

HEAVENLY NEWS

“The Galaxies of Ursa Major”

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February and March bring us clear and crisp evenings, inviting us to bundle up and go outside to look at the beautiful stars of the Milky Way. The pattern of stars I always look for first is the Big Dipper or Plough, in the northern sky. This asterism is one of the commonly recognized patterns of stars. One reason is because it is visible in the northern hemisphere all year. Many have used these stars as a navigational tool. The pointer stars of the Big Dipper point to the North Star, Polaris, which lies within 1 degree of the north celestial pole.

Found in the constellation Ursa Major or Large Bear, the Big Dipper is just the tip of the iceberg of what this neighborhood of stars holds for us. We can also find several bright galaxies. A galaxy is a cluster of millions to trillions of stars held together by gravity. Two of the brightest galaxies in Ursa Major are the pair Messier 81, Bode’s nebula, and Messier 82, the Cigar Galaxy. Their brightness allows them to be viewed through standard-sized binoculars on a dark night. With the correct sized telescope and proper magnification, a lucky star gazer could view both galaxies in the same field of view. That’s a pretty amazing treat.

Another galaxy is the Pinwheel Galaxy (M101), a beautiful face-on spiral galaxy that is about twice the size of our Milky Way. An interesting fact about this galaxy is it has five prominent companion galaxies. In the distant past M101 is believed to have had a near collision with one of these galaxies, NGC 5474, that resulted in distortion to its disk of stars.

While not an actual member of the Great Bear, one of the most famous galaxies in the sky is Messier 51, the Whirlpool Galaxy, in the nearby constellation Canes Venatici. The galaxy and its companion (NGC 5195) are easily found by amateur astronomers. These two galaxies may even be seen with binoculars. The Whirlpool Galaxy is also a popular object to view for professional astronomers to understand galaxy structure and galaxy interactions. The Community Observatory is pleased to offer a poster-sized photograph of the Whirlpool Galaxy taken by astrophotographer Ken Crawford. These posters are available to the public for a small donation.

Other notable spiral galaxies within Ursa Major are Messier 108 and Messier 109. Both are barred galaxies. From the perspective of the Earth, Messier 108 is seen almost edge-on while Messier 109 is a rarer barred spiral galaxy with an oval or pear shaped glow and a very blotchy appearance.

We see these galaxies because we are, generally, looking perpendicular to the plane of our galaxy. So, we're looking "out" rather than "through" the Milky Way. These are just a few of the galaxies-around Ursa Major that you can see for yourself at the Cameron Park Rotary Community Observatory in Placerville any Friday, Saturday or Sunday evening 7:30pm – 9:30pm. For more information about the Cameron Park Rotary Community Observatory and special events go to www.communityobservatory.com.