## Details on acquisitions

| Object | PaStDr3 |
| :--- | :--- |
| Coordinates (J2000) | 01:19:28.88 +49:01:09.38 |
| Type | PN Candidate |


| Observation date | $20.985 / 08 / 2020$ | $(\mathrm{~d} / \mathrm{m} / \mathrm{y})$ |
| :--- | :--- | :--- |
| Meteorological conditions | $20^{\circ} \mathrm{C}$ |  |
| Observer | L.Mulato |  |
| Location | Cornillon | France |


| Mount | NEQ6 |
| :--- | :--- |
| Telescope | Newton Skywatcher $200 \mathrm{~mm} \mathrm{~F} / 5$ |
| Spectrograph | Alpy $600-23 \mu \mathrm{~m}$ slit |
| Resolution (bin 1x1) | $\sim 1$ Å at $\lambda 656 \mathrm{~nm}$ |
| Science camera | ATIK 414 EX |
| Dispersion (bin $1 \times 1$ ) | $\sim 0,3 \mathrm{~nm} /$ pixel at $\lambda 656 \mathrm{~nm}$ |
| Cam Temperature | $0 \quad{ }^{\circ} \mathrm{C}$ |
| Binning | $2 \times 2 \quad$ ASI290 MM non cooled |
| Guiding camera | PRISM V10 |
| Data acquisition Soft | Isis V5.9.3 |
| Data processing Soft |  |


| Exposure on object | 3 |  | 1200 | s | s |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Master Dark date | 28/06/2020 |  |  |  |  |
| Dark Exposure | 18 | X | 1200 | s | $s$ |
| Dark Temperature | 0 | ${ }^{\circ} \mathrm{C}$ |  |  |  |
| Master Offset date | 22/05/2020 |  |  |  |  |
| Master Flat date | 22/08/2020 |  |  |  |  |
| Neon-Argon calib. date | 21/08/2020 |  |  |  |  |
| Reference star calib. | hd14212_A0V |  |  |  |  |
| Exposure on ref star | 13 | x | 8 | S | s |
| Ref Star Sp. date | 21.122/08/2020 |  |  |  |  |



Slit position DSS2


PNST

## 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


## Comments :

Detected lines : [N II] $(6548+6583)>$ Halpha. No [O III] nor H-bêta.

PaStDr3 is a very faint and extended nebula. Data has been acquired under bad weather conditions (high humidity and dew), only 3 frames have been saved.

The nebula seems to be Nitrogen rich ([NII]/Ha ratio ~2), which would indicate PaStDr3 could be a PN. But this result may not be reliable as the $\mathrm{S} / \mathrm{N}$ ratio of the spectrum is very poor. Needs a better spectrum.

