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Title: Seasat Data Restoration

Abstract:

The JPL Physical Oceanography Distributed Active Archive Center (PO.DAAC) has undertaken a significant effort to restore historical Seasat Data. The Seasat mission, launched in June 1978, was the first multi-sensor satellite dedicated to observing the Earth's oceans from space. Seasat data continue to be valuable. Engineering groups still request Seasat data in preparation for other altimeter, scatterometer, and radiometer missions. Seasat was a well-managed and well-documented project, which used then-state-of-the-art technology. The NASA Ocean Data System (NODS) and its predecessors formed from the Seasat Data Utilization Project (SDUP) were created with the express purpose of facilitating Seasat data usage well after the satellite had died. However, in 1996, eighteen years after the satellite flew, the data were not easily usable on unix platforms. We identify several issues associated with long-term data archiving that have emerged from this restoration process. Key issues include evolution of mass storage media and devices, file formats, data formats, data migration, software, documentation, and data heritage.