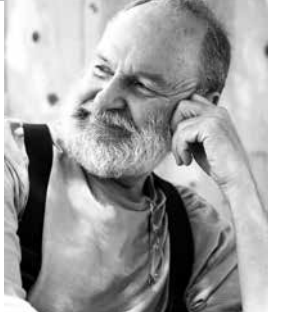


THE STARRY SIDE

Seconds, minutes, hours, years, and (light) years

BY GREELEY WELLS



Greeley Wells

Spring is different from other seasons for many reasons. One astronomical reason is that the Milky Way is not in the sky above us! It falls into the west as spring starts and rises in the east along that horizon line later in the season. Visualize it as entirely below our feet, under the earth where we can't see it. We are actually near the edge of our galaxy, looking out away from it each spring.

Here's another way of visualizing this: as the earth goes around the sun, in spring our night sky is facing away from our beloved Milky Way galaxy and our "neighborhood" of stars. (Some of those "stars" are actually faraway galaxies.) Our

real neighborhood is our solar system. All else is amazingly out of reach: out "there"!

Those distances can be understood in terms of the speed at which light travels. For instance, it takes only 1.3 seconds for reflected sunlight from the moon to reach the earth. But it takes about 8.3 minutes for the light of the sun to reach us here on earth.

In comparison, sunlight hits Venus (the second planet from the sun) in just six minutes, and Mars (fourth from the sun) in 12.7 minutes. For Jupiter, it takes about 43 minutes. And for Pluto, the farthest planet from our sun, it takes 4-7 hours for sunlight to arrive.

The closest star to our sun, Alpha Centauri, is 4.2 light years away. (A light year is how far light travels in a whole year.) It would take 4.2 years for light to get from that star to us. That's six trillion miles! For us to travel to that star at the rate of our fastest rocket would take more than 27,000 years, or 27 millennia. And all the other distances are even crazier far away out there. We are quite alone in this massive universe and even inside our own galaxy. So let's take care of our home!

You who are interested in the night sky know it pretty well, and I've tried to illustrate it each season for more than a decade. So now let me do some fancy dancing with you. We know the Big Dipper pretty well: This time of year it passes overhead while going around the North Star. Follow the arc of the handle to Arcturus, bright and rising in the east. That handle is also the tail of the bear, Ursa Major. To see the bear in those stars, imagine three legs stretched out overhead to the east. Each leg ends with two stars

that are the same distance apart, stretching from Leo the Lion to the bowl of the Dipper.

So two, two, two—also known as the three leaps of the Gazelle in early Arab lore. Those good desert folk have given us most of our star names and many stories we know and love. They have a great story about Leo, who's looking the other way as he casually flicks his tail. This scares the gazelle, who bounds away in those three double steps. The gazelle had been drinking at a pond, which is the Coma Berenices star cluster nearby. (See illustration.)

Meanwhile, in spring, Orion and the Gemini twins are setting in the western sky. As the Big Dipper swings over the North Star, Leo and the Dipper are almost perfectly parallel to, north and south of, the zenith of the sky. Enjoy the annual swing of the sky, the spring parade of stars!

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Guy Ottewell's Astronomical Calendar.

Of Note

Mercury is in our dawn in March and April and moves to dusk in May. **Venus** spends March and April in our evening and moves to dusk for May. **Mars**, if you can find its warm color, is in our pre-dawn sky all season. **Jupiter**, much brighter, is in our morning too. **Saturn**, harder to see, is also in our morning.

Meteor Showers

The Eta Aquariid meteors on May 5 are marred by a full moon, but they are so strong they are worth a try. They rise in the southeast around 4 am, so find "shade" from the moon—it will be way off in the west but not quite setting yet, darn it. You can expect 10-20 meteors an hour under these circumstances.

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