

Earth Radar Missions Requiring High Volume Data Storage

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imaging radar missions are used to generate important high-rate data for use in a variety of earth science and potential commercial applications. For example, high-resolution digital topography data can be generated using interferometric synthetic aperture radar (SAR) systems. Sample images obtained from earth-orbiting imaging radar platforms, such as the Shuttle Imaging Radar (SIR-C), provide an indication of the potential for the application of multifrequency radar. Two potential future earth-orbiting missions for NASA are the SIR-C/X-SAR free flyer and TOPSAT. The onboard data storage requirements will be expected to support data rates in excess of 100 Megabits per second for several 90-minute orbits.