Applegater Winter 2013 7

THE STARRY SIDE **Never touch each other**

BY GREELEY WELLS

I'm on my roof deck again, looking at the night sky. From our position in the Milky Way Galaxy, the only other galaxy we can see with our naked eye is the Andromeda Galaxy. It's the closest galaxy to us, yet it's the most distant thing we can see.

Astronomers predict that in billions of years, various forces of gravity will draw our two galaxies together in a spectacular collision. Computer simulations of this event show our two fairly similar galaxies swinging with their own gravity centers closer together, then making a near miss only to swing in a tighter circle until they "crash" and combine, mixing into one huge galaxy! From this simulated computereye view, these great forces merge into what must be catastrophic death and destruction.

But here's the amazing thing: nothing will touch when the galaxies collide, and there will not be the crashing and physical destruction that we might imagine. The inevitable damage will be due to the forces of gravity mingling and changing and destroying the careful balances that have kept us all-including our neighboring planets-revolving around our sun, and our moon revolving around us.

Now, I'm not a gloom-and-doom guy, but I am a realist. Our solar system will lose that beautiful, delicate balance that literally gives us life-that rare balance of position and heat, size and age that makes this planet perfect for life as we know it. We will indeed perish.

Something happening billions of years from now could be just an interesting 'comfort' to us in its complete remoteness. But let's not get too comfortable; let's not take our eyes off the issues that are happening right here and now. What with a large asteroid possibly hitting us,

economic and environmental breakdown, and rising seas, we have plenty to do.

And we can do something about these things. So let's do it!

THE NIGHT SKY

Let's focus on just one constellation: Orion the hunter is probably the one most people know, if they know any. He's huge and high in the winter, in January slightly south from directly overhead.

Orion is clearly a person, with a three-in-a-row star belt, his shield out to our right and club raised high to our upper left. The sword and scabbard hang from his belt and look oddly smudgy without

Illustration: Guy Ottewell's Astronomical Calendar 2012.



binoculars or a telescope.

Orion's two shoulders are obvious; the bright star to our left is Betelgeuse. Diagonally, to the bottom-right, is the slightly brighter Rigel, making up Orion's knee (or foot, if his leg is bent).

This constellation spans all known history. For the Babylonians Orion was The Heavenly Shepherd; he was Osiris for the Egyptians; the Greeks called him Orion, the strong hunter we know.

There's always wiggle room in observing, which is one of the reasons I love the night sky so much: it's up to you to see what you want to and the way you

> want to. And we've been "wiggling" constellations into view probably since the beginning of our time here on this planet.

THE PLANETS

Jupiter keeps hanging in the Gemini twins, as it has for months. Beautiful and up most of the night, Jupiter rises as Venus sets in December. On March 3, the moon joins Jupiter.

Venus gets to its brightest in December. You can see Venus and a small crescent moon on December 5. Venus falls into the sun on December 11. On January 28, Venus shows up in the morning with a



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and a sweet crescent moon dancing in the dawn joined below by Mercury.

Mars rises and brightens a little before midnight near Spica. The two of them rise earlier each month as the sky shifts.

Mercury shows up in the sunset on January 31 with a crescent moon low in the southwest.

Morning risers: go out on February 23 to 26 to catch the moon with Antares below. Further right (above), you'll see Saturn, then Mars, with Spica below. Together they make a shifting dawn display.

OF NOTE

to 28 has Venus

We might have some Geminid meteorites on December 13, but they will be unfavorable for viewing and probably few. The moon is the problem. Try for a time with a low moon or none. If you're patient, you'll see some meteorites.

December 14 brings the Ursids, a lesser meteor outbreak in the north around the Little Dipper. Look for both meteor showers together. Dawn should be the best time, as usual, because the bright moon will have set.

Quadrantid meteors should be visible in a moon-free sky for several days in early January, peaking January 2. Look all night-the later the better. Look to the north for the radiant.

Solstice is on December 21. March 20 is the Equinox, with even nights and days as the sun rises and sets due east and west.

There are full moons on December 17, January 15, February 13 (Friday!), and March 17.

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