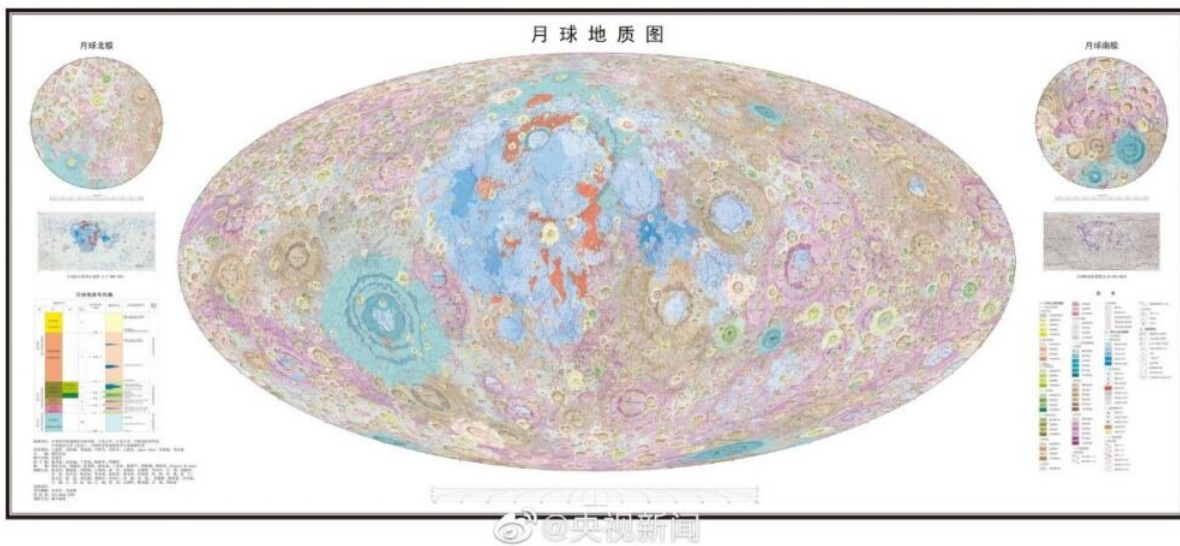


Geologic map of the entire moon at 1:2,500,000 scale

June 15 2022, by Evan Gough



Credit: Science Bulletin/Research Gate

Chinese scientists have created the most detailed map of the moon yet. It took them 10 years and involved hundreds of researchers. The new map will be a boon to lunar exploration and for anyone who just wants to study our natural satellite in more detail.

Up until now, the USGS map of the moon has been the standard. But that map has a resolution of 1:5,000,000. The new map supersedes that with a resolution of 1:2,500,000.

The new map from Chinese scientists is also based on the latest findings on the moon. China began its [lunar exploration](#) program in 2004 and has sent its own orbiters, landers, and rovers there. Those missions gathered data that fed into the map.

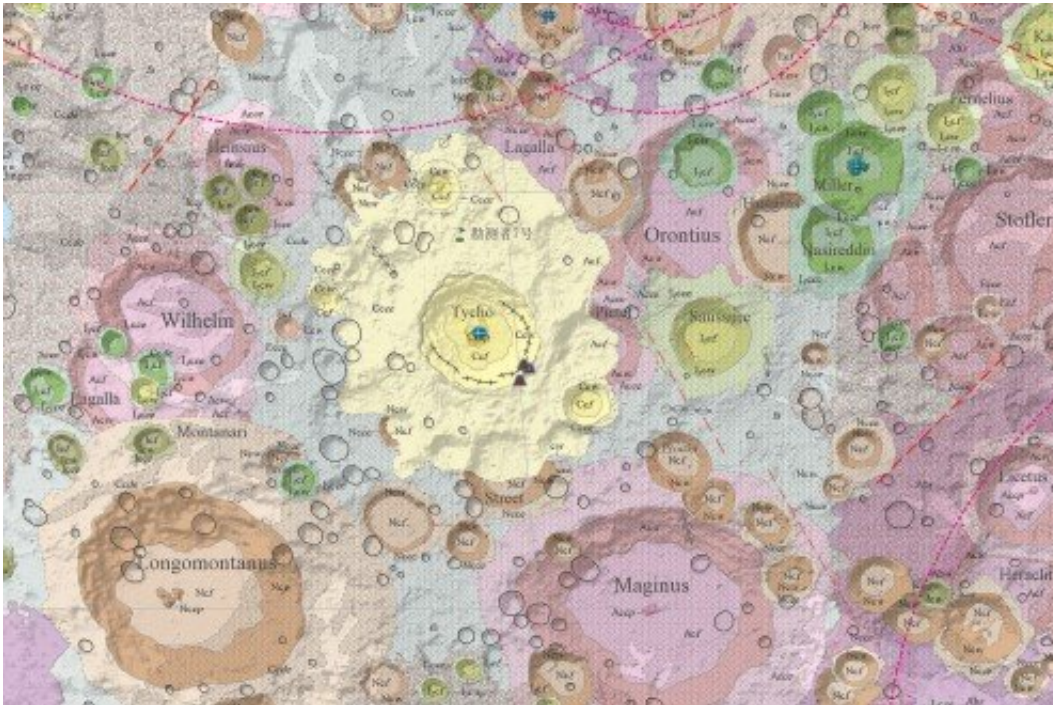
The Institute of Geochemistry of the Chinese Academy of Sciences led the project and other Chinese institutions took part. The map shows 12,341 [impact craters](#), 81 impact basins, 17 rock types and 14 types of structures.

It's difficult to overstate how detailed the map is. The tighter you zoom in the more detail there is.

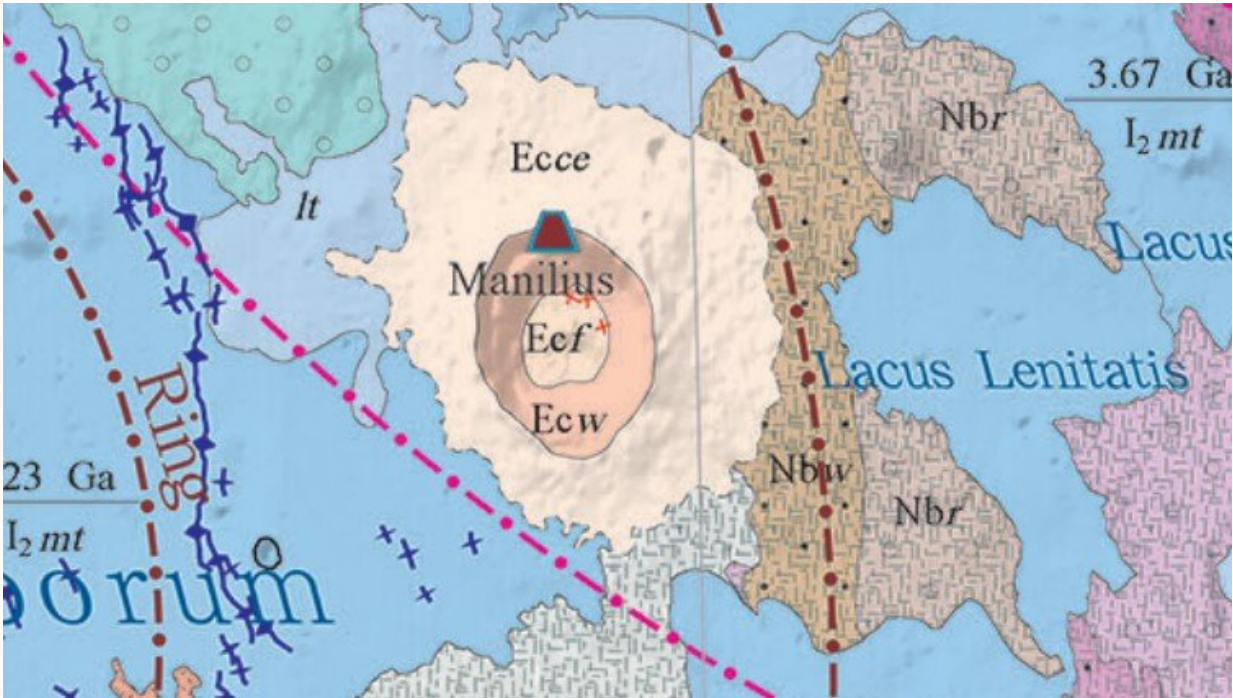
Other maps of the moon were created with data from space-faring nations, and while they've been effective, there were different standards and capabilities behind all that data. But this map is all built to the same standard.

Researchers started by dividing the [moon](#) into 30 quadrangles. Each of the quadrangles was mapped to the same standards and the quadrangles were stitched together into one map. The data from the map came from China's own lunar program and from [exploration](#) by other space-faring nations, as well. The result is a synthesis of knowledge captured over decades.

"As syntheses of current knowledge on lunar geology and evolution history, lunar geologic maps are fundamental resources in science research, exploration planning, and landing site selection," the paper presenting the map says.








This screenshot from the new lunar map is centred on the Tycho Crater. The map shows the composition and structure of the lunar surface and over 12,000 craters. Credit: Science Bulletin/Research Gate










Zoom in on almost any spot on the map and an enormous amount of detail is available. The blue lines are wrinkle ridges, and the red truncated triangle outlined in blue indicates pure anorthosite. Credit: Science Bulletin/Research Gate

1. Copernican

	Discontinuous ejecta
	Continuous ejecta
	Wall materials
	Floor materials
	Central peak materials



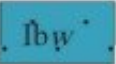

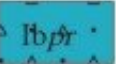

2. Eratosthenian

	Continuous ejecta
	Wall materials
	Floor materials
	Central peak materials

	Wall materials
	Floor materials
	Central peak materials

I-2 Basin Formations

1. Imbrian

	Ejecta formation
	Basin rim formation
	Basin wall formation
	Basin floor formation
	Peak ring formation
	Central peak formation

This is a screenshot of a small part of the map's legend. The legend contains an enormous amount of detail. Credit: Science Bulletin/Research Gate

This map is a fantastic resource for anyone who wants to understand the Moon in more detail. It is downloadable at the reference below, but be warned! The file is 150 MB.

More information: The 1:2,500,000-Scale Geologic Map of the Global Moon. [dx.doi.org/10.12176/03.99.02797](https://doi.org/10.12176/03.99.02797)

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