Autumnal equinox

by James Stokley

The September evening sky contains six bright stars and the planet Jupiter. Brightest of the stars is Vega in Lyra high in the west. Vega is the second brightest star that we can see in the nighttime sky. The only brighter star is Sirius, visible on winter evenings, and now rising in the southeast about two hours before sunrise.

Capella, low in the northeast in Auriga, is the second brightest star in September. Although about nine-tenths as bright as Vega it looks considerably fainter because of its low altitude. This causes increased absorption of its light by the atmosphere. As it climbs higher in the sky during the night it will look brighter.

East of Lyra and directly overhead at the times for which the maps are drawn stands Cygnus. Part appears on the southern sky map and the rest, including the bright star Deneb, is on the one for the north. Part of Cygnus

136

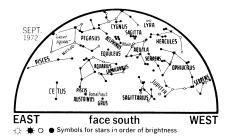


forms the Northern Cross, with Deneb at the top.

High in the north is Altair in Aquila. It is between Vega and Deneb in brightness. With them it forms the corners of the "Summer Triangle." Fomalhaut is low in the south, in Piscis Austrinus. This is a southern constellation that is seen in the zenith from Argentina and Uruguay. In the evenings at this time of year it rises as high as it ever does for the Northern Hemisphere.

The sixth bright star (bright enough to be rated by astronomers as first magnitude) is low in the northwest. This is Arcturus, in Boötes. It is to the left of Ursa Major, of which the Big Dipper is a part.

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Jupiter, in the constellation Sagittarius, is visible low in the southwest. Saturn will rise in the east about midnight as Jupiter sets.

On Sept. 22 at 6:33 p.m. EDT summer ends in the Northern Hemisphere and autumn begins. This is the equinox, the moment when the center of the sun crosses the equator on its southward journey in the sky. It will then be directly over a point in the Pacific Ocean on the equator, about 200 miles off the coast of Ecuador.

It cannot be seen from a large city but if, on an evening in September, you are in the country where the sky is dark and clear, you will have a good view of the Milky Way. It extends from Sagittarius in the southwest, through Aquila, Cygnus, Cepheus and Cassiopeia, to Perseus in the northeast. In late summer and early autumn it passes overhead so it is best seen. The brightest part is then in view.

To the naked eye it appears a continuous band of light but a small telescope or even a pair of binoculars will show that the Milky Way is a vast swarm of stars. With the largest telescopes those as faint as 22nd magnitude can be observed.

The above maps show the northern and southern skies as they look about 11 p.m., local daylight saving time, on Sept. 1. They appear similarly an hour earlier in the middle of the month and two hours earlier at the end.

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Sept. EDT			
1	5:00 am	Moon passes north of Saturn	
3	7:00 pm	Moon passes north of Venus	
7	7:00 am	Mars behind sun	
	1:28 pm	New moon	
13	6:00 am	Moon farthest, distance 251,600 miles	
14	11:00 am	Moon passes north of Antares (star in Scor- pius)	
15	3:13 pm	Moon in first quarter	
16	4:00 am	Moon passes south of Jupiter	
19	4:00 pm	Mercury behind sun	
22	6:33 pm	Autumn begins in Northern Hemisphere	
23	12:07 am	Full moon	
25	3:00 am	Moon nearest, distance 225,350 miles	
28	noon	Moon passes north of Saturn	
29	3:16 pm	Moon in last quarter	

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