

The Loiano 1,5 meter telescope observation campaign

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Further results of the spectrometry observations from the Loiano 1,5 meter telescope

We warmly thank the staff and technicians of the Loiano Observatory for their invaluable help during the observing sessions.

The observations of the HAMR objects would not have been possible without the collaboration of J. Stansbery and T. Kelecy from NASA that continuously support our efforts with updated HAMR objects TLEs

Further results of the spectrometry observations from the Loiano 1,5 meter telescope

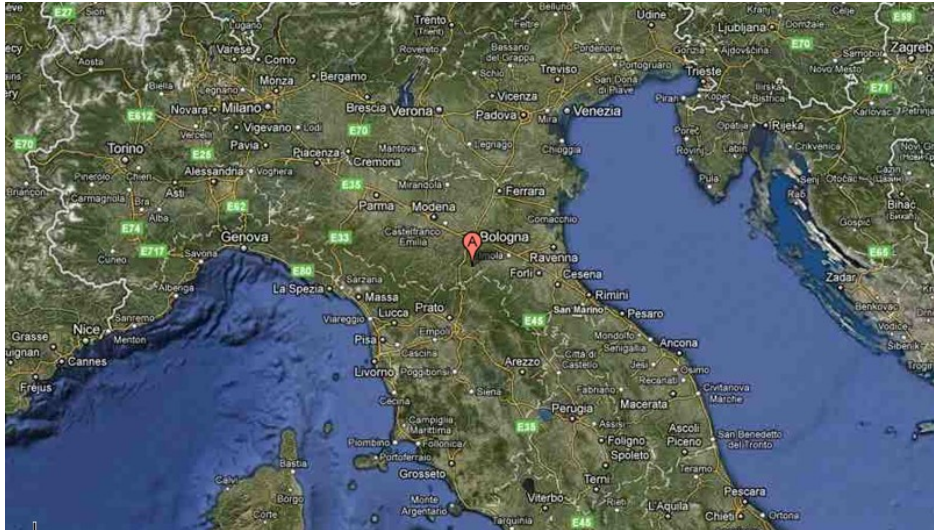
Overview

- Loiano Observatory
- Campaign and Targets
- Results

Astronomical Observatory of Bologna, Loiano

LOIANO

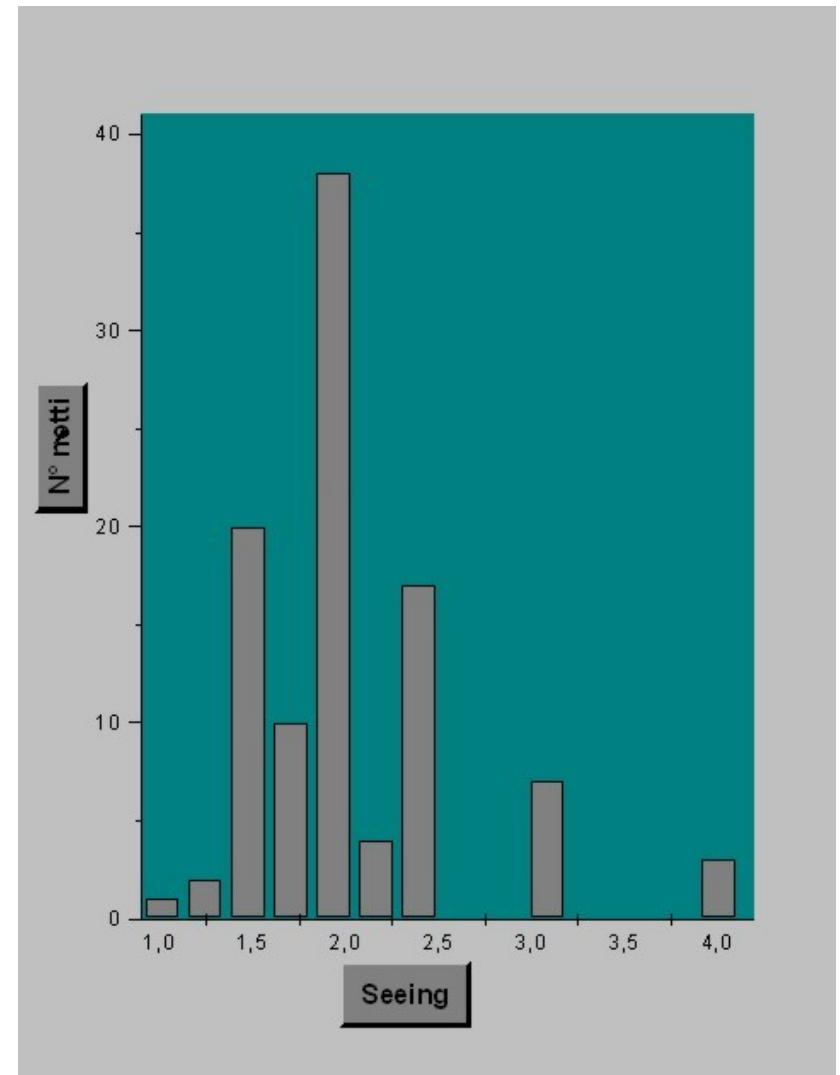
**Lat. $44^{\circ} 15' 33''$ N Long. $11^{\circ} 20' 02''$ E
785 m**



Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Astronomical Observatory of Bologna

Measured seeing at the 152 cm telescope



Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Loiano Telescopes: 152 centimeters Ritchey-Chretien



152 cm diameter

Cassegrain configuration

F/3 primary; F/8 secondary

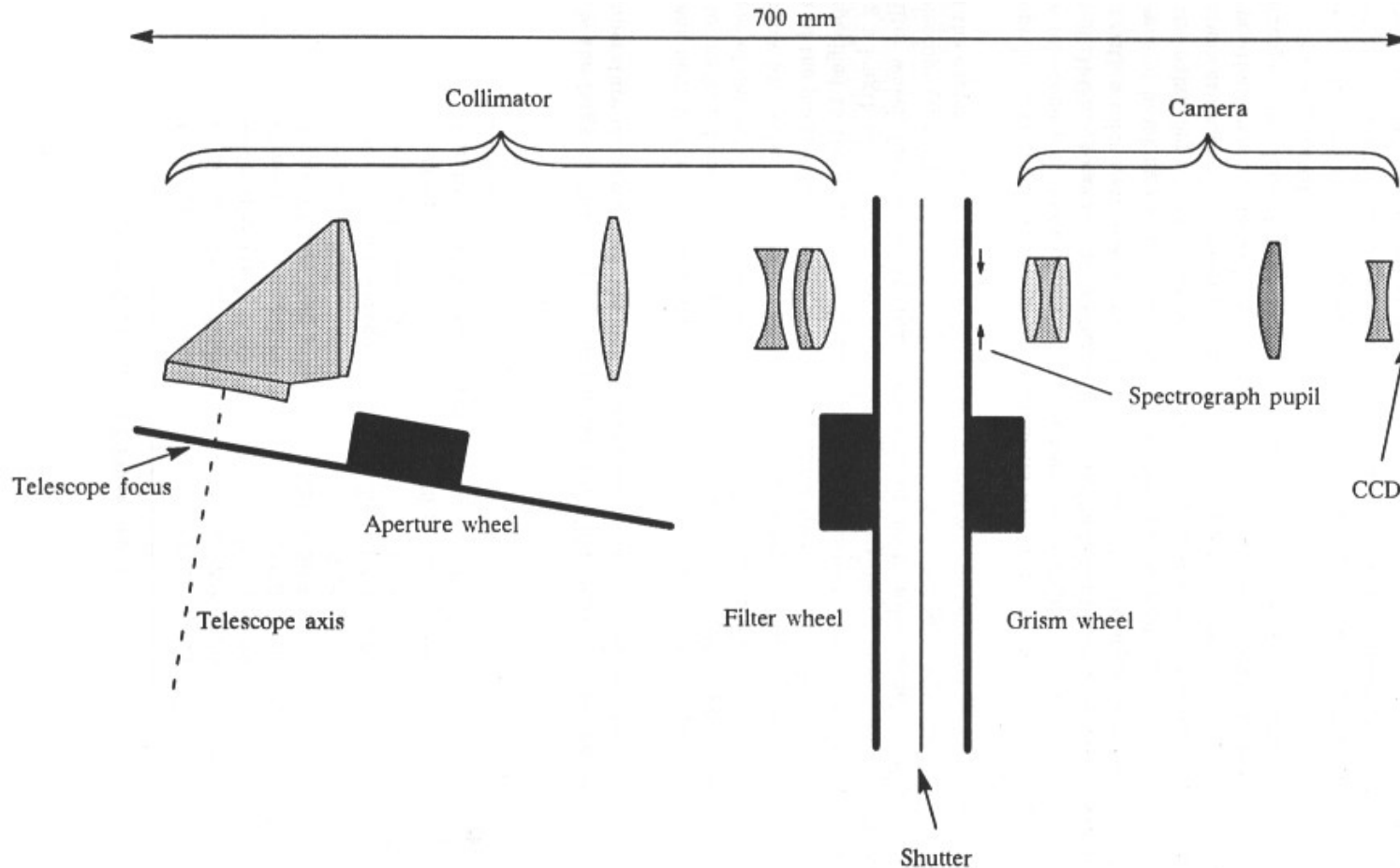
Field of View: 13' x 13'



Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Loiano sensor

BFOSC - Bologna Faint Object Spectrograph & Camera is an instrument built to allow, with a simple configuration change, the acquisition of both images and spectra

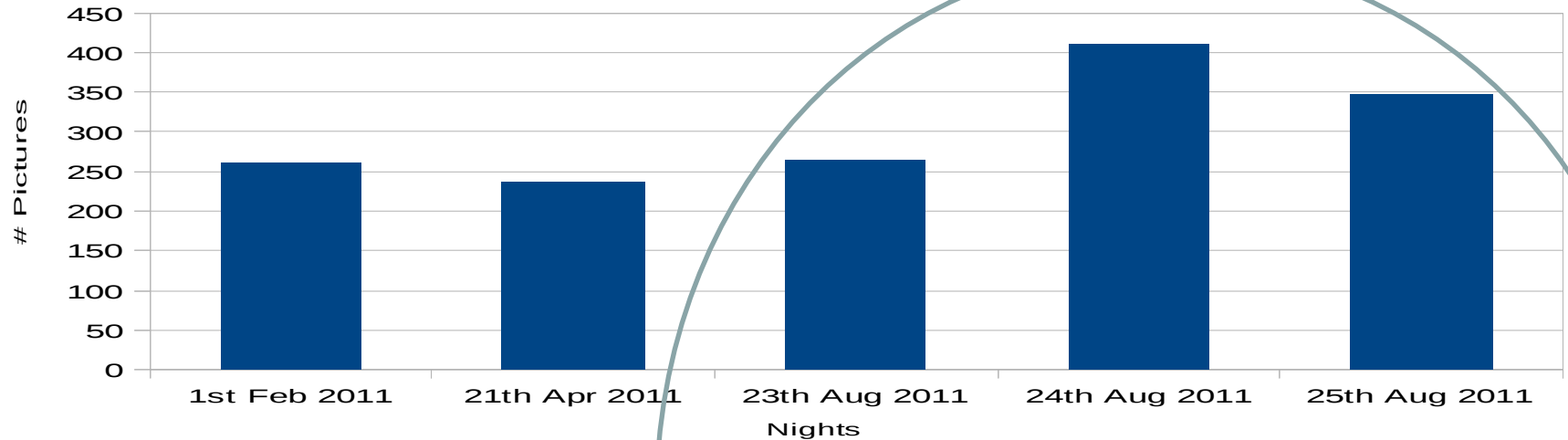


The detector is an **EEV LN/1300-EB/1** CCD with 1300 x 1340 pixels, back illuminated.

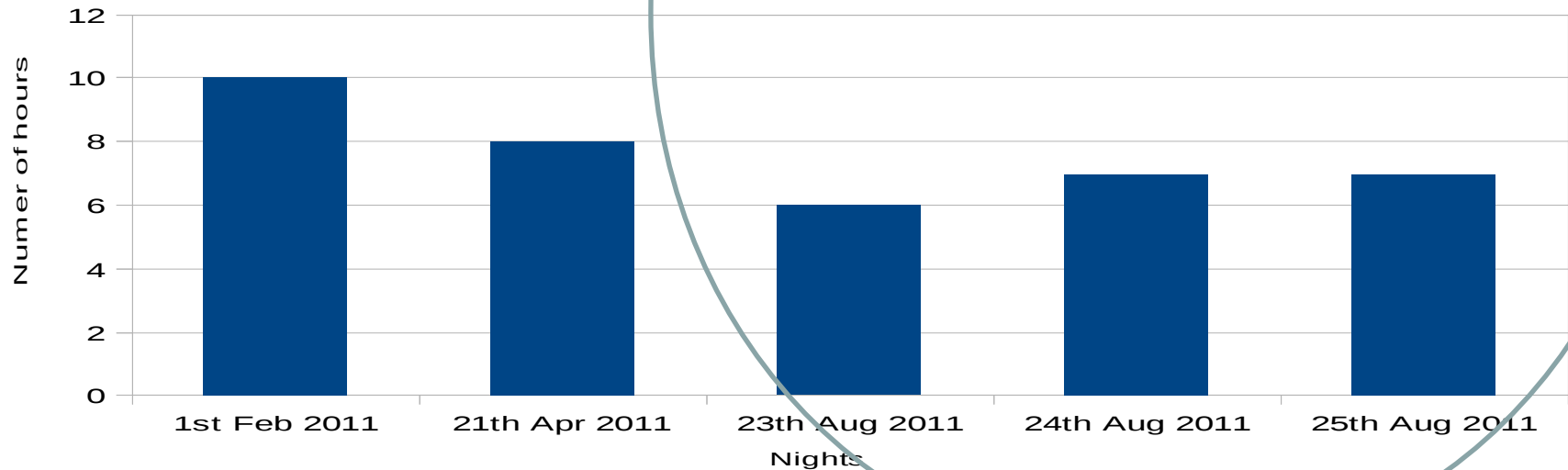
Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Campaign Overview

Number of Pictures taken

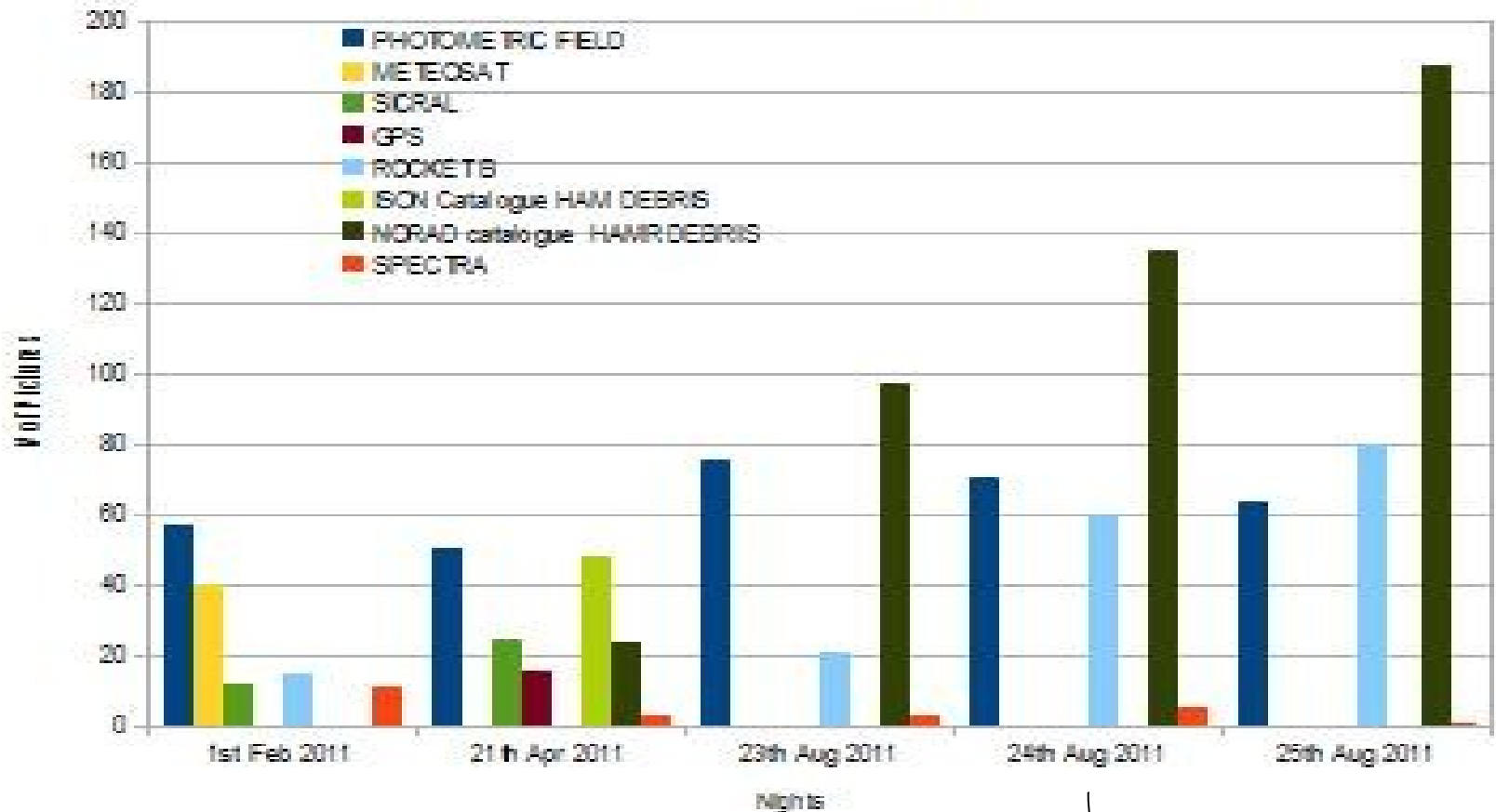


Hours per Night



Further results of the spectrometry observations from the Loiano 1.5 meter telescope

Objects observed



Under Analysis

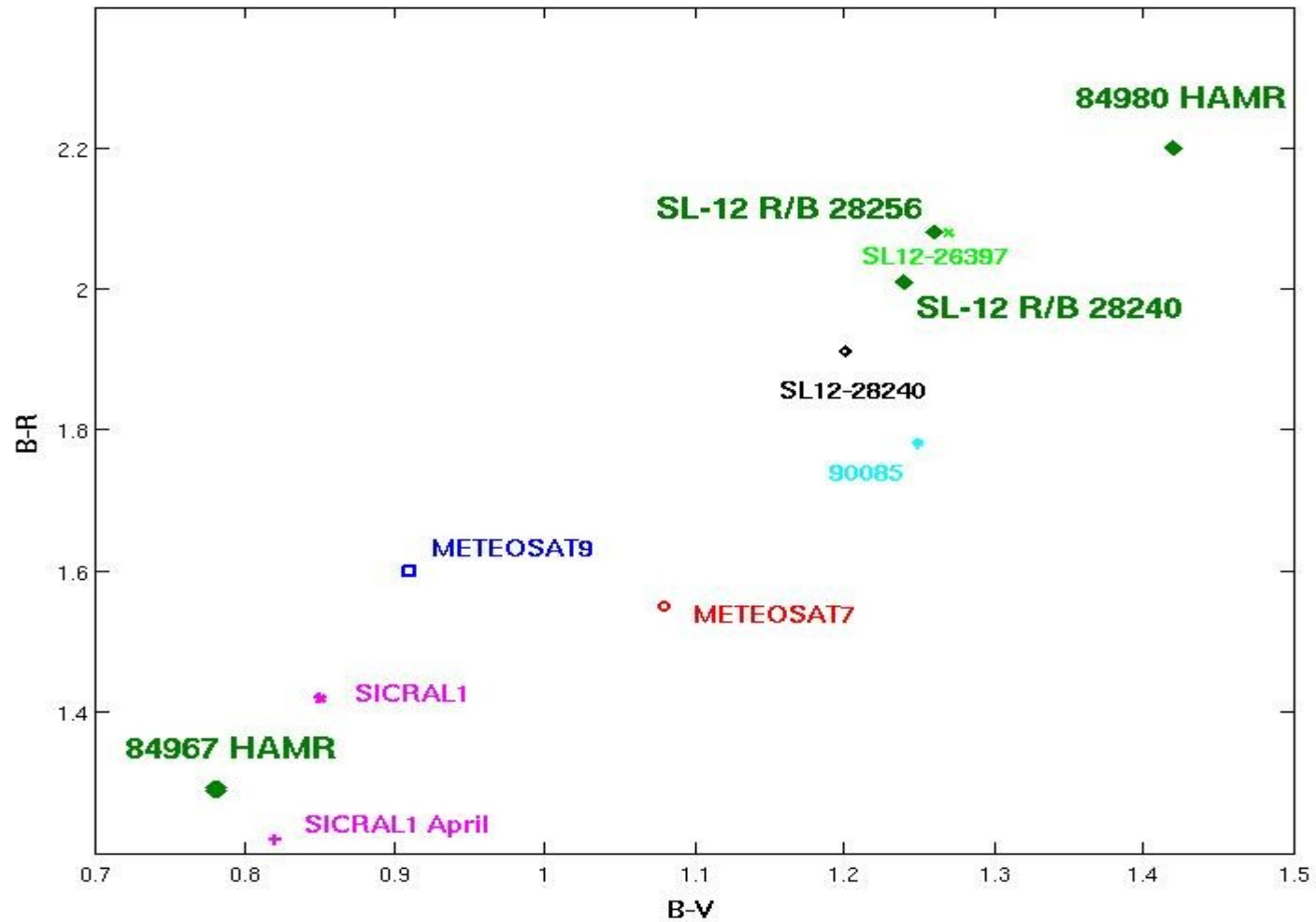
Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Data analyzed

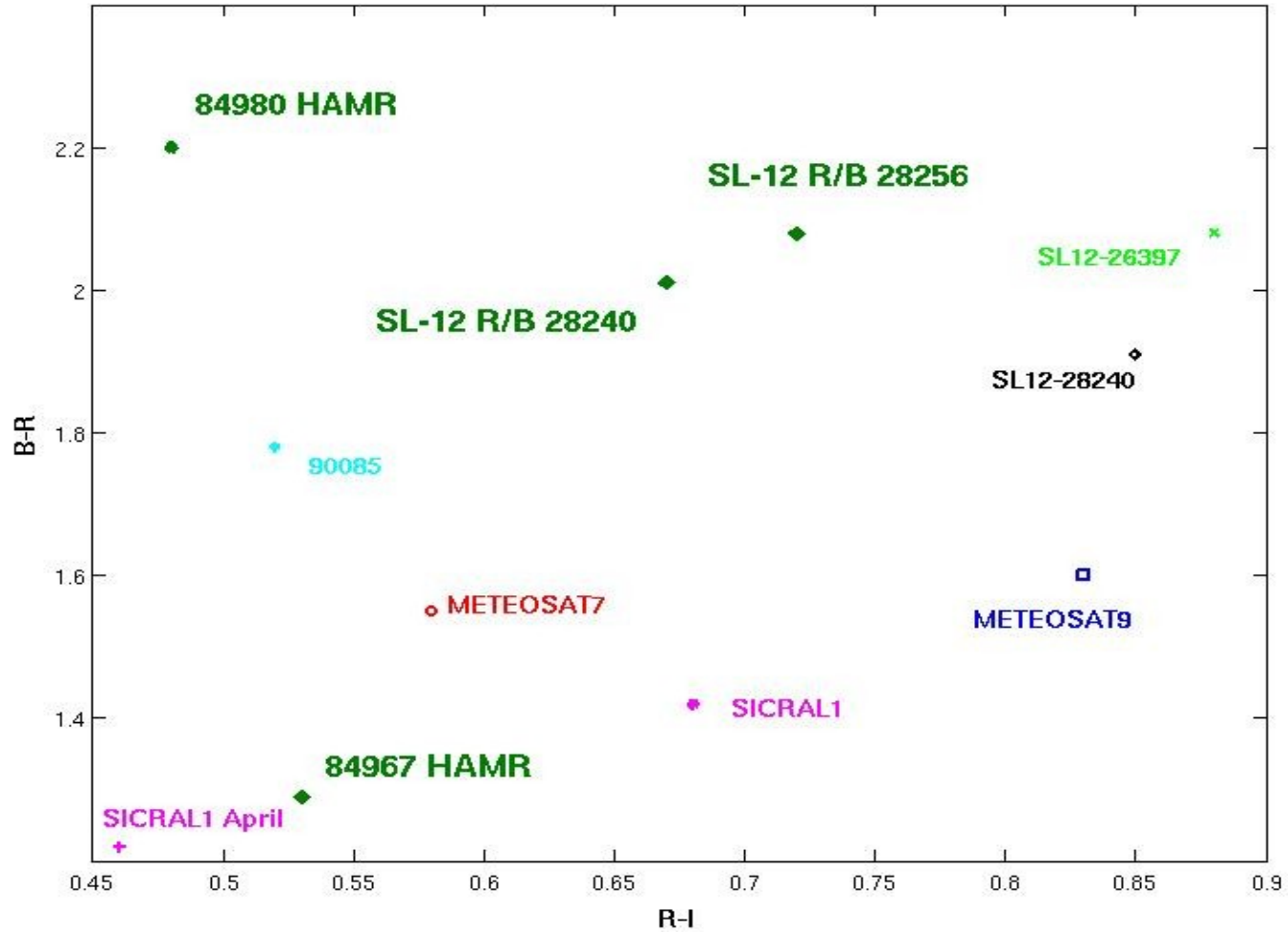
84980 (HAMR)	BVRI
84967 (HAMR)	BVRI
SL12-28240	BVRI
SL12 28256	BVRI

Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Photometric B-R vs. B-V color indices

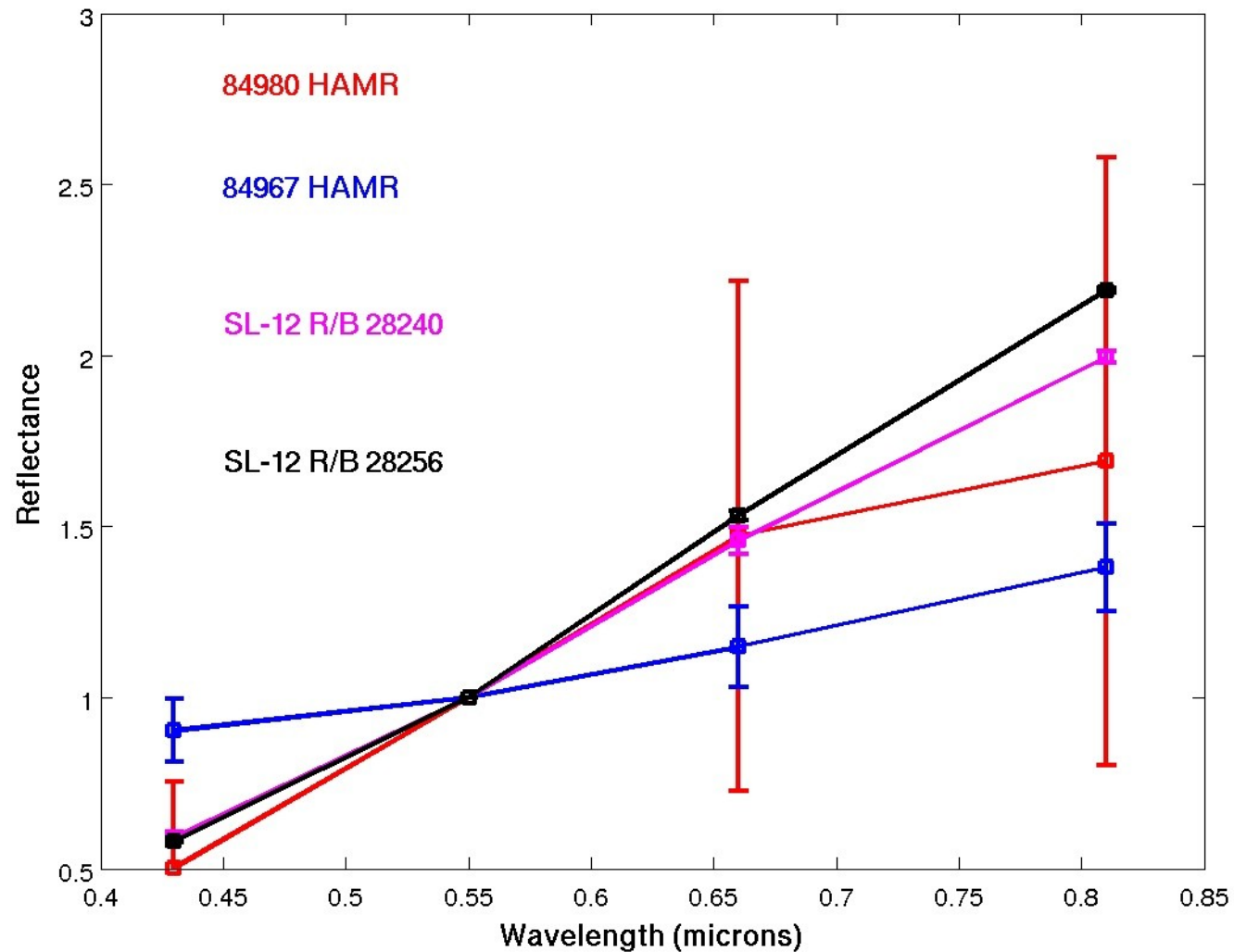


Photometric B-R vs. R-I color indices



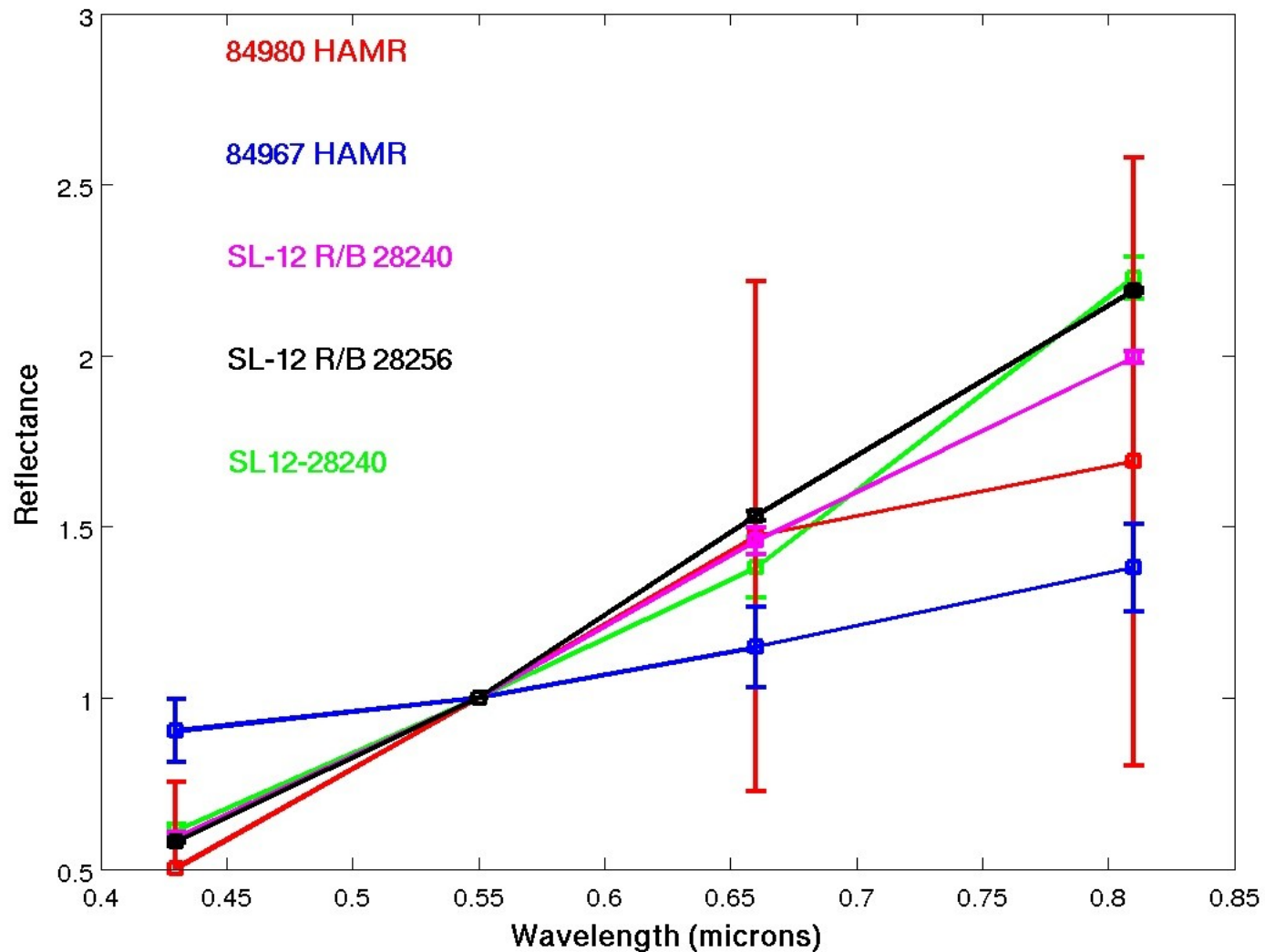
Normalized reflectance from multiband photometry

$$R(\lambda) = 10^{-0.4[(M_F - M_V) - (M_F - M_V)_0]}$$

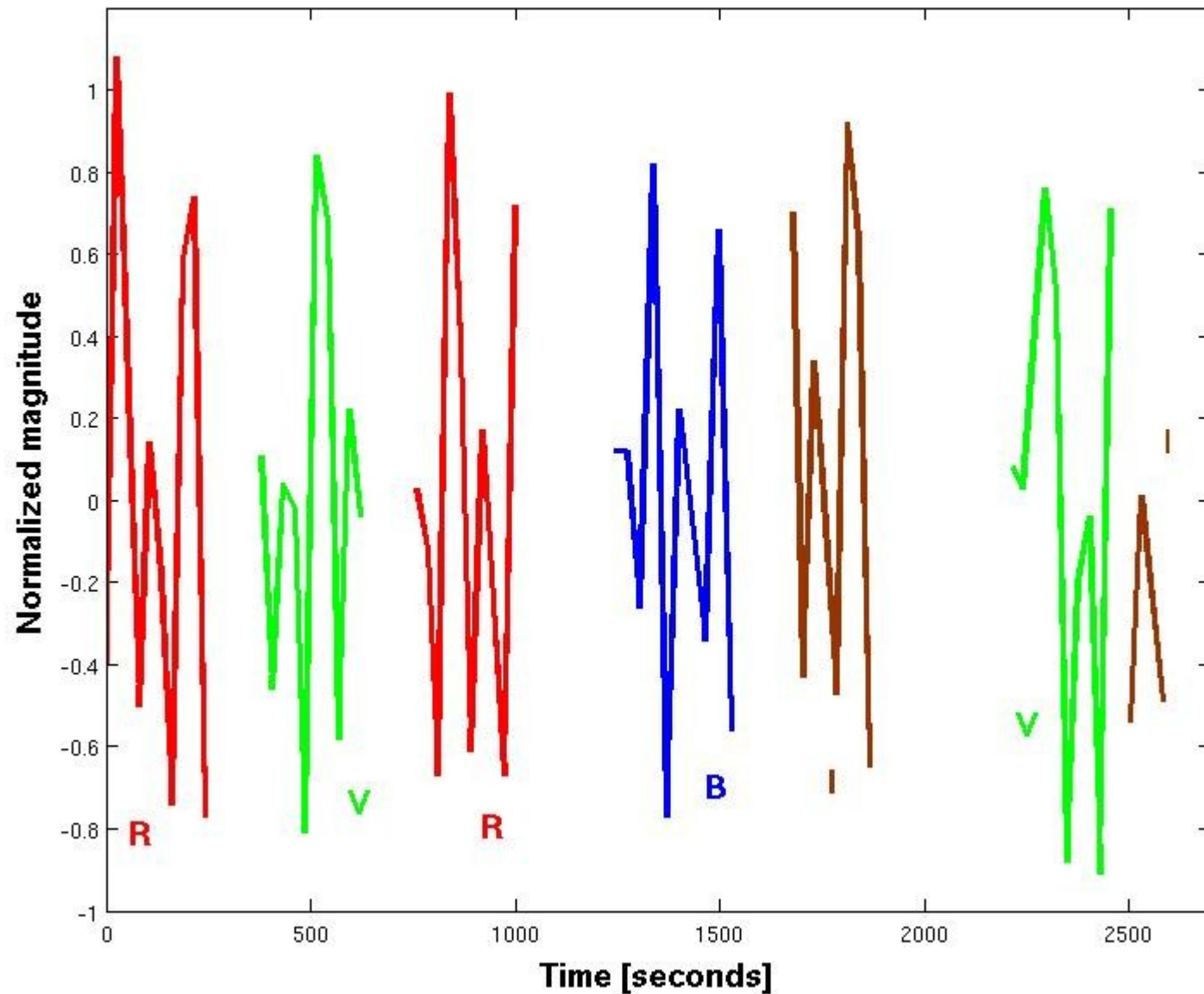


Normalized reflectance from multiband photometry

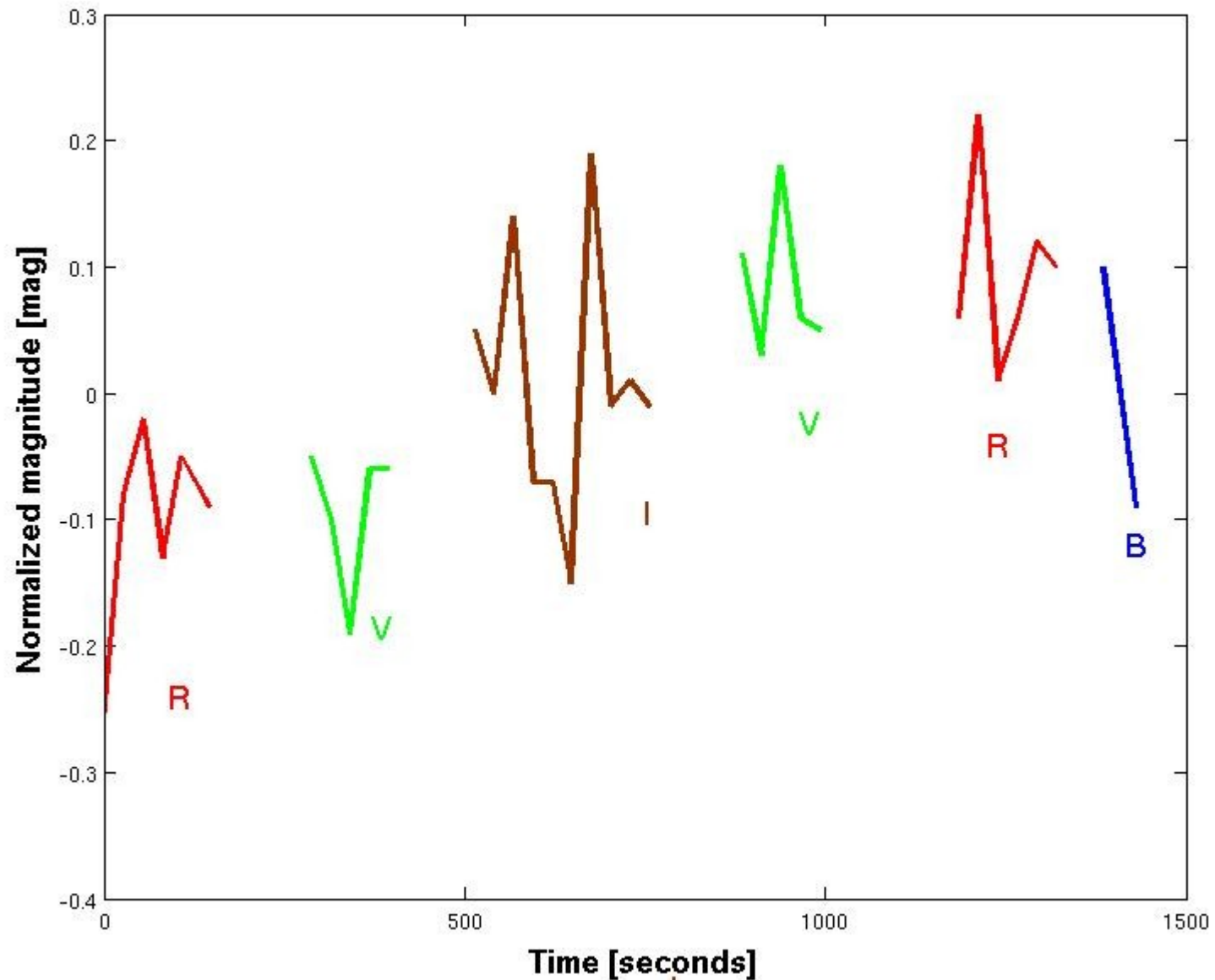
$$R(\lambda) = 10^{-0.4[(M_F - M_V) - (M_F - M_V)_0]}$$



Normalized lightcurve – HAMR 84980



Normalized lightcurve – HAMR 84967



CONCLUSIONS

Four objects from one of the August 2011 nights were analysed

Results consistent with the previous analysis

First lightcurves of HAMR

Two more nights of data acquired in March 2012.
One night lost in May 2012

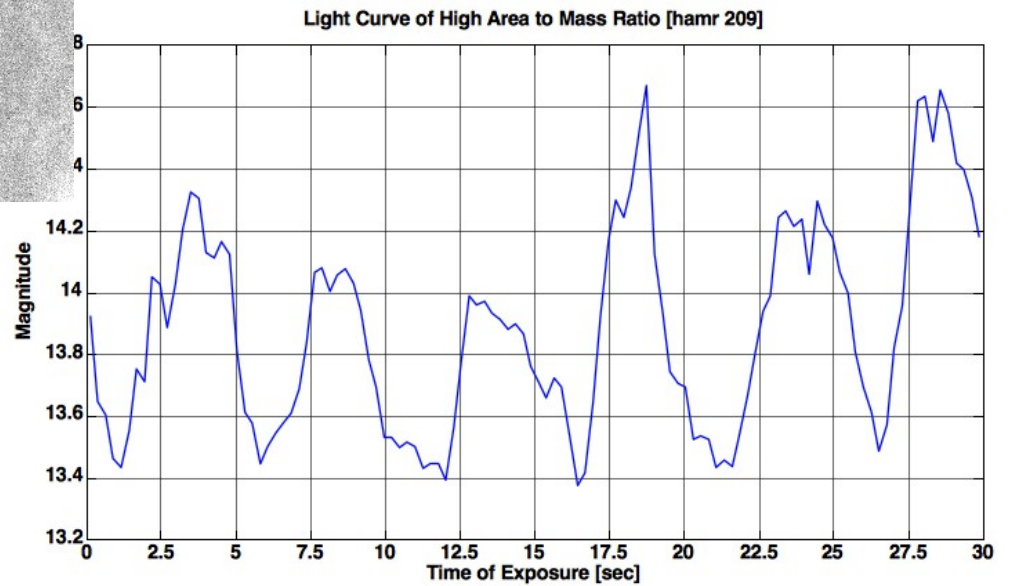
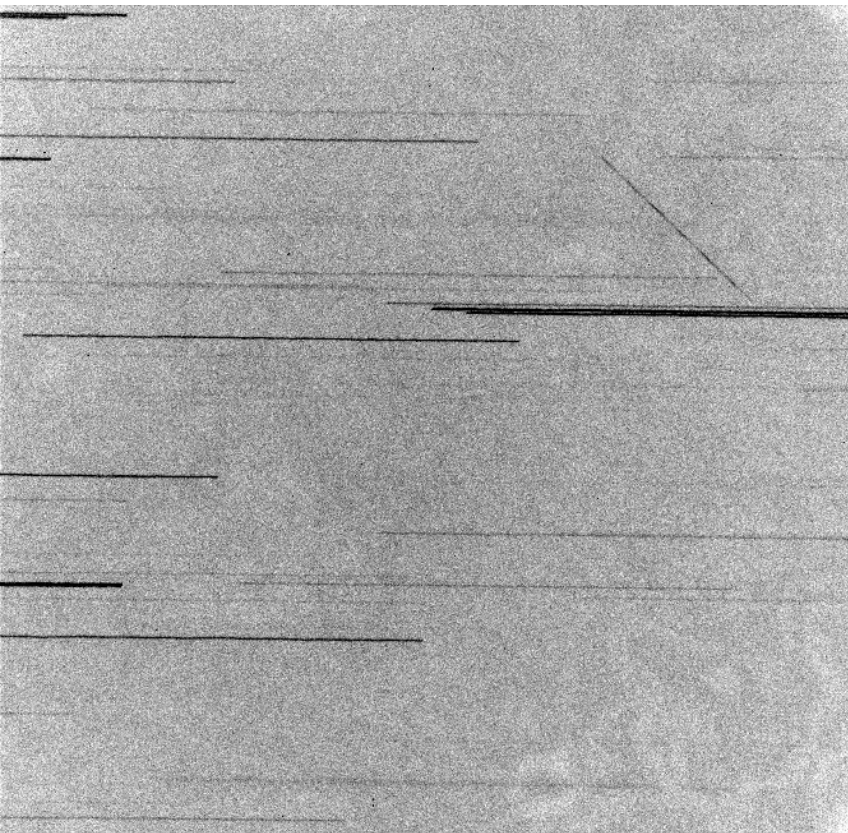
Data under analysis (IAC 2012)

More nights requested for the next semester

Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Flashing period about 5 seconds

HAMR 84999

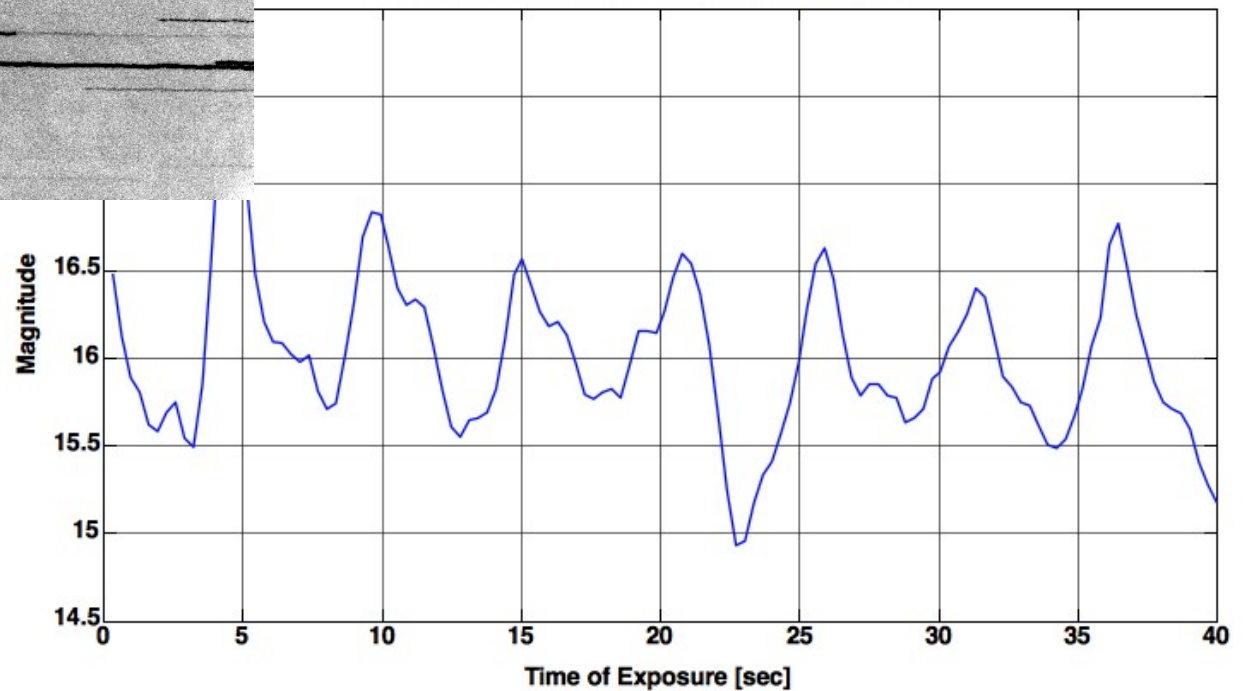


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Flashing period about 5 seconds

HAMR 84999

Light Curve of High Area to Mass Ratio [hamr 535]



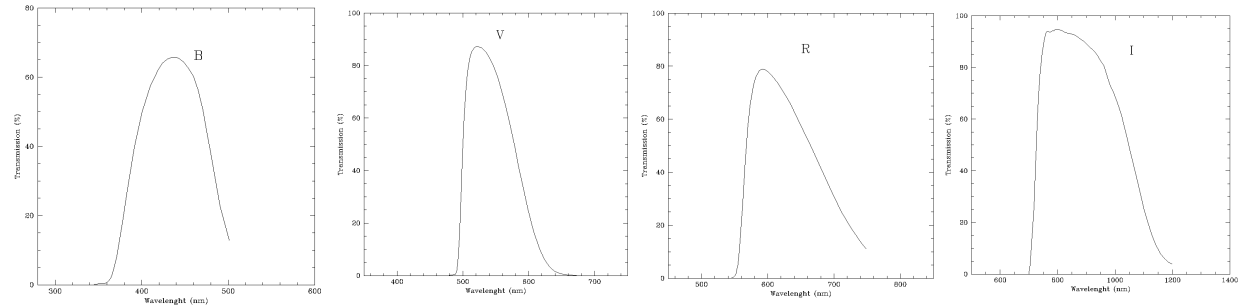
Further results of the spectrometry observations from the Loiano 1,5 meter telescope

Used configuration

Photometry

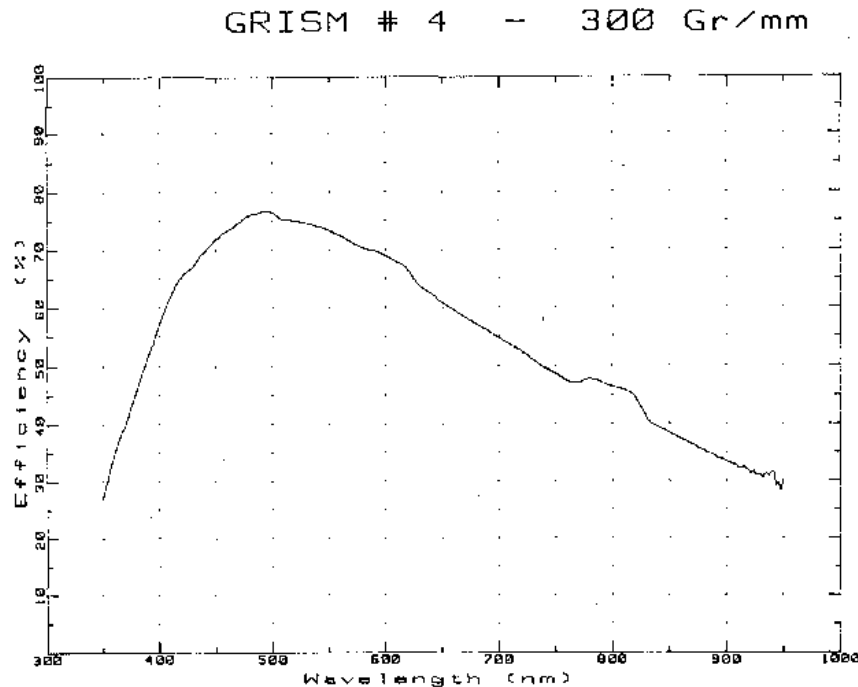
B, V, R, I

Johnson-Kron-Cousin filters



Spectrometry

2" slit



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