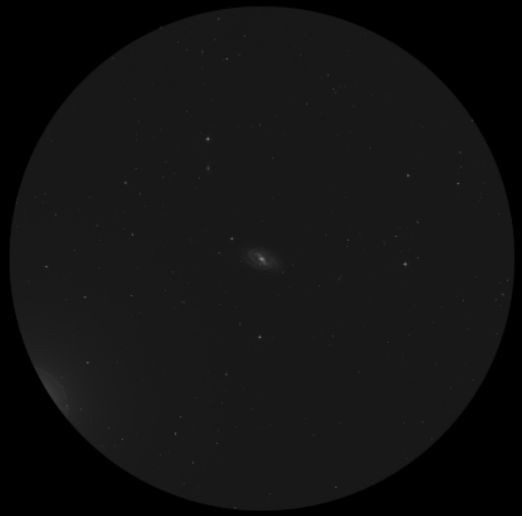
Data of the sky region at the time of the observation.....**SQM-L 21.5 IR xx° Temperature 9°**
Data of the night..... **Sun alt: -22.9° Moon alt: -6.5°**
Data of the object .....**Alt: 76.0° Az: 310.6°**
Telescope .....**Stargate 18”**



Nagler 31mm (70x - 1° 10’ - 6.6mm)

A small spiral galaxy in a poor star field so it stands out clearly.

The galaxy is less than one tenth the size of the eyepiece, so at this magnification, it is quite small in apparent size.

What I see is a typical spiral galaxy with a bright nucleus. It does not appear to be fully facing the Earth but slightly tilted, about thirty degrees. Near the nucleus I begin to see a complex structure, like a kind of swirl in the nucleus that may be a reflection of its arms. The arm structure looks to me like a kind of elongated S, but very elongated, typical of barred spiral galaxies, however the magnifications are still low to get good details of the galaxy.

Nevertheless at these magnifications I can see few details, just the nucleus stands out as very bright, its oval galaxy shape and inclined view.

Messier 109

Ursae Majoris 11h 57m +53º 23’

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Telescope .....**Stargate 18”**

Nagler 22mm (98x - 50’ - 4.7mm)

With this eyepiece I get a very beautiful view of the galaxy. I am amazed by the row of stars on which the galaxy seems to be *resting*, even one of them is very close to the nucleus of the galaxy which makes the whole especially beautiful. I can clearly see a point source of light surrounded by the bright nebulosity of the background galaxy and the nucleus, also very bright, right next to it.

This image alone is worth adding more magnification to the telescope. Also now the structure of the arms is more evident, although I still find it difficult to define it properly. I mention in my voice notes: ‘arms look like to rotate on themselves in that kind of whirlpool, but I appreciate it with great difficulty’.

The nucleus also does not seem punctual but elongated, typical of barred galaxies. It is tremendously bright compared to the rest of the galaxy. In addition, between the nucleus and the zone of the arms I can see a darker region that gives it more beauty but makes it more complex and difficult to describe. They are a kind of dark patches on the sides of the nucleus, or as a drop in brightness to the right and left of the nucleus. Those patches are more evidences when you see the increase again in brightness by the existence of the arm of the galaxy. These dark patches do not surround the nucleus but are only on the two sides of the nucleus.

Messier 109

Ursae Majoris 11h 57m +53º 23’

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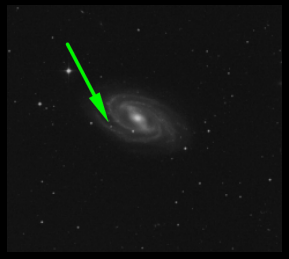
This eyepiece narrows my field a lot but the resolution I observe is very good.



First you can see some more stars of our own galaxy, fainter that is within the galaxy itself and that highlights its beauty. The contrast between the nucleus and the area of the arms is spectacular and keeps you with your eyes fixed on the object trying to get more details of that intricate shape that resists me. I perfectly observe the barred shape of the nucleus and the two dark areas on the sides of this bar, the most complicated thing is to identify where the arms of the galaxy end and where they begin and if they are one or more. I get the impression that there is a single arm on both sides of the central bar. One that starts in the right zone and turns around the south of the galaxy passing through the line of stars of our galaxy and ending almost perpendicular to the core bar. And another arm that starts in the left zone of the nucleus and turns north to end at 15 o'clock.

Delos 14mm (154x - 28’ - 3mm)

Messier 109

Ursae Majoris 11h 57m +53º 23’

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Telescope .....**Stargate 18”**

Ethos 10mm (216x - 27’ - 2.1mm)

With the 100º apparent field from the Ethos I again enjoy a much wider view of the galaxy and the black background. It becomes more evident the spiral shape of the galaxy and the vision of some arms in the outermost and faintest part of the galaxy, however I can not identify any new detail, but it is a beautiful view.

The row of stars in our galaxy, the very bright nucleus, the barred zone that extends the central part of the nucleus, the arms that show beyond this dark zone. It is a real marvel to observe this galaxy in peace and quiet.

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

This is the best view I get on the details of the galaxy. First I am very struck by the area near the nucleus. The spiral arms arise, not from the nucleus itself, but from a darker area that I define as a band of dust that '*surrounds*' (it is rather to the right and left but it is difficult to determine its limit) the halo of the nucleus. It is from this not very bright area that a pair of arms emerge and wrap around the galaxy giving it that beautiful swirling shape. To try to explain it a little better, looking at the galaxy from the outside to the inside I see in its southern zone, the first dimly bright arm, then a slightly less bright area that shows that it is an arm and then three stars of our galaxy forming a line on which M109 rests. It follows a slightly darker zone and then again a not very bright zone, to, suddenly, fall in brightness (this is the dark zone or the band of dust that *surrounds* the nucleus), and above it, a very bright halo containing the elongated nucleus of the barred galaxies. I don't know if I have been able to explain it well, but the galaxy is not very wide because it is tilted with respect to us and everything is compressed. Anyway, a very beautiful view at good magnification and with a good sky.

A delightful pleasure. Sincerely the best view of the galaxy.

Messier 109

Ursae Majoris 11h 57m +53º 23'

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

I can't see the galaxy clearly, I think that the fatigue of the day has taken its toll on me, a pity, and I can't focus properly. I have also lost a lot of brightness and I have lost the area of the arms, seeing practically only the nucleus of the galaxy, now clearly elongated (barred galaxy). If anything I see some remains of these arms as arcs surrounding the galaxy. Too bad I am tired from this day of observation.

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