IMC Daily Summary Report
Increment 10 Stage 16P
02/14/05 16:00 CDT (045/2200 GMT)

Current Status:

Service Module Toilet (ACY): Following the Service Module Toilet (ACY) removal and replacement of the pre-treat container on Friday, February 11, the crew reported that a chemical reaction within the toilet system was generating heat. Troubleshooting showed that the pre-treat had contaminated components of the system. All of the toilet components were changed out over the weekend and the system is now operating nominally. All contaminated components were triple bagged and placed in 16P. MCC-M has not established a root cause but is planning to gather more data by simulating the failure using ground equipment. An expected due date for an ACY report is two weeks. MCC-M is also reviewing the status of ACY spares and their possible manifest on 17P. The crew tested air samples today in the vicinity of the toilet to look for the presence of ammonia and formaldehyde. The crew called down that sampling indicated no ammonia or formaldehyde in the atmosphere as a result of the ACY activities this weekend.

Treadmill with Vibration Isolation and Stabilization (TVIS) 6-Month Maintenance and Periodic Chassis Inspection - Part 1: Today the crew started the nominal 6-month maintenance of the TVIS and chassis inspection. The TVIS was powered down and removed from the TVIS "pit" in order to perform the inspections. Inspection for wear of several of the internal components were completed including the Gyroscope Wire Ropes, belts, rollers, cables and inlet/outlet screens. The preliminary data indicates that inspections of the chassis were nominal and the components are in good shape. The crew temporarily stowed the TVIS in the Service Module "pit" overnight to maintain proper cabin airflow and to protect the hardware. This activity will continue tomorrow with the planned 6-month maintenance including lubricating components, checking for damage, cleaning screens and checking for loose fasteners.

P6 Battery Set 4B3 Reconditioning: The ground began battery reconditioning on battery set 4B3. The reconditioning will take approximately one week to complete and will require no crew actions. Reconditioning the batteries improves battery performance and also allows insight into data that helps assess battery health. During this activity, BCDU 4B3 will be off line and the 4B power channel will be supported in eclipse by the other two Battery Charge Discharge Units (BCDUs). During these activities, power loads on the affected channel have been managed at reduced levels. This is the third battery set out of 6 to be reconditioned. Battery set 4B1 was completed on January 10, and 4B2 in November 2004.

Russian Payload Pilot: The crew performed the medical experiment Pilot today. The crew located, installed and setup the hardware per procedure. Through a computer model, the crew simulated the capture of free-flying objects utilizing a mockup of the hand controllers used for SSRMS. The crew selected progressively more complex tasks starting with fixed free flyer and moving up to fast free flyer computer models. The purpose of the experiment is to examine the state of psychophysiological performance during long space flights.

ISS Oxygen Repress: A planned repress from the Progress 16 oxygen tanks was performed today. The repress increased the ISS pressure by 8mmHg and utilized approximately 10 lbs of oxygen from the tanks. The plan is to utilize all of the oxygen in the Progress 16 tanks prior to undocking of 16P, currently scheduled for February 26. The Elektron has been deactivated to support this plan and is expected to remain deactivated until early March.

Previous Status (February 11):

Advanced Diagnostic Ultrasound in Microgravity (ADUM) Scan: The crew performed telescience operations this week, successfully completing abdominal and bone ultrasound scans. During the abdominal scan, the crew also practiced as if a medical contingency had occurred and the subject was incapacitated. During the bone scans, the crewmembers took turns as the operator and subject. All activities were completed nominally, and images were downlinked for realtime evaluation by ground specialists.

Russian Segment (RS) ATV Global Positioning System (GPS): The final portion of the ATV GPS Intravehicular Activities (IVA) assembly activities were completed when the GPS hardware (ACH-M) was connected to the data storage and telemetry system hardware [СБИ]. Four GPS antennae are currently installed externally on the Service Module, two of the four are not functional. Testing is scheduled to start next week using

the two functional ACH-M antennas. During the Russian EVA13 scheduled for March 25, 2005, two additional antennae will be installed externally completing the installation of the GPS system.

Station Remote Manipulator System (SSRMS) Robotics Proficiency Operations: The crew performed SSRMS proficiency operations this week. The activity was also designed to troubleshoot the "sticky grapple fixture" problem that has been observed numerous times in the past. The crew maneuvered the SSRMS to a Lab Flight Releasable Grapple Fixture (FRGF), and grappled it with the end effector of the SSRMS. They then successfully released the FRGF and backed out the end effector using a special dither technique with the wrist roll joint to counteract the loads-and-friction-induced sticking phenomenon. At the completion of the activity, the SSRMS was maneuvered back to the original position.

RS Metabolic Waste System [АСУ] (Toilet) Maintenance: A pre-treat container [E-K] and associated hoses in the toilet were replaced and the system functionally tested. The pre-treat container stores a solution for treatment and proper processing of metabolic waste. This equipment is replaced when it reaches the end of its service life.

Today's Planned Tasks

- Turn off TVIS circuit breaker **[Complete]**
- TVIS: semi-annual maintenance, frame inspection, part 1 **[Complete]**
- Calldown TEPC display data **[Complete]**
- PILOT. Maintenance work area set up. Tagup w/specialists (S-band) / r/g 9813 **[Complete]**
- PILOT. Experiment ops. Tagup w/specialists (S-band) / r/g 9813 **[Complete]**
- HAM radio set up **[Complete]**
- HAM radio pass **[Complete]**
- Microbial analysis T + 5 **[Complete]**
- PILOT. Maintenance work area disassembly / r/g 9813 **[Complete]**
- On MCC GO: ISS repress with O2 from СрПК in Progress 351 (start) **[Complete]**
- СОЖ maintenance **[Complete]**
- ISS repress with O2 from СрПК in Progress 351 (finish) **[Complete]**
- TVIS/RED/HRM data transfer to MEC **[Complete]**
- Private family conference (Ku+S-band) **[Complete]**
- Collect air samples via draeger tubes **[Complete]**

Ground

- Nominal payload commanding
- P6 Battery Set 4B3 Reconditioning **[In Work]**

Task List

- POC Master CD List Update
- Node 1 Smoke Detector 2 Cleaning – all
- UOP4 LOAD T/S
- Investigate failure of GLAs NOD1PD2, LAB1OS4, and LAB1OS1.
- SSC Shell Conversion to a PCS
- Collect outdated SODF per message.
- Install PUL on UOP 4
- Journals CDR Entry **[Complete]**
- MSG Rack/Hardware Audit and Reconfiguration
- PCS Hard Drive Ghost Image
- POC Master CD List UpdateA31P Shell Troubleshooting

Three-Day Look Ahead:

Tuesday, GMT 046 – MO7&8, TVIS 6 month maintenance part 2, Velo test (FE-1), PMC (CDR / FE-1), OOHA (CDR)

Wednesday, GMT 047 – Reboost at 047/01:22, A/L audit, Diatomeya, 16P prepack, ADUM conference (FE-1)

Thursday, GMT 048 – Reflotron, Smoke Detector cleaning, Fire OBT, Hatch Seal inspection, UOP4 troubleshooting

QUICK ISS Status:

Environmental Control Group:
Elektron is OFF. Vozdukh is ON. MCA is in Operational Mode
CKB-1 is OFF. CKB-2 is ON.

Updated: GMT 045/21:38	**Pressure (mmHg)**	**Temp. (deg C)**	**ppO_2 (mmHg)**	**$ppCO_2$ (mmHg)**
SM Working Compartment (*РО*)	753	26.5	157.1*	3.4*
SM Transfer Compartment (*ПхО*)	752	20.3	N/A	N/A
FGB (*ПГО*)	756	23.3	N/A	N/A
Node 1	748.34	22.9 (shell)	N/A	N/A
U.S. Lab	750.27	20.3	165.2	4.2
Joint Airlock (Eq. Lock)	750.47	25.0	N/A	N/A

N/A = Data not available

*SM Gas Analyzer is not calibrated, and readings are not reliable.

Electrical Power Group:
Both BGAs 2B and 4B are in Autotrack.
FGB Battery #5 is off. All other FGB Batteries are on. None are cycling
All SM batteries are on. None are cycling.

Meeting Schedule:

MEETING NAME	**DAY**	**TIME**	**WHERE**
IMMT	02/17/05	Cancelled due to 17P SORR	
17P SORR	02/17/05	05:00	Blg 1 Room 966

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
BDCU - Battery Charge/Discharge Unit
BGA - Beta Gimble 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 Ergometer 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 - Extravehiclular 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
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
PPL - Pre-Positioned Load (in EEPROM memory)
ppO2 - Partial Pressure of oxygen
QD - Quick Disconnect
R&R - Removal and Replacement
RBVM - Radiator Beam Valve Module
RED - Resistive Exercise Device
RIC - Rack Interface 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
АСУ - SM Toilet
СВО-ЗВ - Water Storage System (aka 'SVO-ZV')
СКВ - SM Air Conditioner System (aka 'SKV')
СОЖ - SM Life Support System (aka 'SOJ')
СОГС - SM Atmosphere Revitalization System
СОТР - SM Thermal Control System
СНТ - American to Russian Converter Unit
СУДН - SM Motion Control and Navigation System
СРВК - SM Condensate Water Processor (aka 'SRVK')
БИТС - SM Onboard Telemetry Measurement System
БВС - SM Onboard Computer System
БМП - Micropurification Unit
БРПК - SM Condensate Separation and Pumping Unit
БСММ - Блок системной и мультиплексной магистрали - 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')
ТГК - Solid Fuel Oxygen Generator (aka 'SFOG')