

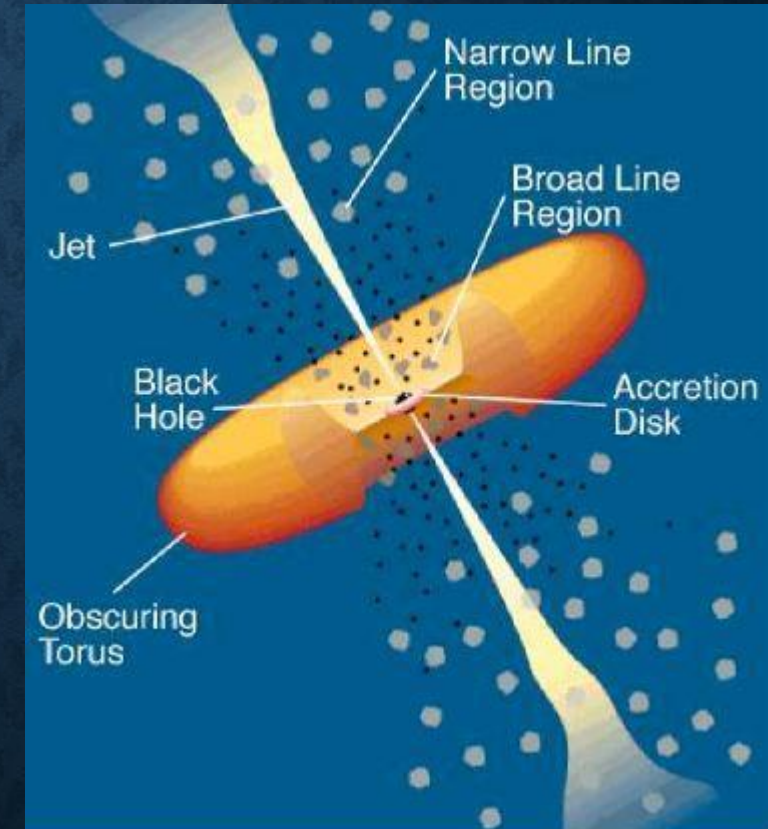
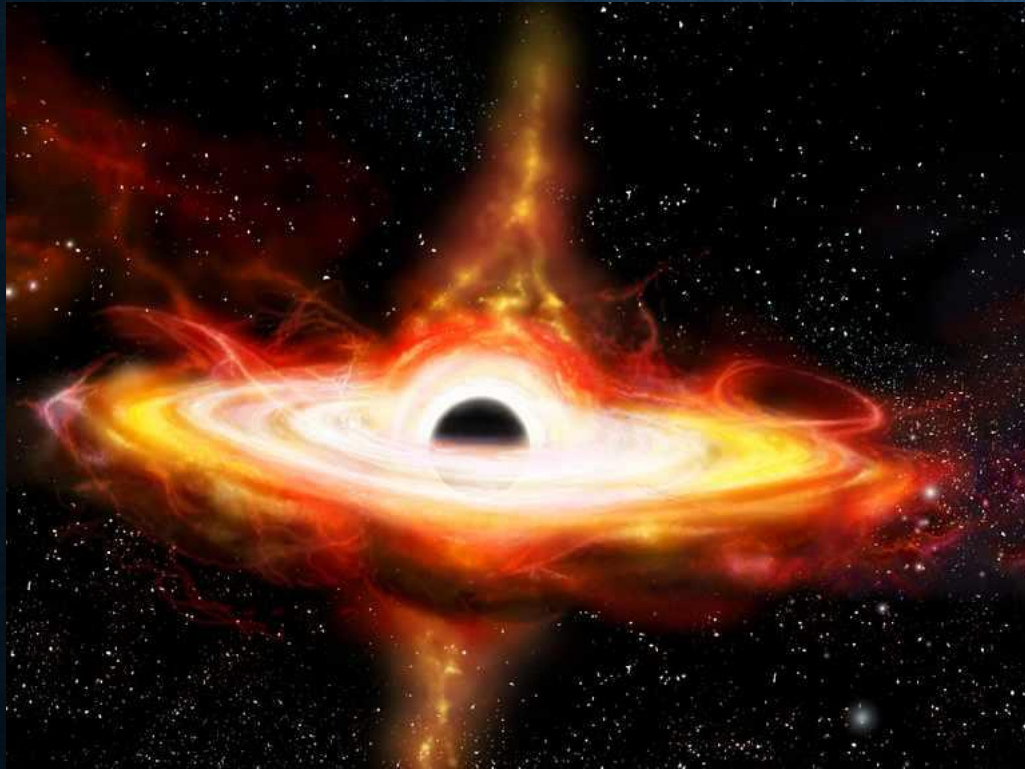
RESULTS OF PHOTOMETRIC RESEARCH OF AGN MARKARIAN 501 AND MARKARIAN 421

Orikhovskiy D.A., Ponomarenko V.A., Simon A.O., Vasylenko V.V.

Taras Shevchenko National University in Kyiv

orekhovskiy.math@gmail.com

BL LAC OBJECTS



TELESCOPES

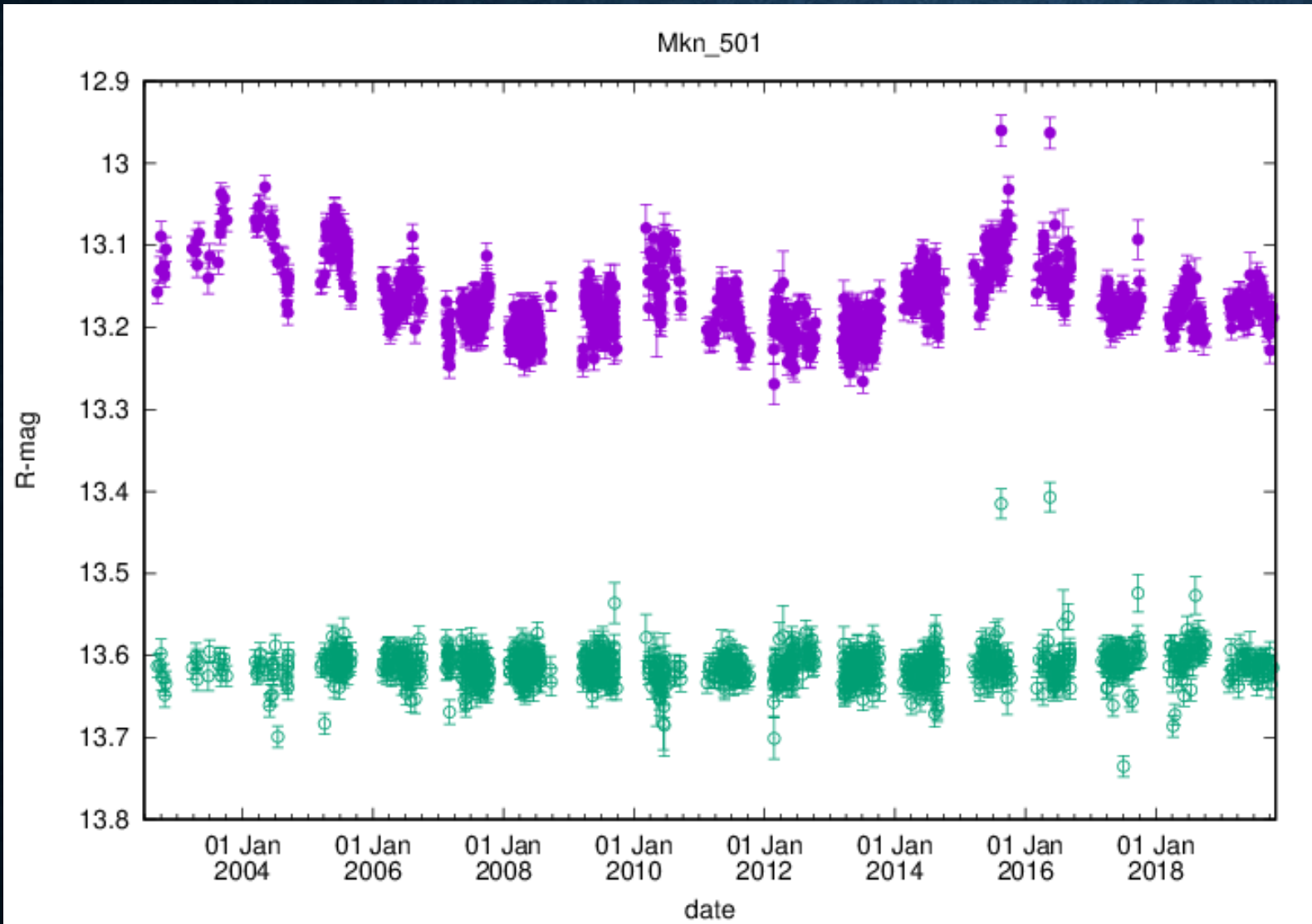
- The telescope AZT-8 ($D=0.7$ m, $F=2.83$ m) with the CCD camera FLI PL4710-1-BB-E2V (1027x1048 pixels, $13 \times 13 \mu\text{m}/\text{pixel}$, scale is $0.95''/\text{pixel}$, field of view is 16.2 angular minutes) and broadband Johnson/Bessel UBVRI filters.



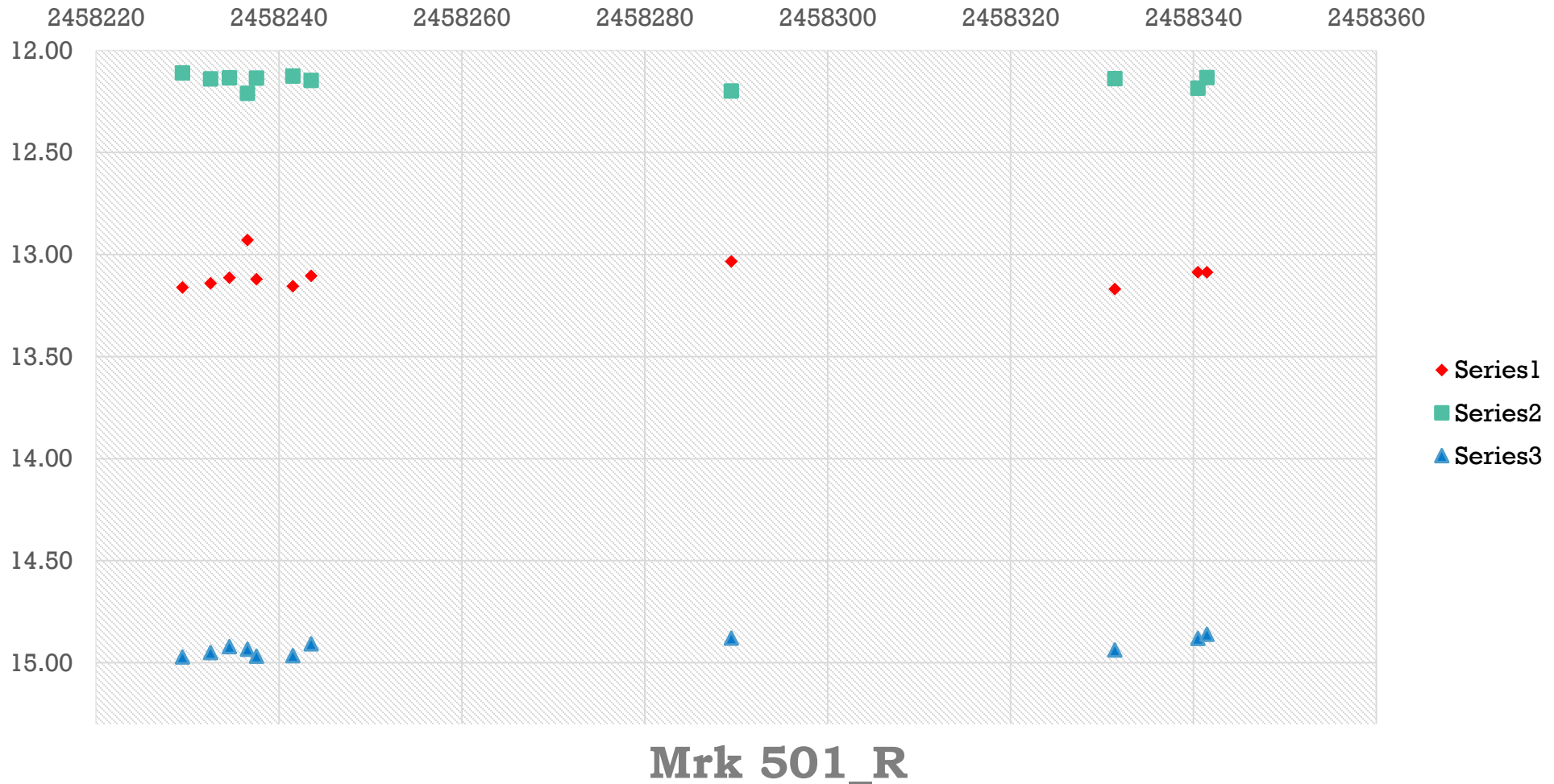
INFORMATION ABOUT THE OBJECTS

Object	Markarian 501	Markarian 421
R.A. (hh mm ss)	16 53 52	11 04 19
Dec. (dd mm ss)	+39 45 38	+38 11 41
Distance or Redshift	z=0.0336	z=0.031
Energy Threshold	300 GeV	500 GeV
Spectral Index	2.72	2.2
Discovery Date	1974	1992-08
V_{mag}	≈13.7 ^m	≈12.9 ^m

PREVIOUS OBSERVATIONS OF MRK 501

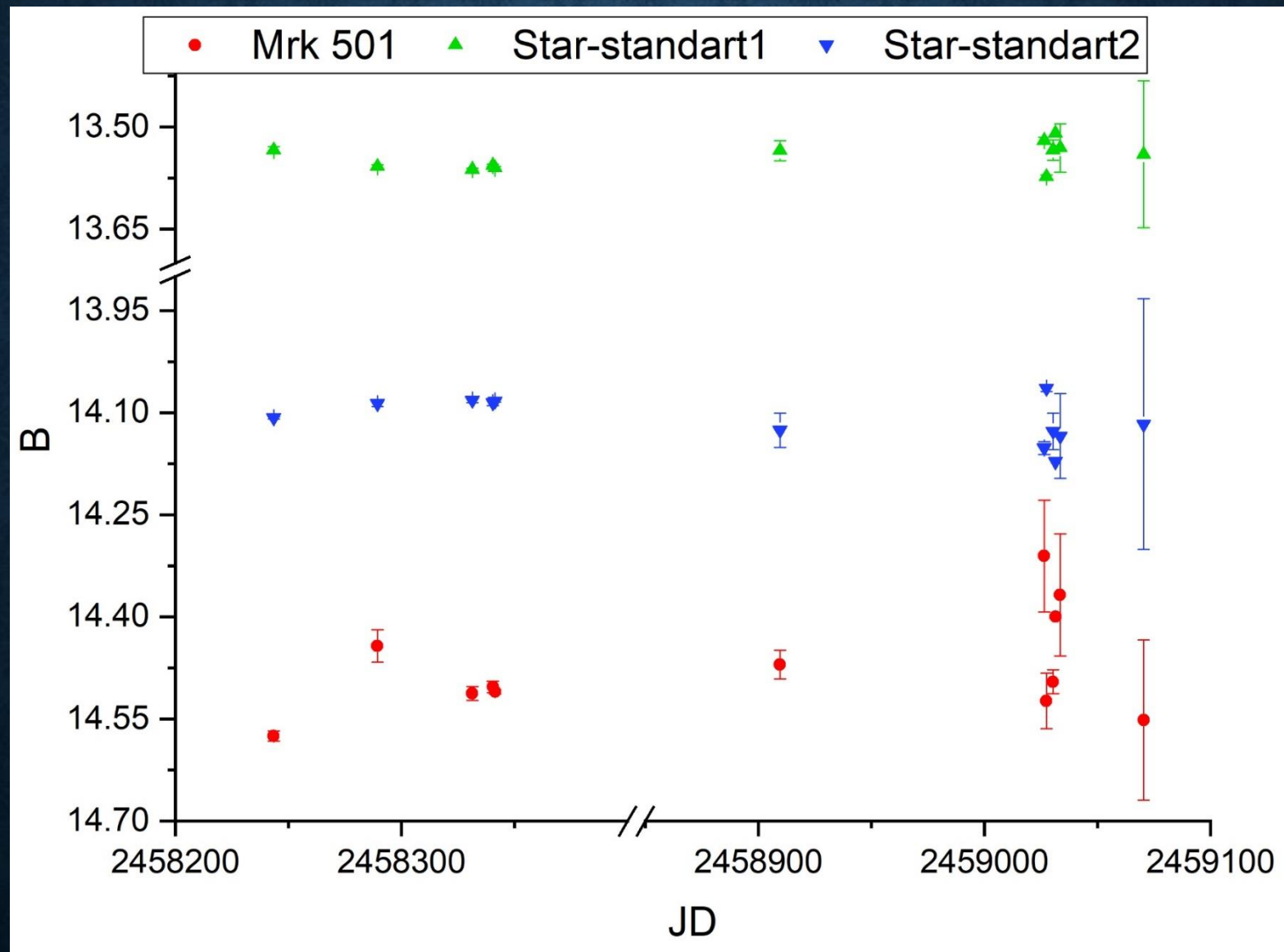


MARKARIAN 501 NIGHT-TO-NIGHT OBSERVATIONS IN 2018

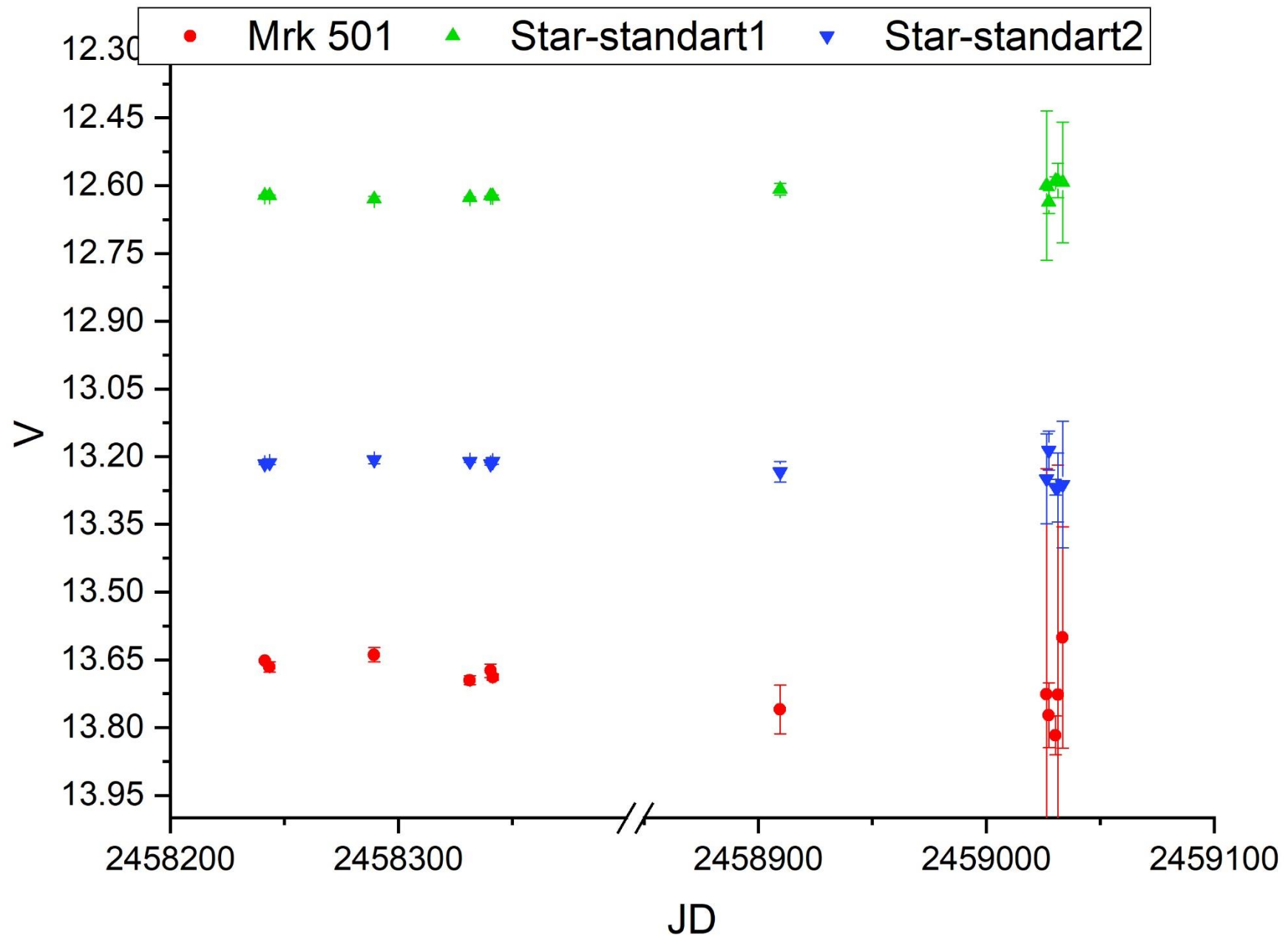


Red – Mrk 501; green and blue – star-standarts

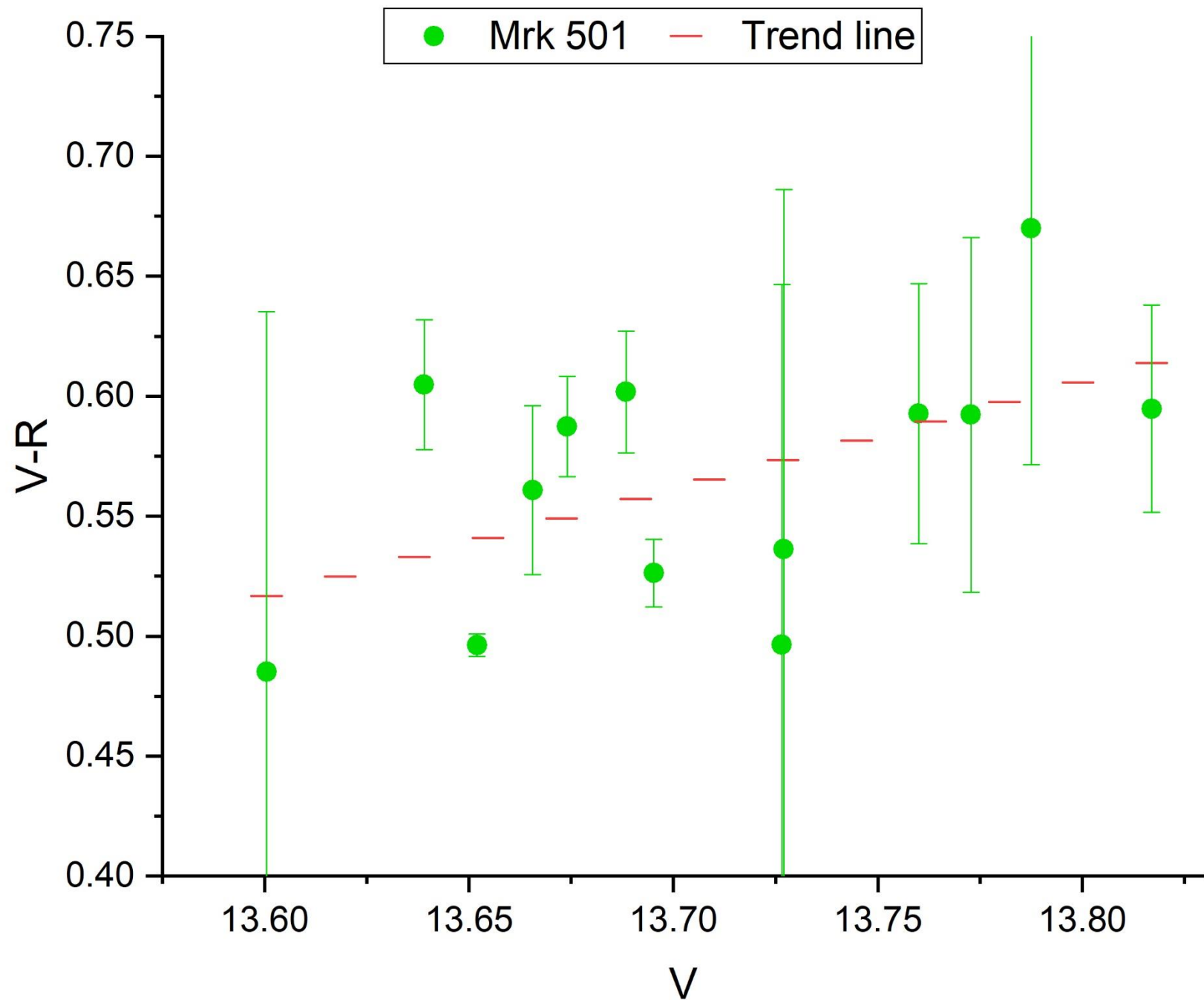
MARKARIAN 501 NIGHT-TO-NIGHT OBSERVATIONS IN 2018-2020



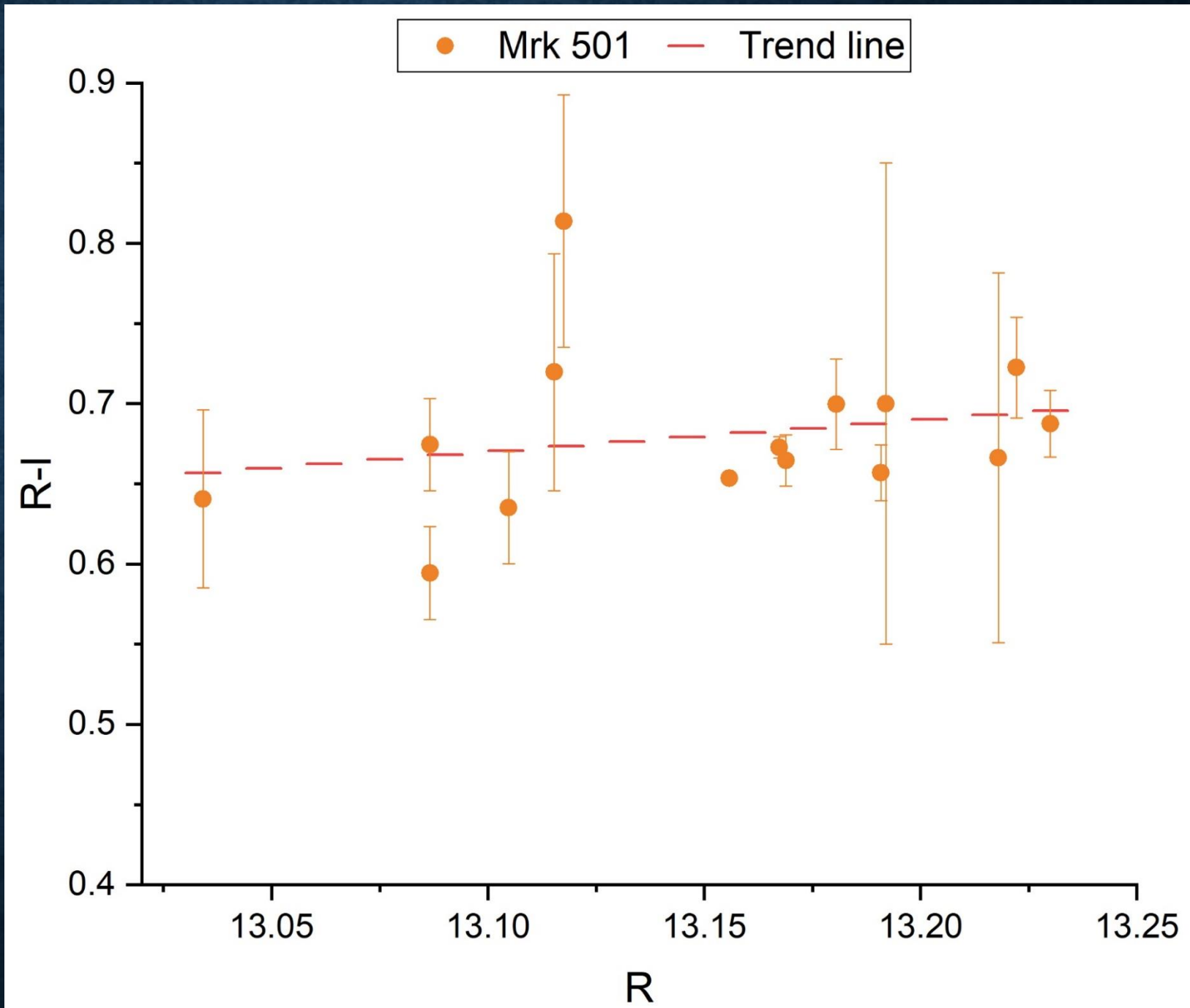
MARKARIAN 501 NIGHT-TO-NIGHT OBSERVATIONS IN 2018-2020



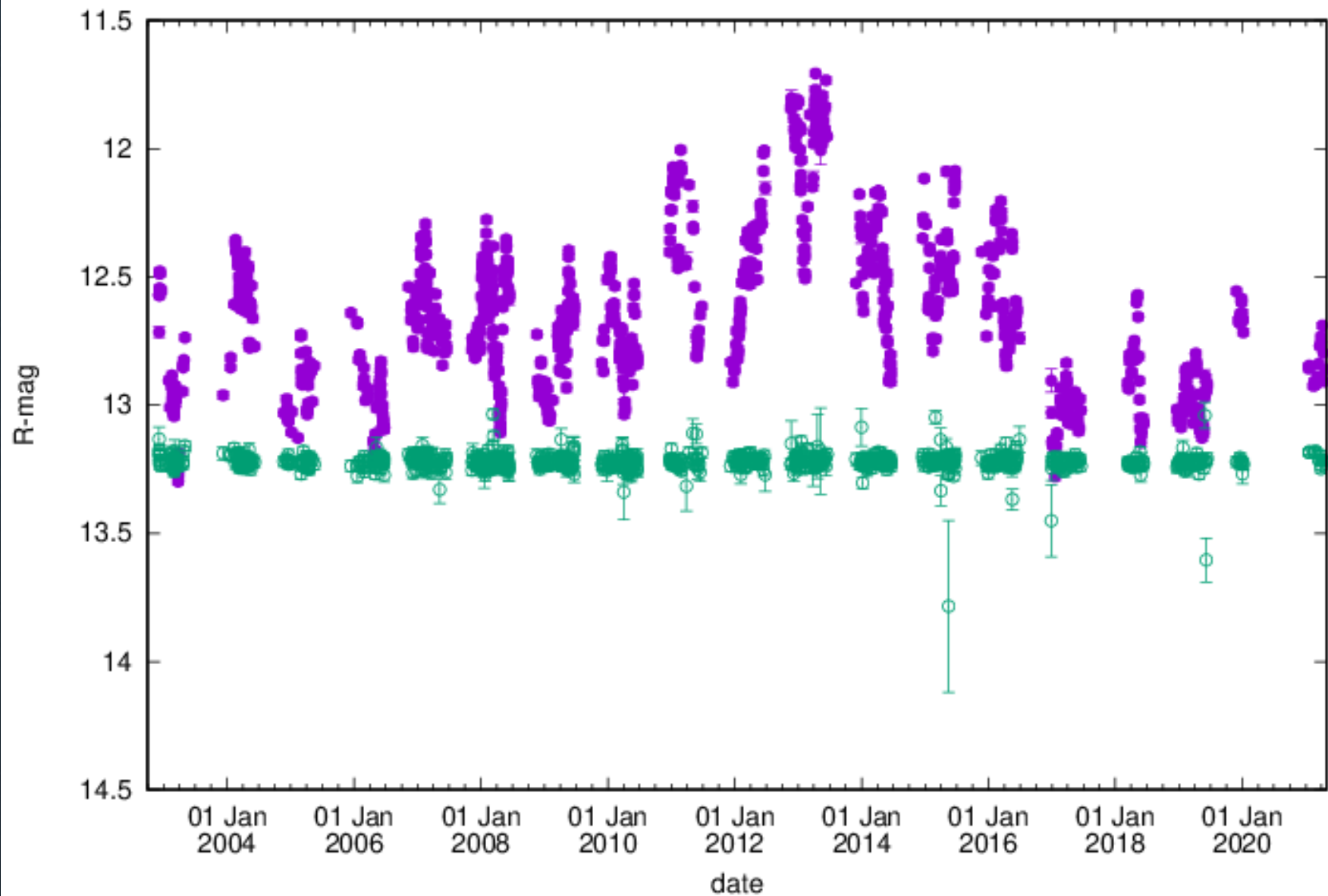
COLOR INDEXES



COLOR INDEXES

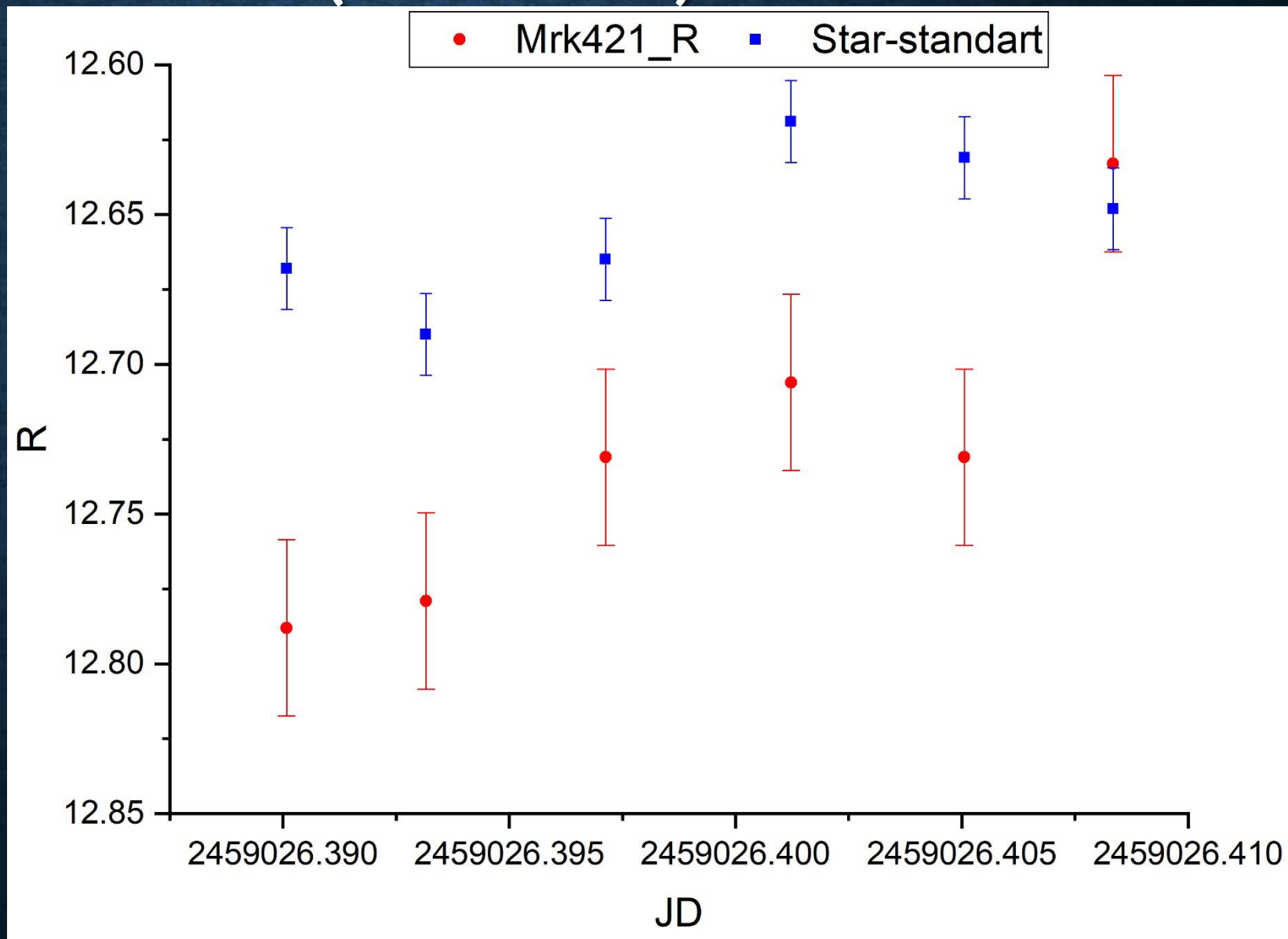


Mkn_421



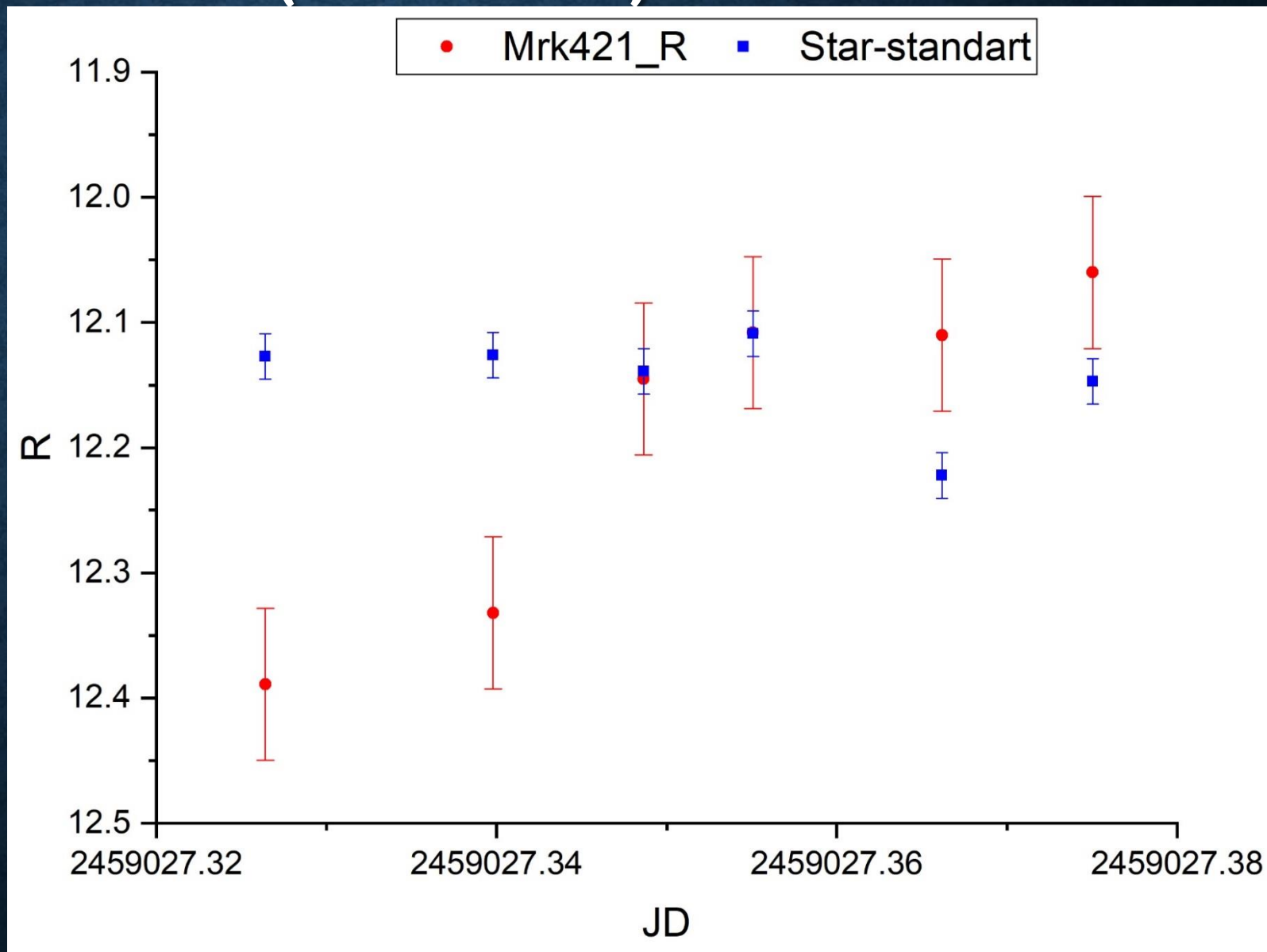
MARKARIAN 421 ONE NIGHT (IDV) OBSERVATIONS IN 2020 (FILTER R)

25.06.2020



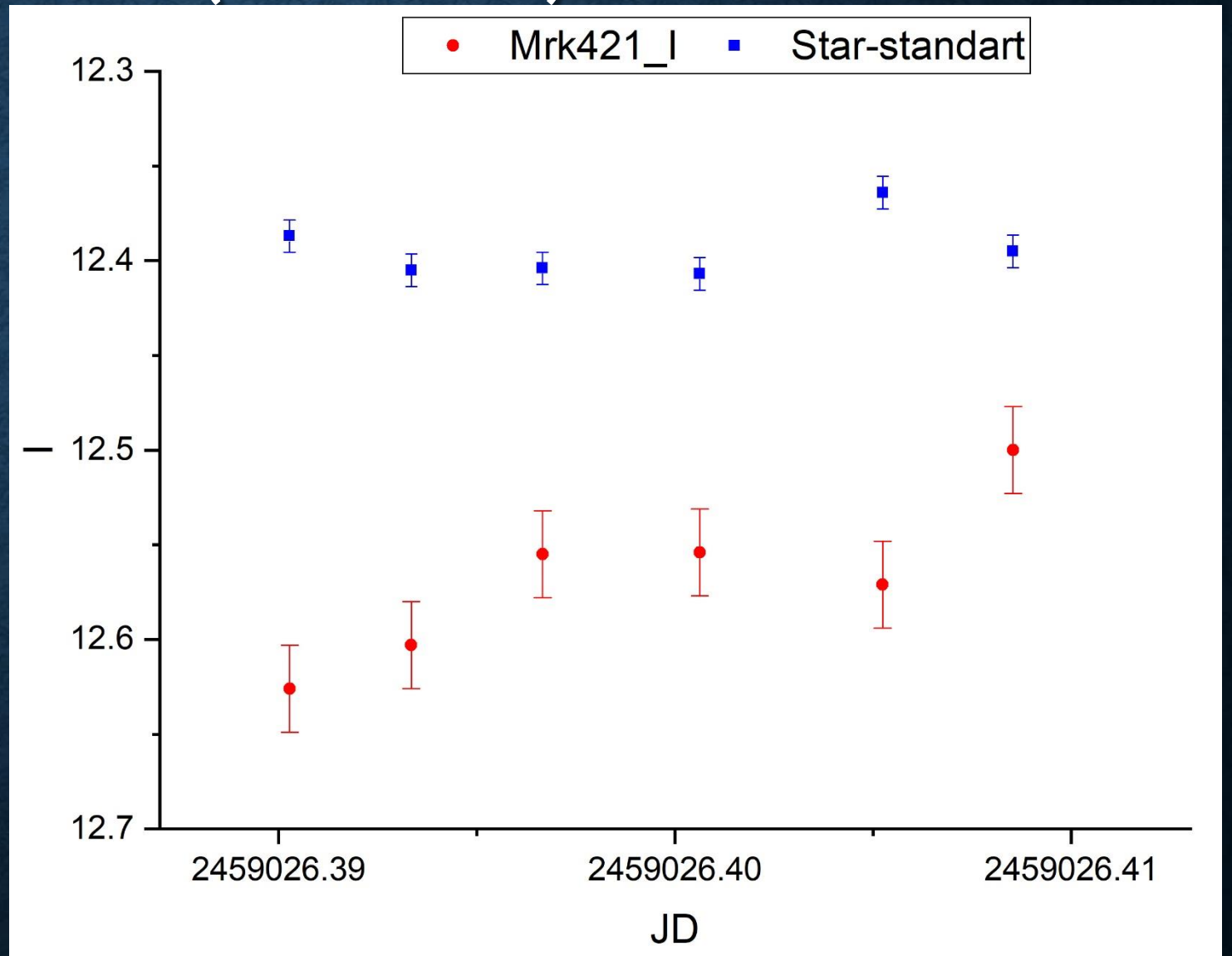
MARKARIAN 421 ONE NIGHT (IDV) OBSERVATIONS IN 2020 (FILTER R)

26.06.2020



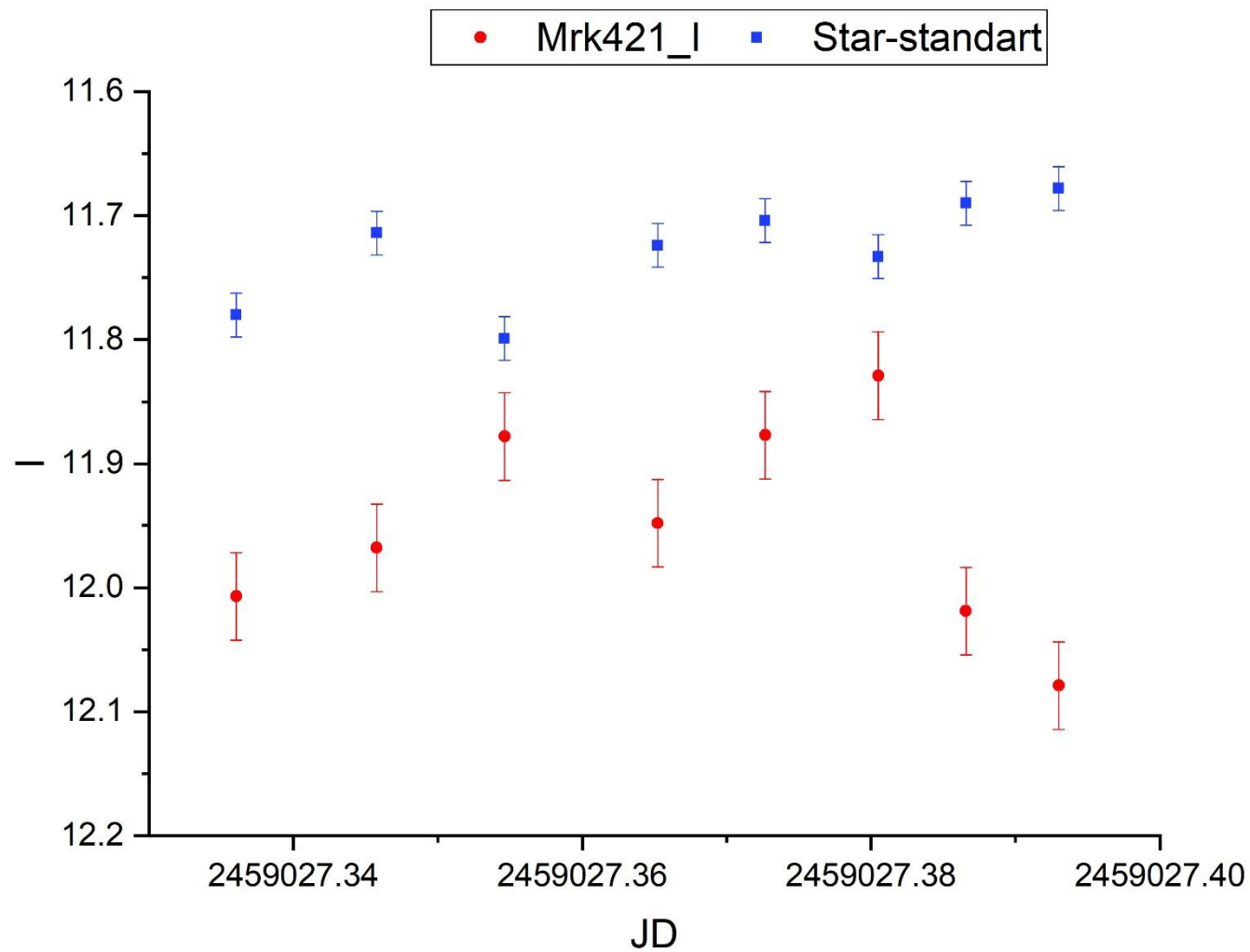
MARKARIAN 421 ONE NIGHT (IDV) OBSERVATIONS IN 2020 (FILTER I)

25.06.2020



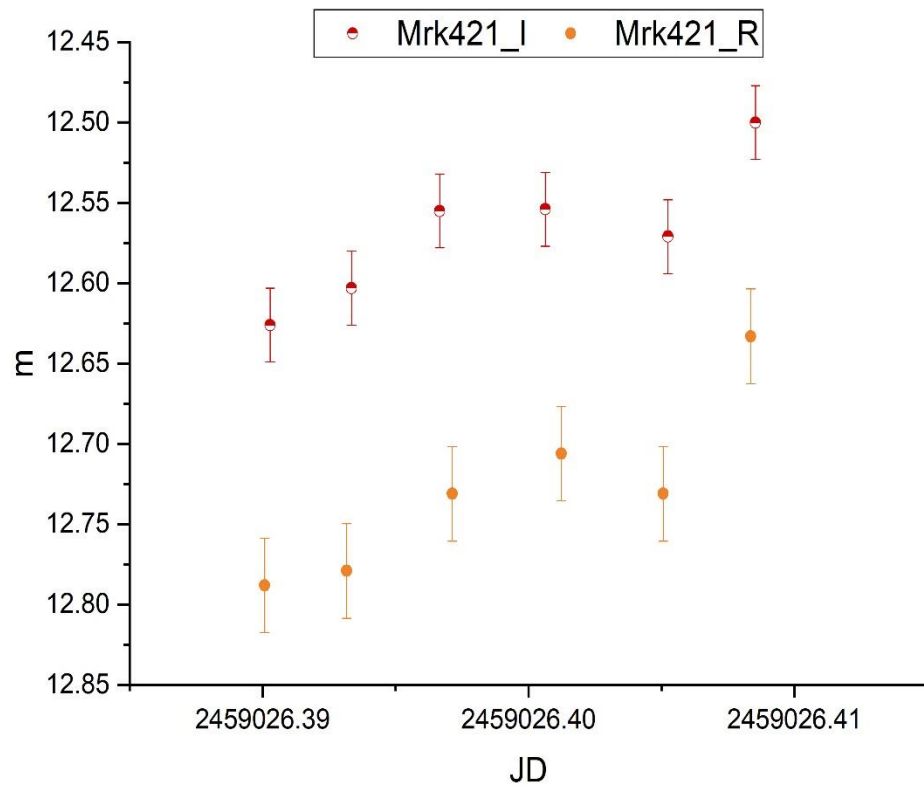
MARKARIAN 421 ONE NIGHT (IDV) OBSERVATIONS IN 2020 (FILTER I)

26.06.2020

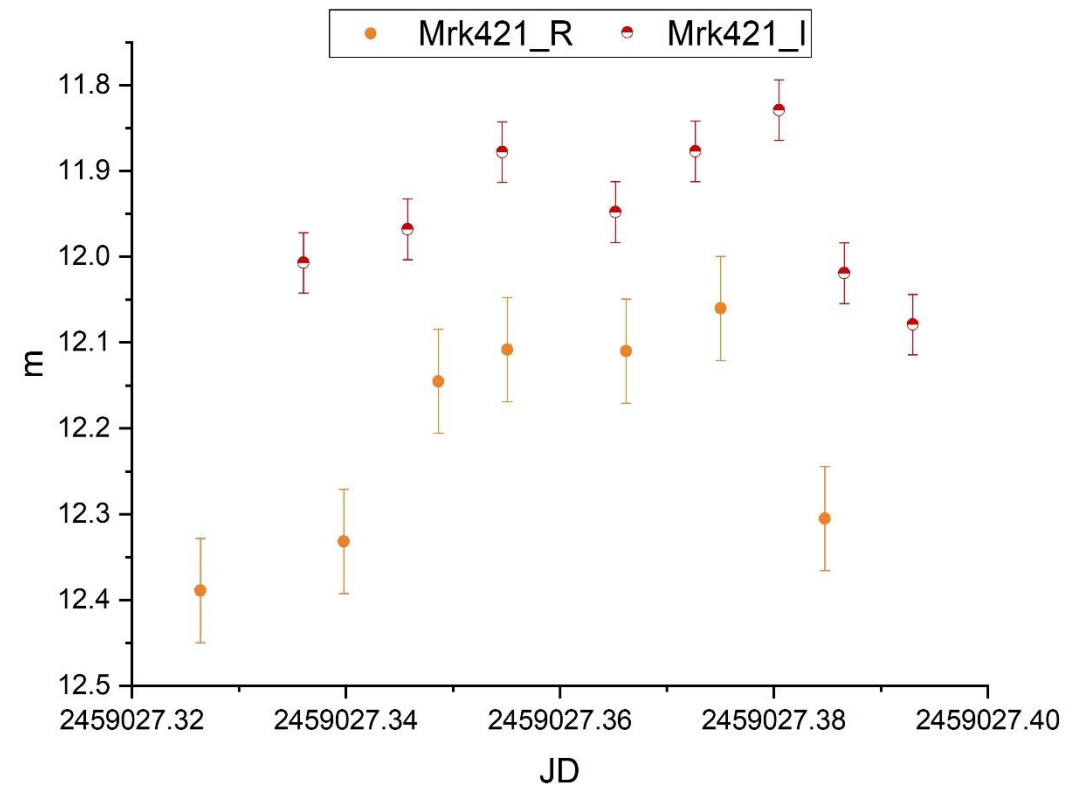


MARKARIAN 421 IN FILTERS R AND I

25.06.2020



26.06.2020



CONCLUSIONS

- For AGN Markarian 501 flux changes in filters B, V, I were sighted in 2020.
- The increasing of the flux is driven by the growth of synchrotron radiation in the jet.
- Intraday variability and flux increment for AGN Markarian 421 in filters R, I was noticed.