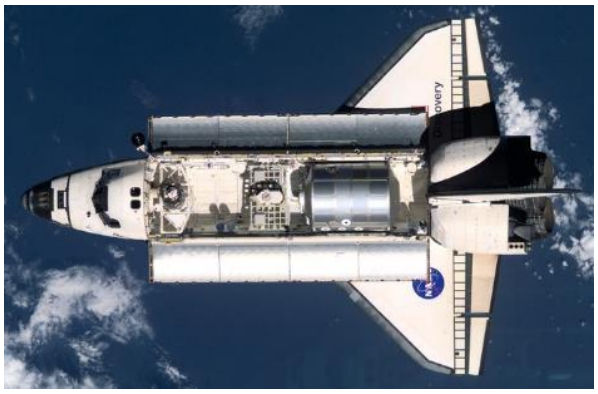
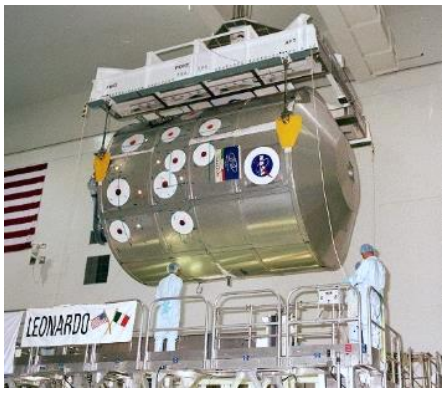
Images and additional descriptions

Historical ISS Cargo Modules and Spacecraft:

NASA has used various spacecraft to deliver cargo to ISS, including the Multi-Purpose Logistics Module (MPLM) delivered by the Space Shuttle, SpaceX's Cargo Dragon, and Northrop Grumman's Cygnus. There is no corridor for crew translation in the Cygnus or Dragon and there is very limited access to content in cargo bags while in the delivery vehicle. However, ISS is large enough for all cargo bags to be transferred from the delivery vehicle into the station and placed where needed. Gateway is not large enough to receive that volume of cargo, so it will remain in the LM and will require access by the crew.

- Multi-Purpose Logistics Module (MPLM) delivered in Space Shuttle Orbiter

- SpaceX Dragon


- Northrop Grumman Cygnus


GrabCAD, Inc.
Address: 38 Cameron Ave, Cambridge MA 02140, USA
Phone: 857-366-6780
E-mail: paulina@grabcad.com
Website: www.grabcad.com

Cargo Transfer Bag (CTB) description

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Cargo Transfer Bags (CTBs) pictures:

Food, water, and clothing in CTBs

Food

Water

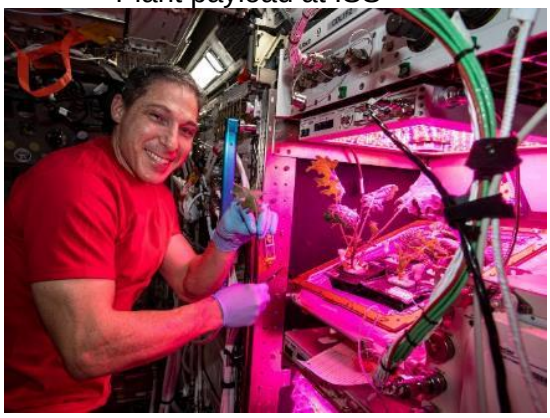
Clothing

Fig. 4: A CTB with 2 weeks of clothing.

Science Payloads

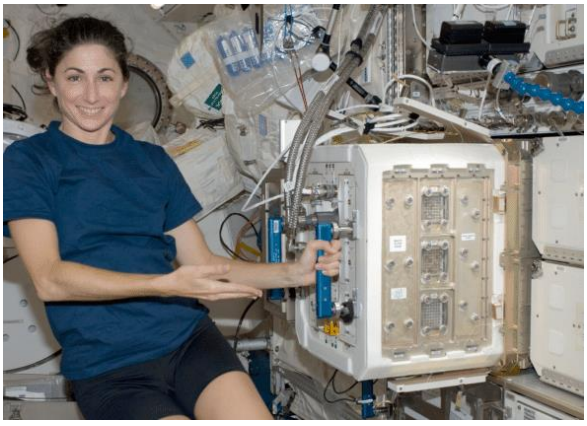
Two science payload

Plant payload at ISS



Science Payload

Double Science Payload:



Two science payloads (left side) and two empty slots (right side)

Cargo inside an MPLM


Resupply Stowage Racks on sides. Resupply Stowage Platforms on top and bottom.



Cargo Racks used in the MPLM

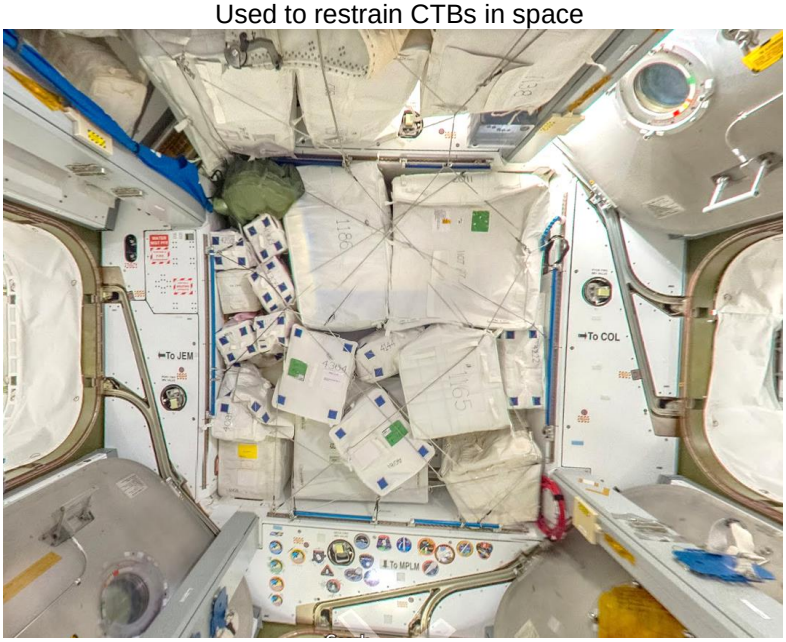
Resupply Stowage Rack (RSR) on the left with compartments and doors.

Resupply Stowage Platforms (RSPs) on the right with bags strapped in place.

On-Orbit storage for ISS

Zero Gravity Stowage Rack
Storage in space, not launch

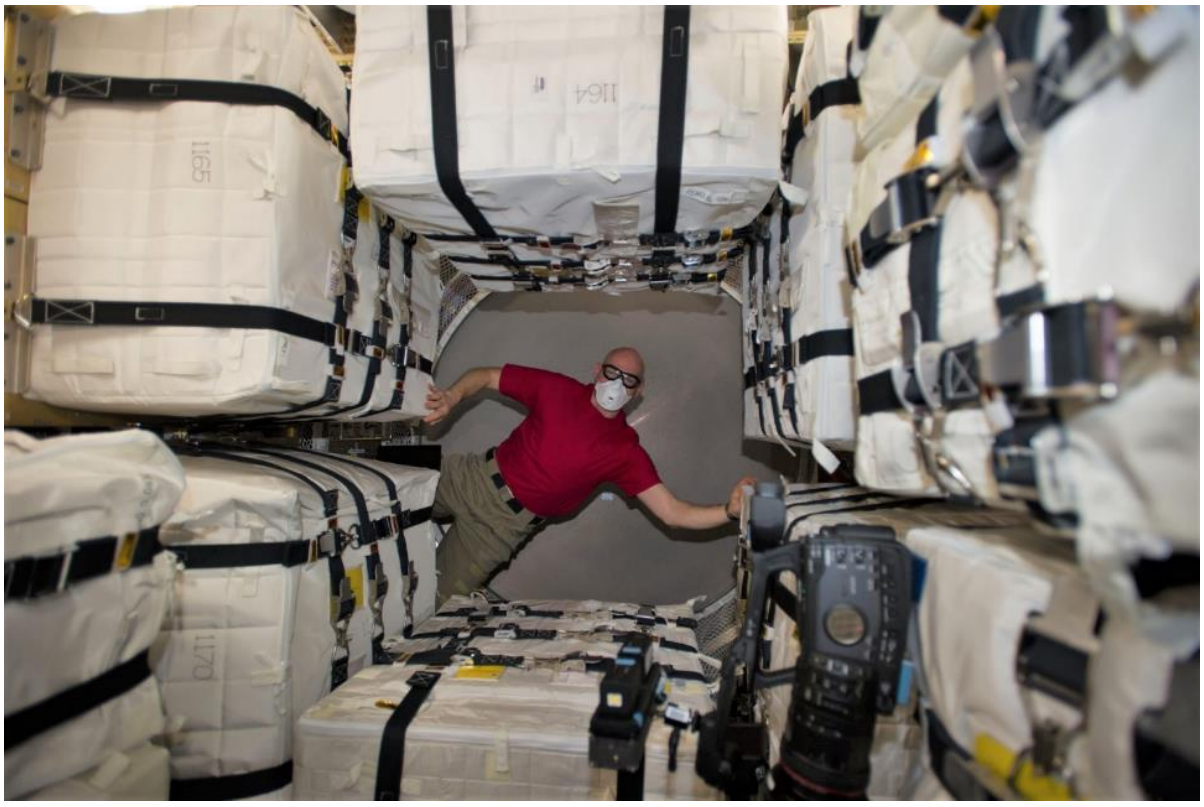
“Bungie jail”
Used to restrain CTBs in space



Northrop Grumman, Cygnus Module being loaded for launch.



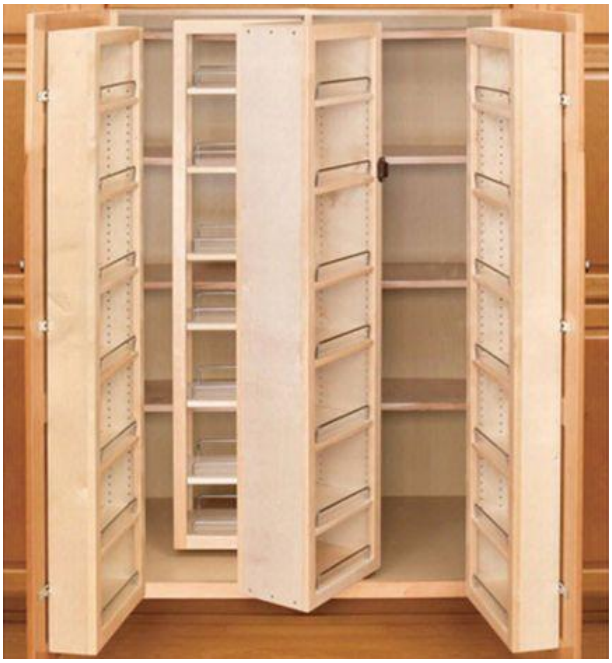


SpaceX, Dragon Capsule:

Cargo Dragon Version 1:

Concept images:



Mechanisms for gaining access to kitchen corner cabinets: