



Spectroscopic Record Sheet



Details on acquisitions

Object	PM1-322
Coordinates (J2000)	21 38 52.8 +18 40 15
Type	PN Candidate

Observation date	21.078/06/2020 (d/m/y)
Meteorological conditions	20°C
Observer	L.Mulato
Location	Cornillon France

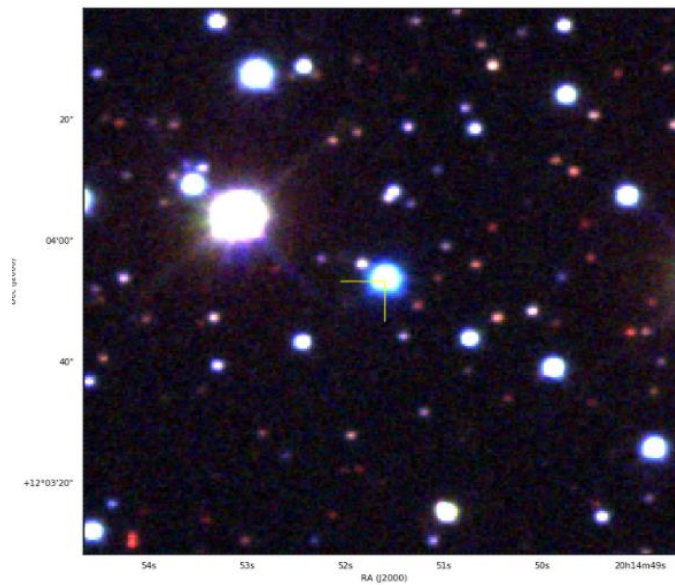
Mount	NEQ6
Telescope	Newton Skywatcher 200 mm F/5
Spectrograph	Alpy 600 - 23 μm slit
Resolution (bin 1x1)	$\sim 1 \text{ \AA}$ at $\lambda 656 \text{ nm}$
Science camera	ATIK 414 EX
Dispersion (bin 1x1)	$\sim 0,3 \text{ nm/pixel}$ at $\lambda 656 \text{ nm}$
Cam Temperature	0 °C
Binning	2x2
Guiding camera	ASI290 MM non cooled
Data acquisition Soft	PRISM V10
Data processing Soft	Isis V5.9.3

Exposure on object	6	x	600	s
Master Dark date	22/05/2020		(d/m/y)	
Dark Exposure	7	x	600	s
Dark Temperature	0		°C	
Master Offset date	22/05/2020		(d/m/y)	
Master Flat date	20/06/2020		(d/m/y)	
Neon-Argon calib. date	21/06/2020		(d/m/y)	
Reference star calib.	hd192425_A0V			
Exposure on ref star	12	x	15	s
Ref Star Sp. date	21.104/06/2020			

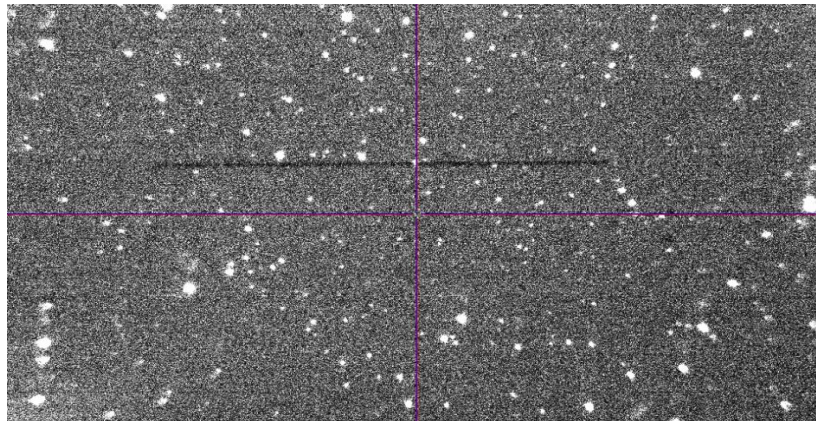


Images and slit position

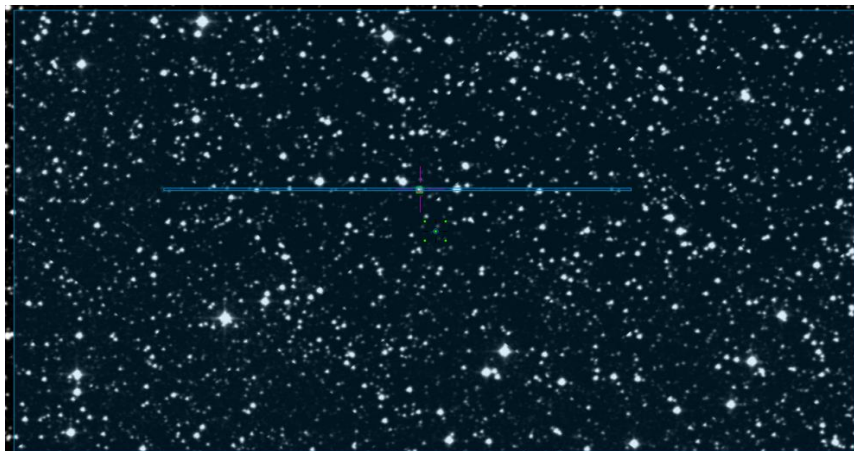
Image © SDSS



Autoguider



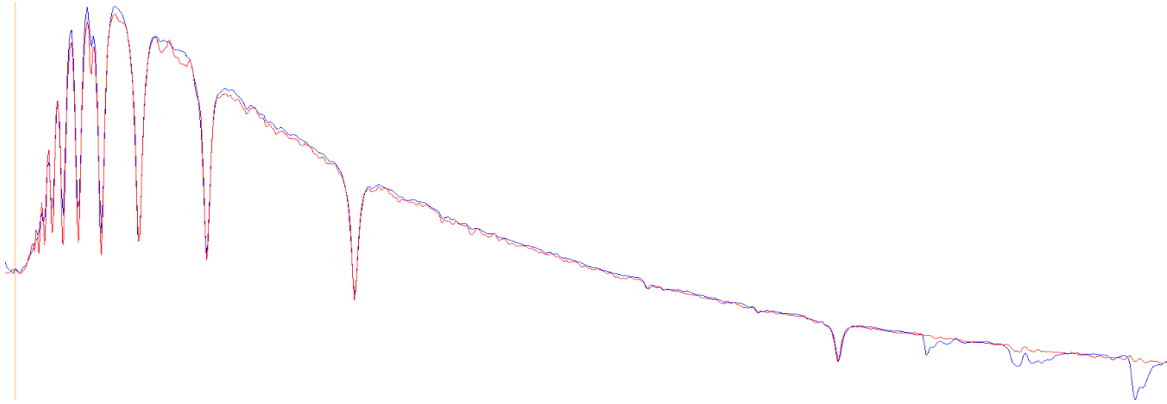
Slit position
DSS2 Red



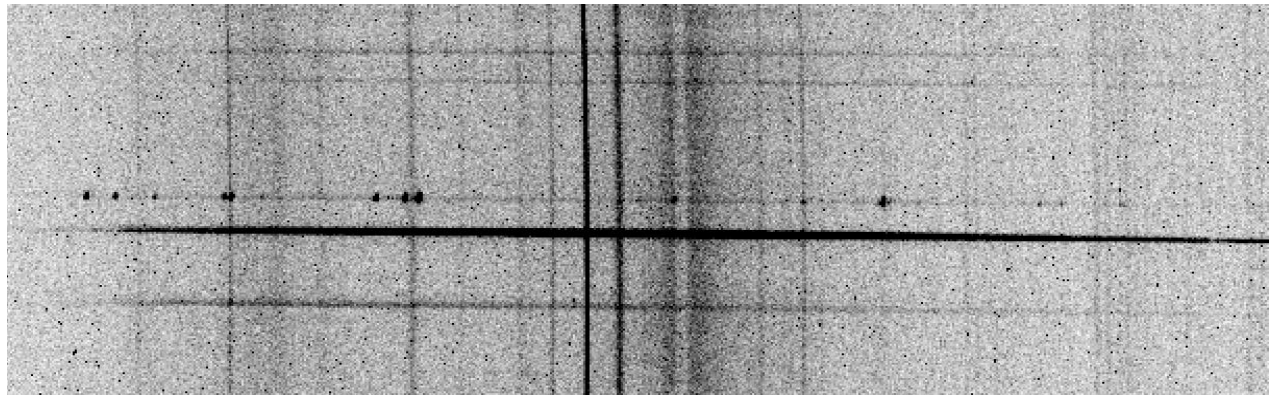


Instrumental Response and 2D Spectrum

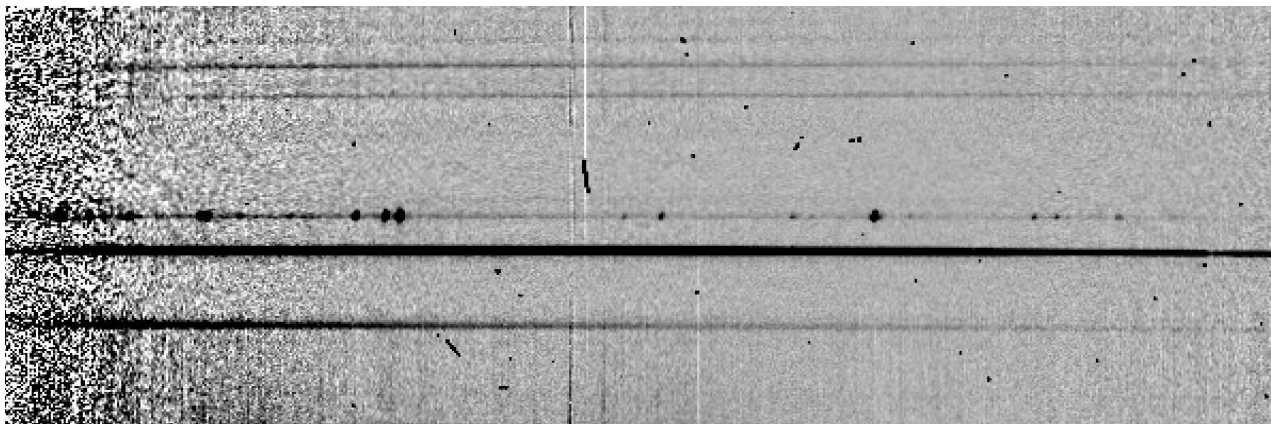
Instrumental response (red = theoretical ref star spectrum ; blue = acquired ref star spectrum with instrumental response correction applied)

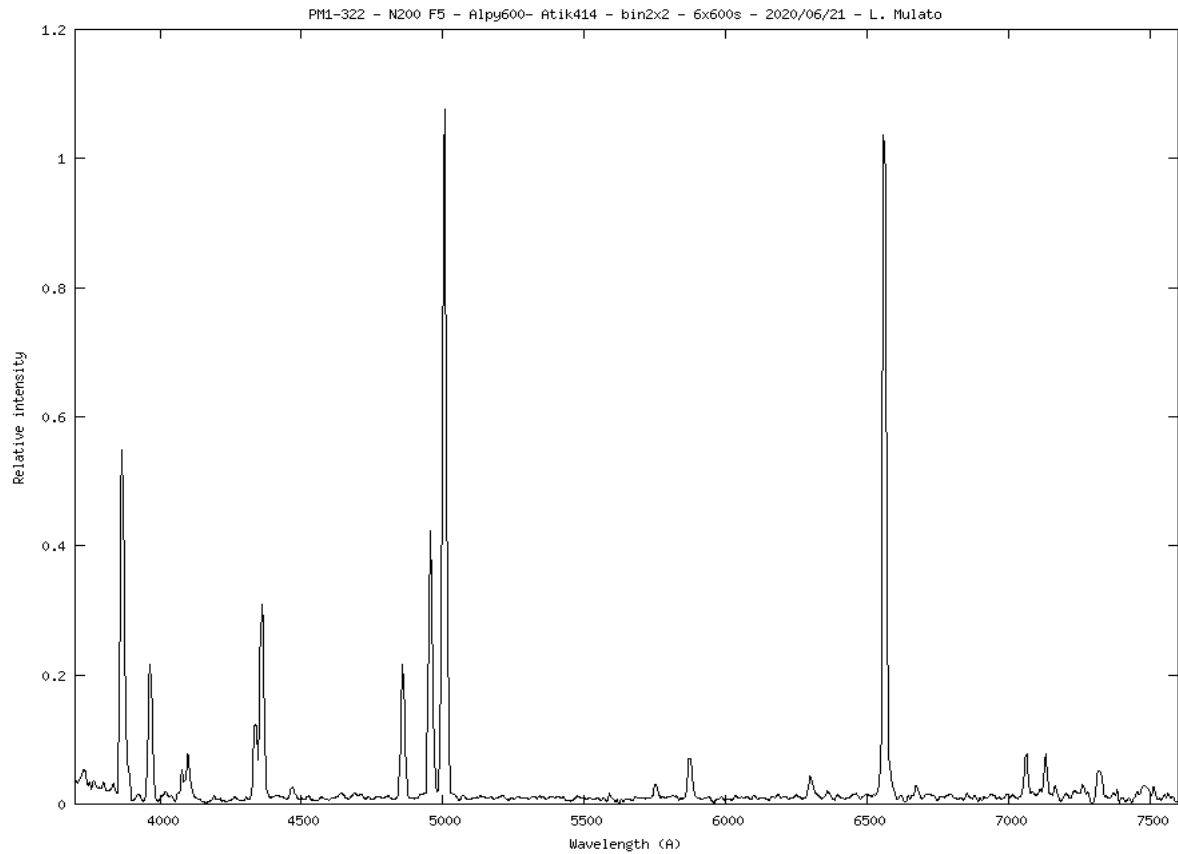


2D Raw spectrum



Processed 2D spectrum





Comments :

PM1-322 is identified by Pereira and Miranda 2005* as a very young and high density PN. The object could also be a symbiotic system.

*<https://www.aanda.org/articles/aa/pdf/2005/14/aa2218.pdf>

Particularity of the spectrum : strong [OIII] 4363 line relatively to 5007/4959.

Detected lines : almost all lines detected by Pereira and Miranda 2005.

Same observation as Pereira and Miranda 2005 : there is no increase of the continuum towards the red, which would indicate the presence of a companion. The 2D spectrum shows instead a clear increase towards the blue.

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