

International Standard Payload Rack Accommodations Aboard Space Station Freedom.

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The Space Station Freedom (SSF) program is an international effort between the United States, Europe (ESA), Japan (NASDA), and Canada (CSA) which will provide space research facilities more sophisticated and powerful than anything currently available and will be capable of being reconfigured over its 30 year lifetime to support a variety of basic and applied research goals in the areas of life science, materials, and commercial research. Space Station Freedom is designed to accommodate both externally and internally mounted experimental hardware. Internal payloads will be mounted in rack structures. SSF payload racks are designed to a physical and utility interface standard which allows them to be fully interchangeable between all SSF laboratory modules. Racks conforming to this standard are referred to as International Standard Payload Racks (ISPRs). An ISPR provides a usable internal volume of 55 cubic feet and accommodates standard 19" wide panels. At Permanently Manned Capability in 2000, the US Laboratory will have 13 ISPR locations, Japanese Experiment Module 11, the ESA Attached Payload Module 20, and the Centrifuge Facility Module will accommodate 3. SSF resources such as electrical power, cooling, data, and crew time will be allocated between SSF systems and the payload complement. Payload utilities will be allocated between SSF partners in accordance with SSF international agreements between NASA, ESA, NASDA, and CSA. ISPRs will be provided with a standardized series of basic and optional interfacing hardware to allow payloads to make use of SSF utilities.

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