

On the Ring of Saturn and on Jupiter's Satellites.
By Capt. W. S. Jacob.

I have several times lately observed something of the same appearance in *Saturn* as that referred to by Mr. De La Rue, in the April Number, p. 177, especially on the 19th May, a drawing of which I send. My first impression was, that the outline of the shadow was decidedly irregular, though to a less extent than is shown in Mr. De La Rue's drawing; but, on more careful scrutiny, and when the definition was at the best, I was inclined to think that the phenomenon might possibly be an illusion, arising from a variation in the shade or tone of the shadow, by which the darker portions appeared to project beyond the rest; the power of the instrument and the state of atmospheric definition were, however, insufficient to allow of my satisfying myself thoroughly on this point. The instrument used was the very excellent 5-foot by Tully, known as the Smythian, of which I have the loan from Dr. Lee.

Jupiter's Satellites.

There have been occurring of late several eclipses or occultations of *Jupiter's* Satellites by each other; a rather curious and interesting phenomenon, though of little practical utility.

I observed one of I. by III. on April 12th, which appeared almost exactly central.

First contact at	h m s	
	7 31 0	Greenwich M.T.
Central conjunction about	7 44	

Clouds prevented the observation of the last contact.

Also, on 19th May, an occultation of II. by I. not quite central, yet so nearly so, that at the time of conjunction the combined figure appeared to be round.

First contact	h m s
	8 56 0
Last contact	9 4 22

At 8^h 58^m 10^s the axis of the oval formed by the combined bodies seemed to point at *Jupiter's* upper or S. Limb, and at 9^h 2^m 40^s at the N. Limb.

The power employed was 180.

Hartwell, 2d June, 1861.