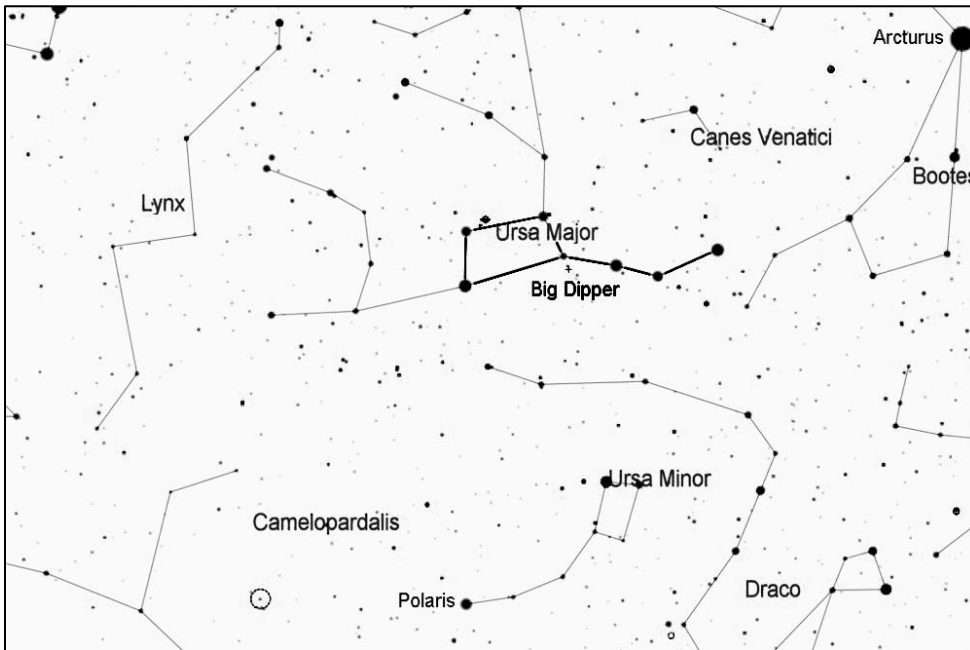


## Messier 81 and 82, Galaxies in Ursa Major

Visible for much of the year, this is probably the most-frequently viewed pair of galaxies in the sky. Through a telescope, M81 is a fuzzy oval and M82 has a long rectangular shape that gives it the nickname the Cigar Galaxy. These galaxies are at the enormous distance of 12 million light years away, yet they are among the closest galaxies to us. Using high magnification can help show some of the intricate structure of M82.



Start by finding the Big Dipper, one of the most recognizable star patterns in the sky. It is part of the constellation Ursa Major, the big bear. It is shown here upside down, high in the sky above Polaris, which is where it can be found during the evenings in spring and summer. For other seasons and times of night, rotate the chart as needed to match what you see in the northern sky.

Visualize a diagonal line across the bowl of the Big Dipper, and extend this line a slightly longer distance outside the bowl, as shown below. This will bring you to the general vicinity of M81 and M82. It is easy to get lost in this part of the sky. If you do, the three star patterns circled in the chart below, which are easily seen in binoculars or a finderscope, can help you get oriented.

