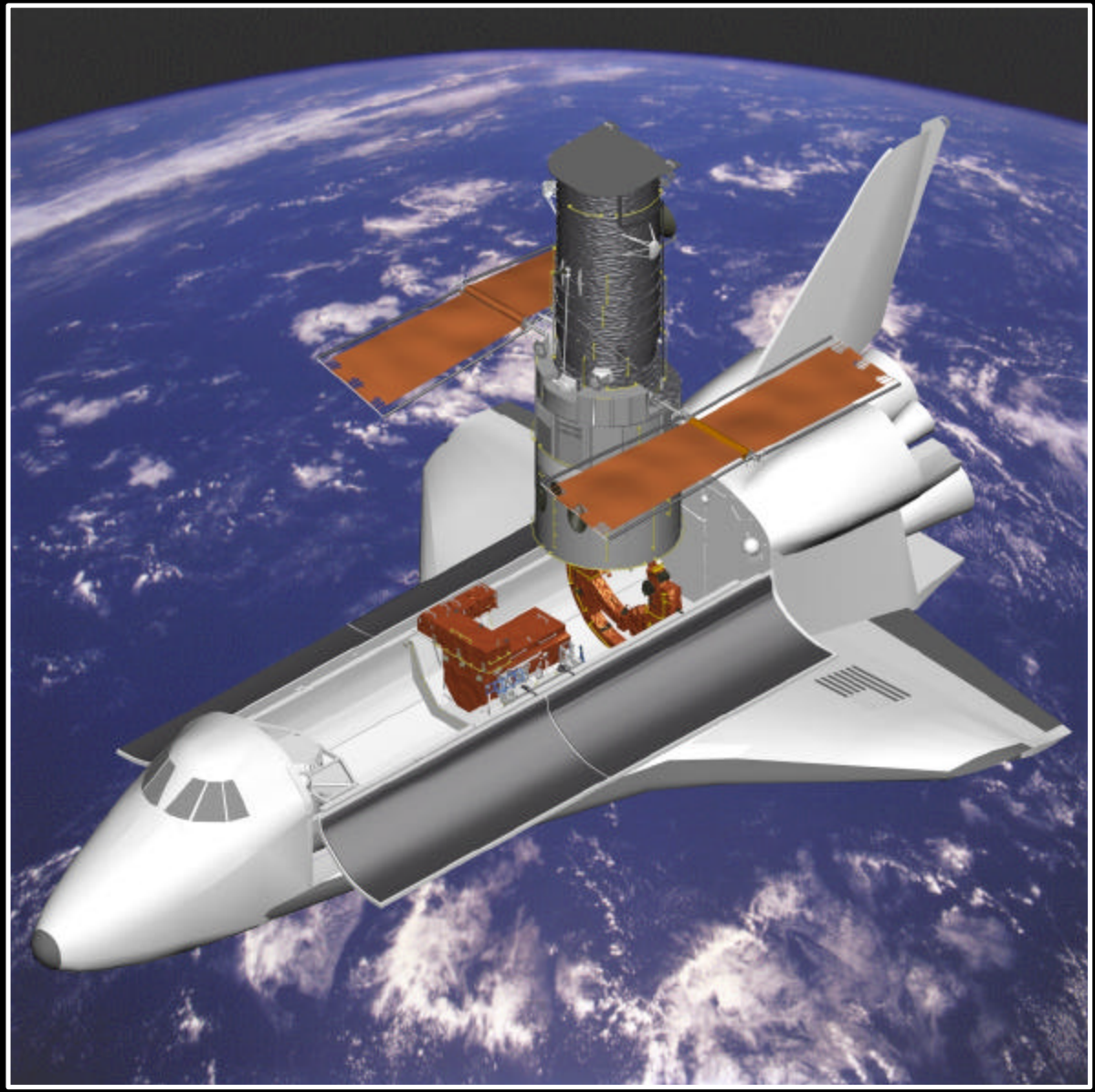
HUBBLE SPACE TELESCOPE
SERVICING MISSION - 3A



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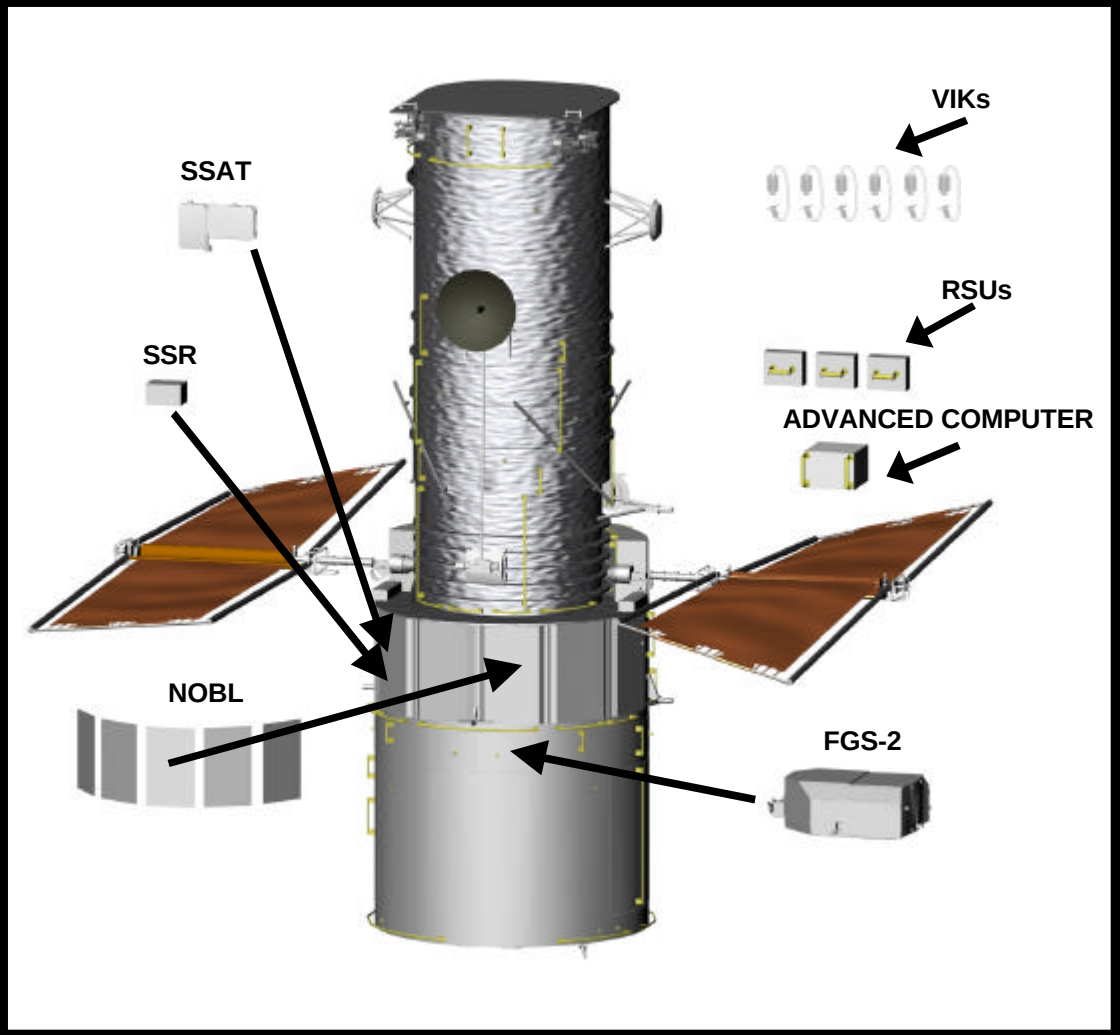
SERVICING MISSION - 3A
ORBITAL REPLACEABLE UNITS



Acronyms

FGS-2	Fine Guidance Sensor-2
NOBL	New Outer Blanket Layer
RSU	Rate Sensor Unit
SSAT	S-band Single Access Transmitter
SSR	Solid State Recorder
VIK	Voltage/Temperature Improvement Kit

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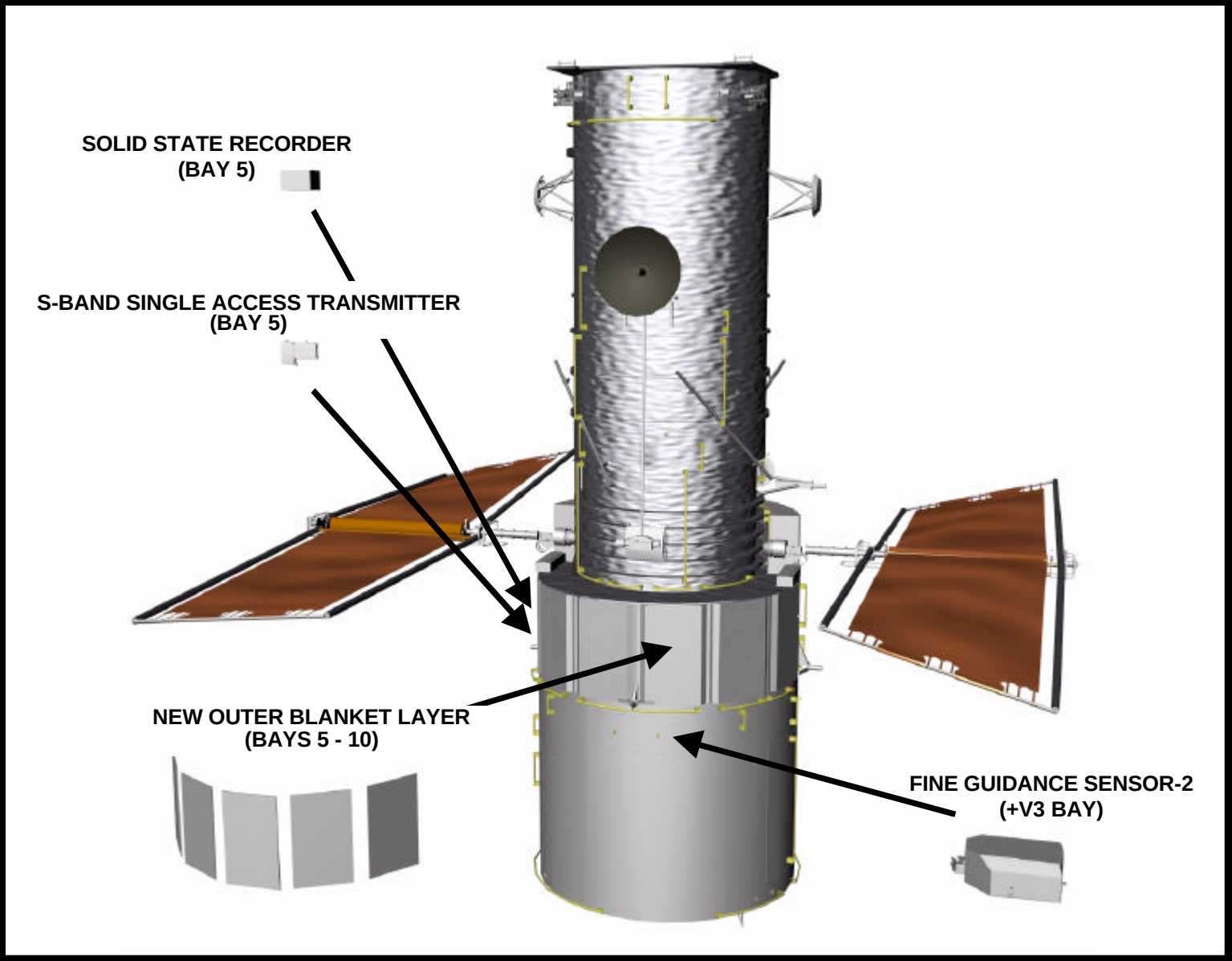
SERVICING MISSION - 3A
ORBITAL REPLACEABLE UNITS
SUN SIDE (+V3)



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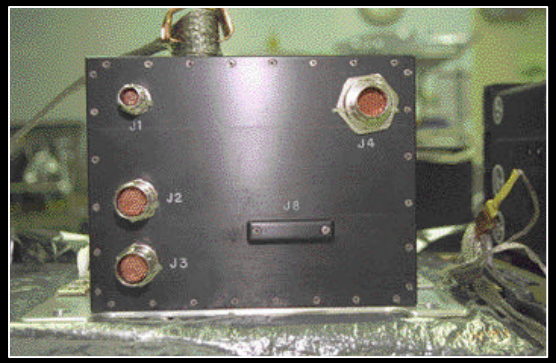
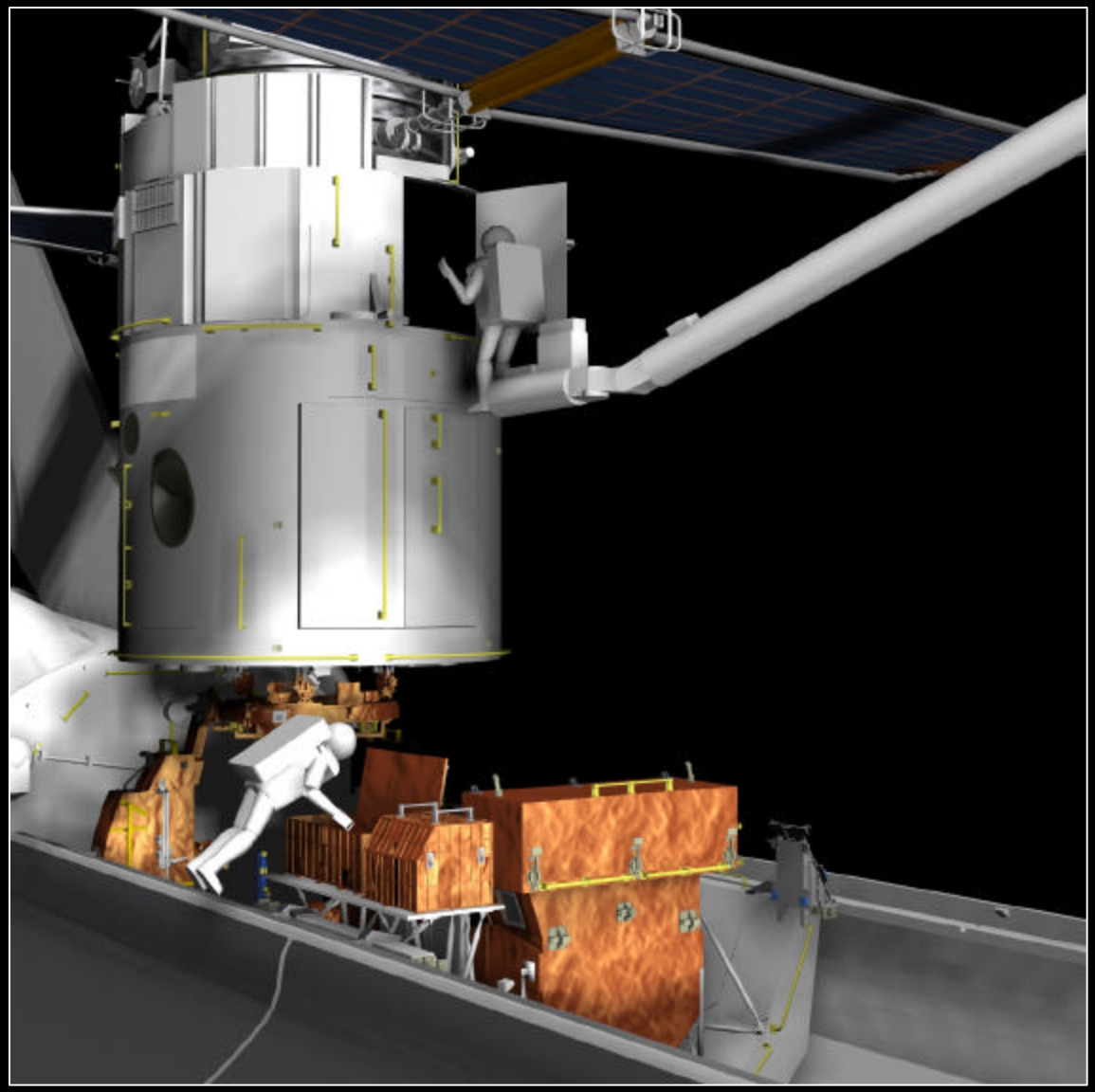
SERVICING MISSION - 3A
SOLID STATE RECORDER

- Highly reliable state of the art digital technology
- Replaces mechanical tape recorder
- Stores over 10 times more data than tape recorder





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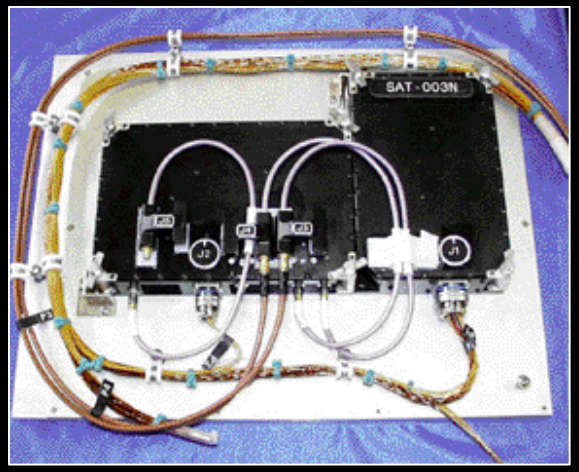
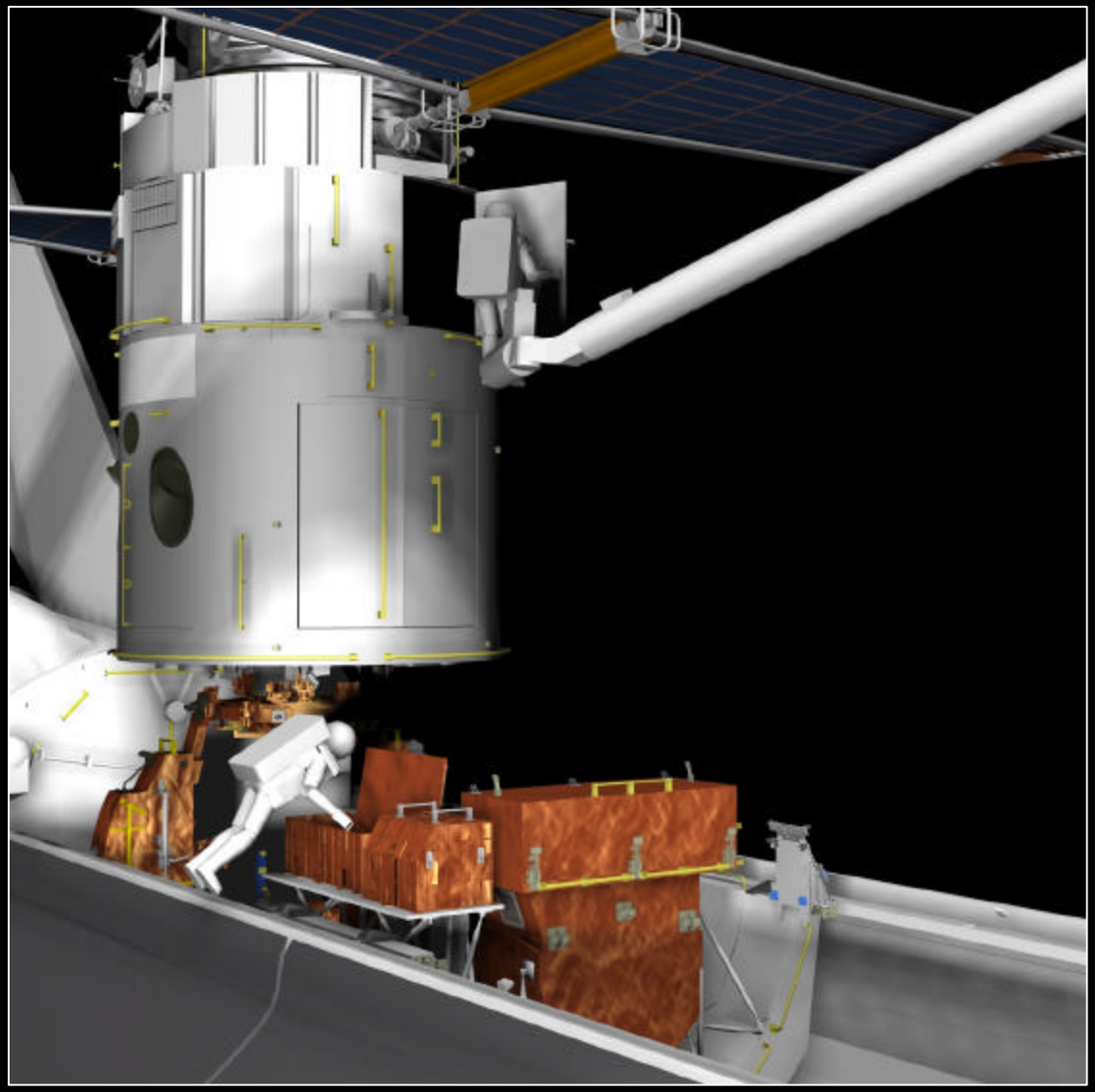
SERVICING MISSION - 3A
S-BAND SINGLE ACCESS TRANSMITTER

- Hubble science data downlinked at 1 million bits/sec by S-band transmitter
- Replaces inoperable transmitter to restore redundancy





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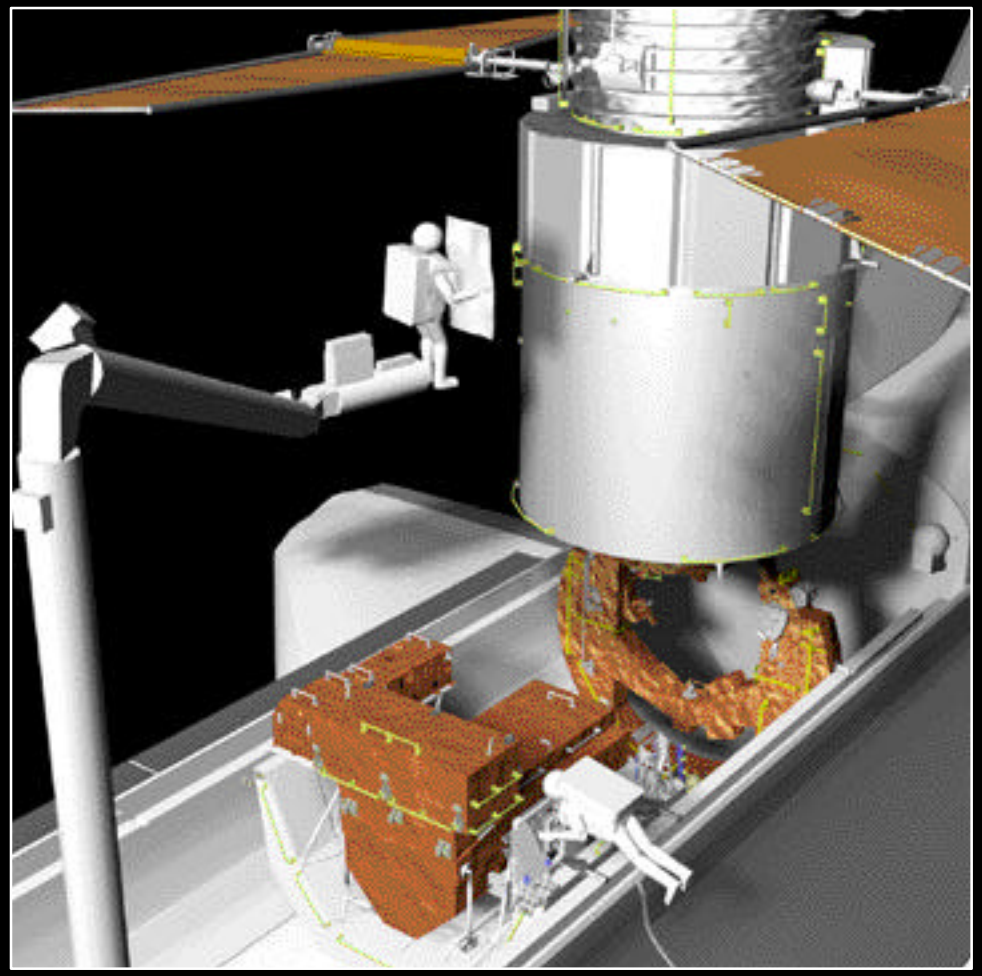
SERVICING MISSION - 3A
NEW OUTER BLANKET LAYER

- Provides optimum thermal properties to equipment bays
- Corrects damage caused by long term space exposure
- Stainless steel foil bonded to frames -Attaches to vent holes with ”bottle stopper plugs”



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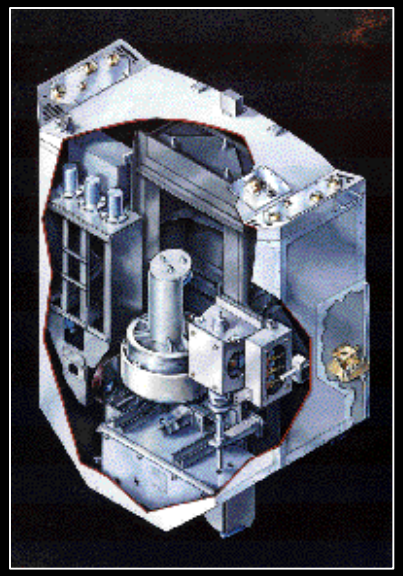
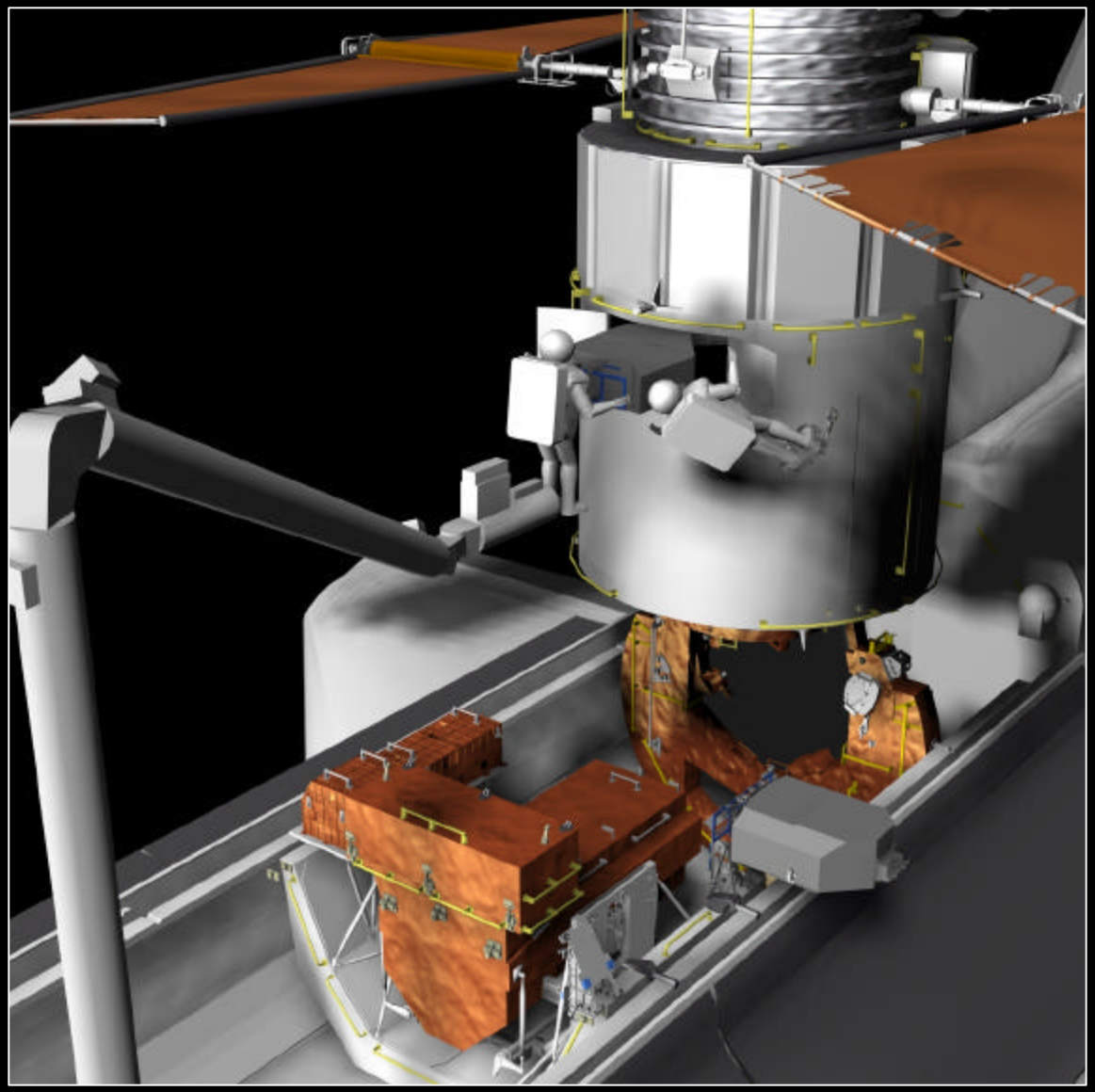
SERVICING MISSION - 3A
FINE GUIDANCE SENSOR-2

- 3 fine guidance sensors used for
  -Fine pointing control
  -Astrometry science
- Replacement unit provides new on-orbit alignment capabilities
- Replaces worn out unit





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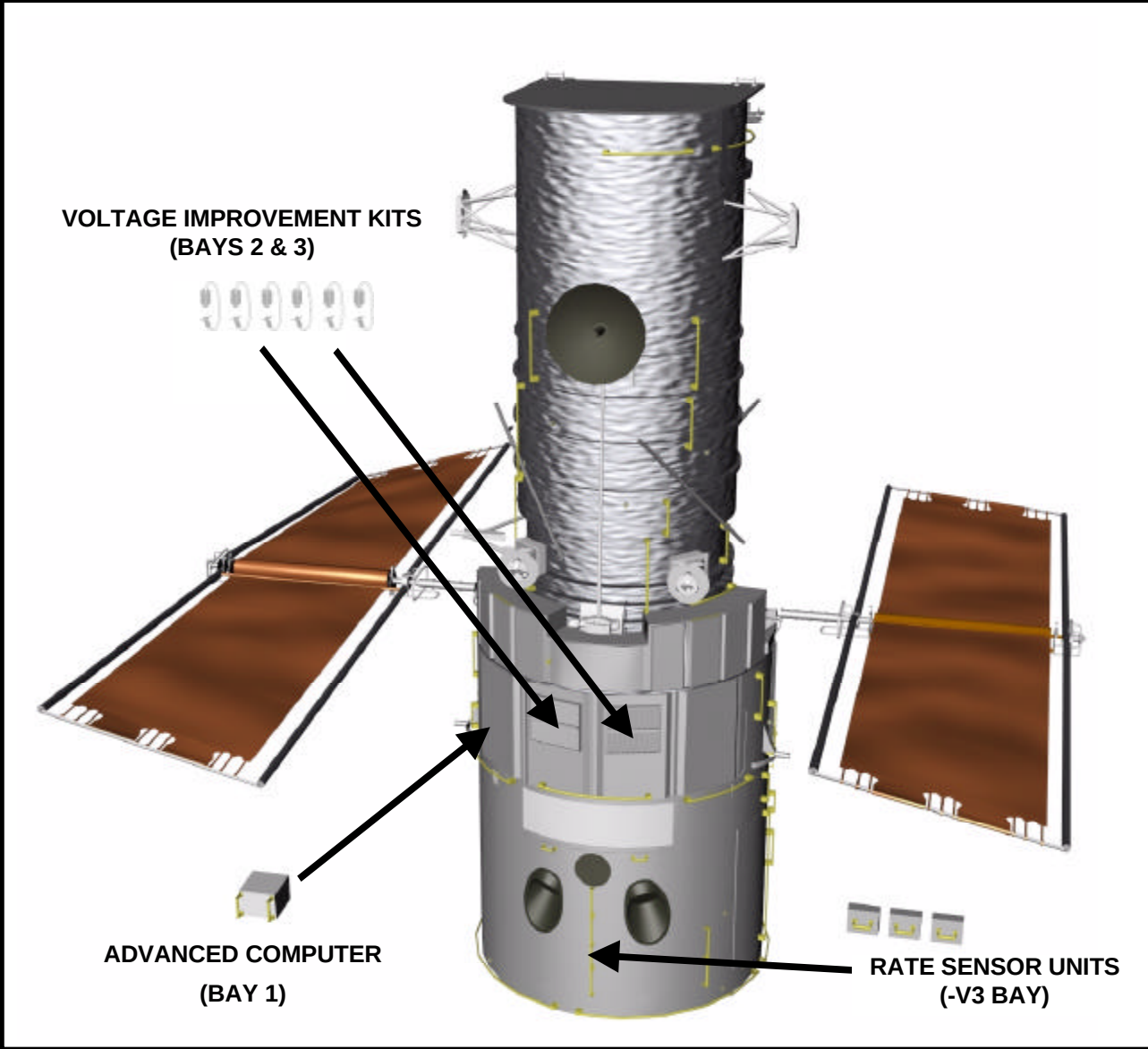
SERVICING MISSION - 3A
ORBITAL REPLACEABLE UNITS
SHADED SIDE (-V3)



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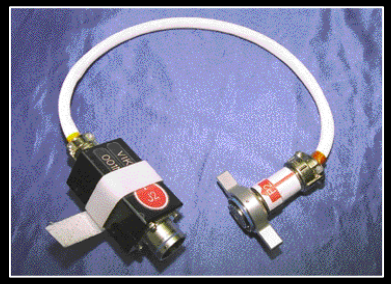
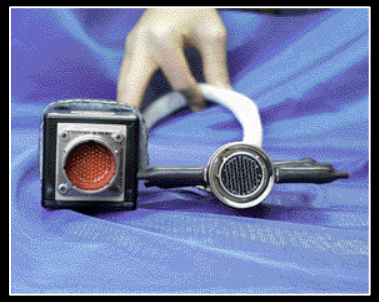
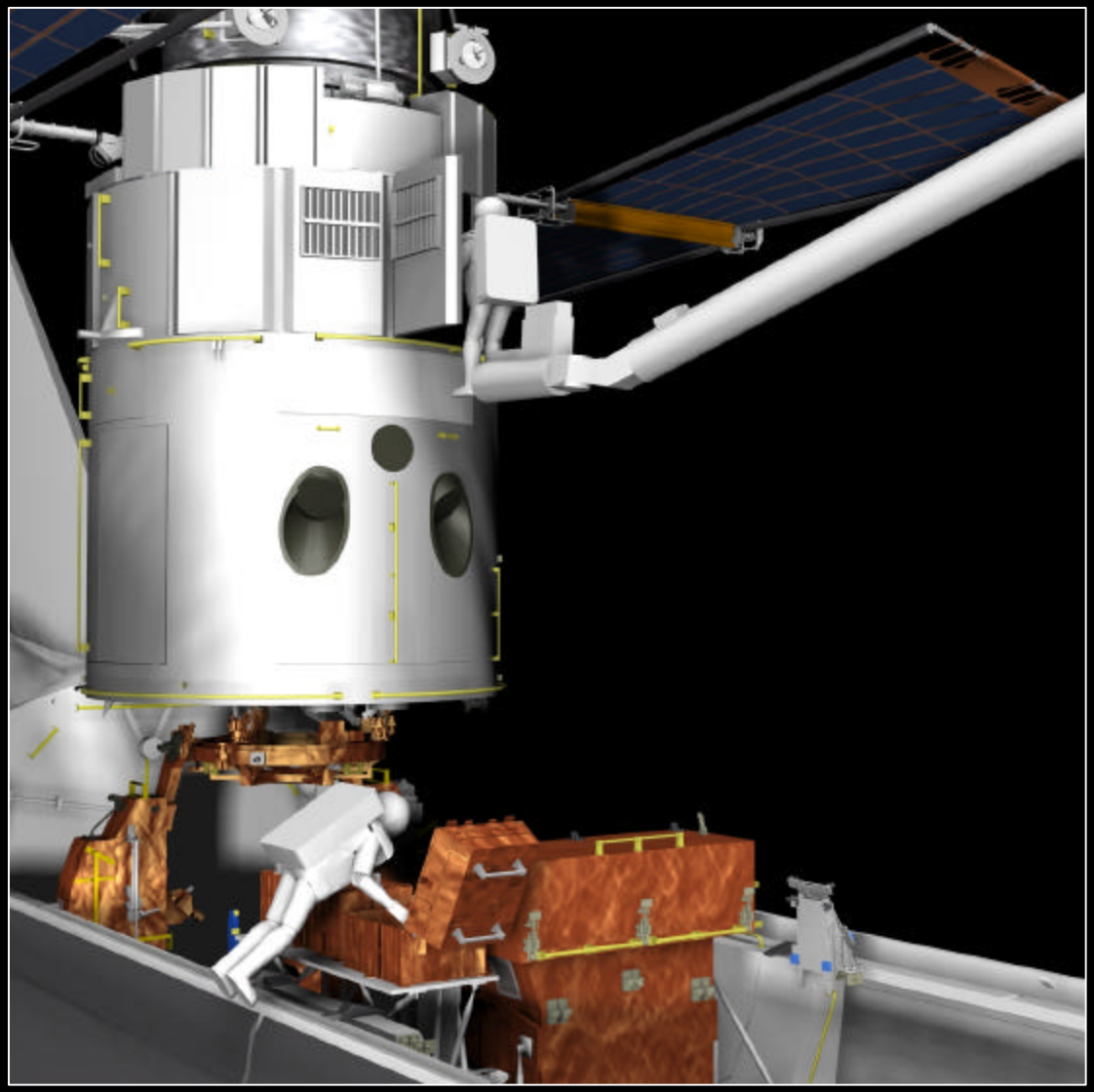
SERVICING MISSION - 3A
VOLTAGE/TEMPERATURE IMPROVEMENT KITs

- 6 batteries power Hubble during orbit night
- 1 VIK per battery for charge control
- Prevents battery overheating







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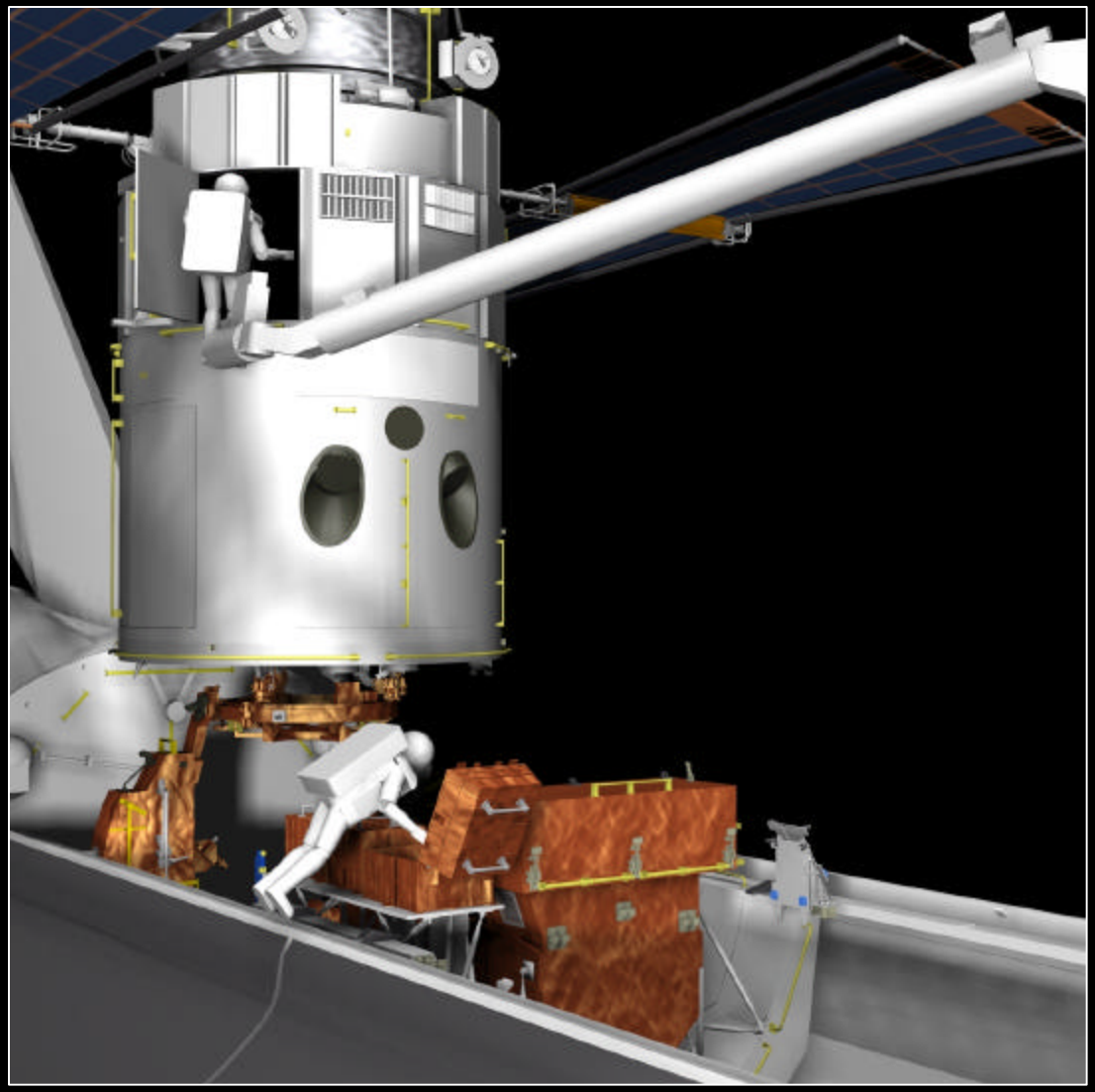
SERVICING MISSION - 3A
ADVANCED COMPUTER

- Advanced radiation hardened system replacing main computer
- Six times the memory and three times the processor speed of existing computer
- Significantly lower operations and software maintenance costs



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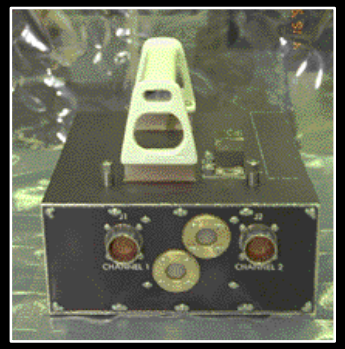
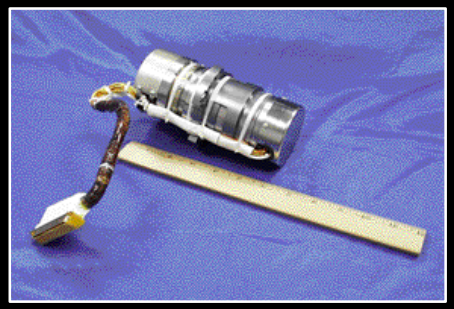
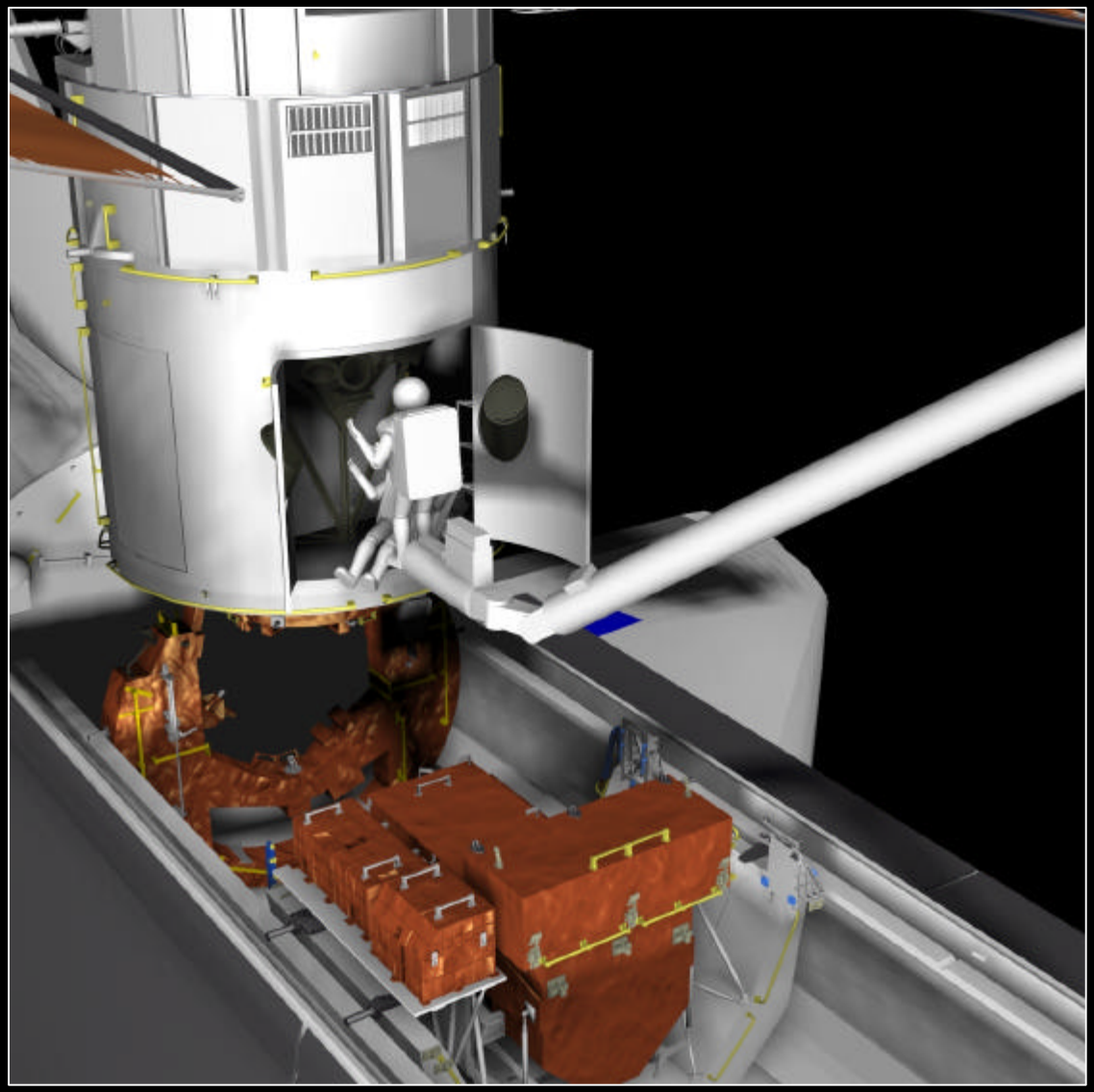
SERVICING MISSION - 3A
RATE SENSOR UNITs

- 3 gyros are required for Hubble's fine pointing, 3 additional gyros provide redundancy
- Hubble gyros are unique low noise, high precision devices
- Each rate sensor unit contains 2 gyros







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