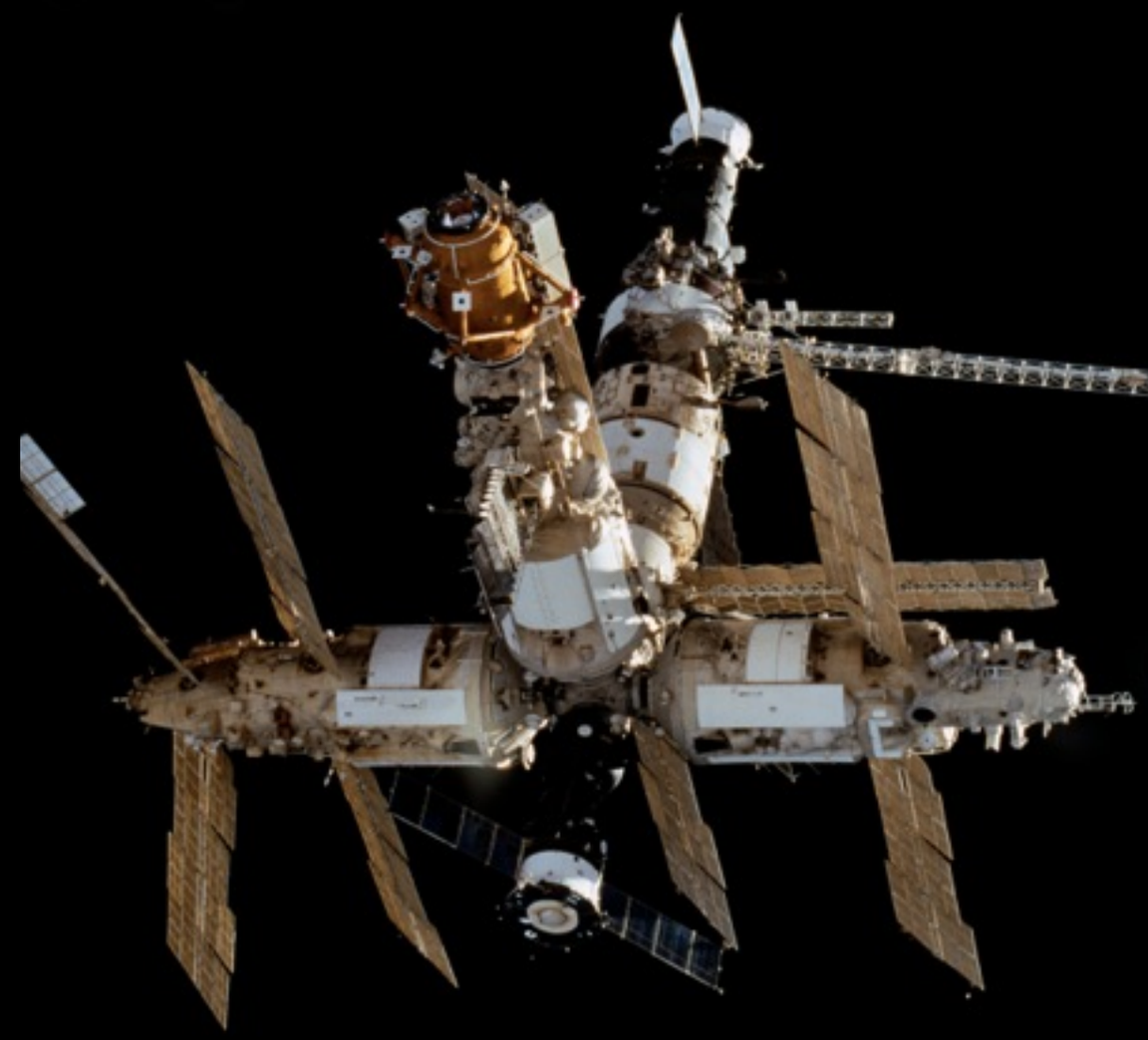
LARS WEILER ‹PYLON@HACKERSPACES.ORG›
GPN14 – 19. JUNI 2014

RAUMSTATIONEN

Bilder: NASA, ESA

ÜBERSICHT

- Motivation
- Vorraussetzungen
- Raumstationen
- Zukunft



MOTIVATION

LEBEN IM WELTRAUM

MOTIVATION

FORSCHUNG

ANFORDERUNGEN AN

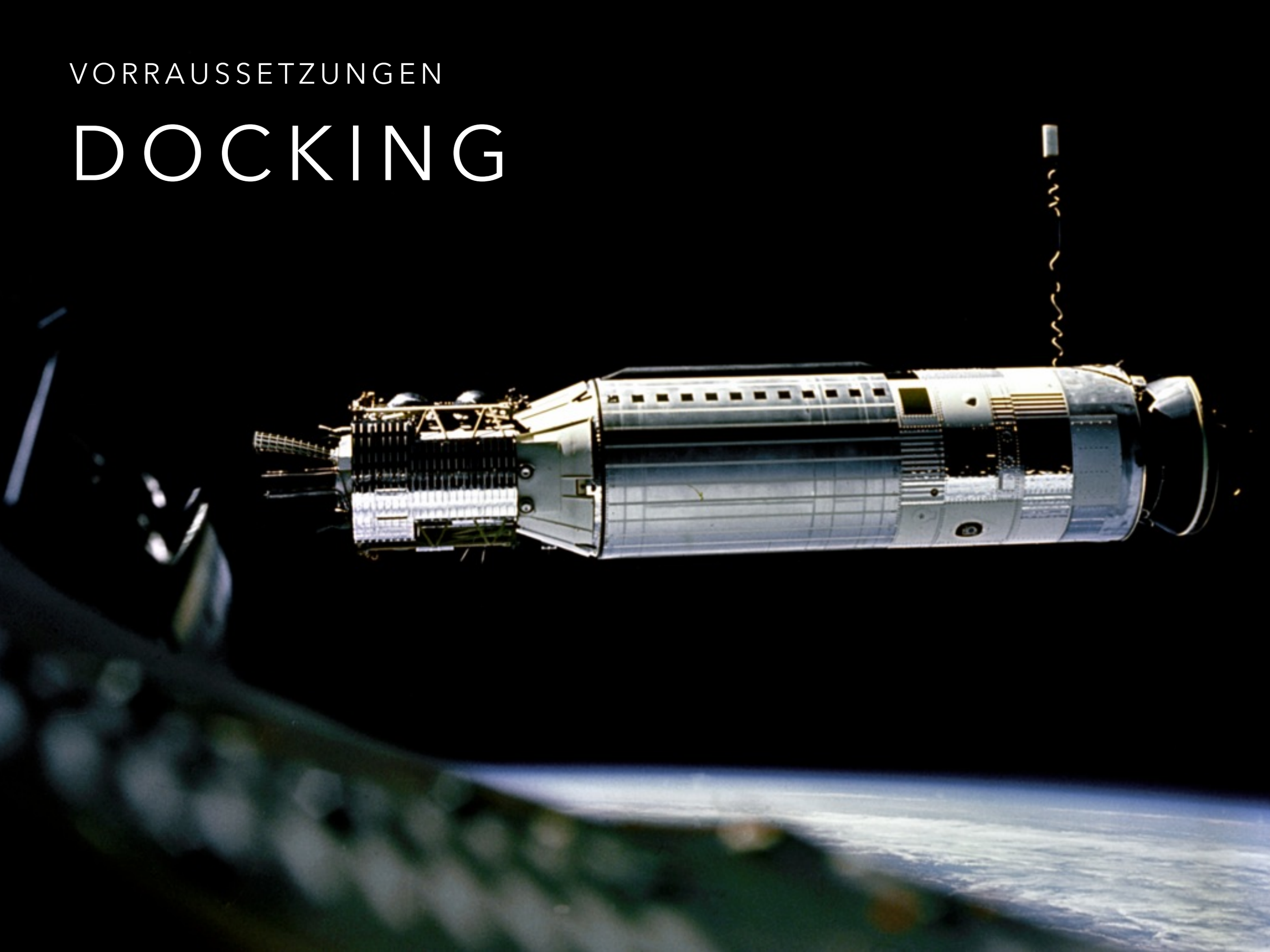
RAUMFAHRER

VORRAUSSETZUNGEN

ORBITING

VORRAUSSETZUNGEN

DOCKING



VORRAUSSETZUNGEN

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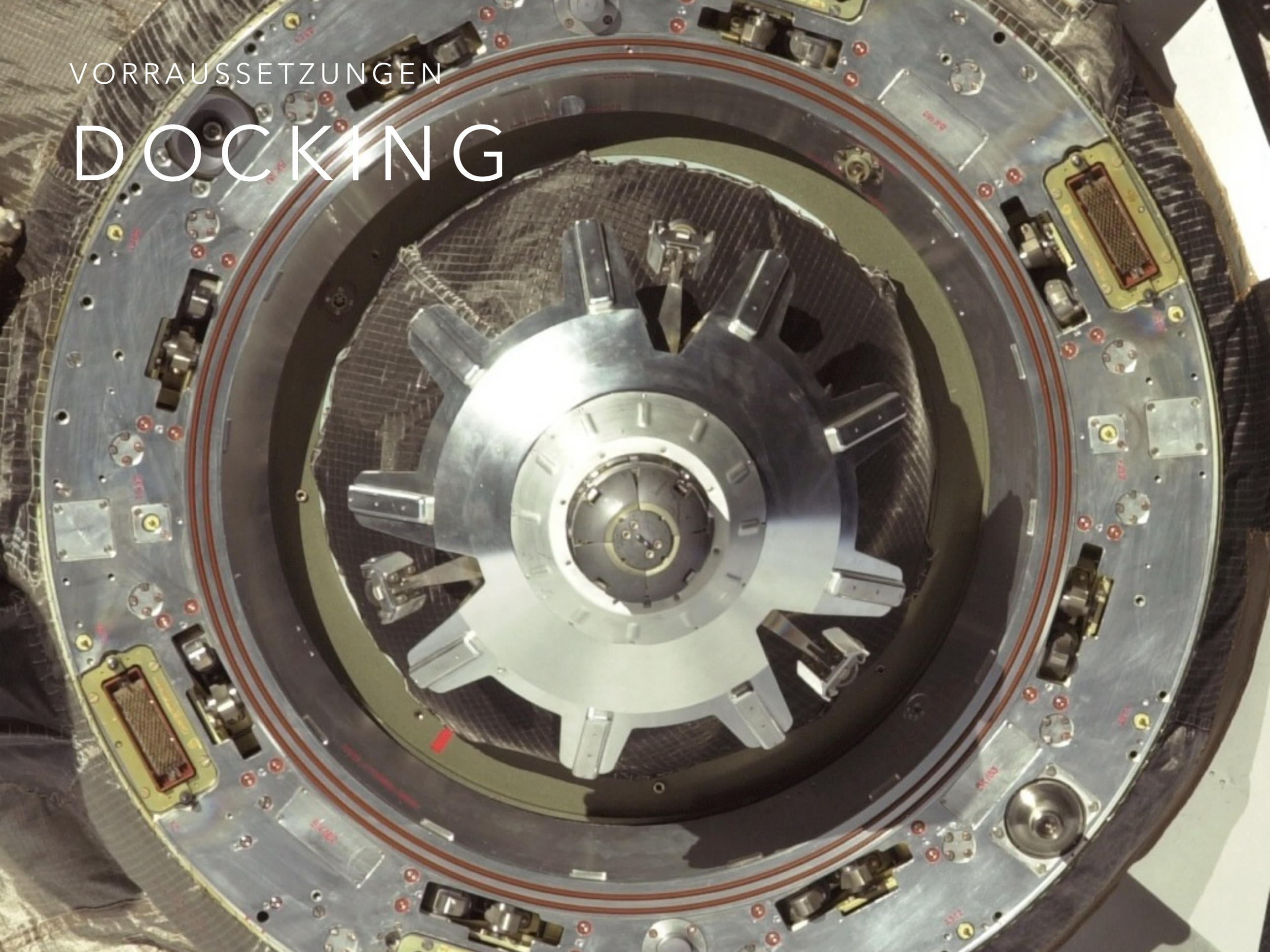

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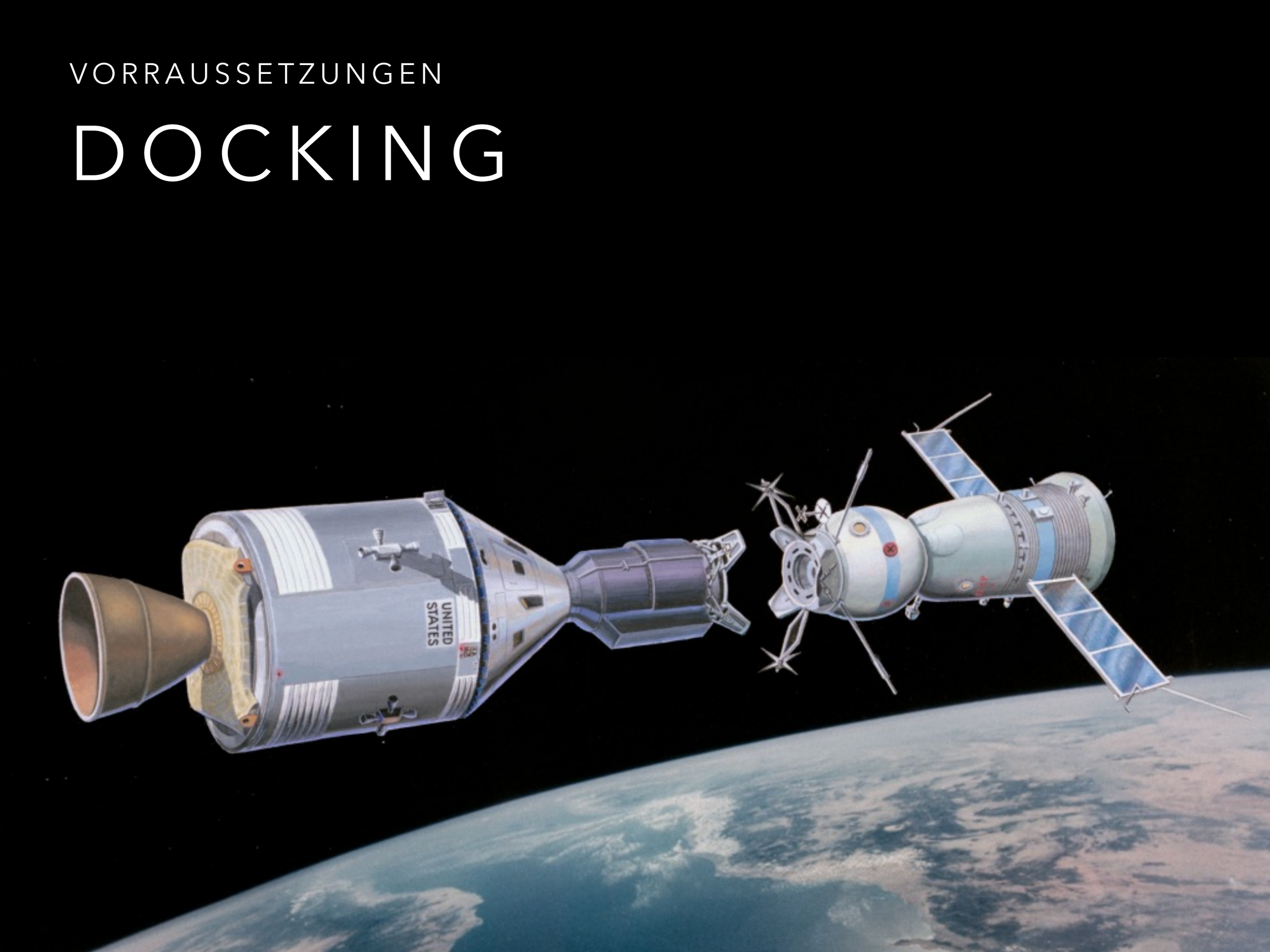

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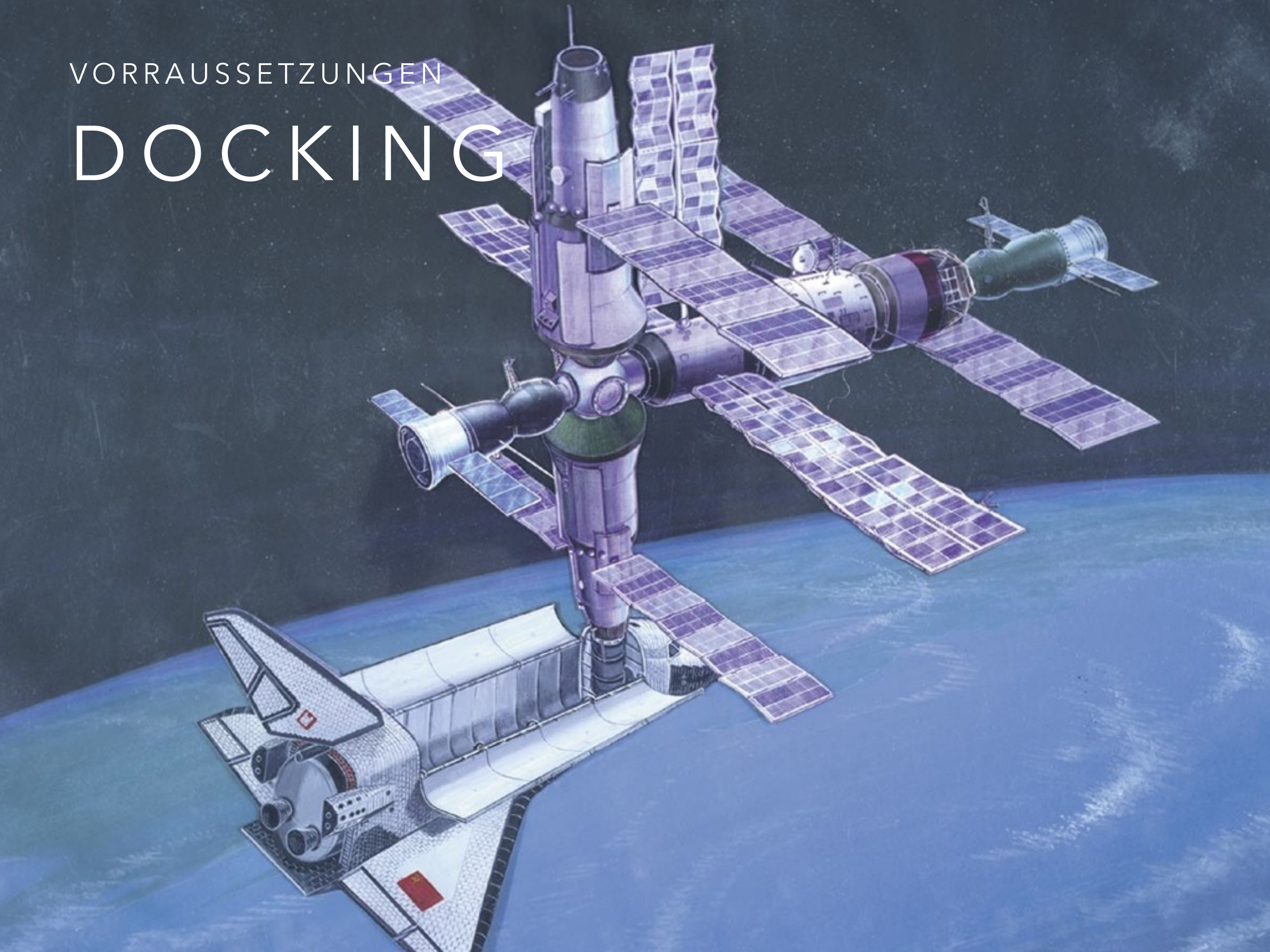


VORRAUSSETZUNGEN

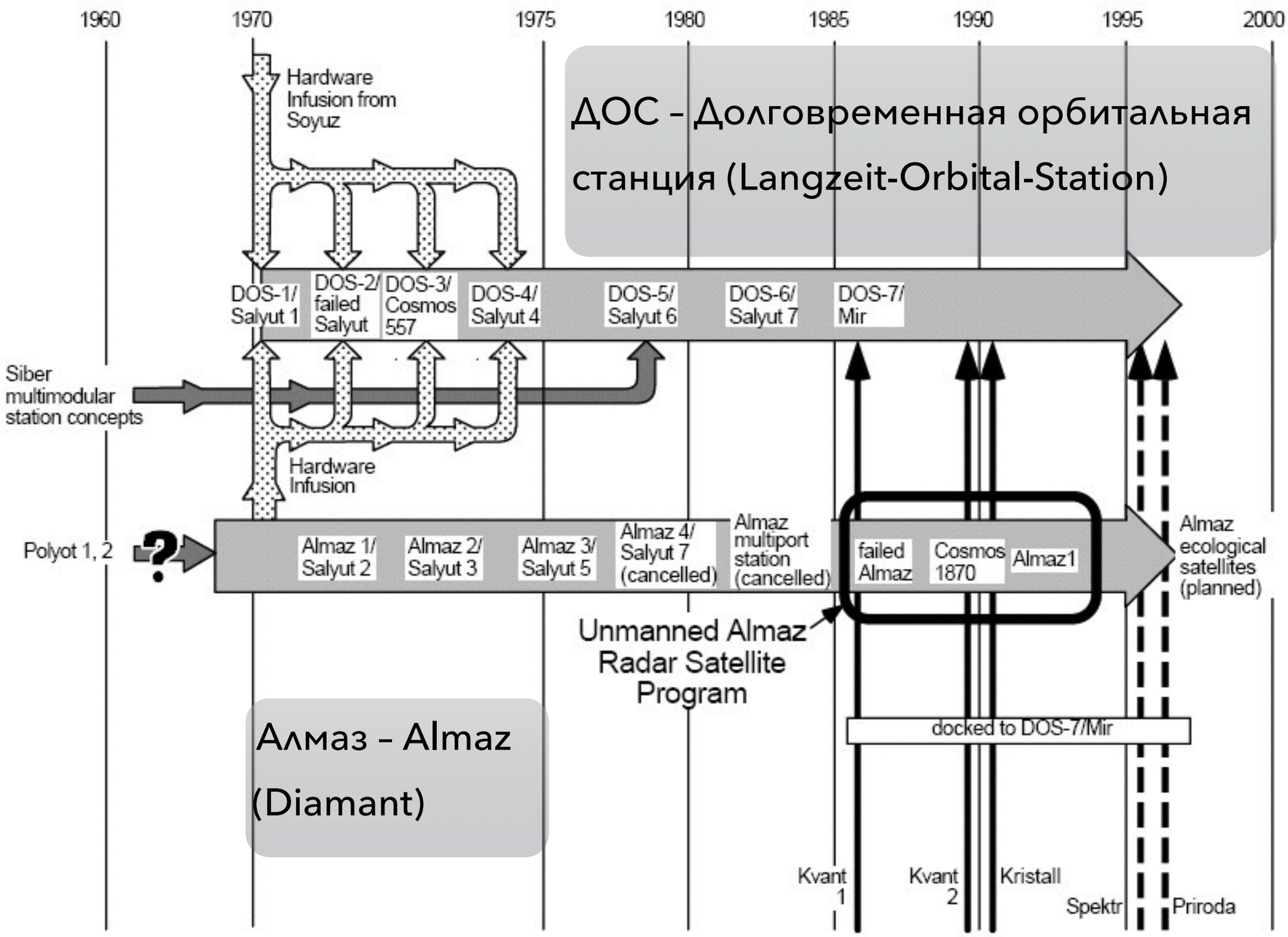
DOCKING

RAUMSTATIONEN

- Салют – Salyut
- Skylab
- Мир – Mir
- Raumlabor
- ISS/МКС
- 天宫一号 - Tiangong

CCCP – UDSSR

САЛЮТ – SALYUT

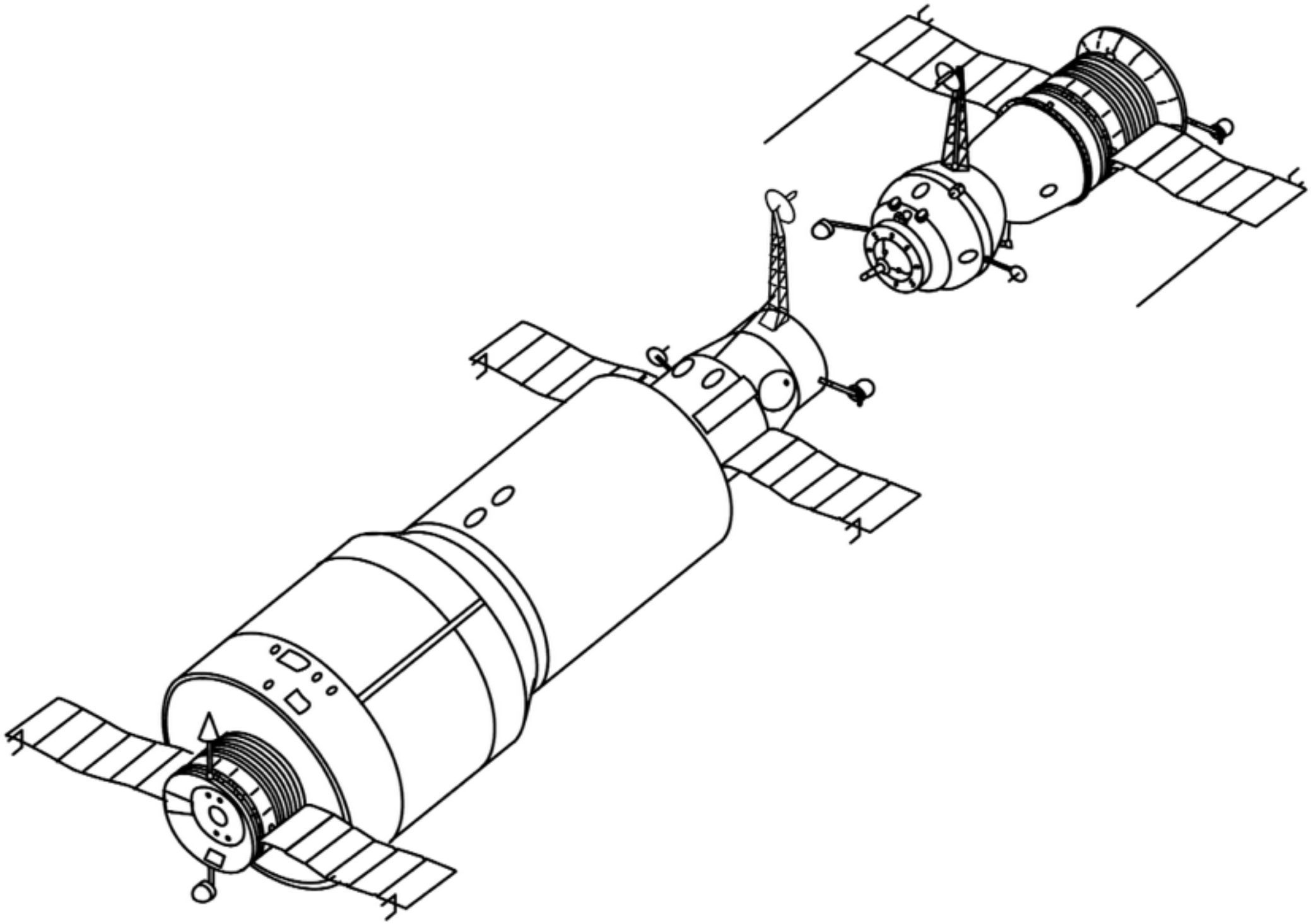


ДОС – Долговременная орбитальная станция (Langzeit-Orbital-Station)

Алмаз – Almaz (Diamant)

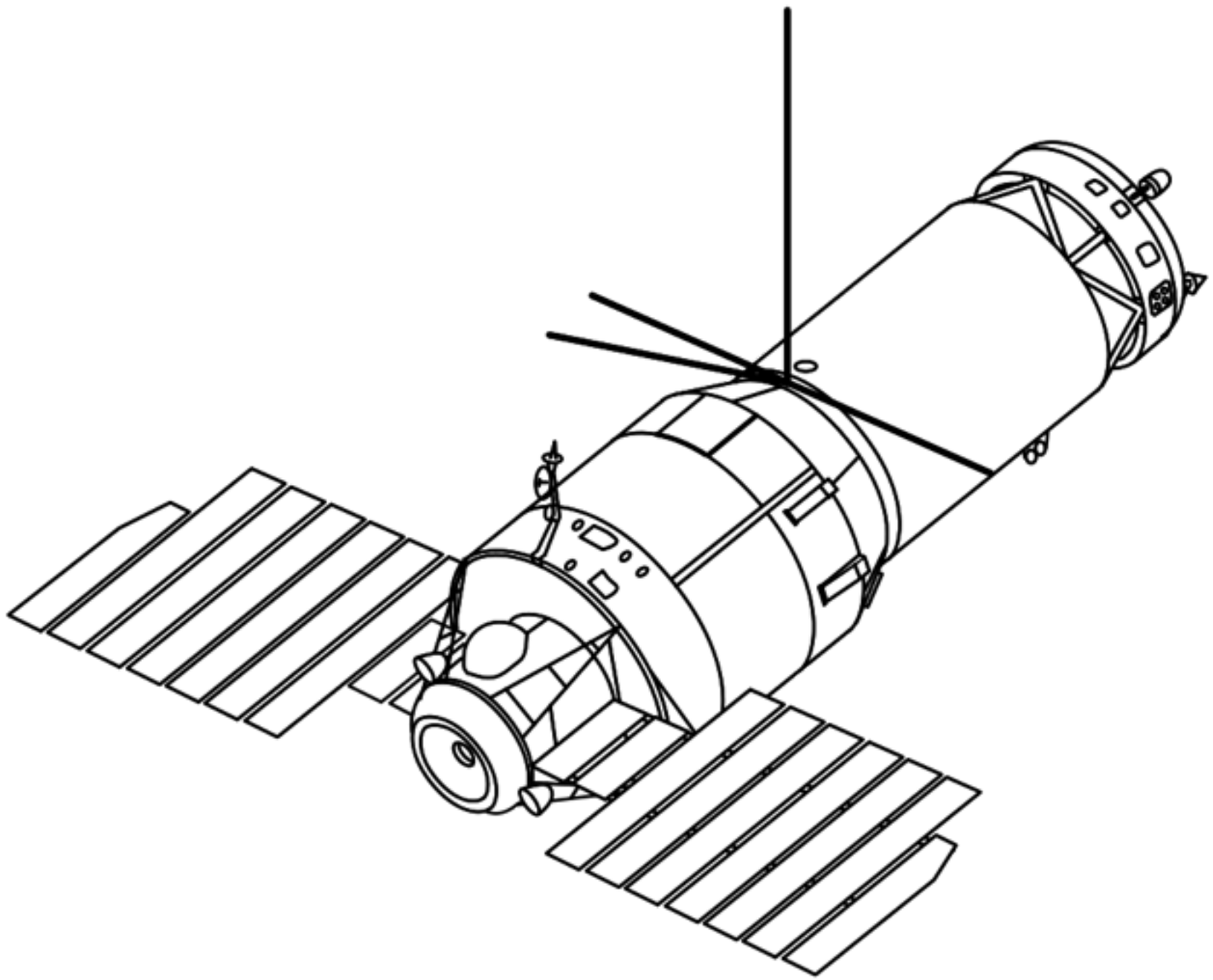
CCCP – UDSSR

САЛЮТ 1 – SALYUT 1



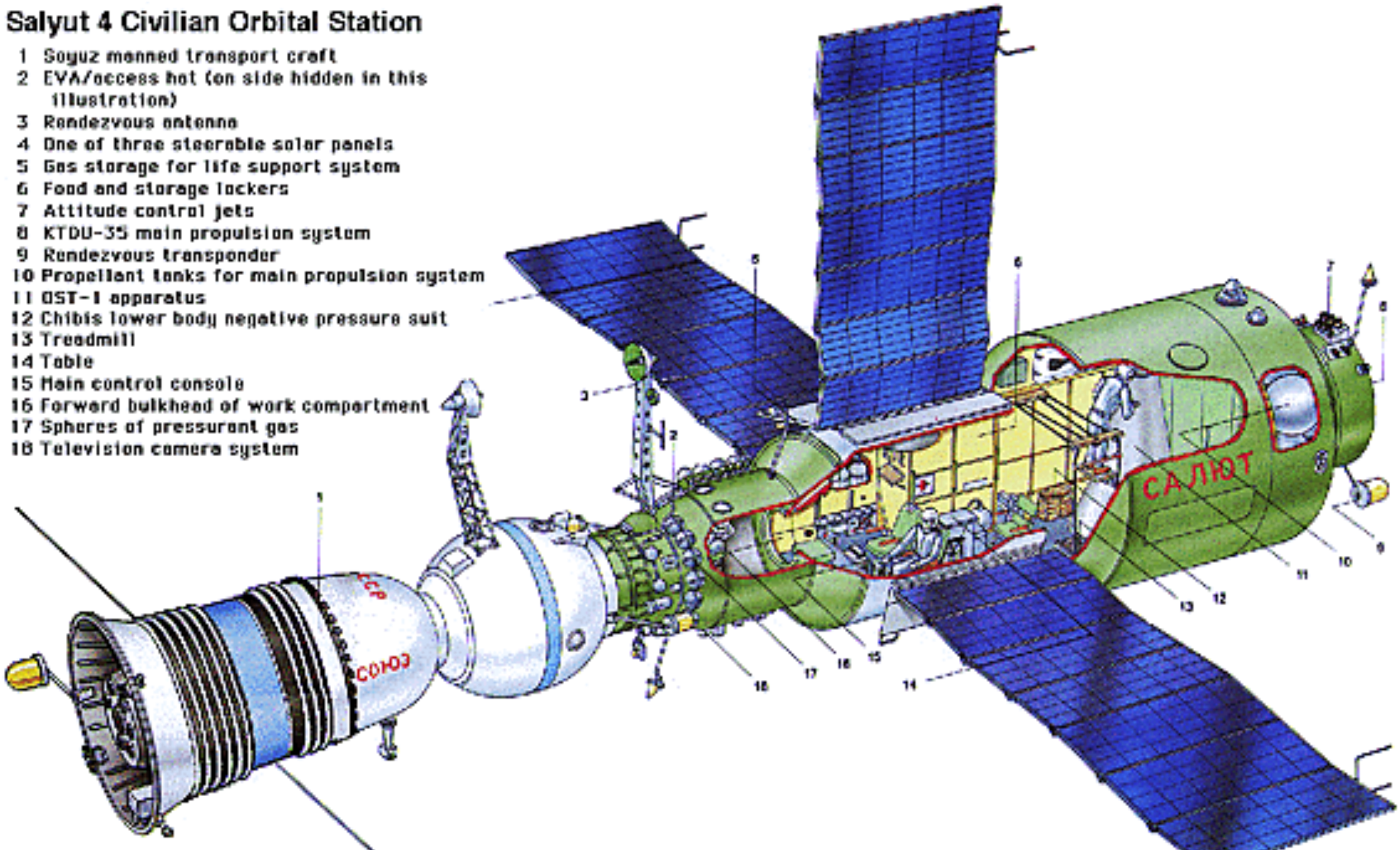
CCCP – UDSSR

AΛMA3 – ALMAZ



CCCP – UDSSR

САЛЮТ 4 – SALYUT 4



CCCP – UDSSR

САЛЮТ 6 – SALYUT 6

ТРАНСПОРТНЫЙ КОРАБЛЬ СНАБЖЕНИЯ

ТКС – TKS

CCCP – UDSSR

САЛЮТ 7 – SALYUT 7

CCCP – UDSSR

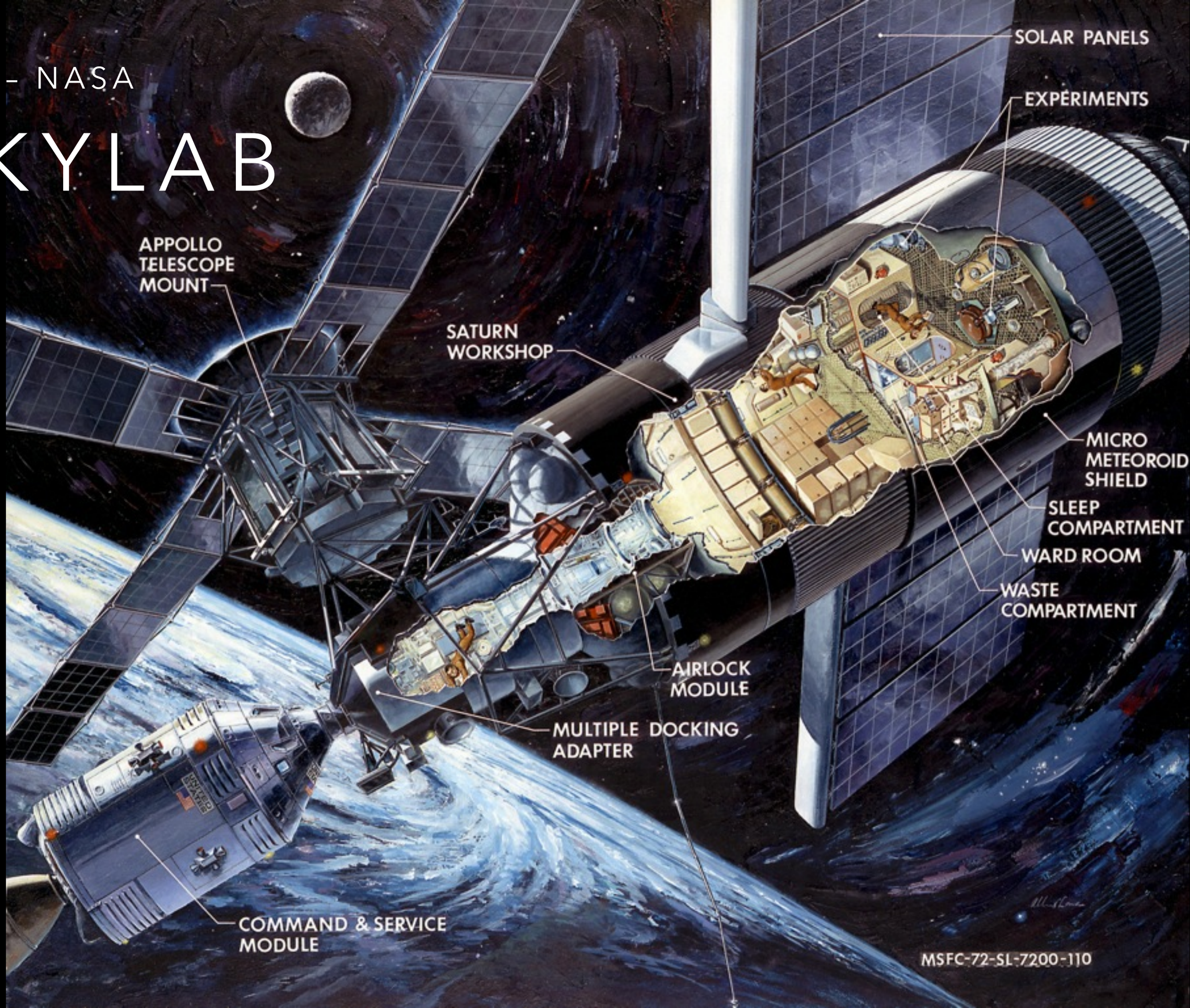
САЛЮТ 7 – SALYUT 7

USA – NASA

SKYLAB

USA – NASA

SKYLAB



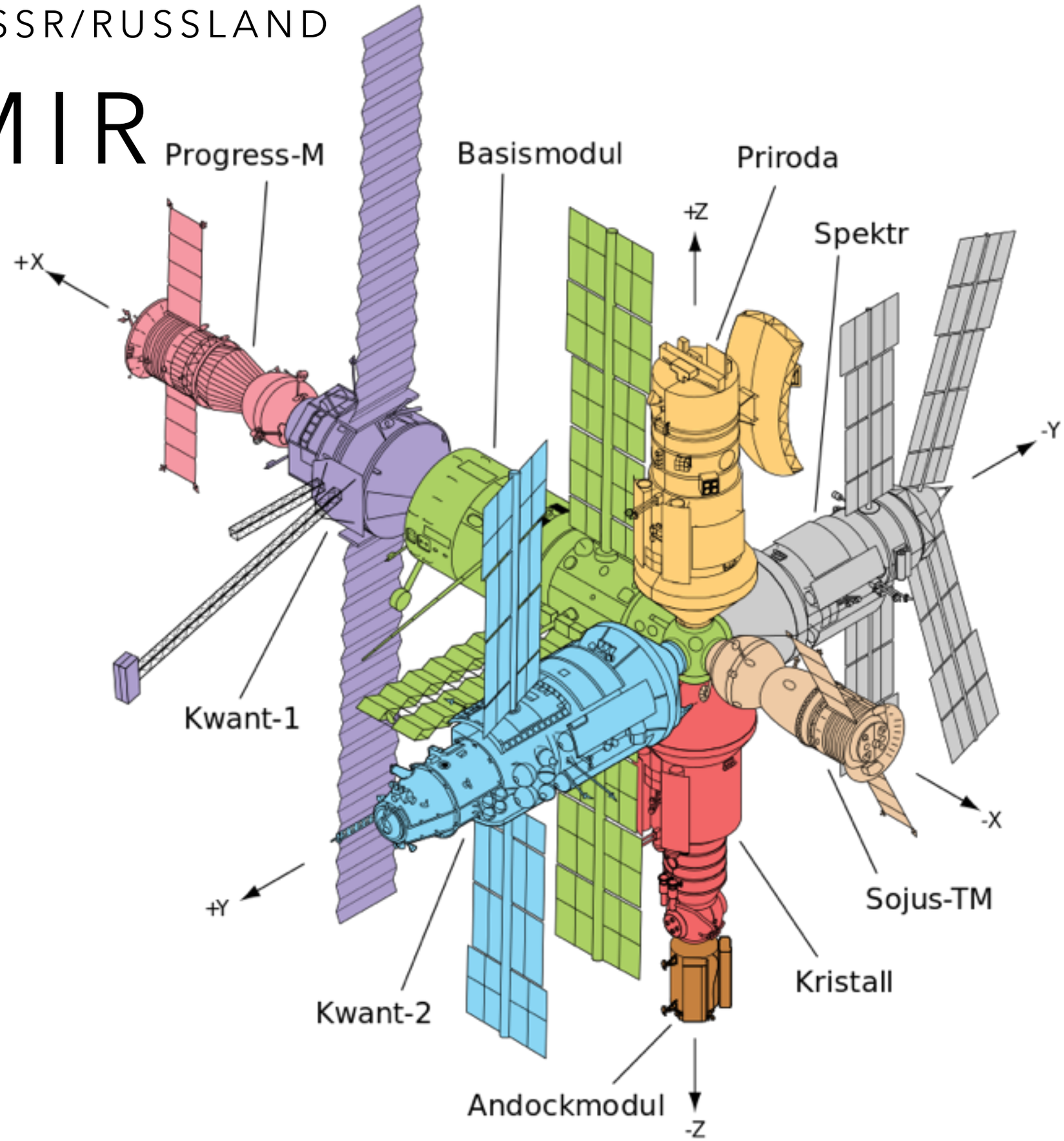
USA – NASA

SKYLAB


SKYLAB BOOST
MISSION

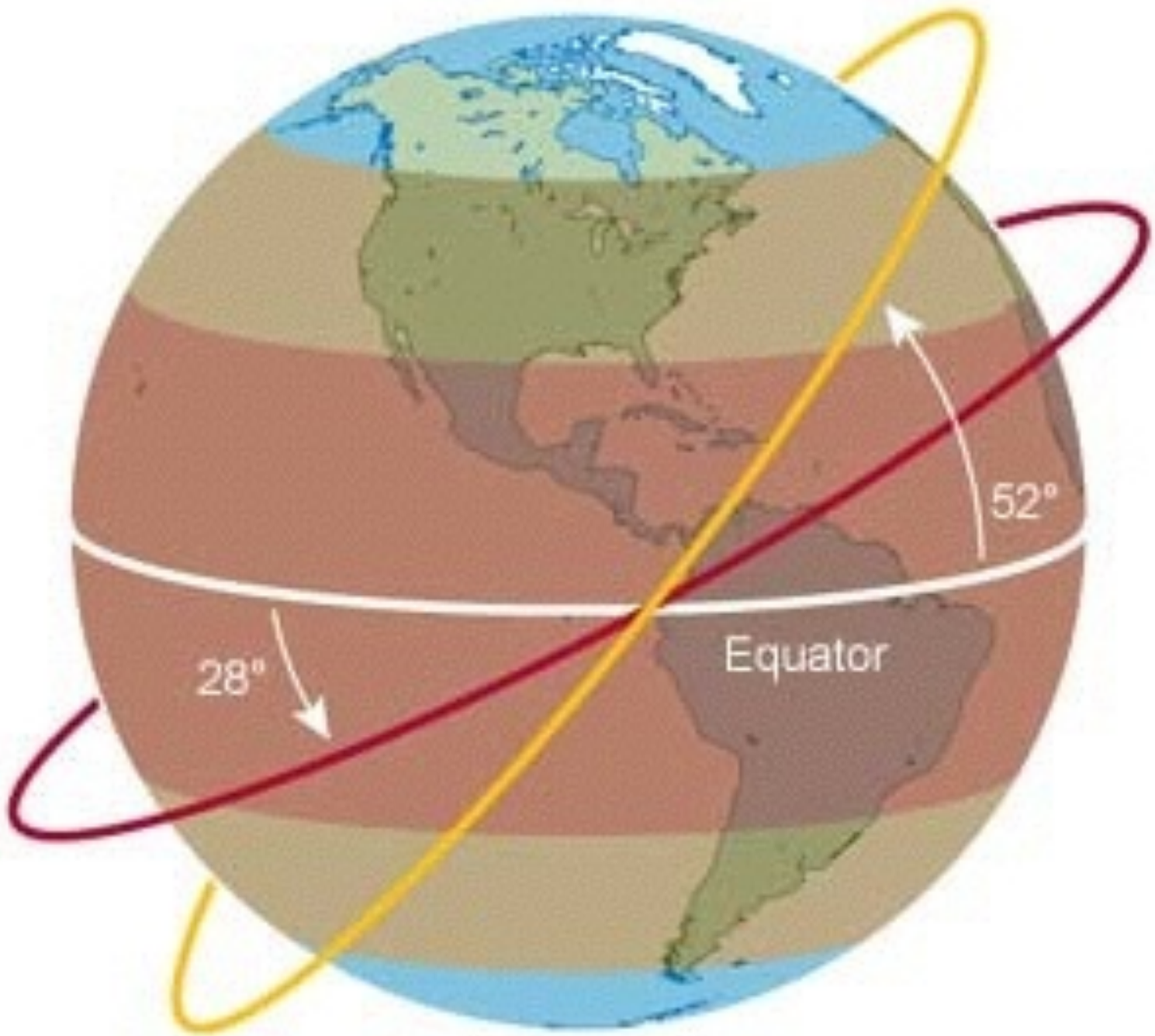
СССР/РУССИЯ – UDSSR/RUSSLAND

МИР – MIR



DAS BAIKONUR-MYSTERIUM

INKLINATION



DAS BAIKONUR-MYSTERIUM

INKLINATION

МИР – MIR

BESATZUNG

MIRCORP

ZEITGLEICH ZUR ISS

МИР – MIR

FEUER

МИР – MIR

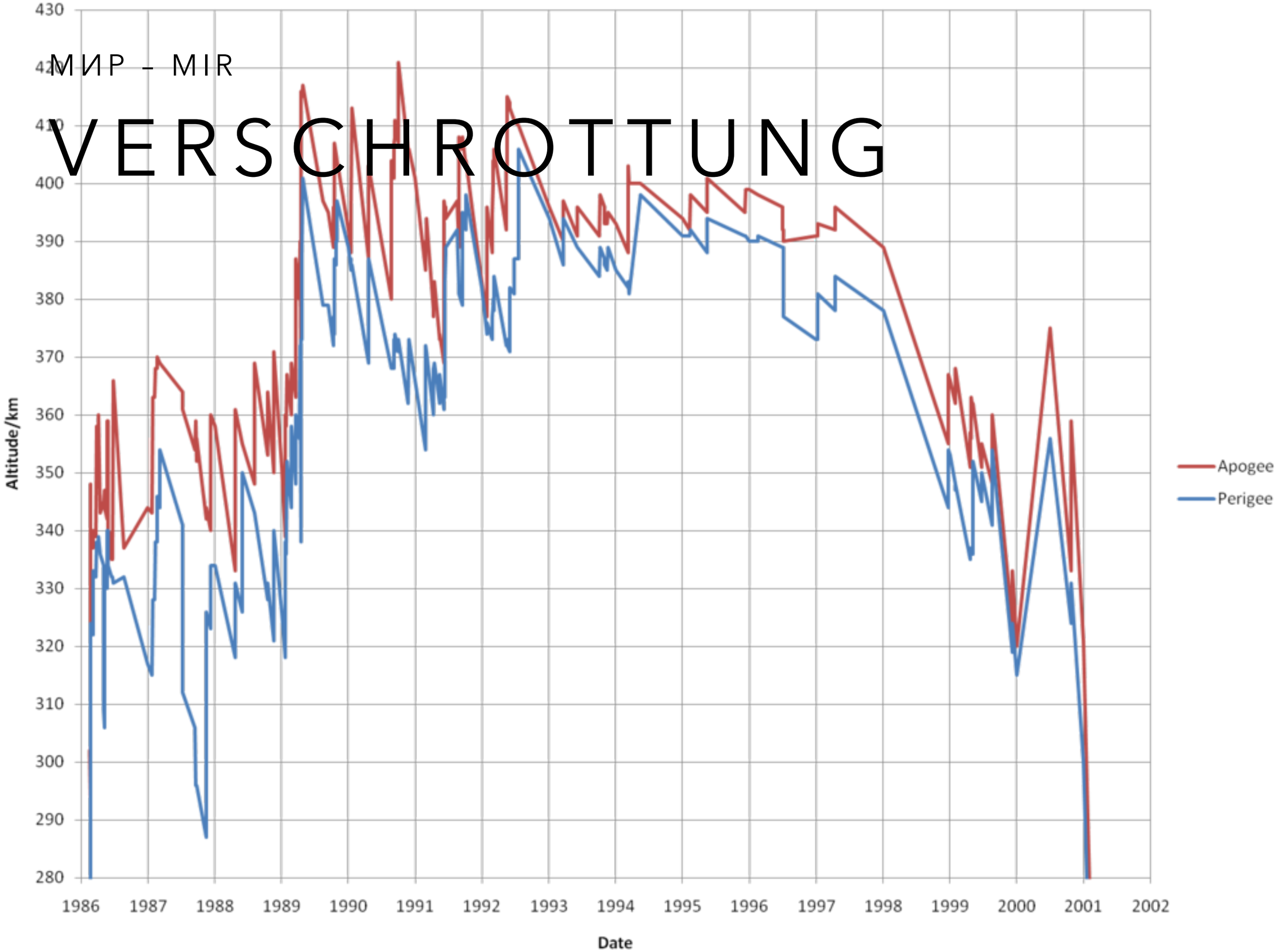
KOLLISION

МИР – MIR

KOLLISION

МИР – MIR

VERSCHROTTUNG

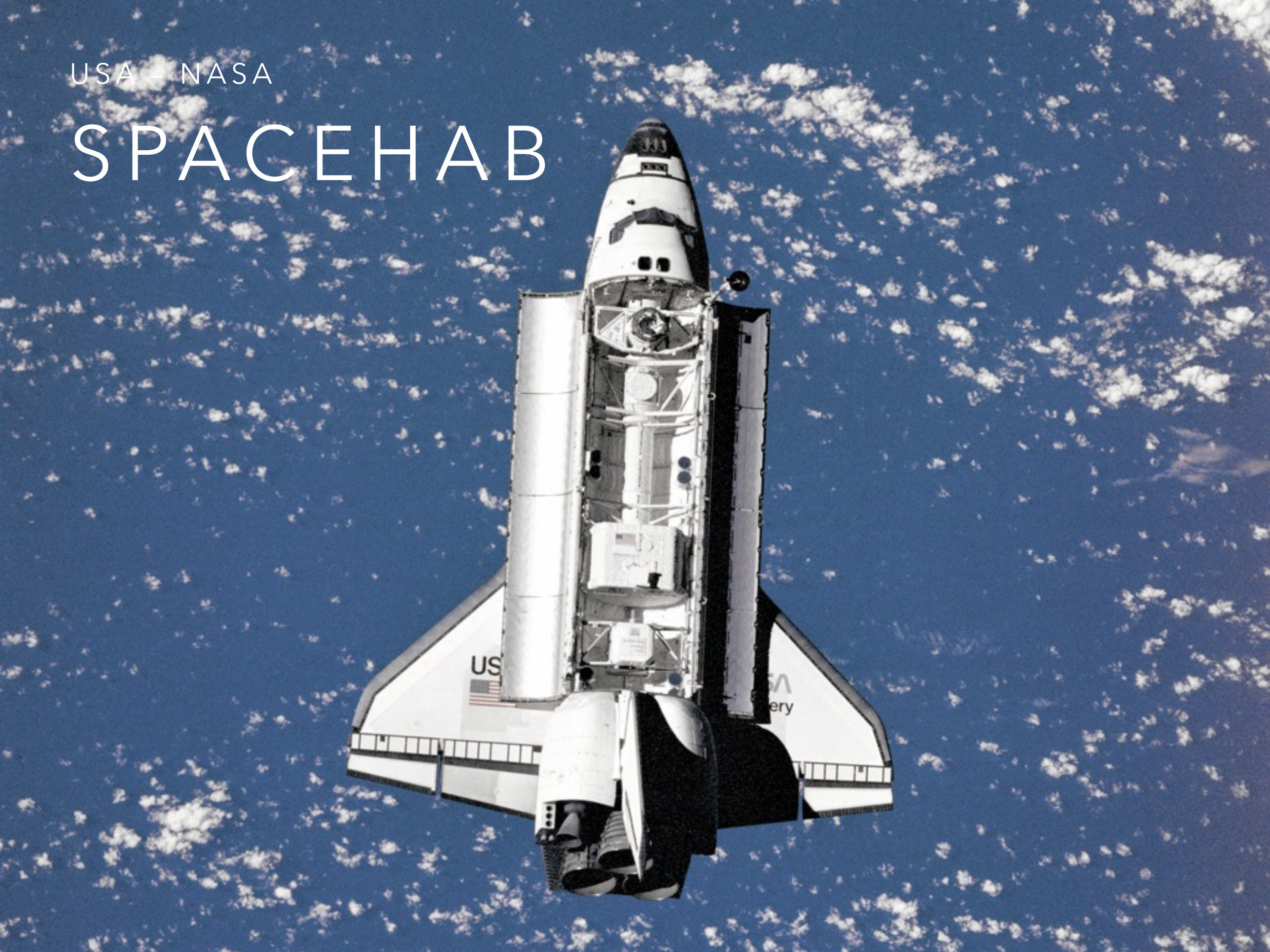


EUROPA – ESA / USA – NASA

SPACELAB

USA - NASA

SPACEHAB



РОСКОСМОС / NASA / ESA / JAXA / CSA ASC

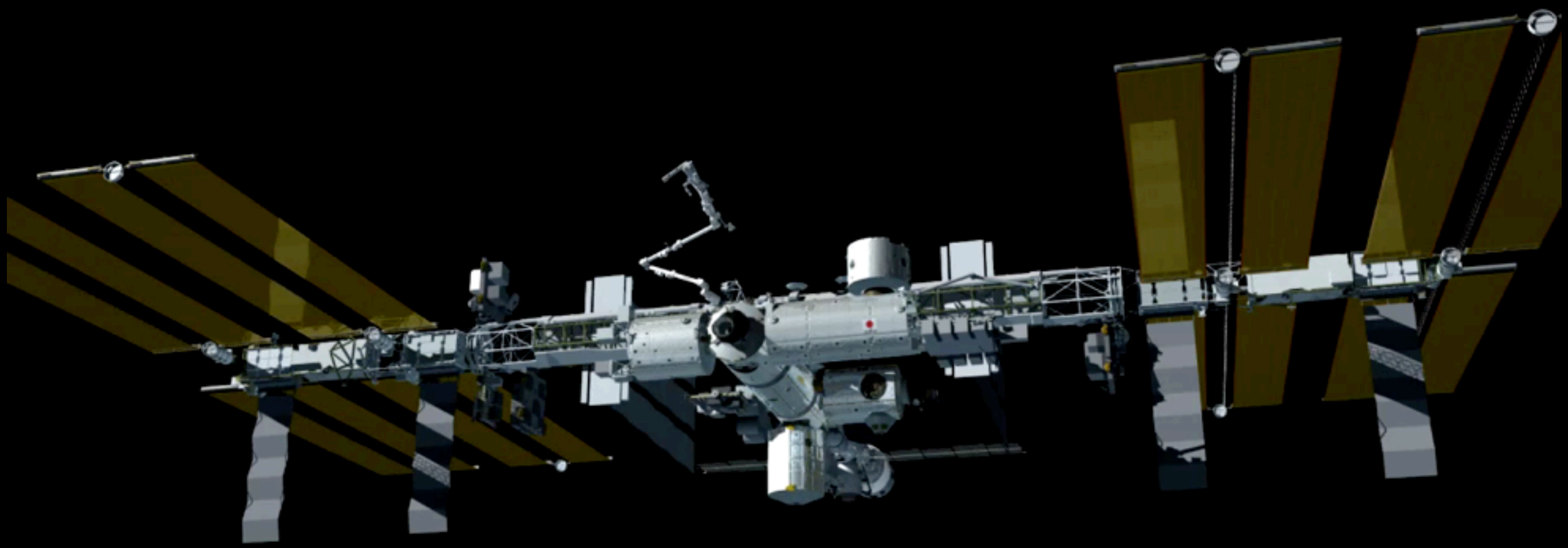
ISS / МКС

INTERNATIONAL SPACE STATION

МЕЖДУНАРОДНАЯ КОСМИЧЕСКАЯ СТАНЦИЯ

ISS

AUFBAU



ULF5
02/24/2011

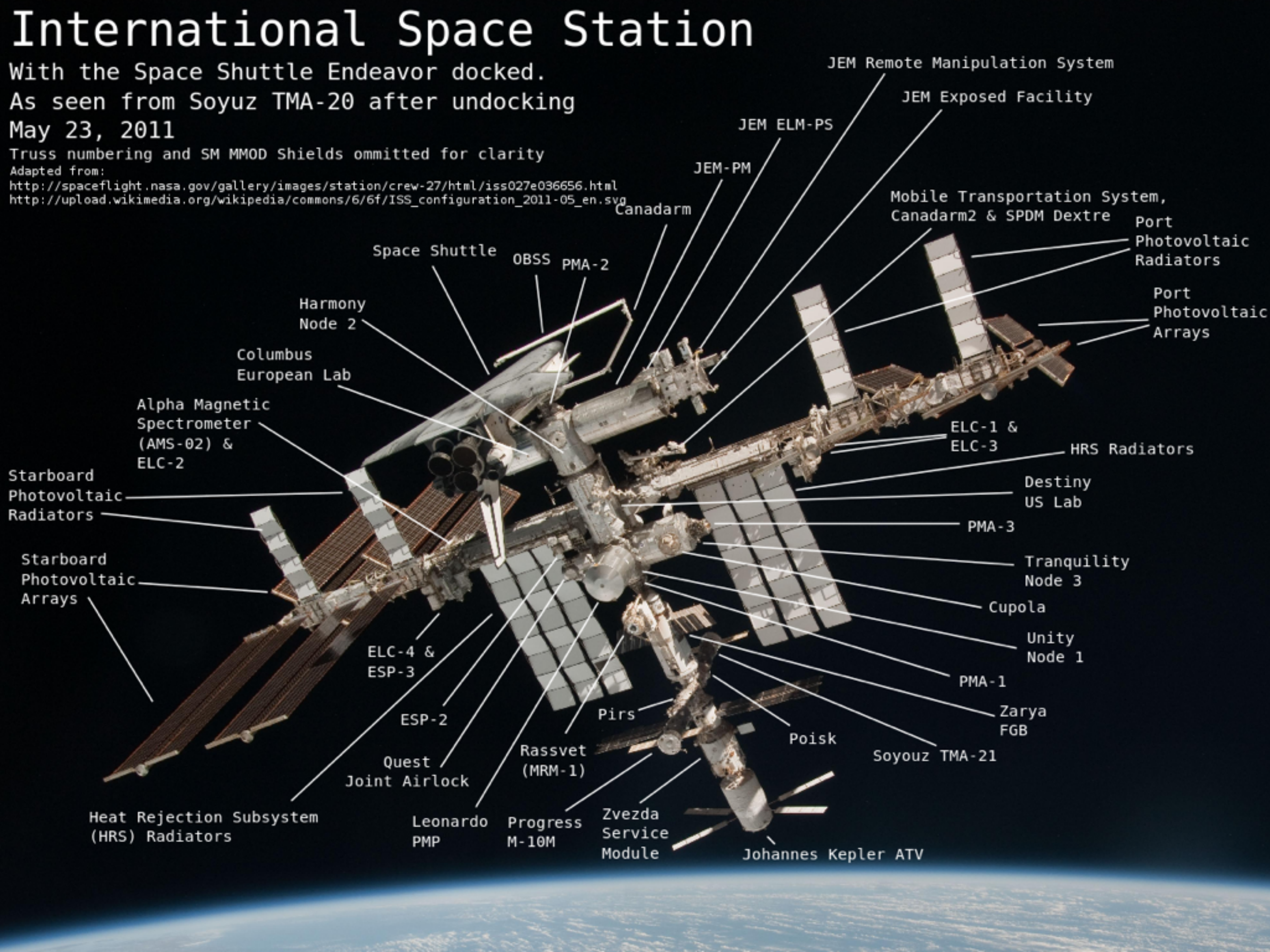
Express Logistics Carrier 4 (ELC4),
Permanent Multipurpose Module (PMM)

International Space Station

With the Space Shuttle Endeavor docked.
As seen from Soyuz TMA-20 after undocking
May 23, 2011

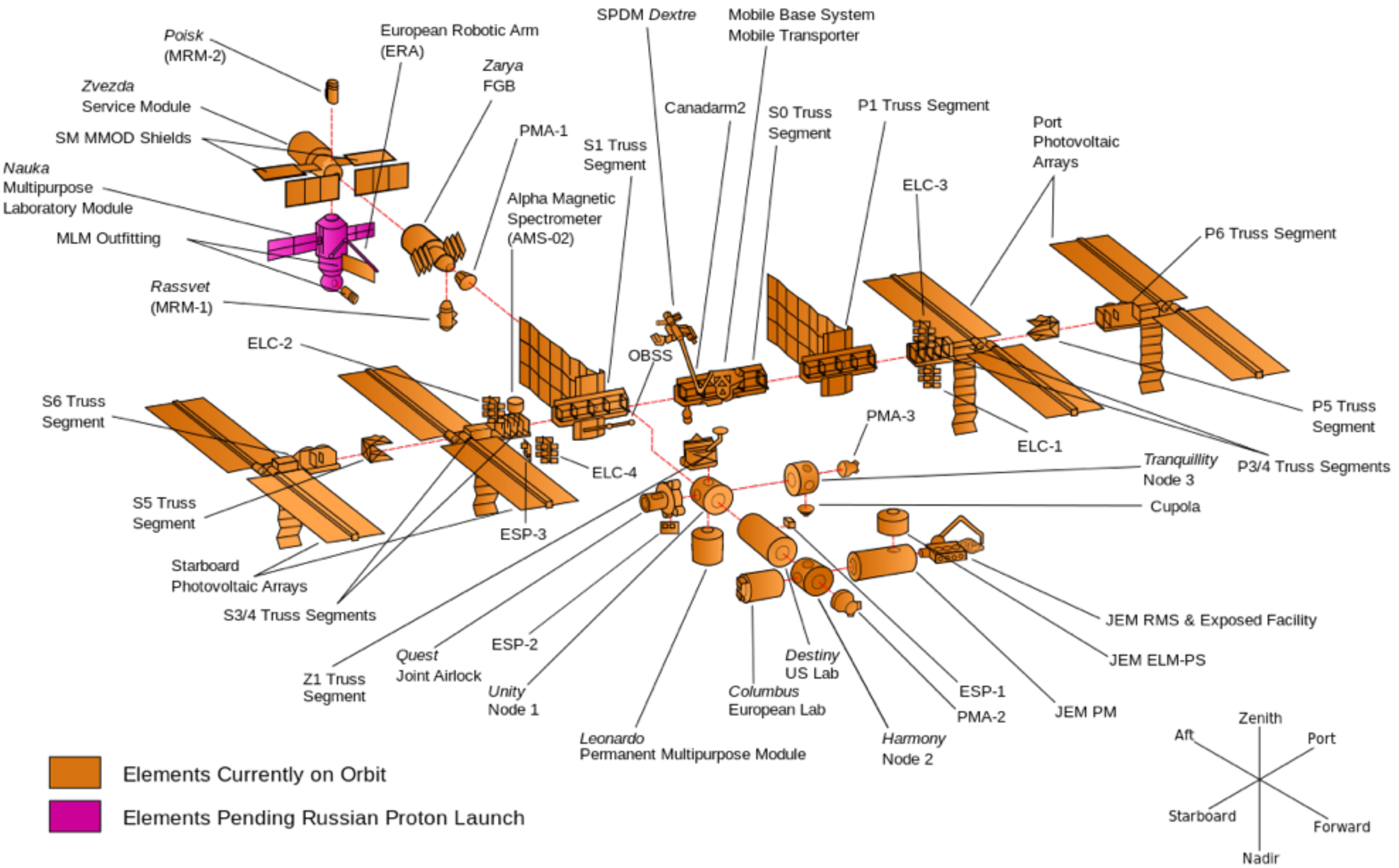
Truss numbering and SM MMOD Shields ommitted for clarity

Adapted from:
http://spaceflight.nasa.gov/gallery/images/station/crew-27/html/iss027e036656.html
http://upload.wikimedia.org/wikipedia/commons/6/6f/ISS_configuration_2011-05_en.svg



ISS Configuration

As of May 2011 (ULF6 - STS-134)

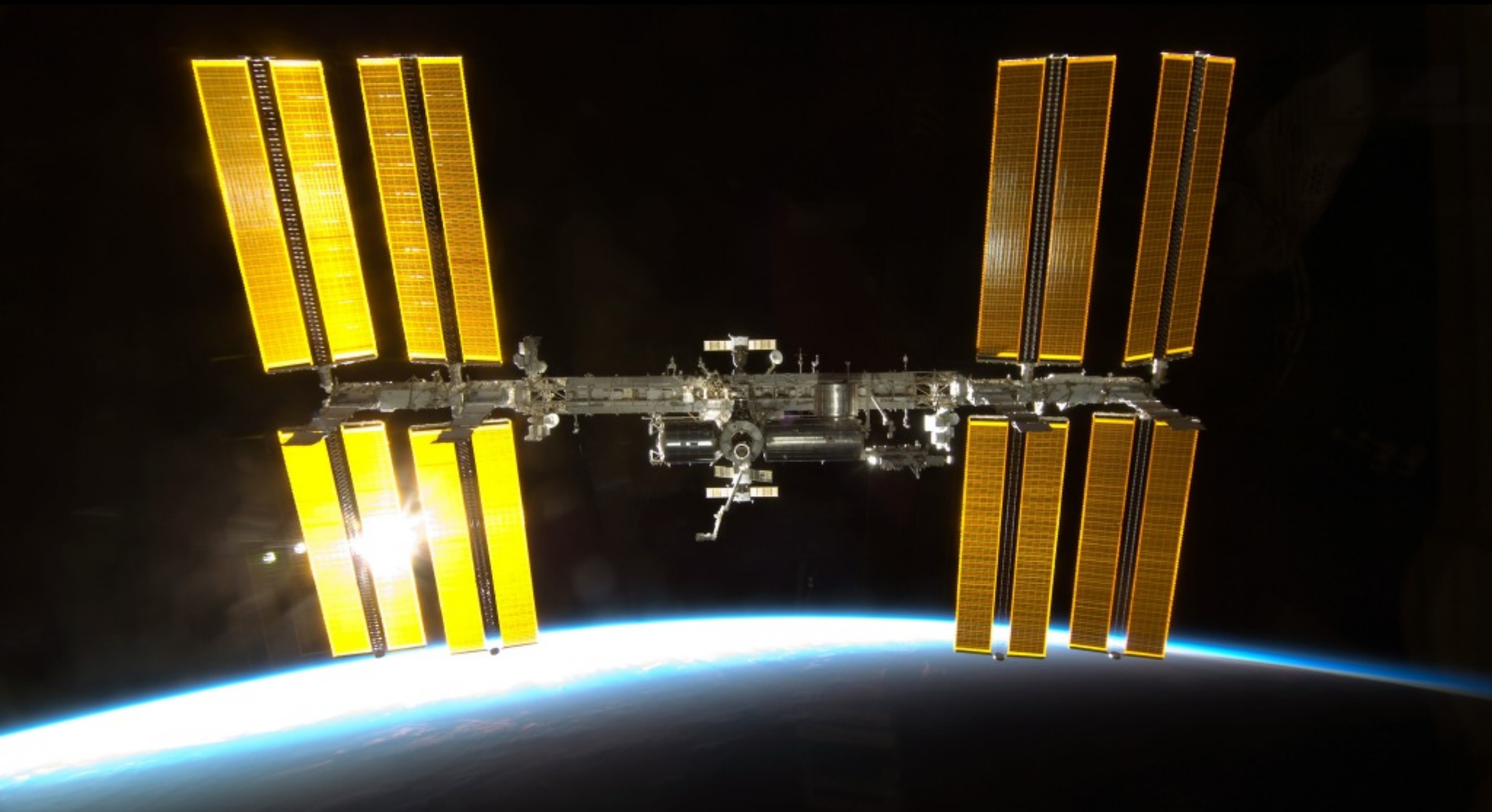



WET WASH
CONICAL
URINE


X-38 V-132
United States

ISS

ORBIT

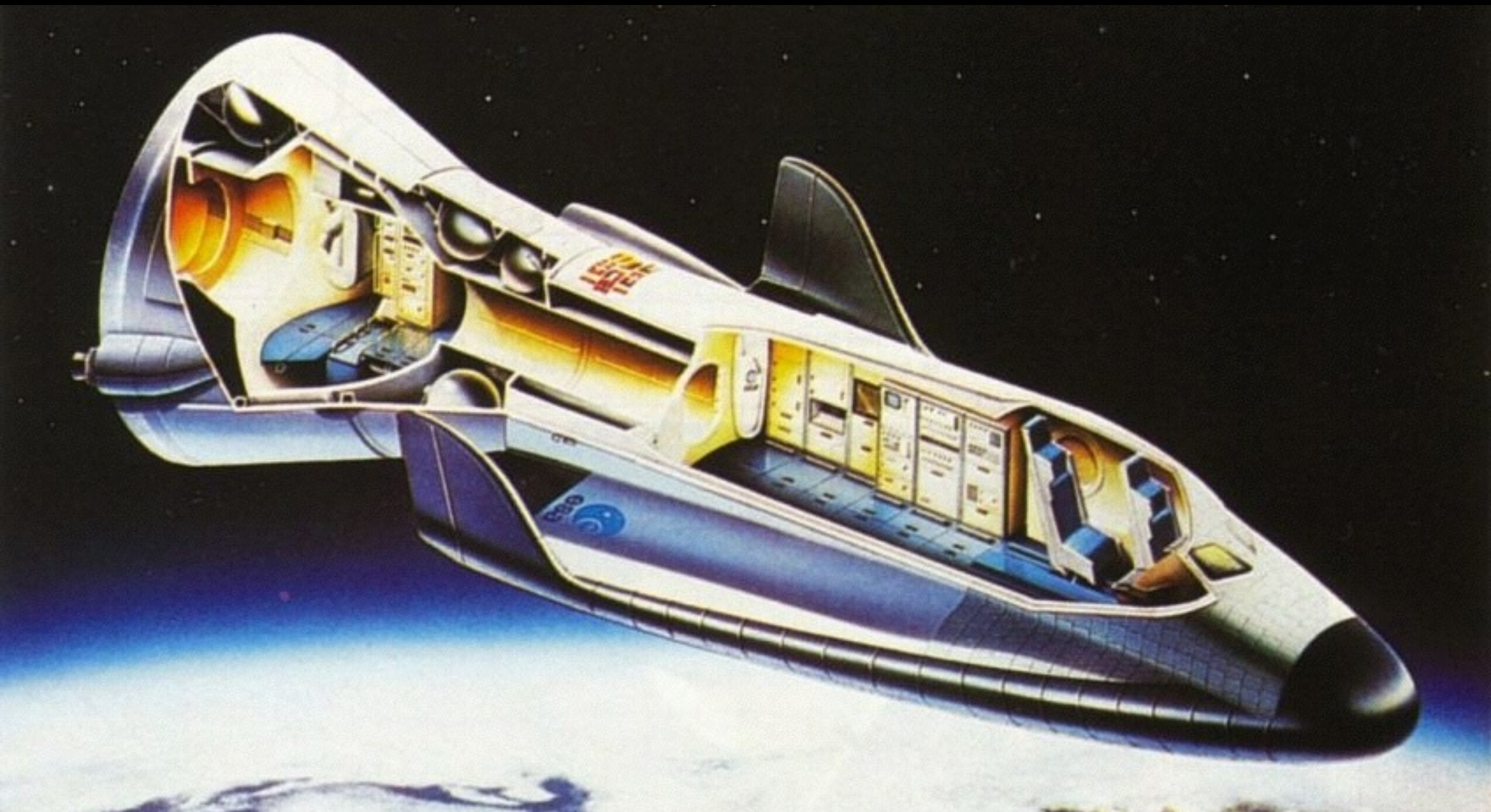


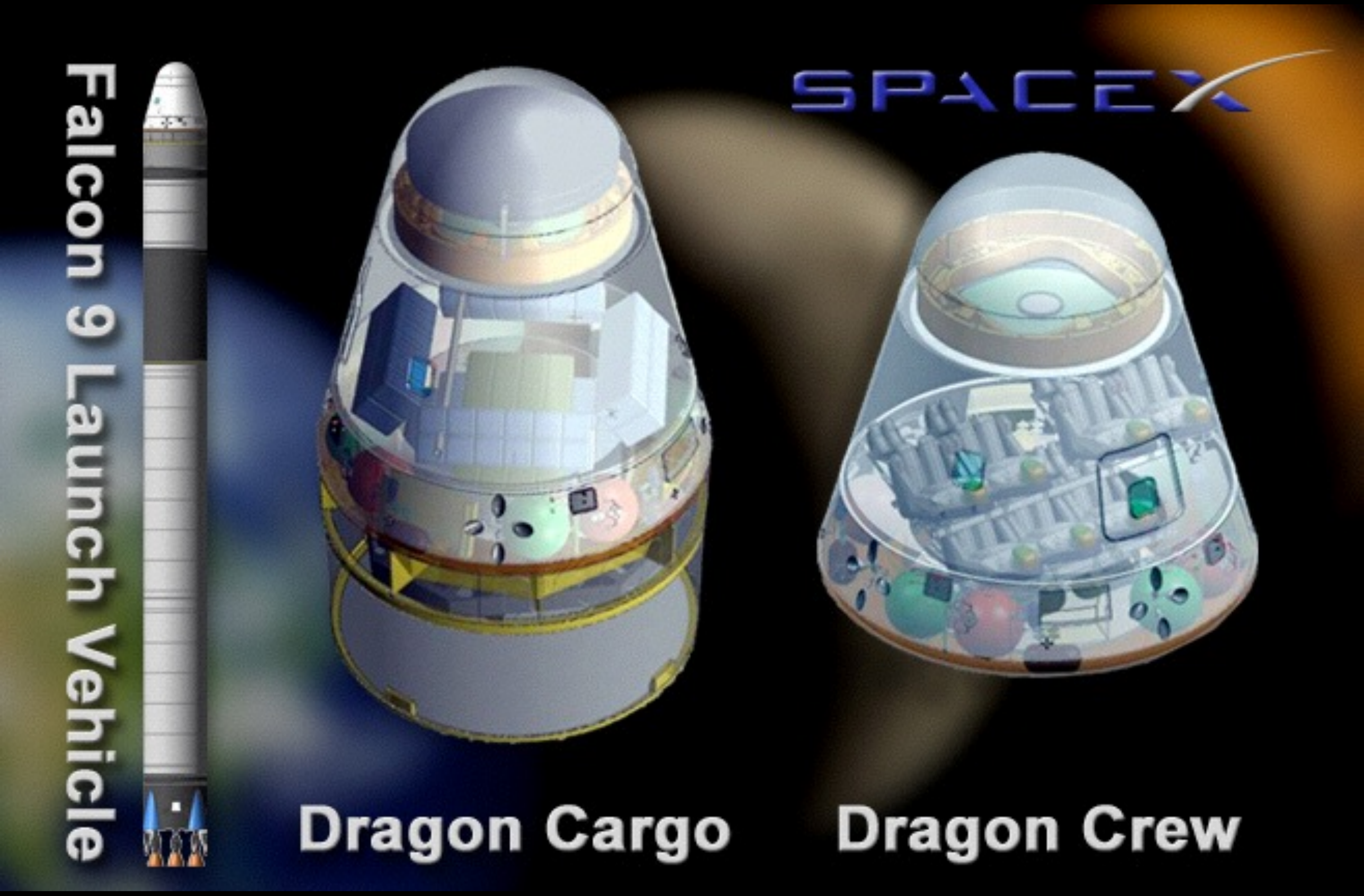
RAUMSCHIFFE

СОЮЗ – SOYUZ

RAUMSCHIFFE

HERMES




SPACEX
Falcon 9 Launch Vehicle
Dragon Cargo
Dragon Crew

ISS TRASPORTFRACHTER

DRAGON CARGO

ISS TRASPORTFRACHTER

DRAGON RETURN

ISS TRASPORTFRACHTER

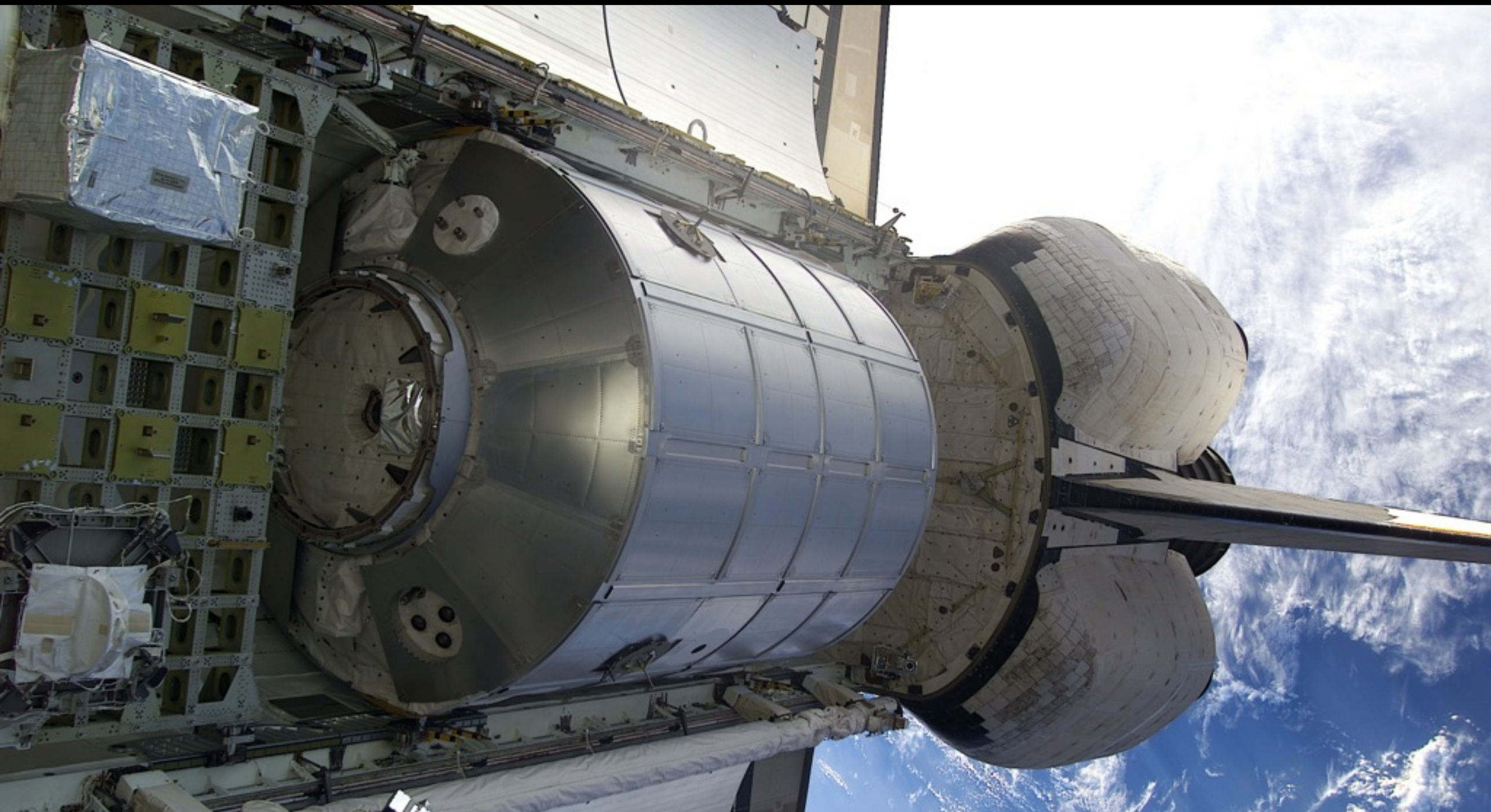
ПРОГРЕСС – PROGRESS

ISS TRASPORTFRACHTER

ПРОГРЕСС – PROGRESS

ISS TRANSPORTFRACHTER

MPLM



ISS TRANSPORTFRACHTER

ATV

ISS TRANSPORTFRACHTER

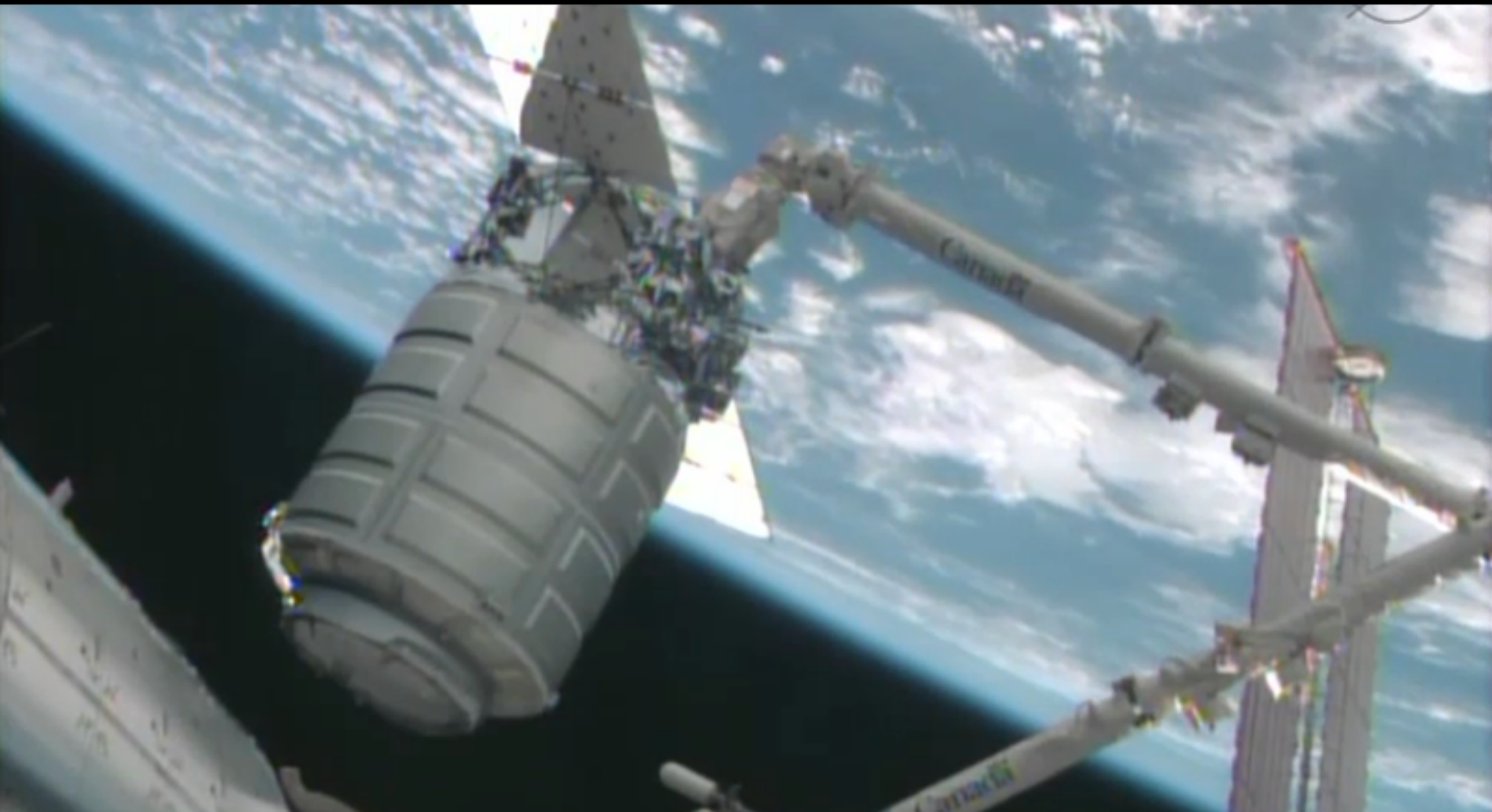
ATV

ISS TRANSPORTFRACHTER

HTV

ISS TRANSPORTFRACHTER

CYGNUS



ISS TRANSPORTFRACHTER

KOMMANDOPULT

ISS

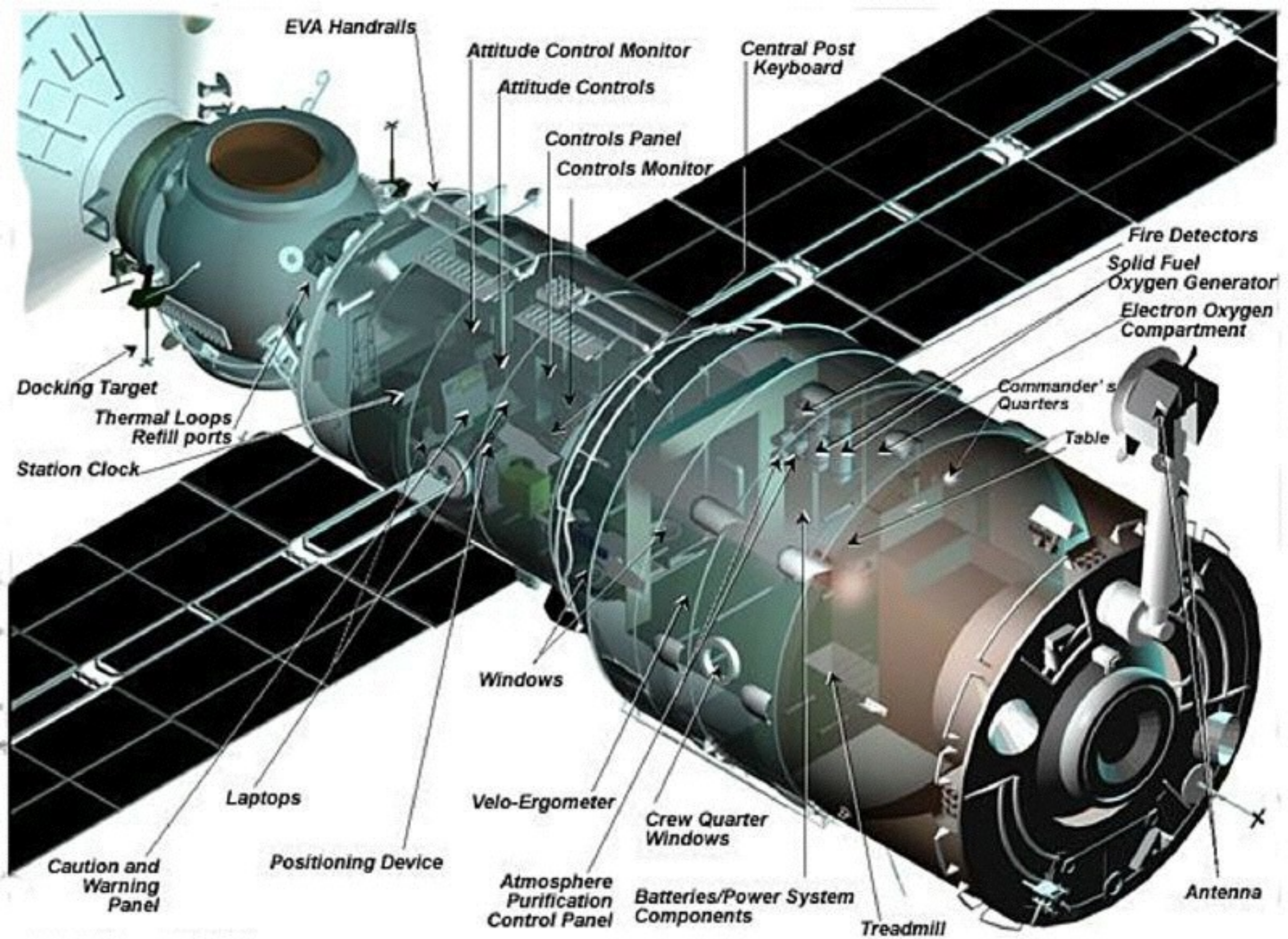
ISPR – INTERNATIONAL STANDARD PAYLOAD RACK

ISS

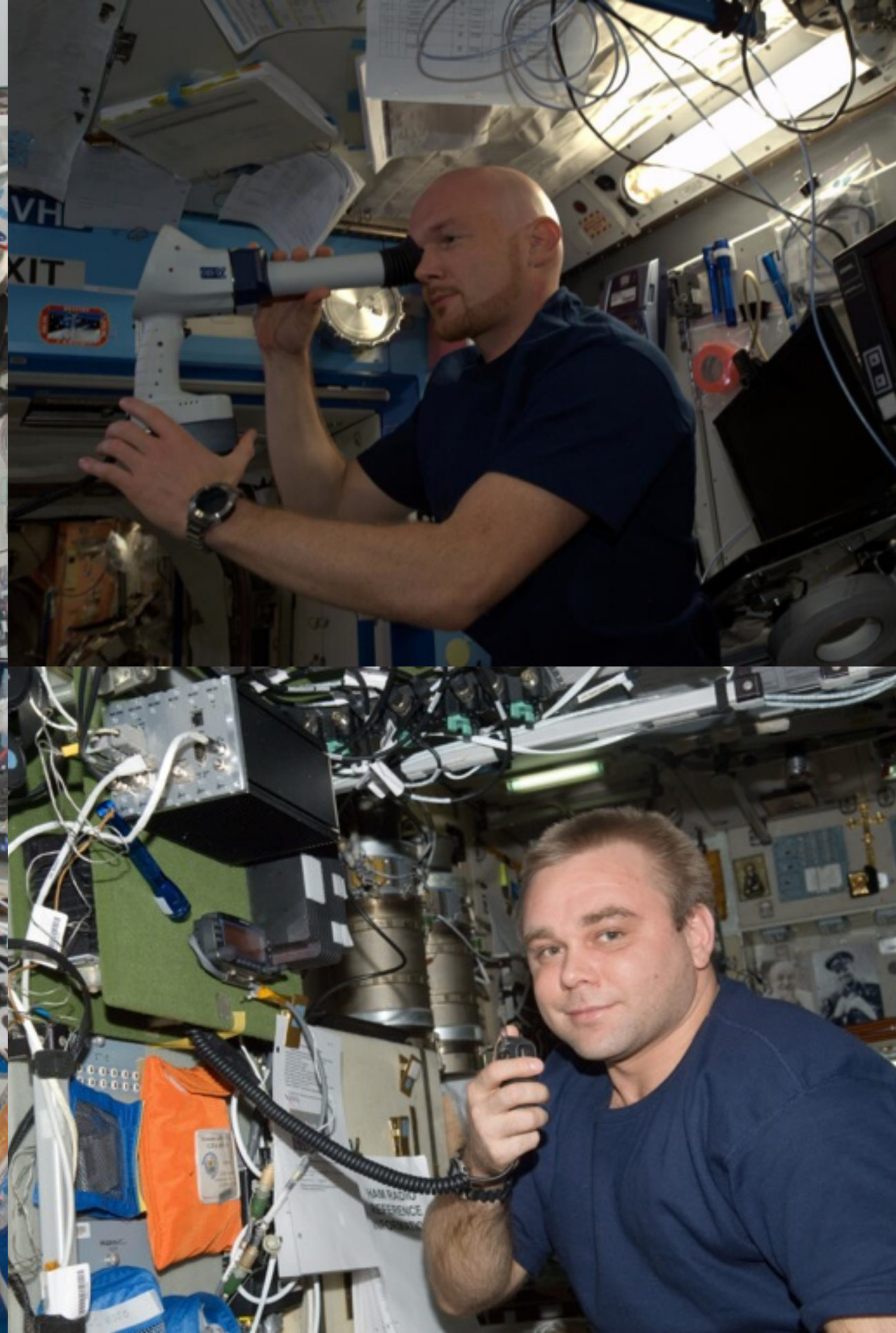
SCHLAFEN

ISS

SCHLAFEN


EVA Handrails
Attitude Control Monitor
Central Post Keyboard
Attitude Controls
Controls Panel
Controls Monitor
Fire Detectors
Solid Fuel Oxygen Generator
Electron Oxygen Compartment
Docking Target
Commander's Quarters
Thermal Loops Refill ports
Table
Station Clock
Windows
Laptops
Velo-Ergometer
Crew Quarter Windows
Caution and Warning Panel
Positioning Device
Atmosphere Purification Control Panel
Batteries/Power System Components
Antenna
Treadmill


OVHD
DECK



HTTP://WWW.NASA.GOV/MISSION_PAGES/STATION/TIMELINES/

TAGESABLAUF

Radiogram No. 5886u Form 24 for 06/18/2014

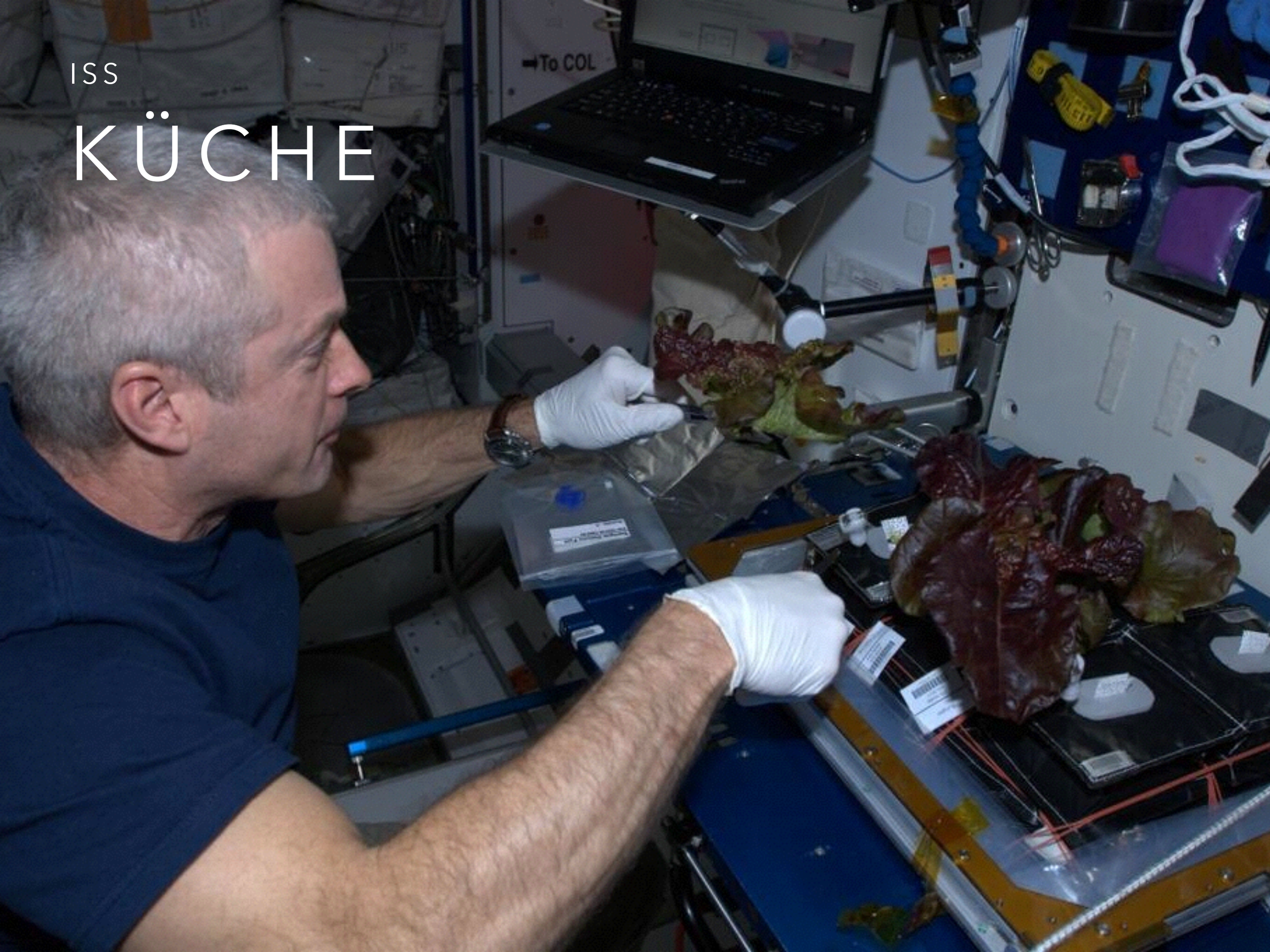
DATA DUMP OPS. RS ATTITUDE CONTROL THRUSTER (ДО) INHIBIT. CREW OFF DUTY

TIME	CREW	ACTIVITY
06:00-06:10	CDR, FE-5, FE-6	Morning Inspection.
06:00-06:10	**FE-1**	Morning Inspection. RSS1,2 Reboot Visual Inspection of Circuit Breaker [A3CO]Position on DC1 Power Switch Panel (БВП) and Fuses on Fuse Boxes БПП-30, 36 per LED indication
06:00-06:10	**FE-2**	Morning Inspection. Laptop RS1(2) Reboot
06:00-06:10	**FE-4**	Morning Inspection. SM ПСС (Caution & Warning Panel) Test
06:10-06:40		Post-sleep
06:40-07:30		BREAKFAST
07:30-07:40		Prep for Work
07:40-08:05		Daily Planning Conference *(S-band)*
08:05-08:15	**FE-1**, **FE-2**, **FE-4**, FE-5, FE-6	Prep for Work


28000
km/h
EXIT
FIRE PORT
Plant Pics
CBM Vestibule
Hardware

ISS

KÜCHE



AB MISSION FUTURA42

ESPRESSO-MASCHINE


Karen Nyberg
Expedition 36 Crew Member


LAB1P2
CAUTION
FIRE PORT

ISS

VERSORGUNG

ISS

VERSORGUNG

ISS / TDRS / ЛУЧ – LUTSCH (STRAHL)

KOMMUNIKATION

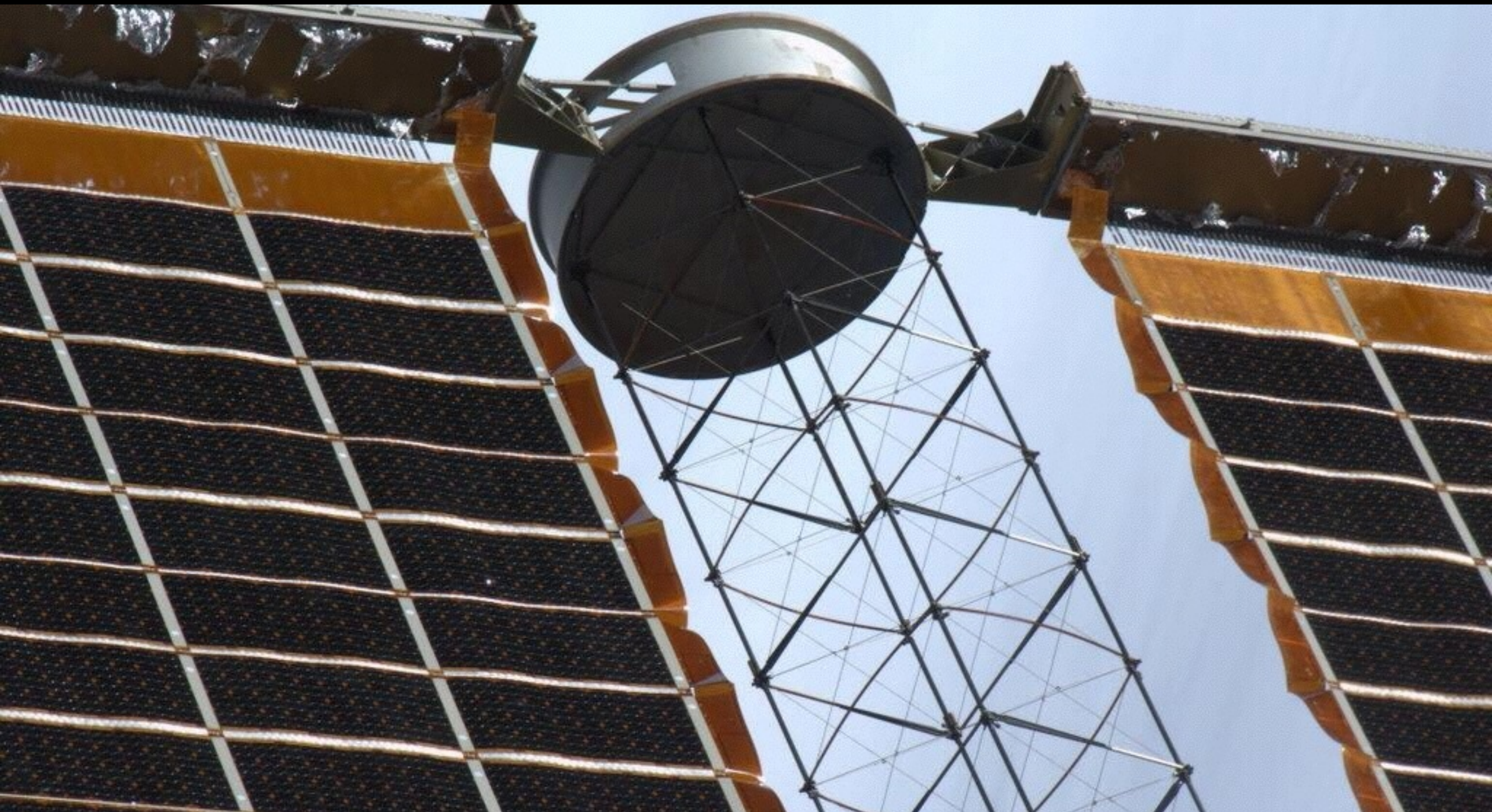
ISS

CREW


National Aeronautics and Space Administration
NASA
Past. Present. Future
Expedition 40
www.nasa.gov
NW-2014-03-002-JSC

ISS

SCHÄDEN



CHINA

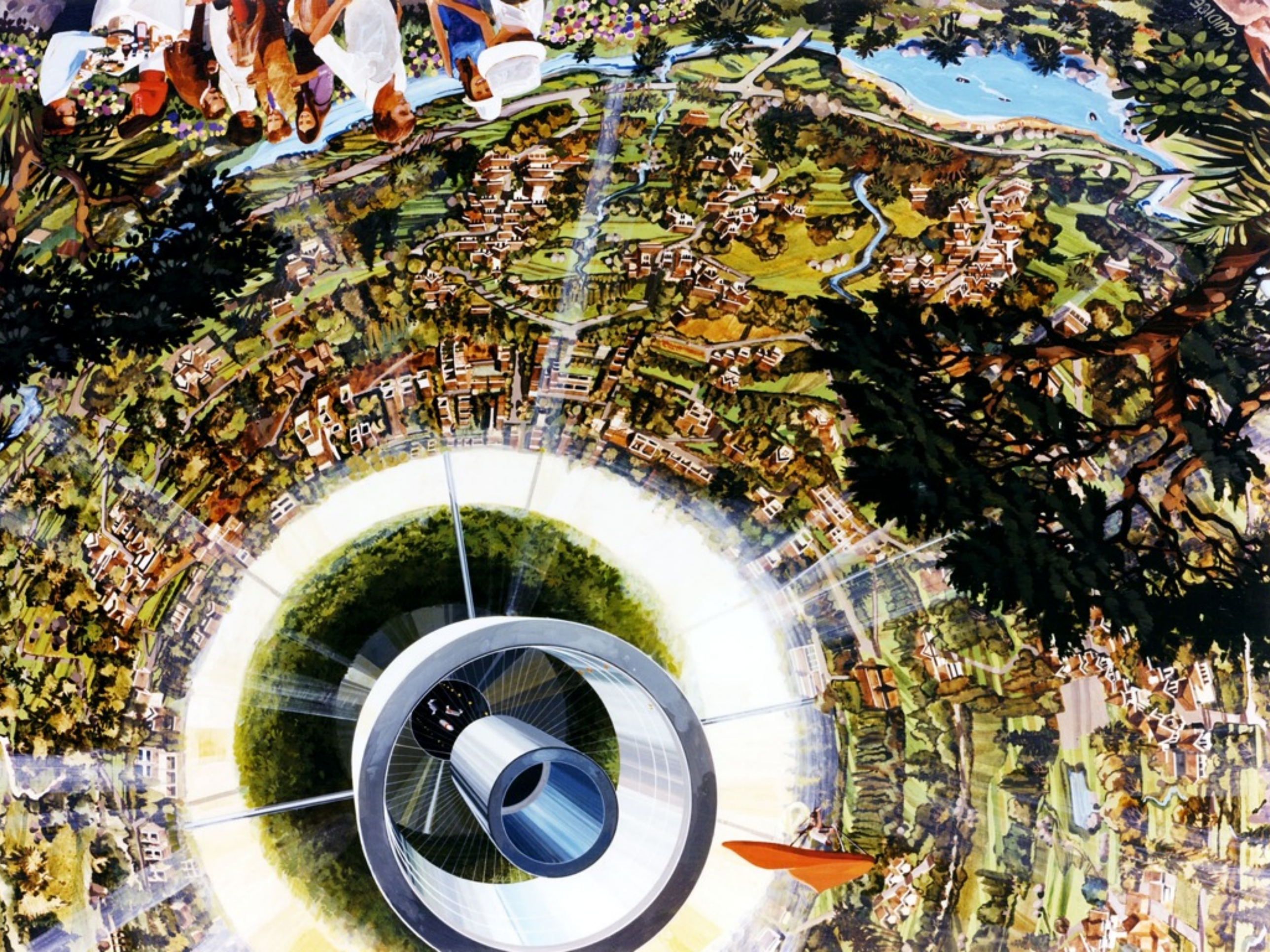
天宫一号 - TIANGONG

CHINA

天宫一号 - TIANGONG

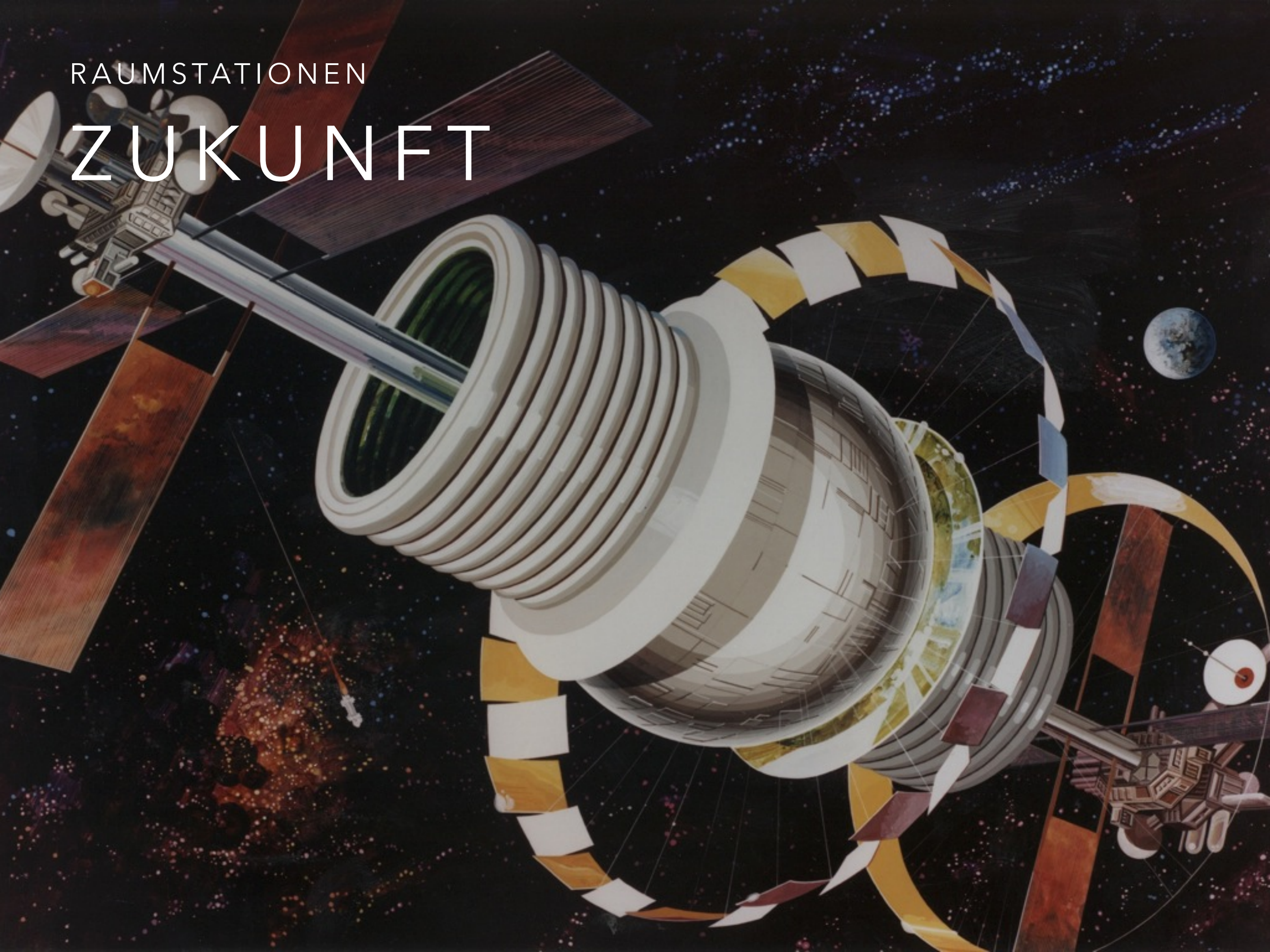
RAUMSTATIONEN

ZUKUNFT



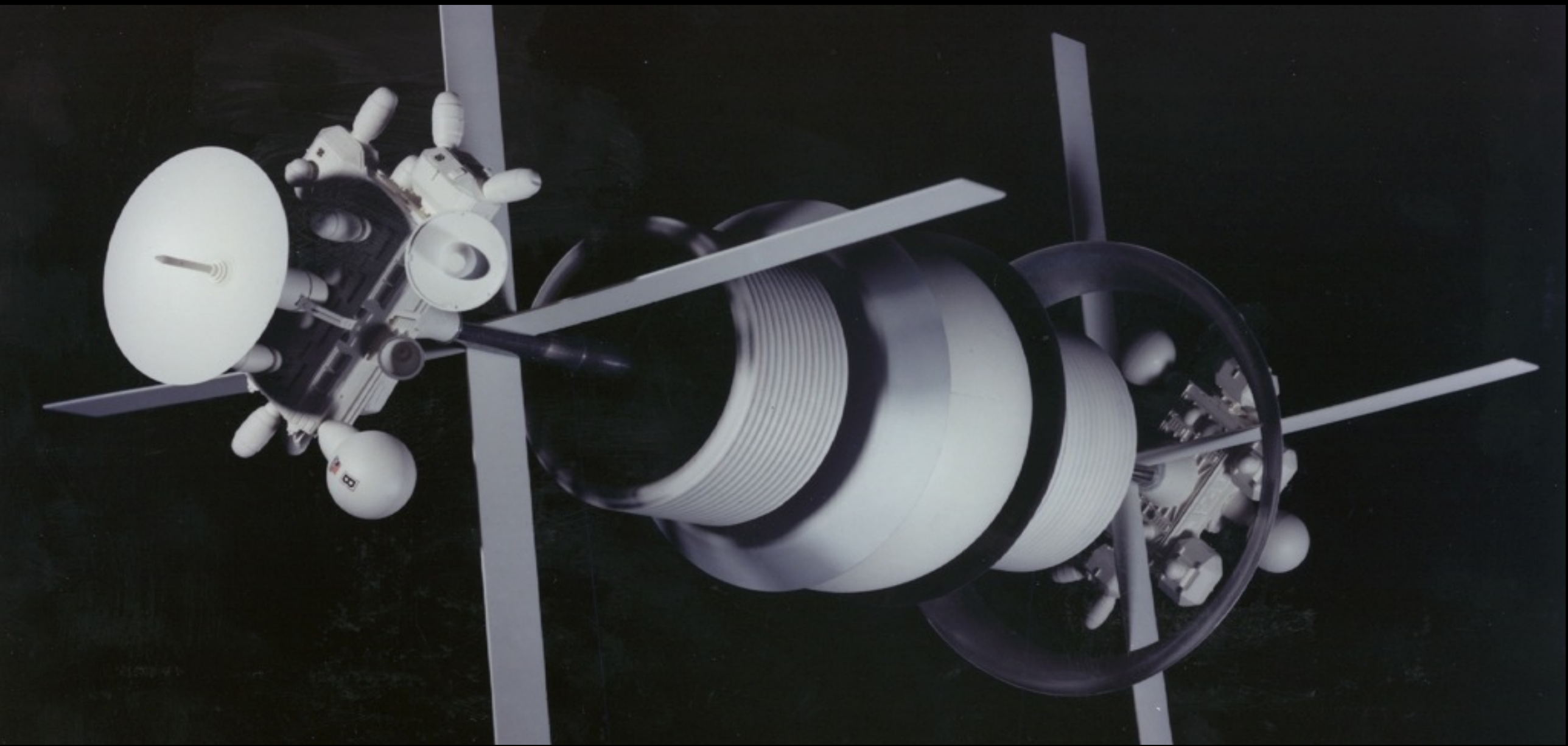
RAUMSTATIONEN

ZUKUNFT



"Die bemannte Raumfahrt ermöglicht uns nicht nur eine einzigartige Sicht auf unseren Planeten, sondern auch darauf, wer wir sind. Wir sind eine Spezies von Forschern."

–ALEXANDER GERST



KONTAKT

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- @PylonC
- http://konvergenzfehler.de