

Discovery OU4: 098.5 +07.9
Coordinates: 21 11 48.18 +59 59 09 (J2000)
"The Squid"

The race Sharpless

May 2011, I decided to continue to explore the catalog which lists 313 Nebulae Sharpless nebulae. For many of them, few images exist on the net. I decided after a search on Google "Images" to choose Sh2-129, Great Nebula very low at the following coordinates: RA 21h 10m 59d 45m in December and a size of 140 minutes of arc.

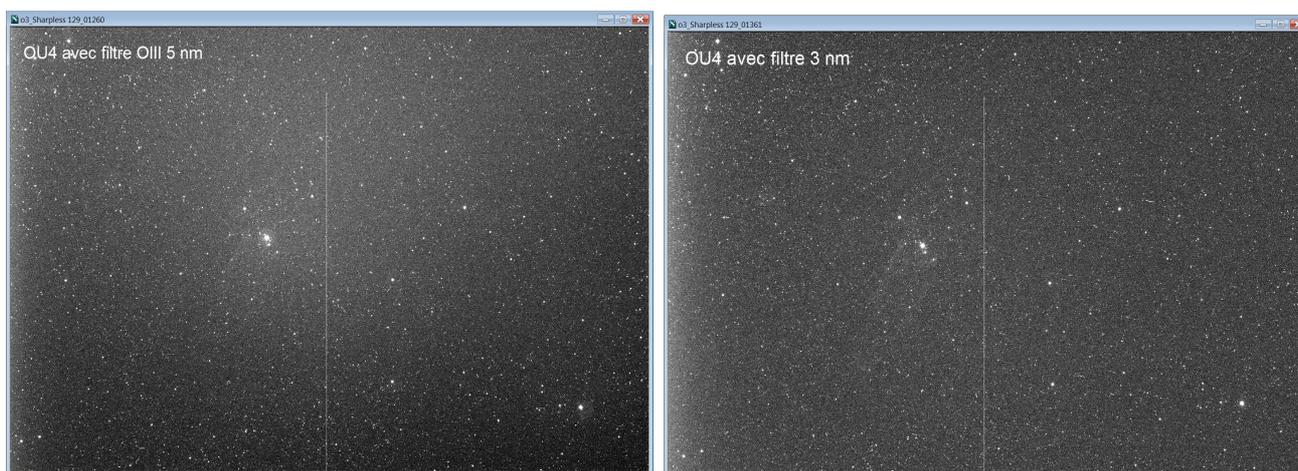
This nebula appears as a horseshoe lying on its side with a low sensitivity in hydrogen and sulfur II.

The few reference pictures on the net show a virtual absence of signal OIII except on the east, there appears a very small area and also OIII periphery.

The first implantations in Halpha and SII illustrate the horseshoe area. The nights are very short in May and June and I can only do 8-up of 30 'by night. The telescope and CCD SBIG FSQ106 6303rd can just fit the object.

The filters used are Astrodon 5 nm, OIII images appear with a central rectangular rather strange. This atypical form compared to the other two filters challenges me, the gradient is very strong and I still waiting for my new OIII filters in 3 nm. A few days later I receive them and neither one nor two I moved into my filter wheel and continues to photograph Sh2-129 with the new filter. The difference is obvious. I can see very clearly that this oddly rectangular shape extends downward and terminates in a curve.

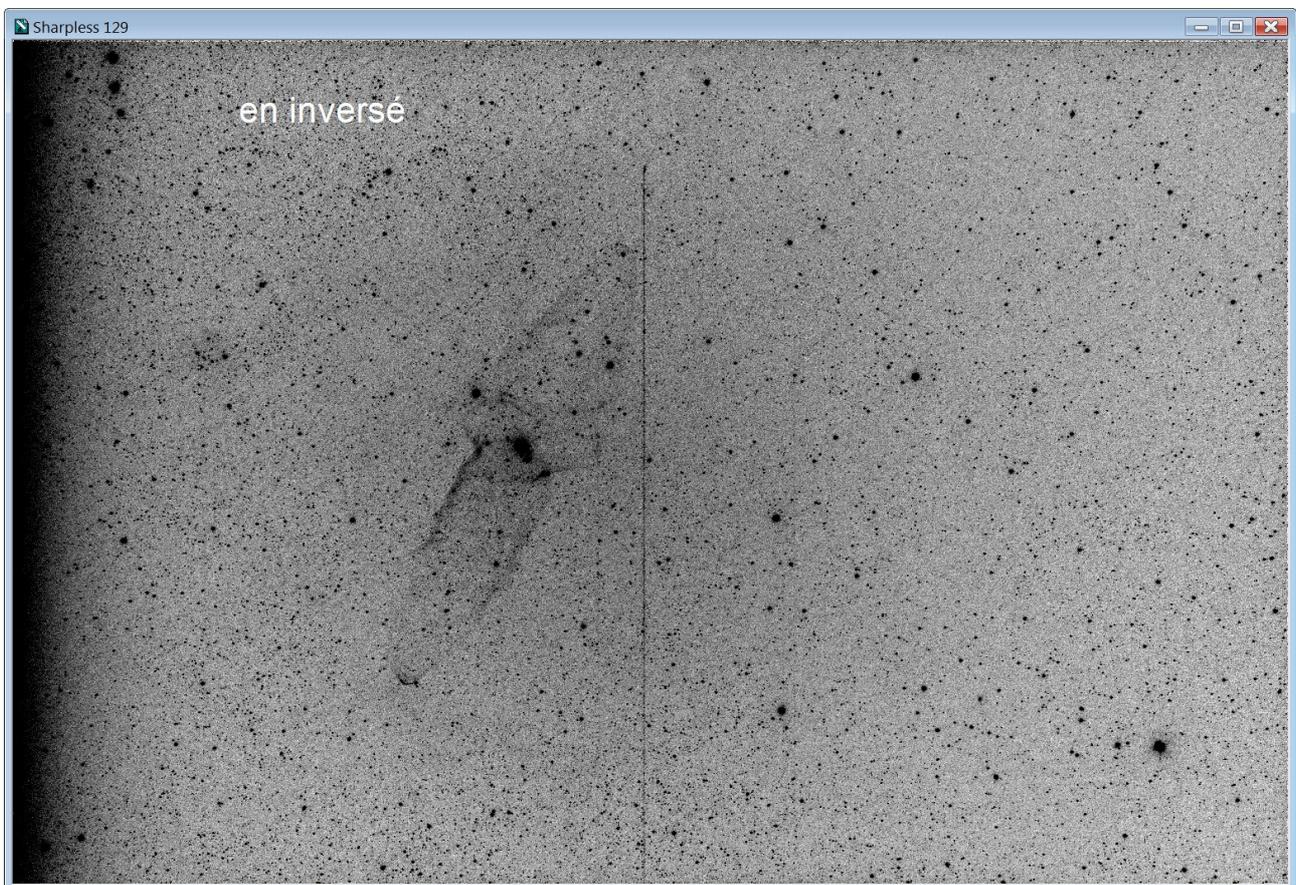
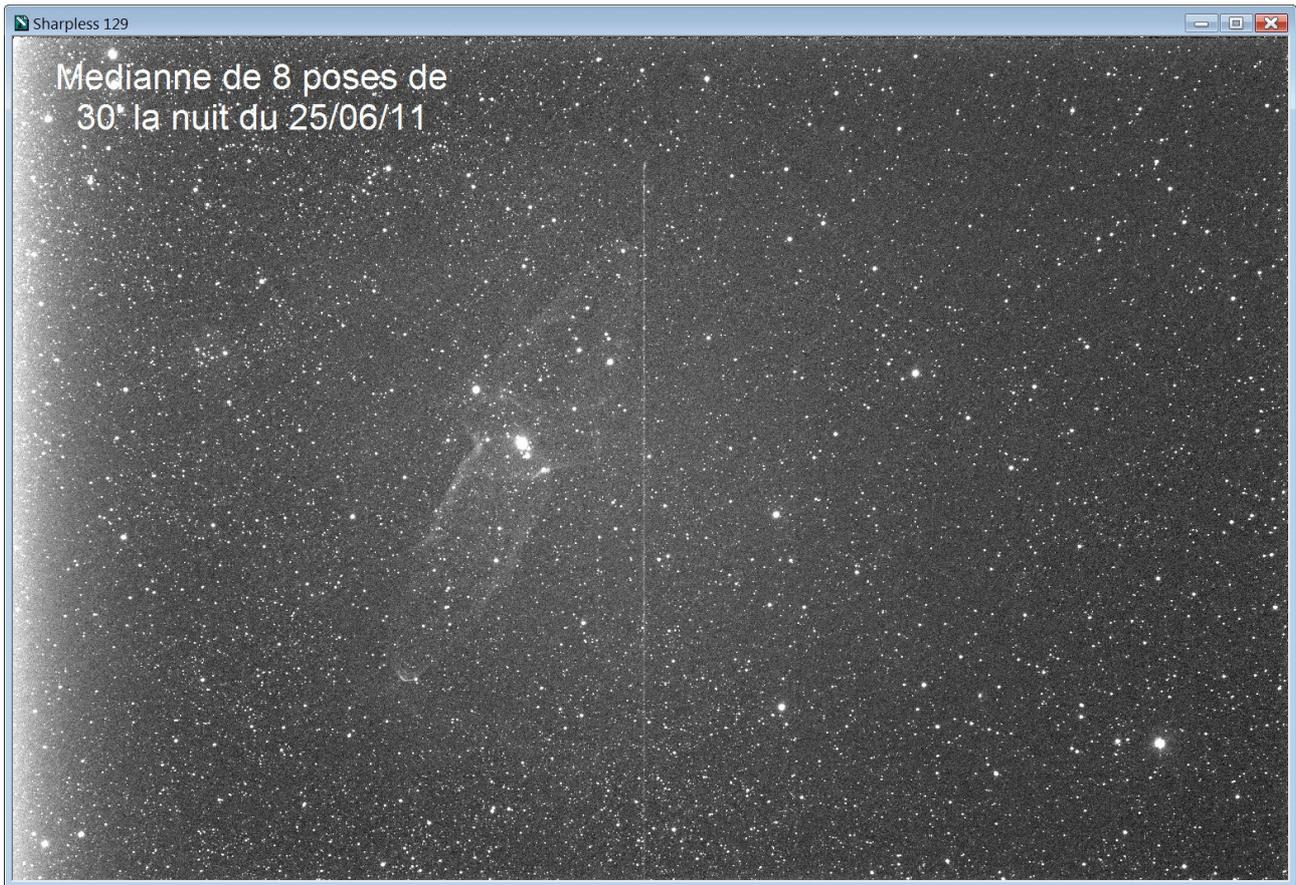
We guess up the same kind of extension.



Left image with 5 μ filter OIII, OIII filter right image 3 μ

Sunday, June 26 in the morning, my friend Michael, who came to spend the weekend at home, sleeping quietly, the evening before the astro was beautiful and we ended up later. We enjoyed the Saturday night to try the equipment loaned by the store and made some Optique Unterlinden with acquisitions.

In my office, I decided to combine the 8-up made the day before with 3 nm OIII filter and suddenly I am astounded at the image that appears on the screen. The subject that emerges is huge and has no coherence with Sharpless 129.



I try to wake my friend Michael, but this one is fast asleep and I am unable to wake him.

I so wanted to share the vision of that object so bizarre.

I start by looking in my usual mapping software (Desktop Universe, The Sky6 pro Wikisky.org on the Net but I can not find anything similar.

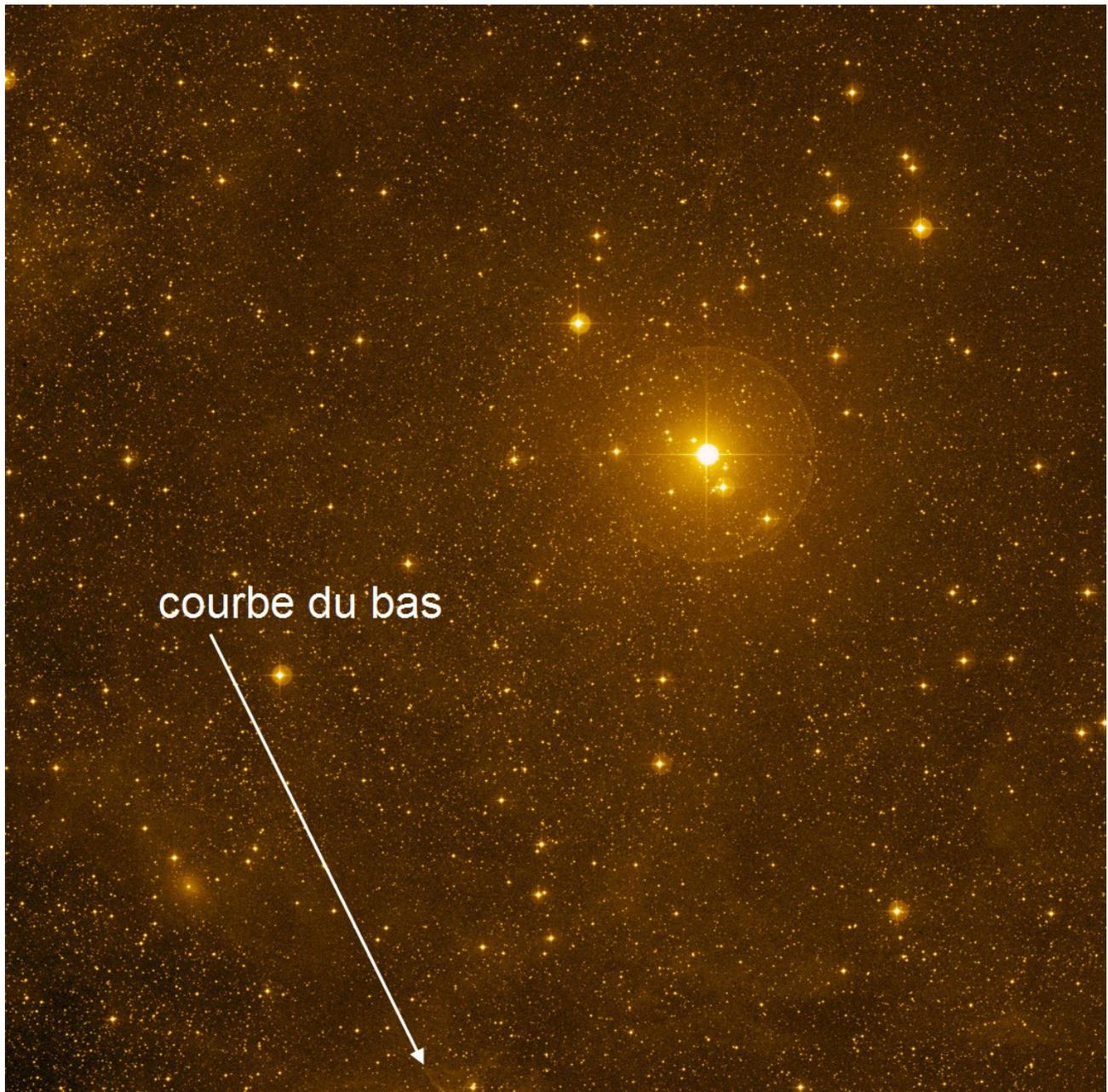
This can not be a reflection or an artifact so the subject is immense.

With the software I MaximDL an astrometric calibration and record the exact coordinates of the center of the mysterious object that I quickly called "The Squid". Inverting black and white reveals even better the unusual shape of this object.

Michael just woke up and I hasten to get it into the office and show him the "Squid".

Michael is surprised to see such a beautiful object and its size, it has never seen before and which reminds him immediately to a planetary nebula, but the enormous size makes us puzzled.

A brief internet search confirms the presence of the bottom curve in hydrogen.



DSS image in H α , no trace except the bottom of the shell

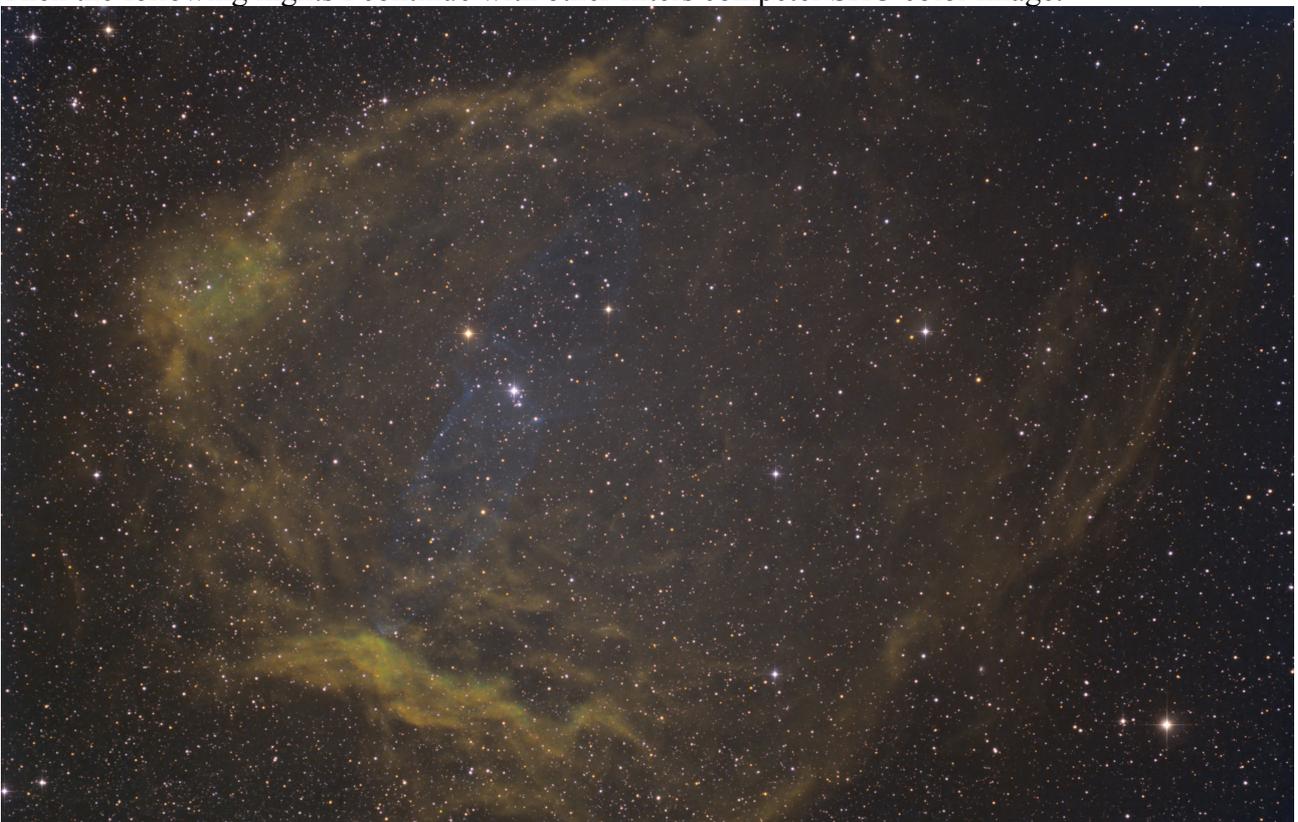
The few images on the Net SHO does not show the object but rather an indistinct blue presence.

A Japanese man has succeeded in photographing Sh2-129 with a small telescope FS60 but the squid is not defined, there are at most a noisy and undefined form.

Over the nights, I keep asking to accumulate 25 exposures of 30 'with 3 nm OIII filter and get this picture.

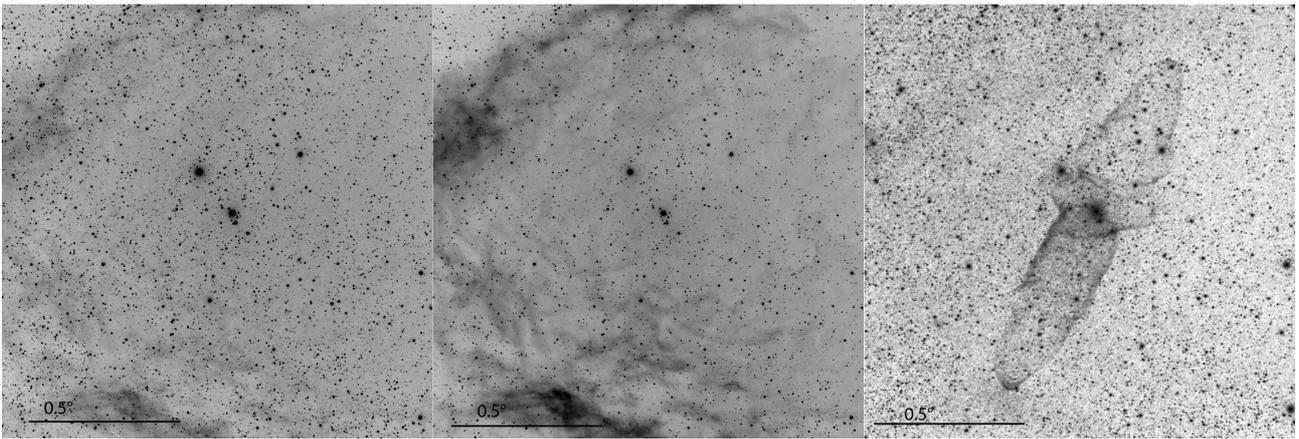


25 exposures of 30 minutes with the filter OIII-CCD and Takahashi FSQ106 Sbig STL6303e
Then the following nights I continue with other filters compéter SHO color image.

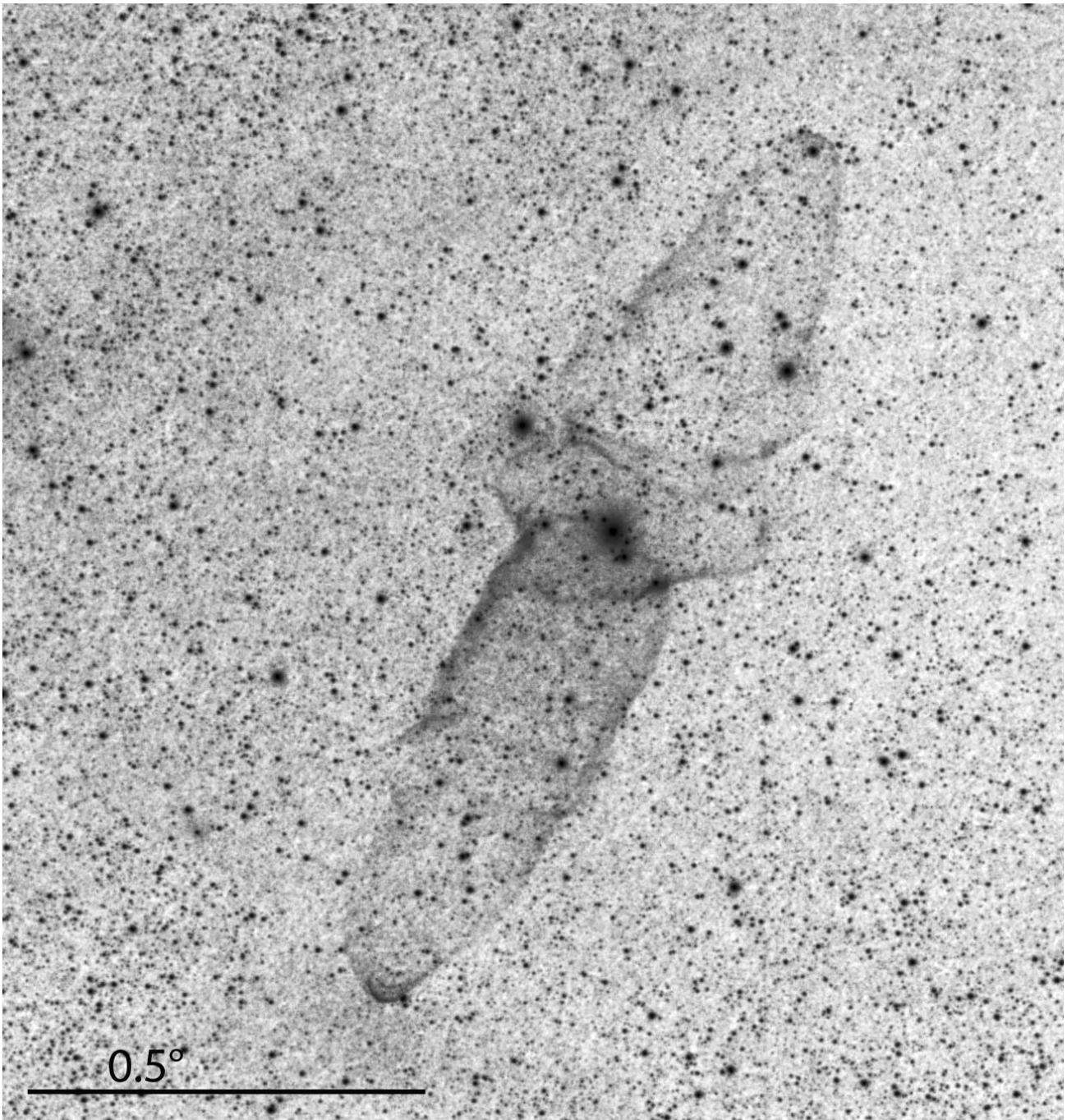


Sh2-129 and OU4 false color (red SII, Ha in green, blue OIII)

Can I contact Agnes Acker because I have no opportunity to confirm the "Squid" other than by its assistance.



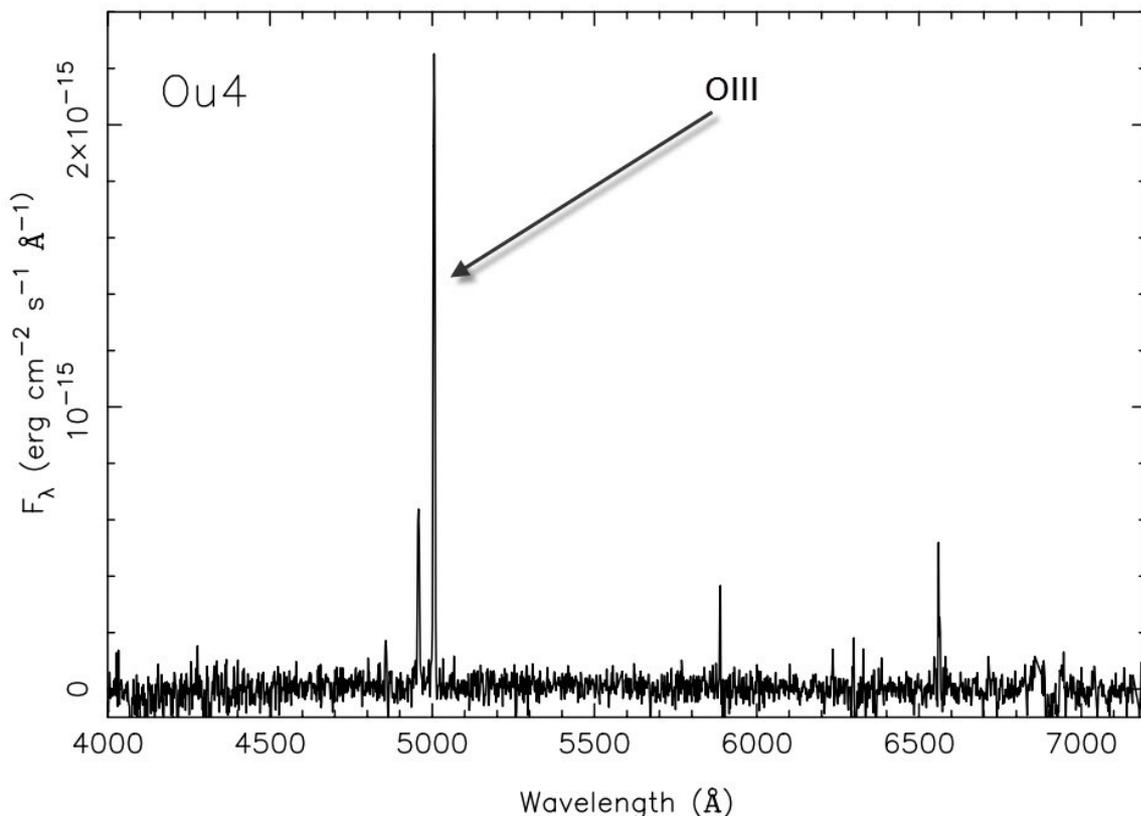
OU4 with 3 filters: SII / Ha / OIII, OU4 appears only in OIII!



Mirror image of OU4, notice the scale!

More questions than answers!

The adventure is just beginning. Agnes undertake specific studies on this strange object. The enormous size of the object plot Agnes. A spectrum is made by laurence SABIN with the telescope of San Pedro 2.1 m of 23 to 26 August 2011 and confirmed a significant presence of Oxygen III.



Spectrum OU4 made by Laurence SABIN artir me to the observatory of San Pedro with the 2.1-m telescope equipped with a Boller & Chivens spectrograph (B & Ch) 2 and a Marconi CCD (2048 × 2048 pixels and 14 × 14μm) . Exposure time: 2400 seconds.

Analysis of the star HR 8119

This star may appear to be the direct cause of the object "Squid" but it is not the case for two reasons:

- the star HR 8119 is too young
- the star HR 8119 is too close to us

If The Squid HR8119 was derived from the shell of gas would be of enormous size by almost 20 pc x 6 pc! Which is highly unlikely.

How about a Nova

The ROSAT All Sky Survey X describes a source 1RX J211148.9 nearly 595,920 HR8119 could be the source of a Nova OU4 which could be a shell of gas as V445 Puppis (Woudt et al. 2009).

How far

The estimated distance of $\sim 25\text{-}50$ Parsec OU4 and if this was confirmed to be the nearest planetary nebula ever discovered.



Very thorough treatment to bring out the colors in front of OU4 Sh2-129.

For now, OU4 is considered "Possible planetary nebula." Further studies should be scheduled soon. As it is, Agnes does not have enough information to say more things but one thing is certain, OU4 will be talked about for a long time.

It is an amazing thing that I do not yet explain how an amateur can still today see things as huge in the sky?