



Spectroscopic Record Sheet



Details on acquisitions

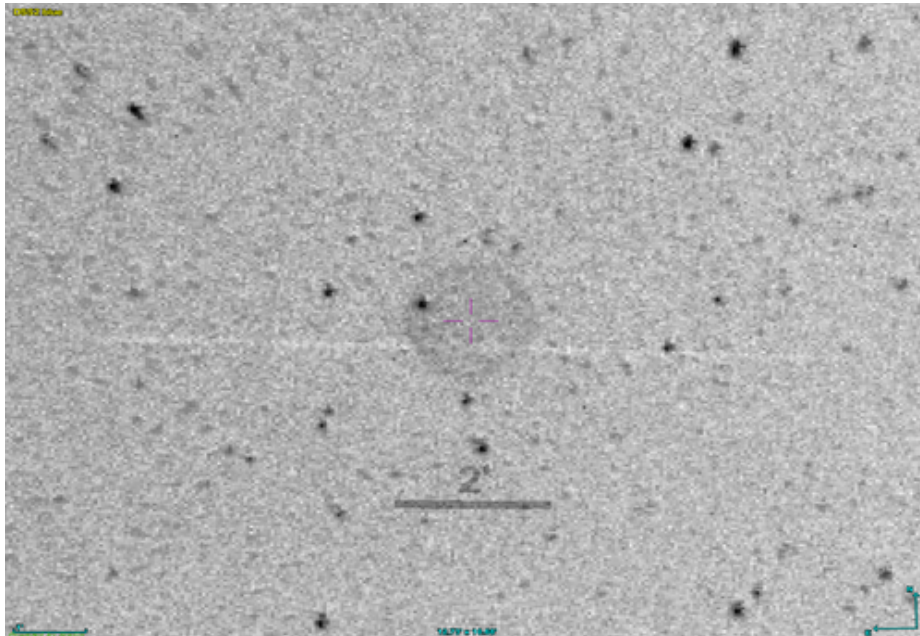
Object	WoWa 1
Coordinates (J2000)	19:44:36.18 +12:17:39.53
Type	Likely PN

Observation date	23.039/08/2025
Weather conditions	/
Observer	P. Le Dû
Location	Kermerrien Observatory (Porspoder, FR)

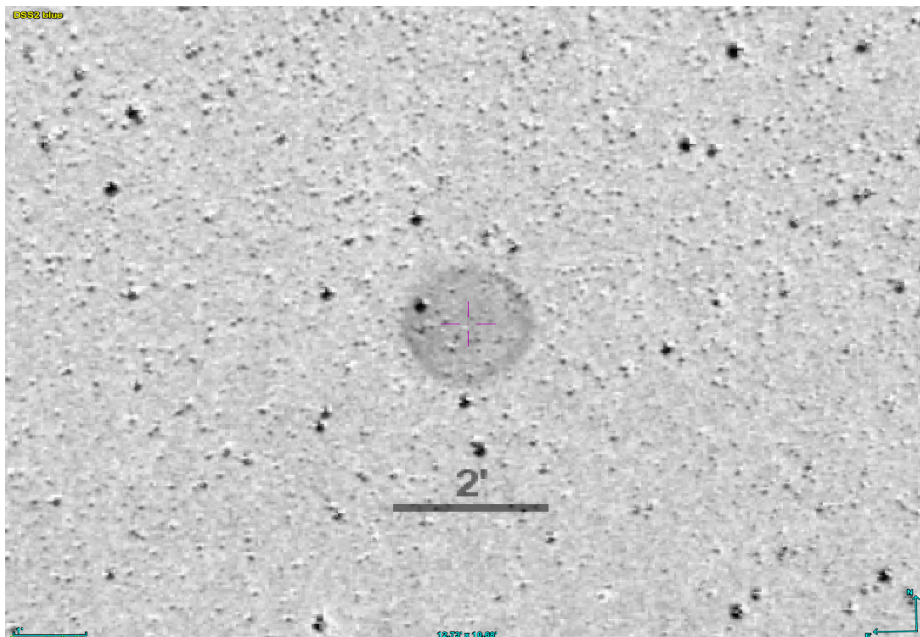
Mount	Losmandy G11
Telescope	Newton 200mm F/5
Spectroscope	Alpy 600 (23um slit)
Resolution (bin 1x1)	~1nm at 656 nm
Principal camera	Atik 414 EX
Dispersion (bin 1x1)	~0,3 nm/pixel at 656 nm
Cam temperature	-10°C
Binning	2x2
Guiding camera	Atik 314L+
Data acquisition Soft	Prism v11.2.3.21
Data processing soft	ISIS V6.1.1

Exposure on object	8 x 1200 s
Master Dark	Corrected
Master Flat	Corrected
Master Offset	Corrected
Neon-Argon calibration	Corrected
Reference star calib.	HD196544_A2V
Exposure on ref star	12 x 12 s
Ref star Sp. date	23.114/08/2025

Slit position

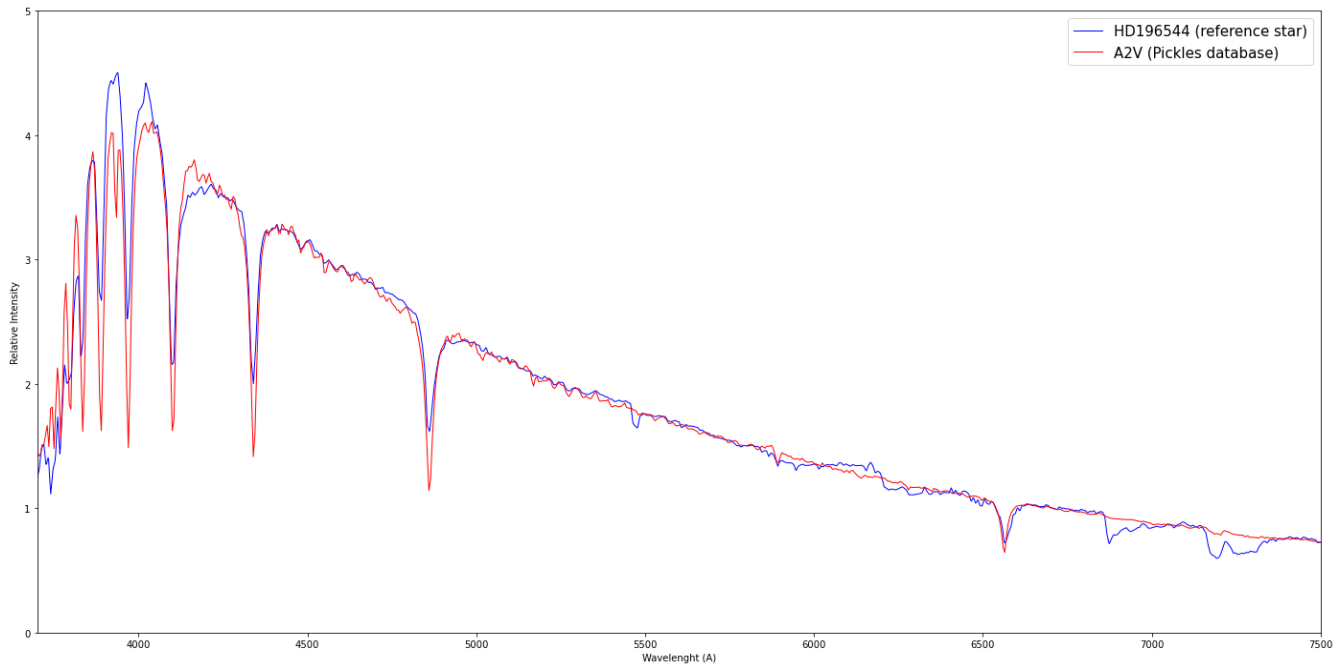


Object picture(s)

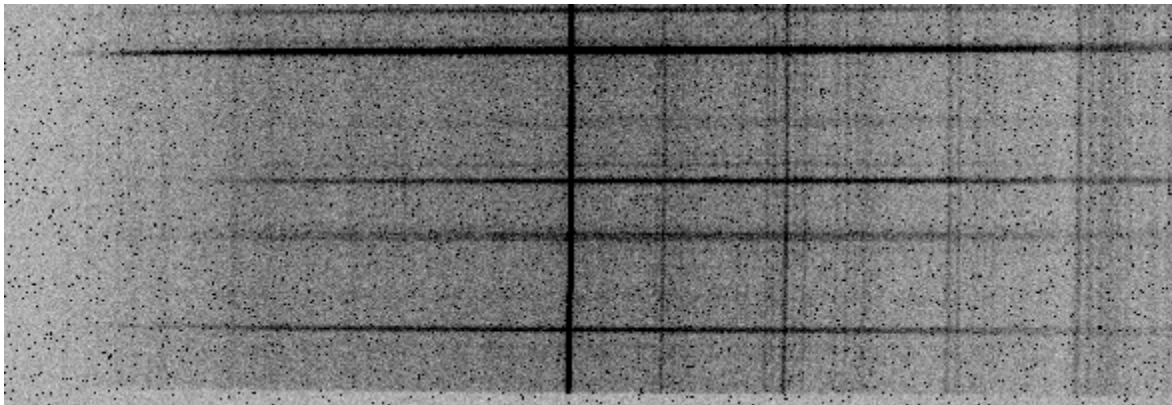


Instrumental Response and 2D Spectra

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

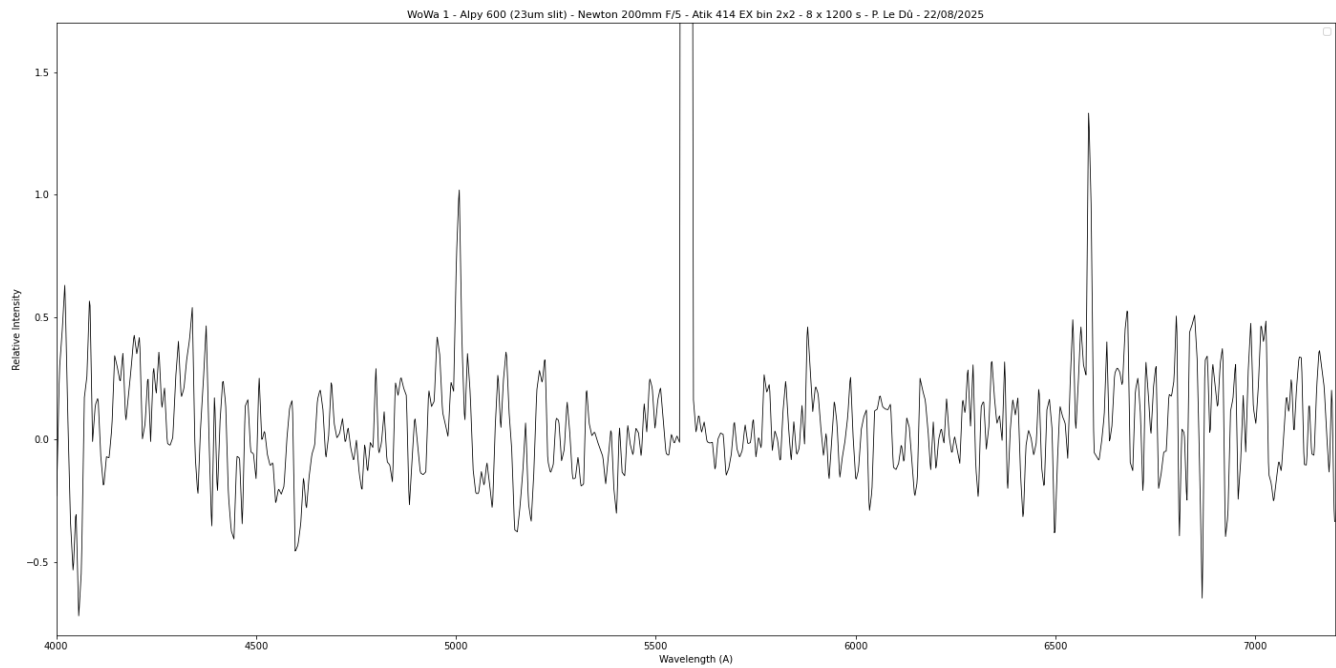


2D Raw spectrum



2D Processed spectrum





Comments

[OIII], [NII] and Halpha lines detected.

The spectrum of WoWa 1 shows the nebular lines of a planetary nebula.

This is probably a true planetary nebula.