

The Street Astronomer's Guide to the Planets for Summer 2010

The Sun

The sun is 865,000 miles in diameter. On a scale of one yard equals one million miles, the sun is 31 inches across (about the size of a beach ball).

Zodiacal Light

The Zodiacal Light is not visible until September. Begin looking for it in the east an hour or more before sunrise on the 5th. It will be visible for the next two weeks from a dark location.

Mercury

Mercury is usually a difficult planet to see. The innermost planet makes a poor appearance on July evenings that will be too difficult for Topeka to see (it's a far better sight if you are visiting south of the equator). Look for Mercury this autumn. Mercury, when visible, appears as a white star.

(At our scale, Mercury is 36 yards away from the sun and 1/10 inches in diameter)

Venus

The Evening Star is visible in the west before it gets dark. It's the dazzling white star low in the west. Venus is traveling to our side of the solar system, so the planet gets larger and brighter this year. Unfortunately, the apparent orbit of Venus is very close to the horizon during summer and so Venus never gets very high. Venus is the brightest planet this year. In color, it is a brilliant white.

On the evening of June 19th, look for the Beehive star cluster to the planet's left (use binoculars). Venus passes very close to Regulus, the lucida of Leo the Lion. Look for a close passage on the evening of July 9th. Beginning in August, Venus makes a close passage to Mars and Saturn. On the evening of the 9th, the three will fit within the view of low power binoculars (look low to the western horizon).

(At our scale, Venus is 67 yards away from sun and ¼ of an inch in diameter)

Earth

Summer (the summer solstice) begins on June 21, 2009. On the morning of July 6th, Earth is its greatest distance from the sun at 94,497,000 miles away.

(At our scale, Earth is 93 yards from the sun and ¼ of an inch in diameter)

Mars

The Red Planet is an evening planet until the end of summer. Mars does not appear very bright this year. In color, it is a pale yellow-orange. Look for close passages between

Mars, Venus, Saturn, and the moon in August. Mars is a slightly orange-yellow star near the heart of the Lion, Regulus.

(At our scale, Mars is 140 yards away from sun and 1/8 inches in diameter)

Jupiter

The King of the Planets finally rises before midnight and is rapidly traveling into the evening skies. By the end of July, Jupiter will rise by the time it gets dark in the east-southeast. Jupiter is at opposition, opposite the sun from earth's perspective on September 21st. It will be visible all night long beginning in autumn. Jupiter is the second brightest planet and appears bright pale yellow in color. Binoculars (if held steady) will show the retinue of its four largest satellites.

(At our scale, Jupiter is .27 miles away from the sun and 2.75 inches in diameter)

Saturn

The solar system's ringed jewel is an early evening object this summer in the constellation Leo. Saturn sets after midnight in June, but with the late nights of summer, we lose sight of the planet by mid-August. So now is the time to see the planet. Saturn is golden yellow in color. It's brighter than most stars, but fainter than usual because its rings are turning on edge.

(At our scale, Saturn 1/2 miles away from the sun and 2.3 inches in diameter)