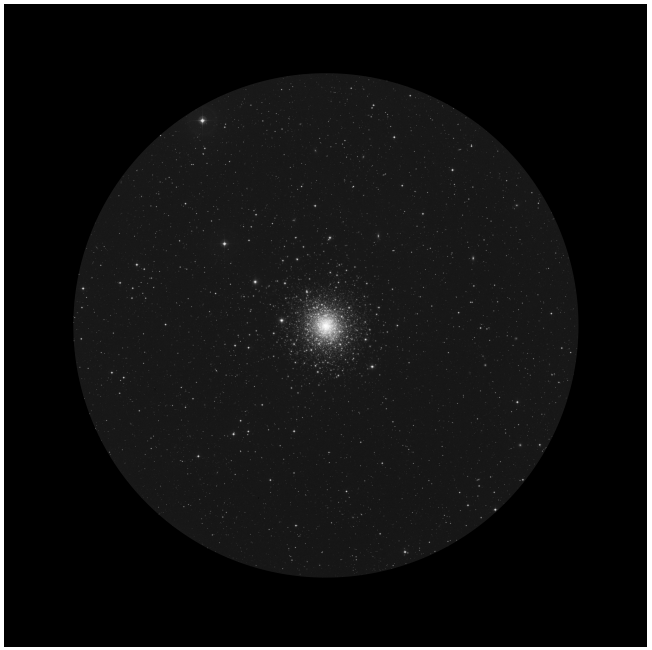
# Messier 92

**Hercules** 17h 17m +43º 08'



Data of the sky region at the time of the observation ..... **SQM-L 21.20 IR +15.3º Temperature 19º**
Data of the night ..... **Sun alt: -28.3º Moon alt: -24.6º**
Data of the object ..... **Alt: 80.6º Az: 305.2º**
Telescope ..... **Stargate 18"**



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

STUNNING!!!

The field is rich in stars with several of high brightness with which the cluster competes with them in presence.

The size of the cluster is rather small, occupying between a quarter and a fifth of the eyepiece field.

Its shape is spherical like most globular clusters and its magnitude is low, i.e. it is a very bright object.

And now comes the most beautiful part of it, which is the amount of stars that are resolved with high brightness inside of the cluster. Many of them are yellowish, golden. The central core is very, very bright and above it there are some beautiful stars of which you can perfectly count a dozen of them. And these are also brighter than the core of the cluster so they stand out enormously. Much brighter than any of those found in the outer halo. Unlike other clusters where the stars in the outer halo are the ones that stand out the most, here it is the opposite, it reminds me of M5. It is the stars that are more in the interior of the cluster that stand out the most because of their magnitude, their punctuality and their beautiful golden color.

In addition it seems that the cluster has three levels of brightness, a very, very bright core, an intermediate halo of important brightness but fainter than the core and a fainter outer halo that appears with averted vision and in which multiple stars can be distinguished.

It is AWESOME. One of the most beautiful globular clusters I have seen at such low magnification.

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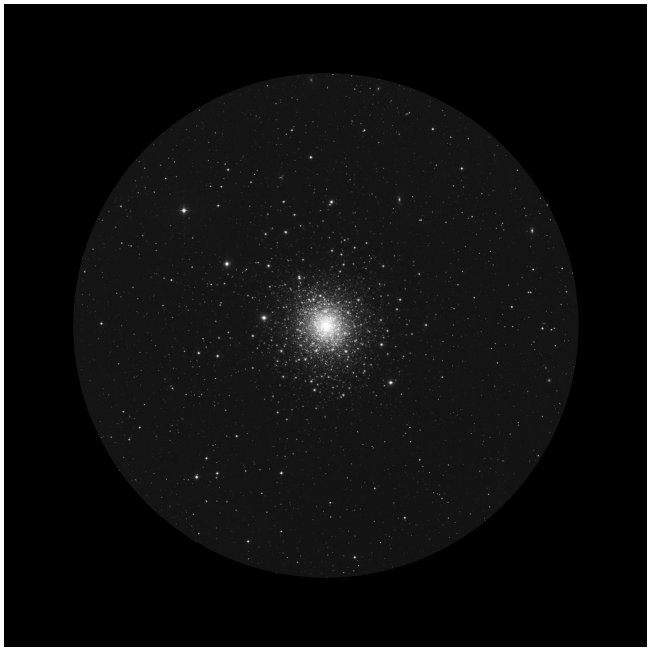
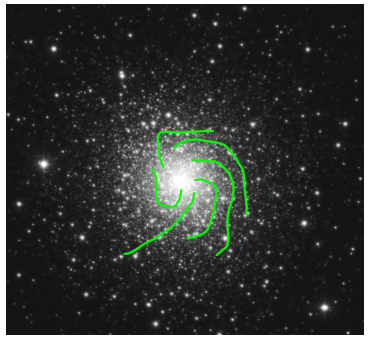


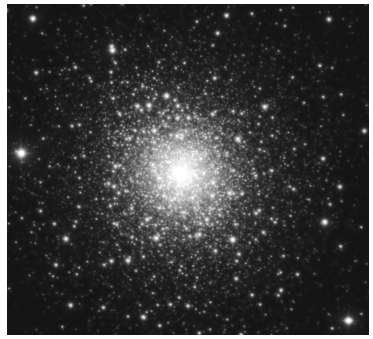
**Nagler 22mm (98x - 50' - 4.7mm)**

The first voice notes I record when looking through this eyepiece are a continuous iteration of two simple words: HOW WONDERFUL!!! HOW WONDERFUL!!!!

First I am struck by the number of stars that resolve inside the cluster, if previously I had counted a dozen I now count between twenty or thirty of them. It is really crazy to enjoy such a quantity of stars totally punctual in such a bright background. But also its hue is BEAUTIFUL, it has a pale golden color that stands out above the bright white cloud in the background of the cluster.

In addition, structures can be seen in the background brightness of the core of the cluster. It is not uniform by far, but is more intense in those areas where these point stars are distinguished and fainter in the spaces between them. Or so it seems to me, creating a sensation of wonderful concentric arms formed by pale rubies that shine with intensity.





I spend minutes and minutes following these arms, which also appear symmetrical on either side of the core center.

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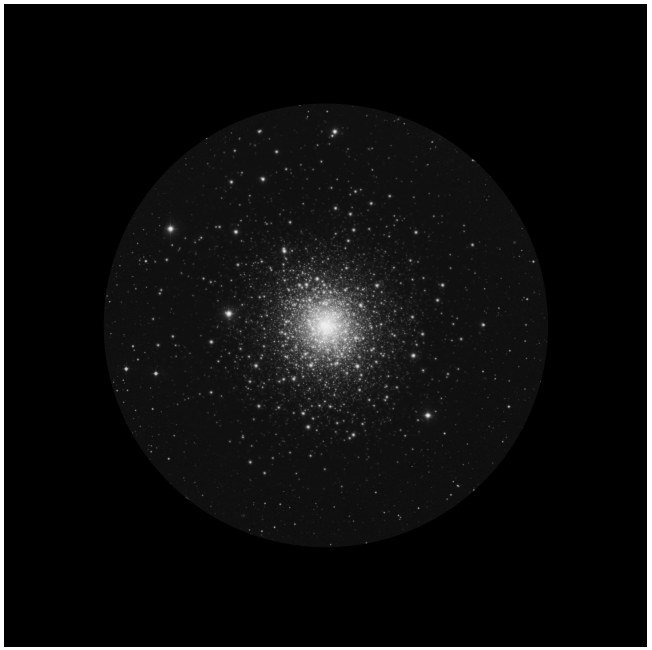

**Delos 14mm (154x - 28' - 3mm)**

The presence of the cluster is now complete, even though it occupies only half of the eyepiece field.

I wonder why I find this cluster so beautiful compared to many others I have seen. I think what explains it, is the number of stars seen of different magnitudes. I mean that in other clusters I saw many stars but there were practically two groups of magnitudes, either bright stars easily distinguishable or, much fainter ones that appeared as lumps. In M92 this does not happen. The magnitude gradient you observe is such that it is difficult to group the stars. You clearly see very bright stars, others a little less bright and more numerous, others even less bright, followed by a fourth group of fainter stars, and perhaps the fifth group is the one that looks like clumps.

To this set of magnitudes we must add the punctuality of the stars. Unfortunately, star charts usually show the brightest stars as larger circles and the fainter stars as smaller circles. It is a good visual tool but it does not correspond to reality and perhaps that is why the surprise is greater when you contemplate several stars of different magnitudes.

In real objects ALL stars are point-like, if any of them give the impression of being larger it is because the telescope is not perfectly collimated or focused. So the difference between one and another is not in their size but in their brightness. And it is amazing to see the same object (a star) with a similar hue, but sometimes so faint that only your averted vision shows it, and sometimes so bright that it stands out like a beacon in the dark.

This precious interplay is observed compactly in M92, presenting itself as a challenge that enhances the beauty of the object. For, although you never lose the feeling of a single object, you are actually seeing dozens of different realities. Hundreds of suns of varying brightness and size trapped in that gravitational well that forces them to travel together through our beloved galaxy.

I would also like to point out that increasing magnification on the same object leads you to discover these subtleties because now the number of stars that are resolved is much higher and of a lower magnitude. That is to say that the play of magnitudes is more evident in the 14mm eyepiece than in the 22mm eyepiece because I have gone from almost 100x to 150x.

In addition, the kernel has a much smaller and spherical shape, even more concentrated with this eyepiece. It is also curious the sensation of three-dimensionality that I get. The object is quite contrasted with the sky background that appears quite dark perhaps because it is very high in the sky and the mass of air that separates me from it is minimal, the fact is that the contrast is greater than in other objects of the same night and helps a lot to enjoy the beauty of this cluster.

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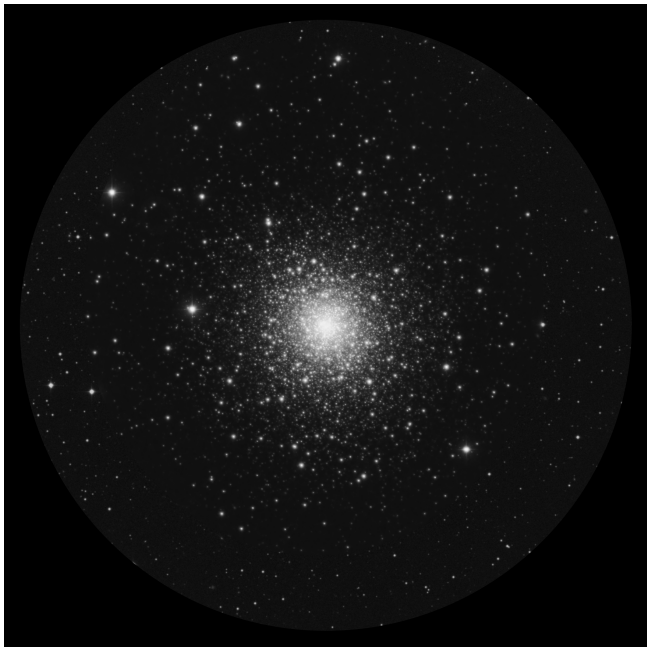

**Ethos 10mm (216x - 27' - 2.1mm)**

No matter how much I add magnification, the object does not seem to diminish in brightness. On the contrary, new details appear that increase the subtlety of the object. So much so that in my voice notes I indicate that I do not believe that there is anywhere a photographic image that can show the beauty of what I am observing.

The most beautiful aspect about this cluster is the possibility of contemplating such bright regions where dozens of stars stand out clearly and punctually, with other much fainter outer regions where you can also see punctuated stars but these are much fainter.

I believe that only the human eye can catch this contrast game. Unfortunately, cameras either burn out a region to show the fine details of the outer region or lose the fineness of the outer halo when showing the stars of the cluster core. I am so convinced of this that I don't think the image accompanying these words does justice to what I have observed, and it is one of the best I have seen.

In this attached image no detail can be seen in the innermost part of the cluster, while in the visual observation several very bright stars can be seen standing out against the bright background, all of them individually resolvable.

Another aspect to note is that adding more magnification to this particular object is very much appreciated, since it allows to enjoy its delicate details with less effort.

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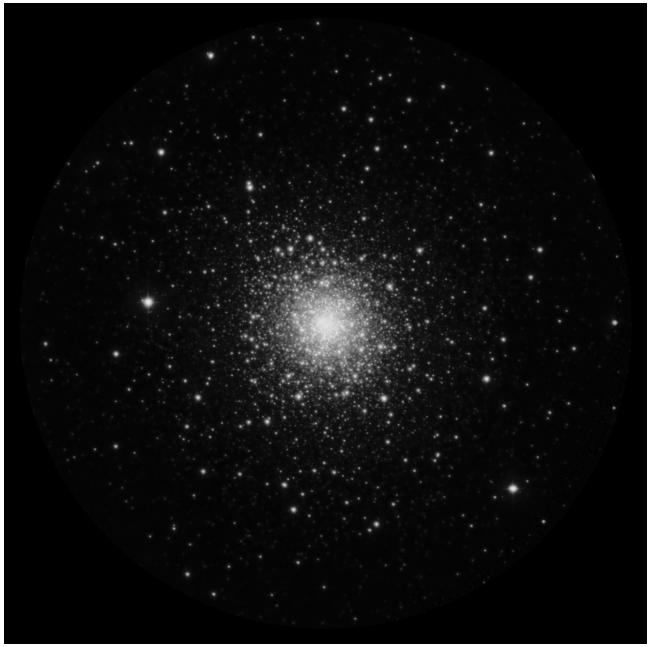

**Ethos 8mm (270x - 22' - 1.7mm)**

Surprisingly the jump to 8mm did not bring me any satisfaction. That is, the object is still incredibly beautiful but its image reminded me a lot of the 10mm and if anything a bit paler.

Now I don't see any tonality in the stars, but they all keep the same pleasant whitish tone. Very bright those in the core of the cluster and fainter those in the outer halo, but all with the same hue.

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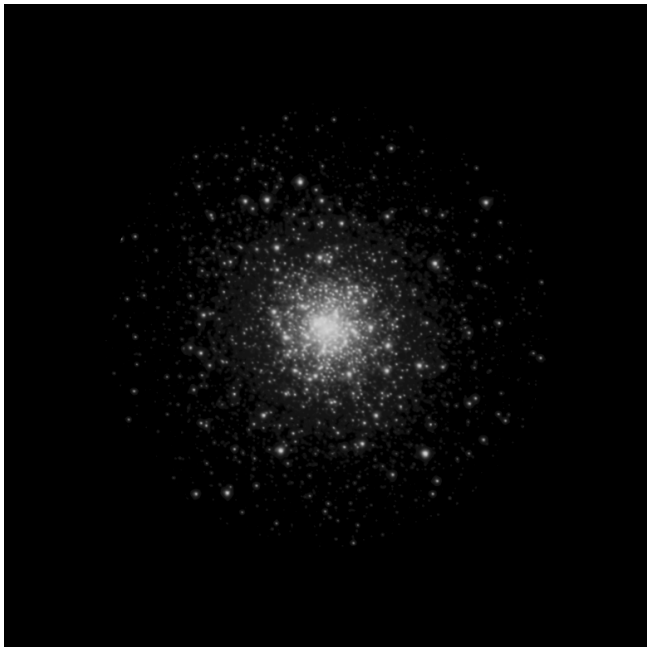


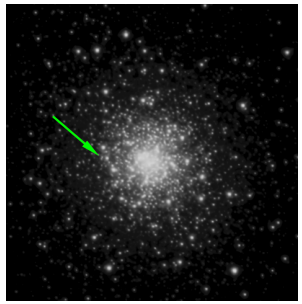
**Delos 4.5mm (480x - 9' - 1mm)**

With the 4.5mm however the impression is totally different. It took me a lot of work to get the perfect focus, but when I did, the core of the cluster showed itself in all its beauty.

The first thing is a sense of volume that takes your breath away, it seems as if you are really looking at a sphere full of stars, which you fly over with tranquility.

Not all the field is occupied by the object but most of it, something that is appreciated because it helps to maintain the coherence of the object. However this increase in size of the object is best appreciated in the nucleus that now appears so large that I have the feeling that it is much larger compared to the rest of the object.

Spending a few more minutes of patient observation I conclude something that I had intuited in other objects, the weakest parts of the object have disappeared in the 4.5mm and that means the outer halo. To confirm this I go back to the 10mm for a few minutes and see a specific example. There is a row of three stars located at 9 o'clock from the core of the object that in the 10mm appeared as part of the core, or very close to its edge, being submerged in the beginning of the next brightness halo of the cluster. However, in the 4.5mm these three stars appear completely outside the core of the cluster, and around them there is no faint cloudiness that would form the outer halo.



It's a pity that the seeing is not good all the time and sometimes I lose this beautiful view. But it is an object that supports these magnifications without problem when the night yields equally in quality of seeing. A real beauty.