# Winter has the best views, but it's cold!

DINO MILANI
Popular Astronomy Club

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If it’s not raining, snowing or unbelievably cold the best time to see the stars is during the winter. The air is dryer with less moisture to block the view. Because it’s colder the air is more dense than usual and the denser air can make the stars easier to see. Some of my favorite views are in winter but seeing them means dressing warm for the cold weather.

Telescopes in winter, especially when the air is still, show sharper images with better details, colors and more visible stars. But sometimes it’s too cold to set up a telescope so try binoculars, instead. Any binocular will work. You can also try the "WideBino 28." It's a very short, wide-angle binocular with a wide field-of-view. With it you can see much of the sky in great detail. Or you can just use your eyes. You can see more with your eyes than you thought, just look up!

When the night sky is clear, step outside and look south, then look half way up the sky and see three stars in a row. The three stars form the "hunter's belt" for the constellation Orion. Above them and to the left is a large yellow star named Betelgeuse. (There's a movie with the same name, only don't say the name three times in a row!) Betelgeuse is reasonably close at 498 light years. It's an old super-giant star that's 886 times wider than our sun. It's big enough and close enough that you can see it's disk with a telescope. Below the belt are two stars, Saiph and Rigel. They form a wide bottomed square with the belt. Inside this square is the Great Orion Nebula which is the brightest nebula in the sky. You can see it by eye, even in our light polluted skies. The nebula is a cloud of gas. It's lit up by the stars in it and new stars are created there. If you ever saw a picture of the

Horse Head Nebula, that area is a small part of the Great Orion Nebula. Take a look and you might be surprised at what you see.

We had a full eclipse of the moon on Jan. 20. Some called it a “Blood Moon," others called it the “Super Blood Red Wolf Moon." Did you see it? It started early, about 8 p.m., was fully eclipsed by 10:45 p.m. and (of course) it was cold! The temperatures started at 7 degrees and dropped to zero. Being that cold I put on wool socks, snow pants, heavy coat, hat, gloves and got my telescope ready in the garage. Then set up the telescope on the driveway, put my camera on it and in between camera shots warmed up in the house. We live in Rock Island but I wasn’t worried about too much light from my neighbors’ lamps or the street lights. A full moon is very bright and the extra light would not hurt the photos. At the end, when the fully eclipsed moon was very dark, I made sure my shadow covered the end of the telescope so that the extra light didn’t ruin the photos. By 11 p.m. it was too cold to stay out but the best photo was the last one taken before going inside. Even though it was very cold, it was exciting photographing the eclipsing moon. Keep looking up!

Dino Milani is a member of the Popular Astronomy Club. It meets the second Monday of each month at 7 p.m. at Butterworth Center, Moline, Illinois. The club also has night- time public observing sessions every third Saturday of the month, March through November, at Niabi Zoo, Coal Valley, Illinois.

QUAD-CITIES SKYWATCH

# Stars shine best on winter nights

## If it's too cold for telescopes, try binoculars

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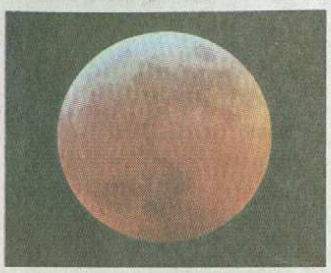

Dino Milani

**Popular Astronomy Club member Dino Milani braved single-digits temps Jan. 20 to get this shot of the "Super Blood Red Wolf Moon." The best shot, Milani said, was the last one taken before being driven inside by the cold.**

It's an old super-giant star that's 886 times wider than our sun. It's big enough and close enough that you can see it's disk with a telescope. Below the belt are two stars, Saiph and Rigel. They form a wide bottomed square with the belt. Inside this square is the Great Orion Nebula which is the brightest nebula in the sky. You can see it by eye, even in our light polluted skies. The nebula is a cloud of gas. It's lit up by the stars in it and new stars are created there. If you ever saw a picture of the Horse Head Nebula, that area is a small part of the Great Orion Nebula. Take a look and you might be surprised at what you see.

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