

not looked for as the phenomena took place in broad daylight with poor seeing.

Object.		Pacific Standard Times of Ingress.	
		1st Limb.	2d Limb.
Satellite III.	Sept. 8.	17 ^h 17 ^m 21 ^s .4	17 ^h 17 ^m 24 ^s .5
Satellite IV.		17 29 38.2	Blurred
Satellite I.		17 30 56.7	17 30 58.7
<i>Jupiter</i>		17 34 44.1	17 36 22.5
Satellite II.		17 45 4.2	17 45 6.7

As the bright disk of the moon gradually passed over the pale surface of *Jupiter* the spherical form of the latter was very conspicuously brought out. The belts appeared almost black by contrast. No distortions were observed.

Satellite I is elongated in the direction of *Jupiter's* equator.

Satellite III has a bright polar cap near the north point of its disk much resembling the polar cap as seen on *Mars* during June and July.

J. M. S.

DISCOVERY OF A FIFTH SATELLITE OF *JUPITER* BY PROFESSOR BARNARD.

The following telegram was sent on September 11.

(dated) LICK OBSERVATORY, Sept. 11, 1892.

The Lick Observatory desires to announce that Professor BARNARD has added a fifth satellite to the four satellites of *Jupiter* discovered by GALILEO on January 7, 1610. It was discovered by BARNARD on September 9th. Its period is about 12^h 36^m.^{*} Its distance from the planet's center is about 112,400 miles. It was observed by him at east elongation September 10, 20^h 53^m 21^s Greenwich mean time. Its magnitude is the thirteenth.

^{*} Later observations give the period as about 11 hours 50 minutes.