

International Space Station Management Center (IMC) Daily Summary Report

Increment 13 Stage ULF1.1

08/30/06 16:00 CDT 242/21:00 GMT

New Status:

Flight 12A Status: The current status is that STS-115/Flight 12A will attempt to launch next week. If it launches next week, then 13 Soyuz will launch on September 18th. If it does not launch next week, then the 13 Soyuz launch date will remain September 14th as originally planned.

Docking Compartment (DC)-1 Hydraulic Cooling Loop Connector [ГП] Coolant Leak Status: Regarding this leak that the Commander (CDR) reported yesterday (*see Previous Status below*), today he reported that there was a small amount of coolant leaking from the threads of this connector. Ground specialists believe this is residual coolant still in the line, since the DC-1 cooling loop was shut down yesterday.

ISS Hardware Maintenance: Today Flight Engineer (FE)-2 cleaned the mesh screen of the BT7 fan on the [ГЖТ4] Gas-Liquid Heat Exchanger of the Functional Cargo Block (FGB) Ventilation Subsystem. The Commander (CDR) continued the task of replacing rigid hoses with flexible hoses in the Service Module (SM) Condensate Water Processor [CPBK-2M] that was reported on August 28th, and noted that he took time to label hardware with a black marker in order to assist the next crewmember to perform maintenance in the same area. FE2 also replaced failed light bulbs in EXpedite PROcessing of Experiments to Space Station (EXPRESS) Racks 1, 2, and 4.

Progress (P) Vehicle Cargo Transfers: Today FE-2 continued loading hardware on 21P for disposal and updated the Inventory Management System (IMS) database. The CDR unloaded cargo from 22P that is needed on ISS.

Capillary Flow Experiment (CFE): Today FE-1 performed a test session of the CFE experiment. The objective of the CFE is to continue exploration of fluid interfaces in microgravity. The setup includes unstowing CFE hardware, preparing the Maintenance Work Area (MWA), securing the CFE hardware to the MWA, and positioning the camcorder for videotaping the test runs. All CFE experiments have in common a fluid reservoir and test chamber. In each case, fluid is manually deployed into the test reservoir in order to observe different aspects of capillary flow phenomena. The phenomenon of interest for this experiment concerns the direct measure of the extremes in dynamic behavior expected from silicone oil. The information to be gained is relevant to the design of fluid-bearing systems in which capillary forces predominate, for example in the passive positioning of liquids in spacecraft fuel tanks.

Previous Status (August 29):

Flight 12A Status: Ground teams pressed with the roll back of the Space Shuttle Atlantis to the Vehicle Assembly Building (VAB) due to the weather system Ernesto. After making it halfway back to the VAB, Space Shuttle program managers decided to stop and roll back out to the launch pad due to decreased intensity of Ernesto. Estimated time for the Shuttle to return to the pad is 7:30 pm EDT tonight.

U.S. Laboratory (LAB) Lighting Anomaly: The crew reported that when the master switch was turned on for the US LAB lights, initially only half the lights came on (even lights on starboard, the odd lights on port remained off). After cycling a single light on and subsequently cycling the master switch on, all US Lab lights came on. All lights that initially came on are powered by Direct Current (DC)-to-DC Converter Unit (DDCU) LA1B. The lights that initially did not come on are powered by DDCU LA2B. Ground teams are evaluating the cause of this behavior.

Docking Compartment (DC)-1 Hydraulic Cooling Loop Connector [ГП] Coolant Leak: Today, while the Commander (CDR) was accessing Docking Compartment (DC)-1 panel 301 during a light changeout activity, he reported a leak of yellow-greenish Triol coolant (water with a 30% solution glycerin) behind the panel. The CDR estimated that about 150 grams of the Toxicity Level 0 coolant was sprayed behind the panel, which he cleaned up. After monitoring the area throughout the day, he reported there was no additional leaking, he didn't see any damage, and everything remained dry. Ground specialists are considering flying a replacement pump on 13 Soyuz, but will need to troubleshoot this anomaly further before coming to this decision, including analyzing photos to be downlinked from the crew. For the time being, the DC-1 cooling loop has been shut down to prevent further leakage.

Inter-Module Ventilation (IMV) Flow Measurements: Today the crew performed a three part procedure to take IMV flow measurements to ensure proper air flow is maintained between the Russian and US segments. The first part, the Micropurification Unit [БМП] check, is to verify accuracy of the Lab Diffuser measurements. The second IMV Flow measurement was with the Lab Aft Port IMV deactivated to determine the IMV Flow between the Russian

and US segments with only the Node 1 IMV Aft Port IMV Fan operating. The third IMV Flow measurement was with the Node 1 Aft Port IMV deactivated to determine the IMV Flow between the Russian and US segments with only the LAB IMV Aft Port IMV Fan activated. The purpose of these measurements is to gather data for the 12A.1 mission configuration.

Today's Planned Tasks

- INFRASOUND-SDTO 15001R. Fan testing at ББПк location. / r/g 3565 **[Complete]**
- Cleaning BT-7 screen on ГЖТ44 **[Complete]**
- Making ALTEA directory list **[Complete]**
- Replacing A-B hoses and adapters in CPBK-2M system / r/g 3567 **[Complete]**
- Loading hardware on Progress 356 for disposal and IMS update / r/g 3355 **[Complete]**
- Transfer RS noise level data to MEC / r/g 3565 **[Complete]**
- Equipment setup for Capillary Flow experiment. **[Complete]**
- Sound meter closeout ops / r/g 3565 **[Complete]**
- Study of cardiac bioelectric activity at rest **[Complete]**
- PAYLOAD SERVER (БСПН). Synchronization / r/g 2822 **[Complete]**
- Scheduled inspection of RED **[Complete]**
- On MCC Go ISS O2 repress from Progress 356 CpПK (start)
- Test ops on contact line 1 in Capillary Flow experiment **[Complete]**
- Progress 357 unloading and IMS updates / r/g 3384 **[Complete]**
- ISS O2 repress from Progress 356 CpПK (terminate)
- COЖ maintenance **[Complete]**
- EXPRESS Rack 1, 2, & 4 failed lamp R&R **[Complete]**
- Capillary Flow experiment equipment setup teardown. **[Complete]**
- Questionnaire – Journal's entry (FE-1) **[Complete]**
- IMS update **[Complete]**
- Transferring TVIS, RED, and HRM data to MEC **[Complete]**

Ground

- Nominal commanding

Task List

- CEO Ops
- PLANTS-2. Experiment start / r/g 3564
- PLANTS-2. Payload status check / Bioexperiments [БЭ], item 5.14, steps 3-7, p. 5-28X
- 12A Prepack
- TVIS - Lubricating Top and Bottom Assemblies
- Node 1 Smoke Detector 2 Cleaning
- SEM-P/L-VIDEO
- SEM-VIDEO-S/U

Three-Day Look Ahead:

- **Thursday, GMT 243** – PC ISS Plug inventory, TVIS Monthly Maintenance, CARDIOCOG
- **Friday, GMT 244** – MSG Seal Testing, SEM Video and Student Questions
- **Saturday, GMT 245** – Weekend activities

QUICK ISS Status:

Environmental Control Group:

Elektron: ON Vozdukh: Manual MCA: ON. CDRA: ON CKB-1 is OFF; CKB-2 is ON

Updated: GMT 242:19:30	Pressure (mmHg)	Temp. (deg C)	ppO ₂ (mmHg)	ppCO ₂ (mmHg)
SM Working Compartment (PO)	734	25.7	159.7*	5.4
SM Transfer Compartment (ПхО)	743	20.5	N/A	N/A
FGB (ПГО)	736	L**	N/A	N/A
Node 1	735.62	Shell – 22.7	167.6	3.9

Joint Airlock (Eq. Lock)	737.44	23.9	N/A	N/A
U.S. Lab	737.24	22.8	N/A	N/A

N/A = Data not available

* SM Gas Analyzer readings are not considered reliable.

** This value is not currently considered reliable.

Meeting Schedule:

MEETING NAME	DAY	TIME	LOCATION
IMMT	8/31/06	8:00 am CDT	Action Center

Information on MER ARTs/FITs can be found at:

http://iss-www.jsc.nasa.gov/cgi-bin/bbtools/org/calendar.cfm?org_id=SEDATA&class_id=142

Common ISS English Acronyms

ARCU - American to Russian Converter Unit
 AL - Joint Airlock
 BCDU - Battery Charge/Discharge Unit
 BGA - Beta Gimbals Assembly
 BMRRM - Bearing, Motor, Roll Ring Module
 CBOSS - Cellular Biotechnology Operations Support System
 CCAA - Common Cabin Air Assembly
 CDRA - Carbon Dioxide Removal Assembly
 CDR - Commander (ISS)
 CEVIS - Cycle Ergo meter with Vibration Isolation System
 CHeCS - Crew Health Care System
 CMG - Control Moment Gyroscope
 CSA-CP - Compound Specific Analyzer - Combustion Products
 CSLM - Coarsening of Solid Liquid Mixtures Payload
 CTB - Crew Transfer Bag
 CWC - Contingency Water Container
 DC-1 - Docking Compartment 1
 DOUG - Dynamic Onboard Ubiquitous Graphics
 DPC - Daily Planning Conference
 EMU - Extravehicular Mobility Unit
 ETVCG - External Television Camera Group
 EVA - Extra Vehicular Activity
 FDI - Fluid Dynamics Investigations
 FE-1 - Flight Engineer 1
 FFQ - Food Frequency Questionnaire
 FGB - Functional Cargo Block
 GN&C - Guidance, Navigation & Control
 GGR&C - Generic Groundrules, Requirements, and Constraints
 HRF - Human Research Facility
 ICU - Interim Control Unit
 IFM - In-Flight Maintenance
 IMCA - Integrated Motor Controller Assemblies
 IMMT - ISS Mission Management Team
 IMS - Inventory Management System
 IMV - Intramodule Ventilation
 InSPACE - Investigating the Structure of Paramagnetic Aggregates from Colloidal Emulsions Payload
 ISS - International Space Station

ITCS - Internal Thermal Control System
 LEE - Latching End Effector
 LHA - Light Housing Assembly
 LTL - Low Temperature Loop (Cooling)
 LVLH - Local Vertical, Local Horizontal
 MBS - Mobile Remote Servicer (MRS) Base System
 MCC-H - Mission Control Center Houston
 MCC-M - Mission Control Center Moscow
 MDM - Multiplexer/Demultiplexer
 MEC - Medical Equipment Computer
 mmHg - millimeters of mercury (pressure)
 MSG - Microgravity Science Glovebox
 MSS - Mobile Servicing System
 MTL - Moderate Temperature Loop (Cooling)
 NGL - Next Generation Laptop
 OBT - On Board Training
 PBA - Portable Breathing Apparatus
 PCMCIA - Portable Computer Memory Card International Adapter
 PCS - Portable Computer System
 PDGF - Power and Data Grapple Fixture
 PFC - Private Family Conference
 PFE - Portable Fire Extinguisher
 PHS - Periodic Health Status
 PMC - Private Medical Conference
 ppCO₂ - Partial Pressure of carbon dioxide
 ppO₂ - Partial Pressure of oxygen
 PWR - Potable Water Reservoir
 QD - Quick Disconnect
 R&R - Removal and Replacement
 RBVM - Radiator Beam Valve Module
 RED - Resistive Exercise Device
 RIC - Rack Interface Controller
 RPC - Remote Power Controller
 RPCM - Remote Power Control Mechanism
 SAMS - Station Acceleration Measurement System
 SFOG - Solid Fuel Oxygen Generator
 SchRED - Schwinn Resistive Exercise Device
 SCU - Sync and Control Unit
 SM - Service Module
 SSC - Station Support Computer
 SVS - Space Vision System
 SSRMS - Space Station Remote Manipulator System
 TeSS - Temporary Sleep Station
 TUS - Trailing Umbilical System

TVIS - Treadmill with Vibration Isolation System
UOP - Utility Outlet Panel
UMA - Umbilical Mating Assembly
VOA - Volatile Organics Analyzer
WPC - Weekly Planning Conference
XPOP - X-Axis Perpendicular to the Orbital Plane
XVV - X-Axis into the Velocity Vector
YVV - Y-Axis into the Velocity Vector

Common ISS Cyrillic Acronyms

ACU - SM Toilet
CBO-3B - Water Storage System (aka 'SVO-ZV')
CKB - SM Air Conditioner System (aka 'SKV')
COЖ - SM Life Support System (aka 'SOJ')
COГC - SM Atmosphere Revitalization System
COTP - SM Thermal Control System
CHT - American to Russian Converter Unit
СУДН - SM Motion Control and Navigation System
CPBK - SM Condensate Water Processor (aka 'SRVK')
БИТС - SM Onboard Telemetry Measurement System
BBC - SM Onboard Computer System
БМП - Micropurification Unit
БРПК - SM Condensate Separation & Pumping Unit
БСММ - Блок системной и мультиплексной
БЖ – Elektron Liquid Unit
магистралей - System and Multiplex Line Unit
КОБ – Internal Heating Loop
КЦП - Central Post Computer
ТВС - SM Television System
ТВМ - SM Terminal Computer
СТТС - SM Communication System
СУБА - SM Onboard Equipment Control System
ЦВМ - SM Central Computer
МО - Russian Medical Operations
ТОРУ - Teleoperator Control System (aka 'TORU')
КУРС - Radio Rendezvous System (aka 'KURS')
ЕДВ - Water Container (aka 'EDV')
ТТК - Solid Fuel Oxygen Generator (aka 'SFOG')