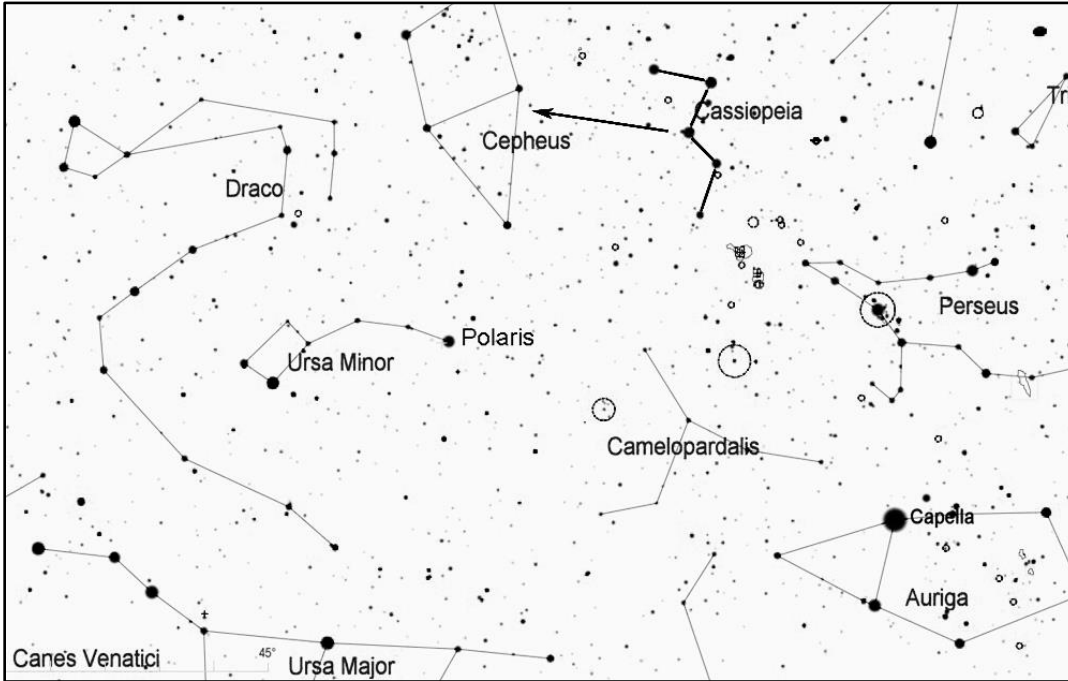


NGC 6939, Open Cluster, and NGC 6946 (Fireworks Galaxy) in Cepheus

This is a contrasting pair of objects about 2/3 degrees apart. NGC 6939 is a small open cluster about 5900 light years away. NGC 6949 (also known as Caldwell 12 or the Fireworks Galaxy) is a face-on spiral galaxy with a bright center and dim diffuse arms, about 25 million light years away. These objects can be seen together in the same low-power field of view, making an interesting juxtaposition of a distant open cluster and a very distant galaxy.



Find the constellation Cassiopeia, which has a distinctive "W" shape (although its orientation changes at different times of year as it circles the north celestial pole). On fall evenings, look for Cassiopeia in the northeast, where its tilt makes it look like a "3", and in the winter look high in the north above Polaris, where it is oriented like an "M".

As shown below, use the stars of Cassiopeia to direct you to the nearby constellation Cepheus. It has the shape of a house with a pointy roof, though the house appears upside down when Cepheus is high in the sky above Polaris.

First locate the upside-down house formed by the five brightest stars of Cepheus. From alpha (α) Cephei, the brightest star at the base of the house, look 4 degrees away in the direction opposite from Cassiopeia for 3rd magnitude eta (η) Cephei and 4th magnitude theta (θ) Cephei. As shown in the chart below, visualize a triangle with η and θ, and the third point of the triangle is NGC 6939. About 2/3 degree to the south is NGC 6946.

