

Astronomy Talk 14th September 2021

Selenology

This Zoom talk was given by Dr Adrian King, who's a geologist with a passion for the Moon. First Adrian looked at the formation of the Moon, likely caused by a collision between the proto-Earth and a Mars sized body. In looking at the internal structure of the Moon, this may explain why the nearside of the Moon has a thinner crust with maria and basaltic heavier components, while the heat from the Earth may have stopped the lighter fractions from condensing. These plagioclasic feldspars then were able to condense on the far side, giving a thicker lighter crust there.

Craters are an obvious feature, and Adrian covered these as simple craters with no central peak and complex craters with a central rebound peak, many of which are degraded.

We then looked at some shield volcanoes, rilles of various shapes, which are collapsed lava tubes, and graben structures caused by the surface pulling apart and the gap sinking.

Cross-cutting features show the order in which events happened, e.g. in crater Posidonius there are many. We then came back to look at degraded craters with varying degrees of degradation, e.g. Theophilus, Lilius and Catharina.

Crater chains are likely caused by an object with many components, similar to the way comet Shoemaker-Levy collided with Jupiter. Some craters are not circular, indicating a very low angle of impact or multiple impacts, e.g. Messier A and B and possibly Schiller.

Many questions followed, and it was a very well received talk. There were 65 attendees.

After Adrian's talk, Kate Earl gave a short talk on crater Schiller, without alas reaching a definite conclusion about how it may have formed: it's still a mystery.

As has become usual, Bob Mizon gave a short talk using Stellarium to show what there is to see in the night sky this month.