

SPACE OPERATIONS SYMPOSIUM (B6)
Human Spaceflight Operations Concept (1)

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H-II TRANSFER VEHICLE(HTV) DESIGN AND OPERATIONS CONCEPT

Abstract

H-II Transfer Vehicle(HTV) is an unmanned transfer vehicle launched by H-IIB rocket and supports the ISS logistics operations. The design is complicated and based on the experience of H-II, Satellites and JEM which Japan has developed. It can deliver 6tons of pressurized and unpressurized cargoes to the ISS, including the whole racks and big size ORUs. This capability is expected by the international partners and now seven HTV launches are planned to support the ISS.

HTV will be launched at the Tanegashima Space Center and monitored and supported by Mission Control Center in Tsukuba. It will approach to the ISS almost automatically under the severe manned safety requirements and be berthed to the ISS with support of the ISS and SSRMS. It departs from the ISS after one month stay and conduct destructive reentry. The operations are going to be established by good international relationship.

Now the first HTV is scheduled to be launched this September. The operation will be completed by the middle of October.

This paper presents the overview of HTV design and operation and will report the status of the first mission.