Observing Report for July 16, 2019, Backyard

by Joe Stieber

July 16, 2019

Luckily, the weather allowed a window of opportunity for me to see Jupiter with my 80 mm f/6 apo refractor (it's my old William Optics with the Lomo triplet objective, which incorporates a true fluorite element). WinJUPOS showed a Great Red Spot transit of Jupiter's central meridian at 9:18 pm EDT, and a Europa shadow ingress at the eastern limb about 9:09 pm. Europa itself would egress from the western limb about 10 pm.

I was set up by 9:11 pm EDT when Jupiter was bright between passing, broken clouds to the south. To the east it was clear and to the west it was completely overcast with many flashes of lightning. I checked several eyepieces and quickly and decided that my Explore Scientific 8.8 mm, 82° eyepiece plus my Orion three-element "Shorty Plus" 2x Barlow gave the best view (109x). At 9:16 pm, I easily saw the Great Red Spot near the central meridian, and with a bit more effort, Europa's shadow towards the eastern limb.

Between the passing clouds, the seeing was generally very good and the GRS continued to be seen without difficulty. In general, it took closer scrutiny to see Europa's shadow and it would vanish in moments of lesser seeing. The question of the minimum-size scope needed to see Galilean satellite shadows has come up in the past, and I think I've seen one or more in the 80 mm before, but if not, last night demonstrated that it was indeed possible. Europa's shadow looked smaller than the more common Io shadow (I suppose since Io is closest to Jupiter).

I was continuing to gaze, teasing out more detail, when my sister-in-law called at 9:35 pm. After the usual chit-chat, I mentioned that I was in the backyard observing Jupiter and was explaining where to look relative to the full moon to find it (she was out in the car, so trees were often blocking her line of sight line).

As I continued to talk to her, I looked south with unaided eyes about 9:43 pm and abruptly noticed a bright object moving from the lower-right to the upper-left near Jupiter. I'm under the approach path to PHL so there are frequent planes passing over in the evening, but this wasn't a plane — It must be the International Space Station! I should have checked the ISS schedule since on Monday evening, I had seen a most unusual ISS pass (that's another story that's been posted on my web page).

I followed the ISS for a bit, but by then, the clouds had thickened, so the view was quite intermittent. Before the pass was over, both the ISS and Jupiter had disappeared behind clouds and I decided I better hang up and get the scope put away before it starts raining.

After I got the scope back in the house (before 10 pm), I rolled the recycle container out to the street with a few raindrops coming down, but eventually, it never rained enough to wet the ground. I'm disappointed I didn't get to see more of the GRS and Europa's shadow, and then Europa itself coming off the disc, but it was still a very worthwhile session.