

Offered Title: Big Eyes on the Sky

If you were able to Get Out with binoculars last week, keep going, because there are hundreds of things you can see. Yeah, you can use naked eyes, but truthfully, it's way better with binoculars.

Taking it up a notch, let's look at bigger eyes on the sky, giant binoculars.

GIANT BINOCULARS

These are big, heavy optics that require a stable platform because you just can't hold them steady enough to be useful. The starting point for "giant" binoculars is usually 70mm diameter objectives. They need a tripod, and/or a specialty mount for binoculars.

70-80 mm objectives, 15-20 times magnification

These "giant" binoculars do two things better than smaller optics, well, beside impressing your friends.

The larger objectives bring in more light, so you can see fainter objects, and the higher magnification results in a darker background, so the objects appear more distinct. Things such as globular clusters, open clusters, and galaxies really start to stand out with these bigger optics. The Moon starts to appear 3D, as if you are an astronaut on your way there. Good ones can be had for \$200-\$300. Top performing models start at \$500.

100+mm objectives, 20-30 times, or higher magnification

Now we are in the realm of super binoculars and some actually allow you to use telescope eyepieces (in matched pairs) to achieve wider angles or higher power. These binoculars are like having two 4" or larger telescopes, one for each eye! Now you are in "space-walk" mode where individual stars in globular clusters can be seen, galaxies and nebulae start to show detail, and solar system objects get spectacular. Expect to pay \$300+ for decent ones. Better ones, that let you use your eyepieces start at about \$1300. Top notch optics with special glass types will start at around \$3000 and go beyond \$15,000. Top notch ones allow you to bump up the power and see detail in Jupiter's belts, see Saturn's rings in relief against a dark background, see lunar craters close up. The downside? 100mm+ binoculars are really, really big and some will weigh in the 30-pound range! They usually need a super heavy duty tripod, heavy duty mount, or come with a dedicated mount and tripod.

Another entry in the 100+mm binocular field are binocular telescopes. These are two telescopes, adapted for binocular use and they can be outstanding! Are they for you? Well, they can take some getting used to. Some commercially available ones are set up so the binocular scope is looking behind you as you sit facing the front of the scopes. They get up to 16" in diameter, meaning very faint objects are within reach, and, oh the views. I have not viewed through them myself, but the reports I read make them sound unbelievable.

As with all optics, do not be led astray by promises of high power, big zoom range, and low price. Quality is not cheap