Epoch in data: 2455989.86899 (2012-03-03.37 UT)

OGLE-2012-BLG-0026



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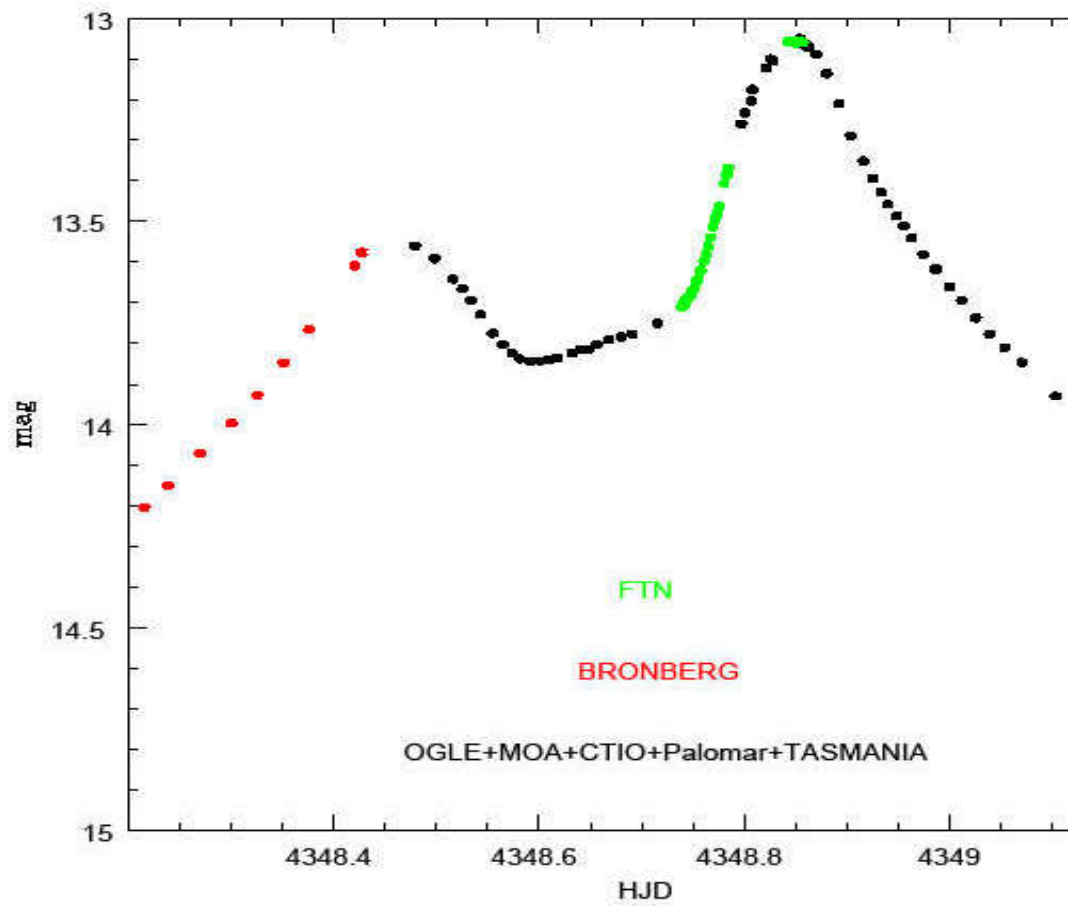


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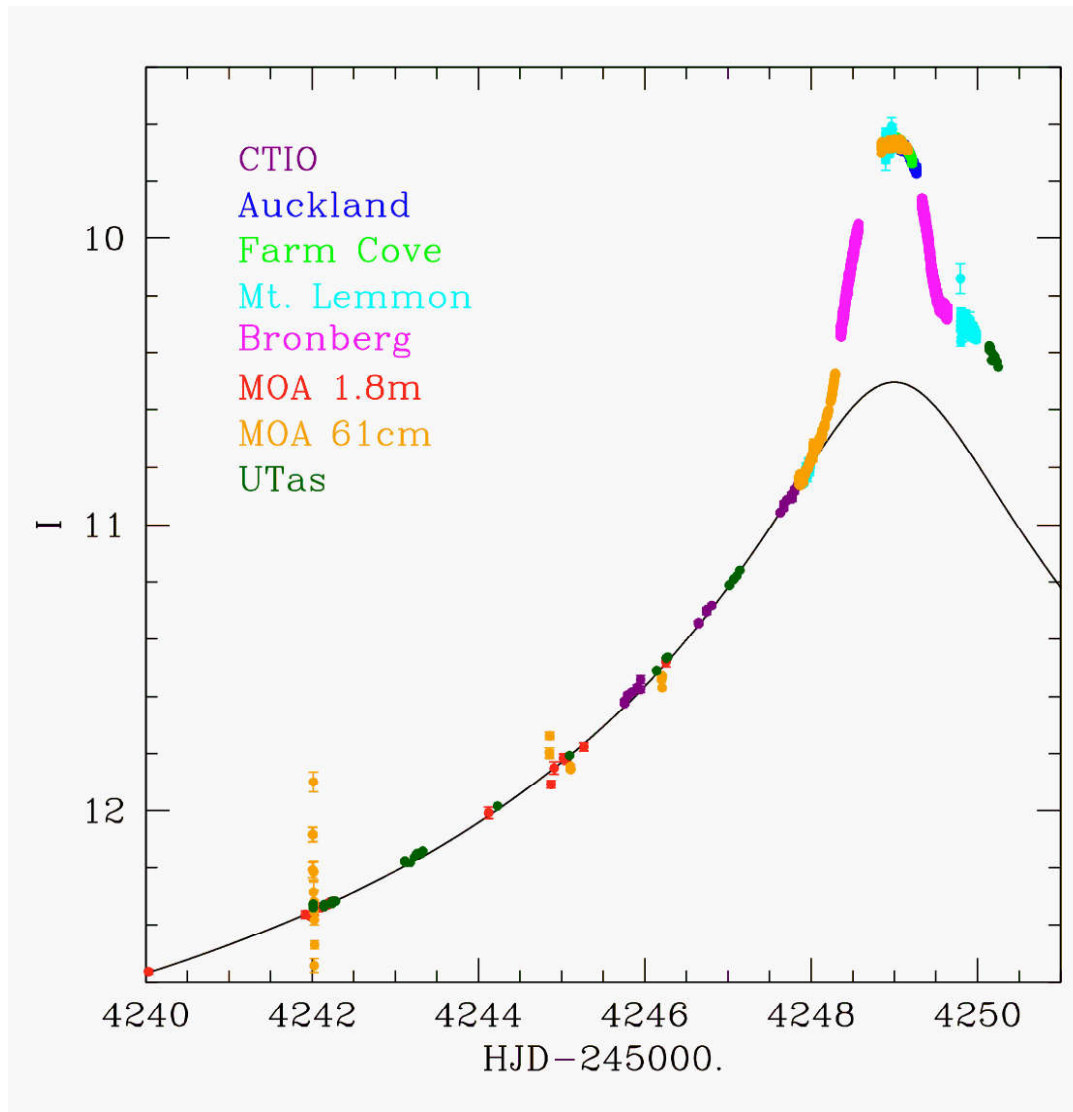
Planet signature in microlensing light

Event OGLE-2007-BLG-349



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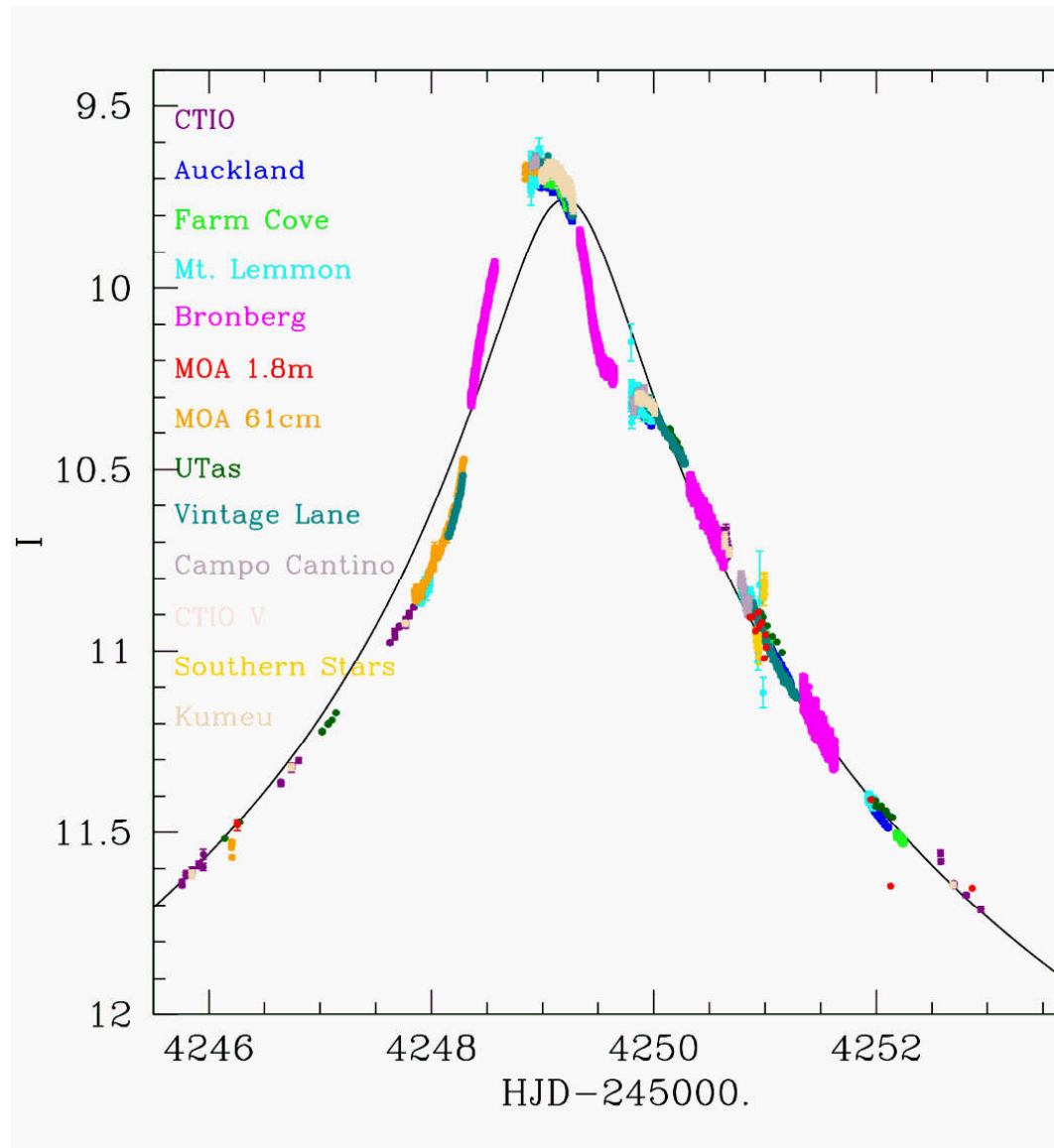
MOA-2007-BLG-146



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Alternative model of mb071

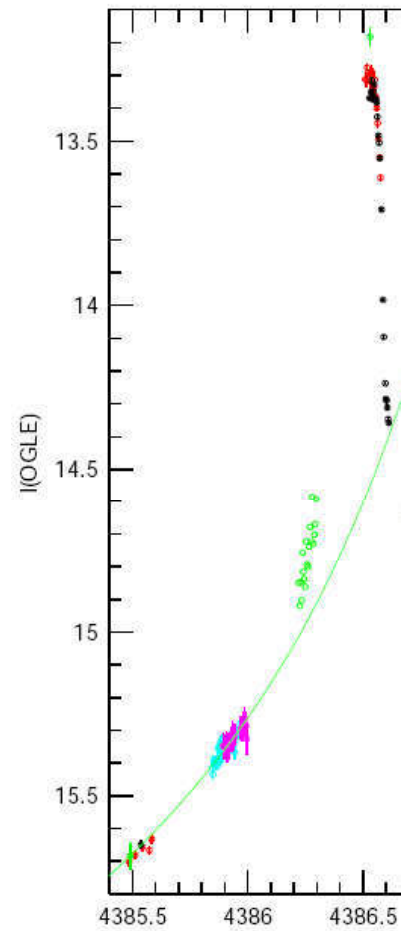
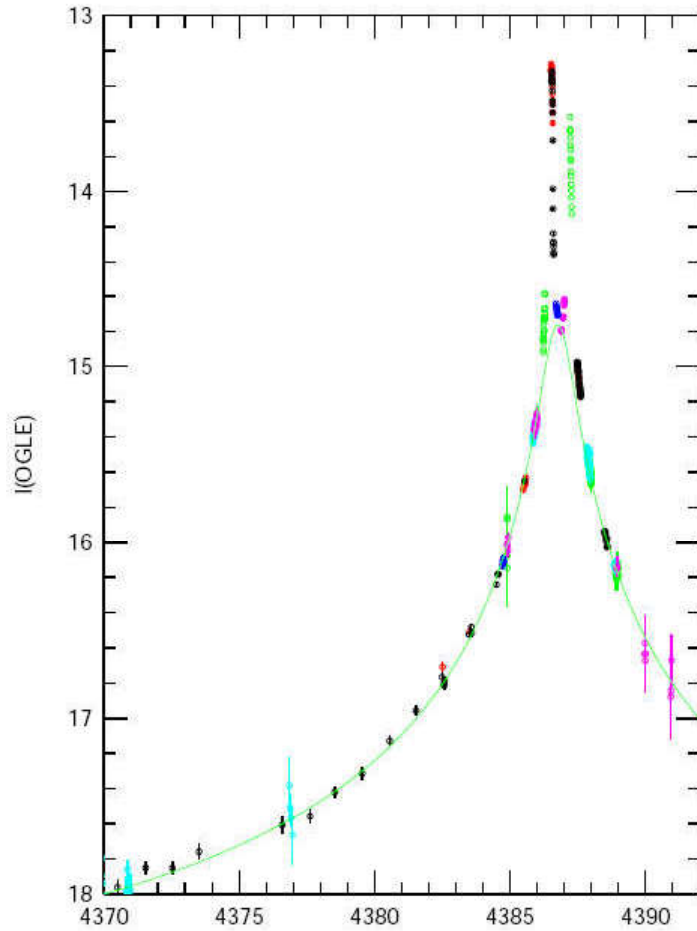


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OGLE-2007-BLG-514 (MB0746)

A=170 [peak 12 Oct!]



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Other CCD Observing

- Exoplanets : to be resumed

Prompt follow-up on alerted transients

- GRBs : to be resumed eventually
- XR and other transients
- Novae / supernovae confirmations

Sometimes those observations are done with CCD and with astrometry applied on it