

COMMERCIALY DEVELOPED SPACE FACILITY
BRIEFING
TO
SPACE STATION ADVISORY COMMITTEE

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COMMERCIALLY DEVELOPED SPACE FACILITY (CDSF)

- **GOALS**

- TO ENCOURAGE U.S. DEVELOPMENT, OWNERSHIP, AND OPERATION OF SIGNIFICANT ELEMENTS OF THE SPACE INFRASTRUCTURE
- TO ENCOURAGE PRIVATE SECTOR USE OF SPACE FOR MICROGRAVITY RESEARCH AND MANUFACTURING

- **THE GOVERNMENT WILL COMMIT TO LEASING UP TO 70% OF THE CAPABILITIES OF A CDSF FOR A PERIOD OF FIVE YEARS**

- **THE CDSF WILL BE U.S. OWNED AND OPERATED AS A COMMERCIAL VENTURE, BUT MAY HAVE FOREIGN PARTICIPATION IN DEVELOPMENT (SEE ISSUES)**

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CDSF

OTHER PROGRAM CHARACTERISTICS

- EPC DRIVEN
- COMPETITIVE PROCUREMENT
- NASA IS AGENT FOR GOVERNMENT
- ORIGINALLY SOLE SOURCE
- SEC IS AT MSFC - DOT, DOC, DOD PARTICIPATING
- FACILITY NOT REQUIREMENTS DRIVEN
- SUCCESS CRITERIA IS FULL COMMERCIAL USE
- WAS PERCEIVED AS A THREAT TO SPACE STATION
- NO AGENCY HAS "REQUIREMENTS" BUT WOULD USE IF AVAILABLE
 - FEW UNIQUE USES
 - PAYLOADS COMMON WITH SPACELAB, STATION
 - FREE FLYER MARKET NOT DEVELOPED
- NASA WANTS "NEW MONEY" FOR FUNDING

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CDSF CAPABILITIES

- SUPPORT EXPERIMENT OPERATIONS IN BOTH A CREW OPERATED, SHIRT SLEEVE, ATTACHED-TO-ORBITER MODE AND A PRESSURIZED FREE FLYER
- PROVIDE TO EXPERIMENTS A MINIMUM OF 7 KW AVERAGE POWER
- PROVIDE AT LEAST 300 FT³ OF PRESSURIZABLE VOLUME FOR MOUNTING USER EXPERIMENTS
- OPERATIONS, MAINTENANCE, AND EXPERIMENT INTEGRATION BY OWNER
- PROVIDE A MICROGRAVITY LEVEL OF $1.0 \times 10^{-6}g$ OR BETTER (AT CENTER OF GRAVITY IN FREE FLYER MODE)
- SUPPORT ATTACHED-TO-ORBITER MODE WITH EXTENDED DURATION ORBITER (WHEN AVAILABLE) FOR UP TO 25 DAYS
- FULLY INTEGRATED CDSF DELIVERED IN A SINGLE LAUNCH OF THE SPACE SHUTTLE (OR LAUNCH VEHICLE OF CHOICE)
- REVISIT MISSIONS FOR CDSF SERVICING AND EXPERIMENT SERVICING/CHANGEOUT PERFORMED BY STS
- REVISIT INTERVAL SHALL BE NOT LESS THAN 4-6 MONTHS (6 MONTHS FOR PLANNING)
- CDSF ORBIT SUSTAINABLE FOR UP TO THREE YEARS WITHOUT REVISIT

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STATUS

- **RFP ON HOLD**
 - STUDIES BY NRC AND NAPA REQUESTED BY HOUSE AND SENATE
 - PURCHASE AND LEASE PURCHASE OPTIONS ADDED BY HOUSE
 - HOUSE BILL AUTHORIZES RFP RELEASE BUT REQUIRES APPROVAL OF CONTRACT

- **PROPOSED LEGISLATION PREPARED FOR LEASE FUNDING**

- **LAUNCH COST (\$110M - FY-88 \$) ESTABLISHED**

- **FOREIGN PARTICIPATION LIMITED TO 30% OF DEVELOPMENT COST FOR SUM OF ALL SUBCONTRACTORS FOR LEASE OPTION - FOREIGN PRIME IS AN ISSUE FOR PURCHASE**

- **MICROGRAVITY STRATEGY REPORT IN PREPARATION BY CODE E - DUE IN ABOUT 1 MONTH**

- **IMPACT OF EXTENDED USE ON ORBITER MANIFEST**

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