

# Gaia Alerts Contributions by The Open University

MEREDITH MORRELL – 2017/12/05

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# PIRATE and COAST

- Located in Observatorio del Teide Tenerife
- 2 small aperture telescopes – 14" and 17"
- 10Micron GE mounts
- Baader Planetarium Domes
- 7 position filter wheel on PIRATE
- 8 position filter wheel on COAST





# Automated Pipeline

Complete +  
Running

Complete +  
Not Running

Incomplete



Select  
Target

Image  
Target

Reduce  
Data

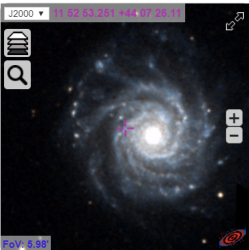
Preliminary  
Light Curve

Upload to  
Calibration  
Server

Gaia17bjw

Details

Follow-up



TNS ID  
SN2017ein

RA - DEC  
178.22188 44.1239  
11.52.53.25 44.07.2

Galactic coords.  
153.84647 69.32393

Alerting date  
2017-05-27 15:38:50

Julian date  
2457901.15

Alerting magnitude  
16.90

Historic magnitude  
None

Historic StdDev  
None

Class  
SN Ic

Publication date  
May 29, 2017, 4:55 p.m.

Other surveys detections

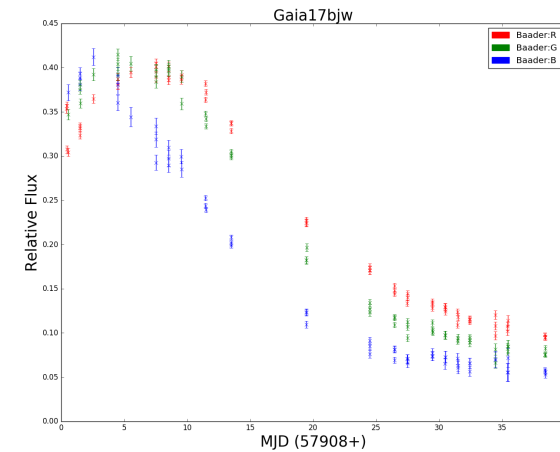
None

Comments

Confirmed SN Ic, aka SN 2017ein, in galaxy NGC 3938

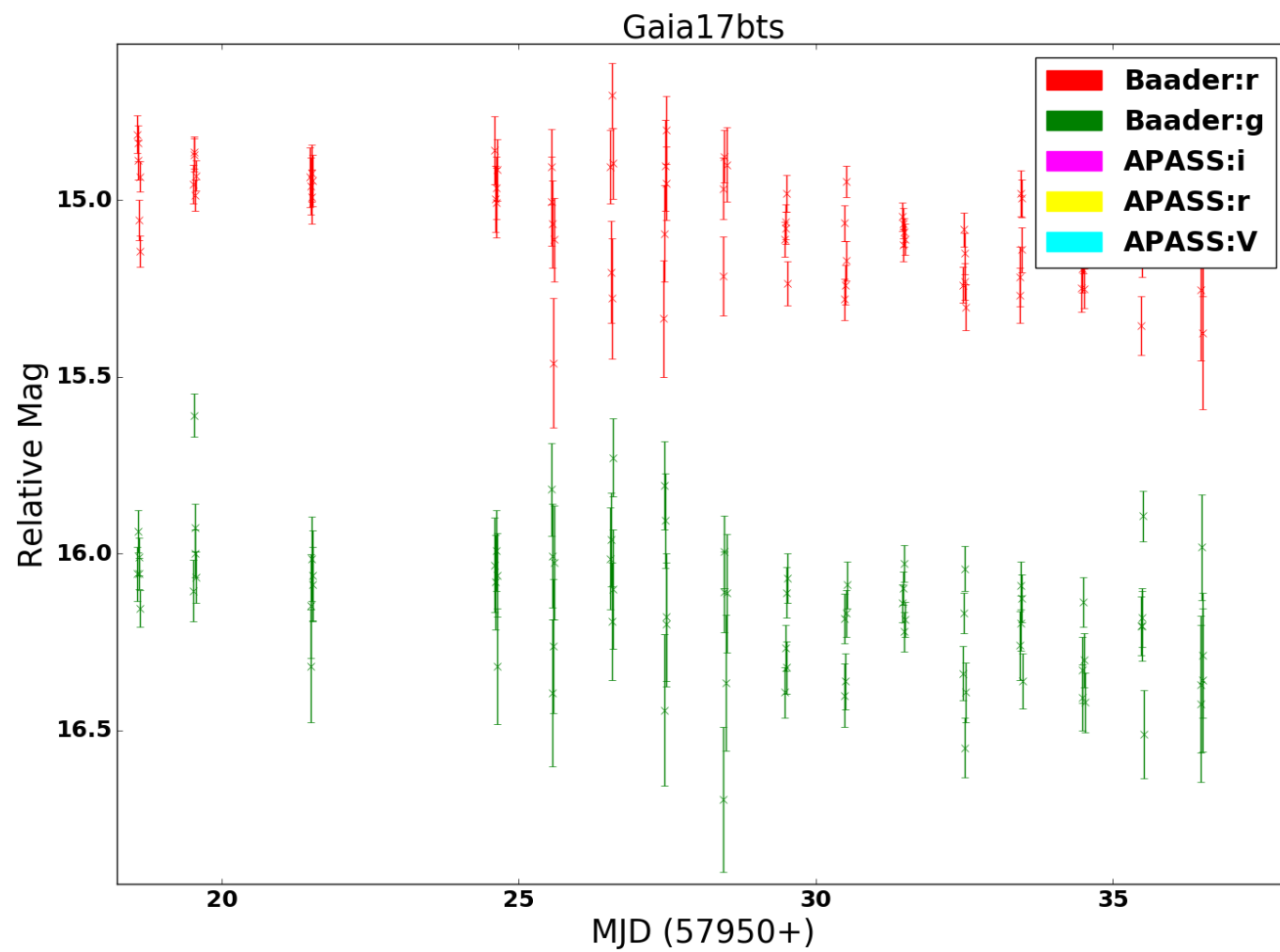
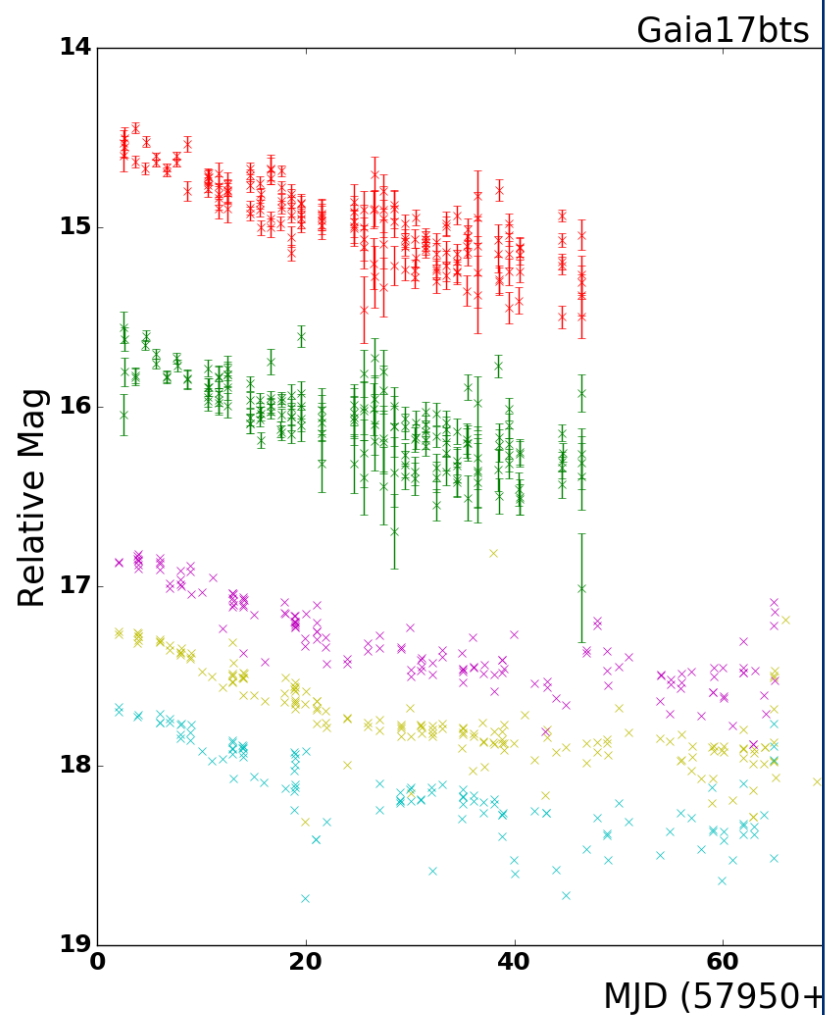
ATels

10434, 10481, 10485



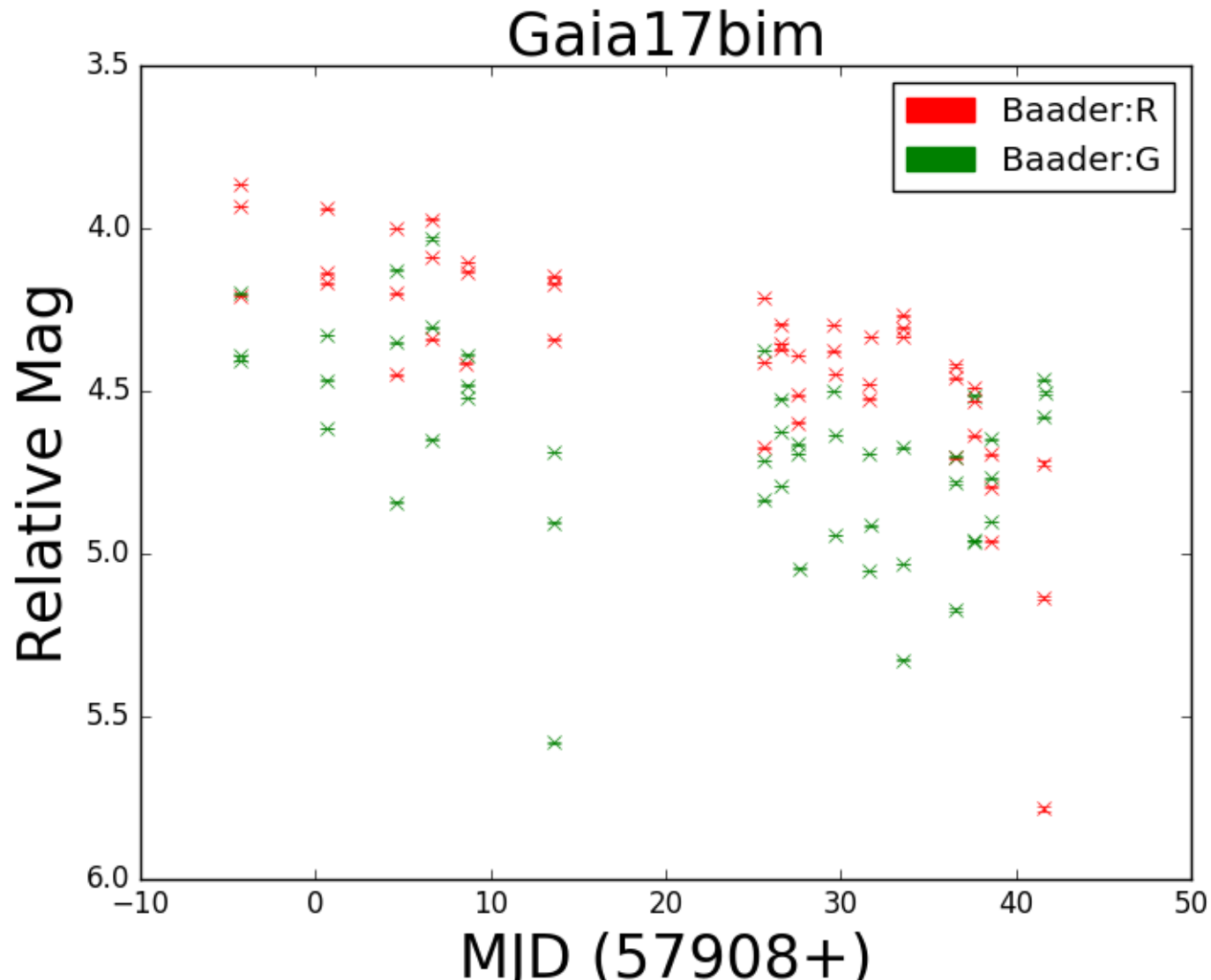
Welcome to the Cambridge Photometry Calibration  
Server (CPCS)

# Pipeline Targets - Gaia17bts



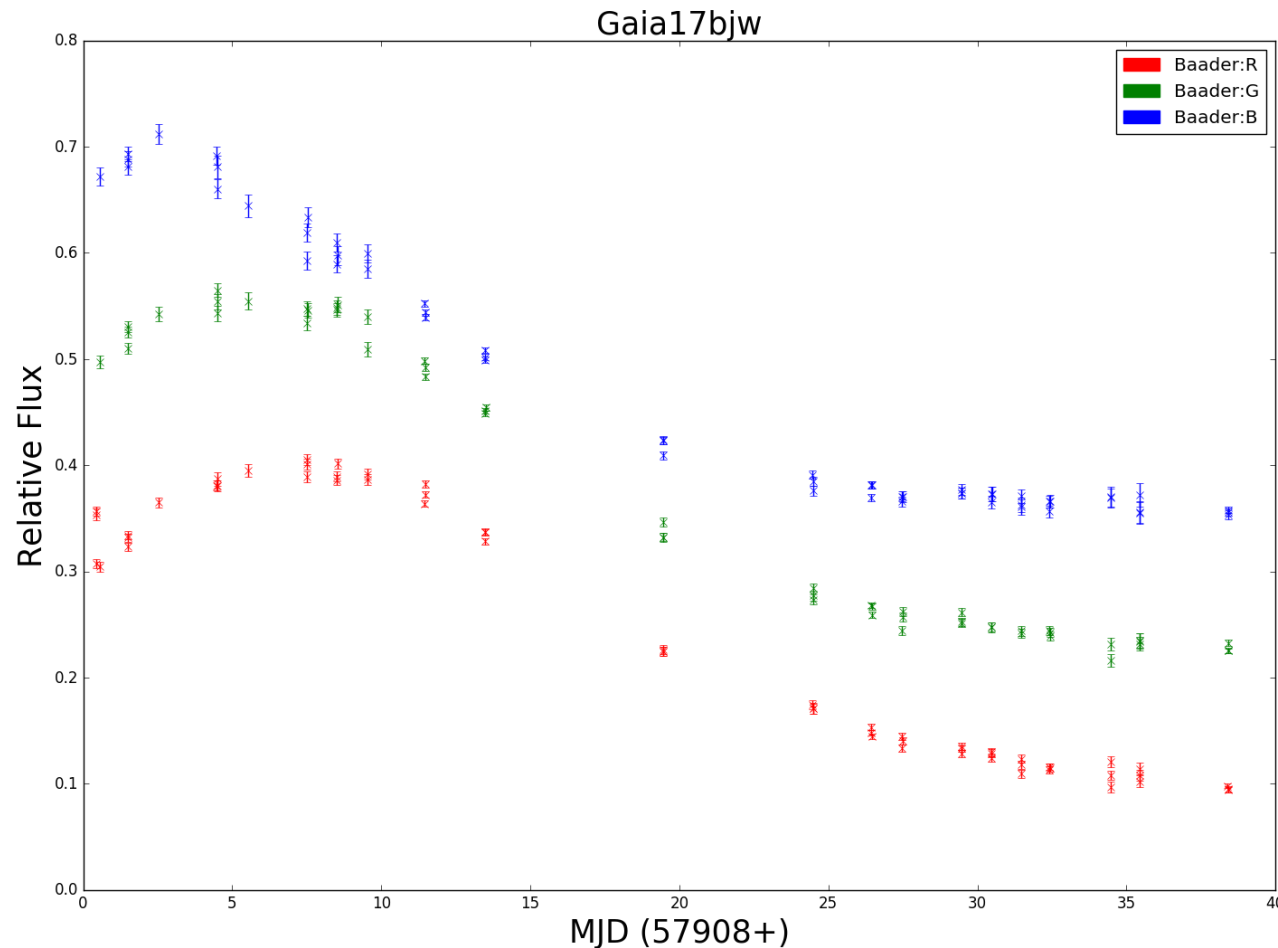


# Pipeline Targets - Gaia17bim



- SNe II according to GS-TEC
- Also ~18 mag though Baader:B
- S/N ~ 3-4
- Rate of decline ~0.01 Mag/day in R and G
- Approximately consistent with SNe II-L

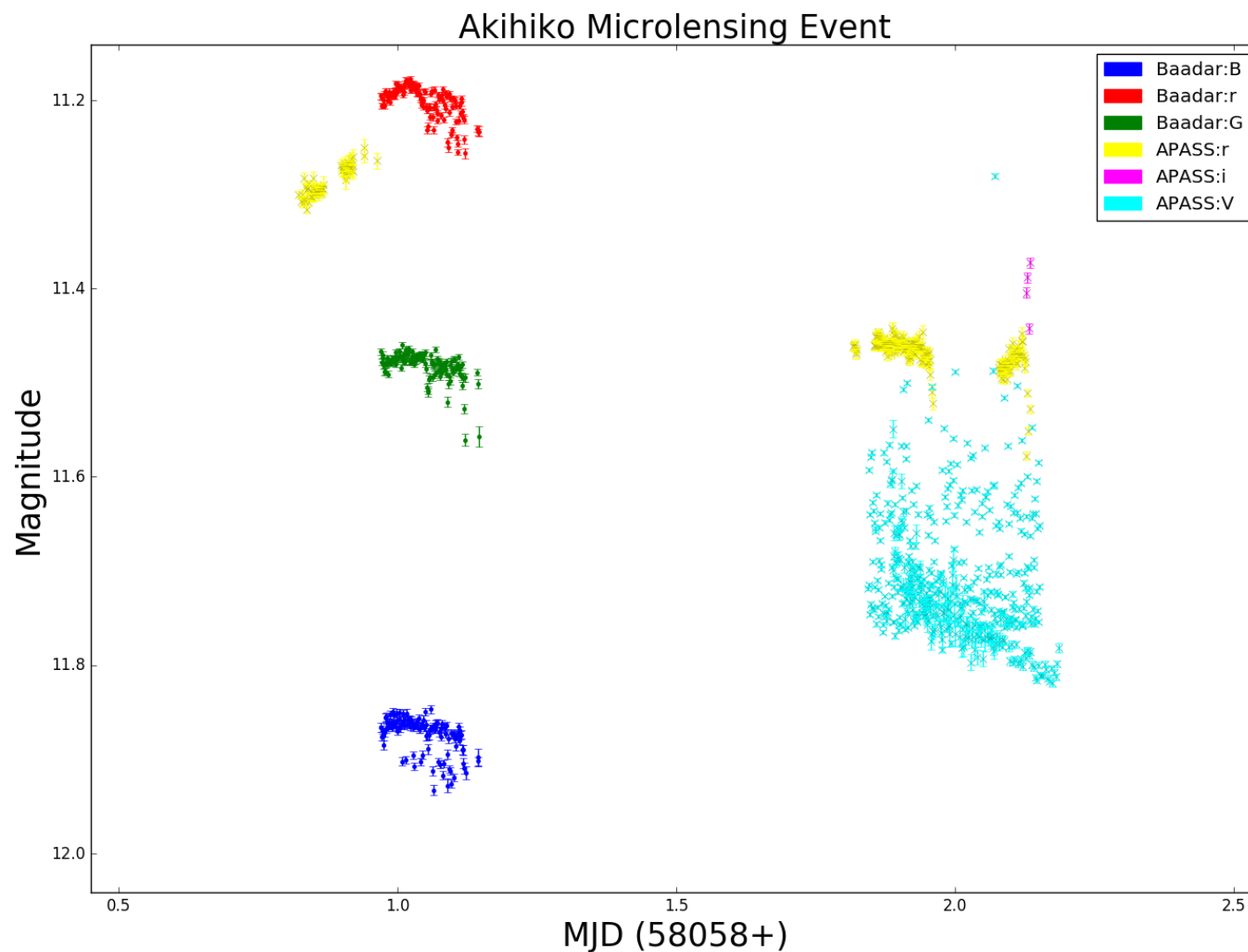
# Pipeline Targets - Gaia17bjw



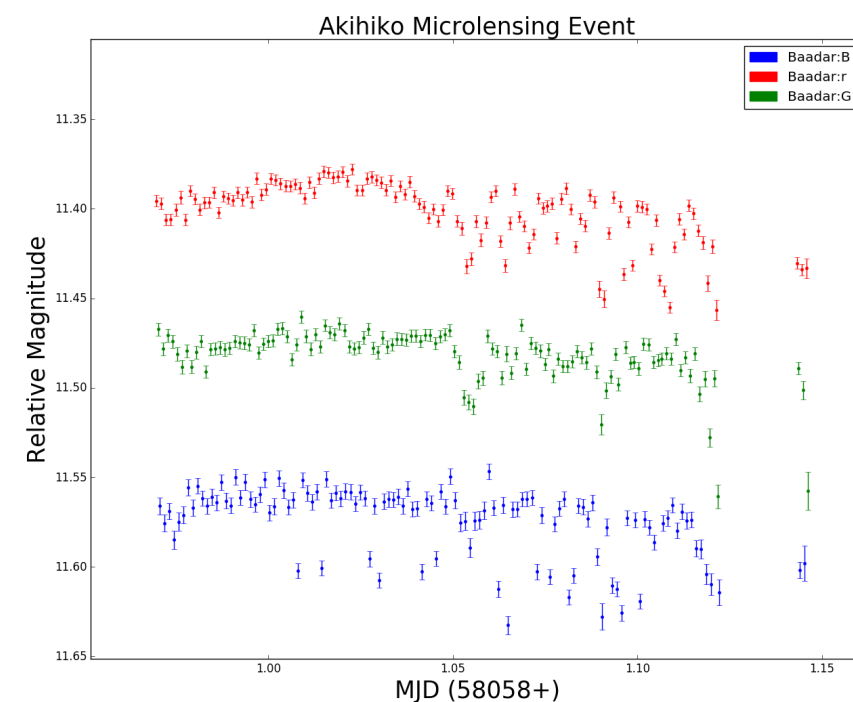
- SNe in galaxy NGC3938 from May/ June 2017
- ~15 mag peak in R G B
- Spectra taken by *Xinglong Station of NAOC* identify target as broad-lined SNe Ic
- Appears to peak several days earlier in the blue – similar to other broad-line SNe Ic
- Approximate rate of decline:
  - ~0.08mag in B
  - ~0.05mag in R & GWithin limits for typical SNe Ic



# Pipeline Targets - Akihiko Microlens



- Single lens microlensing event with follow up beginning on November 1<sup>st</sup>
- Possibly caught the peak
- Weather worsened towards the end of the first night, data needs to be rechecked.



# Targets

- ▶ Microlensing events
- ▶ Interesting cataclysmic variables – Dwarf Novae, antidwarf novae
- ▶ Populations and multiplicity, automatic identification
- ▶ Lots of time available on PIRATE, need interesting targets to observe