

SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

Author: Prof. JOSE F. VALDES-GALICIA
University Space Program, Universidad Nacional Autonoma de Mexico, Mexico,
jfvales@geofisica.unam.mx

THE NATIONAL UNIVERSITY OF MEXICO (UNAM) NETWORK OF SPACE SCIENCE
OBSERVATORIES FROM EARTH**Abstract**

Although October 4, 1957 marked the end of the confinement of the human species to the Earth Surface and its atmosphere, Space Science, in its most wide conception, started much earlier as magnetic, cosmic rays and solar observatories based on earth were continuously operating at least hundred years before. Nonetheless, since 1957 a new perspective of the space around us was constructed as manmade spacecrafts were able to go beyond our magnetosphere and deeper into the Heliosphere, the cavity dominated by the Sun. Observations of the Sun and the space around us continued to be done from Earth based observatories, detectors were refined and sophisticated as a consequence of the quick technological development. Earth and space observations have been a natural complement of each other since then. Mexico has a long tradition for hosting and promoting space observations from its territory. The first geomagnetic observatory dates back to 1879. Crucial experiments to determine the nature of cosmic rays were done in Mexico City in the 1930s. After those, a permanent cosmic ray station operated in Teoloyucan until the 1940s. Surveys of the latitudinal change of the cosmic ray flux were done in the 1950s, and a permanent cosmic ray station was installed shortly after at the UNAM Mexico City campus. Nowadays UNAM has: magnetic observatories that constitute a National Service, cosmic ray detectors of various kinds operating in several places of the territory, belonging to the International Cosmic Ray Network; a ionospheric monitor; installations to follow solar wind disturbances, and solar observatories in different bands of the electromagnetic spectrum. The presentation will focus on the description of the currently operating observatories, its objectives and scientific contributions, putting them in a historical and worldwide contemporary perspective.