

IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Upper Stages, Space Transfer, Entry & Landing Systems (3)

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RETRIEVAL STRATEGIES AND SYSTEMS FOR SOUNDING ROCKETETS AND PAYLOADS

Abstract

Retrieval systems are a vital part of sounding rocket missions. Even if the mission is completely successful the failure in the retrieval subsystem can lead to the payload not being found back and thus a mission failure. This paper describes several retrieval strategies ranging from simple systems to highly complicated highly reliable systems. Several examples will be presented including a retrieval from the ocean and a retrieval operation in the snow. These concepts range from satellite based localization and communication systems simple do visual and audio systems Besides discussing various architectures and concepts for retrieval systems the paper describes and discusses the operations needed for a successful retrieval. The need for a retrieval system and the need for an extensive retrieval system originates primarily from the requirements, from the payload, and the launch site at which a mission is flown. If a payload requires rapid retrieval, such in the case of a biological payload, or in the case of inhospitable terrain the retrieval system becomes more important and more complicated.