Giovanni Leone

Giovanni Leone is an Italian geophysicist and volcanologist. Its main activity is the study of planetary geology and volcanology of the Solar System. He gained the attention of many international newspapers in 2014 after he proposed that Valles Marineris on Mars was formed by lava and not water. In the same year he obtained the results of 3D computer simulations that show once again how the Martian dichotomy was formed, with the Southern Polar Giant Impact (SPGI) as an alternative hypothesis to the Northern Polar Giant Impact (NPGI). The 2D SPGI models were already developed by other authors since 2006. In 2016 they validated this hypothesis with the discovery of 12 volcanic alignments in the southern hemisphere of Mars as the 3D SPGI model predicted. Their observations of lava channels, still mistaken as river networks, spreading from volcanoes, along with the presence of olivines unaltered since the Noachian era, challenge previous views of a warm, wet Mars that had an ocean of water.

After a first doctorate in Environmental Sciences with a focus on planetology at the University of Lancaster (United Kingdom) and a second doctorate in Earth Sciences with a focus on Mars at the ETH in Zurich (Switzerland), **Giovanni Leone** today holds several professorships in planetary geology, mining of extraterrestrial resources and research methodology at the University of Atacama with several interdisciplinary research projects between astronomy and planetary sciences. Space biomining among them. He was a guest editor of the Journal of Volcanology and Geothermal Research and is now on the Topical Advisory Panel of the Geophysics section of the journal Geosciences. He is also editor of the book titled "Mars: a volcanic world" published by Springer in 2021.

Future projects plan to develop the role of Latin America, together with the United States, Japan and Europe, in the space race to the Moon and then to Mars within the framework of the Artemis program.