Data of the sky region at the time of the observation ..... **SQM-L 21.8 IR -10º Temperature 14º**
Data of the night ..... **Sun alt: -43,9º Moon alt: -17.1º**
Data of the object ..... **Alt: 53.9º Az: 119,4º**
Telescope ..... **Stargate 18"**

Nagler 31mm (70x - 1º 10' - 6.6mm)

At these magnifications, what it is seen is a small and very faint nebula. The core of the halo is clearly distinguished from the rest of the galaxy, it is small with respect to the total size of the galaxy, but not punctual, I would say a brighter round cloud in the center of the galaxy.

Looking closely at the nucleus, I see a few small arms coming out from the nucleus, which at the moment is lost in the outer halo of the galaxy. That is, I am not able to follow the whole structure of the arms through the whole size of the galaxy, but merely at their beginning next to the nucleus. The shape is very round, I am not able to identify if it is larger along any of its axes.

Messier 74

Piscis 01h 36m +15º 42' *The Phantom*

Data of the sky region at the time of the observation ..... **SQM-L 21.8 IR -10º Temperature 14º**
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Data of the object ..... **Alt: 53.9º Az: 119,4º**
Telescope ..... **Stargate 18"**

Nagler 22mm (98x - 50' - 4.7mm)

I don't see much more detail even though I changed my eyepiece.

The galaxy occupies a tenth of the size of the eyepiece. I believe I can see the arms in the halo but I have a hard time identifying them. I use the lateral view to sweep the galaxy from its outer edge toward its core and back out the other end. With this game, I can distinguish areas of different brightness in the outer halo of the galaxy that could correspond to the shape of the arms, but the observation is so subtle that I do not dare to confirm it. I still see in the area closest to the nucleus the birth of the arms, but only that.

Messier 74

Piscis 01h 36m +15º 42' *The Phantom*

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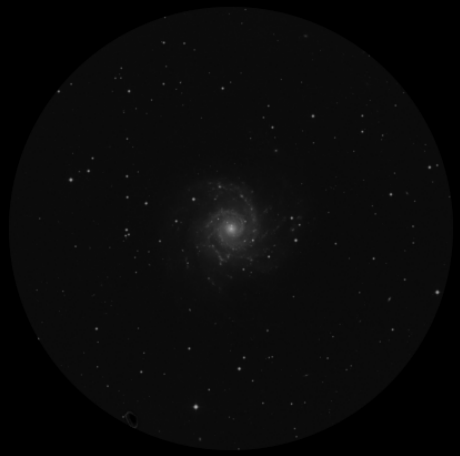
Telescope ..... **Stargate 18"**



Delos 14mm (154x - 28' - 3mm)

With this eyepiece the galaxy gains a lot, now is when I start to see it with better detail.

I keep telling myself that it is quite faint and very difficult for me to observe it carefully, but I can already distinguish at least one arm that runs through the whole galaxy. Applying the same path as before I am able to see faint zone, brightening zone by curved arm, faint zone, nucleus, faint zone, brightening zone by curved arm, faint zone. That is to say, it is difficult for me to follow the arm in all its path but I am able to delimit where it is thanks to the variation of brightness within the halo of the galaxy itself. It is a galaxy that is fully in front of us, round in shape and with a nice but faint structure.

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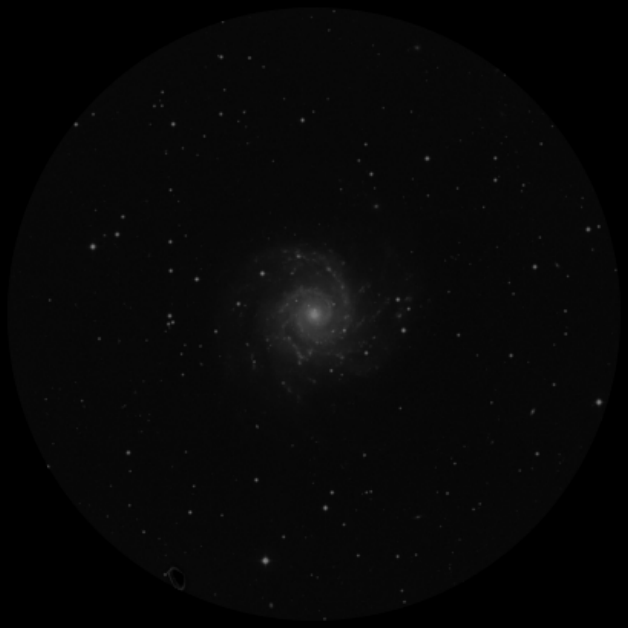
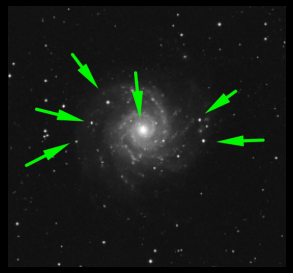
Data of the object ..... **Alt: 53.9º Az: 119,4º**
Telescope ..... **Stargate 18"**

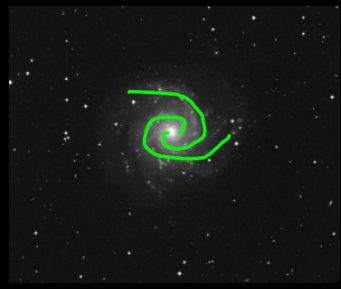


Ethos 10mm (216x - 27' - 2.1mm)

With the 10mm, the image starts to be very good, it is incredible how much the different galaxies I observe win when the exit pupil is reduced, amazing. You simply see everything much more contrasted and better.

First I look at the stars of our galaxy, in addition to the obvious ones that surround the galaxy at two ends, encircling it and giving it a beautiful appearance, surrounded by point stars, near the nucleus I distinguish two stars of our galaxy. One star is especially close to the nucleus, which gives it another point of beauty. The galaxy, at these magnifications, is of appreciable size inside the eyepiece. The nucleus seems very small and the arms rotate a lot, I would say up to 180º, starting from the very center of the nucleus. I see two arms, practically surrounding the galaxy to reach the area where the stars of our galaxy are and that determine its end. It is a really beautiful image because it is also tremendously subtle, it is very difficult to observe, you have to pay close attention but certainly, the repetition of the image confirms what I'm seeing. Two spiral arms that start from the very center of the galaxy, rotating not 180º but almost.

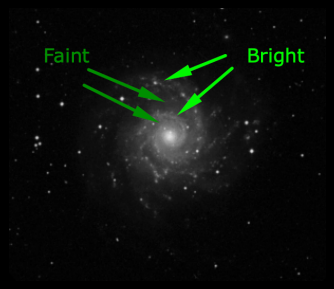




Data of the sky region at the time of the observation ..... **SQM-L 21.8 IR -10° Temperature 14°**
Data of the night ..... **Sun alt: -43,9° Moon alt: -17.1°**
Data of the object ..... **Alt: 53.9° Az: 119,4°**
Telescope ..... **Stargate 18"**

Ethos 8mm (270x - 22' - 1.7mm)

I get a little more contrast with this eyepiece, as well as size, and now is when I see the galaxy better. What I see when I go from outside to inside is: sky background, bright zone, faint zone (darker), bright zone, faint zone, nucleus (and now the other way around), faint zone, bright zone, faint zone, bright zone, sky background. If I now go through the arms I get the feeling that they join the nucleus at the same point.



When I look from the nucleus to the outside, I see clearly how the arms make the turn very close to the nucleus, I point in my voice notes as if I were seeing a mini-galaxy inside the galaxy. It's very curious because I see very clearly the beginning of the arms and how they spin around the nucleus, I see it really well. There is a star in our galaxy very close to the nucleus, which I mentioned before, that can confuse you with the beginning of the arms, but with good seeing, it is clearly punctual, so you discard it immediately. I am surprised by the beauty of the beginning of the arms from the core itself, both for the small size and for how clear and well defined it looks. These two arms, which each start from a hemisphere of the galaxy and end up almost surrounding it, continue towards the outside of the galaxy, but it is very hard to follow them. The difference in contrast of the arms in the innermost part of the galaxy compared to the same ones in the outermost part is really remarkable. In the outer part I have to use all my lateral vision skills, slight movement of the telescope and concentration to be able to see it, while in the innermost part it is enough with just a little concentration. It is very nice indeed, although quite a challenge if you want to observe it in detail.

Although I repeat myself I can not help but convey that the observation with this eyepiece evoques a very beautiful galaxy, but especially in its central part, there is quite a wonderful show. Starting from the fact that it is very faint and you have to force your eyes to see it. You have fun of pure joy when you look by focusing your eyes on the inner edge of the outer arms and then you move to the faintest dusty area of the galaxy, and return again to see the arm, which now turns on the galaxy to get to join the core of the galaxy. It really is mind-blowing, especially for that feeling of seeing a mini-spiral galaxy inside a spiral galaxy. It's as if you have a faint 'outer' spiral galaxy merging with a bright nucleus. But wait, if you strain your eyes a bit, that bright nucleus is actually a new spiral galaxy, with better defined arms but all smaller and with an even smaller nucleus. Amazing, really.

Messier 74

Piscis 01h 36m +15º 42' *The Phantom*

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Telescope ..... **Stargate 18"**

Delos 4.5mm (480x - 9' - 1mm)

At these magnifications the star near the nucleus of the galaxy is very evident, but I lose the detail of the arms, however I seem to see a bright accumulation in one of them, or where one of them should be. I am not very sure because I am very over magnified but I would say that near one of the stars in our galaxy, in addition to the star itself, there is this condensation that I see as an extra. Although it is hard for me to confirm it.

I have to say that with this eyepiece, the galaxy loses the outer beauty, and although the nucleus looks great, with the arms better defined, you no longer have the feeling of the whole, because the outer part of the galaxy, which was fainter, is not observed.

Personally, I prefer the previous view, but that one is worthy to see more details