Chandrayan 2 is equipped with the Chandrayaan-2 Large Area Soft X-ray Spectrometer (CLASS). which can be used over an area of size 12.5km x 12.5km. This data can be processed to give us the material composition at each location of the map. The python graphing library plotly allows us to create heatmaps, which can be used to represent this data.

Different 12.5 kmx12.5km data maps can be shown on the same basemap by transforming the co-ordinates appropriately.

To make the map easier to read and more accurate, we could make a 3d model rather than using a 2D map. This is because 2D maps generally use the Mercator projection, which tends to exaggerate the size terrain features which are closer to the poles.

The map could be made dynamic by adding various filters which show the concentration of one material at a time. This would be useful for finding rich resource deposits.

Bibliography

<https://plotly.com/python/density-heatmaps/>

<https://www.hou.usra.edu/meetings/lpsc2023/pdf/2191.pdf>