

Our Night Sky for June 3rd, 2024

With the planets still on the far side of their orbits and all still generally in the same part of the sky as the sun, let's turn our attention to how astronomers measure the brightness of a star. Place 100-watt light bulb ten feet away and give it a number to represent how bright you think it is, let's say you called it 100. Now move the bulb fifty feet away and perhaps you call it ten now. Move to sixty and seventy and so on. Each time you would pick a smaller and smaller number. This is called apparent magnitude, a measure of how bright an object appears. You also probably noticed that as the bulb got further away you could see that it was dimmer, but it was harder the dimmer it became to tell how much dimmer. Astronomers use a logarithmic scale to allow very fine precision when measuring apparent brightness. Also, astronomy reverses the scale, so the brighter a star is, the smaller the number continuing into negative numbers. The sun is a magnitude of -26.74 and the brightest nighttime stars are -1, 0 and +1. The dimmest stars you can see with your eyes is about magnitude 6 on a clear dark night. Binoculars should give you another magnitude maybe as far as 8th magnitude and our large telescope at the observatory is limited to about 16th magnitude. That's a good broad selection of stars in Our Night Sky.