Spectroscopic Record Sheet

Details on acquisitions

Object	Pa165
Coordinates (J2000)	21 38 52.8 +18 40 15
Type	PN Candidate

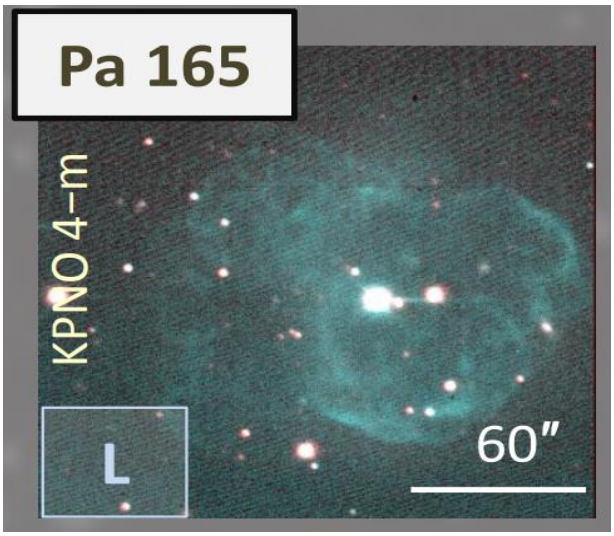
Observation date	24.953/08/2020 (d/m/y)
Meteorological conditions	20°C
Observer	L.Mulato
Location	Cornillon France

Mount	NEQ6
Telescope	Newton Skywatcher 200 mm F/5
Spectrograph	Alpy 600 - 23 µm slit
Resolution (bin 1x1)	~1 Å at λ656 nm
Science camera	ATIK 414 EX
Dispersion (bin 1x1)	~0,3 nm/pixel at λ656 nm
Cam Temperature	0 °C
Binning	2x2
Guiding camera	ASI290 MM non cooled
Data acquisition Soft	PRISM V10
Data processing Soft	Isis V5.9.3

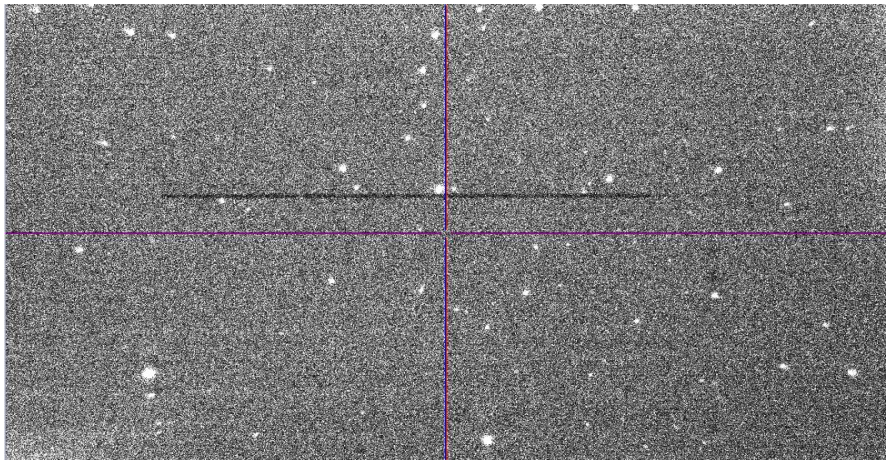
Exposure on object	11 x 1200 s
Master Dark date	28/06/2020 (d/m/y)
Dark Exposure	18 x 1200 s
Dark Temperature	0 °C
Master Offset date	22/05/2020 (d/m/y)
Master Flat date	28/08/2020 (d/m/y)
Neon-Argon calib. date	25/08/2020 (d/m/y)
Reference star calib.	hd220061_A5V
Exposure on ref star	20 x 5 s
Ref Star Sp. date	25.068/08/2020

Images and slit position

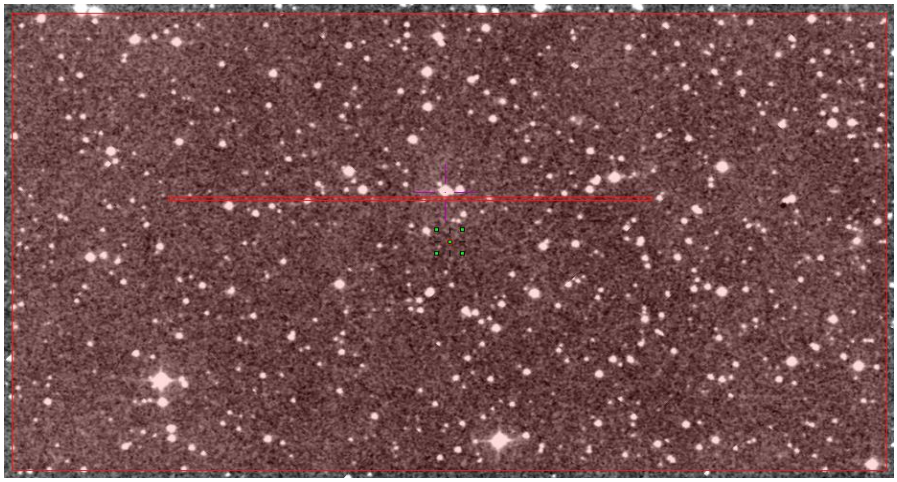
Image Ha
© KNPO



Autoguider

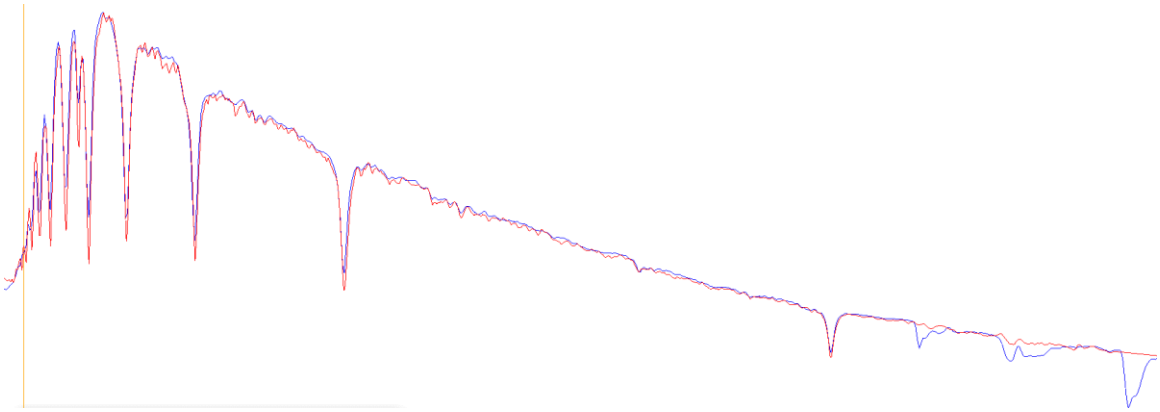


Slit position
DSS2 Red

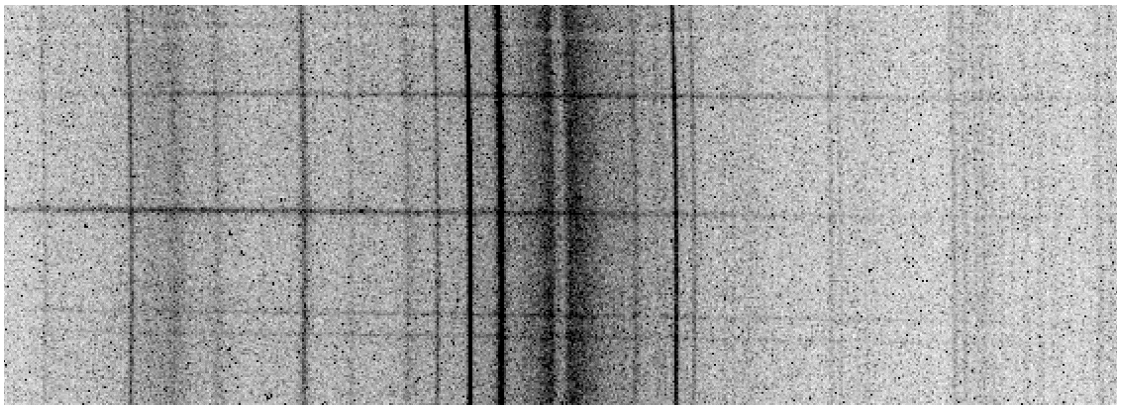


Instrumental Response and 2D Spectrum

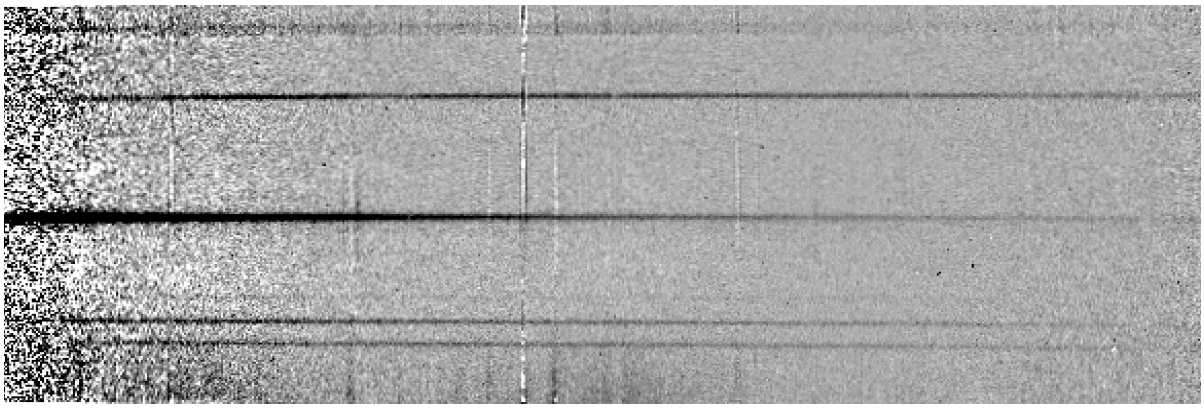
Instrumental response (red = theoritical ref star spectrum ; blue = acquired ref star spectrum with instrumental response correction applied)



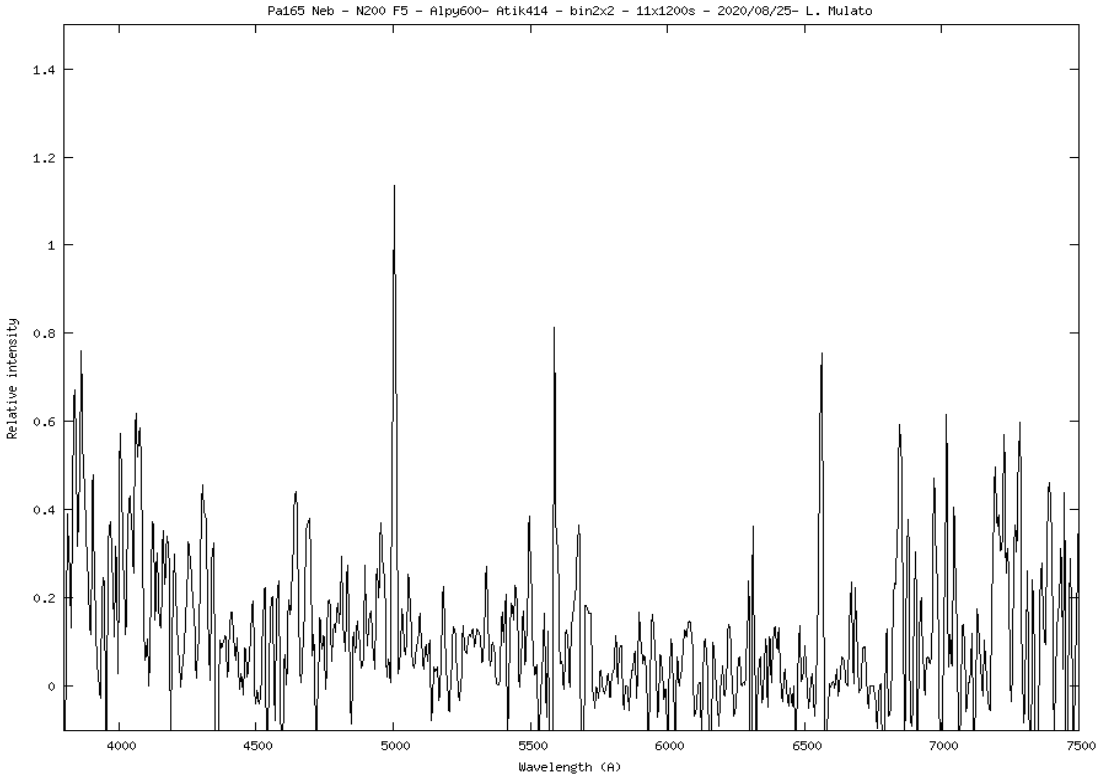
2D Raw spectrum

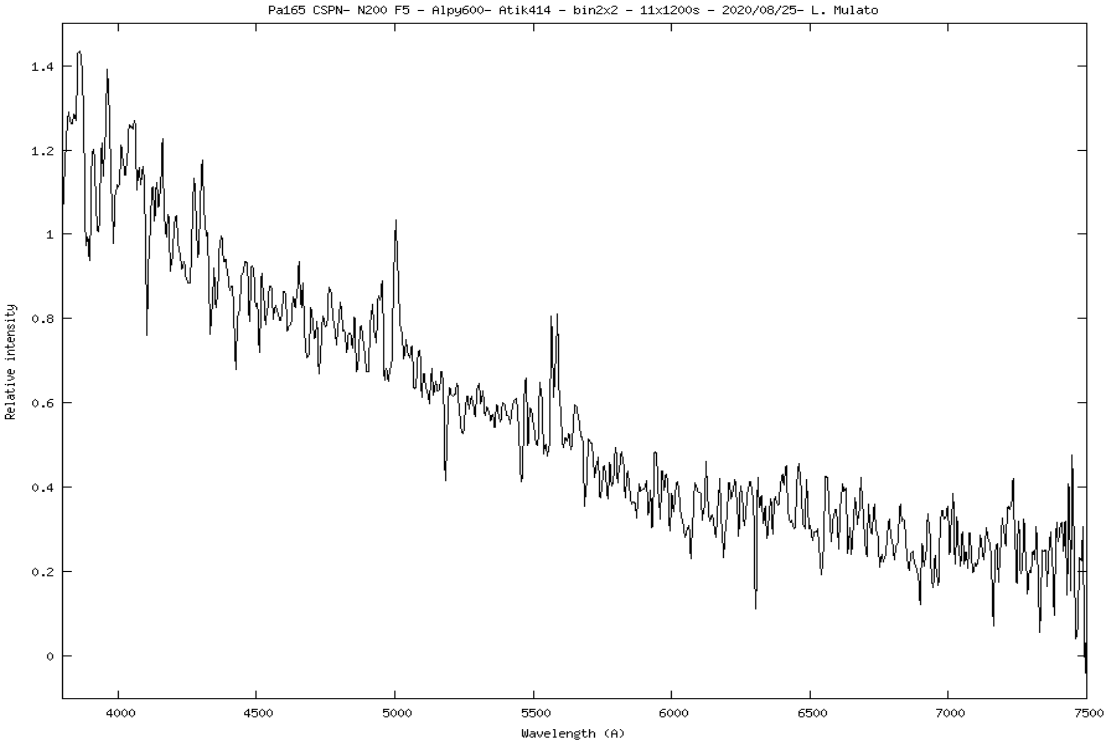


Processed 2D spectrum



Results


Pa165 Neb - N200 F5 - Alpy600- Atik414 - bin2x2 - 11x1200s - 2020/08/25- L. Mulato
Relative intensity
Wavelength (A)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
4000
4500
5000
5500
6000
6500
7000
7500


Pa165 CSPN- N200 F5 - Alpy600- Atik414 - bin2x2 - 11x1200s - 2020/08/25- L. Mulato
Relative intensity
Wavelength (A)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
4000
4500
5000
5500
6000
6500
7000
7500

Comments :
Detected nebular lines [O III] and Halpha, no Hbêta.
Hot continuum detected.
Pa165 is certainly a PN of medium excitation, with visible CSPN.