



Spectroscopic Record Sheet



Details on acquisitions

Object	EGB 9
Coordinates (J2000)	07:18:57.80 07:22:23.20
Type	PN candidate

Observation date	11.112/11/2020 (d/m/y)
Meteorological conditions	7°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)	$\sim 1 \text{ \AA}$ at $\lambda 656 \text{ nm}$
Science camera	ATIK 414 EX
Dispersion (bin 1x1)	$\sim 0,3 \text{ nm/pixel}$ at $\lambda 656 \text{ nm}$
Cam Temperature	-10 °C
Binning	2x2
Guiding camera	ASI290 MM non cooled
Data acquisition Soft	PRISM V10
Data processing Soft	Isis V5.9.3

Exposure on object	5	x	1200	s
Master Dark date	27/09/2020		(d/m/y)	
Dark Exposure	3	x	1200	s
Dark Temperature	-10		°C	
Master Offset date	27/09/2020		(d/m/y)	
Master Flat date	11/11/2020		(d/m/y)	
Neon-Argon calib. date	11/11/2020		(d/m/y)	
Reference star calib.	HD61887_A0V			
Exposure on ref star	15	x	10	s
Ref Star Sp. date	11.154/11/2020			



Images and slit position

Orange line : Approximative slit Position

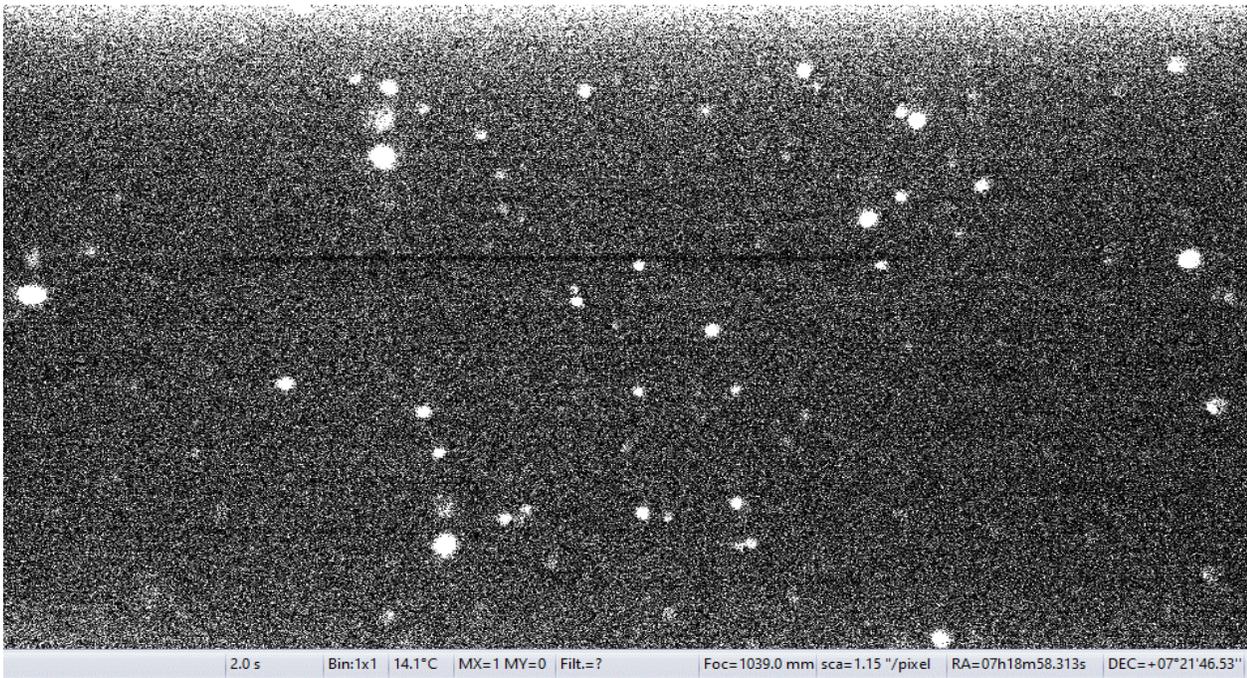
Image DSS2 Color



Markus Blauensteiner image



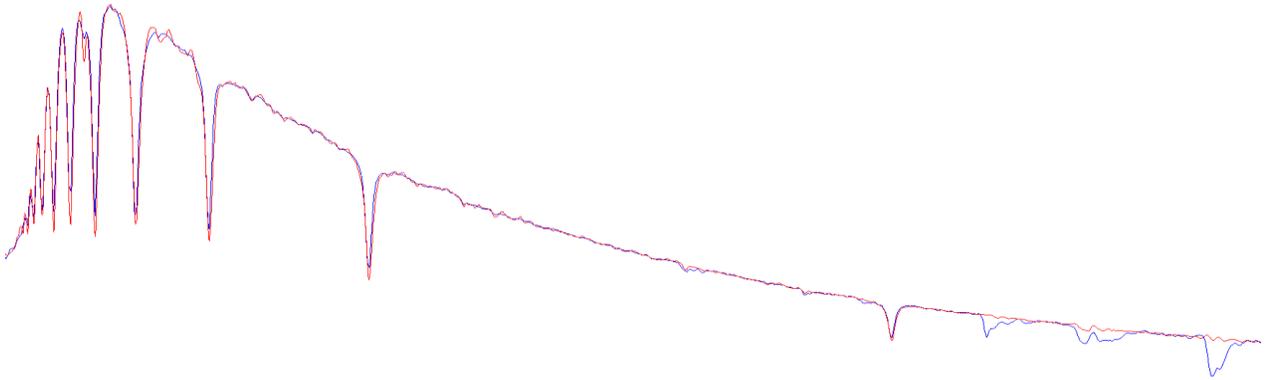
Slit Position Autoguider



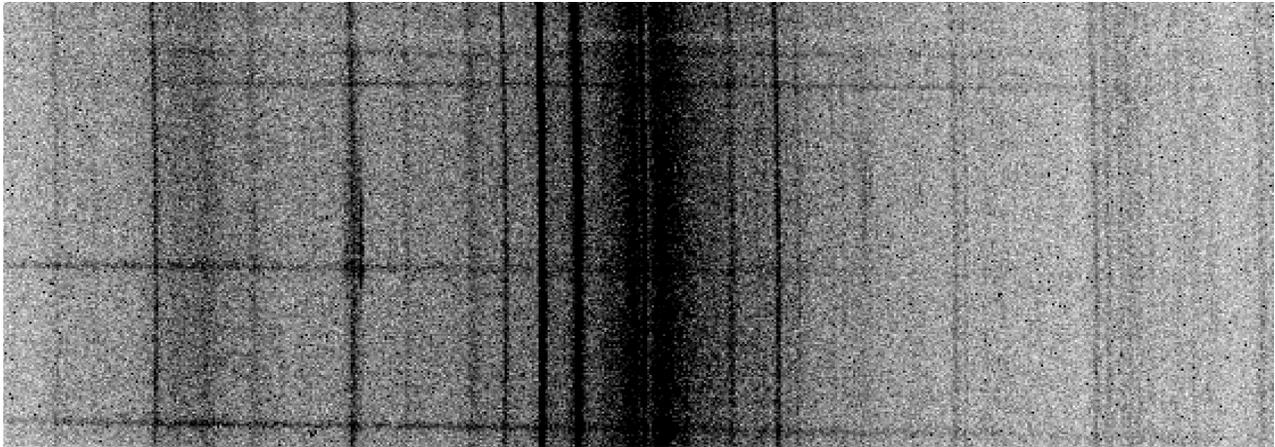


Instrumental Response and 2D Spectrum

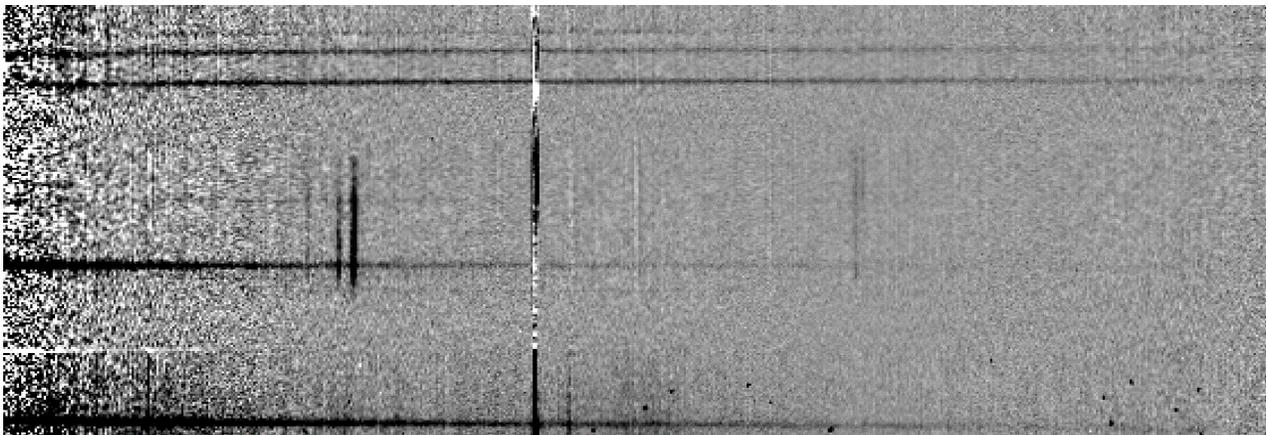
Instrumental response (red = theoretical ref star spectrum ; blue = acquired ref star spectrum with instrumental response correction applied)

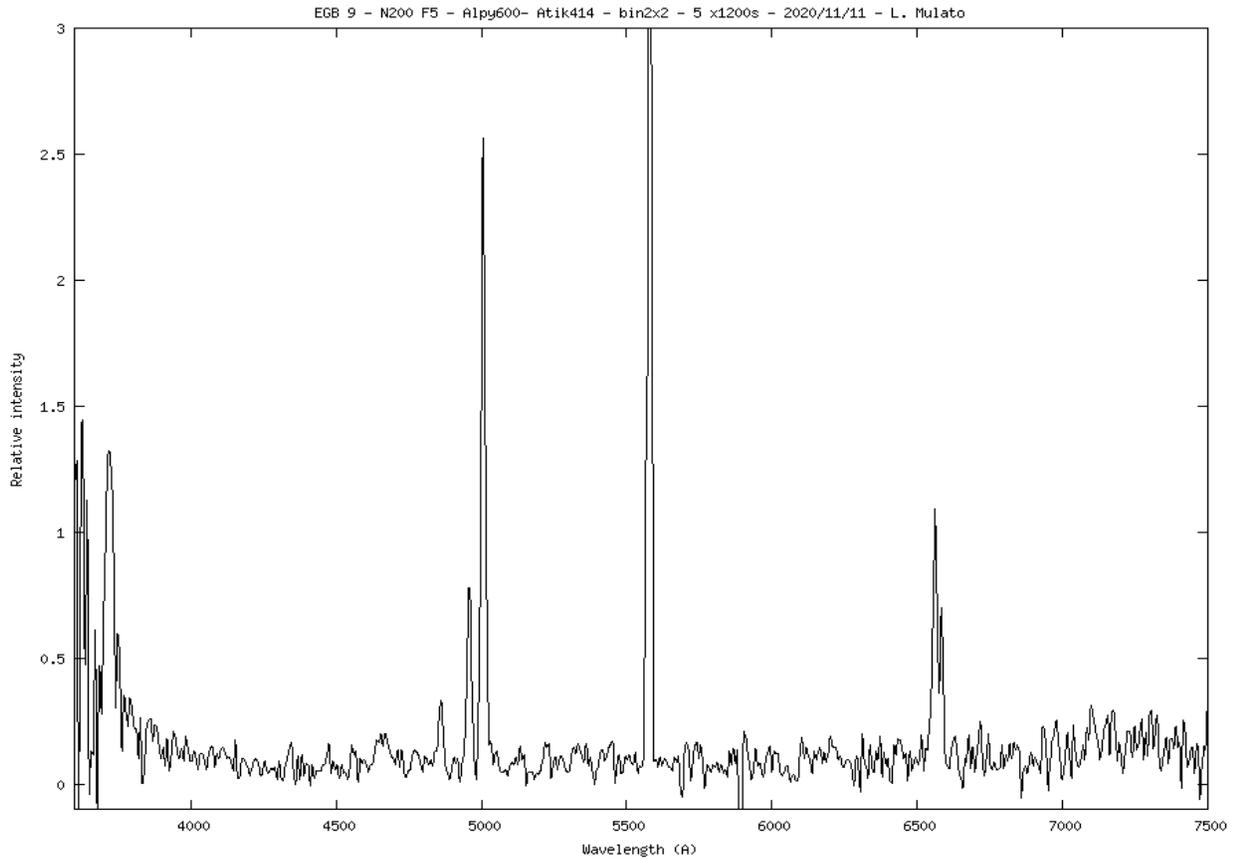


2D Raw spectrum



Processed 2D spectrum





Comments :

Spectrum shows strong [O III] >> H-beta, $H\alpha$ [N II](6548+6583). No [S II] detected.

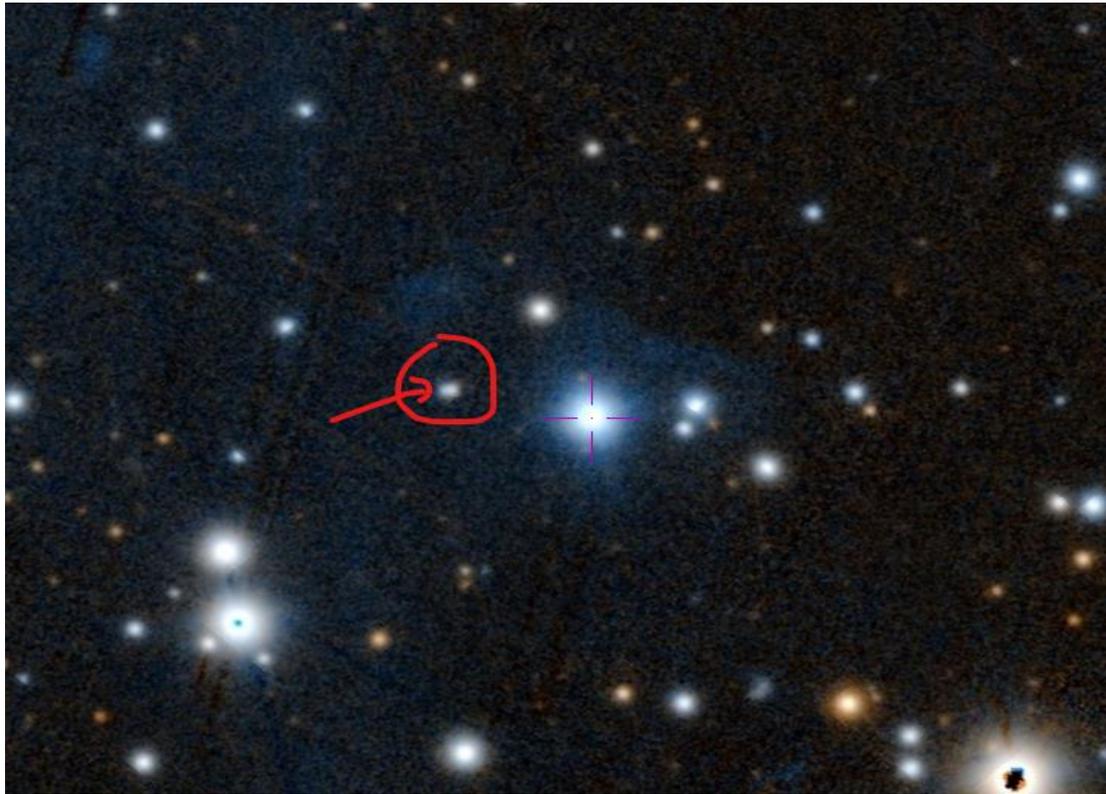
EGB9 is identified as ionized ISM in HASH, it has also been identified as a possible PN by D. Frew (see D. Frew Thesis 2008 p427) :

EGB 9. Discovered by Ellis, Grayson & Bond (1984) from the POSS. Hoessel, Saha & Danielson (1988) obtained images of it, and suggested it was either a faint emission or reflection nebula. It shows up on SHASSA images as a irregular elongated patch (see figure A.1). CCD images (though not reproduced in their paper) have been obtained by Kerber et al. (2000). The emission spectrum is also confirmed here, on a MSSSO 2.3m spectrum. The CS is quite bright ($V = 13.0$) relative to the $H\alpha$ flux, so the nebula must be of relatively low mass. If the nebula is near (<0.7 kpc), the small size and low flux indicates it may be another case of ionized ISM. Using a low-trend SBr relation, a distance of ~ 1.0 kpc is suggested. For now it is considered as a PN candidate, but further work is needed to clarify its nature.

X. Stottner and M. Drechsler may have found a CSPN candidate near the center of the nebula, coords : 07 18 59.441 +07 22 27.80 (see Panstarrs z-zg-g image below). It seems that there are 2 close stars at this position, the blueish one visible on Panstarrs-1 image access (see below) could be the CSPN.

EGB9 may be a True PN with a diameter of : 660 x 810 arcsec.

Image Panstarrs z-zg-g



PanSTARRS-1 Image Access



