

Data of the sky region at the time of the observation.....**SQM-L 21.5 IR -17° Temperatura ambiente 15°**
Data of the night**Alt sol: -29,1° Alt luna: -37,5°**
Data of the object.....**Alt: 41.8° Az: 254,7°**
Telescope**Stargate 18"**



The first impression with this galaxy is quite good, it has a round shape, the nucleus is perfectly visible and, even at these magnifications, you start to see a structure of arms, especially at 12 o'clock in my eyepiece, but also around 6 o'clock. I only see a single arm with a very pronounced S-shape. With the arm rotating from 12 to 9 o'clock and from 6 o'clock towards 3 o'clock respectively.

The nucleus is round with a brightness clearly superior to the rest of the galaxy.

It is a promising object, I am also seeing it at the same time I jump to M98 and the contrast of the two types of galaxies is very striking. And although M99 seems fainter than M98, its structure seems more complex and I like it more.

Nagler 31mm (70x - 1° 10' - 6.6mm)

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I am quite surprised by this galaxy because as I increase the magnification I see surprising details. For example the difference between the two '*hemispheres*' of the galaxy. The arm that looks better and better is very well defined in what would be my northern hemisphere while in the southern hemisphere it is lost more in the haze of the galaxy and it is as if it had a lower brightness. Or rather, the contrast of the arm in the 12 o'clock zone is much greater than in the 6 o'clock zone. So much so that in the 12 o'clock zone I see it almost effortlessly while in the 6 o'clock zone I have to use averted vision

intensely to be able to follow its path. It is very strange and curious.

The shape of the galaxy is still quite round and the nucleus is taking more presence and volume, not being punctual but as a small bright ball in the center of the galaxy.

I can't see more details so I switch to the 14mm eyepiece.

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

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

Now it really is. Indeed the galaxy is quite strange. You can fully appreciate the arm that runs through the galaxy from 12 to 6, however the region at 12 o'clock is very different from the one at 6 o'clock. The northernmost region in my eyepiece is very elongated, I say in my voice notes that it is veeeeery long. It appears to be escaping the galaxy with a very pronounced dark area between the arm and the nucleus. However in the southernmost region of my eyepiece what I see is an arm closer to the nucleus that ends in a star that is almost at 5 o'clock looking from the nucleus. This arm, I don't know if it is because it is closer to the nucleus or some other reason I don't see it as contrasted but more surrounded by a bright halo of the galaxy. I cannot be able to see that bright halo in the same arm to the north, but clearly see that the background is just as dark as the rest of the eyepiece field.

To add complexity, when I use the averted vision to bring out more detail in the nucleus I seem to see a second arm that starts from the nucleus and runs parallel to the main one.

I try to explain better, when using the averted vision, I see the nucleus more punctual and I see more contrast in the area close to it, then is when I start to see this second arm, what happens is that it is very small and I see it rarely, not ALWAYS. And that leads me to doubt that I am really seeing a second arm, of which there is no trace in the 12 o'clock region.

Apart from this curious detail of the very different shape of the galaxy in one area and another, I do not see more detail.

I forgot to comment, the galaxy is beautiful. Because rarely do you find a galaxy completely in front of us and with such a clear structure of arms (especially in its northern zone). One has the impression of contemplating a really complex artifact of nature, with millions of suns and a wonderful structure.

Very beautiful.

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

What a pleasure! Now I see much better how the arms are created from the core itself. They do not emerge from the 12 and 6 o'clock as I previously imagined but rather from the 3 and 9 o'clock of the nucleus. And the arm that emerges from the 9 o'clock is not single but double or so it seems at the beginning. I'm looking forward to putting more magnification on it to confirm this.

In the *loooooong* arm that comes at 3 o'clock from the nucleus and that extends very defined in space, I also begin to see a more complex structure. Some areas of

higher concentration of brightness begin to appear. It is a bit strange because the arm of a thin thickness starts with an intense brightness that fades as it turns towards 9 o'clock but increases again almost at the end.

I think it is a galaxy that deserves to be observed calmly for the challenge it represents.

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What a beauty! Now the galaxy is much larger and I can verify without any fear of being wrong the existence of two arms in one region while in the other there is only one of them. It is also true that these two arms are much shorter and run parallel to each other until they disappear when they reach a bright star in the south of the galaxy.

The longer northern arm is very striking because of this peculiarity that it has a concentration of brightness at the end of it. I am tempted to imagine that it is some object within the galaxy, although it may be a star in our

own galaxy. The minutes are passing and I have caught the object once it had already passed its south so every minute that passes is lower in the sky and there is more atmosphere between the object and my telescope.

But the image is beautiful with this telescope. I have lost little brightness overall. I have the feeling that the long arm was longer before and that the arms of the 6 before were a little more extended but as I see the galaxy so well I don't mind as I enjoy a beautiful view of the arms.



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

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This eyepiece is already too much for the galaxy. Practically the only thing that can be seen in the eyepiece is the galaxy and of it especially its nucleus. That seems to me that with the averted vision it '*contracts*' into an even brighter region in the very center, it even looks like it has some structure but I am not able to define it correctly. The two parallel arms look pretty good although one is much fainter than the other and now I get the feeling that they are more separated from each other.

The long arm has almost disappeared in its end zone and I am having a harder time seeing where it used to end. It is true that I see concentrations of brightness in it, not only in this region at the end of it but in its

beginning, it does not look like a uniform brightness but formed by clumps.

I also like to observe the stars to the south of the galaxy that serve me as a reference to improve the focus, they are quite bright and good companions to this beautiful image of such a particular galaxy (a galaxy with two very different areas that even have different number of arms). I think this is something new to me and I have never observed it before if I can remember correctly.

Good object that offers important challenges for observation.

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