

THE STARRY SIDE

# Two- to three-dimensional

BY GREELEY WELLS

As we define and speak of things, we fix them in those forms and terms in our minds. As we redefine and rename them based on new insights, our knowledge and understanding expands. Here's an example of this process that recently happened for me. Because I was astounded and enlightened by it, I want to pass it on to you.

All of my schooling, all of the books I've read, and all of the astrological pictures I've seen show a two-dimensional (2D) version of our solar system. You've all seen it: concentric circles of planets surrounding the sun at the center. This representation of reality is how we have come to understand, perceive, and describe how our solar system works. Who could argue with that? We all agree, even our scientists...

However, when we look three-dimensionally (3D) at this, a whole new reality and understanding unfolds. It's not that we've been wrong; it's just that we've long had limited 2D thinking about our solar system, and to be woken to the 3rd dimension is to come out of an ancient sleep into the daylight of a new reality.

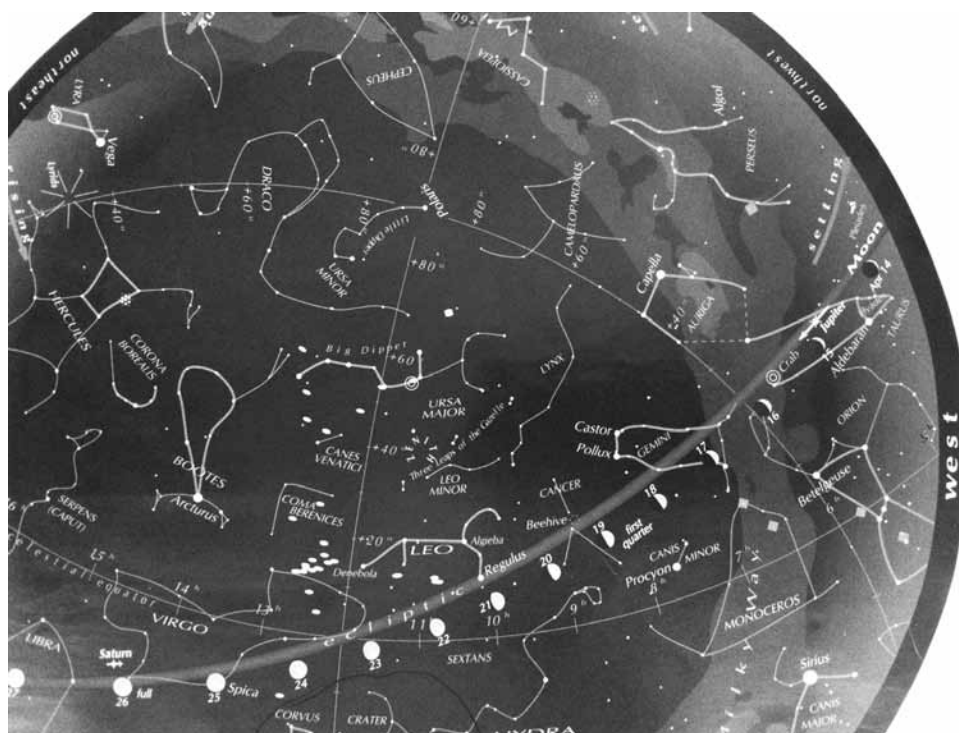
Just as the planets are not static, but move around the sun, the sun is not static either. The sun moves in its own path through our galaxy; therefore, something revolving around the sun is also moving through space. This means the planets don't move in a true circle around the sun; their movement actually forms a spiral shape, because the sun and planets are moving through new space together.

Now, get this: the galaxy itself is moving through the universe, and the universe itself is in motion as well as expanding.

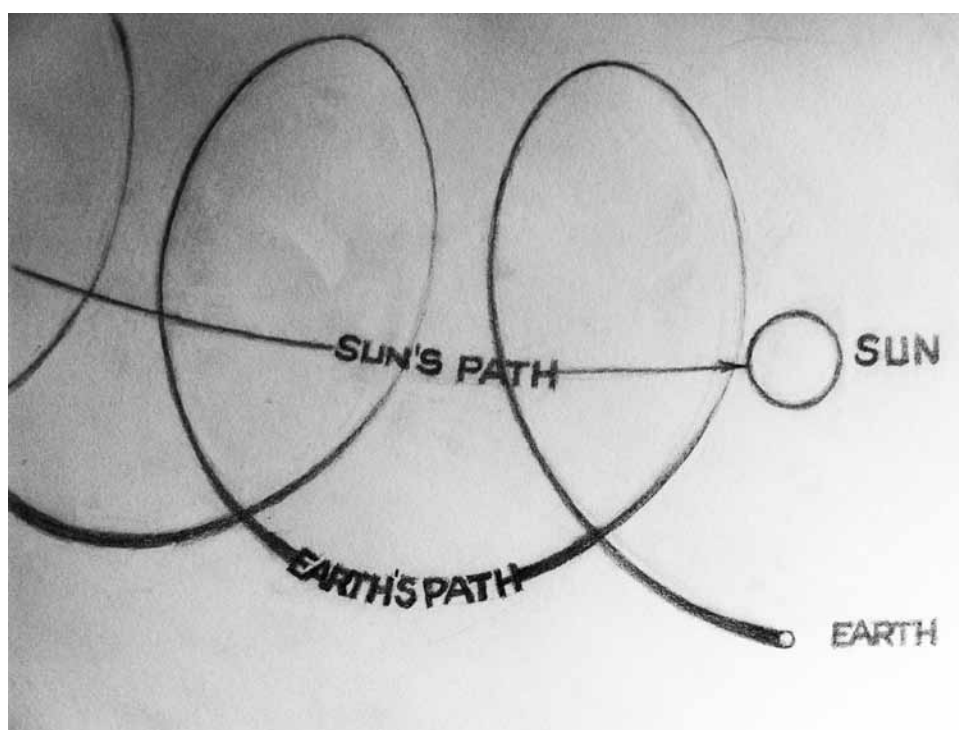
So from a 2D concept we are now invited into a much greater, clearer, more accurate understanding of what is really going on in our solar system. The photo illustrates what it looks like in that whole "new" (to me and now perhaps to you) reality. Isn't it beautiful?

This spring, as you walk out into a clear night with this new understanding of the solar system, you'll see Orion standing upright in the west. To his left is the brightest star in the sky: Sirius, the heart of his faithful dog in Canus Major. Above and to the left of Canus Major is Canus Minor—quite minor, in fact: just one bright and one dim star. Over Orion's head to the left are the Gemini twins (well, they're not identical twins, since one is not quite as bright as the other). Our favorite winter constellations (including Taurus the Bull and Pegasus) are sliding into the west along with Jupiter.

Meanwhile, the eastern sky is busy. The Big Dipper is up early in spring, bringing Arcturus (follow the arch) into view. The Summer Triangle begins to rise in the eastern night, with Vega first rising in the northeast in April. In March, Leo



Note the northeast corner where Vega, in Lyra, the first star of the Summer Triangle, rises—hello, summer to come. In the west, Orion, and Sirius in the southwest, set—goodbye winter. Overhead (the zenith) are the Big Dipper north a bit, and Leo just south with the little Leo Minor between. Illustration from Guy Ottewell's Astronomical Calendar 2012.



This illustration is the author's view as an artist imagining the "real" paths of the sun and earth spiraling around it. Original illustration by Greeley Wells.

the Lion has risen, with the Big Dipper parallel to it. (They are overhead by April and westerly in May; June finds them setting in the west.) By May Deneb rises, and June finds Altar up, completing the Summer Triangle in time for the summer solstice. This same pattern repeats every spring.

You won't find the Milky Way up in May, because it's around you at the horizon line. We're essentially standing on it, looking out away from it. The rest of the seasons, we are looking into it from our vantage point on earth. The Milky Way goes right through the summer triangle, so they rise together.

**THE PLANETS**

Venus leaves the sky in February, hiding shyly in the sun. She makes her dusk debut in April—very low at first,

and rising higher all month while Jupiter moves quickly lower. On May 10, if you have a low western horizon, you'll see a tiny crescent moon to the lower-left of Venus just after the sunset. Mercury also shows up to join Venus and Jupiter.

Jupiter is the big deal of this season, high in the sky next to the orange Aldebaran in Taurus' V-shaped head. They are joined by a crescent moon on March 17, and again on April 13 and 14. Watch the movement of the moon each night relative to Jupiter and Aldebaran. In May Jupiter heads to the horizon line in the sunset, while Venus and Mercury rise. All three can be seen close together from May 28 - 31. On May 31 they form a diagonal line with Mercury on top and Jupiter below. After sunset they are very low in the western sky—you need a clear view with no obstructions, so climb



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a mountain! Gotta get out there to see this planetary play!

Saturn is rising in the east after sunset in March and at sunset in April, when he stays up all night. He's rising just after (and south of) Arcturus. On April 26 the moon is just a few degrees away from Saturn, so that would be a good day to find Saturn. On May 22 the crescent moon is to the lower-left of Saturn. By the end of May, Saturn has moved fairly close to Spica.

Mercury is not visible in March or April, but in May becomes visible low in the sunset. Jupiter has also arrived there from above and Venus from below, creating a rare opportunity to see the dim, sun-hugging planet. Whenever you have brighter things around (Jupiter and Venus) you can see the dimmer ones more easily. (To locate Mercury, see the section on Jupiter.)

**OF NOTE**

The full moon on March 27 is called the Easter Moon this year. April's full (April 25) has a bright visitor, Spica, all night. This moon is called the Egg or Grass or Paschal Moon. The Milk or Planting Moon is May's full moon (May 25).

Set your clocks forward at 2 am on Sunday March 10 ("spring forward"). That hour, from 2 am - 3 am, simply doesn't exist any longer; you killed it. The other thing we've done by changing our clocks is to change our relationship with the sun. At 1 pm, not noon, the sun is now straight up. Strange. I object to this killing of time and manipulating of noon. It "saves" nothing!

Wednesday, March 20, is the vernal or spring equinox: day and night are of equal length. Easter Sunday falls on March 31 this year.

Lyrid meteors show up on April 22; see if you can see some. Vega (of the Summer Triangle) in Lyra is about at the center (or radiant) of the shower. But the full moon a few days later will decrease your chances of seeing these dim meteors. So right near dawn would be the time to look, after the moon sets and before the first light of day.

Eta Aquarids meteors have no moon to outshine them on May 6. Give them a look any time that night, although predawn is the recommended time—great if you're an early riser! Remember, no one can predict what meteor showers will actually do; these pronouncements are based on past experience and estimations...no guarantees possible!

Good luck with all your meteor- and star-hunting. And while you're out there, keep that 3D image in mind!

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