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INTERNATIONAL SPACE STATION RESEARCH: HIDDEN TREASURES IN OPEN DATA PORTALS

Abstract

From fundamental scientific knowledge to medical treatments to pushing the frontiers of scientific knowledge, research on the International Space Station (ISS) is moving humankind forward into the solar system. Over the past 25 years, the ISS has become a premier orbiting laboratory, enabling over 4,000 groundbreaking experiments representing over 100 different nations. Research on the space environment and advanced technologies has produced a massive amount of data, resulting in more than 4,400 publications since the beginning of the station. These results are being delivered to humanity in the form of numerous breakthroughs, scientific publications, and Earth applications, as described in the document "Benefits for Humanity".

Over the years, ISS partners have strived to store and share this invaluable knowledge to maximize the scientific output of this remarkable international laboratory. Many data repositories were created to provide access to the information generated though ISS investigations, which are listed in this article. This paper will provide an overview of the Open Data Portals already available, as well as their purpose and instructions for access, to improve the visibility of these data repositories and inform the research

community regarding the availability of this unique data.

Challenges related to data sharing and dissemination will be addressed and new initiatives to maximize the results of ISS research will be discussed. The purpose is to fully analyze this unique information, create collaboration opportunities even between seemingly unrelated fields of research, and increase the visibility and access to this invaluable knowledge that will support solar system exploration by humanity.