Data of the sky region at the time of the observation ..... **SQM-L 21.0 IR -18° Temperature 16°**
Data of the night ..... **Sun alt: -33.3° Moon alt: -11.6°**
Data of the object ..... **Alt: 45.7° Az: 148.0°**
Telescope ..... **Stargate 18"**

# M62. Quest

- ☐ 3 bright regions, with a point-like core
- ☐ Size of the regions
- ☐ Stars HD 153484 and HD 153515 as companions at low magnification
- ☐ Star HD 153516 and the line of stars that abruptly cut across the eastern region
- ☐ Irregular shape in the core
- ☐ At high magnification, crab-like shape?

Image orientation: N at 6 o'clock, W at 9 o'clock, S at 12 o'clock and E at 3 o'clock.

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**Nagler 31mm (70x - 1º 10’ - 6.6mm)**

The star field in which M62 is located is rich in stars, because despite being near the tail of the scorpion, it is within the core region of the Milky Way. A pair of bright stars located north of the object (at 6:00 as I see it through my eyepiece) are particularly striking. These are HD 153484 and HD 153515, with magnitudes of 7.48 and 8.04 respectively and spectral classes M4III and G0II. Therefore, these are two reddish-golden stars. Regarding the size of the object, with these magnifications and this field, it appears medium-sized, centered within the eyepiece. The core is quite smaller than the rest of the outer halo, I would say in a ratio of 1:5 (i.e., the core is about one-fifth the size of the object). Its shape is rounded but not perfectly spherical, with a disordered outer halo, showing areas with greater star density.

It is bright, requiring no side vision or any device to observe it, and its brightness is concentrated in the central region. However, this increase in brightness is not pronounced but rather quite smooth and gradual. In other words, it is perceived to be brighter inside than in its outer halo, but both areas are quite bright and there is no marked difference. Even at these low magnifications, many of its stars can be resolved, especially in the outer halo. Regarding its peculiarities, at these low magnifications it seems to show some color, especially inside the cluster, which appears more golden/yellowish, compared to the silver-gray color of the much more extensive outer halo.

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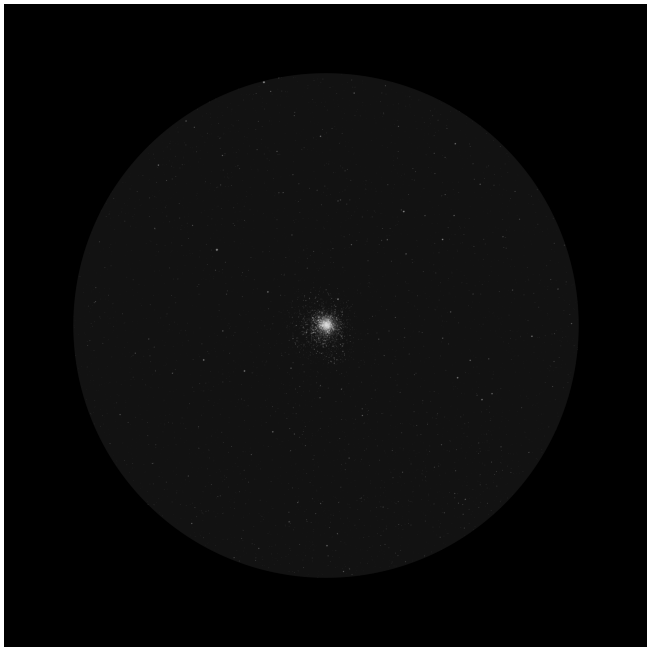

**Nagler 22mm (98x - 50’ - 4.7mm)**

Now the cluster has gained a little more presence, with the outer halo standing out especially due to its size. Unlike with the previous eyepiece, I would highlight that I now see the nucleus divided into two parts, one much more concentrated and punctual on the inside, surrounded by another more extensive and slightly less bright one. To establish some proportions, we would find a very inner and point-like nucleus, very bright, then an inner halo with a proportion of 1/4 of the total size of the object, less bright but brighter than the outer halo. And the other 3/4 part of the object is much more extensive, diffuse, and with stars that are more easily resolved. It does not have any peculiar shape of arms, at least I cannot identify it, because its outer halo seems quite uniform and chaotic in that uniformity.

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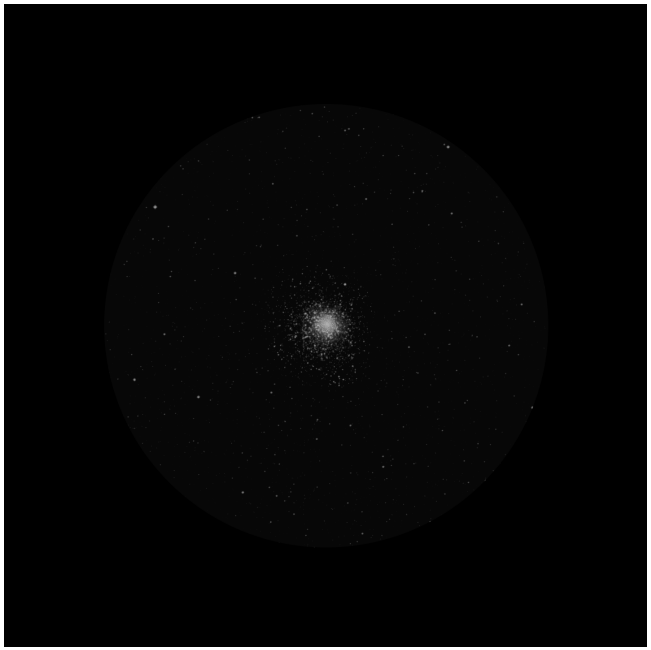
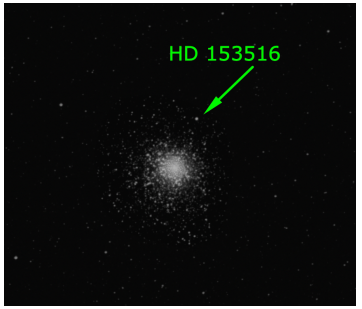
Telescope ..... **Stargate 18”**



**Delos 14mm (154x - 28’ - 3mm)**

Juan Antonio Páez and I are observing on a rather windy night, which makes it difficult for us to observe the object at our leisure, but some new details can be seen. The first was pointed out by Juan Antonio Páez, who noted that the object is not uniform in its distribution but differs in its east-west axis, with one region much richer than the other. The western region is richer in stars than the eastern region.

In my voice notes, I tell myself that this is entirely possible because to the southeast of the cluster there is a star, HD 153516, which is orange in color and has a magnitude of 11.08. If you take it as a reference and continue northward (moving downward as I saw the object with the south at 12 o'clock, so going from south to north, for me was going down through the eyepiece), you can see a series of stars of similar magnitude that form a kind of line (especially from 5 o'clock as I see it in my eyepiece) and to its east (my right), nothing can be seen. Meanwhile, in the opposite region (to the west), there is nothing similar; on the contrary, the outer halo seems to extend gradually without reaching any area that clearly marks its end. The difference is so abrupt that it even seems as if the cluster is a kind of 9 with a straight stem. Furthermore, with the 14mm, I have lost all color image, and the nucleus seems very spherical to me.



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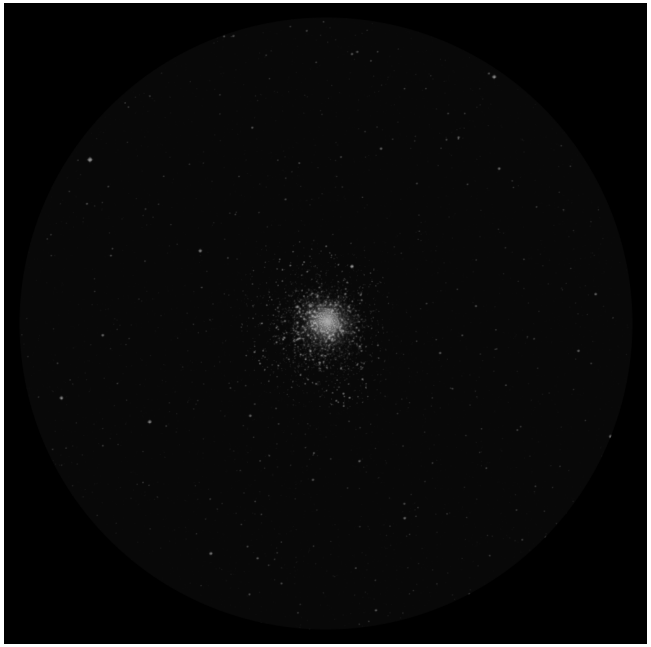

**Ethos 10mm (216x - 27’ - 2.1mm)**

With the 10mm, I cannot see any more details, but I can confirm everything I observed previously, with special reference to that line of stars that so clearly defines the cluster on its eastern side. The core seems much more spherical to me, and its stars are very well resolved, especially those on the edge of the core (in addition to all those that are resolved in its outer halo). A rather curious object.

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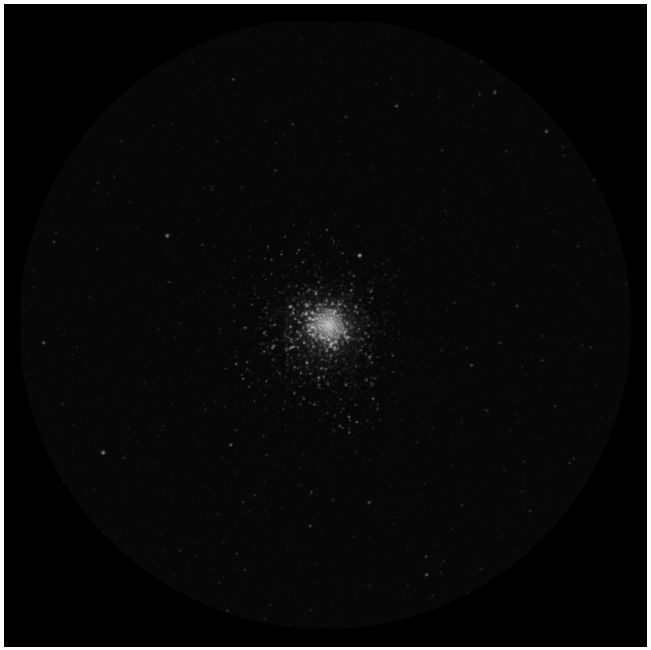

**Ethos 8mm (270x - 22’ - 1.7mm)**

With the 8mm lens, I am losing the outer halo of the cluster, and the wind is preventing us from observing it calmly. However, we think we can see some arm structures in the object, so we imagine that we are seeing a kind of crab.

Its shape would be, obviously, the body, the brightest central part of the cluster. In the eastern region, where a line abruptly cuts off the outer halo, would be the crab's hind legs and claws on the opposite side. The body (the bright central region of the cluster) would not be uniform but would narrow (like a trapezoid) towards the claws, that is, towards the west, and some bright stars in that region would be the crab's eyes protruding from its body.

It is undoubtedly a curious object, especially because of its east-west difference.