

Happy New Year

Telescope: Takahashi **FOA-60Q** (60/900mm doublet with extender)

Eyepieces:

TakO-32 - Tak ortho, $f=32\text{mm}$ ($28\times$, 1.5°)

TV8 - TeleVue Plössl, $f=8\text{mm}$, ($113\times$, $25'$)

Time: 2020/01/01 16:10-17:00UT

Location: Říčany

Weather: Very good transparency.

Seeing: Very good, Ant. II.

Mount: Zeiss T1

Accessories: Baader 1.25" zenith prism



I was a little bit tired that evening, right after the New Year celebration night. Still I could not miss this opportunity to try my Christmas present, the 8mm TeleVue Plössl. This focal length gives in my small refractors, like FOA-60Q or Telementor, about right magnification for relaxed observation of Moon and planets. I prefer Abbe orthoscopic eyepieces for this purposes, however good quality 8 mm orthos are rare these days. Therefore I returned back to Plössl design, after all, the 8 mm one was my main planetary eyepiece in former Newton 250/1600.

The first quarter Moon, together with clear sky and very good seeing, was forming an irresistible mixture which was calling for detailed exploration of Moon with my newest equipment.

I don't observe Moon regularly and Moon is for me mostly *terra incognita*. I like to scan its surface looking for various features, like rills, craters with interesting morphology, lonely mountains, etc. In particular, domes are favorite of mine. Ignorance is a bliss, and thanks to my ignorance of Moon I have *discovered* many domes in last decade of observing.

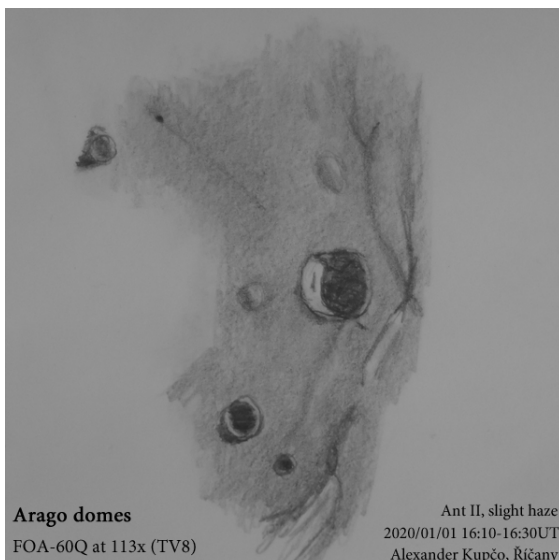
This night I run on two easily recognizable domes. They looked familiar, I thought that these were probably the domes near crater Arago. Later, I found at home that indeed, I already *discovered* them six years ago, see the sketch on next page.

More careful look revealed a third possible dome in the area. In addition, there was long very dark line appearing as phantom only in short calm moments. It had a small dark spot at its western end.

All this looked interesting enough and I decided to sketch the area for later identification of observed features. You can see on the left the rough sketch from my logbook made directly at the eyepiece. I mirrored the scanned image in computer to produce mirror-correct version.

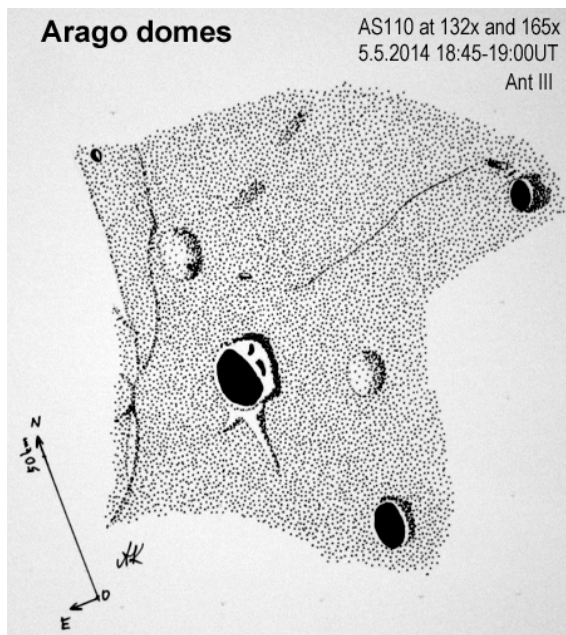
I have found out at home, that the third observed dome was real. In fact, there is a group of several domes in this area drawn in Rühl's Moon atlas. Next time, I have to pay more attention to this region.

As for the thin dark line, it is definitely real as I saw it in 2014 through 110 mm refractor as well. The feature is invisible on most lunar images that I looked at on internet. Only few



Arago domes
FOA-60Q at 113x (TV8)

Ant II, slight haze
2020/01/01 16:10-16:30UT
Alexander Kupčo, Říčany



of them show that there is a dorsum. The dark spot on its eastern edge looks on images like a sunken valley.

During the search, I run on few interesting facts about the two most prominent Arago domes α and β . I was surprised to learn that these large mountains with diameters 23 and 24 km are elevated only by about 300 meters above the surrounding floor. You would probably not even notice that you are climbing them!

Alexander Kupčo