

### Watch for the “dirty snowballs”

**By Vernon Whetstone**

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The outdoor temperature seems to be catching up with the season. We can definitely say that winter is on its way; as if two inches of snow wasn't a good enough hint.

But, as we have discussed before, the seasons are an astronomical event, not a meteorological one.

Technically winter starts on Friday, Dec. 21, at 4:12 p.m. MST, (called the winter solstice) when the Sun crosses the celestial equator heading south.

Our good friends in the southern hemisphere, on the other hand, will begin to enjoy the benefits of more direct sunlight with longer days and the advent of summer.

I remember when I was growing up, seeing photographs in the newspaper of people in Australia celebrating Christmas Day with a trip to the beach and Santa Claus on a surf board.

Another supposed feature in the winter solstice is the longest night and the shortest day.

Technically, the length of day from Wednesday, Dec. 19, to Monday, Dec. 24, is nine hours and 19 minutes for each day.

Then on Dec. 25, the days start to get longer.

Word has begun to circulate in astronomical circles of the possibility of two so-called “Great Comets” coming our way in 2013.

Astronomers are rather careful now about describing newly discovered comets in super-heated terms of greatness after the debacle of Comet Kohoutek in 1973.

That comet was supposed to be one of the brightest and best comets ever. As you probably remember, the comet did not live up to expectations and was called a “fizzle” by many.

These two newly-discovered comets, Comet C/2012 S1 (ISON), and Comet PANSTARS are named using the acronyms (which I won't bother to spell out here) of the discovering organizations, both of which are dedicated to searching for in-bound comets.

The first (PANSTARS) will be closest to the Sun and Earth in March, and the second (ISON) will not be onstage until November and December of next year.

While astronomers are careful to couch their descriptive phrases in terms of “might be,” “could be,” and “possibly,” we will have to wait to see what happens.

However, as the days pass both comets are brightening enough to put them in the “possible super” category.

Comets have been described as “dirty snowballs” because they are composed of ice, dust, rock, and other leftover tidbits from the formation of the solar system.

As they near the Sun and its heat begins to melt the ice the material begins to stream away from the comet into the proverbial tail which always points away from the Sun.

We will just have to wait and see what kind of comet show we will have.

SKY WATCH: First quarter moon tonight, Thursday, Dec. 20. Bright Venus is sinking toward

the eastern horizon each morning while dimmer Saturn is rising higher. In the evening sky very bright Jupiter is rising higher and Mars seems to be standing still above the western horizon. The moon will be near the Pleiades cluster on Monday, Dec. 24, then moves on to be very near Jupiter on Christmas night, Dec. 25.

NEXT WEEK: The winter triangle, circle, and rectangle, and more astronomical blathering.