

The United Nations Open Universe Initiative for Open Data in Space Science

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The information revolution is rapidly becoming the major force in social, economic and cultural transformation worldwide, and the internet is today an asset capable of globally achieving the long sought, fundamental goals of transparency, availability and accessibility to information. The benefits of openness and transparency, for both users and providers of information, have been widely emphasised in the most diverse areas of society, and are no exception in the case of the space sciences.

Much has been done in recent years, especially in space astronomy, to offer open access, user-friendly and integrated platforms and services. However, there is still a considerable degree of unevenness in such services. Further efforts are therefore necessary to consolidate, standardise and expand them, aiming to promote a significant leap in an inspirational data-driven surge in training, education and discovery in space sciences. Such a process, leading to a much larger level of availability and integration of space science data, should be expanded beyond the scientific community, to non-scientific sectors of society, as a driver for development.

The Open Universe is an initiative under the auspices of the Committee on the Peaceful Uses of Outer Space (COPUOS) with the objective of stimulating a dramatic increase in the availability and usability of space science data, extending the potential of scientific discovery to new participants in all parts of the world, and empowering global educational services, especially in developing and underdeveloped countries. The far-reaching vision of the Initiative – which is carried out in cooperation with, and under the leadership of the United Nations Office of Outer Space affairs (UNOOSA) – and its potentially global reach, call for a wide international cooperation. Initially developed as part of the activities in preparation for UNISPACE+50, it is an initiative in response to the UN Sustainable Development Goals (SDGs), in particular Sustainable Development Goal 4, as a tool for Quality Education.

Open Universe will ensure that space science data will become gradually more openly available, easily discoverable, and free of bureaucratic, administrative and technical barriers, and therefore usable by the widest possible community, from space professionals, to the common interested citizen. By doing so, it seeks to trigger a major evolution in the culture of space science through data availability, by fostering the publication of all existing open space science data, and promoting its immediate usability, thus responding to

the global demand for information and transparency. Through the integration and interoperability of existing services, data sets and software tools, provided by many actors worldwide, it will promote VO-based technology and protocols in the multi-messenger era of astronomical research, and improve international cooperation in space between governments, academia and with the third sector.