



# Spectroscopic Record Sheet



## Details on acquisitions

Object	Br 9
Coordinates (J2000)	20:21:13.85 +44:47:14.20
Type	/

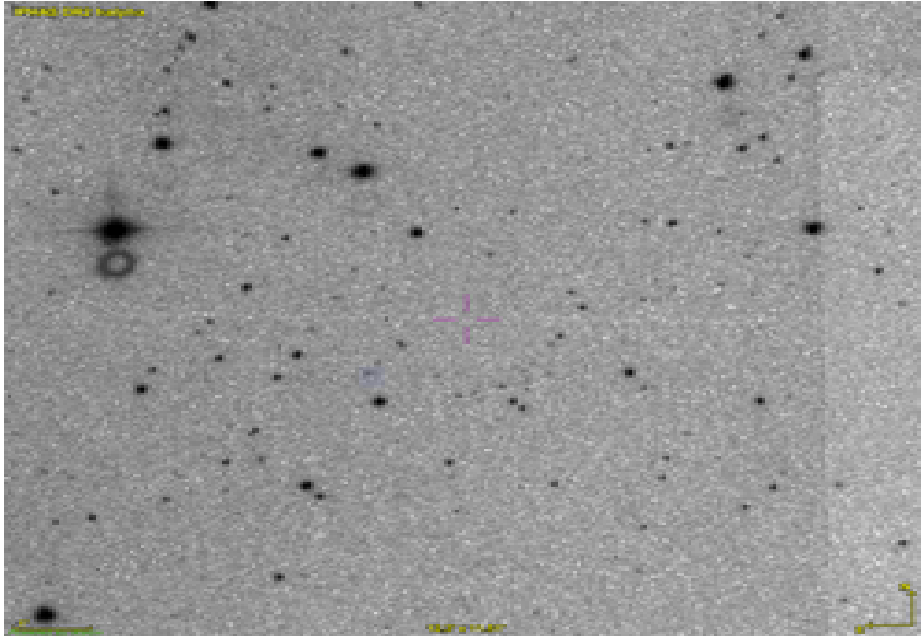
Observation date	14.952/09/2023
Weather conditions	Temp:15°C Hygro: 85% Patm:1015 hpa
Observer	P. Le Dû
Location	Kermerrien Observatory (Porspoder, FR)

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

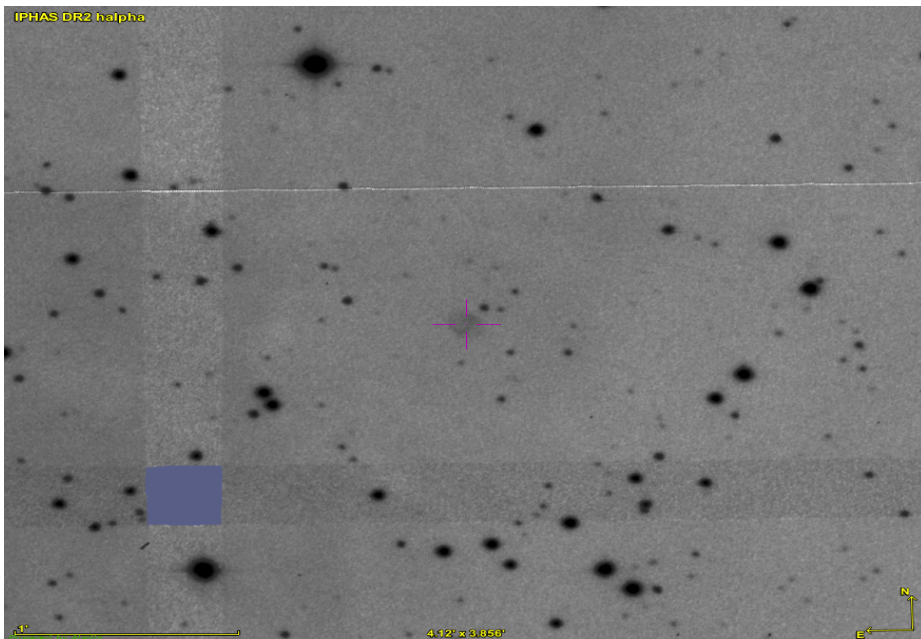
Exposure on object	8 x 1200 s
Master Dark	Corrected
Master Flat	Corrected
Master Offset	Corrected
Neon-Argon calibration	Corrected

Reference star calib.	HD222439_A0V
Exposure on ref star	14 x 6 s
Ref star Sp. date	15.148/09/2023

## Slit position



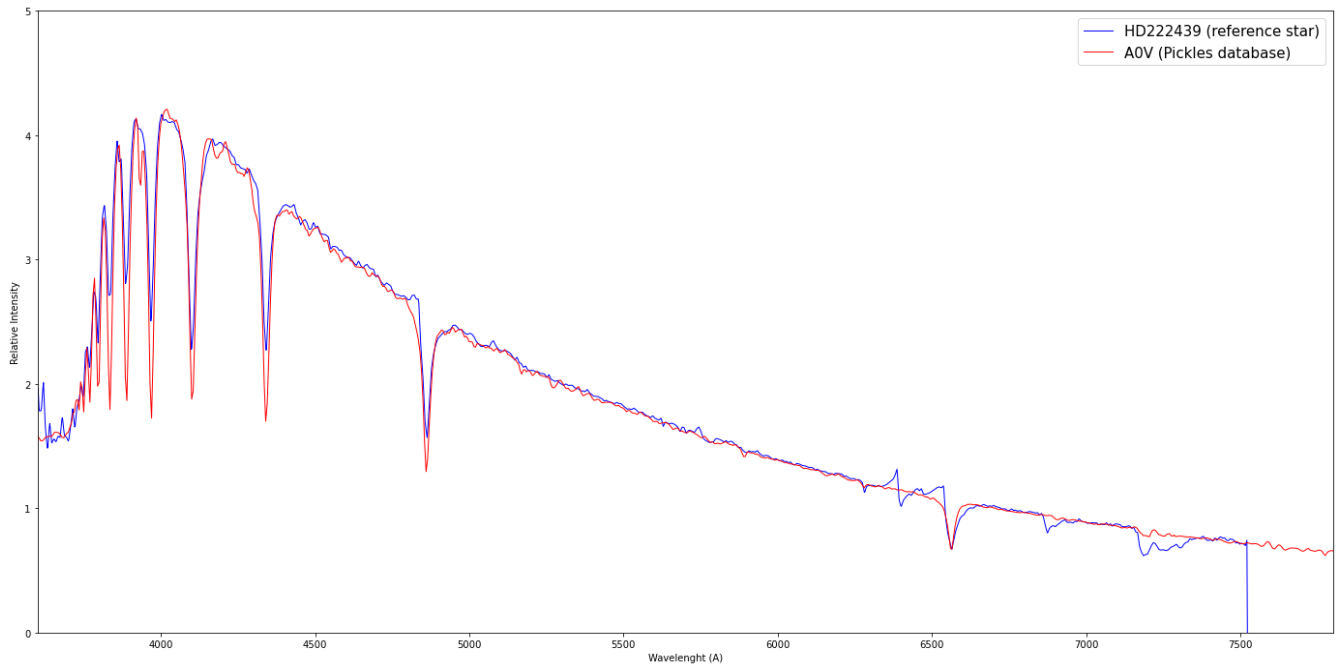
## Object picture(s)



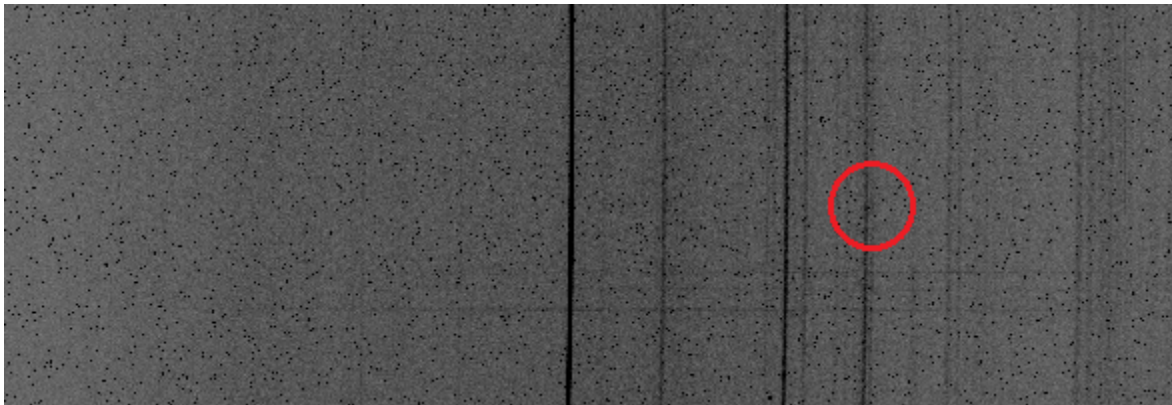


# Instrumental Response and 2D Spectra

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

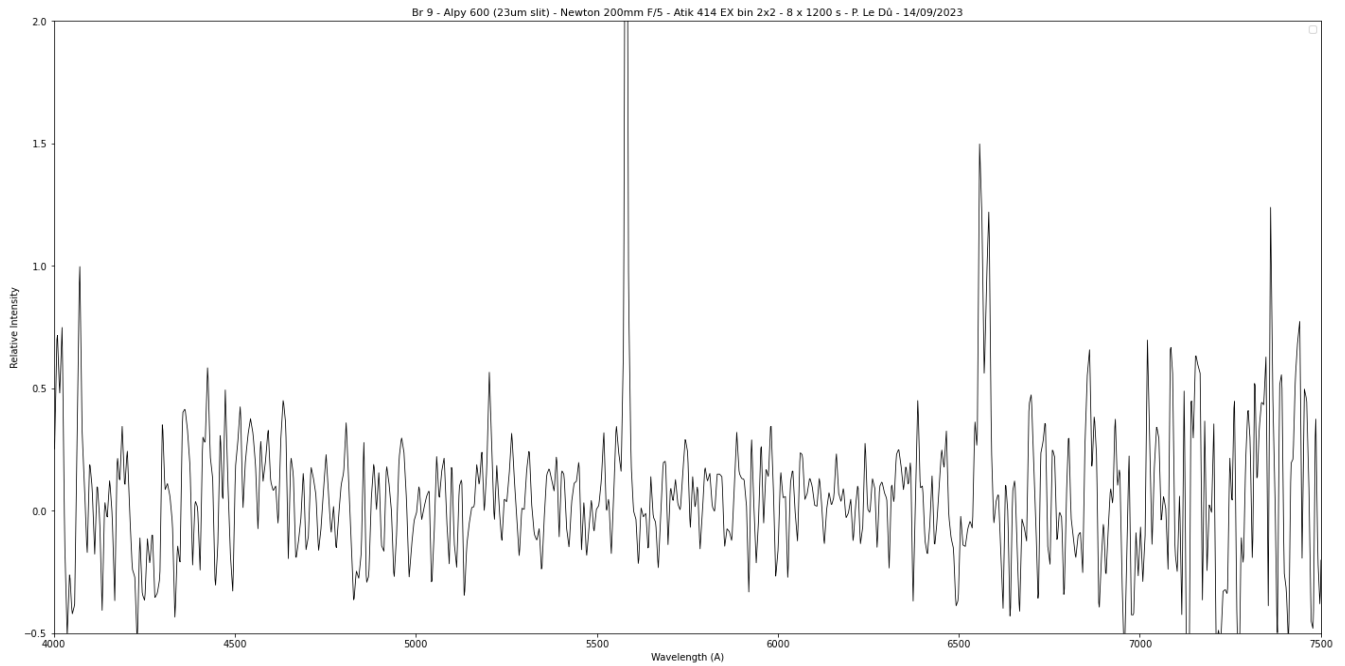


## 2D Raw spectrum



## 2D Processed spectrum





## Comments

Only H $\alpha$  and [NII](6583Å) lines detected.

Another emission line seems to be visible around 5200Å, [NI]?

Br 9 is probably a true planetary nebula