

## HEAVENLY NEWS

### “Enjoying Binocular Astronomy”

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You've been reading articles in this column about the wonders of the night sky and about our Community Observatory where you can see these wonders in powerful telescopes. But did you know you can start viewing many deep space objects in your own back yard with binoculars that you may already have? It's true. I started my hobby in astronomy with binoculars and to this day I take them with me on any outing where I'll have access to a dark clear night sky. A good pair of binoculars offers you viewing similar to that of early astronomers who discovered and named many of the larger, brighter night sky objects.

What kind of binoculars are best for astronomy? Binoculars are rated with 2 numbers, for example "10x50". The first number is the magnification or 'power'. In our example, objects are magnified '10' times their normal size. That does not sound like a lot at first until you realize that many night sky objects are actually quite large and do not need extreme magnification to result in a wonderful view. The second number states the size (diameter) of the front lens or 'aperture' in millimeters. This is the more important of the two numbers as it indicates how much light will be let into the binoculars - the bigger the better. While many objects in the night sky are large enough for low power, they may be quite dim. A larger aperture can brighten them up nicely. I find that 7x35 binoculars are likely the smallest that can offer the ability to find dimmer objects. The 10x50 models are a good balance of power and aperture without being too big to hold for longer viewing sessions. If you have more magnification, you'll find the image shaky unless you mount the binoculars on a tripod for steadier viewing. There are very expensive models that offer "image stabilizing" and even built in digital cameras. But if you just want to enjoy the night sky with friends and family, you cannot go wrong with a good pair of 10x50's.

What can you see with binoculars? The brightest object of course is the moon. You'll be able to make out more surface features than with your naked eye. If you like planets, you'll find that you can see Jupiter and its 4 big moons: Europa, Ganeymede, Io, and Callisto. Other planets are made larger and brighter also. With low magnification, they won't be seen as large spheres but you'll be able to tell they are not stars. You'll be able to travel to deep space - outside our solar system. You'll be able to enjoy many larger star clusters and nebulae throughout our Milky Way galaxy. For example, the Pleiades star cluster and the Orion Nebula are especially spectacular seen through binoculars. Lastly, you'll be able to see other entire galaxies. The view of the Andromeda Galaxy in my 10x50's is always better than in my telescope because Andromeda is very large and the telescope cannot get it all in view. The night sky changes gradually throughout the year with new objects to see each season. If you are not familiar yet with what's up there, you should try to obtain a 'star map' of night sky objects. These maps are available on the internet, at a newsstand in monthly astronomy magazines, or at a bookstore. As you gain more experience with your binoculars, you may find yourself taking on the challenge of

'bagging' those smaller dimmer objects like some sort of space hunter. But in the mean time, you'll love just slowly cruising through the night sky seeing it 50 times brighter and 10 times larger than with your naked eye.

The final nice thing about binoculars - you can take them anywhere at a moments notice. They can be used for sporting events, nature watching, many occasions - day or night. But on quiet clear nights in our beautiful Sierra foothills, you can relax with them in a peaceful cruise through the Heavens Above.

So I invite you to grab a pair of binoculars and just see what you can see. You'll be pleasantly surprised if you've not tried it before. If you are up visiting the Community Observatory, bring your binoculars. One of our docents will be happy to help point you to objects that should be great for binoculars.

The Community Observatory is located behind the El Dorado Center of Folsom Lake College (off of Green Valley Road in Placerville) and is open during the fall and winter months (when the sky is clear) 7:30 PM – 9:30 PM. For more information about the Observatory and driving directions please go to [www.communityobservatory.com](http://www.communityobservatory.com)