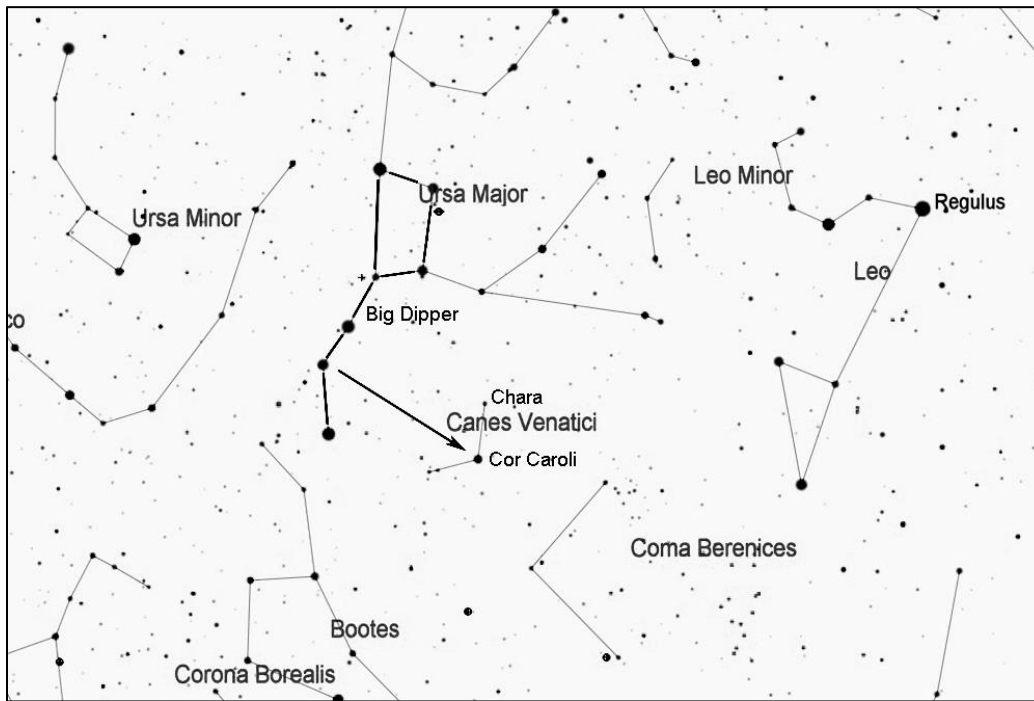


## NGC 4449 (Caldwell 21) and NGC 4244 (Caldwell 26), the Silver Needle Galaxy

NGC 4449 is an irregular galaxy and NGC 4244 (known as the Silver Needle Galaxy) is a very pointy edge-on spiral galaxy. Both are about 14 million light years away. At magnitudes 9 and 10, respectively, they can be seen in even small telescopes under dark skies. Their differences in size and shape are worth examining. These relatively nearby galaxies are members of the Canes Venatici I galaxy cluster, which also includes nearby M94.



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 on its side as it appears on early spring evenings. For other seasons and times of night rotate the chart as needed to match what you see in the northern sky. Then look "underneath" the curved handle of the Big Dipper for Cor Caroli, the brightest star in the small constellation Canes Venatici at magnitude 2.8.

From Cor Caroli, look 5 degrees to the northwest to find Chara (magnitude 4.2). Then take a right turn and go another 5 degrees to the southwest to reach the location of the Silver Needle Galaxy. About halfway there is the 5th magnitude star 6 Canes Venatici, which can help guide you in the correct direction. To find NGC 4449, go back to Chara and move 3 degrees to the north-northwest.

