

COSPAR William Nordberg Medal – 2014

Mikhail Ya. Marov

Academician Mikhail Marov has made many distinguished contributions to the application of space science. His achievements and fundamental contributions to space science, planetary research and the study of natural mechanisms on the terrestrial planets with implications for Earth using a comparative planetology approach are truly outstanding.

In particular, Professor Marov served as Project Scientist and Principal Investigator on the VENERA and MARS lander series in the Soviet Union and also made great contributions to the LUNA, VEGA and PHOBOS GRUNT space projects. He also was responsible for implementation of the first in situ measurements in the Venus and Mars atmospheres as well as development of models used for the design of the Venera landers which had to survive in the hot and dense atmosphere on Venus' surface. He has also been involved in fundamental studies and pioneering research in the Earth's aeronomy with application for evaluation of artificial satellite and orbital station lifetime and ozone layer decay depending on the abundance of minor constituents in the middle atmosphere. His investigation of radiative and convective transfer applied to the Venera lander design enabled transmission of the first surface images and measurements of soil composition. Furthermore, his development of the theory of turbulent multicomponent reactive gases and rarefied gas kinetics is significant for advanced modeling procedures and important scientific and technical applications such as protoplanetary gas-dust disc evolution and primordial planetary bodies formation, light scattering by aerosols of natural and antropogenic origin, estimate of Martian ancient ocean loss, gas-oil industry, etc. And to cite one last accomplishment, his study of migration processes and estimates of the delivery of water and volatiles to Earth and terrestrial planets has implications for understanding the early history of the solar system evolution.

Mikhail Marov is, indeed, a most deserving recipient for the 2014 COSPAR William Nordberg Medal.

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