Spectroscopic Record Sheet

Details on acquisitions

Object	MulPre 1
Coordinates (J2000)	18:44:27.21 -08:30:48.70
Type	New candidate

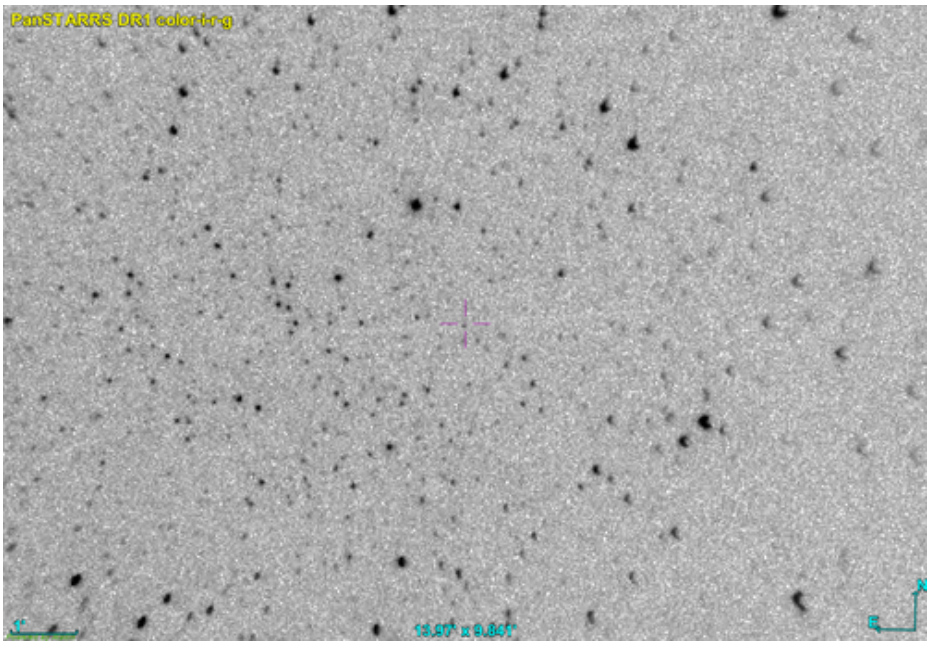
Observation date	8.331/06/2021
Weather conditions	/
Observer	2SPOT
Location	Deep Sky Chile (CL)

Mount	10 Micron GM3000 HPS
Telescope	Ritchey-Chrétien RC12
Spectroscope	Alpy 600 (23um slit)
Resolution (bin 1x1)	~1 Å at l656 nm
Principal camera	Atik 414 EX
Dispersion (bin 1x1)	~0,3 nm/pixel at l656 nm
Cam temperature	-10°C
Binning	1x1
Guiding camera	Atik 314L+
Data acquisition Soft	Prism v10.4.12.911
Data processing soft	ISIS V5.9.2

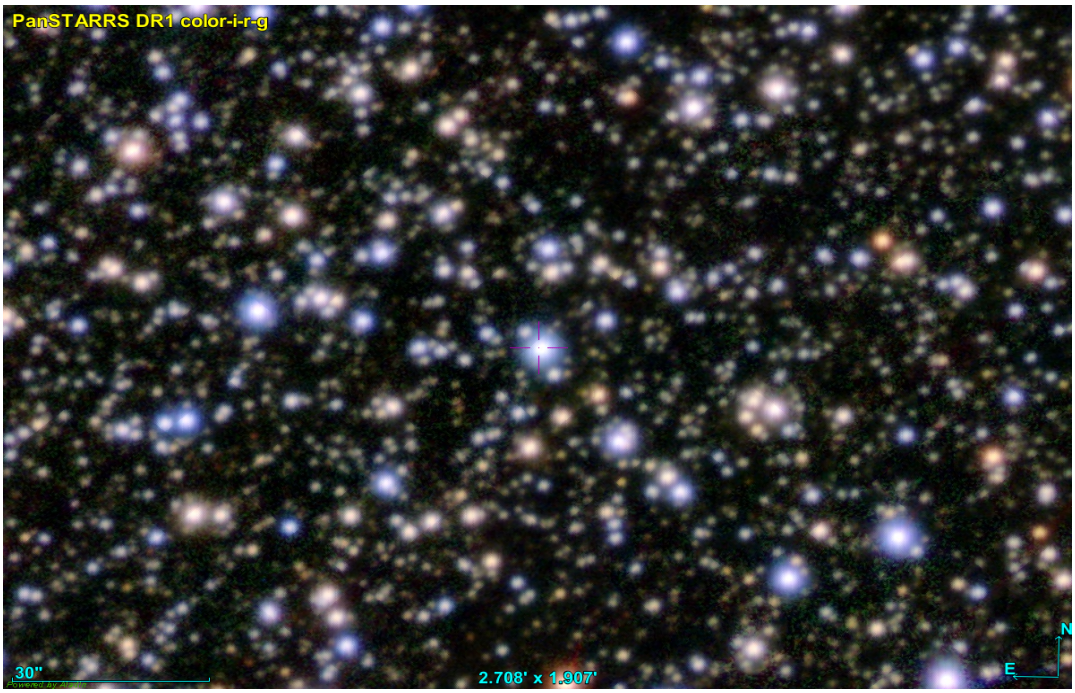
Exposure on object	7 x 1200 s
Master Dark	Corrected
Master Flat	Corrected
Master Offset	Corrected
Neon-Argon calibration	Corrected
Reference star calib.	HD177756_B9V
Exposure on ref star	14 x 6 s
Ref star Sp. date	8.398/06/2021

Images and slit position

Slit position

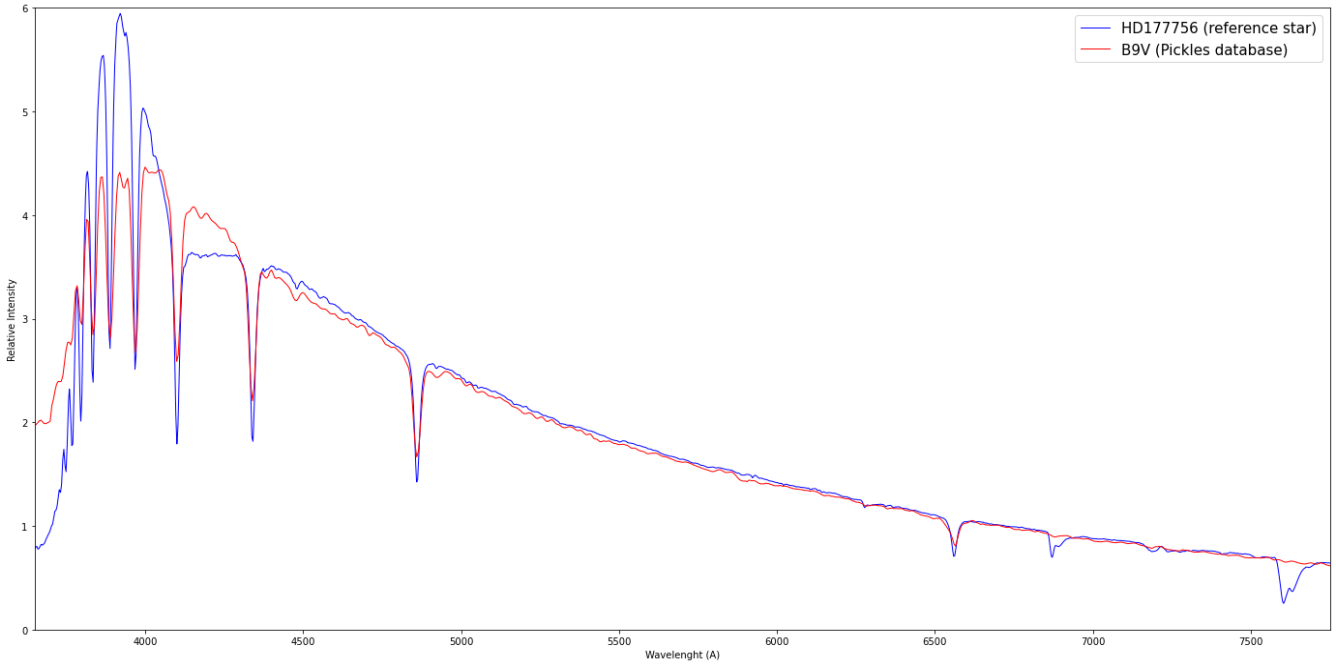


Object picture(s)

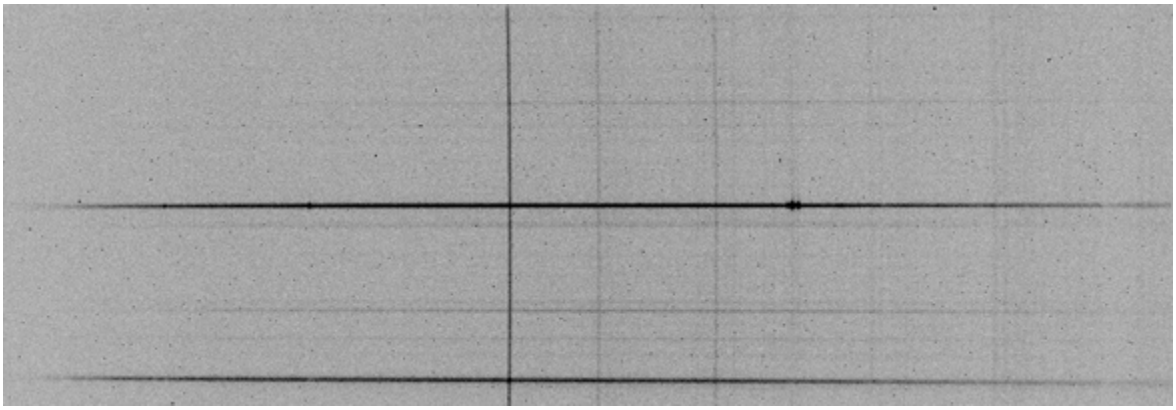


Instrumental Response and 2D Spectrum

Instrumental response (red = theoritical ref star spectrum ; blue = acquired ref star spectrum with instrumental response correction applied)

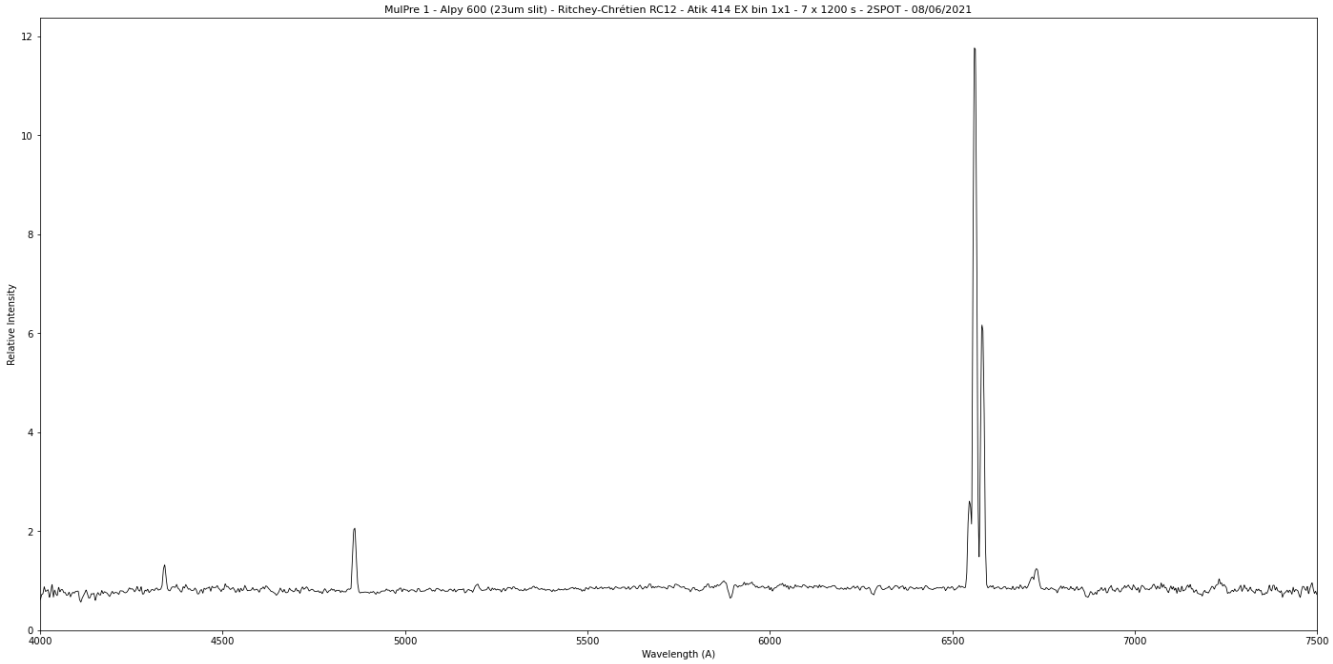


2D Raw spectrum



2D Processed spectrum

Results



Comments

Hgama, Hbeta, [NII], Halpha and [SII] lines detected with strong Halpha line.
No [OIII] line detected.
[SII] lines with a 6731/6717 ratio of ~0.9 (medium density).
The ASAS-SN photometry does not reveal any significant changes.
https://asas-sn.osu.edu/sky-patrol/coordinate/34f3c0b8-3380-4685-8eea-4da25a31fa52

MulPre1 may be a low excitation PN.