ISS Monthly Program Review

April 11, 2003

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ISS Monthly Program Review
(IMPR)

April 11, 2003 1:00 p.m.

Bldg. 4S, Rm. **4419** Overflow Room **4802**

Meeting Chair: **Mr. William Gerstenmaier**

TIME	TOPIC FOR DISCUSSION	PRESENTER
1:00	**Opening Remarks and Introduction**	OA/Bill Gerstenmaier
	Performance Indicators	
1:05	▪ Key Program Performance Indicators (KPPI)	OG/Richard Fox
1:25	▪ Management Level Proprietary Performance Indicators (MLPI)	OG/Richard Fox
	Schedules and Issues**	
1:45	▪ Schedules Summary (Last Month, This Month)	OM/Ken Martindale
1:50	▪ Integrated Assessment	Boeing/David Bethay
1:55	▪ Software Performance to Plans	Boeing/Ric Miles
2:00	**Increment 6 Schedules/Issues**	NASA/Missy Gard
2:05	**Increment 7 Schedules/Issues**	NASA/Merri Sanchez
2:10	**6S Schedules**	NASA/Hoy, Boeing/Gonzales
2:15	**11P Schedules**	NASA/Mike Hoy
2:20	▪ Flight ULF-1 Status	NASA/Booker, Boeing/Barner
2:25	▪ Flight 12A Status	NASA/Brasseaux Boeing/Hammitt
2:30	**Increment 8 Schedules/Issues**	NASA/Ryan Prouty
2:35	▪ Flight 12A.1 Status	NASA/Sharon Castle
2:40	▪ Flight 13A Status	NASA/Ben Sellari, Boeing/Dave Manser
2:45	▪ Flight 13A.1 Status	NASA/Monica Jordan
2:50	**Increment 9 Schedules/Issues**	NASA/Ryan Prouty
2:55	▪ Flight 15A Status	NASA/Torcivia, Boeing/Grebel
3:00	▪ Flight 10A Status	Boeing/Mike Nowak
3:05	**Action Item Review**	OA/Bill Gerstenmaier
3:10	**Adjourn**	

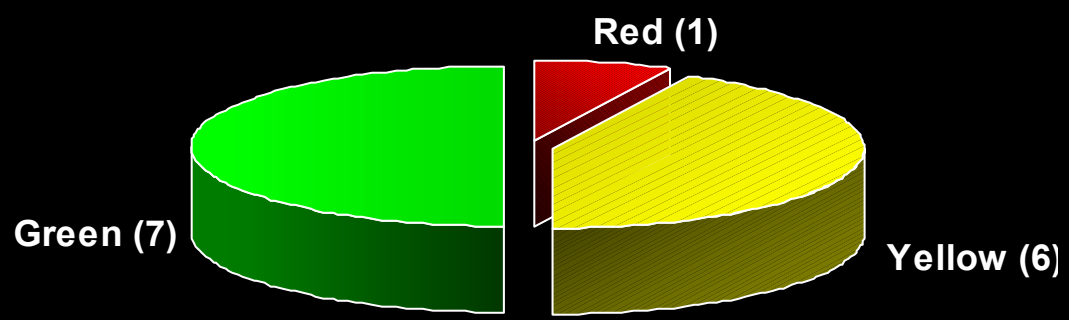
** Schedules and Issues status to Include Flight Summary Schedule, Health Summary, LPM Schedules/Issues, Open Paper Burndown, and EVA Status)

For More Information, Contact:
Heather Q. Monahan 281-244-8369
Erin Cotten 281-226-4519

Key Program Performance Indicators

April 11, 2003

Current Status	Last Status	Ref #	KPPI	POC	ORG
		1	ISS Impact of Columbia Tragedy Groundrules	Gerstenmaier	OA
R	R	2	Special Topic: Node 2 Development Status	Porter	OB
Y	Y	3	Program Risk	Holsomback	OE
Y	Y	4	Assembly Sequence Critical Path Assessment	Geyer	OM
Y	G	5	Research	Roe	OZ
Y	G	6	Special Topic: Prime Contractor Redeployment - Plan vs. Actual	Waddell	OG
Y	Y	7	Ops / On-Orbit Resources	Creasy	OC
Y	Y	8	International Partners	Bennett	OI
G	Y	9	Flight Readiness	Creasy	OC
G	G	10	Performance Measurement	Waddell	OG
G	G	11	Workforce	Waddell	OG
G	G	12	On-Orbit Status	Porter	OB
G	G	13	Programmatic Budget	Waddell	OG
G	G	14	Special Topic: Contract Strategy Implementation - Milestones vs. Pl	Waddell	OG
G	G	15	Safety	Holsomback	OE



ISS IMPACT OF COLUMBIA TRAGEDY GROUNDRULES

AS OF 3/14/2003 **ORG** OA **POC** Gerstenmaier

STATUS SUMMARY

Status listed as Red as placeholder only. This Performance Indicator is informative - to provide groundrules for metrics and establish commonality in reporting. No metrics are included in this indicator.

DESCRIPTOR

The Columbia Groundrules and Assumptions Performance Indicator provides the current groundrules and assumptions from which all PI's (KPPI and MLPI) report.

Columbia Impact: Groundrules and Assumptions

All program metrics are being measured against these groundrules and assumptions as of 4/01/03. The Plans below are for planning purposes within the ISSP only – As they are modified, this page will be changed accordingly.

- Make no significant changes in ISS implementation (at least not until flight date is known)
  - Hold schedule for active development tasks (avoid deferral penalty)
  - Reevaluate new development and new spares planning
  - Reevaluate planned manpower reductions for sustaining/operational areas
- Station will resume flight rate upon launch of ULF 1
- Station will remain manned (2 - 3 crew during delay, 3 crew after) and will perform critical EVAs
  - Assume SSCB recommended Progress flight schedule: one additional Progress vehicle in FY03 and one additional Progress vehicle in FY04
- Use the planning dates below for metric reporting

	Launch Date From:		Launch Date To:
Flight	Baseline	Interim Planning	NASA Planning
ULF1	3/1/03	NET 7/21/03	NET 7/21/03
12A	5/23/03	NET 8/1/03	NET 8/21/03
12A.1	7/24/03	NET 8/28/03	NET 12/18/03
13A	10/2/03	10/2/03	NET 1/22/04
13A.1	11/13/03	NET 1/14/04	NET 5/6/04
15A	1/15/04	1/15/04	NET 6/10/04
10A	2/19/04	2/19/04	NET 9/23/04
ULF2	7/29/04	7/29/04	To Be Reviewed

Soyuz/Progress Near-Term Dates

Flight	Date
6S	4/26/03
11P	6/8/03

	Orbiter From:	Orbiter To:
13A.1	OV-102	(TBD)
10A	OV-105	(TBD)

Barry Waddell
281-244-7141

Special Topic: Node 2 Development Status

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Key Program Performance Indicator	R	OB	Porter	4/11/03

DESCRIPTOR

The Node 2 Development Status Special Topic allows the Program to assess its performance relative to the development of Node 2 baseline schedule.

STATUS DETAIL

A threat still remains to maintaining Node 2 delivery schedule. Alenia has a significant amount of assembly and installation remaining on COP's and MDPS. Some analytical data remains outstanding. FAR board occurred for 4/04. List of open work and traveled work is being compiled. Pre-ship Review will occur ship date – 4days and must determine closure of the constraint items. New planned ship date is 5/31/03 with 6/1/03 as the new on-dock at KSC. If Alenia demonstrates good progress in meeting its new schedule the Performance Indicator can be brought down to yellow at the next meeting.

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

Node 2 Trend Chart

Message

- Working 19 Dec 02 NASA / RSA / ASI Action Plan to evaluate ECP Fiscal Responsibility.

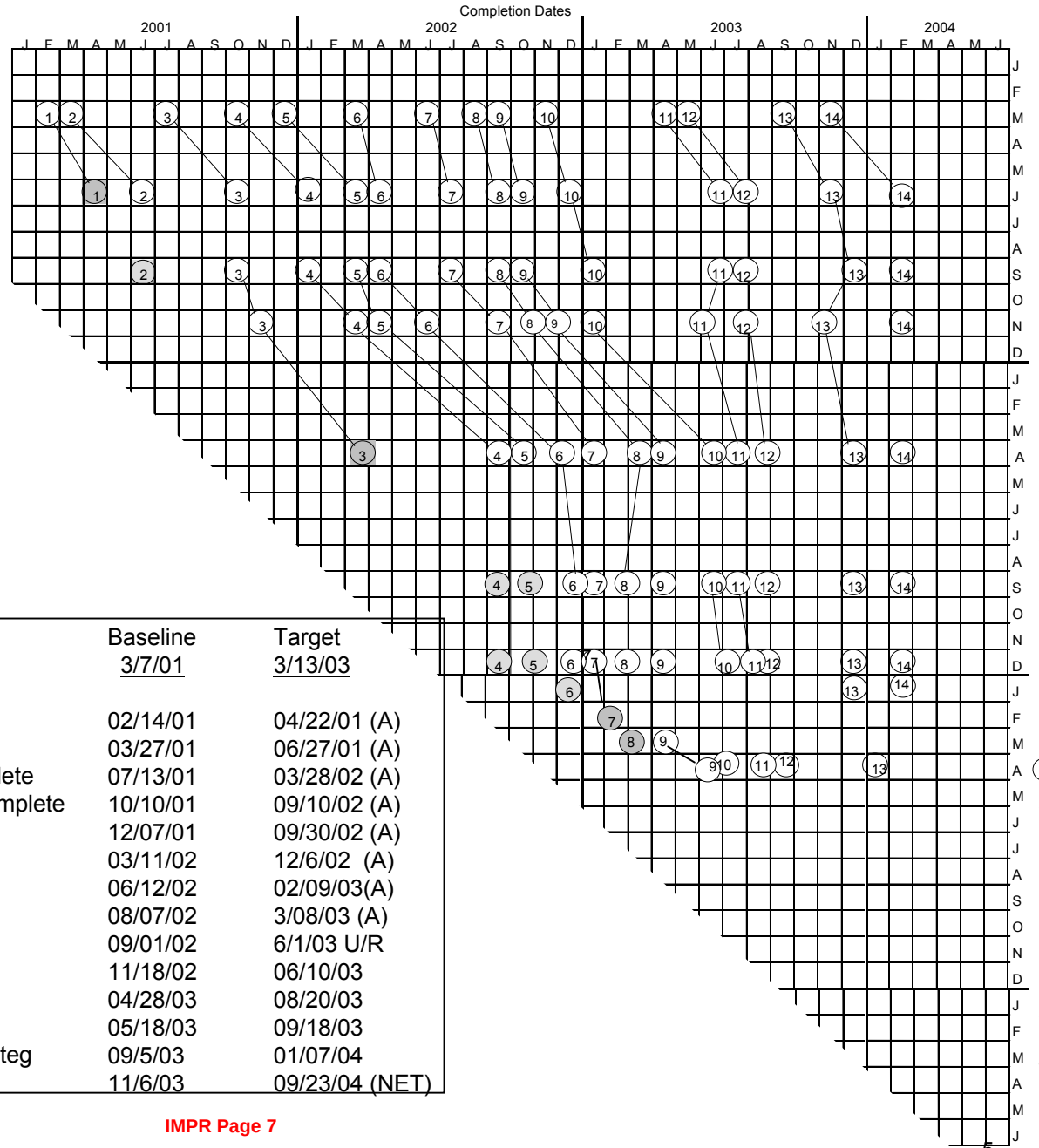
-Contract mod for ECP payment signed week of 13 January.

- Nickel seals replacement on track.

-COP installation remains a major threat to schedule. Awaiting final bracket deliveries.

-Acoustic test completed. Only illumination test remaining.

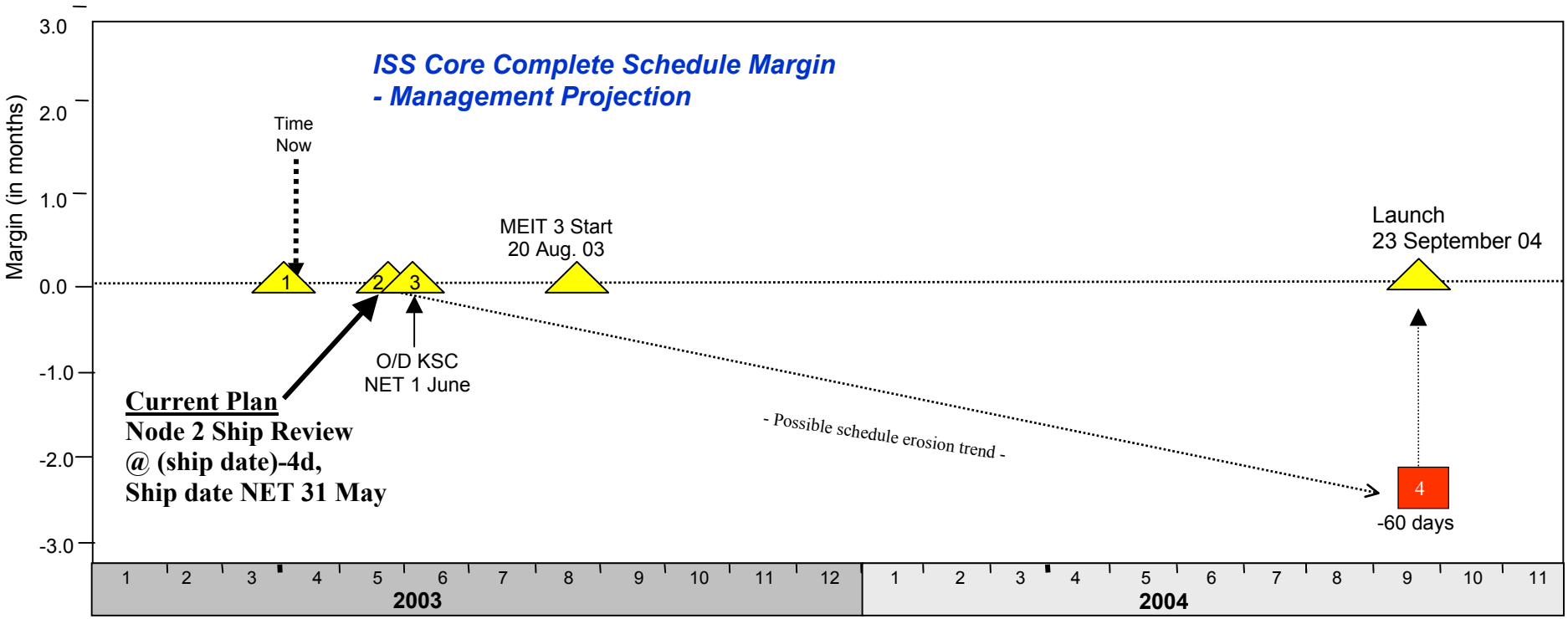
-New planned ship date is 5/31/03. FAR board occurred on 4/04. Open work and traveled work list being compiled. Pre-ship Review to occur ship date – 4 days. ARB two weeks after on dock at KSC.



ID	Milestone	Baseline 3/7/01	Target 3/13/03
1	N2 Struct Assy complete	02/14/01	04/22/01 (A)
2	N2 Proof Pressure complete	03/27/01	06/27/01 (A)
3	N2 Sec Str Inst/Modal Survey/Cleanup complete	07/13/01	03/28/02 (A)
4	N2 Harness, Piping, Htrs Accommodation complete	10/10/01	09/10/02 (A)
5	N2 Starboard Rack I&T complete	12/07/01	09/30/02 (A)
6	N2 SW I&T complete	03/11/02	12/6/02 (A)
7	N2 ACBM End to End Test complete	06/12/02	02/09/03(A)
8	N2 HSI (NASA) complete	08/07/02	3/08/03 (A)
9	N2 O/D KSC	09/01/02	6/1/03 U/R
10	N2 PDI/OOCT complete	11/18/02	06/10/03
11	N2 IST complete / Ready for MEIT III	04/28/03	08/20/03
12	MEIT III complete	05/18/03	09/18/03
13	N2 Closeouts complete / Ready for Shuttle Integ	09/5/03	01/07/04
14	Launch 10A	11/6/03	09/23/04 (NET)

Last Update: 4/9/03 (OWNER: STEVE PORTER)

ISS Schedule Reserve



1. • ***FAR was held on 4 April.***
2. • ***Node 2 Shipping Review to be held on [(ship-date)-4d]***
3. • ***Delivery and installation of MMOD panels and COP now driving critical path.***
   - ***KSC working most efficient schedule for processing NET but keeping MEIT commitments.***

ISS Management Options to Recover Future Schedule Delays

4 • KSC schedule being reviewed for least cost options consistent with LP/OA NET launch dates.
- Multiple weeks of recovery options available.

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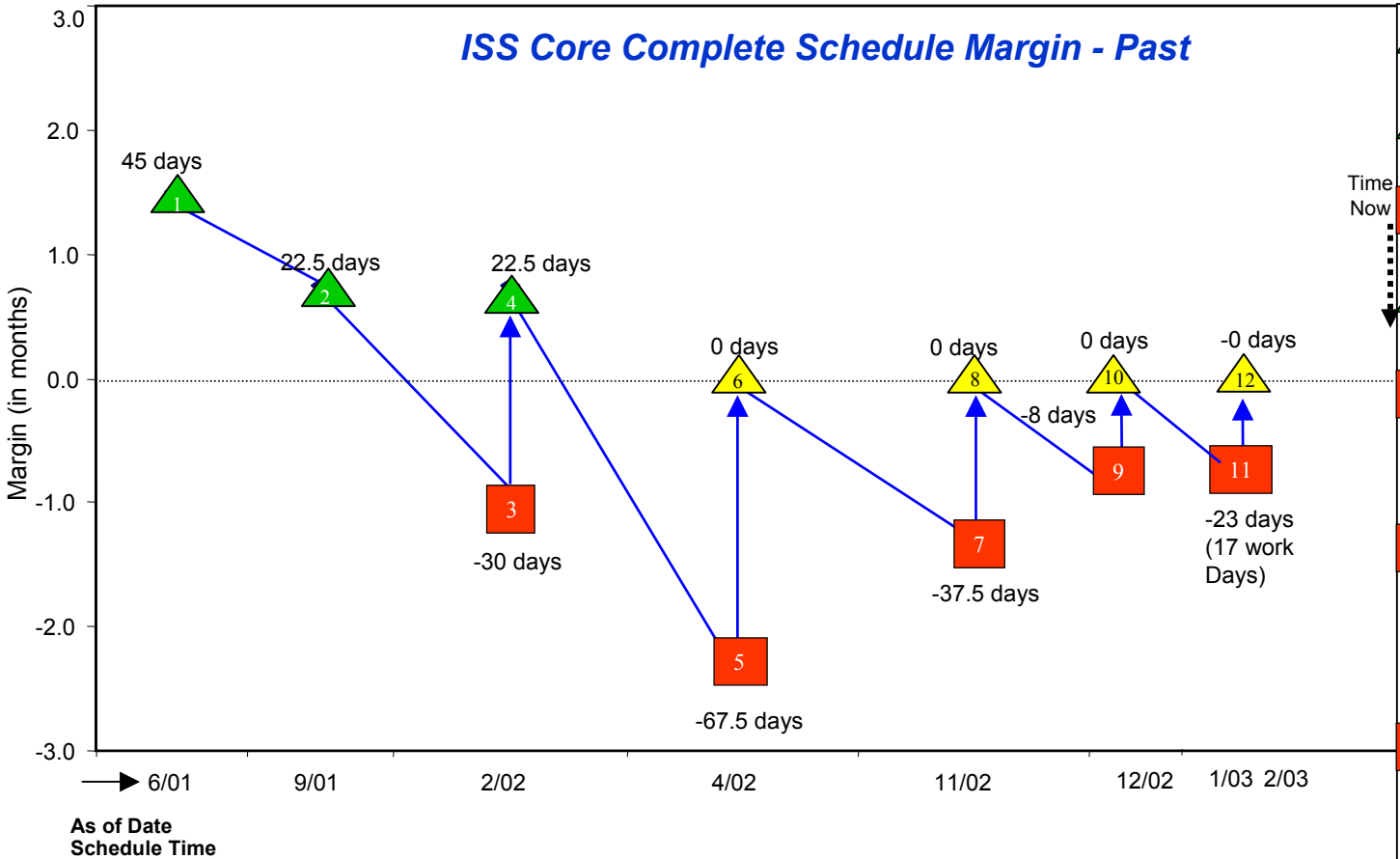
ISS Schedule Reserve



1. Schedule margin decreased 0.75 month due to KSC Systems Test growth and Closeouts growth
2. 1.75 months slip to on dock (O/D) at KSC. Alenia build and subcontractor problems
3. Reduced KSC systems Test Preps/Site Activation and Systems Test scope
4. 3 months slip to O/D at KSC. Alenia assembly and financial problems
5. Reduced scope and testing; worked KSC tasks in parallel (e.g.: Closeouts & Leak Checks)
6. 1.25 months slip to O/D at KSC Alenia work planning inefficiencies.
7. Increased the number of KSC tasks in parallel, and adjusted powered-on testing to 3 shifts/day/5days/week
8. Eight days lost due to mechanical installation failures and rework of End Cone ATCS NH3 line
9. Increased to 3 shifts/day and 7 days per week until 3/17/03 to recover 8 days lost at ATCS mechanical installation
10. 17 workday impact due to decision to replace nickel seals
11. Add additional personnel (2 shifts x 6 days) to remove ACTS lines in parallel with planned work. The new crews will continue to rework lines and reinstall after HSI.
12. HSI Recovery Margin realized.

ISS Program Risk

AS OF	3/20/2003	ORG	OE/S&MA	POC	Wade

STATUS SUMMARY

Accumulating the risk score for all top program risks indicates a current condition of Yellow (but almost at the red threshold). The greatest risks affecting the ISS Program are the 1) replanning efforts and impacts related to Shuttle downtime and limited upmass capability, 2) Ability to support crew rescue beyond 2005, and 3) Node 2 March '03 Delivery Date (see KPPI: ISS Special Topic). Mitigation plans are being developed for item 1 and are in place for items 2 & 3 and these risks are being monitored and managed closely.

DESCRIPTOR

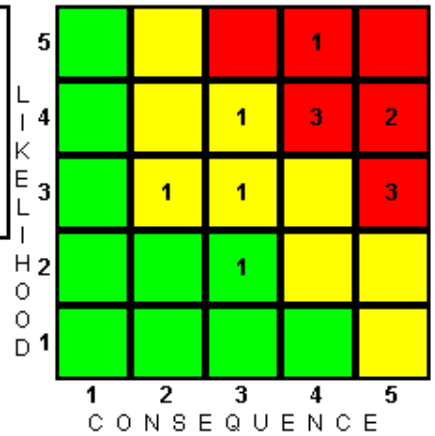
The Top Program Risk (TPR) matrix accumulates the current major issues being managed by the ISS Program. TPRs are risk that significantly affect the safety of flight, ISS Program budget, crew health, integrity of the ISS hardware/software, or mission success. TPRs pose a threat to launch dates and/or require significant ISS Program resources and attention. This KPPI is reformulated at each Program Risk Advisory Board (PRAB) meeting where all top risks are discussed, integrated and planned (meeting held approx. every 6 weeks).

PowerPoint Version

ISS Top Program Risks

Watch Items

- 4108 - Crew Time for Utilization - OC
- 4414 - Crew Rotation, Assembly, Docked, and Stage Timelines - CA



Risks

L x C Score: 4 x 5

- 4107 - Ability to Support Crew Rescue Beyond 2005 - OI, OA, OG (T)
- 4671 - ISS Replan - ISS Continued Manning - OA, OB, OD, OE, OF, OG, OI, OL, OM, OZ, AE, CA, DA, EA, MA, NA, NQ, SA, XA, KSC, MSFC, HQ, ARC, LaRC, GRC, JSC, BOE, GSC, OC (S,T)

L x C Score: 3 x 5

- 2810 - Russian Segment capability to provide adequate MM/OD protection - OM (S,T)
- 3887 - Funding for External Carriers - ExPRESS Pallets (3), with (24) Payload Adapters - OM, OZ (C,S,T)
- 4106 - Ability to Support REMAP High Priority Research - OI, OZ, OM (C,S,T)

L x C Score: 5 x 4

- 3902 - Node 2 March '03 Delivery Date (OB4) - OB, OA, OC, OM, MA, KSC, MSFC (C,S,T)

L x C Score: 4 x 4

ISS Critical Path Assembly Sequence

AS OF 4/2/2003 **ORG** OM/Prog Integ **POC** Geyer

STATUS SUMMARY

Y

Node 2 is identified as assembly critical and high schedule risk. CAM is identified as assembly critical and medium schedule risk. S6 Truss and ATV are identified as non assembly critical and medium schedule risk. All other elements are identified as low schedule risk.

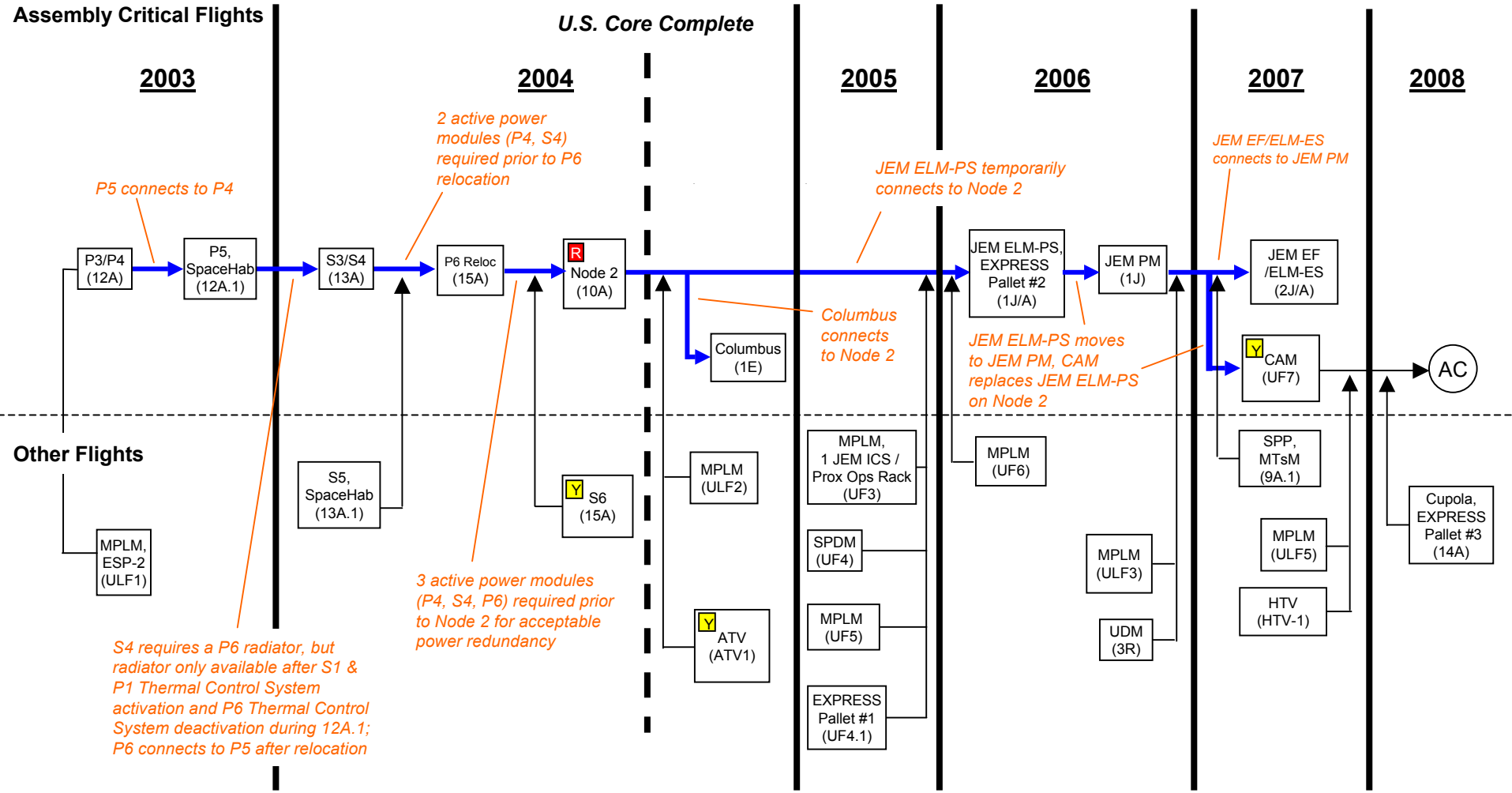
DESCRIPTOR

The Assembly Sequence Critical Path highlights elements that are both assembly critical and medium to high schedule risk. An element is assembly critical if it is required or constrains an element that is required to satisfy the *Minimum* US Core complete assembly: Research elements are required (US Lab; JEM PM, EF, ES, PS; Columbus; CAM), Russian assembly elements are not required, and less than optimal operations are acceptable.

Assembly Sequence Critical Path Assessment

Interim Rev F Assy Seq (Thru Letter OC-03-026)

POC: Geyer
Data as of 4/2/03



Schedule Risk

G = Green = Low schedule risk*
Y = Yellow = Medium schedule risk
R = Red = High schedule risk

* *Low schedule risk not identified for simplicity*

Assembly Critical

Element is required or constrains an element that is required to satisfy the *Minimum* U.S. Core Complete Assembly:
- Russian elements not required
- Research labs required
- Less than optimal operations acceptable

Status Detail

Node 2 is identified as assembly critical and high schedule risk. CAM is identified as assembly critical and medium schedule risk. S6 Truss and ATV are identified as non assembly critical and medium schedule risk. All other elements are identified as low schedule risk.

Legend
= Assembly Critical Path

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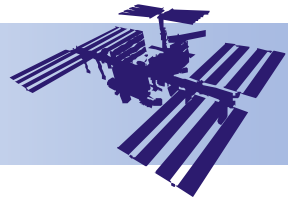
ISS Research Accommodations Status

9 April 2003 (Data through 31 March 2003) *[POC: Lesa Roe]*



Research

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	
▸ Key Program Performance Indicator	Y	▸ OZ	▸ Roe	▸ 4/11/03

DESCRIPTOR

- An interim ISS research plan has been baselined and is in the integration process.
- The Research Indicator shows the Program's performance in accommodating the required Research Investigations on the ISS and the required research objectives for those investigations, as defined in the 12-month plan. Note that the planned investigations for FY03 and FY04 have been constrained to fit within available critical Station research resources. An additional metric will be developed to measure performance against a Headquarters-developed strategic plan.

STATUS DETAIL

- All planned Investigations have been executed through Increment 5.
- 99 percent of the research objectives have been accommodated through Increment 5.
- Increment 7 plan in jeopardy due to no research upmass allocation.

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

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U.S. Research Investigations Accommodated, Compared to the 12-Month Plan

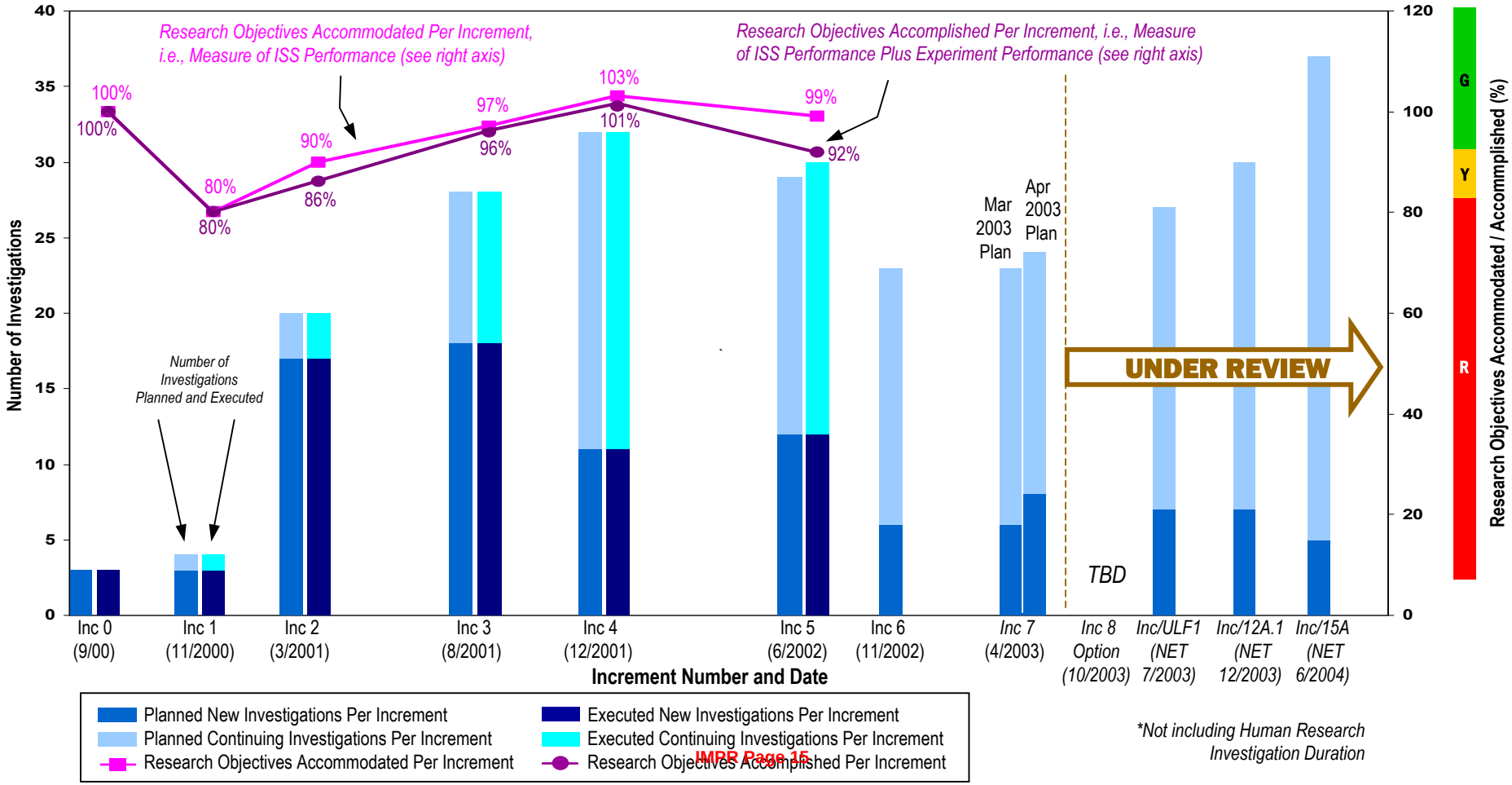
9 April 2002 (Data through 31 March 2003) *[POC: Lesa Roe]*

All planned Investigations have been executed through Increment 5.
99 percent of the research objectives of the investigations have been accommodated through Increment 5.
Increment 7 plan in jeopardy due to no research upmass allocation.

Status: Yellow

Total Number of Investigations to Date = **70**
Research Objectives Accommodated (Cumulative) through Increment 5 = **99%**
Research Objectives Accomplished (Cumulative) through Increment 5 = **95%**

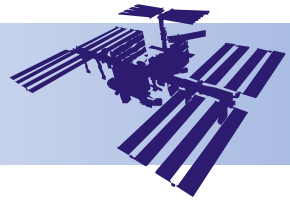
Continuous U.S. Research Time to Date = **25 Months**
Average Investigation Duration through Increment 5* = **1872 Hours**
Average Crew Time Per Investigation through Increment 5 = **18 Hours**



*Not including Human Research Investigation Duration

ISS Research Accommodations Status

9 April 2003 (Data through 31 March 2003) ***[POC: Lesa Roe]***



Definitions, Sources, and Status Levels

U.S Research Investigations Accommodated

U.S. Investigator: The principal person selected or approved by NASA to conduct a research investigation on-board ISS.

Number of Investigations (Cumulative) and Total Number of Investigations to Date: The cumulative number of U.S.-sponsored investigations carried out on ISS to date. This number also includes any international investigations conducted within U.S.-provided accommodations as part of agreements with the ISS international partners. If an investigation requires experimentation on more than one increment, it is designated a continuous investigation and counted only once. The cumulative number is plotted at the date of each Shuttle flight to ISS, which is when new investigations are added.

Source: The Investigator Master List, maintained by the Lead Increment Scientist, provides the number per increment. The Increment Scientist also provides the cumulative number per Shuttle flight.

Increment Length: The time period that an expedition crew is on orbit. It is measured from their launch date to their ISS undock date, and is documented in the Increment Definition Requirements Document (IDRD) Flight Program Definition matrix.

Continuous U.S. Research Time to Date: The time that the U.S. Laboratory has been continuously supporting research investigations, not counting short-term stoppages lasting only a few hours. The U.S. Lab began supporting research investigations in March 2001, and has done so continuously since then.

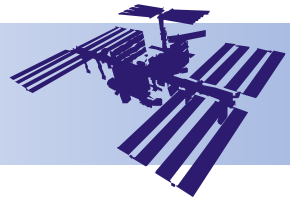
Source: The Increment Scientist assisted by investigation payload planners at NASA/Marshall Space Flight Center.

Research Objectives Accommodated: Each investigation may have several objectives, experiments, or steps to be carried out during an increment. The percent successfully accommodated by the ISS is calculated for each investigation, then all investigations are averaged together to determine the per increment value and the value through Increment X. Only the performance of ISS in accommodating the investigation is measured. The metric does not include performance of the experiment hardware.

Source: ISS Research Accommodations list, maintained by the lead increment scientist.

ISS Research Accommodations Status

9 April 2003 (Data through 31 March 2003) ***[POC: Lesa Roe]***



Research Objectives Accomplished: The percent of planned research objectives defined for each investigation that have been accommodated successfully by the ISS *and* performed successfully by the experiment hardware. The values for each investigation are averaged together to determine the research objectives accomplished during each increment and the cumulative objectives accomplished through Increment X.

Source: ISS Research Accomplishments and Failures list (hailed from "Accommodations" list), maintained by the lead increment scientist.

Crew-Tended Research Time: The cumulative hours that the ISS crew performs U.S.-sponsored research investigations, including time both within and outside of the normal workday.

Source: 'Actual' crew time is documented in the Summary Crew Tracking Matrix, provided by the Payload Operations Integration Center (POIC).

Number of Investigations Planned Per Increment: The number of U.S.-sponsored investigations planned 12 months in advance for an increment, including both new and continuing investigations occurring during that increment.

Source: ISS Research Accommodations list, maintained by the lead increment scientist.

Number of Investigations Executed Per Increment: The number of U.S.-sponsored investigations actually carried out during an increment, at least partially, including both new and continuing investigations.

Source: ISS Research Accommodations list, maintained by the lead increment scientist.

Status Level Definitions

Research Objectives Accommodated (%)

Green: 90% or more of research objectives accommodated.

Yellow: 80-90% of research objectives accommodated.

Red: Less than 80% of research objectives accommodated.

Research Objectives Accomplished (%)

Green: 90% or more of research objectives accomplished.

Yellow: 80-90% of research objectives accomplished.

Red: Less than 80% of research objectives accomplished.

Number of Investigations Executed Per Increment

Green: 90% or more investigations executed.

Yellow: 80-90% of investigations executed.

Red: Less than 80% of investigations executed.

ISS Special Topic: Prime Contractor Redeployment

AS OF	4/8/2003	ORG	OG/BMO	POC	Waddell

STATUS SUMMARY

Y

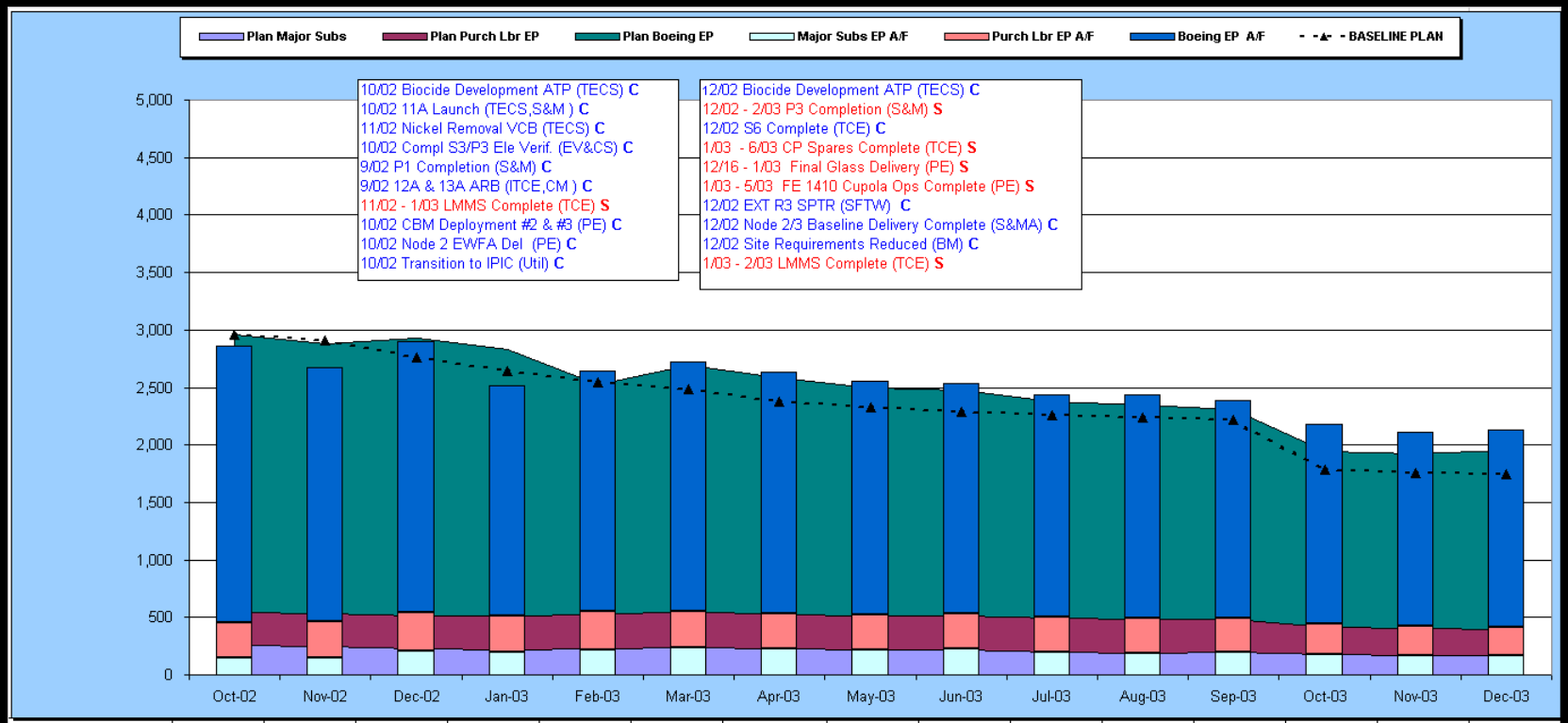
The FY03 Boeing workforce performance is above both the original baseline plan and the revised plan as adjusted for content (4% over baseline, 5% over revised plan). Both plans had anticipated drops in February which did not occur.

DESCRIPTOR

This Special Topic provides visibility into Boeing workforce levels required to execute within NASA's budget.

ISS Prime Total Program Rollup by EP's

As of January 2003



BASELINE PLAN	**2,962**	**2,910**	**2,765**	**2,640**	**2,544**	**2,481**	**2,380**	**2,330**	**2,288**	**2,258**	**2,234**	**2,220**	**1,784**	**1,758**	**1,748**
Plan Boeing EP	2,416	2,345	2,412	2,318	2,004	2,144	2,055	1,981	1,958	1,881	1,868	1,827	1,519	1,516	1,557
Plan Purch Lbr EP	286	287	292	294	301	312	296	294	294	293	292	289	238	231	231
Plan Major Subs	261	244	223	222	222	241	229	218	221	200	190	196	181	172	165
Plan Total EP	**2,963**	**2,876**	**2,927**	**2,834**	**2,528**	**2,697**	**2,580**	**2,492**	**2,473**	**2,374**	**2,350**	**2,312**	**1,938**	**1,919**	**1,953**
Boeing EP A/F	**2,405**	**2,209**	**2,354**	**2,007**	**2,097**	2,163	2,104	2,030	2,010	1,937	1,946	1,892	1,736	1,682	1,716
Purch Lbr EP A/F	**309**	**320**	**331**	**311**	**332**	323	309	307	307	301	301	299	262	253	253
Major Subs EP A/F	**144**	**144**	**211**	**199**	**219**	233	224	219	222	200	190	196	181	172	165
Total EP A/F	**2,858**	**2,673**	**2,896**	**2,516**	**2,648**	**2,719**	**2,637**	**2,556**	**2,539**	**2,438**	**2,436**	**2,387**	**2,179**	**2,107**	**2,134**
FORECAST	**2,824**	**2,844**	**2,792**	**2,751**	**2,746**	-	-	-	-	-	-	-	-	-	-
Var Act vs Fcst	**35**	**(168)**	**99**	**(231)**	**(99)**	-	-	-	-	-	-	-	-	-	-

Barry Waddell
281-244-7141

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Operations/On-Orbit Resource Status

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC
Key Program Performance Indicator	Y	OC	Creasy

DESCRIPTOR

- The On-Orbit Resource Manager Level Performance Indicator allows the Program to assess its performance relative to requirements and/or schedules for EVA and other ISS crew training, crew time, cargo allocation, internal and external stowage, waste containers, food, water, altitude/life, propellant, power, oxygen, comm and other resources.

STATUS DETAIL

- Status is 79% satisfactory. Of the Program's operations/on-orbit readiness-related products, 0% have serious and 21% have moderate issues. The overall status is Yellow, there are issues with, lack of agreement with Russia on allocation for Cargo, funding to provide addition Progress vehicle support. The change from Shuttle for re-supply has affected the ops resources, water, food and cargo allocation up-mass and return capability.

PERFORMANCE INDICATOR METRICS

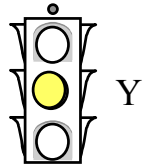
- Operations/On-Orbit Resource Status

Metrics / Performance Information

ISS Operations/On-orbit Resources Status

Chart Owner: OC/D Schmalholz/Phone: x4-6669 Last Update: 4/11/03

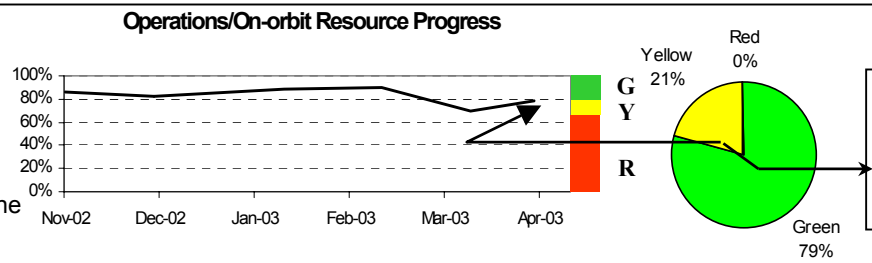
Purpose: Show progress toward top level ISS operations/on-orbit resource readiness to support the program. Basis is status of operations/on-orbit resources relative to requirements and schedules. **Goal**: All operations/resources needed for on-orbit readiness meet requirements and/or schedule. **Metric Summary**: Status is 79% satisfactory. Of the Program's ops/on-orbit readiness-related products, 0% have serious (Red) and 21% have moderate (Yellow) issues, contrasted with 0% and 27% on 3/14/03.



Readiness Criteria for Known Problems

Near Term Stages **(next major milestone = SORR)**
- Green-credible plan and resolved by SORR
- Yellow or Red (problem severity)-questionable plan

Farther Out Stages **(SORR-6 months)**
- Green-credible plan and resolved by next major milestone
- Yellow or Red (problem severity)-questionable plan



ISSP Stoplight Criteria
- 81-100% = Green Status
- 71-80% = Yellow Status
- 0-70% = Red Status

ISS Operations/On-orbit Resource Status

IDRD Assembly Sequence	Incr 6	Incr 7			Increment 8 (Option)				Increment/ULF1		Increment/12.A.1		
	Stage 11A	Stage 6S	Stage 11P	Stage 12P	Stage 7S	Stage 13P	Stage 14P	Stage 15P	Stage ULF1	Stage 12A	Stage 12.A.1	Stage 13A	Stage 13.A.1
	11/22/2002	04/26/2003	06/08/2003	08/30/2003	10/18/2003	11/20/2003	01/30/2004	03/25/2004	NET 7/21/02	NET 8/21/03	NET 12/18/03	NET 1/22/04	NET 5/6/04
Ops/Resources (IM Overview)	G	G	Y	Y	Y	Y	G	G					
-Expedition Summary (OC3)	G	G	G	G	Y	Y	Y	Y					
Operations (MOD and EVA)													
-Training (MOD)	G	Y	Y	Y	G	G	G	G					
Resources													
-Crew Time (OC3/OZ)	G	G	G	G	G	G	G	G					
-Internal Stowage (OC4/OM)	G	G	G	Y	Y	Y	Y	Y					
-Ext. Stowage-P/L Attach (OM)	G	G	G	G	G	G	G	G					
-Cargo Allocations (OC3)	G	Y	Y	Y	Y	Y	Y	Y					
-Waste Containers (OC4)	G	G	G	G	G	G	G	G					
-LiOH Canisters (OC5)	G	G	G	G	G	G	G	G					
-Crew Provisions (OC5)	G	G	G	G	G	G	G	G					
-Food (OC5)	G	G	Y	Y	Y	Y	Y	Y					
-Water (OM)	G	G	G	Y	Y	Y	Y	Y					
-Altitude/On-orbit Life (OM)	G	G	G	G	G	G	G	G					
-Propellant (OM)	G	G	G	G	G	G	G	G					
-Power (OM)	G	G	G	G	G	G	G	G					
-Thermal (heat rejection) (OM)	G	G	G	G	G	G	G	G					
-Oxygen (OM)	G	G	G	G	G	G	G	G					
-Nitrogen (OM)	G	G	G	G	G	G	G	G					
-S-band Up/Downlink (OD)	G	G	G	G	G	G	G	G					
-Ku-band Downlink (OD)	G	G	G	G	G	G	G	G					

Under Review

G = Green, Y = Yellow, R = Red, Blank box = no data, / = none,
Source = ISS Office Mgrs+IMs+ISS Monthly Program Review +MOD, SORR = Stage Readiness Review

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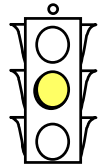
★= Status degradation or Red status

Red/Yellow Key ISS Ops/On-orbit Resources Issues (Backup to Ops/On-orbit Resources chart)

Chart Owner: OC/D. Schmalholz Phone: x4-6669 Last Update: 4/11/03



Purpose: This chart is keyed to the Ops/On-orbit Resources chart and provides technical or schedule issues and any degradation since the last metrics review which threatens the conduct of successful Stage Operations Readiness Reviews. **Goal**: The goal is to remove all issues prior to the SORRs. Sources are ISS Office Mgrs, IMs, MOD, and the ISS Monthly Review package.

Increment 7

- Ops Resources- Continuing to work remaining open issues including manifest items. IDRD was baselined this week. Manifest baselines in work. Do to upmass limitations, available utilization time will be undersubscribed.
- **Crew Training- Expedition 7 prime crew loading average approximately 50 hours per week here to Launch.**
- **Internal Stowage-Requirements exceed standard stowage capability**
- Cargo Allocation - Cargo allocation for return on 5S is volume and mass limited and all mandatory return US items cannot be returned. RSC-E has agreed to manifest all mandatory US h/w for launch on 6S and 11P pending release of their reserve. 12P manifest not yet baselined
- Food- Launch of US food on 6S was agreed. The quanity of US food to launch on Progress is to be determined with the Russians.
- Water: Several days below 45 day skip cycle prior to 12P docking unless 12P launch date accelerated from 9/18 to 8/30.

Increment 8 (Option)

- Expedition Summary - Potential for minimal new Utilization to perform, and minimal upmass Cargo Allocations and Water
- **Potential for demanning in Increment 8 (option) if 13-Progress is not accelerated.**
- **Internal Stowage-Requirements exceed standard stowage capability**
- Cargo Allocations – Requirements for Logistics and Maintenance, Provision, and Utilization have been significantly reduced to fit within Russian Vehicle capability.
- **Food-Agreement to Launch US Food with Russian vehicles has not been reached**.
- Water –Assumes funding for additional Progress support will be approved and additional Rodnik tanks will be installed.

Yellow or Red status issues shown-new status in bold, underlined font (see Operations/On-orbit Resources Status matrix chart)

International Partners

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Key Program Performance Indicator	Y	OI	Bennett	04/11/03

DESCRIPTOR

The International Partners Indicator allows the Program to assess its interaction with and the performance of its international partners, including Russia.

STATUS DETAIL

Implementation plans to meet intent of International Partner Agreements in work. Status Yellow pending resolution.

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

Agreements/Barters/Offsets Status

G — No Issue
Y — Minor Issues
R — Major Issues

IP	NASA Gets	Obligation: IP	Obligation: NASA	NASA Gives
Russia	1. FGB launch and sustaining engineering, spares, SM, life support resupply, 11 Soyuz for Crew Rescue, propellant, reboost 2. Assembly Complete: Propellant, FGB maintenance, reboost,	1. Y 2. G	1. Y 2. G	1. Assembly Phase: Power for Russian core systems, crew transport, SPP launch, water, shuttle upmass/downmass, 2. Assembly Complete: Contingency power, reboost, propellant, water, upmass/downmass
Japan	1. 51% of accommodations in JEM 2. CAM, CR, LSG, HII-A launch 3. HTV launch of common items	1. G 2. Y 3. G	1. G 2. G 3. G	1. 12.8% non-Russian utilization resources, 12.8% crew opportunities, JEM systems support 2. Launch of JEM elements ($500M) 3. Partial offset of NASDA CSOC obligations
Europe	1. 51% of accommodations in Columbus 2. Nodes 2/3, crew R/FR, cryo-FR, spares 3. MELFI, MSG, hexapod pointer 4. Cupola 5. ATV launch of common items/propellant	1. G 2. Y 3. G 4. G 5. G	1. Y 2. G 3. Y 4. G 5. G	1. 8.3% non-Russian utilization resources, 8.3% crew opportunities, Columbus systems support 2. Launch of Columbus 3. Early cooperative research (various) 4. Launch of payloads, window glass, cupola, etc 5. Partial offset of ESA CSOC obligations
Canada	1. Use of SSRMS, MRS base 2. Use of SPDM, SSRMS s/w upgrade 3. Portion of CSA utilization rights	1. G 2. Y 3. G	1. Y 2. G 3. G	1. 2.3% non-Russian utilization resources 2. Partial offset of CSA CSOC obligations 3. Launch of payloads, TDRSS credit, MS train
Italy	1. 3 MPLMs	1. G	1. Y	1. 0.85% NASA payload accommodations, 1 ISS crew opportunity every 5 years
Brazil	1. Agreement being revised	1. Y	1. Y	1. Agreement being revised

Process owner: K. Doering / April 2003

Flight Readiness

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC
Key Program Performance Indicator	G	OC	Creasy

DESCRIPTOR

- The Flight Readiness Indicator allows the Program to measure its relative technical requirements and schedule readiness for a given flight or flights, by assessing factors such as hardware and software development, cargo integration, payloads, safety, Shuttle integration, operations, etc..

STATUS DETAIL

- As of 4/11/03, Technical Readiness is 88% satisfactory. Schedule readiness are 81% satisfactory (Green), with 14% moderate (Yellow) and 5% serious (Red) issues. Unresolved funding issue to increase Progress flight rates, integration of US cargo into Progress, unresolved Node 2 funding issues, and issues with the activation S4 on 13A are of concern.

PERFORMANCE INDICATOR METRICS

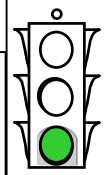
Flight Readiness	Assembly Sequence Status

Metrics / Performance Information

ISSP Flight Readiness and Program Progress

Chart Owner: OC/D Schmalholz Phone: x4-6669 Last Update: 4/11/03

Purpose: Show progress toward overall ISSP flight readiness. Basis is maturity of products relative to requirements/schedules. **Goal**: All products needed for flight readiness meet requirements and/or schedule. **Metric Summary**: ISSP Technical is 88% satisfactory. Schedule status is 81 % satisfactory. Of the total Program's flight readiness-related products, 5% have serious (R) and 14% have moderate (Y) issues, contrasted with 4% and 18 %, respectively, on 3/14/02.

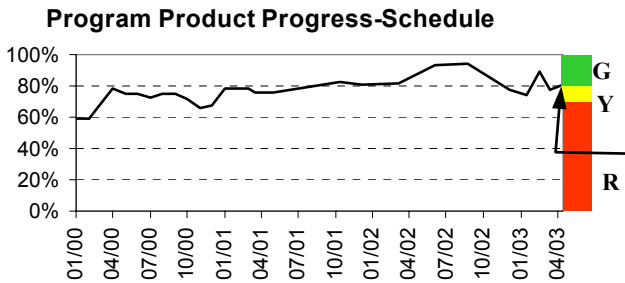


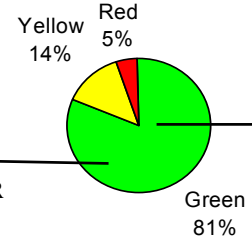
Readiness Criteria for Known Problems

Near Term Flights: next major milestone = SORR
- Green-credible plan and resolved by SORR
- Yellow-credible plan and resolved by FRR
- Red-questionable plan

Near Term Flights: next major milestone = FRR
- Green-credible plan and resolved by FRR
- Yellow-credible plan and resolved by L-2 days
- Red-questionable plan

Farther Out Flights (greater than L-4 months)
- Green-credible plan and resolved by next major milestone
- Yellow or Red (problem severity)-questionable plan





Schedule
(4/11/03 Snapshot)

ISSP Stoplight Criteria
- 81-100% = Green Status
- 71-80% = Yellow Status
- 0-70% = Red Status

ISSP Flight Readiness - Interim Planning Dates

IDRD Assembly Sequence	Incr 7						Incr 8 (Option)								Increment/ULF1				Increment/12.A.1						Increment/TBD					
	6S		11P		12P		7S		13P		14P		15P		ULF1		12A		12A.1		13A		13A.1		15A		10A		8S	
	04/26/2003		06/08/2003		08/30/2003 UR		10/18/2003 UR		11/20/2003 UR		01/30/2004 UR		03/25/2004 UR		07/21/03 - NET		08/21/03 - NET		12/18/03 - NET		1/22/04 - NET		5/6/04 - NET		6/10/04 - NET		9/23/04 - NET		05/10/2004	
	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc	Tec	Sc
Overview	G	G	G	G	G	Y	G	Y	G	Y	G	Y	G	Y	G	G	Y	Y	G	G	Y	Y	Y	G	G	Y	Y	Y	G	G
Flight Element/OB/OC/OM															G	G	G	G	G	G	G	G	G	G	G	Y	Y	Y		
Flight/Qual ORUs/OB/OD			G	G	G	G			G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	Y	Y		
Analysis & Verif/OB/OM															G	G	G	G	G	G	G	G	G	G	G	G	Y	Y		
Software/OD	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
IP/P H-W/Vehicles/OM/OC	G	G	G	G	G	★R	G	★R	G	★R	G	★R	G	★R	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Payloads/OZ															G	G	G	G	G	G	G	G	G	G	G	G	G	G		
Safety/OE															Y	G	Y	G	G	G	G	G	G	G	G	G	G	G		
Shuttle Integration/OC															G	G	G	G	G	G	G	G	Y	G	G	Y	G	G		
Pressurized & Unpress'd Carriers/OC/OM															G	G			G	G			G	G						
Operations/OC/MOD	G	G					G	G							G	G	Y	Y	Y	G	Y	Y	G	G	G	G	G	G	G	G
Cargo Intgr/Launch Processing	G	G	G	Y	G	Y	G	G	G	G	G	G	G	G	G	G			G	G			G	G						

Tec = Technical, Sc = Schedule, IP/P = Intn'l Partner/Participant, G = Green, Y = Yellow, R = Red, Blank box = no data, / = none, Source = ISS Office Mgrs+LPMs+ISS Monthly Review+MOD, SORR = Stage Readiness Review, FRR = Flight Readiness Review, SHAB=SPACEHAB ★= Status degradation or Red status-see Key Issues chart

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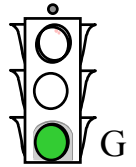
Red/Yellow Key Flight Readiness Issues (Backup to Flt Readiness chart)

Chart Owner: OC/D. Schmalholz Phone: x4-6669 Last Update: 4/11/03

Purpose: This chart is keyed to the Flight Readiness chart and provides technical or schedule issues and any degradation since the last metrics review which threatens the conduct of successful flight readiness reviews. **Goal**: The goal is to remove all issues prior to the flight readiness reviews. Sources are ISS Office Mgrs, LPMs, MOD, and the ISS Monthly Review package.



6S, 11P,12P

•**Cargo integration- 6S and 11P manifest agreements in place. 11P cargo delivery schedule remains at risk due to a lack of a proven method to reduce long customs clearance times. 12P manifest agreements not complete..**

12P-15P, 7S

•**IP H/W Vehicles- uncertainty about funding of Russian vehicles to support increased flight rate.**

Flt ULF1

•Safety – 3 open NCR's require analysis for closure.

Flt 12A

•Overview and Operations- Constraints for the AJIS and Brace Beam installation are not defined. Attitude Control plan is in work.
•Safety- Open NCR-Electrical connector pin exists on powered side of connector.

Flt 12A.1

•**Ops-**OC-Concerns with P5 installation clearances and pump module transfer on EVA1 and complexities associated with the power system reconfiguration are in work. Thermal analysis for the planned attitude timeline has not been completed.

Flt 13A

•Ops and Overview-Issues related to S4 activation in work; S4 system management prior to PVR installation, thermal management of PVR during relocation, over-pressure of PVR by ETCS prior to P6 removal.
• Issue in work to resolve long-term stowage of PVRGF after P6/PVR relocation.
• Potential Hardware constraints regarding on-orbit configuration of SARJ interface that may result in impacts to current EVA 1 & 2 content. Assessing Options.
• BMRRM latch operations constraints are still ine work.

Flt 13A.1

•Overview/Shuttle Integration: Awaiting 13A.1 Orbiter manifest plan.

Flt 15A.

•**Flight Element/Flight Qual ORU's/Shuttle Integration-Impacted by late return of PFCS ORU on 12A.1 needed for integration into S6. Risk mitigation plan in place to procure additional PFCS.**

Flt 10A

•Overview/Flight Element**- Node 2 shipping date continues to slip. New shipping date is 5/31/03 with on-dock at KSC 6/1/03. However, Alenia's latest schedule is still very aggressive. COPS and MDPS Shield installation remains a threat.**

•Flight/Qual ORUs Analysis & Verification**-Heat Exchangers remain a technical issue. It is most likely not a threat to Node 2, but rather a program issue. Lab also uses the heat exchangers.**

Worsened or Red status issues shown-new status in bold, underlined font - (see ISSP Flt Readiness & Progress chart)

ISS Performance Measurement

AS OF 3/31/2003 **ORG** OG/BMO **POC** Waddell

G

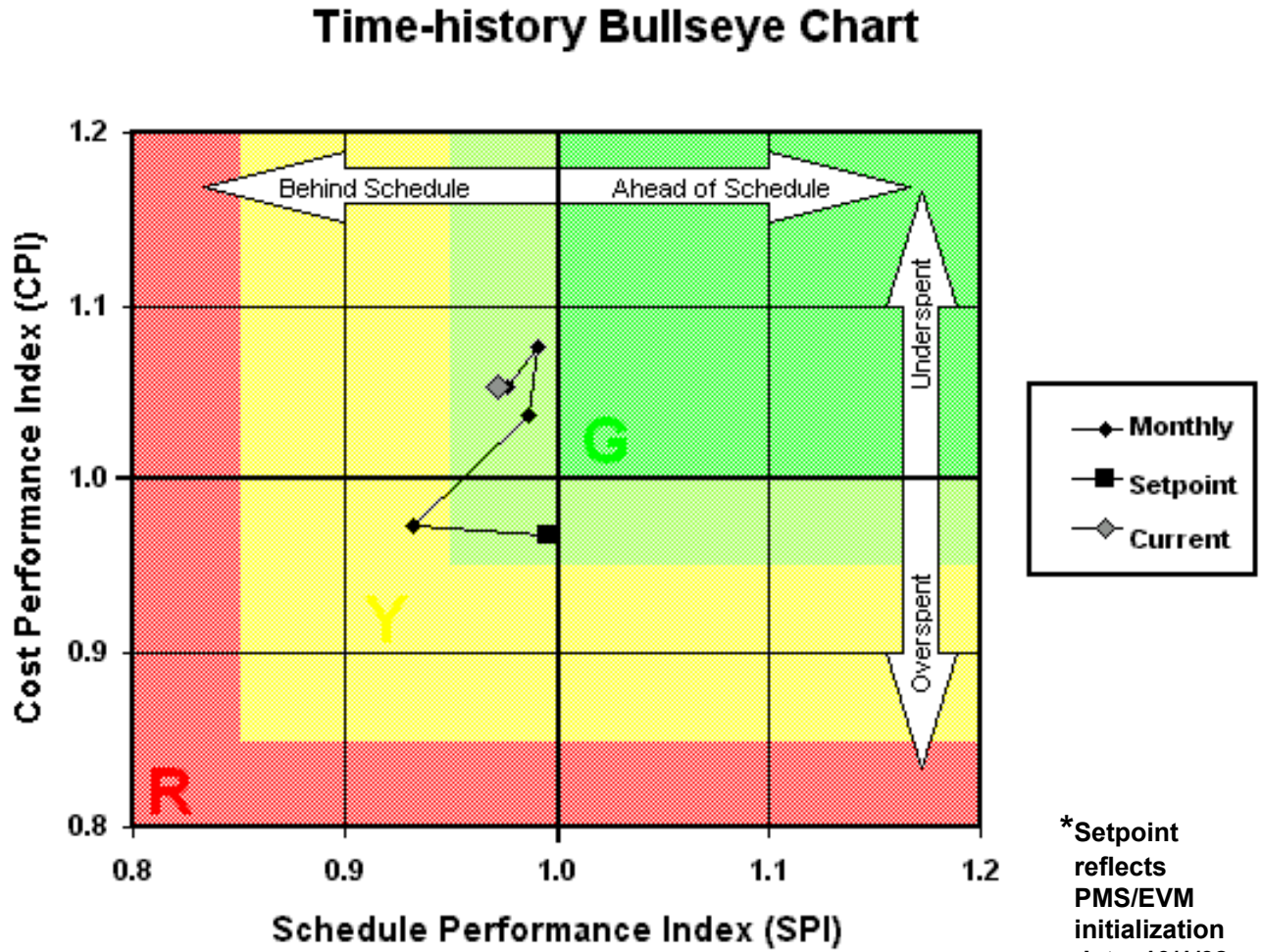
STATUS SUMMARY

February data indicate continued Green (SPI = 0.973, CPI = 1.054) performance. Slight dip in SPI may reflect beginning of Columbia accident impact. Caveat: JSC IFMP go-live impacted availability of actual cost data and may have affected CPI. ISS PMS/EVM quality metrics indicate continued improvement, with ISS aggregate data and individual data from CAPs 5 (MOD/TSC) and 7 (MOD/SFOC) having converged enough to be factored into management decision-making. Other individual CAP data should continue to be treated as qualitative vs. quantitative until system matures further & CAP data oscillations settle out.

DESCRIPTOR

This indicator displays overall health in terms of ISS Performance Measurement System / Earned-Value Management (PMS/EVM) metrics.

FY03 Performance Measurement System / Earned Value Management (PMS/EVM) Trend as of 3/31/03

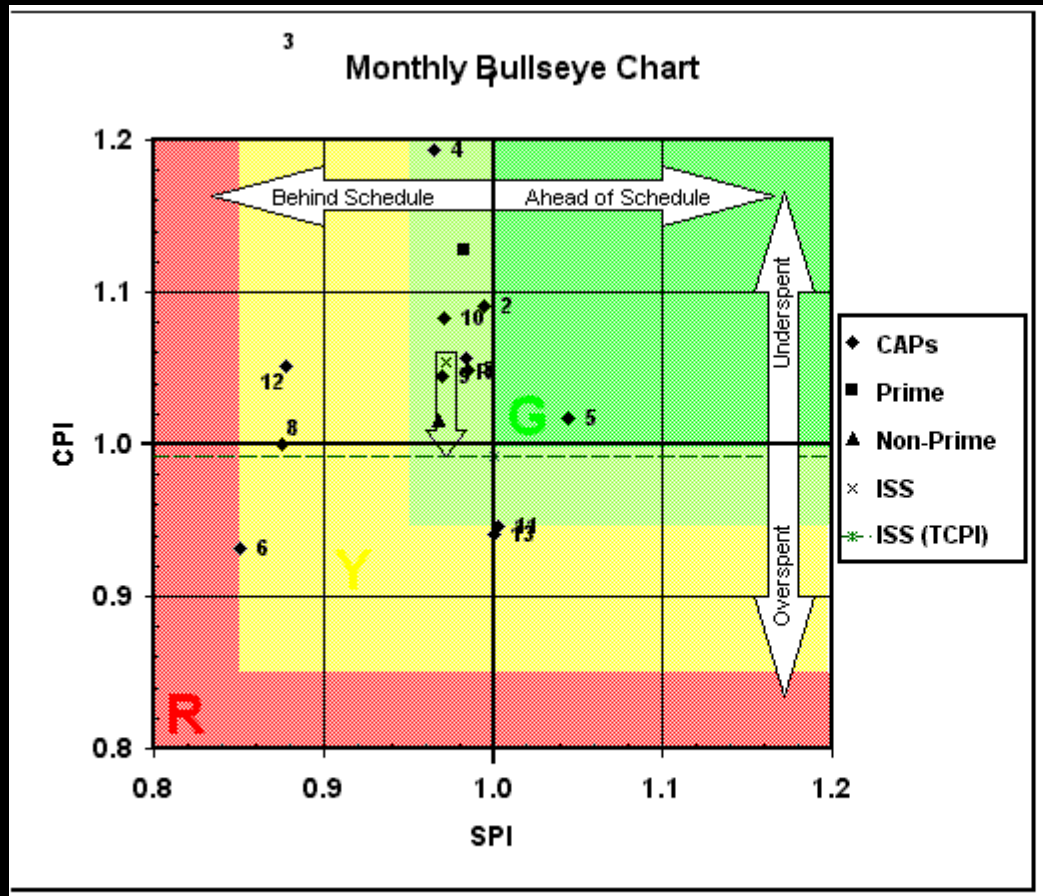


*Setpoint reflects PMS/EVM initialization data, 10/1/02

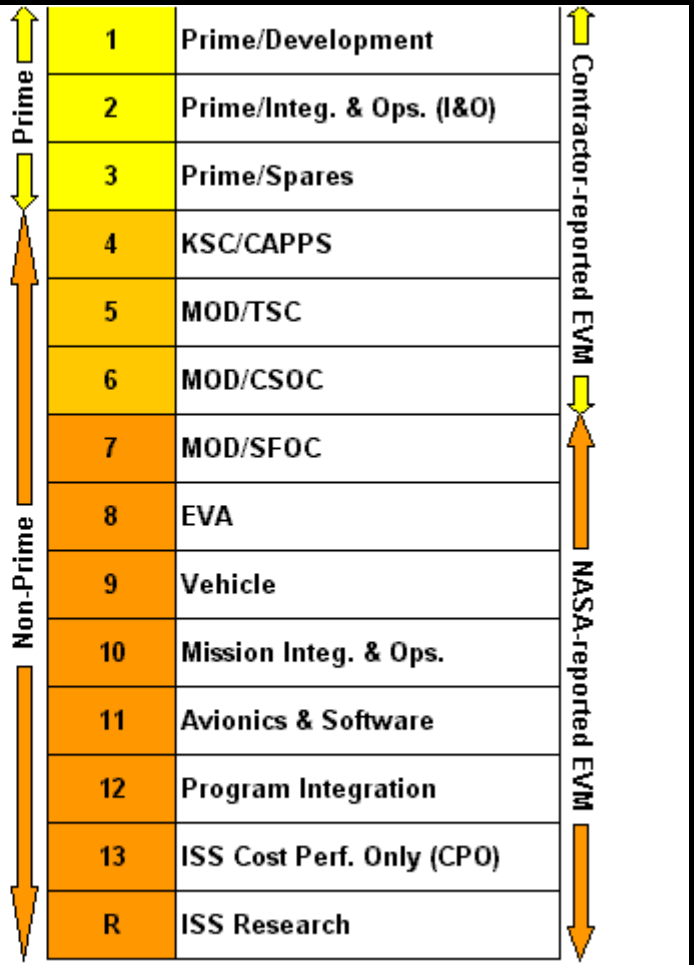
- SPI (0.973) indicates Program is somewhat behind schedule
- CPI (1.054) indicates work performed cost less than budgeted

Barry Waddell
281-244-7141

FY03 Performance Measurement System / Earned Value Mgmt. (PMS/EVM) Control Account Package (CAP) Status as of 3/31/03



Note: All values plotted are cumulative from start of EVM System Window (1 October 2002).



Note: ISS total plotted without Research.

- CAP #1 off-scale G due to delay in costing of TRW subcontract closeout
- CAP #3 off-scale Y due to revision in previously taken earned value (improved from 1/03 R)
- No R CAPs this month; overall status indicates Program EAC achievable

Barry Waddell, 281-244-7141

ISS Workforce

AS OF	4/11/03	ORG	OG/BMO	POC	Waddell

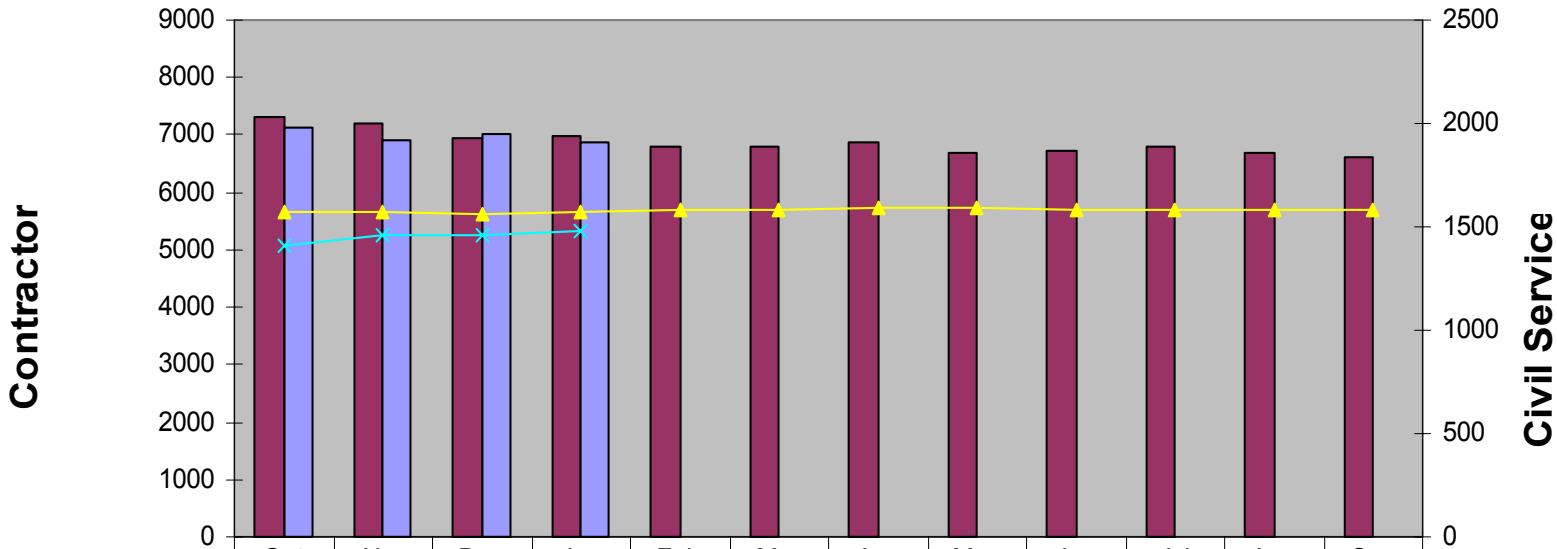
STATUS SUMMARY

Both contractor and civil service workforce have trended below the FY03 plan. We are unable to collect February workforce actuals (with the exception of Boeing) due to IFMP implementation of the Business Warehouse. A threat exists that the data will be unavailable next month as well. However, nothing suggests any substantial anomolies have occurred in February to cause concern.

DESCRIPTOR

This indicator displays performance relative to civil servant and contractor EP levels within NASA's budget.

Total Contractor and Civil Service Workforce Status as of 2/28/03



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Contractor Plan	7324	7192	6952	6974	6785	6795	6853	6684	6712	6808	6674	6623
Contractor Actual	7137	6910	7030	6852								
Civil Service Plan	1575	1569	1565	1573	1581	1584	1588	1590	1582	1583	1584	1581
Civil Service Actual	1407	1455	1458	1482								

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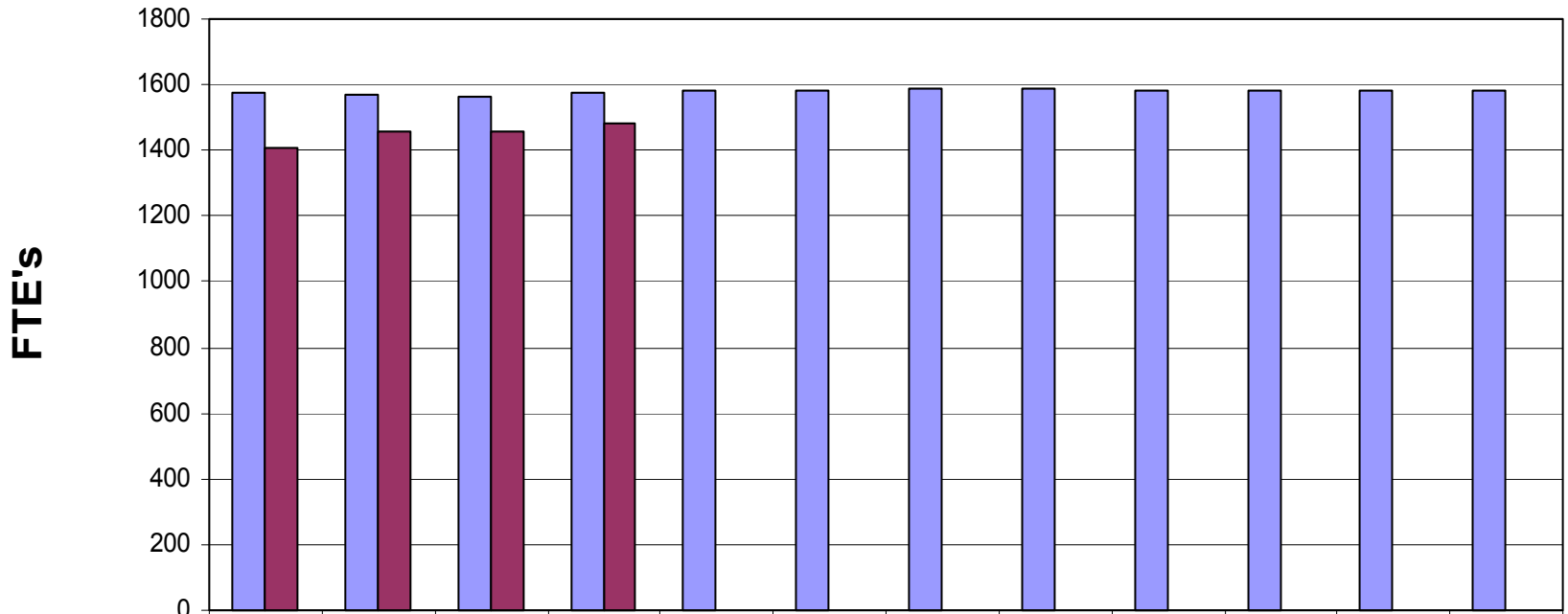
FY03 Civil Service Workforce Status as of 2/28/03



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Civil Service Plan	1575	1569	1565	1573	1581	1584	1588	1590	1582	1583	1584	1581
Civil Service Actual	1407	1455	1458	1482								

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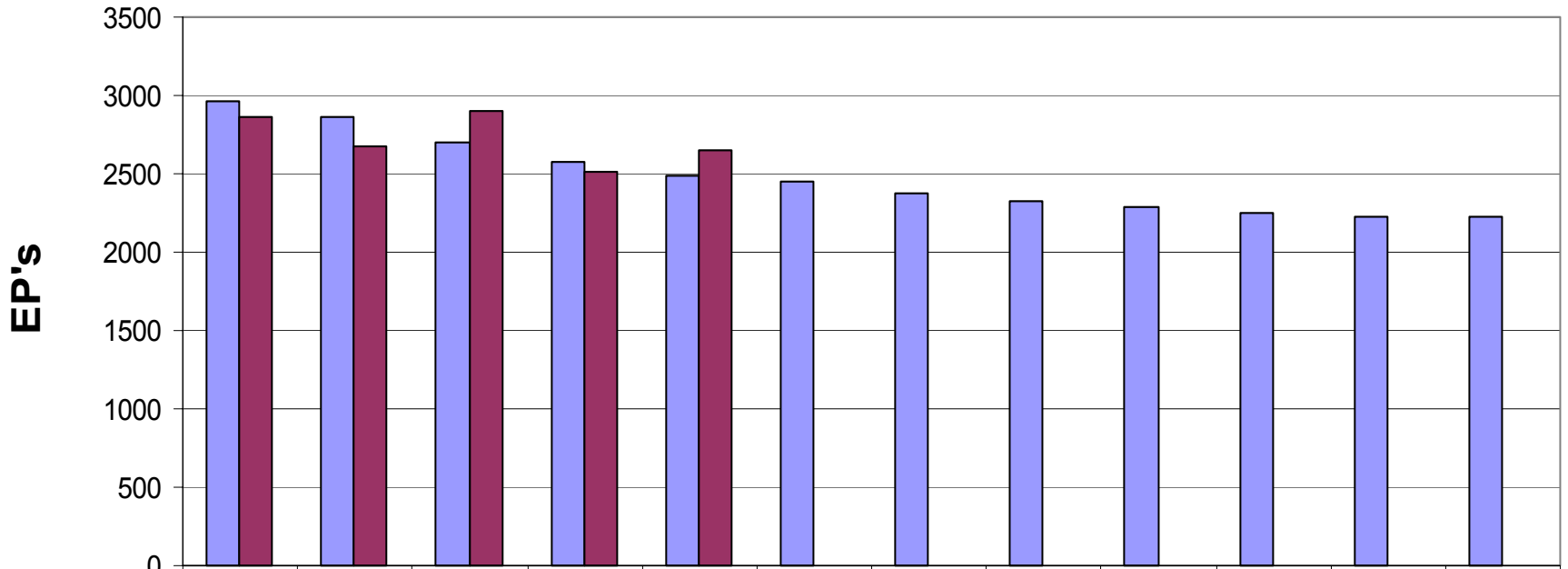
FY03 Prime Contractor Workforce Status as of 2/28/03



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Plan	2962	2857	2697	2576	2490	2456	2370	2324	2286	2249	2230	2221
Actual	2858	2673	2896	2516	2648							

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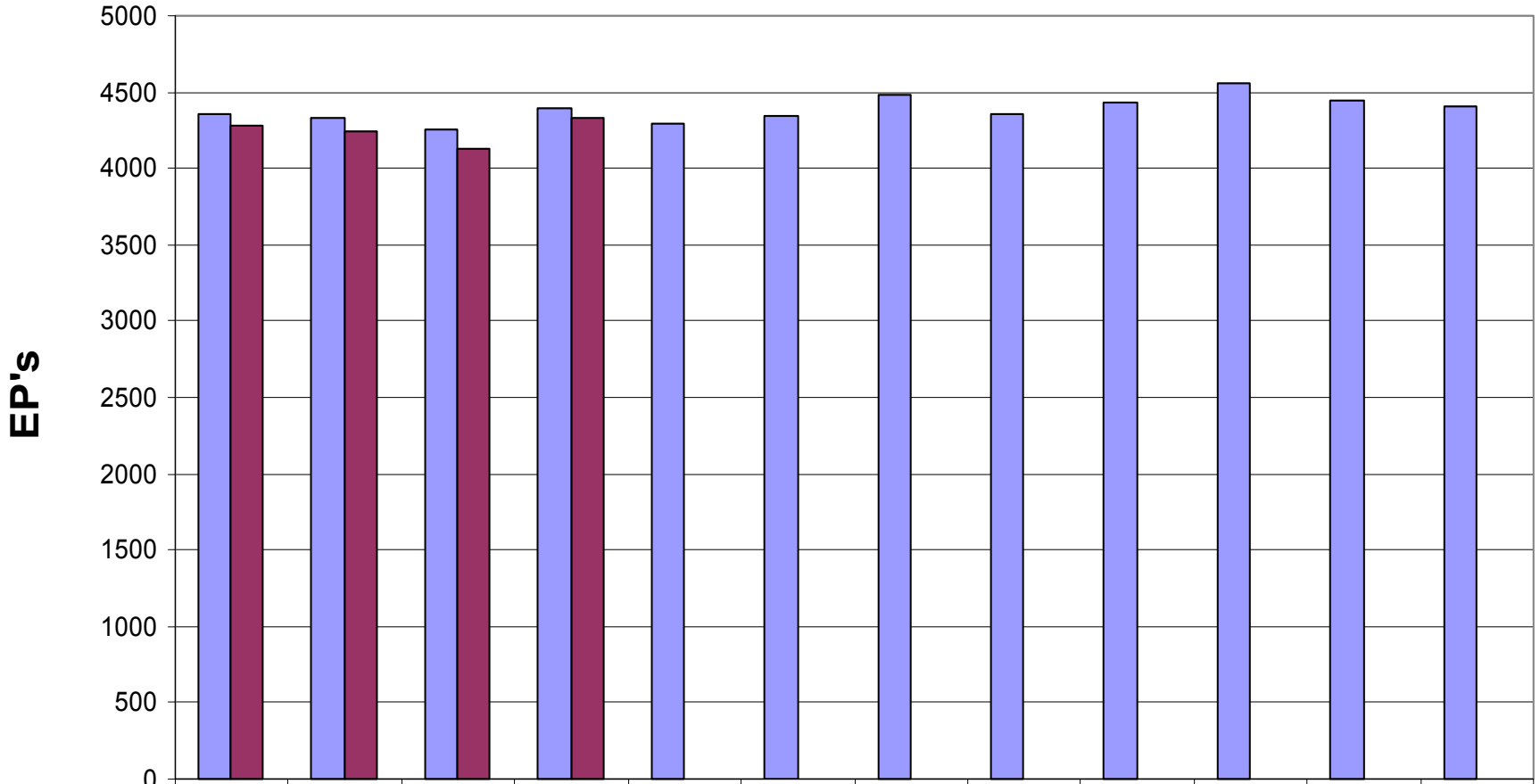
281-244-7141

FY03 Non-Prime Contractor Workforce Status as of 2/28/03



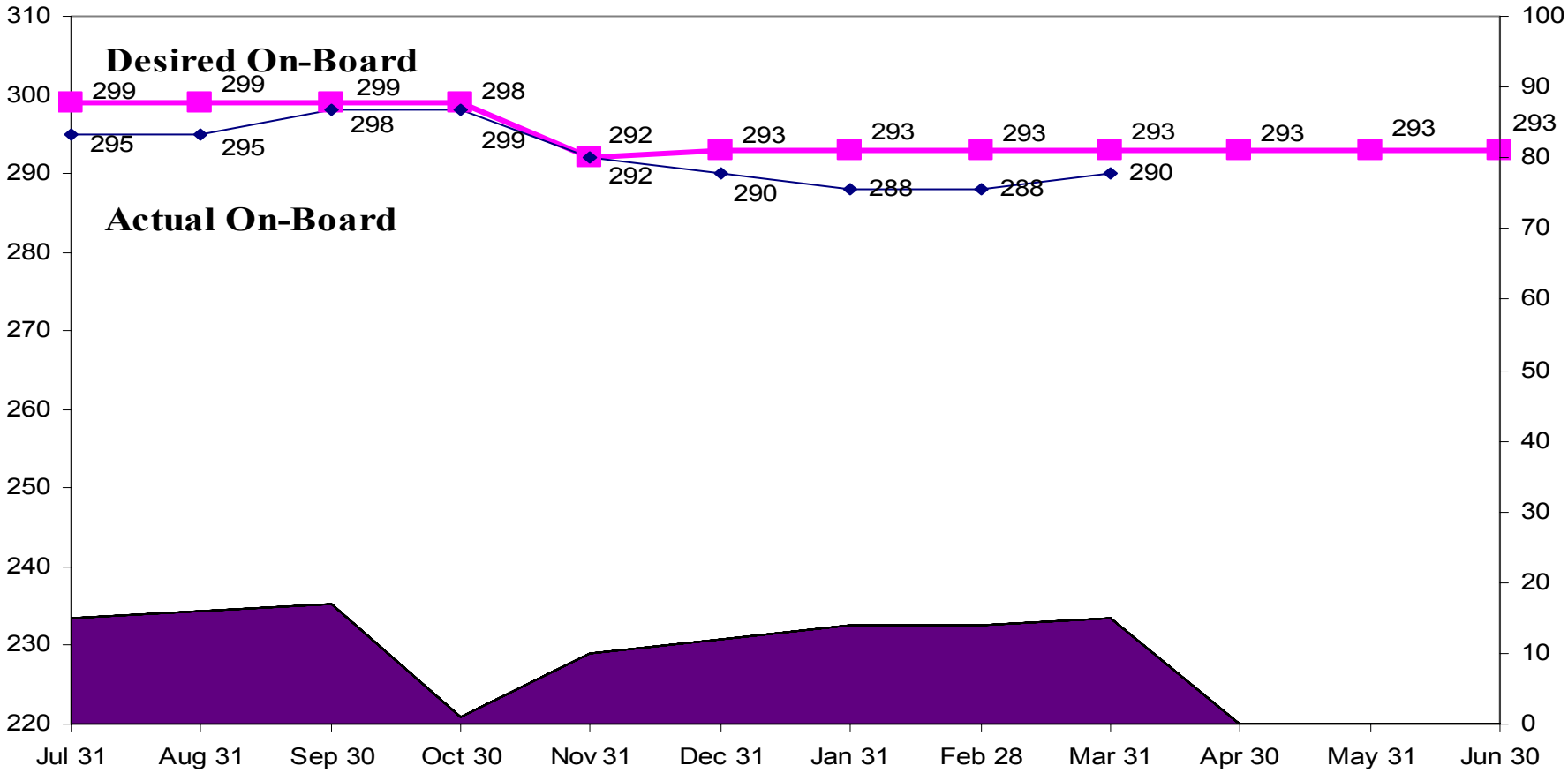
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Plan	4362	4335	4255	4398	4295	4339	4483	4360	4426	4559	4444	4402
Actual	4279	4237	4134	4336								

Barry Waddell
281-244-7141

2.2.1.1 – FY03 International Space Station Program Staffing Metrics
As of: 3/3103

Chart Owner: OF/Linda R. Enck, x30855

Purpose: To status ISS staffing within the Program.
Goal: To maintain the staffing ceiling.
Metric Summary: The Program continues to fill critical vacancies, as they occur, to maintain the staffing ceiling. We will continue to pursue multiple methods to fill the critical vacancies (e.g., ROB's, CPP's, external hires).



On-Orbit Status

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC
▸ Key Program Performance Indicator	G	▸ OB	▸ Porter

DESCRIPTOR

- The On-Orbit Status Indicator allows the Program to assess the current health of the vehicle systems. The Vehicle Health Status is provided by the Manager of On-Orbit Engineering Office and reflects a monthly snapshot of system health.

STATUS DETAIL

- Overall, the health of the on-orbit vehicle is good. Individual systems have experienced some anomalies, but none of these are limiting completing mission objectives.

PERFORMANCE INDICATOR METRICS

- Vehicle Health – Current State

Metrics / Systems Status
Vehicle Health

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ISSP Vehicle Health (POC: OB/S. Porter)

Last Update: 03/12/03

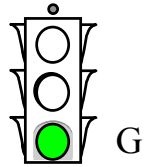

Chart Owner: S. Gahring Phone: x4-2347

Purpose: To provide a sense of the availability and functional status of the on-orbit systems.

Definitions:

RED: System performance is degraded and there is significant impact to operations

YELLOW: Degraded system performance. Some operations are being impacted.

GREEN: Acceptable performance. Degraded performance of any subsystem may be deemed acceptable, dependent on other mitigating factors such as redundancy, spares availability, or criticality level.

Status Summary: Overall, the health of the on-orbit vehicle is good. Individual systems have experienced some anomalies, but none of these are limiting completion of mission objectives.

VEHICLE HEALTH ASSESSMENT BY SUBSYSTEM

#	SUBSYSTEM	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03
1	ECLSS (Environments)	G	G	Y	G	G	G	Y	G		
2	GN&C (Guid & Nav)	G	G	G	G	G	G	G	G		
3	Proplusion	G	G	G	G	G	G	G	G		
4	EPS (Power)	G	G	G	G	G	G	G	G		
5	S&M (Struc & Mech)	G	G	G	G	G	G	G	G		
6	C&DH (Command and Data Handl.)	G	G	G	G	G	G	G	G		
7	C&T (Comm & Tracking)	G	G	G	G	G	G	G	G		
8	TCS (Thermal Systems)	G	G	G	G	G	G	G	G		
9	FCE (Flight Crew Equip.)	G	G	G	G	G	G	G	G		
10	EVR	G	G	G	G	G	G	G	G		
11	EVA	G	G	G	G	G	G	G	G		
12	CHeCS (Crew Health Sys)	Y	G	G	G	G	G	G	G		

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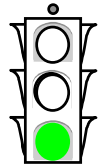
G = Green, Y = Yellow, R = Red, Blank box = no data,

ISSP Vehicle Health (POC: OB/S. Porter)



Purpose: This chart is keyed to the ISSP Vehicle Health Chart.

- S&M
  - 2B and 4B BGA showing high currents sporadically
    - 2B and 4B rotated as required for power
    - Dual angle mode and XPOP flown when possible
    - Low b X-POP being pursued to limit BGA rotations, when possible.
  - 3 of 4 Beta Gimbal Assembly (BGA) latching mechanisms locked on starboard 4 Bar assembly/Strength analysis shows 3 of 4 acceptable for life.
- TCS
  - Early external active thermal control system operating within specs
    - Starboard radiator has one loop plumbed incorrectly/Heat rejection capability impacted - still meets current heat rejection needs
  - ***ITCS operating in dual loop mode to operate new MT Pump Package***
    - ***Spare pump manifested on 11P***
    - MTLGas Trap and Pump Package Assembly R&R'd
      - MTL PPA failed and cause currently unknown but under investigation
    - Comprehensive ITCS fluid forward plan still in work
- EVR
  - CanadArm2 operating nominally. RWS operational.
- GN&C
  - CMG #1 failed/All remaining CMGs have experienced occasional loss of comm
    - Momentum well within current requirements, no issue until 12A
    - Spare/Replacement scheduled for ULF-1
  - CMG #4 has shown elevated Spin Motor Currents. Within bounds but under observation
  - GPS system
- EVA
  - Suspect PGTs replaced during 9A
  - ***Last two "wet" SPDs were installed during second Inc 6 Stage EVA***
- Propulsion
  - 10P Docked with new prop load
- C&T
  - S-band high/low data rate operating nominally/Ku band operating nominally
  - MCOR operational
  - SM Regul System - 2 of 3 strings operational
  - SM Kurs set #2 has intermittent failures - no impact
- FCE
  - Nominal
- CheCS
  - TVIS - operating restrictions in place
  - IRED – Forward plan in work to deal with usage rate.
  - CEVIS – ***On-orbit IFM allowed CEVIS to be used in online mode for EVA prebreathe.***
  - TOCA (water sample analyzer) – not operating. New unit manifested on ULF1
  - VOA (air sample analyzer) - operational
  - TEPC (real-time radiation monitor) – Determined failed. Returned on 11A..
- EPS
  - FGB EPS working nominally
    - 5 of 6 batteries on-line
  - SM EPS working nominally
    - All 8 batteries on-line
  - P6 power channels 2B and 4B operating nominally
    - 2B and 4B rotated as required for power
  - RPCMs
    - RPCMs LAD22B-A, LAFWD-1B-A, LAFWD-1B-C, and LAD62B-A have bit flips on SRAM and cannot be refreshed
      - No short term impact
      - Spares available, if required
    - ***MT RPCM replaced during second Inc 6 Stage EVA***
- ECLS
  - Lab ECLS systems operating as required
    - CDRA operational in dual bed mode during Vozdukh down-periods (Valves replaced on 11A)
      - On-orbit unit susceptible to FOD from dessicant beds, use must be treated as a consumable
      - Spare valves manifested on 6 Soyuz
    - MCA operational experiencing occasional interrupts due error codes (this is a periodic problem with the MCA).
  - Airlock CCAA water separator R&R'd but 9A stage restrictions in place.
    - No constraint for future EVA operations.
- C&DH
  - All MDMs operational
  - ***Step up to USOS R3 and SM 7.01 software completed.***

Worsened or Red status issues shown-new status in bold, underlined font - (see 2.2.3-9.1 Overall ISSP Flt Readiness & Progress chart)

ISS Program Budget

AS OF 4/11/2003 **ORG** OG/BMO **POC** Waddell

STATUS SUMMARY

G

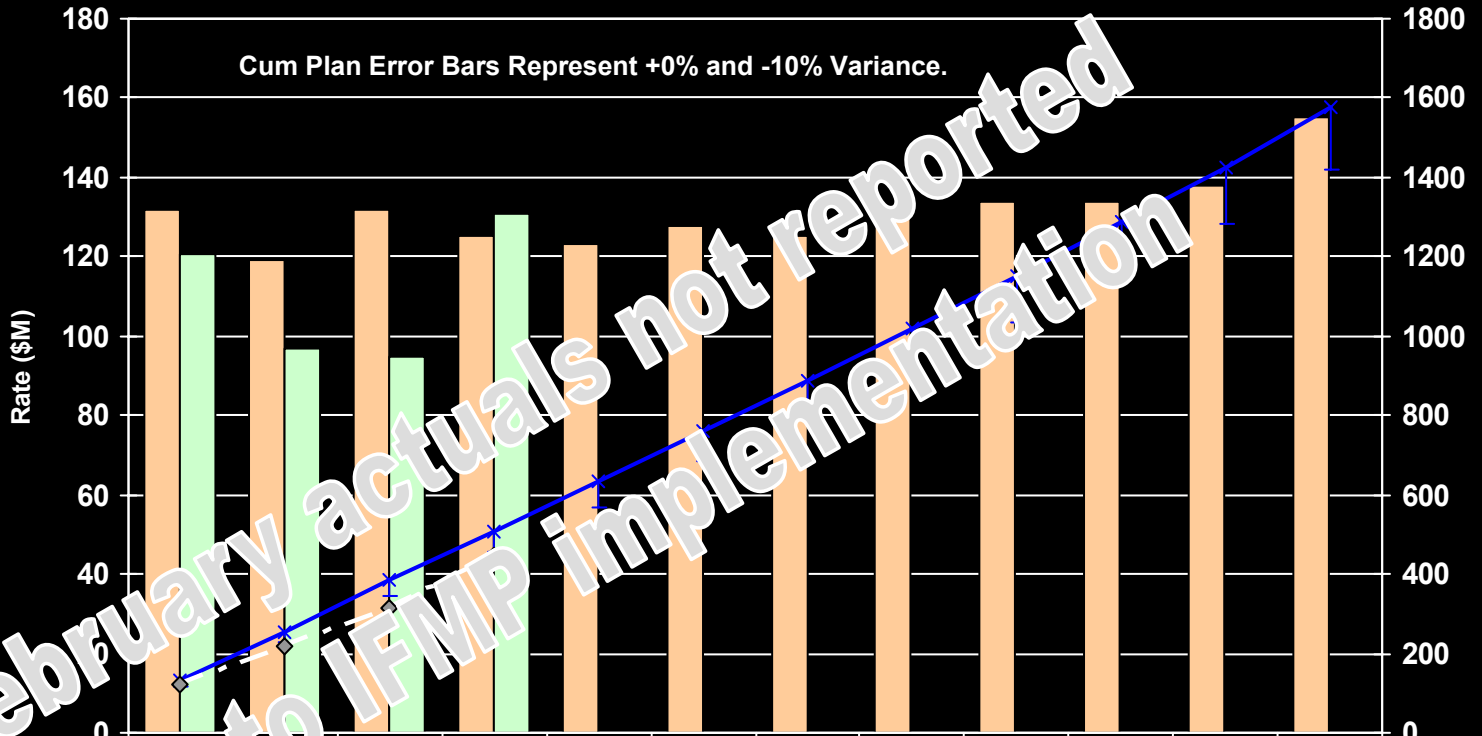
Program Budget allocated for FY03 is $1579M. February actuals are not reported due to the IFMP transition. A qualitative analysis of cost performance by the BMO analysts and the Assessment & Cost Estimating Office (ACEO) estimates "actuals" to be ~$549M, or a cum under spend of ~$83M thru February.

Currently, $171M of unencumbered reserves, $66M make operable and $105M DAA reserves. Shuttle slips caused by the Columbia accident and Institutional charges continue to challenge the FY03 planned rephase of $100M of reserves into FY04.

DESCRIPTOR

This indicator displays the assessment of the Program's performance relative to budget, via metrics including costs and reserves measurements.

FY03 Cost Plan
Government Accruals
As of 1/31/03



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Plan Rate	132	119	132	125	123	128	125	133	134	134	138	155
Actual Rate	121	97	95	131								
Total Cum Plan	132	251	383	509	632	760	885	1018	1152	1286	1424	1579
Total Cum Actual	121	218	313	444								

- Cum under spend $65M or 13% under plan: not of concern at this time as under spend is driven by under reporting and accounting adjustments. (Prime FY02 year end adjustments; ECLSS & DCAS under reported due to IFMP start up at MSFC; and lagging invoices)

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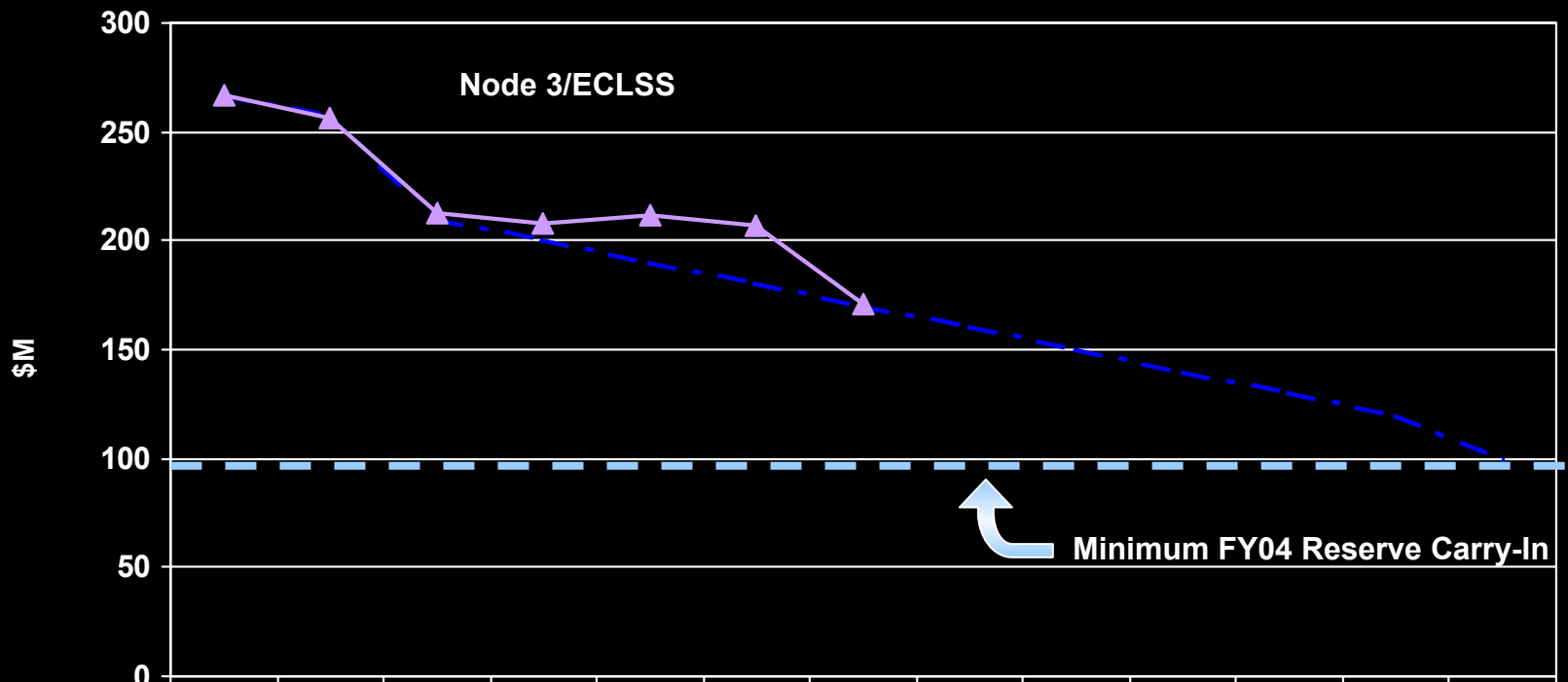
281-244-7141

FY03 Unencumbered Program Reserves

As of 3/31/03



	FY03 Start	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep
Min Target	267	257	210	200	190	180	170	160	150	140	130	120	100
Actual	267	256	213	208	212	207	171						

- $20M decrease for HQ/Taxes for IFMP acceleration, Civil Service pay raises & staffing increases, etc.
- $10M decrease to restore PMS under spend to MSFC and KSC
- $5M decrease for HQ adjustment to FY03 New Obligating Authority for Code A advanced programs

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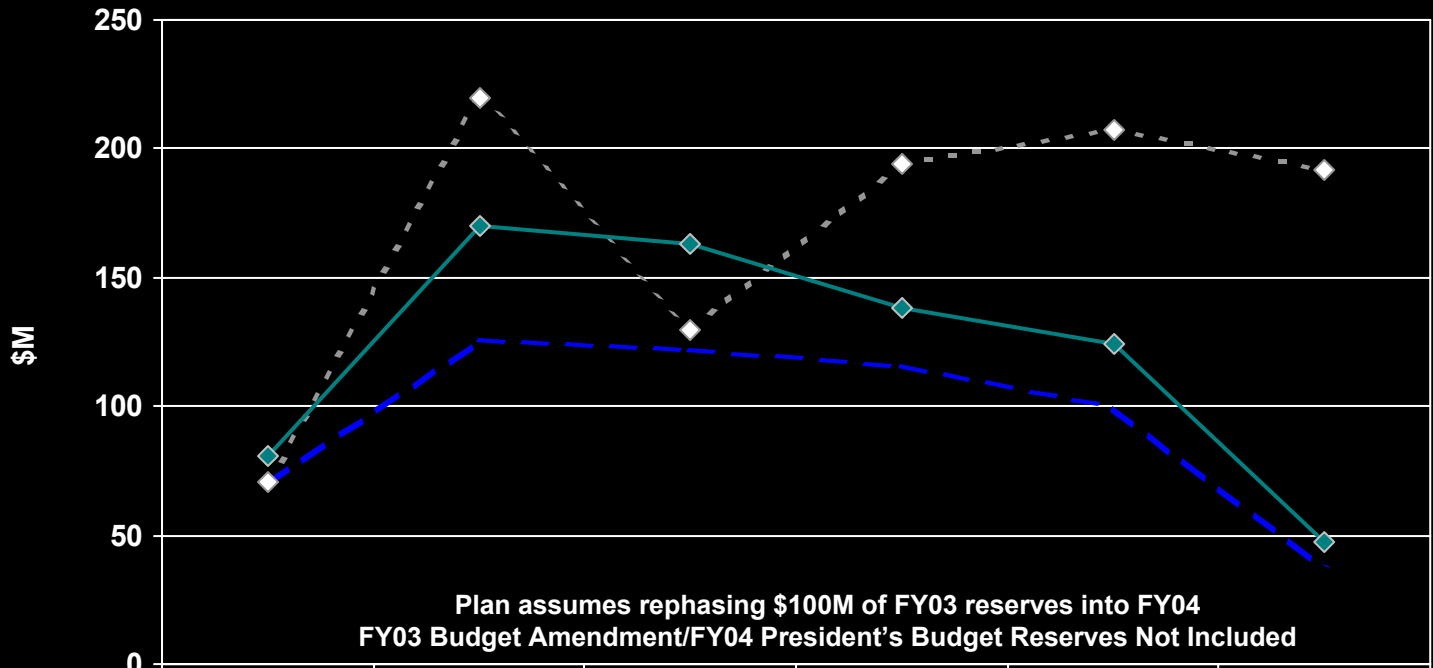
281-244-7141

Budget Threats vs. Reserves

As of 3/31/03



	FY03	FY04	FY05	FY06	FY07	FY08
Reserves Projection	71	220	130	194	207	192
Threats (Level 1 & 2)	81	170	163	138	124	47
QRA 80% Confidence	70	126	122	116	99	37

- Program Reserves reflects POP 03 Guideline Adjustments
- Shuttle slip due to the Columbia accident and Institutional charges continue to challenge FY03 planned rephase of $100M of reserves into FY04.
- FY05 highest risk year for known threats

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281-244-7141

ISS Total Reserves Status
$ in Millions
Status 3/31/03

G

	FY03	FY04	FY05	FY06	FY07	FY08	Total
Make-Operable Reserves (Shortfall) 2/28/03	**82.9**	**(14.2)**	**(12.3)**	**(7.3)**	**(1.7)**	**0.2**	**47.6**
OC/SSCN 7218 ISS Downlink Enhancement Architecture (IDEA) Project funding adjustment	(0.1)	(0.2)	(0.1)	(0.1)	(0.1)	(0.1)	(0.7)
HQ/Adjustment to FY03 NOA for transfer to Code A for Advanced Programs	(5.0)						(5.0)
EVA/SSCN 7682 USA SAFER On-Orbit Interval Extension		(0.1)	(0.1)				(0.2)
MSFC/Restore PMS underspend to MSFC	(6.2)						(6.2)
KSC/Restore PMS underspend to KSC	(4.0)						(4.0)
OB/SSCN 7601 Solar Array Wing 5 Removal from 12A (Partial Implementation)	(1.6)						(1.6)
Make-Operable (Shortfall) 3/31/03	**66.1**	**(14.5)**	**(12.5)**	**(7.4)**	**(1.9)**	**0.1**	**30.0**
DAA Reserves	124.4	134.1	142.8	201.4	208.8	192.0	1003.5
HQ/Taxes for IFMP acceleration, CS pay raises and staffing increases, SBIR/SBTT, etc.	(20.0)						(20.0)
Proposed FY03 Minimum Carry Forward (MCF)	(100.0)	100.0					0.0
Total Program Reserves After MCF	**70.5**	**219.6**	**130.3**	**194.0**	**206.9**	**192.1**	**1013.5**

Note: Small Business Innovative Research (SBIR) & Technology Transfer Programs (SBTT)

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281-244-7141

ISS Special Topic: Contract Strategy

AS OF 3/31/2003 **ORG** OG/BMO **POC** Waddell

G

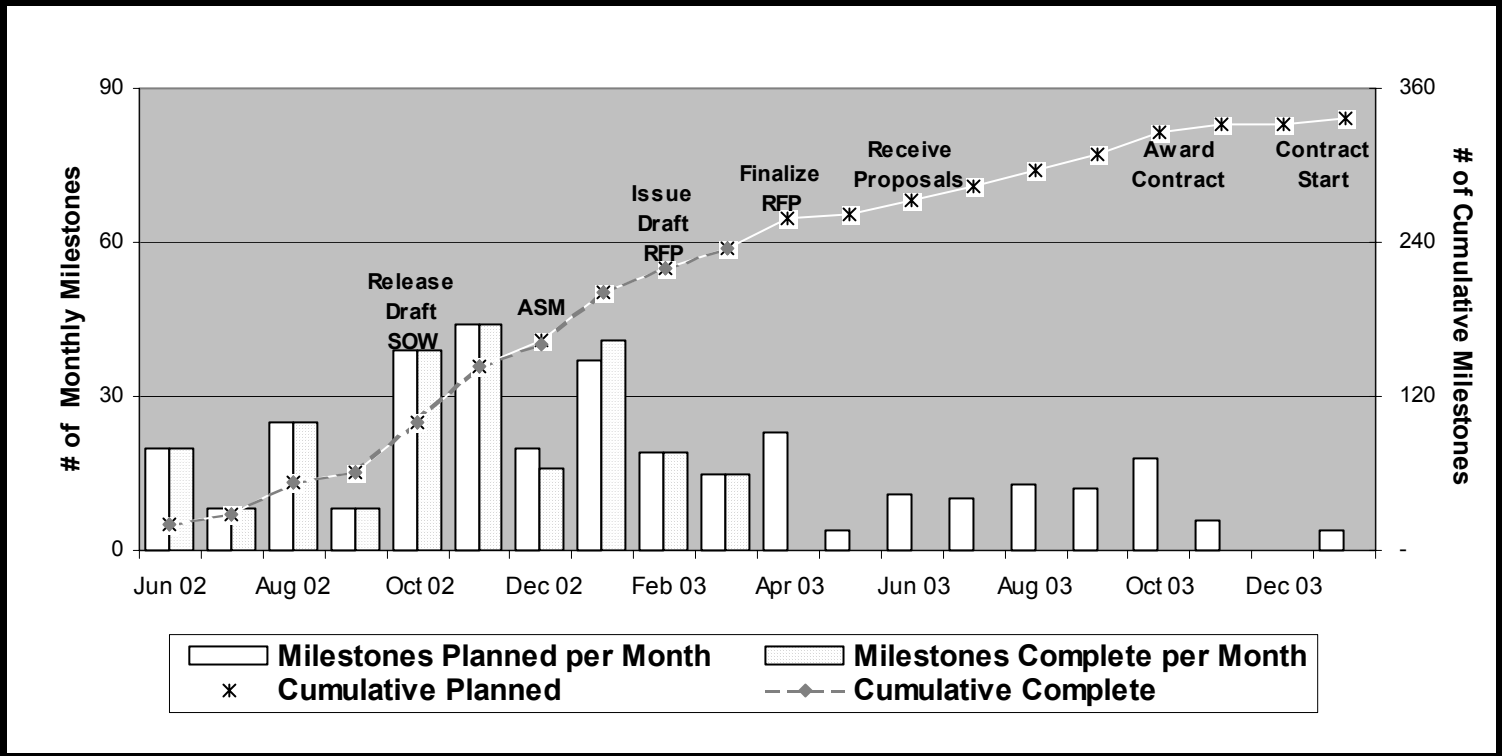
STATUS SUMMARY

- Contracts A, B, C & F on schedule to meet all major milestones.
- Contract G has been re-scheduled pending Space Shuttle Program's decision (in April).

DESCRIPTOR

This indicator displays performance relative to completed milestones associated with the implementation of the ISS Contract Strategy, leading to contract start date of 01/01/04.

ISS Contract Strategy Implementation
as of 03/31/03



- Contracts A, B, C & F on schedule to meet all major milestones
- Contract G has been re-scheduled pending Space Shuttle Program's decision (in April)

Barry Waddell
281-244-7141

ISS Safety

AS OF	4/11/2003	ORG	OE/S&MA	POC	Wade

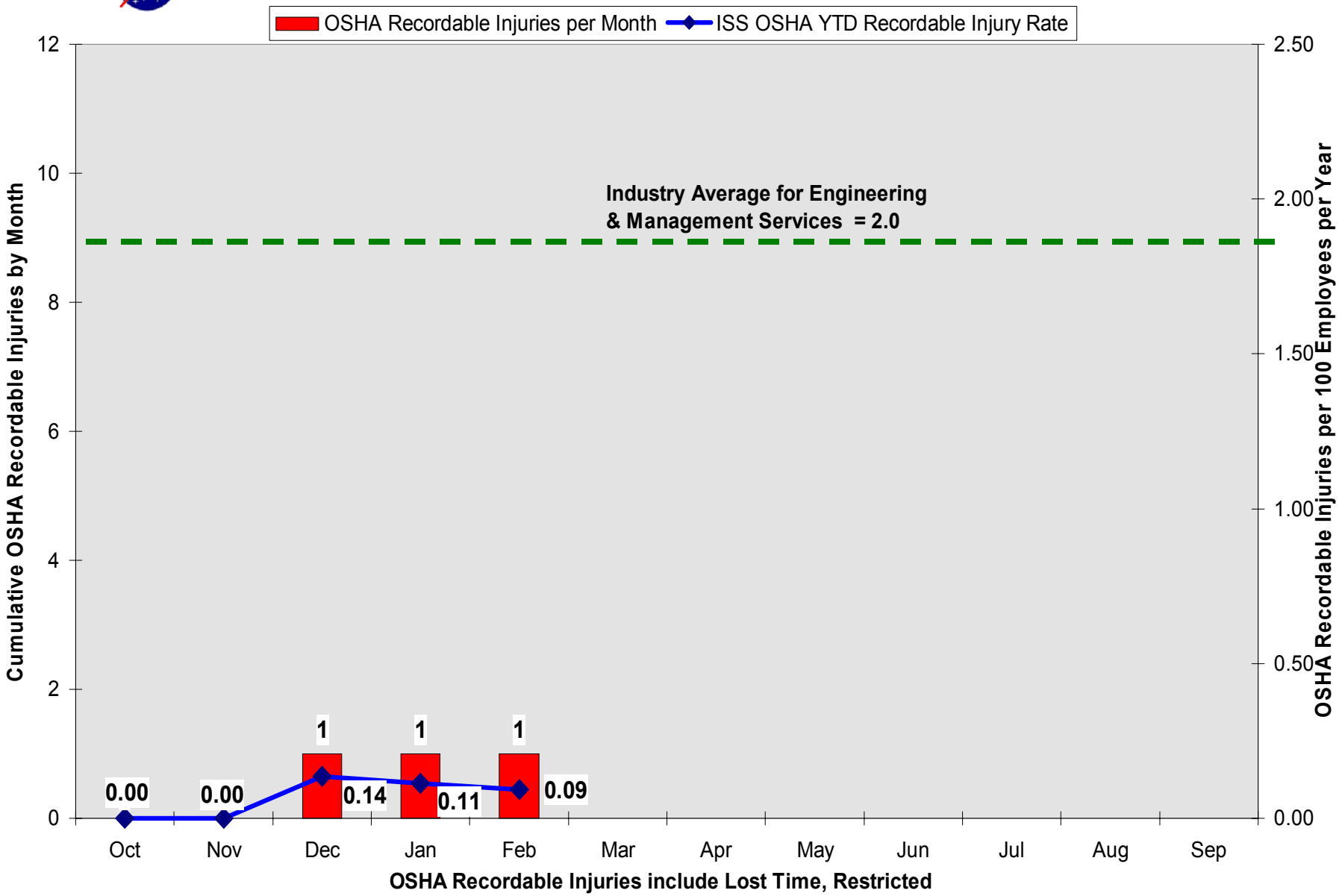
STATUS SUMMARY

The safety metric is below the industry average of 2 recordable injuries per 100 employees/year, and the JSC goal of 1.5 recordable injuries per 100 employees/year.

DESCRIPTOR

The Safety metric tracks the cumulative for the year, International Space Station (ISS) Occupational Safety and Health Agency (OSHA)-reportable injuries. The metric also tracks details of specific contractor, as well as civil servant, injuries. Additionally, the metric tracks the cumulative for the year ISS property damage.

ISS OSHA YTD Recordable Injuries/Rates - FY03



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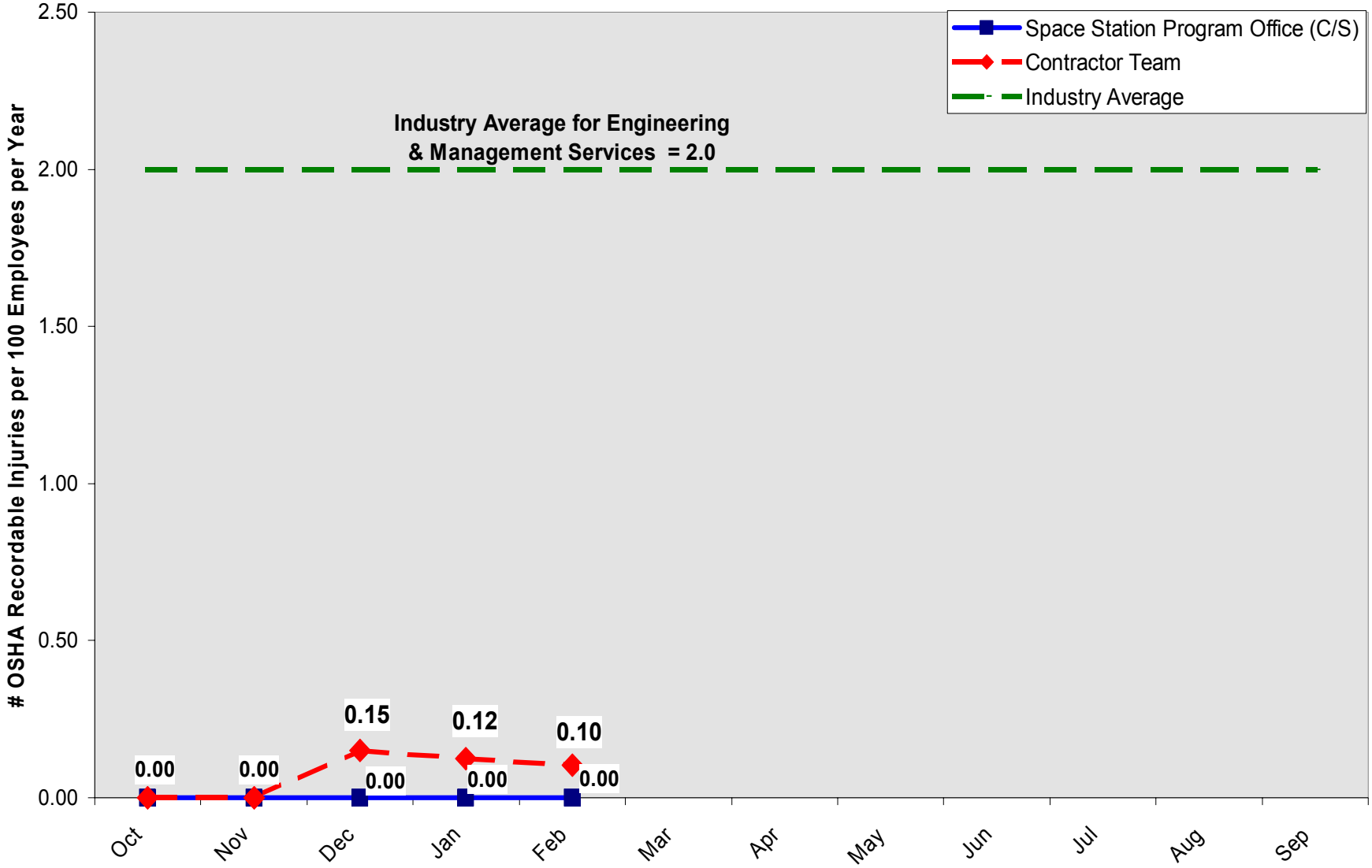
ISS OSHA Recordable YTD Injury Rate - FY03



OSHA Recordable Injuries include Lost Time, Restricted Duty & Medical Treatment Cases

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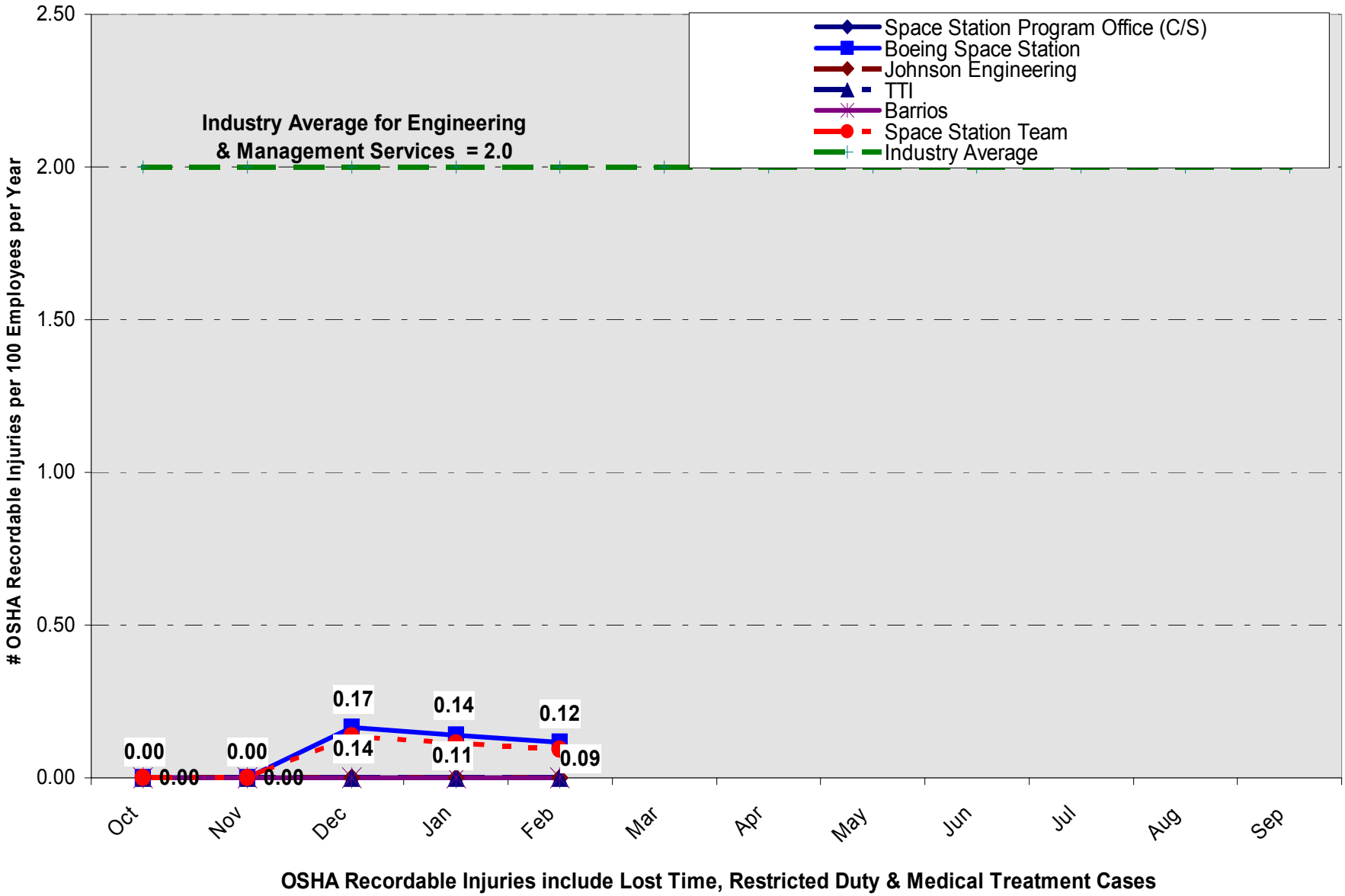
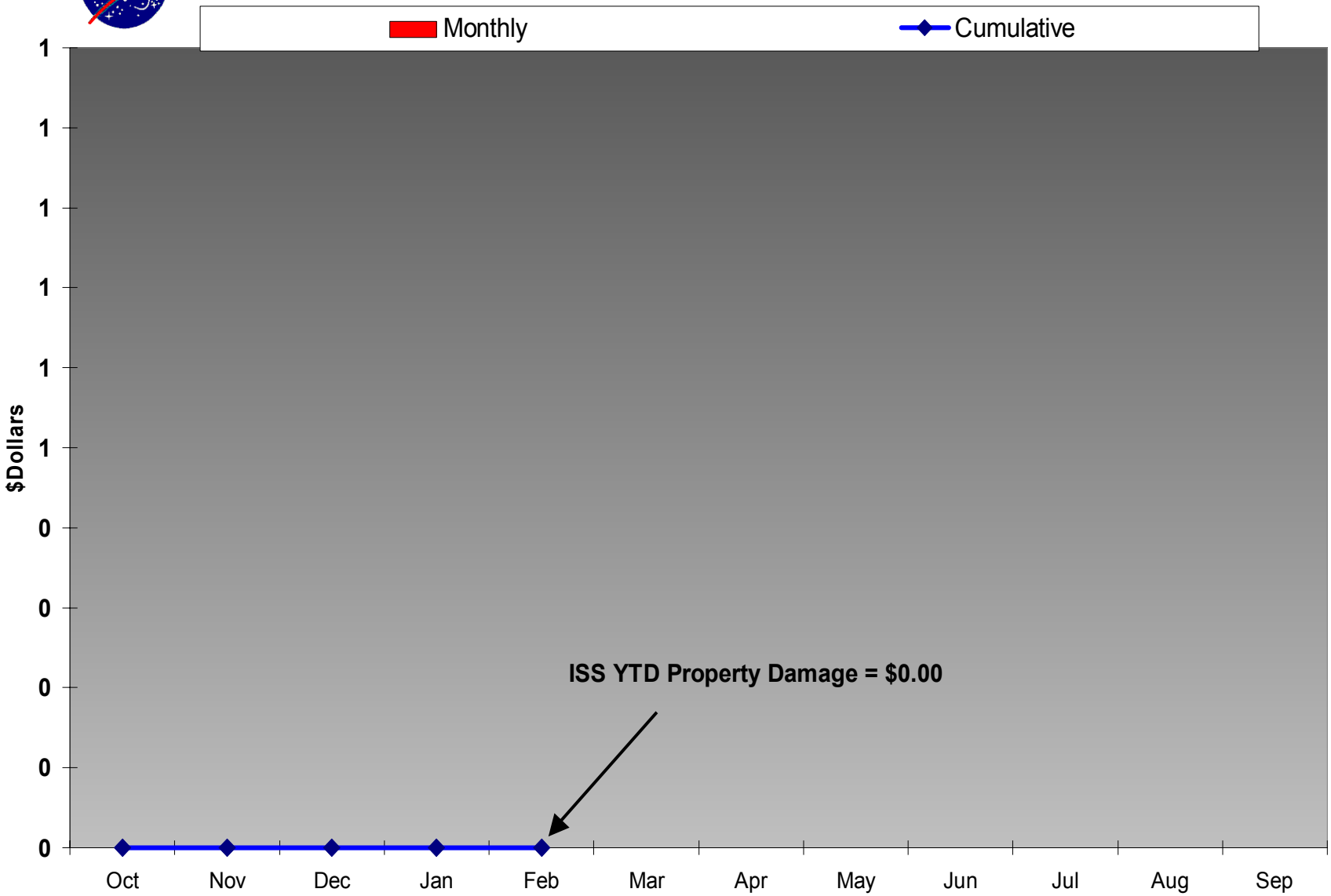
ISS OSHA Recordable YTD Injury Rates - FY03



OSHA Recordable Injuries include Lost Time, Restricted Duty & Medical Treatment Cases

ISS Property Damage - FY03



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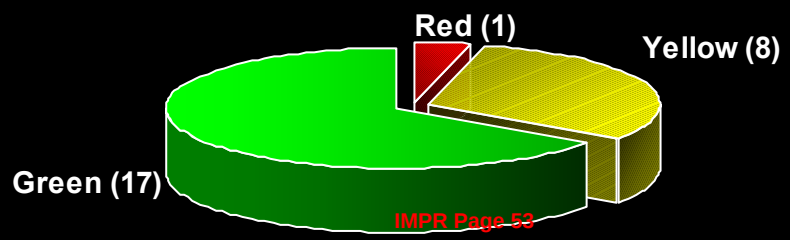
ISS Property Damage

- No Cases through 2/28/03

Manager Level Performance Indicators

April 11, 2003

Current Status	Last Status	Ref #	MLPI	POC	ORG
		1	ISS Impact of Columbia Tragedy Groundrules	Gerstenmaier	OA
R	R	2	Research Resources	Roe	OZ
Y	Y	3	Non-Prime Regenerative ECLSS	Porter	OB
Y	G	4	Key Procurements	Waddell	OG
Y	Y	5	Prime Spares	Porter	OB
Y	Y	6	Prime External Carriers	Geyer	OM
Y	Y	7	Prime Business Management	Waddell	OG
Y	Y	8	Cost-Bearing Change Requests	Luna	OL
Y	Y	9	ESA and NASDA Schedule Status	Geyer	OM
Y	G	10	MOD Flight Production and Crew Loading Status	Webb	MOD
G	Y	11	Prime Pressurized Elements	Porter	OB
G	Y	12	Schedule Reserves	Porter	OB
G	G	13	Prime TCE (includes ITCE and OTCE)	Porter	OB
G	G	14	Prime T&ECS	Porter	OB
G	G	15	Prime Structural and Mechanical	Porter	OB
G	G	16	Prime S&MA	Holsomback	OE
G	G	17	Prime Systems Engineering and Integration	Geyer	OM
G	G	18	Launch Site Processing	Talone	KSC
G	G	19	MOD Facility Development/Operations	Webb	MOD
G	G	20	Prime Configuration Management	Luna	OL
G	G	21	Prime Avionics	Panter	OD
G	G	22	Undefinitized Contract Actions (UCA'S)	Waddell	OG
G	G	23	Prime EPS	Porter	OB
G	G	24	EVA	Flynt	EVA
G	G	25	Prime Software	Panter	OD
G	G	26	Prime Flight Element Processing	Porter	OB
G	G	27	Information Technology	Luna	OL
Removed	G	28	Reserves Status	Waddell	OG



ISS IMPACT OF COLUMBIA TRAGEDY GROUNDRULES

AS OF 4/11/2003 **ORG** OA **POC** Gerstenmaier

STATUS SUMMARY

R

Status listed as Red as placeholder only. This Performance Indicator is informative - to provide groundrules for metrics and establish commonality in reporting. No metrics are included in this indicator.

DESCRIPTOR

The Columbia Groundrules and Assumptions Performance Indicator provides the current groundrules and assumptions from which all PI's (KPPI and MLPI) report.

Columbia Impact: Groundrules and Assumptions

All program metrics are being measured against these groundrules and assumptions as of 4/01/03. The Plans below are for planning purposes within the ISSP only – As they are modified, this page will be changed accordingly.

- Make no significant changes in ISS implementation (at least not until flight date is known)
  - Hold schedule for active development tasks (avoid deferral penalty)
  - Reevaluate new development and new spares planning
  - Reevaluate planned manpower reductions for sustaining/operational areas
- Station will resume flight rate upon launch of ULF 1
- Station will remain manned (2 - 3 crew during delay, 3 crew after) and will perform critical EVAs
  - Assume SSCB recommended Progress flight schedule: one additional Progress vehicle in FY03 and one additional Progress vehicle in FY04
- Use the planning dates below for metric reporting

	Launch Date From:		Launch Date To:
Flight	Baseline	Interim Planning	NASA Planning
ULF1	3/1/03	NET 7/21/03	NET 7/21/03
12A	5/23/03	NET 8/1/03	NET 8/21/03
12A.1	7/24/03	NET 8/28/03	NET 12/18/03
13A	10/2/03	10/2/03	NET 1/22/04
13A.1	11/13/03	NET 1/14/04	NET 5/6/04
15A	1/15/04	1/15/04	NET 6/10/04
10A	2/19/04	2/19/04	NET 9/23/04
ULF2	7/29/04	7/29/04	To Be Reviewed

Soyuz/Progress Near-Term Dates

Flight	Date
6S	4/26/03
11P	6/8/03

	Orbiter From:	Orbiter To:
13A.1	OV-102	(TBD)
10A	OV-105	(TBD)

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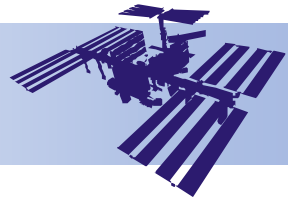
ISS Research Accommodations Status

9 April 2003 (Data through 31 March 2003) ***[POC: Lesa Roe]***



Research Resources

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	
▸ Manager's Lead Performance Indicator	R	▸ OZ	▸ Roe	▸ 4/11/03

DESCRIPTOR

- An interim ISS research plan has been baselined and is in the integration process.
- The Research Resources Indicator shows the Program's performance in accommodating the required Research Crew Time and Research Supplies in Middeck, as well as the Program's performance in achieving the minimum commitments for Research Crew Time and Research Supplies in Middeck.

STATUS DETAIL

- Research Crew Time: Yellow. Allocated Increment 7 crew time much greater than requirement. No crew time allocation known for Increment 8 Option. Allocated Increment/12A.1 crew time less than 90% of minimum commitment and less than 80% of research requirement. Crew Time Steering Team investigating improvement methods.
- Research Supplies in Middeck *(and Soyuz/Progress):* Red. Allocated upmass on 6S and 11P much less than requirement (allocation = 0 kg). No mass allocation known for 12P or Increment 8 Option. Powered middecks not available on Increment/12A.1. No middeck allocations on Increment/15A.

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

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Non-Prime Regenerative ECLSS

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Performance Indicator	Y ↓	OB	Porter	4/11/03

DESCRIPTOR

- **The Non-Prime Regenerative Environmental Control and Life Support System (ECLSS) Indicator measures the budget, schedule, and technical performance of the advanced ECLSS.**

STATUS DETAIL

This addresses actuals through Feb. HSSI EVMS: .96 CPI and .96 SPI. At HSSI, multiple component failures and late subcontract hardware is causing
WPS schedule to erode (see ORU M&A and test.acceptance metrics) and delaying manpower ramp-down (see manpower metric). In-house issues with workmanship on eletronics; outsourcing work to recover some schedule. Still working within the 42.3M RIN for ECLSS/N3, however, flexibility (to end FY03) is eroding. Re-assessing split between N3/ECLSS marks within the 42.3M RIN. May augment ELCSS plan due to performance issues. This action will be complete by 11 April 2003.

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

ISS Key Procurements

AS OF 4/11/2003 **ORG** OG/BMO **POC** Waddell

STATUS SUMMARY

The Battery buy is Green. A letter contract was awarded in February and is scheduled to be definitized in May.

MDM procurement is Yellow. Contracting Officer is waiting for Contractor availability to begin negotiations.

DESCRIPTOR

This indicator displays performance relative to completed milestones associated with the implementation of two sole-source procurements: 1) Boeing Battery Procurement and 2) Honeywell, Inc. MDM Procurement.

Prime Spares

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Performance Indicator	Y	OB	Butina	4/11/03

DESCRIPTOR

- The Prime Spares Indicator allows the Program to measure its financial and schedule performance during spares procurement activities.

STATUS DETAIL

- Spend actuals for February were very close to plan. Adjustments from early in the fiscal year will cause an end of year under spend of ~10%. Also, Avionics has cost efficiencies from L3COM that contributes to the end of year under spend. Under-spend does not impact technical performance.

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

ISS Prime External Carriers

AS OF 4/11/2003 **ORG** OM/Prog Integ **POC** Geyer

STATUS SUMMARY

Y

-Earned value system operational - monitoring to identify trends.

-Latest data indicating cost threats

-Personnel losses as Prime contract nears completion remain a threat to project execution.

--Pump Module, BCDU FSE on schedule for 12A.1

Columbia Impact: None, maintaining current schedules

DESCRIPTOR

This portion of the Prime External Carriers Indicator enables the Program to assess level of readiness for External cargo integration activities, including mission support and FSE development (WBS 2.13.04 and WBS 3.13.01.01).

ISS Prime Business Management

AS OF 4/11/2003 **ORG** OG/BMO **POC** Waddell

STATUS SUMMARY

Y

Overall status is Yellow for Prime Business Management. Currently running under plan, but indications are Boeing will not be able to meet planned redeployment due primarily to slower than planned de-staffing at Canoga Park. Boeing management taking actions to remain within planned budget.

DESCRIPTOR

This indicator provides visibility into assessing Boeing's performance relative to planned redeployment of business personnel in order to remain within authorized budget.

ISS Cost-Bearing Change Requests

AS OF 4/11/2003 **ORG** OL/Management Integration **POC** Luna

STATUS SUMMARY

Y

The total number of Program CR's (575) is over the projected number (510) for FY03, reflecting an increase of 12% over the projected number. The number of actual Cost bearing CR's (68) vs. the projected (72) is less.

DESCRIPTOR

The metrics track the number of new change requests (CR's) per month and number of cost bearing CR's per month. The metrics also include the very rough order of magnitude of the CR's for the month and gives the program insight into the first basic engineering estimate of how much a particular change may cost.

ISS ESA and NASDA Schedule Status

AS OF 4/11/2003 **ORG** OM/Prog Integ **POC** Geyer

STATUS SUMMARY

Y

ATV and CAM are identified as medium schedule risk. All other ESA and NASDA elements are identified as low schedule risk.

NASDA is performing an internal assessment of Program Health ECD: May 03

Columbia Impact: Maintaining key hardware milestone dates
ATV Sept '04 Launch included in ISS recovery flight
plan

DESCRIPTOR

The ESA and NASDA Schedule Status highlights elements that are high or medium schedule risk. ESA elements include the ATV, Columbus, and Cupola. NASDA elements include the ELM PS, JEM PM, JEM EF, ELM-ES, Centrifuge Element, and HTV. Schedule risk is based on schedule drift over time, available margin, workaround flexibility, and known technical issues.

MOD Flight Production and Crew Loading Status

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Performance Indicator	Y	MOD	Webb	4/11/03

DESCRIPTOR

- **MOD Flight Production and Crew Loading Status – This metric provides a status on the production activities that need to be completed by MOD for each Station Mission. The metric also provides the status of the Expedition Crew Loading prior to each Station Increment.**

STATUS DETAIL

- **Expedition 7 prime crew loading average ~50 hrs/week here to launch (yellow). Expedition 8 green. Will reassess Expedition 9 and subs once official direction is received with respect to crew rotation (crewmember names, tasks, launch dates).**

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

ISS Prime PE

AS OF	4/11/2003	ORG	OB/Vehicle	POC	Porter

STATUS SUMMARY

G

ISSUES: [DDT&E] – Design issue found on Carleton Inter-Module Ventilation (IMV) valves. Node 3 schedule maturity. [I&O] – Node 3 Integrated Test and Verification plan schedule is being impacted by Subsystem Team involvement with Node 2. ACCOMPLISHMENTS: [DDT&E] – Requirements loaded for the procurement of replacement hardware for Node 2 1553 data bus terminator assemblies. Completed the design and product baseline certifications for Cupola Top and Side Scratch Window configurations. Completed the final shipment of flight Cupola windows to Alenia. Completed the shipment of the Cupola Top and Side Scratch Window spares and Top Debris Window spare to KSC PPS Stores. Manufacture of the Node 3 to Node 1 VOK fluid jumpers completed. Restarted acceptance testing of the Node 3 Nitrogen Interface Assembly. Received the first redesigned Intermodule Ventilation (IMV) valves from the vendor. Completed Node 2 CBM deployment 4A. [I&O] – Developed and coordinated plan of action to resolve an interference between Node 2 1553 data bus loop back connectors and CBM brackets. Closure data generated for two thirds of the 50 Node 3 DR-2 actions. Quarterly action items are in work. Supported Node 3 Ground Operations working group at KSC.

DESCRIPTOR

This portion of the Prime External Carriers Indicator enables the Program to assess level of readiness for External cargo integration activities, including mission support and FSE development (WBS 2.13.04 and WBS 3.13.01.01).

Special Topic: Node 2 Reserve

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Key Program Performance Indicator	G	OB	Porter	4/11/03

•DESCRIPTOR

- The Node 2 Reserve Schedule allows the Program to track issues that impact the schedule margin to launch date and management actions to recover. Cost and technical issues are discussed in the Node 2 Development Status KPPI and IRMA Risk # 3902.

•STATUS DETAIL

- ISS Core Complete schedule issues are discussed on the schedules. The schedule status is green due to the launch slip. The positive margin resulting from the slip will be quantified for the next update.

•PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

ISS Prime TCE

AS OF	4/11/2003	ORG	OB/Vehicle	POC	Porter

STATUS SUMMARY

G

ISSUES: [DDT&E] – None

[I&O] – P4 FW5 / S6 FW7 R&R due to SAW deployment concerns. Could result in schedule impacts to current baseline. S6 PCA has slipped to April. ARB date could be impacted.

ACCOMPLISHMENTS: [DDT&E] – Delivered S6#1 BMRRM, BGA #1 Platform, and BGA S6 #1 and #2 4-Bar Assemblies to KSC. Completed redesign/modification of Splice Joint (SPL 1) Qual hardware. Completed Cone Drive acceptance testing for MT Rail and delivered to KSC.

[I&O] – Delivered S6 MT Rails to KSC for fit-up. Completed MT Rail loads analysis to enable start of P5/P6 extended test.

DESCRIPTOR

The Prime Truss Cargo Elements (TCE) Indicator allows the Program to measure Prime contractor budget and schedule performance relative to truss development. The TCE Status is provided by the Manager of the Element Integration Office and reflects a monthly snapshot of the element status.

ISS Prime T&ECS

AS OF 4/11/2003 **ORG** OB/Vehicle **POC** Porter

STATUS SUMMARY

G

Actuals through February '03. Cost performance being managed to plan. Significant technical issues in work: Internal Thermal Control System (ITCS) water chemistry and CDRA On-Orbit shutdown. Issues of note: 1) Initial corrosion test data shows little delta between 180 and 120 day results 2) Nickel removal hardware design review complete, 3) CDRA bed redesign TIM complete, selector valve TT&E continues, and 4) NTA heater failure has impacts to flight and spare ORU production. In addition, several work packages (ATCS/PTCS) have completed work prioritizations. For T&ECS, the potential overload may impact the planned EP reductions.

DESCRIPTOR

The Prime Thermal and Environmental Control Systems (T&ECS) Indicator allows the Program to monitor budget and schedule performance, and technical milestones relative to Prime Contractor development and sustaining of the thermal and environmental control systems.

ISS Prime Structural & Mechanical

AS OF 4/112003 **ORG** OB/Vehicle **POC** Porter

STATUS SUMMARY

G

Actuals through February '03. The P5 Robotic Install mechanism analysis and corridor analysis is on schedule. The system is preparing for SAW 5 redeployment activity. Also reanalysis of future hardware is in work to account for PGT torque tolerance.

DESCRIPTOR

The Prime Structural & Mechanical (S&M) Indicator allows the Program to monitor budget and schedule performance, and technical milestones relative to Prime Contractor development and sustaining of the structures & mechanisms system.

ISS Prime S&MA

AS OF	4/11/2003	ORG	OE/S&MA	POC	Holsomback

STATUS SUMMARY

The status of Prime S&MA is Green because ISS Lost Workday Rates currently exceed program goals.

DESCRIPTOR

The Prime Safety and Mission Assurance (SM&A) Indicator allows the Program to monitor the status of its Prime contractor's safety and mission assurance initiatives.

ISS Prime Systems Engineering and Integration

AS OF 4/11/2003 **ORG** OM/Prog Integ **POC** Geyer

STATUS SUMMARY

G

No performance issues.

Columbia Impacts: Continuous assessments of tasks to assure work in progress is appropriate

DESCRIPTOR

The Prime Systems Engineering and Integration Indicator enables the Program to assess its performance and level of readiness for its overall systems engineering and integration processes and activities.

Launch Site Processing

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Performance Indicator	G	KSC	Talone	4/11/03

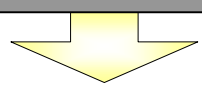
DESCRIPTOR

- The Launch Site Processing Indicator enables the Program to assess its performance relative to the KSC ground processing of each mission including mission costs, unplanned work and mission schedule status.

STATUS DETAIL

- The Assembly & International (A&I) and Resupply & Return (R&R) missions are under budget through March 2003. All A&I and R&R schedules are being met with no significant threats.

PERFORMANCE INDICATOR METRICS



Metrics / Performance Information

MOD Development and Facility Operations

METRIC TYPE	STATUS	ORGANIZATION	ACCOUNTABLE POC	UPDATED
Performance Indicator	G	MOD	Webb	4/11/03

DESCRIPTOR

- **MOD Development and Facility Operations – This metric provides a status on development projects required to support the ISSP in the Integrated Planning System (IPS), the Mission Control Center (MCC), and the Training Facilities. The metric also provides status on the health of Facility Operations in each of the primary MOD facilities that support the ISSP: IPS, MCC, Neutral Buoyancy Lab (NBL), Space Vehicle Mockup Facility (SVMF), and the Space Station Training Facility (SSTF).**

STATUS DETAIL

- **All ISS development projects are green. Facility availability is green for all operation facilities. NBL Station Robotics Arm maintenance upgrade is being evaluated for Summer 2003. Will use Shuttle Robotics arm & EMU position device to support NBL EVA training.**

PERFORMANCE INDICATOR METRICS

Metrics / Performance Information

ISS Prime Configuration Management

AS OF 4/11/2003 **ORG** OL/Management Integration **POC** Luna

STATUS SUMMARY

Status of Green for Prime Configuration Management because costs and manpower are under the current budget.

DESCRIPTOR

Prime Configuration Management cost and EP's for FY03. This PI gives the ISS Program insight to assess and control cost/manpower for CM.

ISS Prime Avionics

AS OF 4/11/2003 **ORG** OD/Avionics & Software **POC** Panter

STATUS SUMMARY

G

-The reliability of the C&DH Hardware continues to manifest itself in that there have been no new flight hardware related PRACA reports in the past 4 months. This situation allows the team to work toward closure on several lower priority PRACA to clear out our backlog.
-The bulk of the C&T problem reports that turned into PRACA occurred during the same time that we were preparing for launch, installing and activating hardware. Now that most of the C&T hardware is on-orbit and has been operating for several months, the frequency of problem reports have dropped significantly.
-Relatively low number of PRACA's is an indication of the overall reliability of the GNC hardware.

DESCRIPTOR

The Avionics Indicator allows the Program to measure the reliability of the Avionics hardware.

ISS Undefinitized Contract Actions (UCA's)

AS OF 4/11/2003 **ORG** OG/BMO **POC** Waddell

STATUS SUMMARY

G

7 open UCA's

5 Prime Boeing contract - $10.2M

1 Honeywell Multiplexer/Demultiplexer (MDM) procurement - $15.7M

1 Boeing Battery procurement - $7.0M

DESCRIPTOR

This indicator displays the total number, total value, and age of outstanding UCA's.

ISS Prime EPS

AS OF 4/11/2003 **ORG** OB/Vehicle **POC** Porter

STATUS SUMMARY

G

Actuals through February '03. Cost performance being managed within plan. RPCM firmware change to support hot mate/demate is a potential $500k impact and RPCM firmware download tool $1.0M. EEE Parts team turned on to investigate replacement options due to RPCM FET hybrid defects allowing conduction through the gate oxide layer, discovered during evaluation of failed on-orbit hardware. Plans have been presented on procurement of parts and planned ORU upgrades. MOD planned monthly refreshes may reduce the risk of corrupt SRAM changes. EPS team obtained Program approval to pursue SRAM Loading over 1553.

DESCRIPTOR

The Prime Electrical Power System (EPS) Indicator allows the Program to monitor budget and schedule performance, and technical milestones relative to Prime Contractor development and sustaining of the electrical power system.

ISS EVA

AS OF	4/11/2003	ORG	EVA	POC	Flynt

STATUS SUMMARY

G

All EVA metrics are green except NBL SSRMS, NBL Projects, and EVA Contract status which are yellow, and Prebreathe which is red. SSRMS is out-of service, with a rework plan under development. NBL projects are in the bidding phase, with implementation expected soon. EVA contract strategy is under review. Prebreathe protocol is being evaluated for effectiveness and cost-benefit.

DESCRIPTOR

EVA Metrics include number of EVA's by Assembly Flights and by Increments, number of EVA Training Events at the NBL by month and by Increment, number of EVA training events in the Hydrolab, Increment crew training status, NBL Utilization and SSRMS Reliability, NBL Projects Status, EVA Hardware Development and Processing (EMU, EVA Tools, and Flight Crew Equipment) status, ISS Systems Development status, EVA Cost by month, and Contract Strategy status.

ISS Prime Software

AS OF 4/11/2003 **ORG** OD/Avionics & Software **POC** Panter

STATUS SUMMARY

G

The maturity of the ISS Software continues to increase as most of the CSCI's are now on-orbit and several subsequent releases have taken place.

DESCRIPTOR

The Software Indicator allows the Program to measure the maturity and progress of the software.

ISS Prime Flight Element Processing

AS OF 4/11/2003 **ORG** OB/Vehicle **POC** Porter

STATUS SUMMARY

G

ISSUES: [DDT&E and I&O] – Impacts due to one wing R&R. 15A SAW installation – battery concerns and flight SAW identification.
ACCOMPLISHMENTS: [DDT&E and I&O] – S3/S4 hard-mate complete. S3/S4 Seg 2 IACO complete 2 weeks ahead of commit date. 3 additional PAS deploys were done due to clearance concerns, successfully completed. S6 FQDC quick disconnects scratch resulted in FQDC R&R complete. S6 IEA Lower deck completely outfitted with ORU's.

DESCRIPTOR

The Prime Flight Element Processing (FEP) Indicator allows the Program to measure Prime contractor performance relative to testing, integration, and element verification activities. The FEP Status is provided by the Manager of the Element Integration Office and reflects a monthly snapshot of the element status.

ISS Information Technology

AS OF 4/11/2003 **ORG** OL/Management Integration **POC** Luna

STATUS SUMMARY

G

Overall budget performances of ODIN funded resources are within the FY03 ISD Plan. ISAC contractor performance continues to properly maintain program applications.

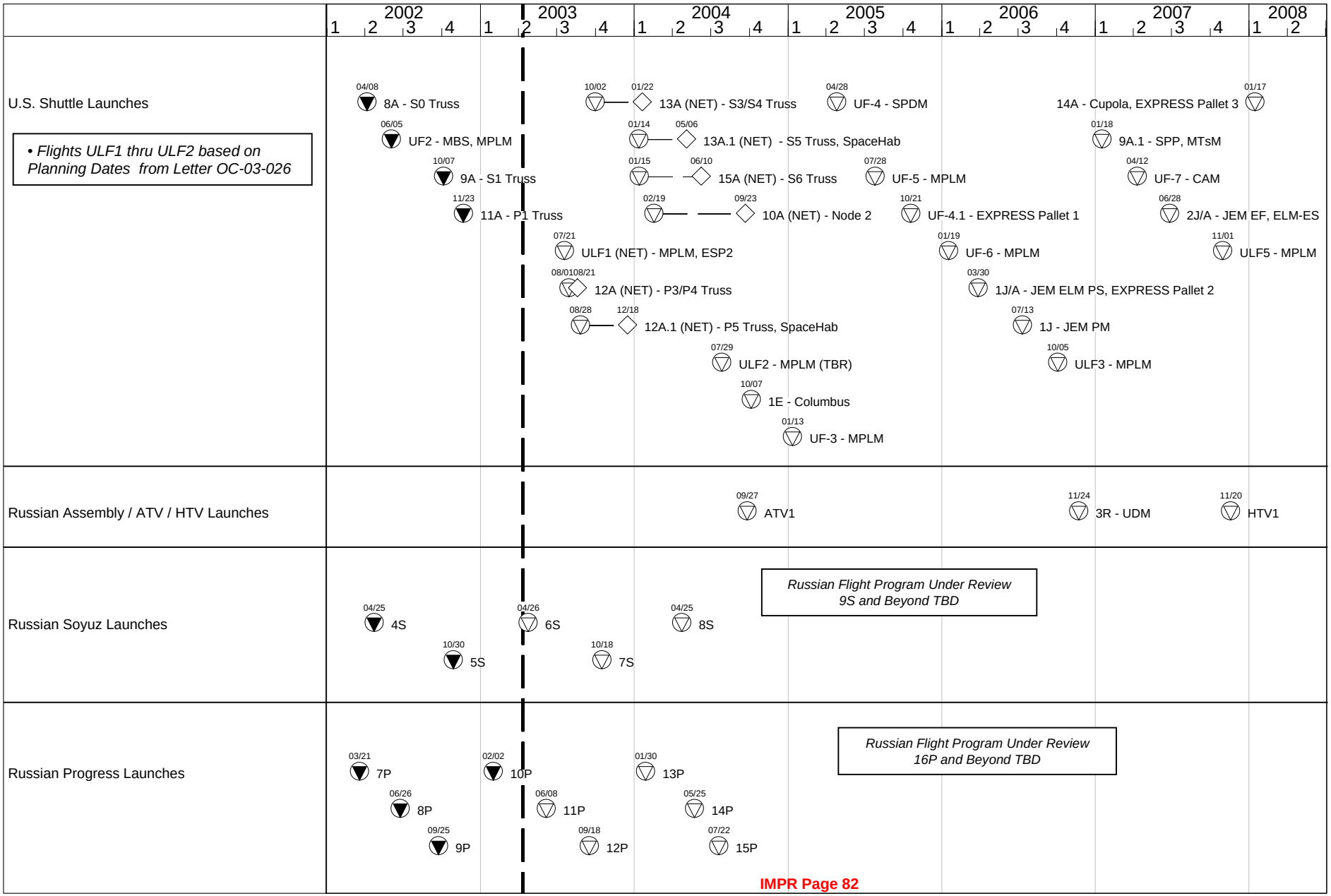
DESCRIPTOR

ISS Information Technology - This metric provides a status on the activities that need to be completed by the Management Information Systems Office to support ISS mission within cost, schedule, and technical constraints.

ISS Integrated Program Summary Schedule (U/R)

March 12, 2003 vs. April 09, 2003

As of: 04/09/03

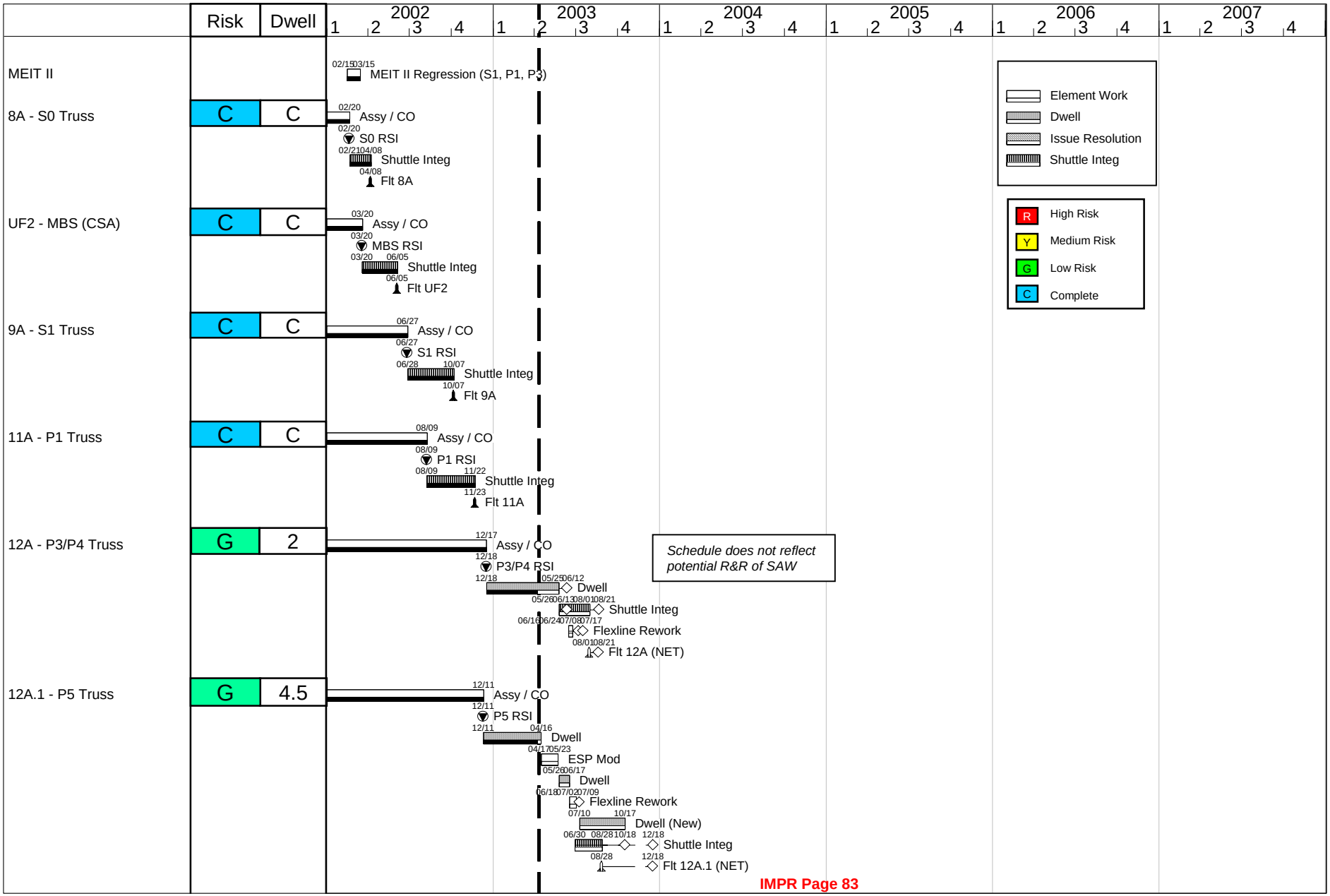


ISS Integrated Program Summary Schedule (U/R)

Interim Rev F Assy Seq (Thru Letter OC-03-026)

March 12, 2003 vs. April 09, 2003

As of: 04/09/03



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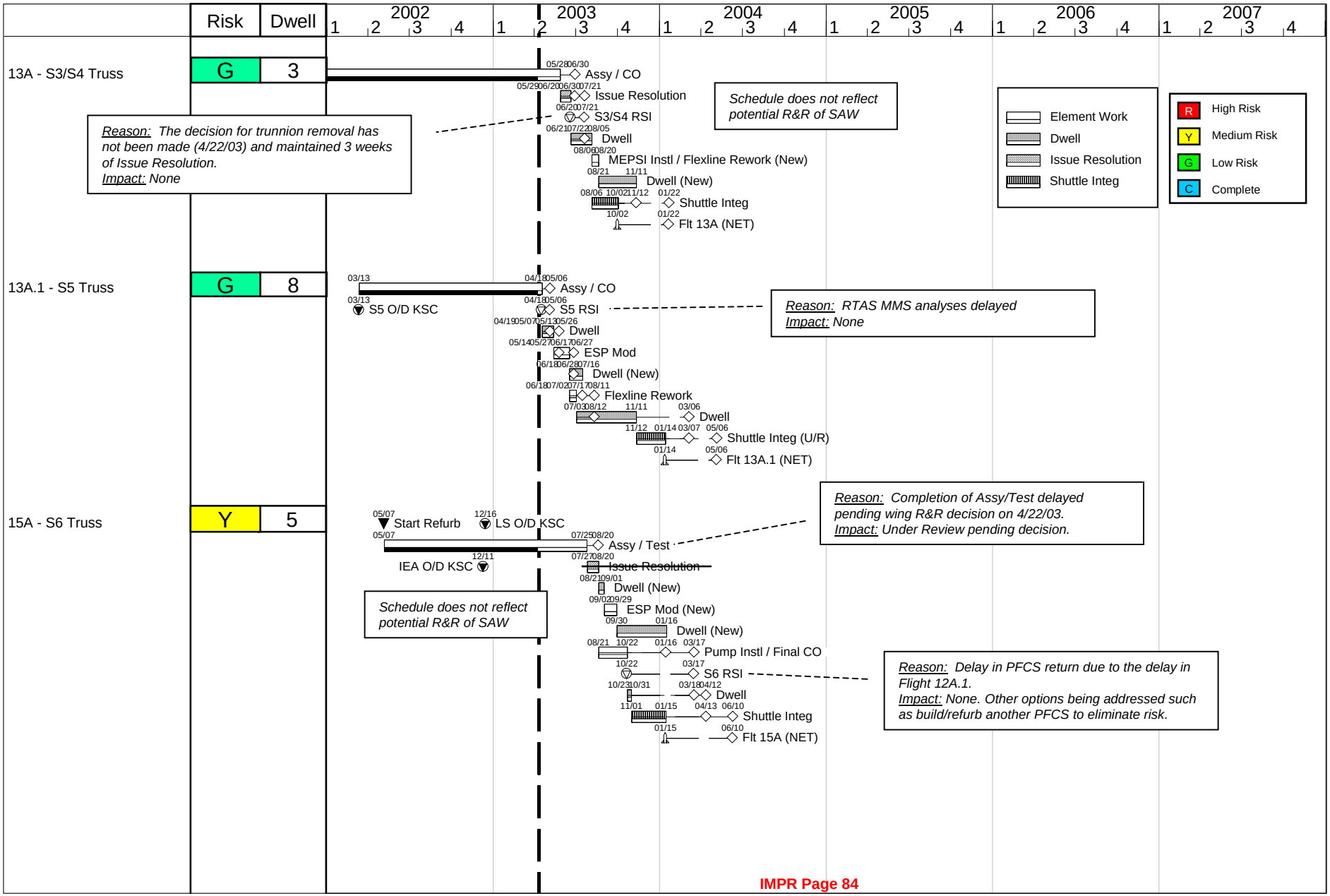
ISS Integrated Program Summary Schedule (U/R)

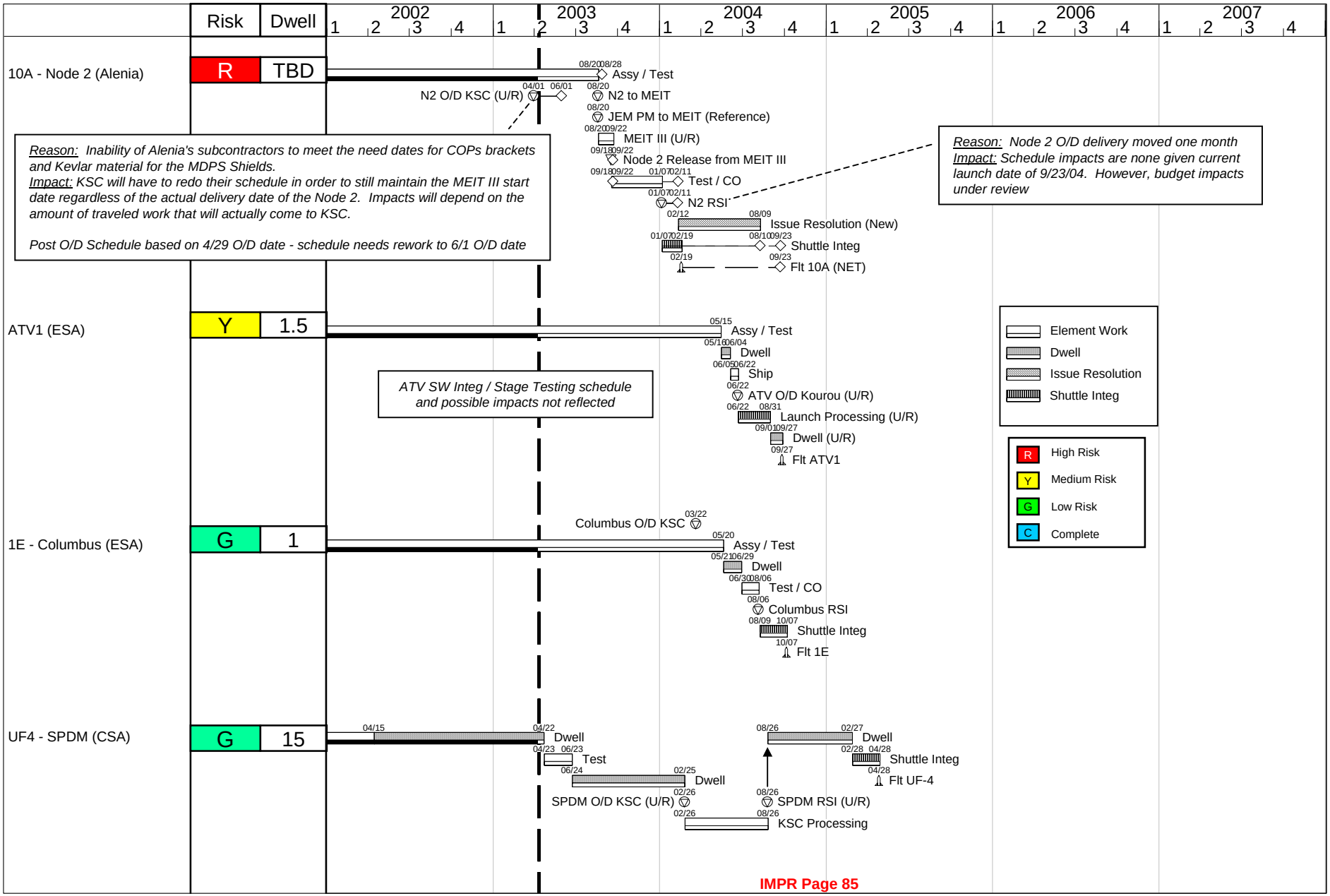
March 12, 2003 vs. April 09, 2003



ISS Integrated Program Summary Schedule (U/R)

Interim Rev F Assy Seq (Thru Letter OC-03-026)

March 12, 2003 vs. April 09, 2003



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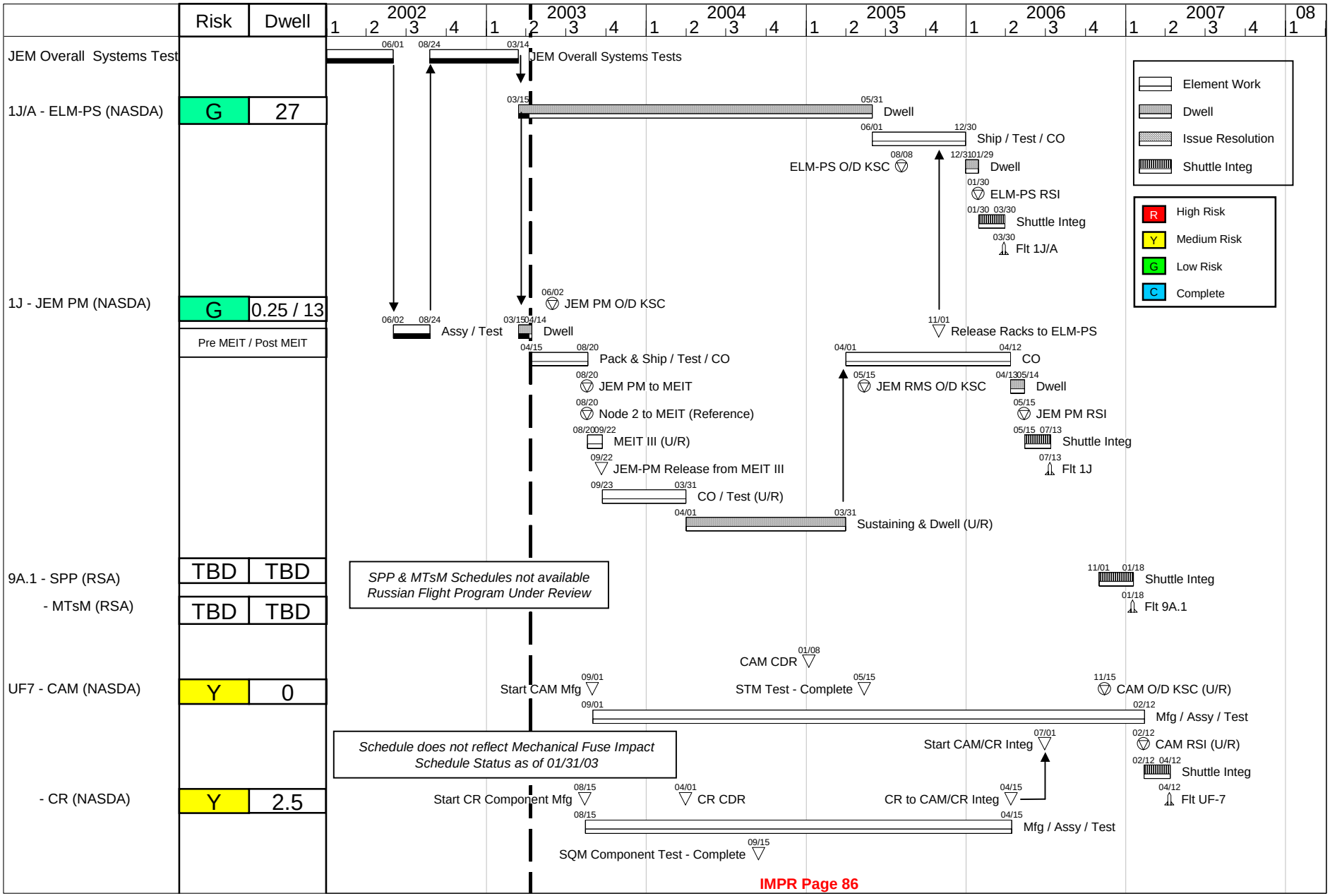
ISS Integrated Program Summary Schedule (U/R)

Interim Rev F Assy Seq (Thru Letter OC-03-026)

March 12, 2003 vs. April 09, 2003



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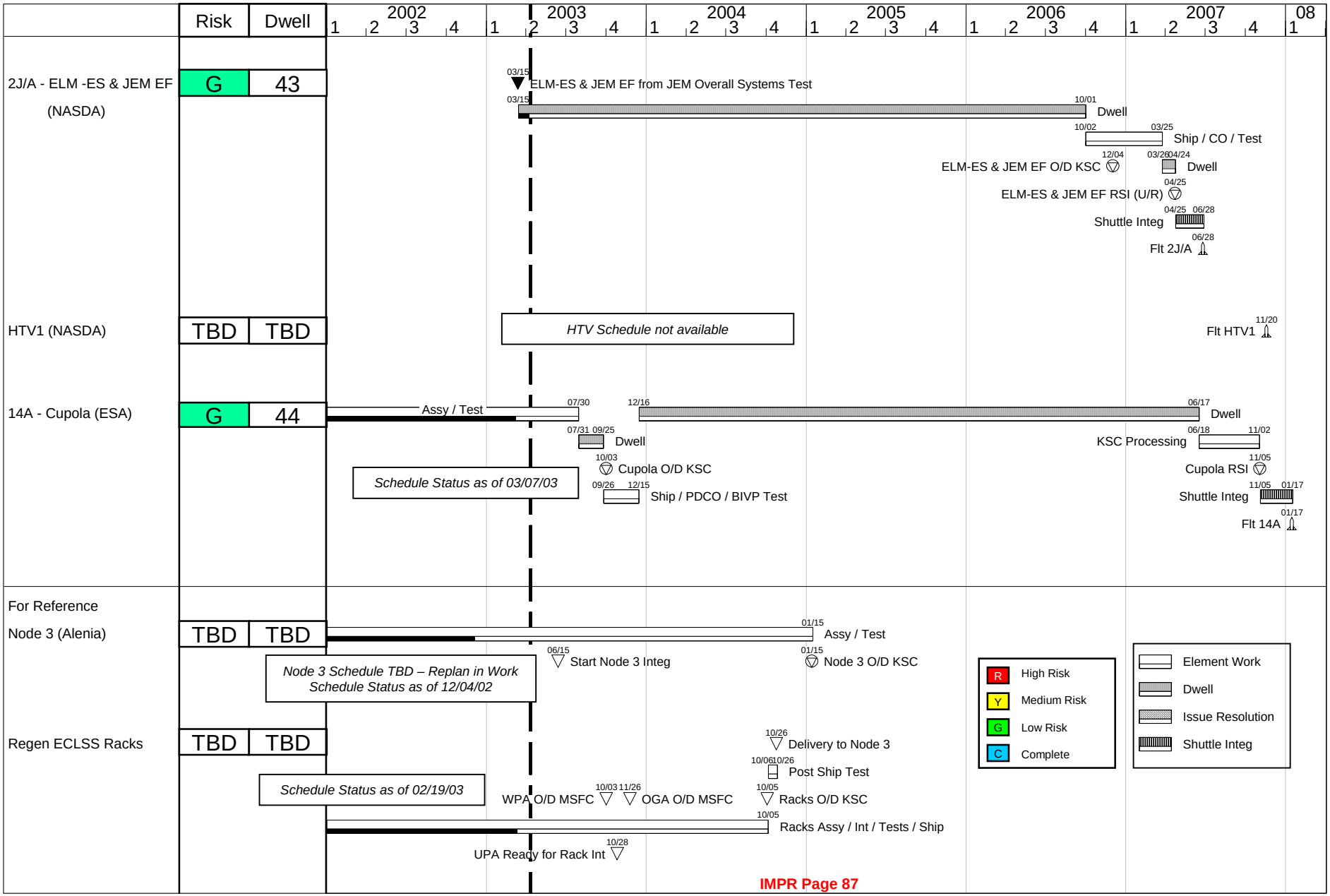
ISS Integrated Program Summary Schedule (U/R)

Interim Rev F Assy Seq (Thru Letter OC-03-026)

March 12, 2003 vs. April 09, 2003

As of: 04/09/03



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ISS Integrated Program Summary Schedule (U/R)

March 12, 2003 vs. April 09, 2003

Flight	Lev	Schedule Item	Last Month's Date (03/12/03)	Current Date (04/09/03)	Change Since Last IMPR (In Months)	Reason	Impact
OD/Avionics							
15A		Stage Verification - Complete	8/1/03	9/15/03	1.5	Reschedule the HSI Formal Test activities to keep the tests consistent with the template.	NONE
10A		Stage Verification - Complete	9/1/03	3/1/04	6.0		
1E		Stage Verification - Complete	4/15/04	7/1/04	2.5		
1J		Stage Verification - Complete	6/1/04	10/1/04	4.0		

ULF-1 / 1E / 14A / UF-4 / MEIT-3 / 10A / 1J

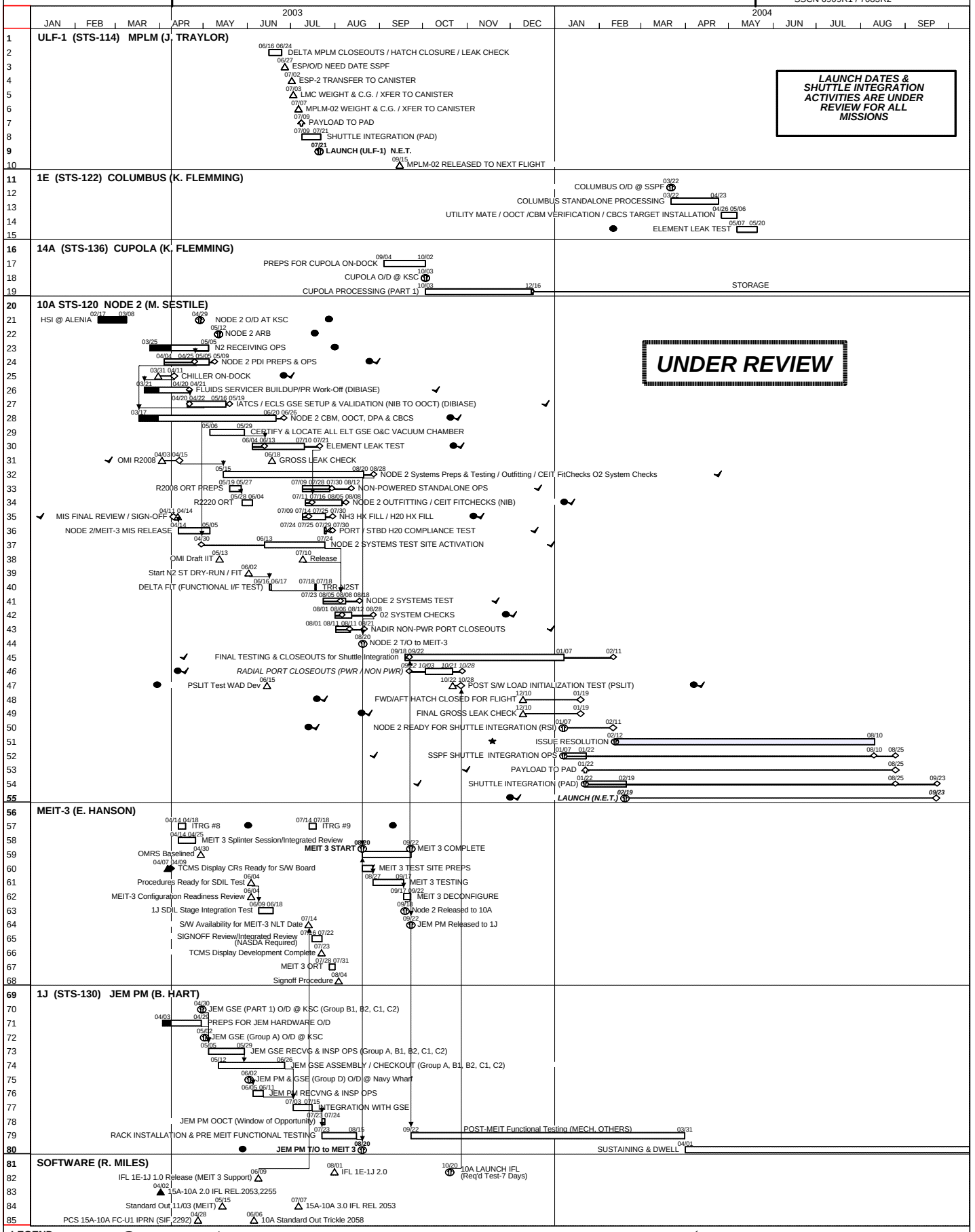
Integrated Assessment

OPR: M. Pearce

DATE: 09-APR-2003

REV: F INTERIM

SSCN 6909R1 / 7083R2



LEGEND: Level I; Level II; Milestone; New Item; Change in Schedule; REV: Under Review; *Italics* Change in Description

Scheduler: P. Bennett (321) 867-5816 Latest Update: 09-APR-2003 16:56

i:\integskeds\assessments\ia-nontruss.arp i:\integskeds\assessments\untitled.frm

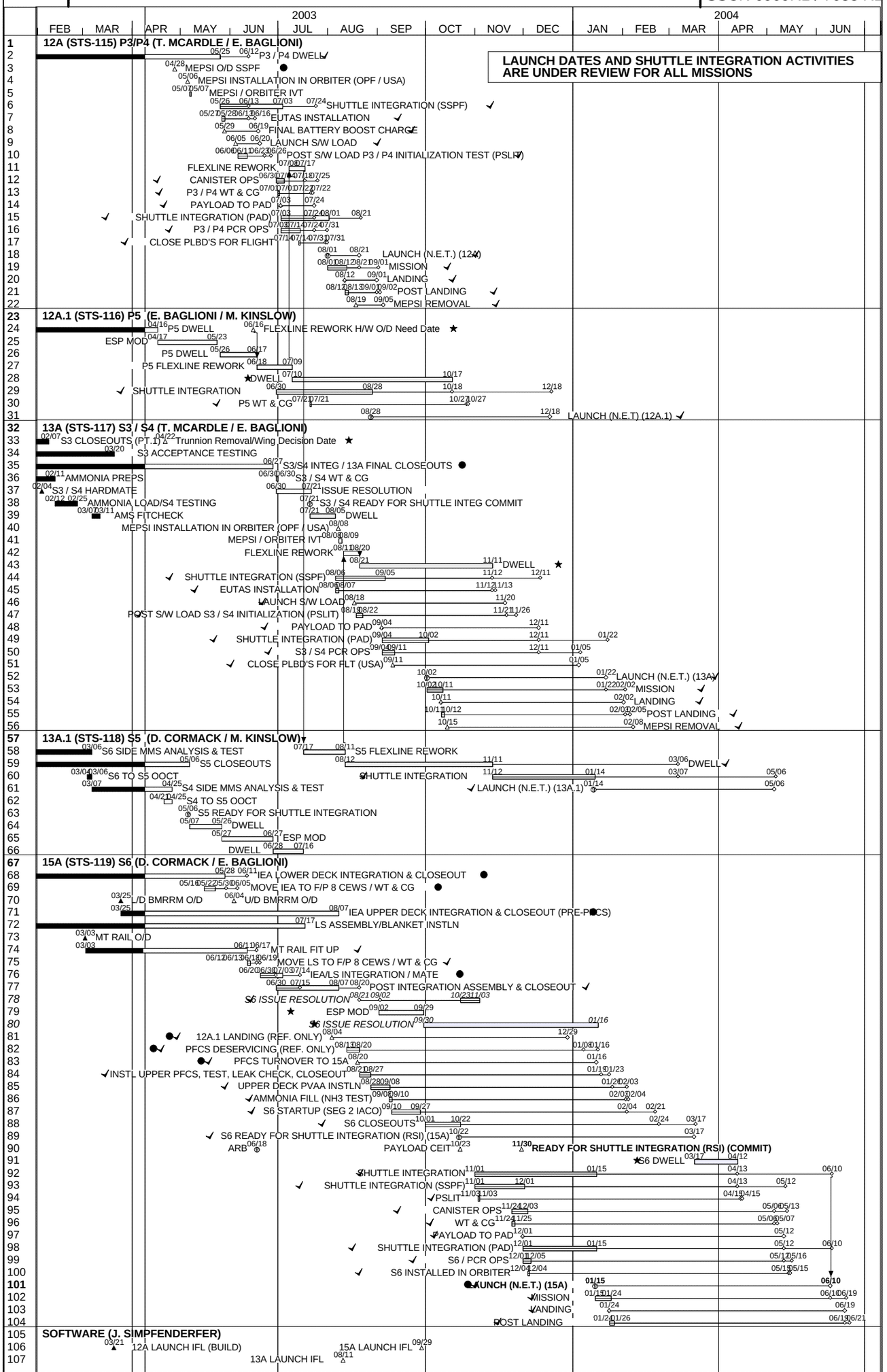
12A / 12A.1 / 13A / 13A.1 / 15A Integrated Assessment

OPR: M. Pearce

DATE: 09-APR-2003

REV: F INTERIM

SSCN 6909R1 / 7083 R2

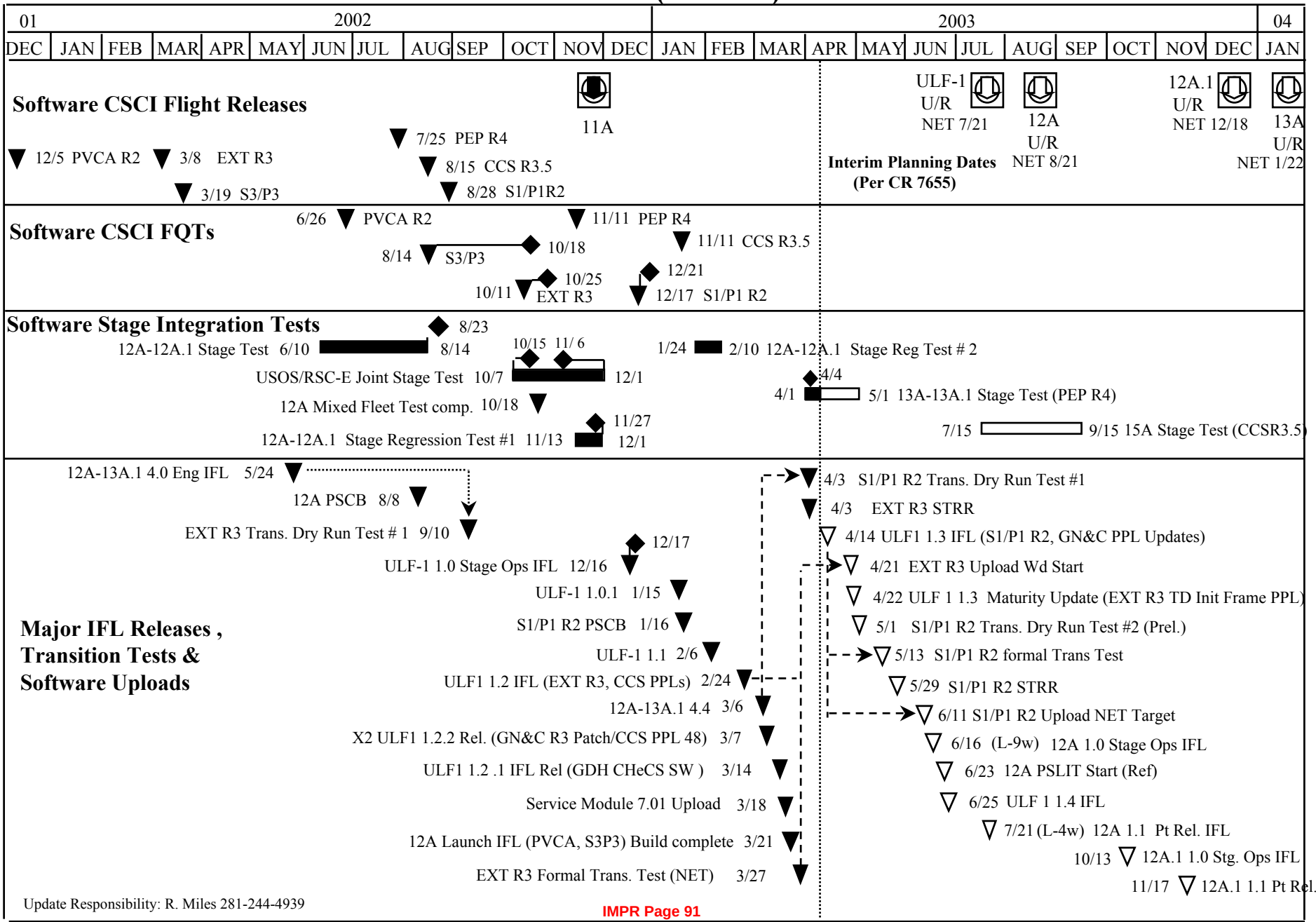


LEGEND: Level I | Level II | Milestone | New Item | Change in Schedule | Under Review | *Italics* Change in Description

Scheduler: W. Mitchell (321) 867-5923 Latest Update: 10-APR-2003 16:02 i:\integskeds\assessments\IA-Truss.arp i:\integskeds\assessments\untitled.frm

ULF 1 – 13A.1 Software Plan to Launch (2CSCIs) & Transition (2 CSCIs)

As of 4/10/03



Update Responsibility: R. Miles 281-244-4939

International Space Station-Increment 6 Management

Chart Owner: Melissa Gard - Increment 6 Manager
Increment Engineers: Kevin Engelbert, Yuri Guinart-Ramirez

Last Update: 04-09-03

Accomplishments:

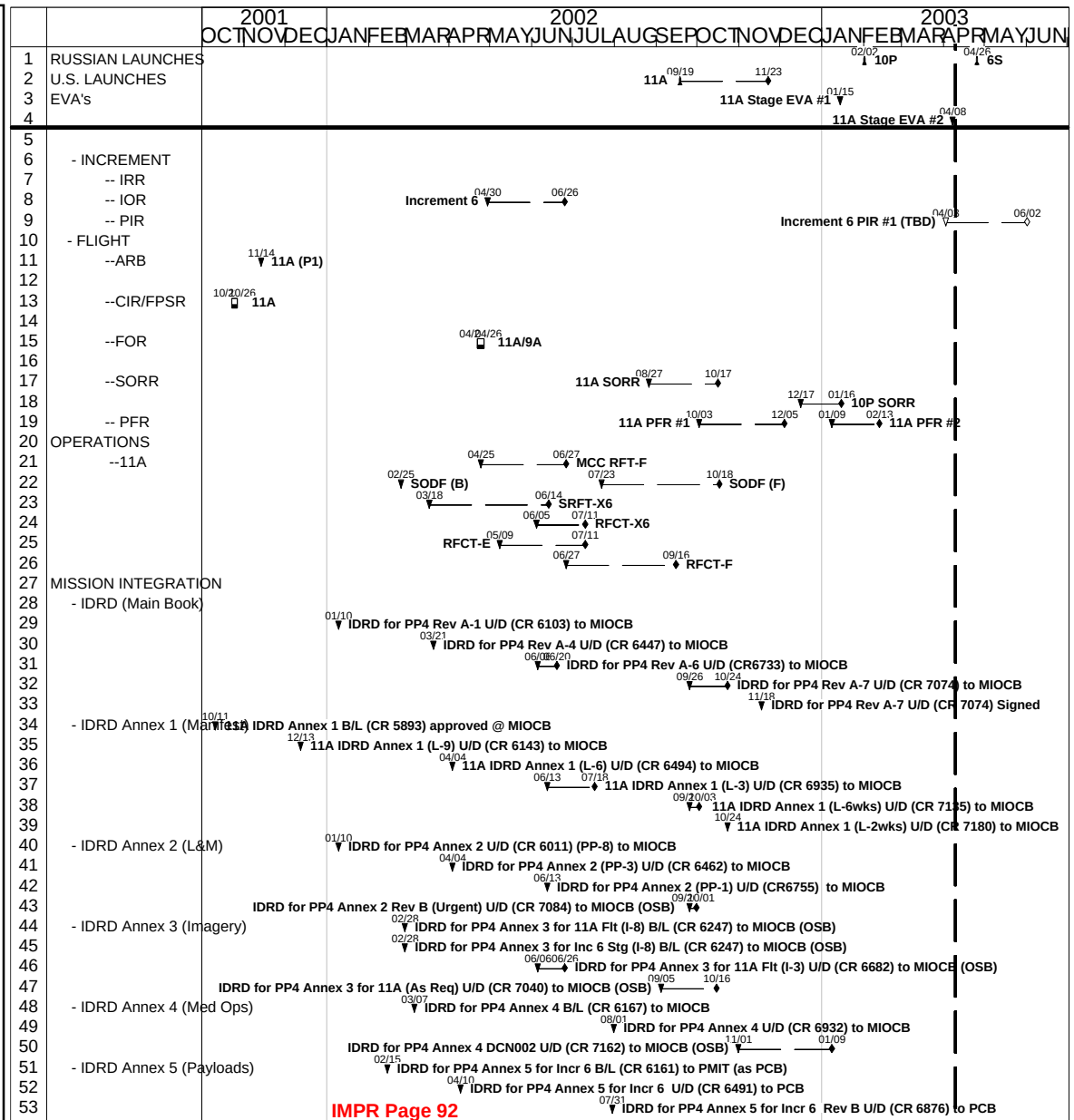
- Baselined CSRD Rev. A (EVA #2 & Increment extension requirements)
- Completed RS version 7.01 s/w update [18 Mar 03]
- Conducted Robotics operations
  - Stage EVA #2 viewing platform & post-EVA configuration survey
  - Completion of On-orbit Check-out Requirements [11 Apr 03]
- Performed MTL PPA failure troubleshooting & replaced MTL PPA with only on-board spare [18 Apr 03]
  - ITCS operating in dual loop mode for 2 weeks to observe MTL PPA performance [9 Apr 03]
- Conducted Stage 11A EVA #2 [8 Apr 03, 6:26]
  - CMG cable reconfig
  - Lab HX SPD installation
  - RBVM thermal cover re-installation
  - MT RPCM replacement
  - ATA cap retrieval
  - Get-aheads: CETA light & stanchion, S0/S1 & S0/P1 BBC demate, NTA cable inspection, misc. tool retrievals
- Conducted RS & U.S. solar array efficiency tests [3/9 Apr03]
- Complete Progress-based reboost/Soyuz phasing burns [4/10 Apr 03]
- Performed defibrillator troubleshooting [11 Apr 03]
- Payload operations: additional FOOT run, EVA-related PuFF data takes, EVARM badge readings; EarthKAM
  - Completed MSG troubleshooting & resumed nominal ops
  - Began InSPACE processing [31 Mar 03]

Plans:

- Continue InSPACE sample processing
- Attempt ARCTIC freezer repair [TBD]
- Continue crew rotation preparation (TMA descent study, medical operations, pre-pack, etc.)
- Continue post-landing planning
- Conduct 5S/6S joint operations & return Expedition 6 crew on 5S [28 April – 4 May]

Issues/Concerns:

- Crowded timeline between now and 6S arrival



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International Space Station-Increment 7 Management

Chart Owners: Merri Sanchez - Increment 7 Manager
Increment 7 Engineer: Roland Martinez, Joe Voor

Last Update: 04-09-03

Increment 7

Accomplishments:

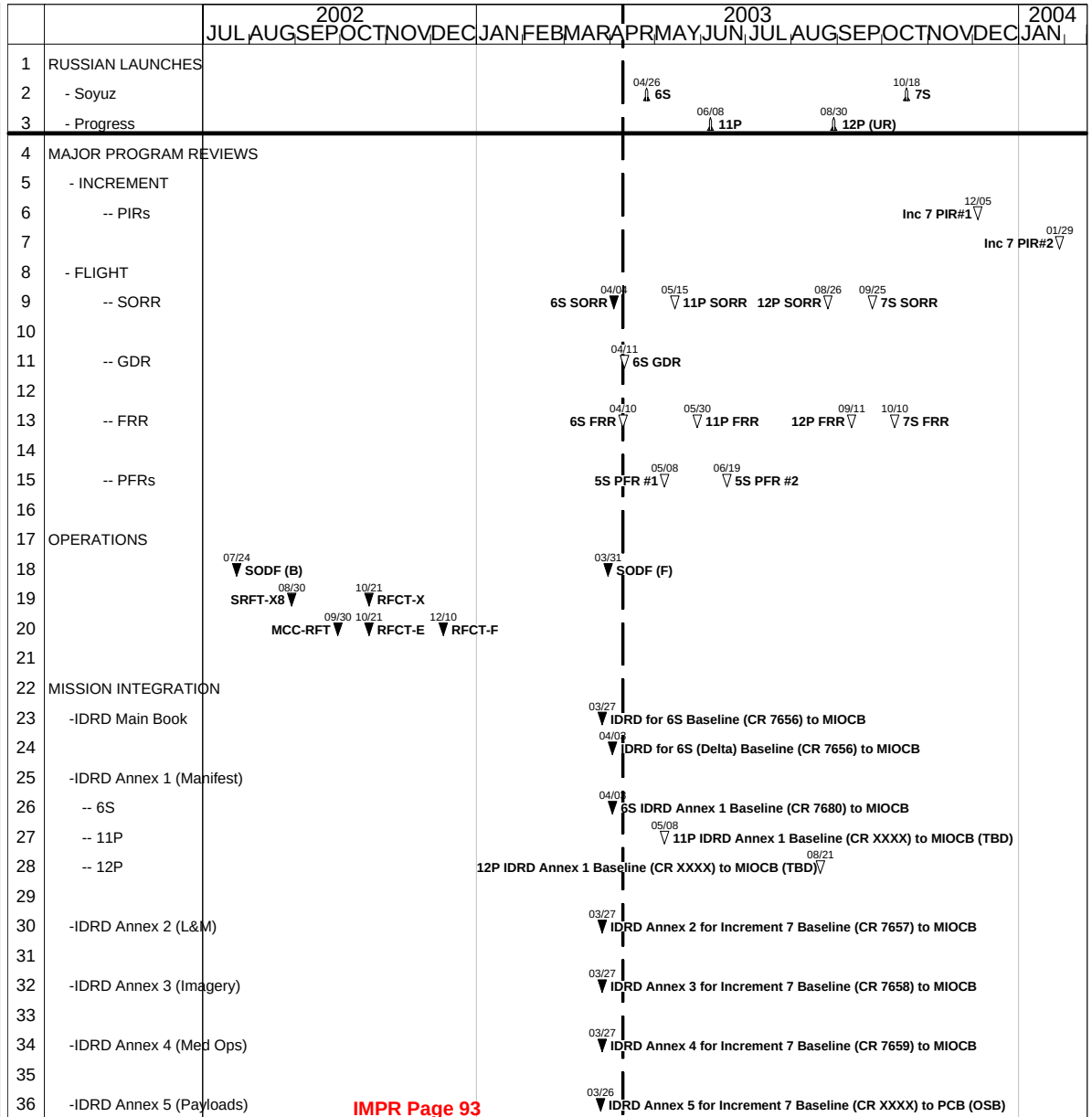
- Completed Planning TIM in Moscow 3/31-4/4, where agreement on the IDRD was reached. Preliminary agreements on reduced usage rates was also accomplished.
- NASA and Russian approval of Increment 7 IDRD SSP 54007 on April 9. Other partner approvals in work.
- Approval of Increment 7 IDRD Annex 1 (Manifest) for flight 5S and 6S. The TCM for the flight 11P Annex 1 will be conducted 4/15.
- NASA approval of Increment 7 IDRD Annexes 2 (Logistics and Maintenance), 3 (Imagery), 4 (Medical). Partner approvals in work.
- Participated in 6S SORR April 4.
- Participated in 6S FRR April 10.

Plans:

- New Increment 7 (Option) OOS will be baselined April 11.
- 12P manifest definition in work with baseline in early May.
- Developing Current Stage Requirements Document for implementation at 6S launch.
- Preparing IMC shift and support schedule.

Issues/Concerns:

- none



Jack Ludwig (Blackhawk) 4-8382

Increment 7/6 Soyuz

EVA Tasks	Technical Status	Schedule Status	# EVA's	Comments
STAGE TASKS No Planned Stage EVA's	G	G	0	
HARDWARE TASKS EMU	G	G	0	EMU Life Extension Waiver approved for EMU on-orbit life through 3/01/05
ISS-7 Gloves	G	G	0	EMU gloves shipped and planned for launch on 6S

International Space Station-Increment/ULF1 Management

Chart Owners: Merri Sanchez – Increment/ULF1 Manager
Increment/ULF1 Engineer: Roland Martinez, James Flores

Last Update: 04-09-03

Accomplishments:

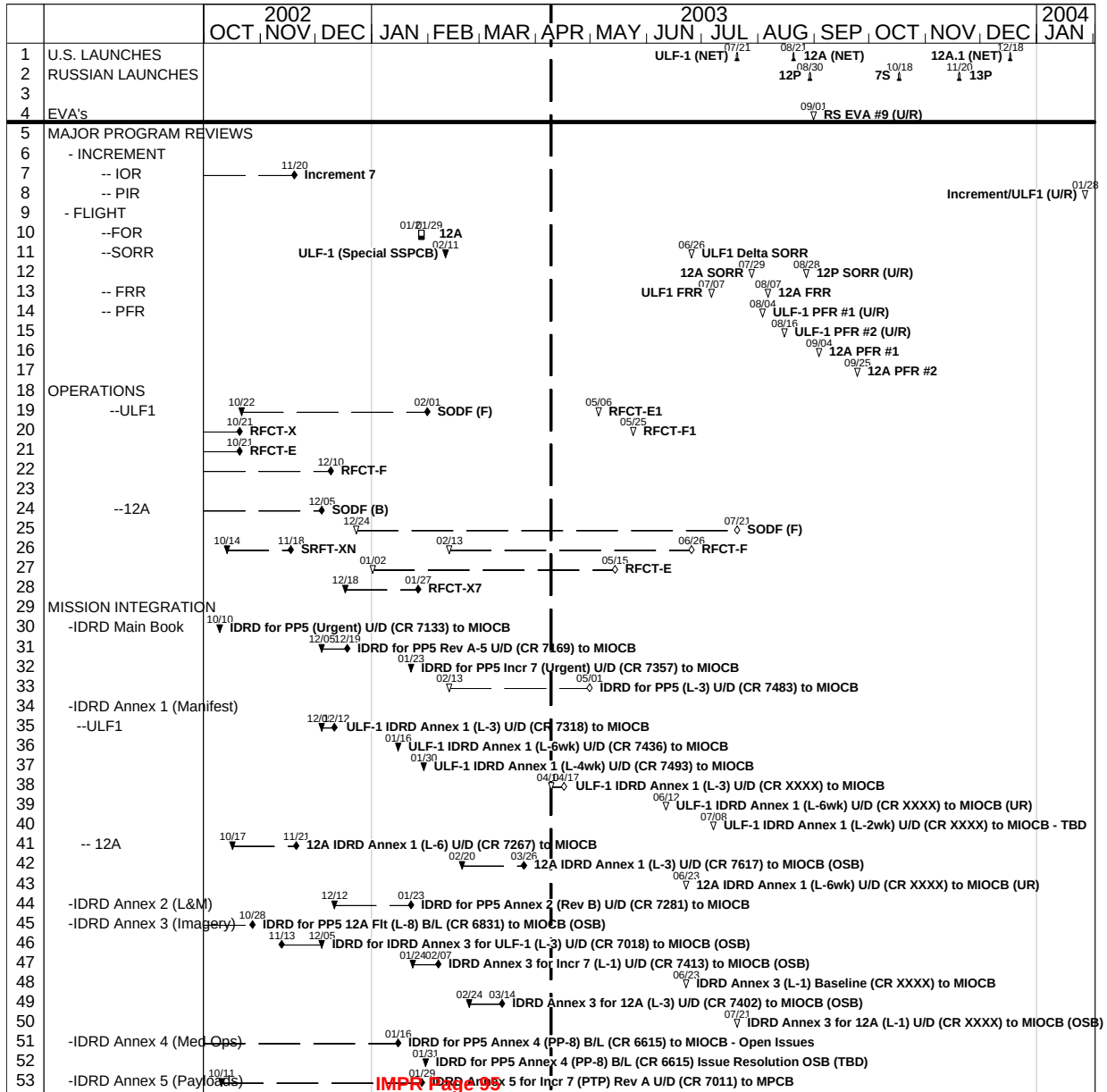
- Supporting replanning efforts for the ULF1 and 12A launch slips.

Plans:

- The next Increment 7 CR for the PP5 IDRD was released for review in January, but the TCM was placed on hold pending replan results. Will withdraw CR and rerelease so that IDRD can be updated with all dates and Russian flights as TBD

Issues/Concerns:

- Available power and thermal profiles are under review. Current power predictions for Stage 12A will not support the planned utilization activities. Predictions are there will be power issues during joint ops, high beta, XPOP, and Progress docking. All 10 payload racks operate during this Increment, 7 on the Same power channel. There are also multiple days planned when 5 racks are operating simultaneously. Working with MOD, VIPER, and utilization to identify the science impacts and possible workaround plans.



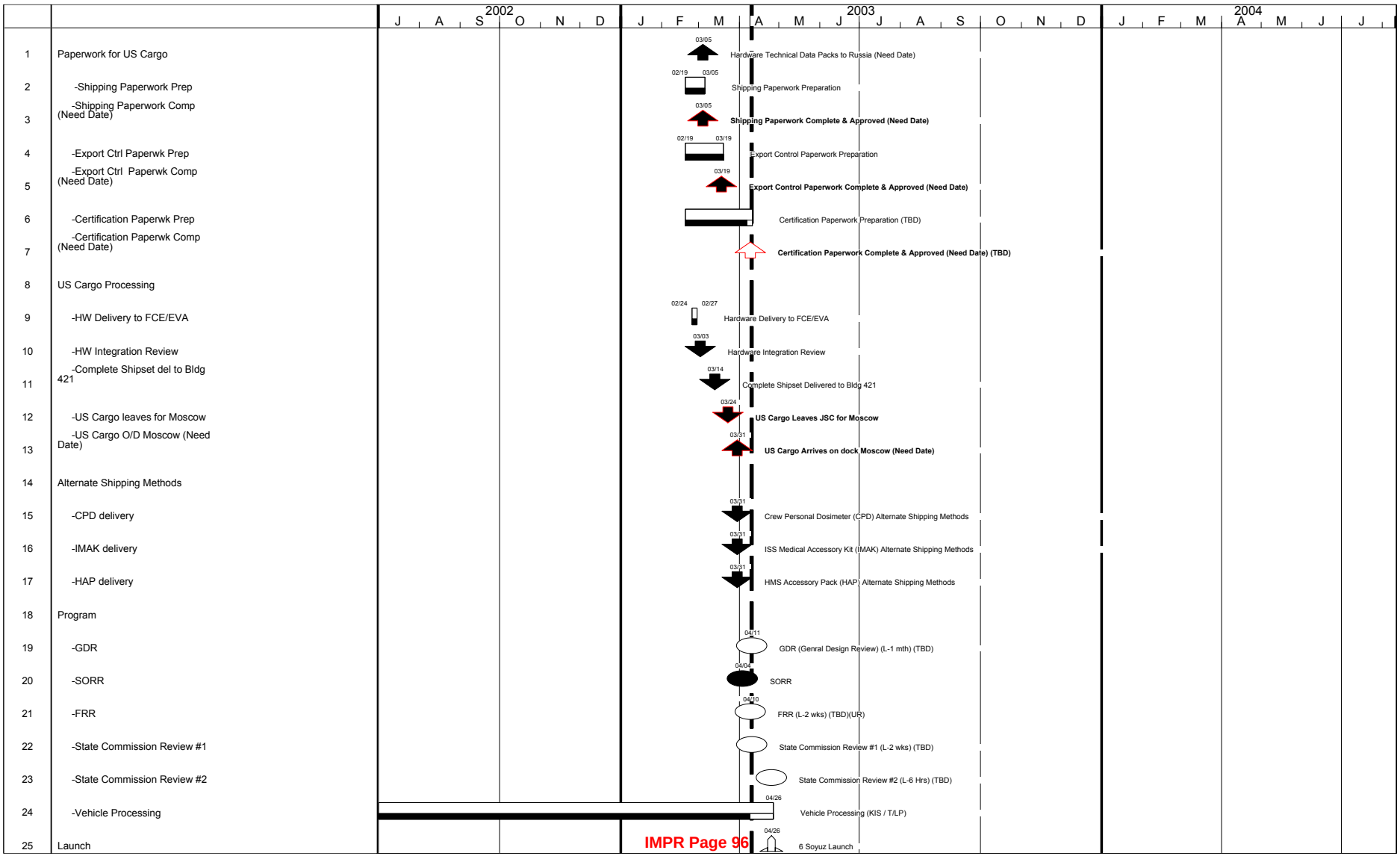
Jack Ludwig (Blackhawk) 4-8382

2.2.3-4.5 International Space Station-Launch Package 6 Soyuz

Chart Owner: Mike Hoy X48631

Last Update:4/10/03

Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

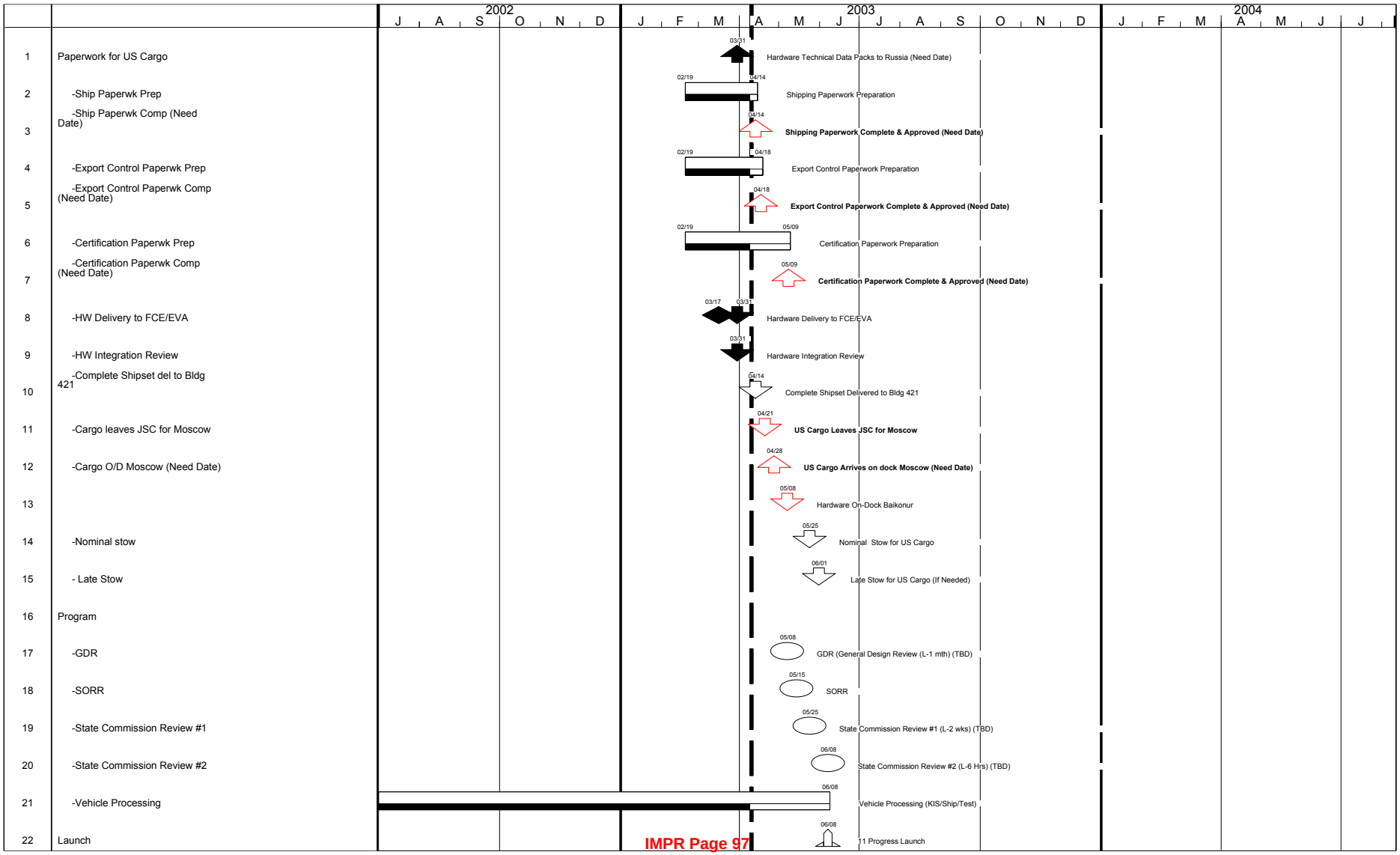


2.2.3-4.5 International Space Station-Launch Package 11 Progress

Chart Owner: Mike Hoy X48631

Last Update:4-10-03

Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.



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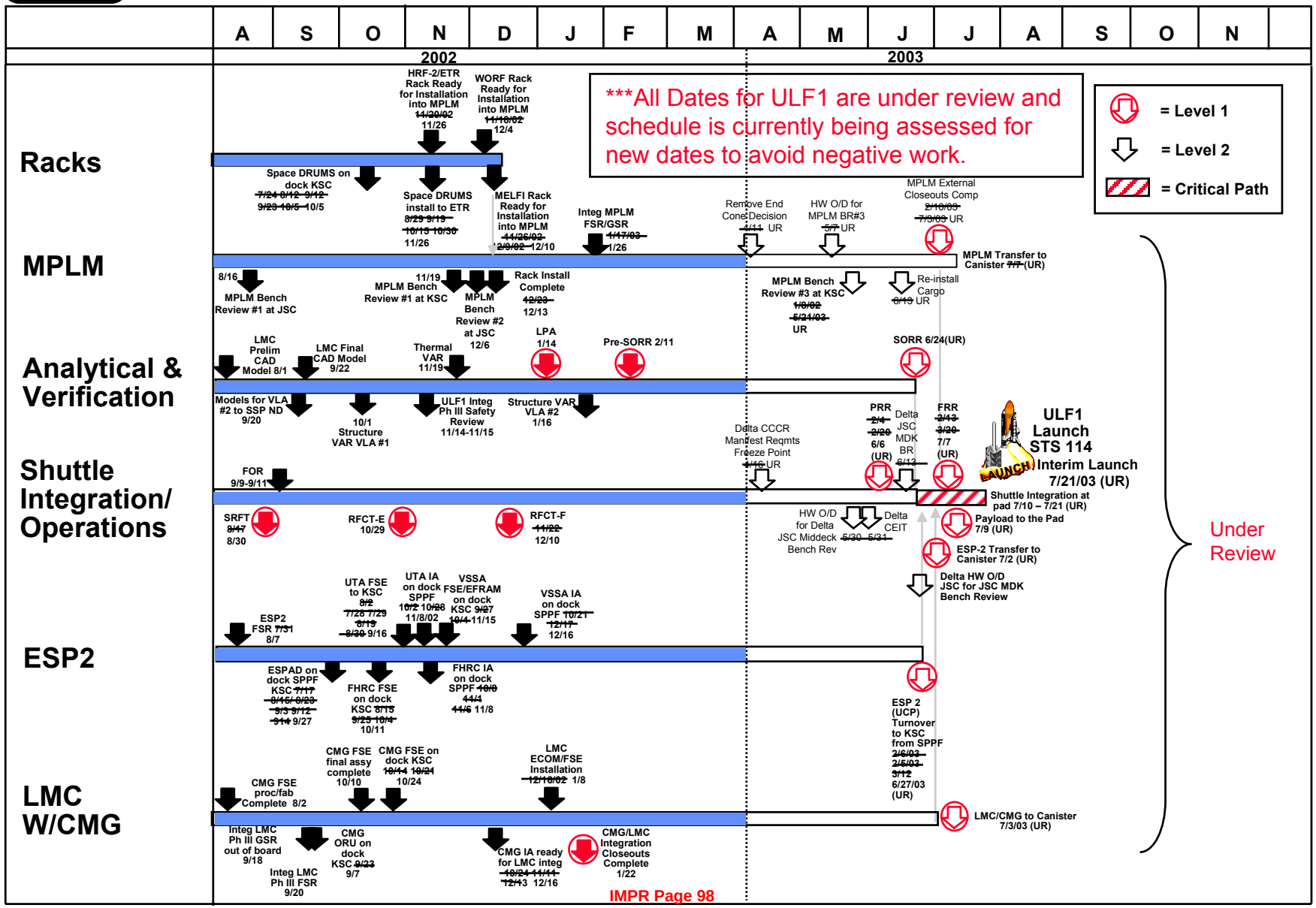
International Space Station
Integrated ULF1 Flight Summary
MPLM w/ RSPs/RSRs, MELFI, WORF, HRF 2, ETR
ESP2 w/ Assembly & Spare HW, LMC w/ CMG Spare

International Space Station

Schedule Health: G

Status Week of 4-7-03



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NASA Launch Package Manager: Floyd Booker X47813

Launch Package Planner (Blackhawk): Dana Tobeck X48600

Flight ULF1 Health Summary
4-9-03

TEAM	TECH	SCHED	REMARKS
Flight ULF1 Overview	G	G	Tech: No Issues. Schedule: **Assessing schedules and developing plans to avoid negative work.**
MPLM Cargo Element	G	G	Tech: No issues. Schedule: **Working schedules for de-integration and new L- 2 mth KSC MPLM Bench Review #3.**
ESP2	G	G	Tech: No issues. Schedule : **Working Periodic Maintenance schedules for UTA, FHRC & VSSA.**
LMC/FSE W/ CMG	G	G	Tech: No issues. Schedule: **Working Periodic Maintenance Schedules for CMG.**
Utilization	G	G	Tech: **ITCS fluid R&R Assessment in work.** Schedule: No issues.
MPLM Cargo Integration	G	G	Tech: **CR initiated to R&R PIP pin.** Schedule: No issues.
Middeck	G	G	Tech: No issues. Schedule: No issues.
Safety	Y	G	Tech: **3 NCRs open.** Schedule: No issues.
KSC Processing	G	G	Tech: No issues. Schedule: No issues.
Manifest (Ascent/Descent)	G	G	Tech: No issues. Schedule**: IDRD Annex 1 (Manifest) L-3 month updated scheduled for 4/10/03 has been withdrawn.**

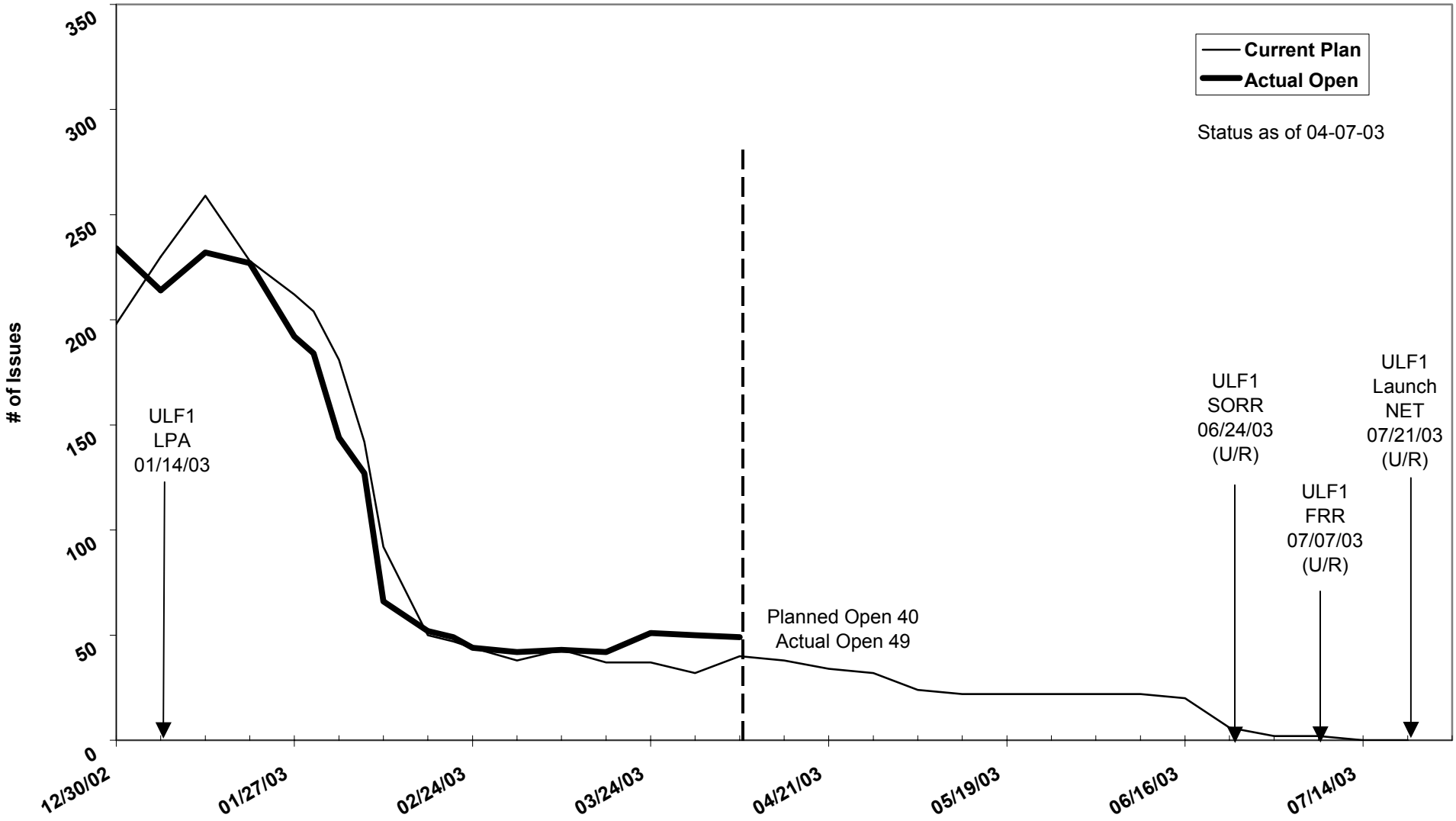
G — Schedule: Zero or positive margin
Tech: Meets technical requirements; No significant issues

Y — Schedule: Does not meet requirements but has recovery plan. Open issues have recovery plans.
Tech: Negative margin with approved recovery plan with no impact to critical path

R — Schedule: Negative margin without recovery plan or negative margin with critical path impact.
Tech: Does not meet requirements and does not have recovery plan. Open issues do not have recovery plans.

▲ Improving ▼ Worsening

Flight ULF1
Open Paper Burndown



Barner, Larry M. 281-226-4750 Status as of 04/07/03

2.2.3-4.5 International Space Station-Launch Package ULF1

LPM: Floyd Booker / OC / X47813
LPIM: Eulalio Nandin / OC / X47979

Last Update: 4/9/03

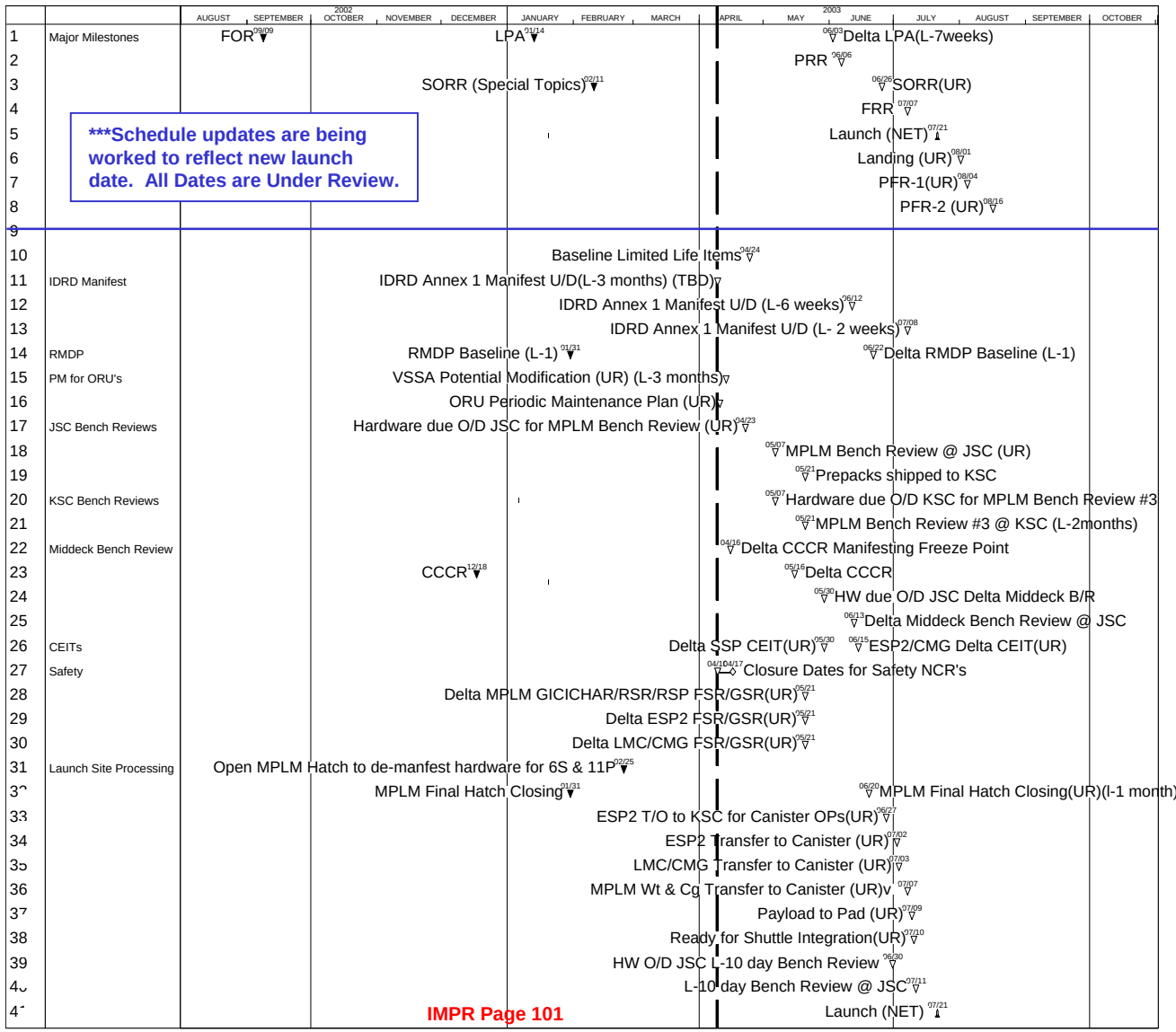
Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

Accomplishments:

- L-4.5 Month hold strategy approved at SSPCB
- Assessing impact of adding SRMS and protecting 1000 lbs of APM
- Periodic Maintenance (PM) strategy for CMG, FHRC, and UTA approved at SSPCB.
- Increment 6 EVA#2 successfully completed all planned tasks, removes the following task from ULF1 EVAs, and adds ~ two hours of margin
  - •Lab Heater Loop A Spool Positioning Device (SPD) install
  - •Mobile Transporter (MT) Remote Power Control Mechanism (RPCM) R&R

Issues/concerns:

- Increasing probability of cargo reduction in response to return to flight shuttle configuration changes



Print Dat04/10/03 ISS Schedule Automation/Tiering Program (v P.3) Code:

ISS Monthly Program Review
EVA Status for Flight and Stage

STS-114/ULF-1

XA/EVA Project Office
4/11/03

EVA Tasks	Technical Status	Schedule Status	# EVA's	Comments
FLIGHT TASKS * Install External Stowage Platform-2 (ESP-2) on ISS - Attach active ESPAD to the Airlock and berth ESP-2 - Install primary and redundant ESP-2 power cables * Change-out MISSE passive experiment containers (PEC's) * CMG R&R * Install two video system support assemblies (VSSA's) * Install one external television camera group (ETVCG) * Install the Floating Potential Measurement Unit (FPMU) * Remove ESP-2 FRGF and stow in starboard TSA for return	G	G	3	* Working to determine temporary stowage method for the failed CMG to protect for contingencies * Working to clear several bolts on ESP-2 ORU's and FSE that failed to gage fitcheck * **SPD installation completed on Increment 6 EVA** * Assessing adding MISSE PEC 5 installation to EVA1 - Currently installing PEC's 3 and 4
STAGE TASKS None	G	G	0 EMU 1 Orlan	
HARDWARE ITEMS Phase VI Gloves (ULF-1 Crew)	G	G		Delivery Date: Robinson: Complete (Prime and B/U) Noguchi: Complete (Prime and B/U)
Phase VI Gloves **(Inc. ULF-1)**	G	**Y**		Delivery Date: **Crew TBD** Kaleri: Complete (Prime and B/U) Malencheko: Complete (Prime and B/U) Lu: Complete (Prime and B/U)
WIF Extender	G	G		DCR: Complete Delivery: Complete
Torque Analyzer Kit	G	G		DCR: ~~1/17/0~~3, ~~2/7/03~~, ~~3/15/03~~, 4/15/03 Delivery: ~~1/14/03~~, ~~L-10~~, ~~3/15/03,~~ 4/15/03

IMPR Page 102

International Space Station
Integrated Flight 12A Summary
P3 Truss, P4 (IEA), Solar Arrays, Radiators

Flight Health Schedule Assessment: Y

Rev F-Mod 4 Assy. Seq.
Status as of: 04/09/03

2003

March | April | May | June | July | August | September

P3/P4 ITS

12A Commit Dates: Completed
- Hard Mate Complete 9/4/02 — 8/24/02(A)
- Flt H/W NH3 Load Complete 9/25/02 — 9/03/02(A)
- Seg 2 IACO Complete 10/24/02 — 9/13/02(A)
- RSI 1/8/02 — 12/18/02(A)

65 Days of Dwell to Start of Shuttle Integration (L-60)

SAW FW #5 R & R Decision at SSPCB 4/21
Start SSPF Shuttle Integration 6/13
Launch S/W Load / PSLIT 6/20 - 6/26
Payload to Pad 7/24
DWELL
6/19
7/22
Final Battery Boost Charge
7/7 - 7/18 P4 Flexlline Rework
P3/P4 Final Wt & CG / Canister Ops 7/18 - 7/25
Start Pad Shuttle Integration 7/24
SSV to Pad
TCDT 8/1
Flight 12A Launch STS-115 NET 8/21 (U/R)
7/28
7/29
7/31
P3/P4 ITS Install in P/L Bay
Close P/L Bay Doors for Flight

P3/P4 ITS in SSPF

Shuttle Intg./ Mission Ops.

CCCR 6/13
RFCT(F) 6/26
PRR (U/R) 7/10
SODF(F) 7/21
FRR 8/7
PMMT 8/19
5/15 RFCT(E)
6/21 CEIT (OPF)
7/18 FCE/EVA Bench Review
8/11 L-10 Bench Review

Analytical Intg./Verif.

12A Final Stage Model 4/4
P3/P4 Assessment Review (SSPCB) 4/8
LPA 7/1
SORR 7/24

Software

Launch IFL Build Complete 3/21
1.0 Stage Ops IFL 6/16
1.1 Stage Ops Point Rel IFL 7/21
4.4 IFL 3/6
EXT R3 Upload Start 4/21
5/30 U/R
Launch IFL Release

Note: All Schedule Dates Reflect Current Assessment.

Contact:
Boeing LPM: Steve Hammitt (281) 226-4024
Boeing LPP: Renee Clokey (281) 226-4826

Flight 12A Health Summary
STS-115

Team	Tech	Sched	Remarks
Flight 12A Overview	Y	G	**Schedule:** Ready for Shuttle Integration tasks completed 12/18/02 with approved exception of P3/P4 Flex Line jumper installation during Shuttle Integration. **SAW R&R decision will impact readiness to support Shuttle Integration, Plan reviewed at SSPCB Review 3/25/03. Final Decision 4/22/03**
P3/P4 Flight	Y	G	**Tech:** P3/P4 Assessment Special Topics: • SAW Storage Time/SAW Deployment Anomaly- • Battery Charge and Conditioning Plan • 12A KSC Work To Go SORR Watch List items • 12A Mated Attitude Control: (WPRR 048A) • P5 Installation power balance with P6 4B SAW retracted (CR 7357). • AJIS Strut/Brace Beam Install EVA1 Vs EVA3. (FOR Action Item 042) • BGA Autotrack Mode Availability (P6 2B/4B on orbit issue) • ETE Berthing Analysis • Russian Toilet usage to minimize waste water dumps during 12A mated ops • **Preventive Maintenance Items for P3/P4 ORUs** **PVR motor and controller dual element heater design being assessed as part of SCAN ISS-PRIME-044 issued as a result of on-orbit NTA Heater Failure investigation**
ORU Development	G	G	**Tech:** No Significant Issues **Sched:** No Significant Issues
Software	G	G	**Tech:** No significant Issues **Sched:** 12A Software Transition (CCS R3/GNC R3/INT R2/PCS) completed 2/23/03. EXT R3 transition 4/21-4/22.
Shuttle Integration	G	G	**Tech/Sched:** Shuttle Integration Start Date 6/13 (U/R) (L-60 days) for an 8/21/03 launch.
Analysis & Verification	G	G	**Tech:** No Significant issues **Schedule:** P3/P4 Cargo Element Final As-Built CAD Model Delivery completed 2/28/03. SAW R&R will Require Delta DPA and revalidation of Cargo Element As-Built CAD Models
Safety	Y	G	**Tech:** ISS-NCR-079 requires closure-"Lack of Ability of PVR to Withstand All On-Orbit Loads During Deployment or Retraction. Docked Loads Constraints Flight Rule approved at STS-115 FOR documents constraints. **S&M coordination with Safety has determined NCR not required. New NCR being submitted to document only 1 upstream power inhibit (CIDs 7) exists for P1 to P3 W5001 mating and (CIDS 8) for P1 to P3 W5002 mating. Review at SRP 4/16/03**
Operations	Y	G	**Tech:**SORR Watch List: 12A Mated Control (WPRR 048A), AJIS Strut/Brace Beam Install EVA1 Vs EVA3. (FOR Action Item 042)

G	**Schedule:**	Zero or positive margin	Y	**Schedule:**	Negative margin with approved recovery plan with no impact to critical path	R	**Schedule:** Negative margin without recovery plan or negative margin with critical path impact.
	Technical:	Meets technical requirements; No significant issues		**Technical:**	Does not meet requirements but has recovery plan. Open issues have recovery plans.		**Technical:** Does not meet requirements and does not have recovery plan. Open issues do not have recovery plans.

2.2.3-4.8 International Space Station-Launch Package 12A

LPM: H. Brasseaux X48079

Last Update: 04/09/03

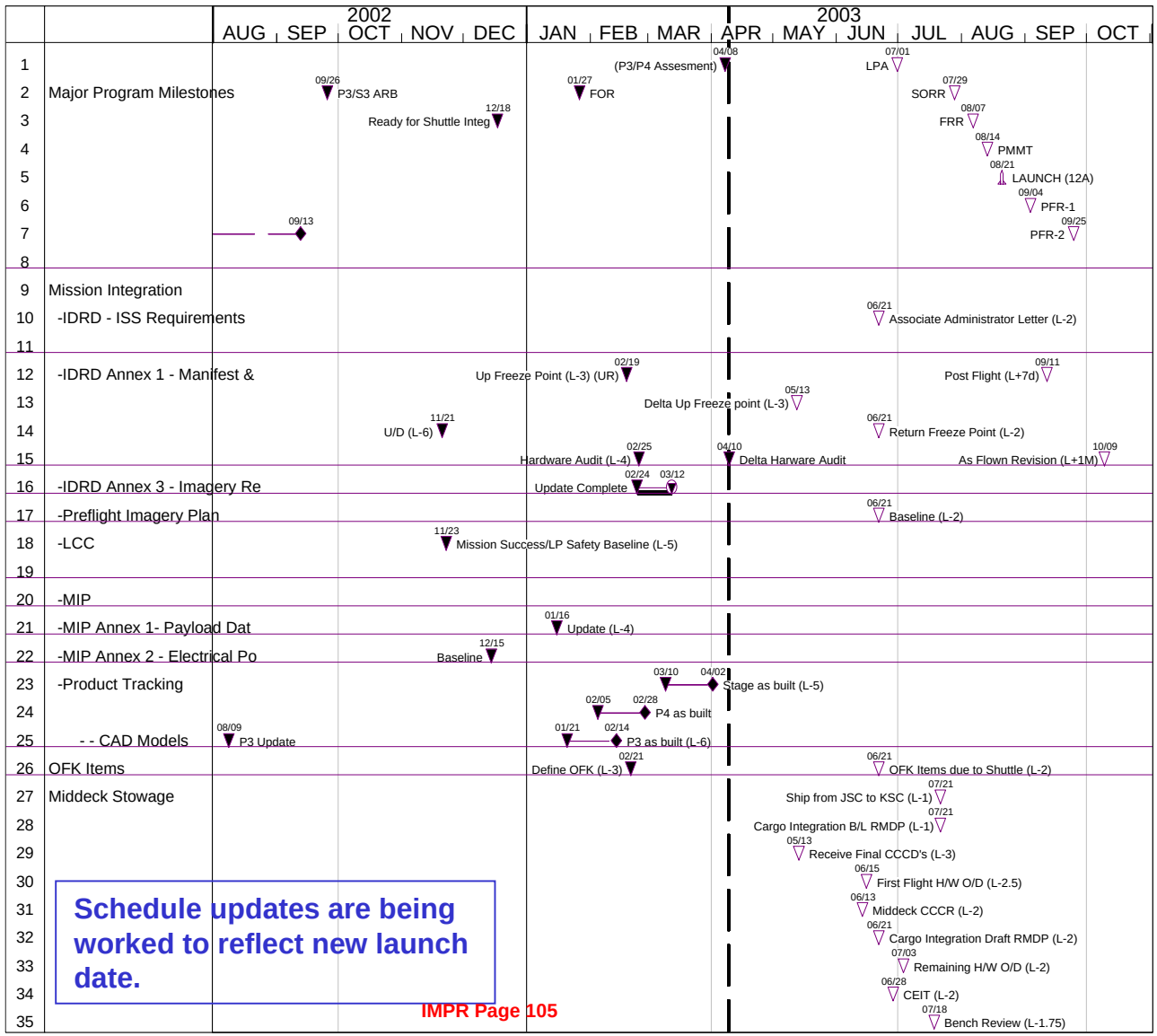
Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

Accomplishments:

- Completed P3/P4 Assessment
- Completed delta Hardware Audit, primarily focusing on payload hardware
- Defined the activities that would be deferred in the event of a planned or contingency EVA solar array deploy activity
- Met with Shuttle Flight Integration Manager to discuss available Ascent Performance Margin and manifest / de-manifest plans associated with potential launch date or vehicle changes
- Coordinated EVA Get-ahead task listing with EVA team
- Provided inputs to update the Increment Definition and Requirements Document for the 12A mission

Issues/Concerns:

- Mated Attitude Control Analysis – Due April 11th
- Brace Beams and AJIS Strut installation Analysis – Due April 18th
- P5 Installation Energy Balance and 4B Retraction Status – Due April 29th to SSPCB

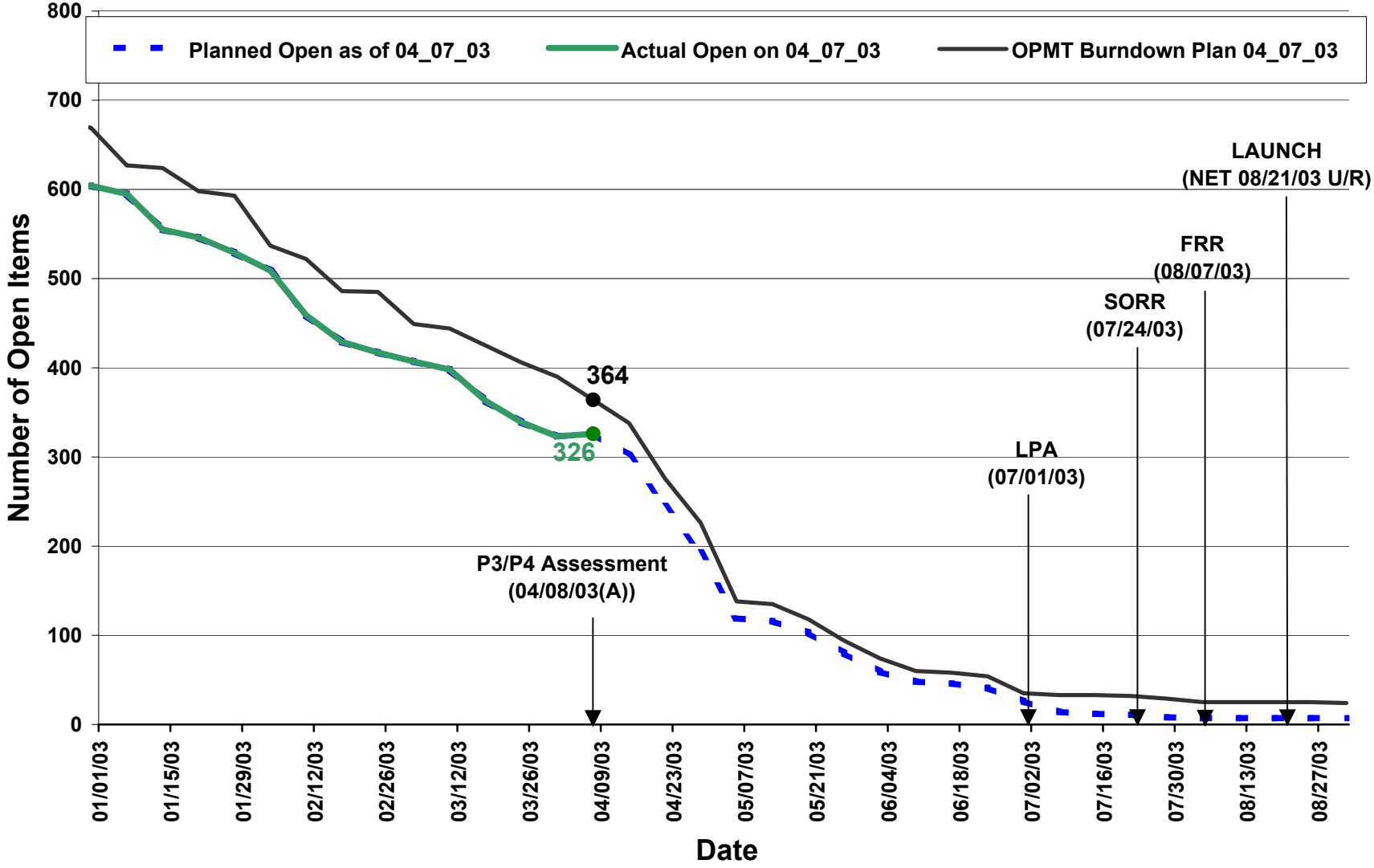


Schedule updates are being worked to reflect new launch date.

IMPR Page 105

12A Open Paper Burndown

Status as of 04/07/2003



Boeing LPM : Steve Hammitt
281-226-4024

ISS Monthly Program Review
EVA Status for Flight and Stage

XA/EVA Project Office
4/11/03

STS-115/12A

EVA Tasks	Technical Status	Schedule Status	# EVA's	Comments
FLIGHT TASKS - Connect and activate P3/P4 - Install WETA Stanchion - Remove/stow P3 Keel Pin and drag link - Rigidize 4 of 4 P4 SARJ struts - Release P4 PVR cinches and winch - Install Temporary MT stop - Remove P3 SVS target from face 1 - Install External Television Camera Group (ETVCG) on P1 - EAS/S0 Stbd and port fill	G	G	4	* Analysis in work by Program to determine if AJIS struts must be installed before SARJ Launch Lock release. Could require significant replanning of EVA tasks. * **EVA feasibility study in-work to determine impacts of EVA assisted SAW panel separation (baseline or contingency) tasks** **- Due back to SSPCB on 4/21/03**
STAGE TASKS None	G	G	0 EMU 0 Orlan	
HARDWARE ITEMS Phase VI Gloves	G	G		Delivery: Piper: Prime & B/U gloves returned for minor rework Tanner: Complete (Prime and B/U) Burbank: Complete (Prime and B/U) MacLean: Complete (Prime and B/U)
EVA Temporary Rail Stop (ETRS)	G	G		DCR: - Complete Delivery: Complete
ISS Contamination Kit	G	G		DCR: ~~3/28/03~~, 7/1/03 Delivery: ~~2/21/03~~, ~~4/4/03~~, 7/1/03
Crew Hook Redesign	G	G		DCR: ~~10/17/02~~, ~~11/12/02~~, ~~1/3/03~~, ~~4/4/03~~, **6/4/03** Delivery: ~~10/31/02~~, ~~11/15/02~~, ~~1/3/03~~, ~~4/4/03~~, **6/6/03** **Thermal and cycle test failure complete and design changes in-work to resolve issues. Working to manifest tethers on ULF-1 due to flight delays.**
IVA Hardware contingency items	G	G		DCR: ~~4/8/03~~, 6/10/03 Delivery: 6/19/03 Certifying IVA tools for 12A/13A SARJ contingency task. Building insert to restrain SARJ launch locks in ORU transfer bags.

International Space Station-Increment 8 (Option) Management

Chart Owners: Pete Hasbrook - Increment 8 (Option) Manager
Increment 8 (Option) Engineer: Ryan Prouty

Last Update: 04-09-03

Accomplishments

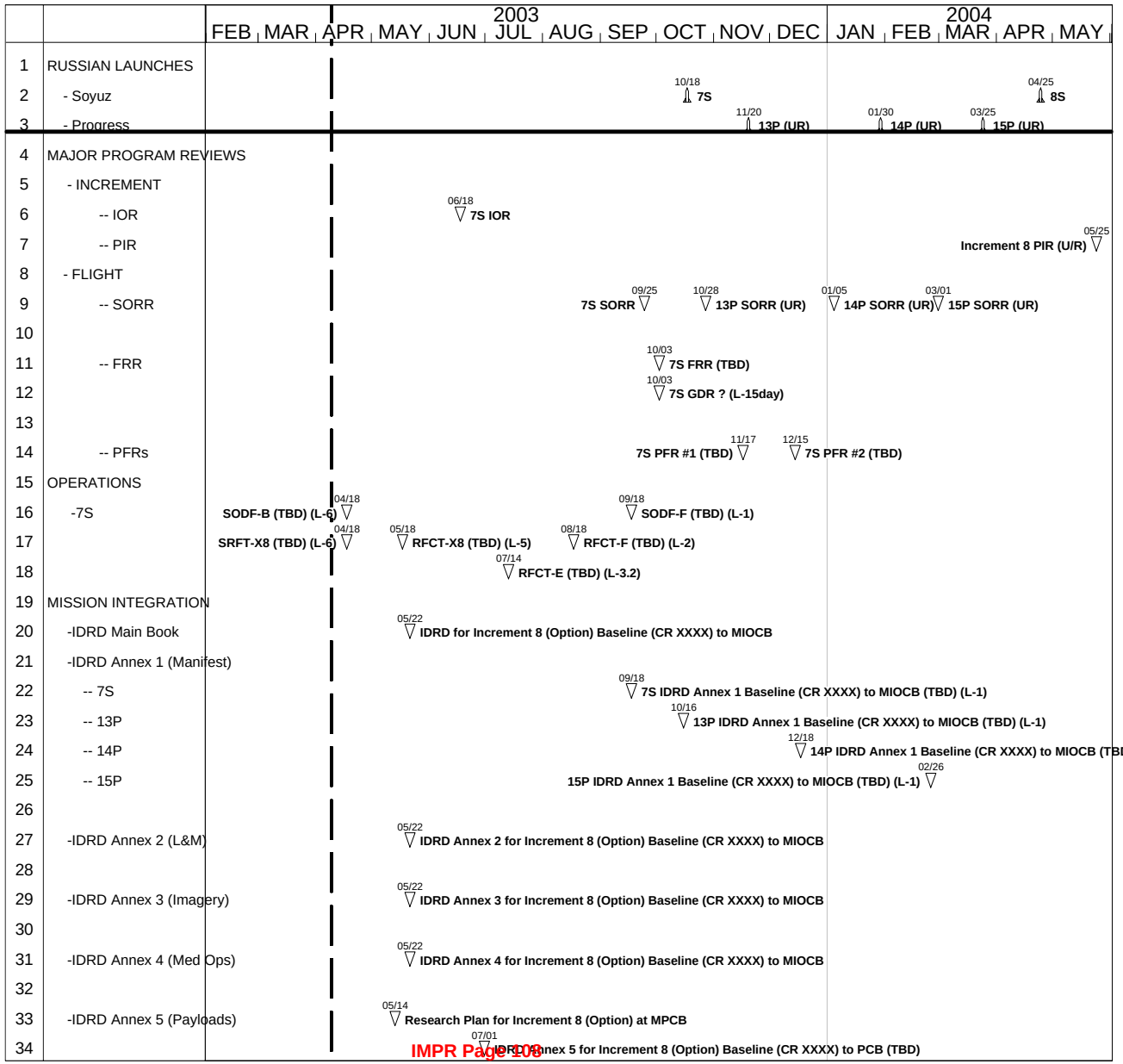
- Prepared SSCN XXXX to baseline Increment 8 (Option) IDRD Main Volume (SSP 54008) and Annexes 2, 3, and 4. On hold pending resolution of Progress launch schedule.
- IDRD Main Volume will include:
  - Stages for 13P, 14P and 15P (U/R)
  - Generic agreements made during Increment 7 negotiations, including GGR&C exceptions, crew time adjustments, handover approach
  - Stage EVA (TBR) in March '04, for SM outfitting for ATV, per Russian input

Plans

- IDRD Main Volume and Annexes 2, 3, and 4 plan a joint TCM on ~May 13, and all to MIOCB on May 22. (Schedule U/R)
- Participate in skip cycle definition, and consumables planning for demanning and remanning.
- Continue discussions on ATV prerequisites, including Russian EVA plan, hardware installation, etc. OC working with ESA, OM/LPM, XA and Russian side.
- Utilization will plan science assuming no allocation and very limited candidates list for 12P, 7S & 13P

Issues/Concerns

- If Progresses not accelerated (and Shuttle not flying), cargo deficit shows need for demanning in Dec. or Jan.
- Expect little to no US payloads on 12P and 7S -- limits significant utilization that can be accomplish (OZ working options with IPs on possible shared investigations)



Jack Ludwig (Blackhawk) 4-8382

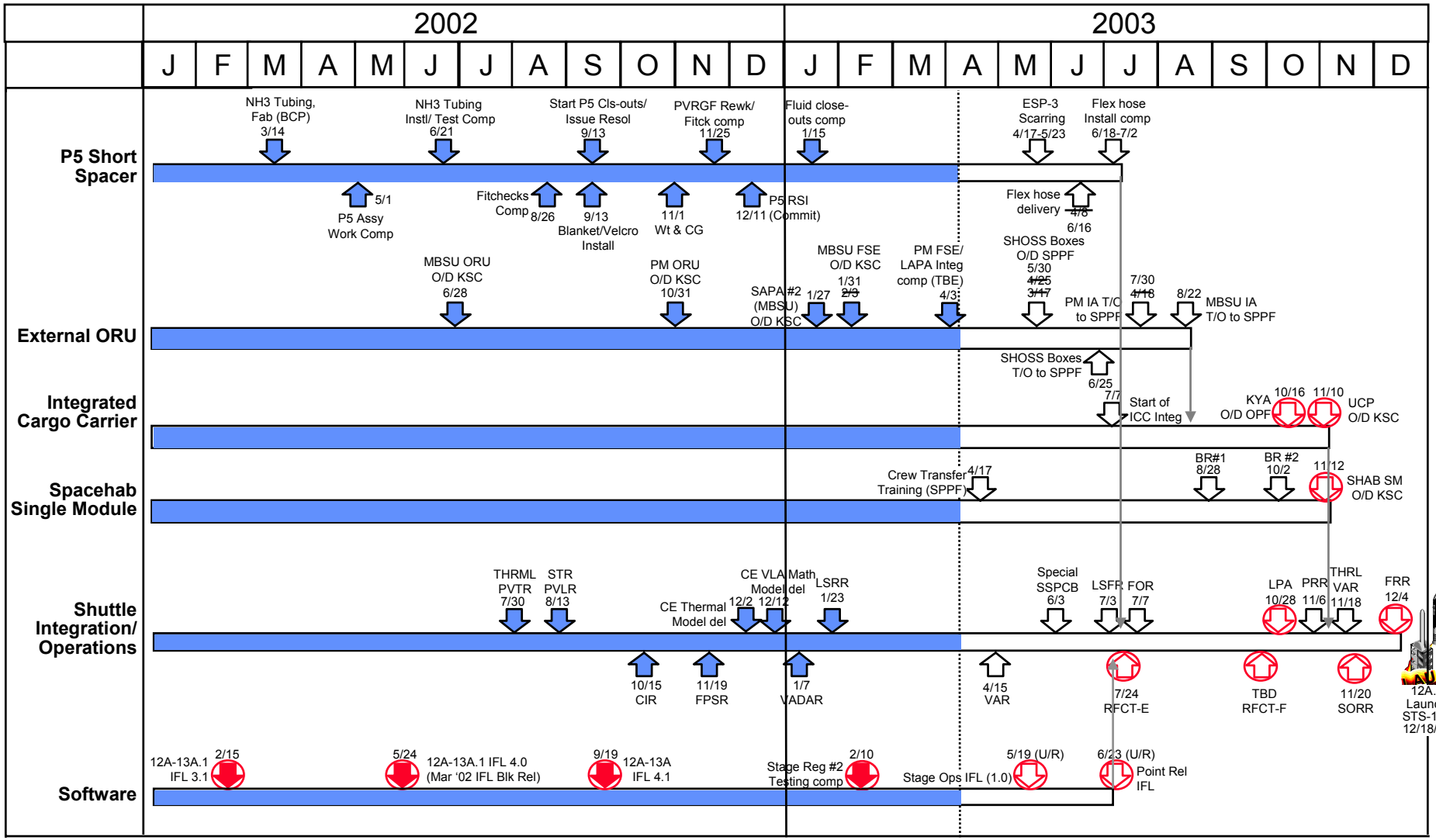
Increment 8 (Option 7S-8S)

EVA Tasks	Technical Status	Schedule Status	# EVA's	Comments
STAGE TASKS None	G	G	0	
HARDWARE TASKS Phase VI Gloves	G	G		Increment 8 hardware delivered for prime crew. Manifest priority for 12P/7S in-work.
Backup Crew Hardware	G	Y		Backup crew not officially named. Manifest options being worked (12P/7S).
EMU Batteries	Y	Y		Launch on Progress (13P) will require hardware modifications for EMU battery.
Bends Treatment Adapter	Y	G		Manifest options being worked.

International Space Station
Integrated Flight 12A.1 Summary
P5 Short Spacer, Spacehab Single Module, and ICC

Schedule Health
G
Assy Seq Rev F

Status as of 4/9/03



NASA Launch Package Manager: Sharon Castle (X42555)

Launch Package Planner (Blackhawk): Monica Jordan (X47703)

INTERNATIONAL SPACE STATION

Flight 12A.1 (STS-116) Health Summary

Status as of 4/9/03

Team	Tech	Sched	Remarks
Flight 12A.1 Overview	G	G	**Tech: Letter proposing new launch dates was signed by program management at 3/25/03 SSPCB & released to ISS program. Flight 12A.1 launch date has been changed to 12/18/03. Shuttle working new CR to change launch date to NET 3/1/04 & PRCB scheduled for 4/17/03. Subsequent letter will be sent to ISS program providing direction to work to new launch dates.** **Schedule: No significant issues.**
P5 Flight Unit with PVRGF/OSE	G	G	**Tech: P5 flex hose delivery has been evaluated by KSC & can be accommodated to support a 12/18/03 launch date.** **Schedule: Vendor delivery of replacement hoses is 6/16/03. Delivery date supports integration activities.**
Spacehab SM Flight Unit	G	G	**Tech: SPACEHAB bench review processes were reviewed between ISS, SPACEHAB, & crew representatives. The crew representatives were pleased with the process. SPACEHAB ready to support hardware deliveries. Negotiated additional control weight to cover middeck in the L-6 month manifest. Working with SPACEHAB to designate which items will fall below the line to get within SPACEHAB control weight limits.** **Schedule: Crew Transfer Training scheduled for 4/17/03 at SPPF. SPACEHAB received technical direction to work to 12/18/03 launch date.**
ICC and SHOSS Boxes:	G	G	**Tech: Preliminary direction has been provided to KSC & to SPACEHAB for how far to proceed with ORU integration activities & where the hardware is to be stored pending further launch date finalization. A proposed plan & schedule has been developed to modify the fixed SHOSS box lid to accommodate the FGB's. The plan & proposed modifications has been reviewed with various technical communities. Last coordination with Structures Working Group in work.** **Schedule: SPACEHAB received technical direction to work to 12/18/03 launch date.**
Payload and ORU/FSE Development: MBSU, Pump Module, DDCU CP, MBSU CP	G	G	**Tech: The Oceaneering proposal on how to accommodate the new Cold Plate fin protection requirement was reviewed by the technical community. Oceaneering waiting on decision on ATP. OB still needs two electrical connector caps for MBSU cold plate. Discussions with vendor concluded in plan to procure connector caps with a turn around time of 5-6 weeks. Estimated delivery planned for end of April, which will support integration activities. The Oceaneering proposal option to install the cold plate caps & to update top level drawings has been submitted for evaluation.** Oceaneering has completed the Cold plate structural compatibility & vibe test. Inputs have been submitted to the cold plate provider for evaluation. Estimated resolution by end of April **With addition of cold plate caps & fin protection, the integrated SHOSS-ED may now exceed the percent weight growth allowed, & thus drive additional vibe testing. SPACEHAB is working with the SWG to determine options.** ORU thermal analysis needs to be evaluated to determine if there is sufficient margin for launch dates over a period of time to verify that heaters are still not required for the ORU's. Any additional heater requirements would adversely affect the ability to achieve the energy depende Schedule: **No significant issues.**
Shuttle Integration	G	G	**Tech: SPACEHAB transition plans from Shuttle to ISS management continued to be developed. They are being implemented as soon as joint agreement on the subjects is reached.** **Sched: Shuttle processing CR to change launch date to NET 3/1/04. PRCB scheduled for 4/17/03.**
Analysis & Verification	G	G	**Tech & Sched:** P5 install clearances are very low (1.6-3.5 inches). CR 7146 has been reviewed up thru SSPCB. P5 closure plan scheduled for 7/11/03.**Awaiting thermal analysis of attitude timeline; ECD 4/30/03. Awaiting power assessment of P6 retraction related to 12A & 12A.1; ECD 4/22/03.**
Safety	G	G	**Tech:** Pump Module ORU testing impacted due to delay in safety assessment of testing equipment. **Safety assessment scheduled for completion by 4/11/03. Hardware will be available for shipment to KSC by next week.** **Sched:** No significant issues.
Operations	Y	G	**Tech/Sched: MOD presented across the board FOR plan to SSPCB. Awaiting decision by program management on build of new PFCS ORU, which would take the return of the PFCS out of the 15A critical path. Vehicle office has been given the opportunity to assess where they want their PFCS on-orbit asset**

G — Schedule: Zero or positive margin
Tech: Meets technical requirements; No significant issues

Y — Schedule: Negative margin with approved recovery plan with no impact to critical path
Tech: Does not meet requirements but has recovery plan. Open issues have recovery plans.

R — Schedule: Negative margin without recovery plan or negative margin with critical path impact.
Tech: Does not meet requirements and does not have recovery plan. Open issues do not have recovery plans.

NASA LPM: Sharon Castle 281-244-2555
Boeing LPM: Jeff Heitzman 281-226-4777
Blachkawk LPP: Monica Jordan 281-244-7703

2.2.3-4.5 International Space Station-Launch Package 12A.1

LPM: Sharon Castle/OC X42555
LPIM: Don Schmaholz/ OC X46669

Last Update: 4/9/03

Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

Accomplishments:

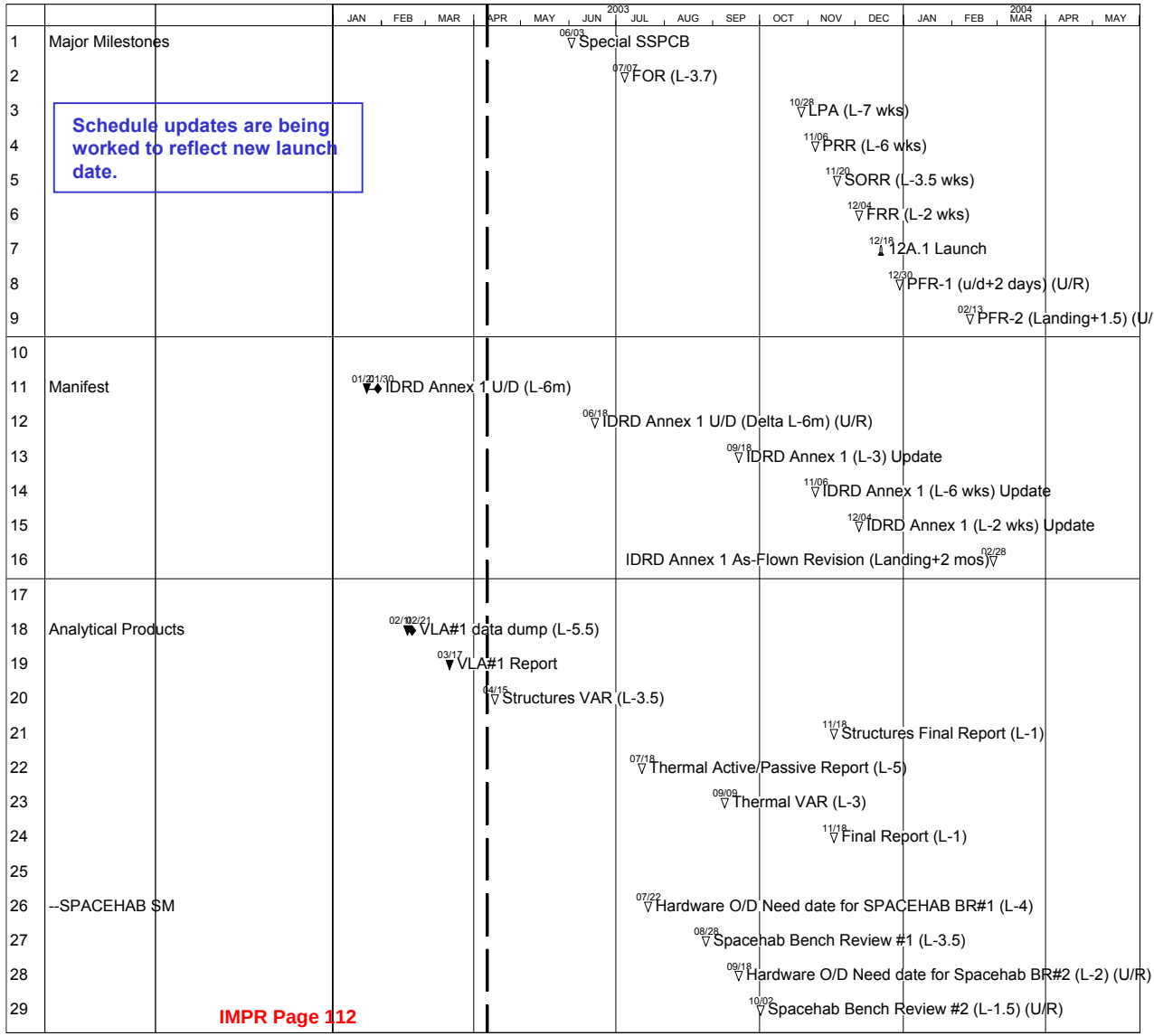
- Negotiated additional control weight to cover middeck items in the L-6 month manifest.

Planned Events:

- Decision to fly Pump Module Assembly as is, or to replace with a PMA with modified heater design will be re-addressed at SSPCB on 4/15/03.
- SPACEHAB Crew Transfer Training: 4/17/03
- P5 Scarring for ESP-3: 4/17/03-5/23/03
- Power balance assessment: 4/22/03
- Decision on 15A PFCS: 4/28/03
- Thermal attitude assessment: 4/30/03

Issues/Concerns:

- ORU thermal analysis needs to be evaluated to determine if there is sufficient margin for launch dates over a period of time to verify that heaters are still not required for the ORUs. Any additional heater requirements would adversely affect the ability to achieve the energy dependent day.
- With the addition of cold plate caps & fin protection, the integrated SHOSS-ED may now exceed the percent weight growth allowed, and thus drive additional vibration testing. SPACEHAB is working with the Structures Working Group to determine options.



ISS Monthly Program Review
EVA Status for Flight and Stage

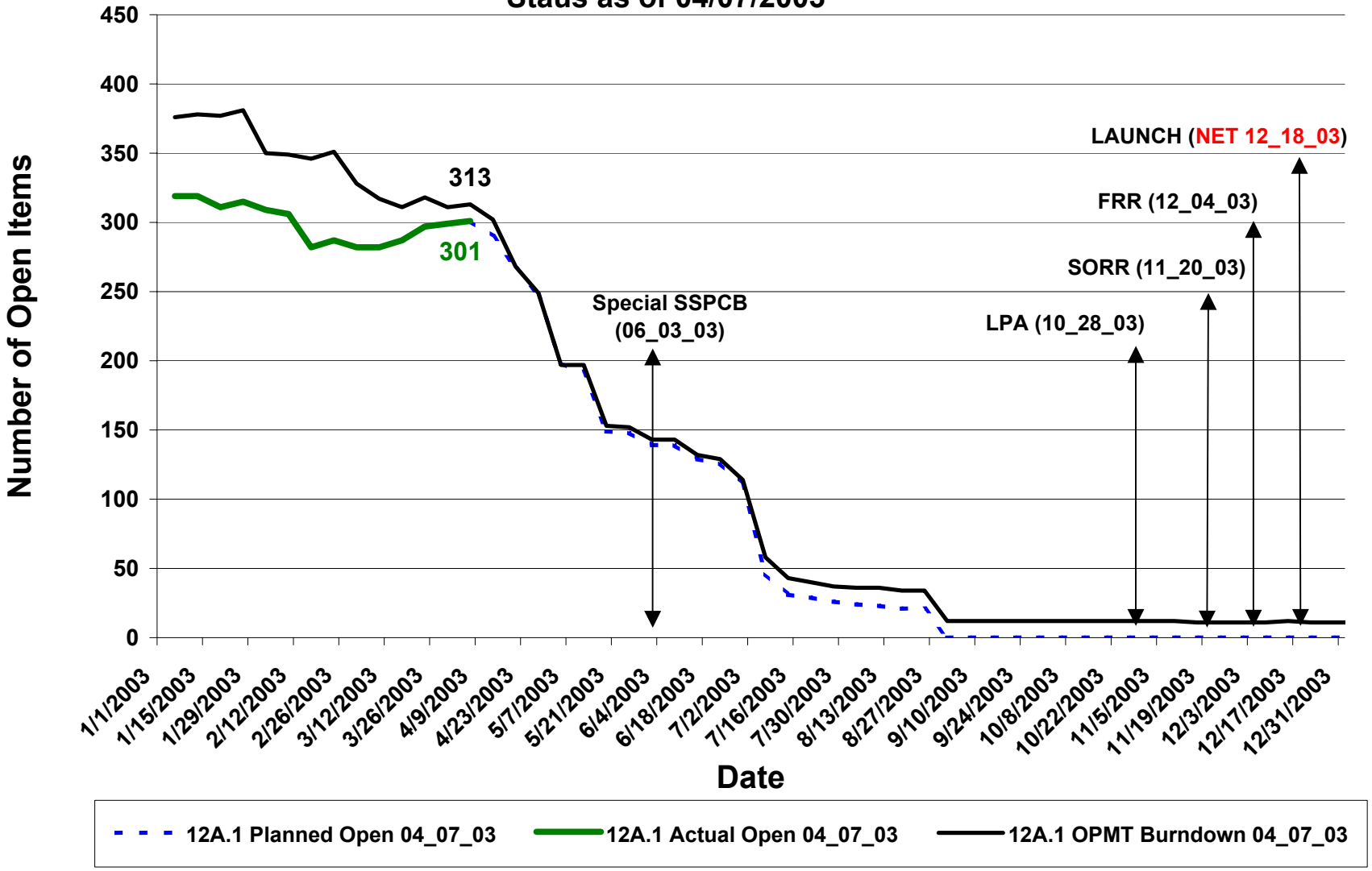
STS-116/12A.1

XA/EVA Project Office
4/11/03

EVA Tasks	Technical Status	Schedule Status	# EVA's	Comments
FLIGHT TASKS - P5 installation - MBSU reconfigs CH 4A/4B) - EATCS activation: Loop A - MBSU reconfigs (CH 2A/2B) - EATCS activation: Loop B - ORU transfers	G	G	4 3 SSP Crew 1 ISS Crew	* **Following P5 PVRGF to P4 BGA clearance issue** **- Awaiting Boeing analysis of "as built" data** * **Adjustable Grapple Bar pins are non-compliant** **- Awaiting resolution plan**
STAGE TASKS 12A.1 U.S. Stage EVA - EEATCS PVR's (2) stow - Install PVRGF on aft PVR - EEATCS starboard PVR shroud - 13A EVA prep - MISSE 5 - FPP Removal	G	G	2 EMU	* USOS EVA - EVAAT completed on 10/9/02 - Contingency requirements development in work * USOS EVA - MISSE 5 - may move to ULF-1 (under review)
HARDWARE ITEMS 1/4" BDT	G	G		DCR: ~~2/28/03~~,6/11/03 Delivery: ~~2/28/03~~, 6/20/03
3/4" BDT	G	G		DCR: ~~2/28/03~~, ~~4/30/02~~, 7/8/03 Delivery: ~~2/28/03~~, ~~4/30/02~~, 7/15/03. Late changes of ISS TCS requirements (energy values) causing delay in schedule
Phase VI Gloves	G	G		DCR: Complete Curbeam: Complete (Prime and B/U) Fuglesang: Complete (Prime and B/U)
Inc 8 Gloves **(Inc. 12.1 Crew)**	G	**Y**		DCR: **Crew is TBD** Foale: Complete (Prime and B/U) Tokarev: Complete (Prime and B/U) McCarther: Complete (Prime and B/U)
5 TM Handrails (Shoss - ED FSE) 6 TM Handrails (MBSA FSE) 3 TM Handrails (ICC) 4 TM WIF (ICC)	G	G		Delivery: Complete Delivery: Complete Delivery: 4/15/03 Delivery: Complete

12A.1 Open Work Burndown

Staus as of 04/07/2003



Boeing LPM: Jeff Heitzman
281-226-4777

INTERNATIONAL SPACE STATION

International Space Station
Integrated Flight 13A Summary
S3 Truss, S4 (IEA), Solar Arrays

Flight Health Schedule Assessment

Y

Rev F-Mod 4 Assy. Seq.
Status as of: 04/09/03

2003 | 2004

J F M A M J J A S O N D J F

S3 Truss
- S3 AT Compl 3/20

S3/S4 Integrated Element
- S3/S4 Final Integ & C/O's Start 1/23
- NH3 Load 2/12-13
- Seg 2 IACO 2/13-19
- 3/11 AMS Fitcheck
- S3/S4 Final Integ & C/O's Complete 6/27
- S3/S4 RSI 7/21
- 6/30 S3/S4 Wt & CG

S4 IEA
- S4 Final Assy/ C/O / PVAA Instln Complete 1/19
- 1/23 FP 7 CEWS S4 Wt & CG Complete

PVAA
- 7/22 S4 Flexline Rework 8/11 - 8/20
- DWELL
- 11/12 Start Shuttle Integration
- S/W Load/ PSLIT 11/20 - 11/26
- 12/11 Payload to Pad
- Flight 13A Launch STS-117 1/22 NET (U/R)

Shuttle Intg. / Mission Ops
- 1/23 FPSR
- RFCT-E 5/23
- LSRR 6/26
- SRFT-X8 7/22
- LSFR 7/31
- Delta LSFR 9/4
- CCCR 11/7
- RFCT-F 11/22
- PRR 12/11
- FRR 1/8
- PMMT 1/20
- 7/15 SODF(B)
- 8/22 RFCT-X8
- FOR 9/15-9/19
- STR VAR 10/1
- 12/10 FCE/EVA Bench Review
- 12/22 SODF(F)
- 1/12 L-10 Bench Review

Analytical Integration & Verification
- S3/S4 Cargo Final Model 6/13
- 13A Final Stage Model 7/18
- S3/S4 Assessment Review (SSPCB) 8/12
- LPA 12/2
- SORR 12/18

Software
- 2/10 4.3.1 IFL
- 3/6 4.4 IFL
- X2-13A Transition IFL U/R ~~6/30~~
- Launch IFL Build Complete 8/11
- External Release TBD
- Stage Ops IFL 11/10
- Stage Ops Point IFL 12/15

13A Commit Dates:
- Hard Mate Complete 1/21/03 Current: 2/4/03(A)
- Flt H/W NH3 Load Complete 2/11/03 Current: 2/13/03(A)
- Seg 2 IACO Complete 3/12/03 Current: 2/19/03(A)
- RSI 5/30/03 Current: 7/21/03

RSI to L-60 Dwell 99 days

Note: All Schedule Dates Reflect Current Assessment.

Contact:
Boeing LPM: Dave Manser (281) 226-6227
Boeing LPP: Renee Clokey (281) 226-4826

Flight 13A Health Summary
STS-117

INTERNATIONAL SPACE STATION

BOEING

Team	Tech	Sched	Remarks
Flight 13A Overview	Y	G	Tech: Continuing forward work on WPRR-0112 and SIR 8-0015 PVRGF Plan. Awaiting assessment of 12A FOR action on AJIS Strut Installation and applicability to 13A. Watching FW5 removal decision (12A), battery capacitance degradation mitgation strategies S3/S4 Contingency Jumper Ammonia flex hose 6/16/03 KSC O/D. Installation 8/03. Sched: No issues.
S3/S4 Flight	G	G	Tech: S3 working off PR 368 on clevis bolt low running torque. ECD 5/08/03. Then PAS 1-4 stow. Then DPA. GSE trunnions remain on S3/4 awaiting results of 12A Flight Wing 5 removal decision on 4/21. S4: No issues. Sched: No issues.
ORU Development	G	G	Tech: BMRRM S4-2 Anti-rotation Latch Anomaly Root Cause Analysis: Root Cause could not be determined. PRACA 3171 closure plan to SPRT 5/16/03. Sched: No issues.
Software	G	G	Tech: No issues. Sched: 13A-13A.1 stage test started on 4/4 per plan. ECD 5/1
Shuttle Integration	G	G	Tech: No issues. Sched: Official change to Launch Date from 10/2/03 to NET 1/22/04. Still showing OV-105 Launch Vehicle. New RSI 7/21/03. New SI 11/12/03. Dwell increased from 47 to 99 days.
Analysis & Verification	Y ↑	G	Tech: WPRR-0112 forward work on-going. T&VCP directed bolt thread-in fit check of S4 IEA corner bolt nuts (4). Identified extra ACME flight quality bolt. Not to interfere date with KSC processing and completion of necessary paperwork is late April. Sched: No issues.
Safety	G	G	Tech/Sched: Watching PGT NCR reporting for impact(s).
Operations	G	G	Tech: Tracking SAW stiction technical reporting/EVA Contingency deployment impact. -EV Crew tool: Radiator Alignment Tool test delayed from 2/18 to approx 5/16 due to slip in installation of S6 PVR to S6 IEA. -EM PVR first crew training date 3/20/03 (A). Sched: First NBL runs since Nov '02: 4/9 (A), 4/11. F.O.R. moved from 6/2 to 9/15/03.

G Schedule: Zero or positive margin
Tech:Meets technical requirements; No significant issues

Y Schedule: Negative margin with approved recovery plan with no impact to critical path
Tech:Does not meet requirements but has recovery plan. Open issues have recovery plans.

R Schedule: Negative margin without recovery plan or negative margin with critical path impact.
Tech: Does not meet requirements and does not have recovery plan. Open issues do not have recovery plans.

BLPM: Dave Manser 281-226-6227
4/10/2003

2.2.3-4.5 International Space Station-Launch Package 13A

Chart Owner: OC2/B. Sellari X47094

Last Update: 04/09/03

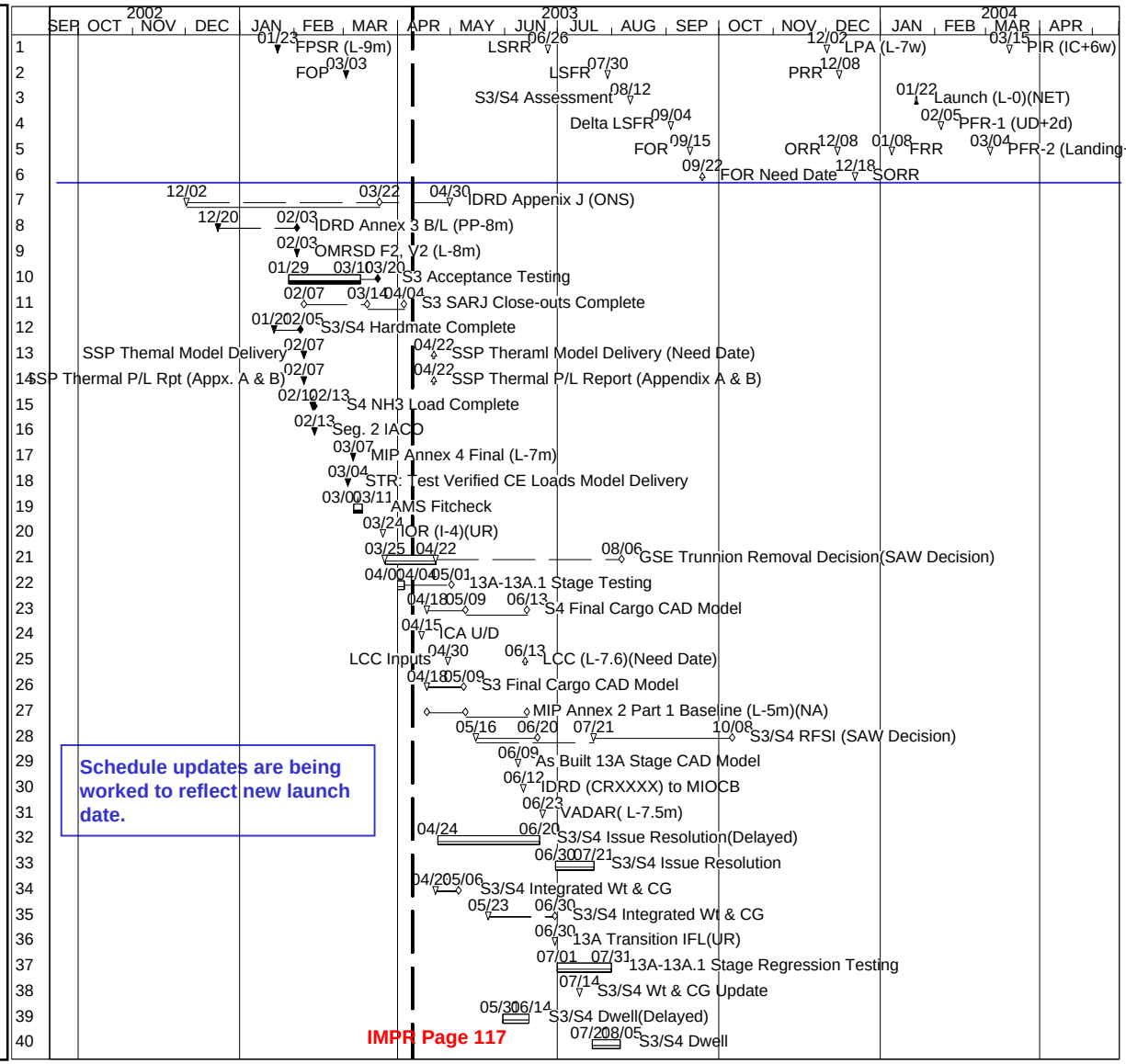
Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

Accomplishments:

- Performed detailed review of STS-117/13A integrated schedules and updated milestones to reflect NET launch date of 1/22/04.
- Approved MIP CR updates for:
  - -Addition of powered payloads
  - -Updates to new SSP post-landing requirements
  - -O2/N2 transfer requirements update
- S3 Acceptance Testing completed 3/20.
- Successfully deployed all 4 PAS & verified adequate clearances remained after modifications completed.
- MT Go Gauge testing completed on S3/S4. All cover & blanket modifications were completed and passed.
- Completed NBL runs for EVA 1 on 4/9 & EVA 2 on 4/11. Key points identified that require follow-up.
- Agreement reached on 13A FOR date of 9/15-19. This will be maintained in the event of further launch delays with a Delta FOR if required.

Issues/Concerns:

- Performed S4/IEA & P6/PVR thermal assessments related to PVR relocation for Flight 13A & identified issues which need to be addressed through additional forward work.
  - –S4/IEA equipment On/Off states must be manually managed in order to maintain required thermal ranges prior to installation of the PVR and activation of the Photo-voltaic Thermal Control System (PVTCS).
    - •The operational requirements have not yet been worked with MOD.
    - •Flight software ability to support this kind of vehicle management needs to be tested.
  - –The PVR NH3 accumulators can not sustain direct sun due to heating concerns during the relocation activities.
    - •EVA positioning and SSRMS configurations must be developed to protect this hardware.
  - –Current plans call for the inter-connection of the EATCS and the PVTCS during Flight 12A.1.
    - •This results in a higher than expected pressure in the PVTCS for installation on the S4/IEA.
    - •It is not clear that this condition can be supported by the IEA hardware.



13A Issues /Concerns

- –Current thermal analysis shows S4/IEA can be thermally managed assuming various components can be turned On/Off independently.
  - •It has been recommended that the ability to flow NH3 within the IEA prior to the PVR installation would be an important capability to verify.
  - •Currently no formal testing addresses this. Working with Vehicle Office to add this testing.
- –Attachment of PVRGF on P6/Aft radiator from Stage 12A.1 to 13A and the long term stowage on P6/Starboard radiator still need to be assessed. Previous plans resulted in significant EVA impacts to multiple flights.

▪Have determined that the S4/IEA attachment fittings for the PVR have not been tested with flight bolts.

- –Risk is low that the fittings will not work with the PVR bolts on the P6 radiator. However, consequences are severe.
- –Boeing working to obtain flight qualified bolts & provide to KSC for testing.
- –Working with KSC to include test in current 13A processing flow.

▪Constraints identified during 12A FOR that SARJ Braces & AJIS Struts must be installed before SARJ Launch Locks & Restraints are removed. Has potential to impact 13A EVAs.

- –Addressed potential impacts at 13A IPT & MOD determined that EVAs 1 & 2 can accommodate the change in EVA task order.
- –This is not the most efficient approach & has potential for further delays if additional restrictions imposed for delays on problems in installing the Braces or Struts first. Do not recommend making change unless hardware damage results.
- –Awaiting Boeing structural assessment to determine full impact. Analysis results on schedule for 4/18 release.

▪S3/S4 NH3 transfer flex hoses were inspected and found damaged.

- –Working to manufacture replacement hoses.
- – Currently scheduled for KSC On-Dock date of 6/16 & re-install of 8/11-20.

▪Supported Vehicle Office and Boeing in identifying & reviewing Limited Life Items for S3/S4 Element. Provided S3/S4 candidates for inclusion in overall Truss Element assessment of impacts due to launch delays. Assessment continues.

▪Continuing to support integrated assessment of battery management plan for Flights 12A, 13A, & 15A. Proposal to ISSP by end of April.

▪Supporting integrated assessment of Solar Array Wing (SAW) pre-load questions for Flights 12A, 13A, & 15A to determine if previous “stick-tion” issues needs to be re-addressed. Evaluating consequences of supporting manual assisted deployment. SRP reviewed scheduled for 4/15, EVA CCB for 4/16 & SSPCB on 4/21.

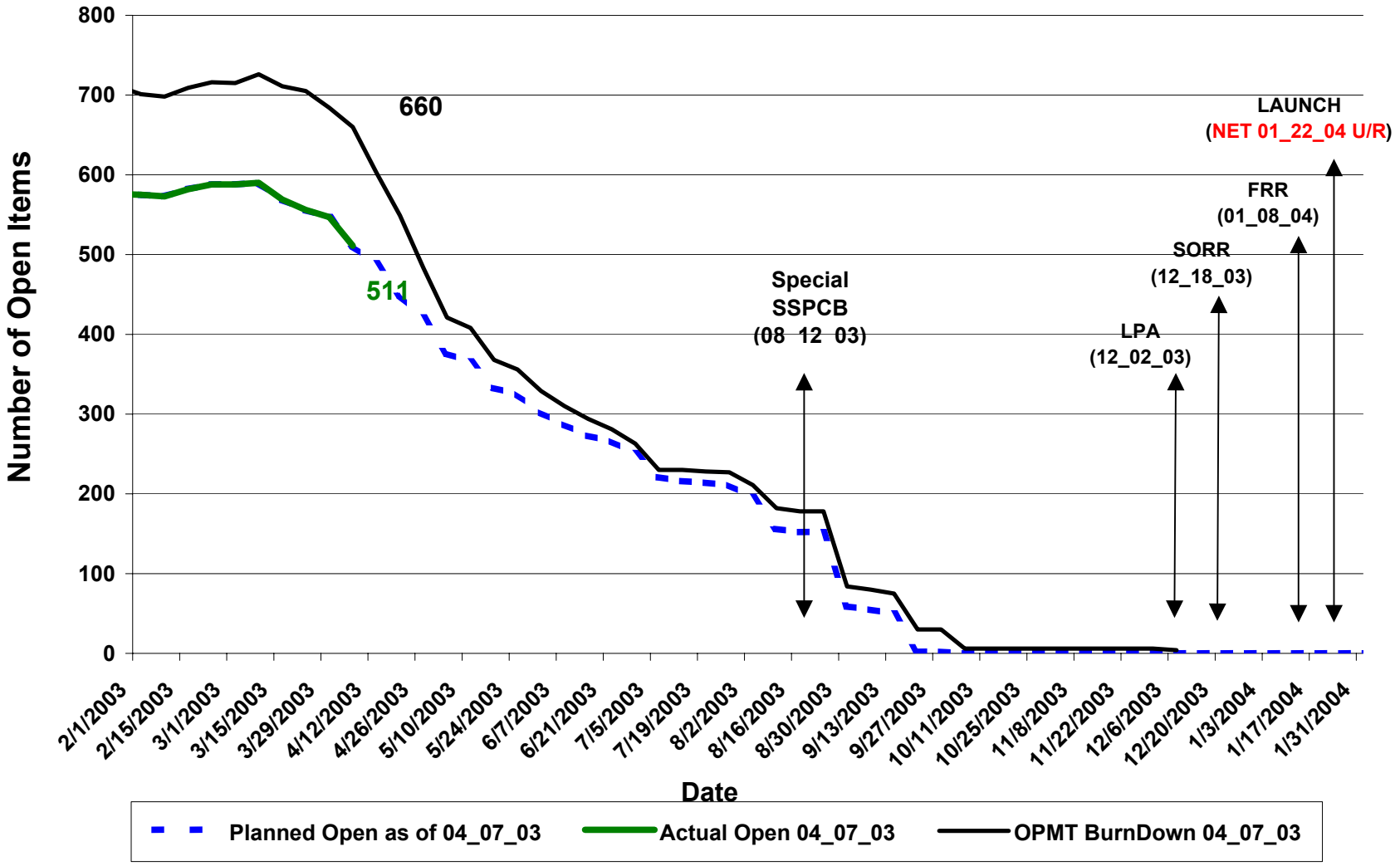
▪Continuing to perform various assessments related to STS-117 ascent performance.

- –Developed agreed to baseline with SSP on STS-117 manifest content as starting point.
- –Participating in multi-flight assessment addressing up to 1000 lbs reduction (700 lbs Flight Derived Dispersions + 300 lbs Return to Flight impacts).
- –All options require significant buy-backs.

▪PRACA regarding BMRRM S4-2 Anti-rotation Latch anomaly remains open. S4 hardware cleared for flight but operational constraints have not been addressed

13A Open Work in OPMT

Status as of 04/07/03



Boeing LPM: Dave Manser
281-226-6227

STS-117/13A

EVA Tasks	Technical Status	Schedule Status	# EVA's	Comments
FLIGHT TASKS - Connect and activate S3/S4 - SAW deploy - SARJ prep - PVR relocation - Rotate MT stop - Deploy P6 Aft shroud - Remove SVS target - Install ETRS	G	G	4 EVA's 2 orbiter EVA teams	* Radiator alignment tool was used to install alignment decals onto S6 IEA. S4 IEA decal installation awaiting KSC scheduling * **EVA feasibility study in-work to determine impacts to EVA assisted SAW panel separation (baseline or contingency) task** **- Due back to SSPCB on 4/21/03** * Analysis in work by Program to determine if AJIS struts must be installed before SARJ Launch Lock release. Could require significant replanning of EVA tasks.
STAGE TASKS Stage EVA - none	G	G	0 EMU 0 Orlan	
HARDWARE ITEMS - Phase VI Gloves	G	G		Delivery: Reilly: Prime - Complete, B/U 4/25/03 Forrester: Prime, Complete and BU TBD Polansky: Prime and BU TBD Mastracchio: Complete (Prime and B/U)
- Fluid QD Radiator Alignment Tool	G	G		DCR: Complete Delivery: Complete

ISS Monthly Program Review
EVA Status for Flight and Stage

XA/EVA Project Office
4/11/03

Post 13A

Topic	Technical Status	Schedule Status	# of EVA's	Work in Progress
13A.1 Flight - S5 installation - Relocate S-Band system from P6/Z1 to P1 - BCDU ORU transfer to ESP-2 - VSSA GSE transfer to ICC - EAS transfer to ICC - Relocate ACBSP and SASA from P6/Z1 to P1	G	G	3	* **EVA crew has completed first set of EVA 1-3 NBL training runs**
13A.1 Stage Stage EVA - P6 PVR Stow - CETA move - 13A.1 EVA Prep - **WETA 3 Install**	G	G	1 EMU 1 Orlan	* Contingency requirements development in work * Russian EVA in early definition * CETA move may be deleted due to CETA/SARJ interface for 15A
15A Flight - Attach S6 - P6 relocation	G	G	3	* Assessing adding CETA cart relocation to EVA2 due to SARJ / CETA clearance concerns * **Assessing timeline/training impacts to protect for unsticking solar array wing panels**
15A Stage	G	G	0 EMU 0 Orlan	
10A Flight (Node 2)	G	G	2	
10A Stage	G	G	3 EMU 2 Orlan	
HARDWARE ITEMS On-Orbit Transfer Device (OTD)	G	G		DCR: Complete Delivery: Complete
Fluid Line Repair Kit (FLRK)	G	G		DCR: 8/4/03 Delivery: N/A

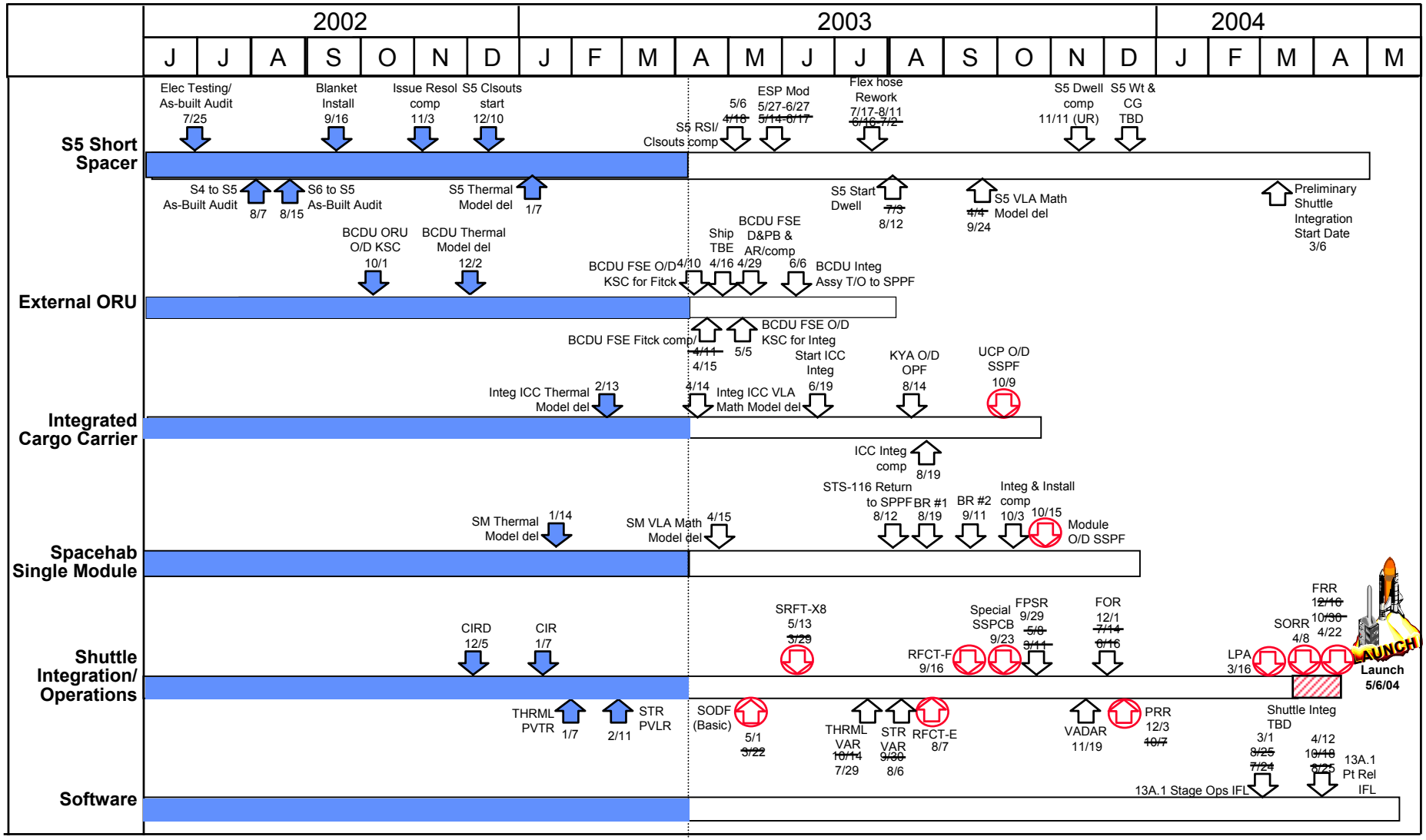
International Space Station
Integrated Flight 13A.1
S5 Short Spacer, Spacehab Single Module & ICC

Schedule Health

Y

Assy Seq Rev F

Status as of 4/9/03



Flight 13A.1 (STS-118) Health Summary
Status as of 4/9/03

INTERNATIONAL SPACE STATION

Team	Tech	Sched	Remarks
Flight 13A.1 Overview	Y	G	**Tech:** Awaiting Assignment of Launch Vehicle. Assessing schedule impacts associated with adding crew rotation to fl **Schedule:** No Significant Issues.
S5 Flight Unit with PVRGF/OSE	G	G	**Tech:** No Significant Issues **Schedule: ESP & Flexhose are being worked per KSC Schedules.**
Spacehab SM Flight Unit	G	G	**Tech:** No significant issues. **Schedule:** No significant issues.
ICC with BCDU and EAS FSE	G	G	**Tech: New MLI Blanket being provided for BDCU** **Schedule:** No significant issues**.**
Shuttle Integration	Y	G	**Tech: Shuttle program initiating CR to change launch date to NET 6/1/04.** Awaiting assignment of Orbiter. **Schedule:** Launch Date U/R
KSC Processing	G	G	**Tech:** Awaiting assignment of Launch Vehicle. **Schedule:** No significant issues.
Manifest	G	G	**Tech:** Work on the L-9 manifest has been delayed until an orbiter is assigned & crew rotation flights have been decidec **Schedule:** No significant issues.
Utilization	G	G	**Tech:** No significant issues. **Schedule:** No significant issues.
Analysis & Verification	G	G	**Tech:** All analysis and VLA cycles are under review. **Schedule:** No significant issues**.**
Safety	G	G	**Tech:** No significant issues. **Schedule:** No significant issues.
Operations	G	G	**Tech:** No significant issues**.** **Schedule:** No significant issues.

G — Schedule: Zero or positive margin
Tech: Meets technical requirements; No significant issues

Y — Schedule: Negative margin with approved recovery plan with no impact to critical path
Tech: Does not meet requirements but has recovery plan. Open issues have recovery plans.

R

↑ Improving ↓ Worsening

2.2.3-4.5 International Space Station-Launch Package 13A.1

LPM: B. Dickey X47933
LPIM: M. Rodriggs X46359

Last Update:4/9/03

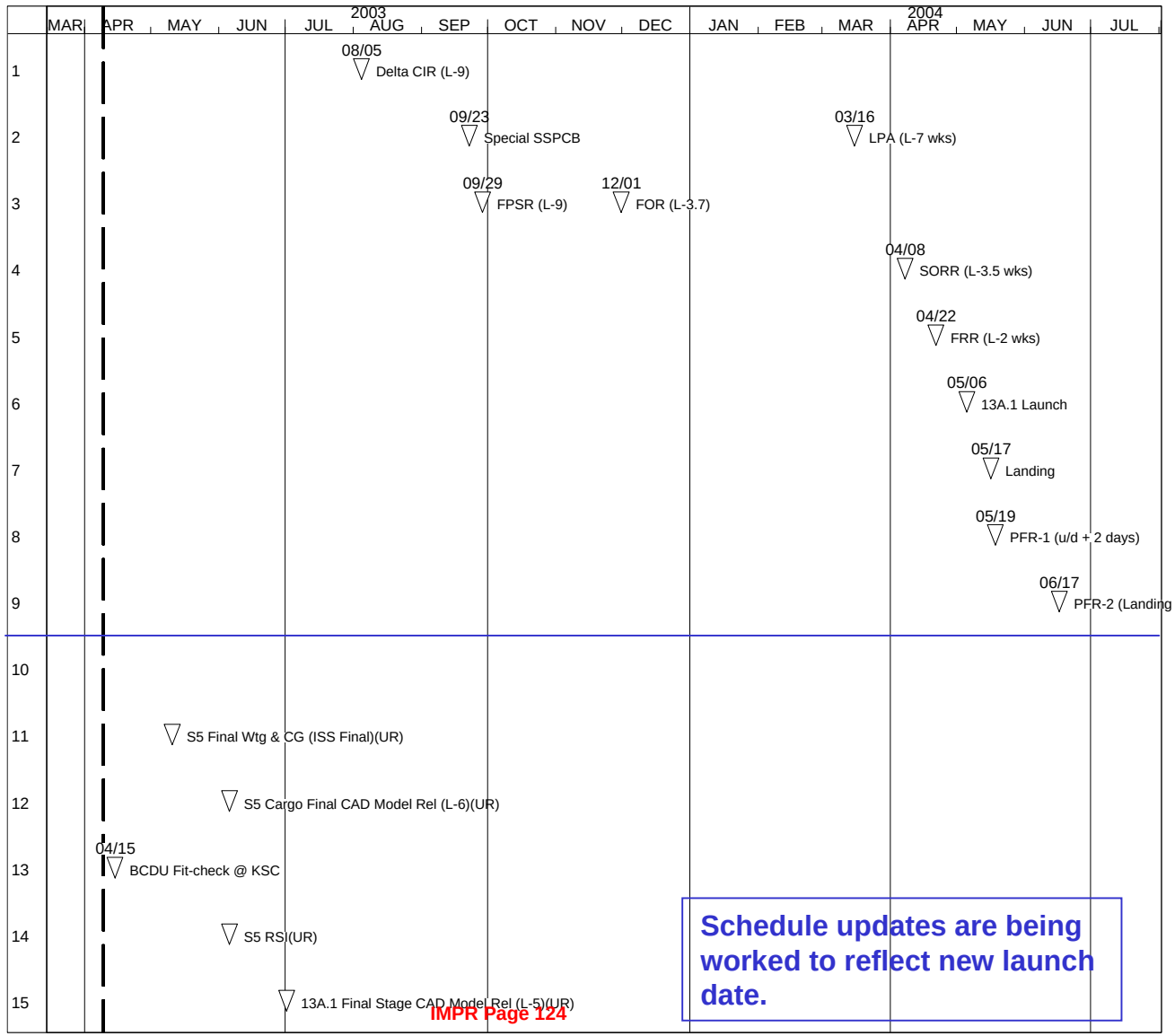
Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

STS-118/13A.1 Mission Accomplishments:

- SPACEHAB Overview Training was given to the crew on 4/9/03. The SPACEHAB Program overview as well as their Operations and Training Plan were presented. There were good discussions regarding roles and responsibilities between SPACEHAB, MOD, and the Launch Package Team.
- A new set of Multilayer Insulation (MLI) for the Battery Charger Discharger Unit will be manufactured due to crew concerns with the old MLI. The BCDU will be delivered with the old MLI and then swapped out with the new. There are no schedule impacts.
- 13A.1 Launch Date has been newly set to No Earlier Than June 1, 2004.

13A.1 New Issues and Concerns:

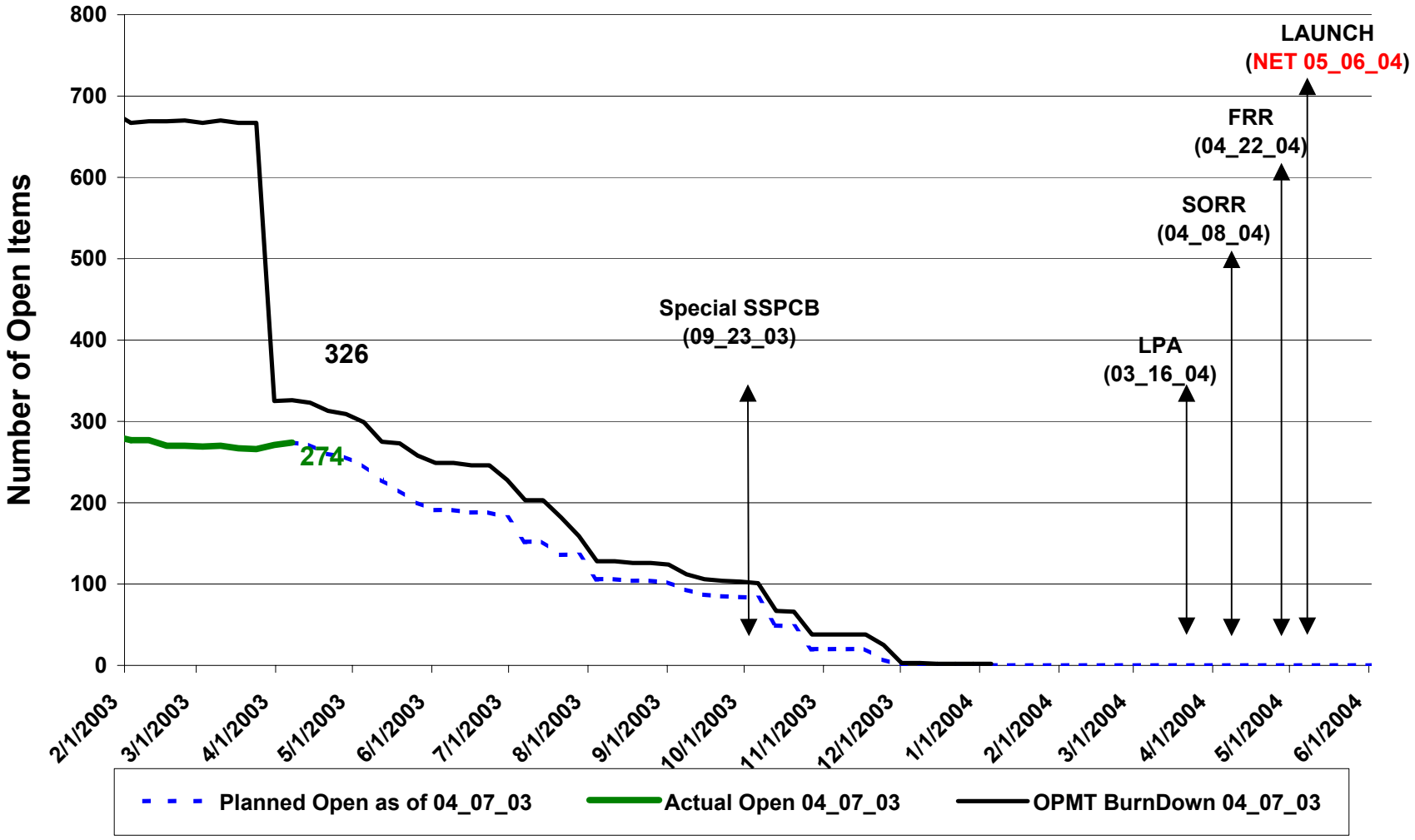
- No new issues or concerns.



Schedule updates are being worked to reflect new launch date.

13A.1 Open Work in OPMT

Status as of 04/07/2003



Boeing LPM: Jay Nichols
281-226-4633

INTERNATIONAL SPACE STATION

Dwell = 27 Days

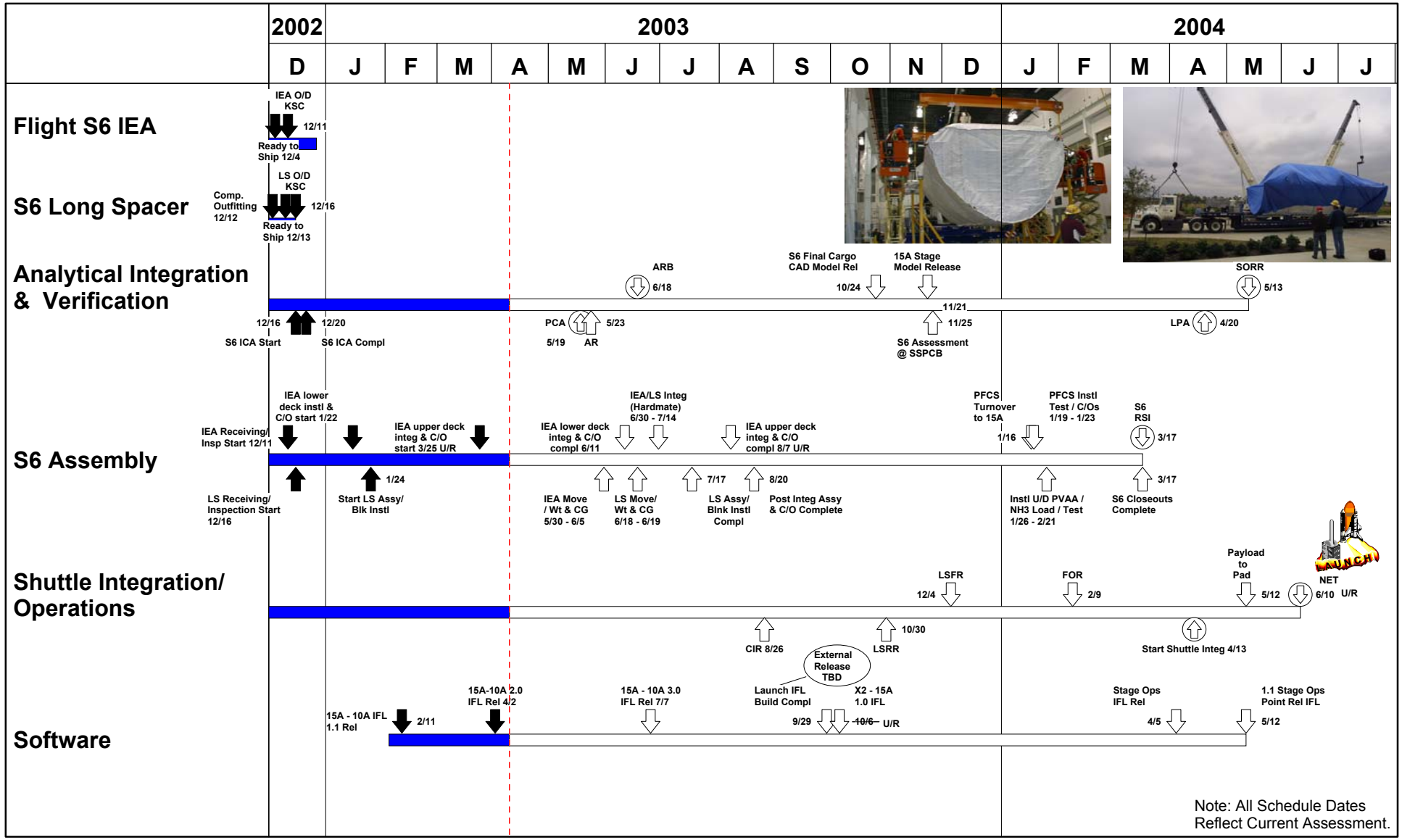
International Space Station
Integrated Flight 15A Summary
S6 Truss Segment, PFCS

Flight Health Schedule Assessment

Y

Rev F Mod 4 Assy Sequence

4/9/2003



Boeing LPM: Stephan Grebel (281) 226-6035
Boeing LPP: Melanie Calverley (281) 226-4123

2.2.3-4.5 International Space Station-Launch Package 15A

LPM:R. Torcivia / OCX47942
LPIM: M. Dillard/ OC X48640

Last Update:4/09/03

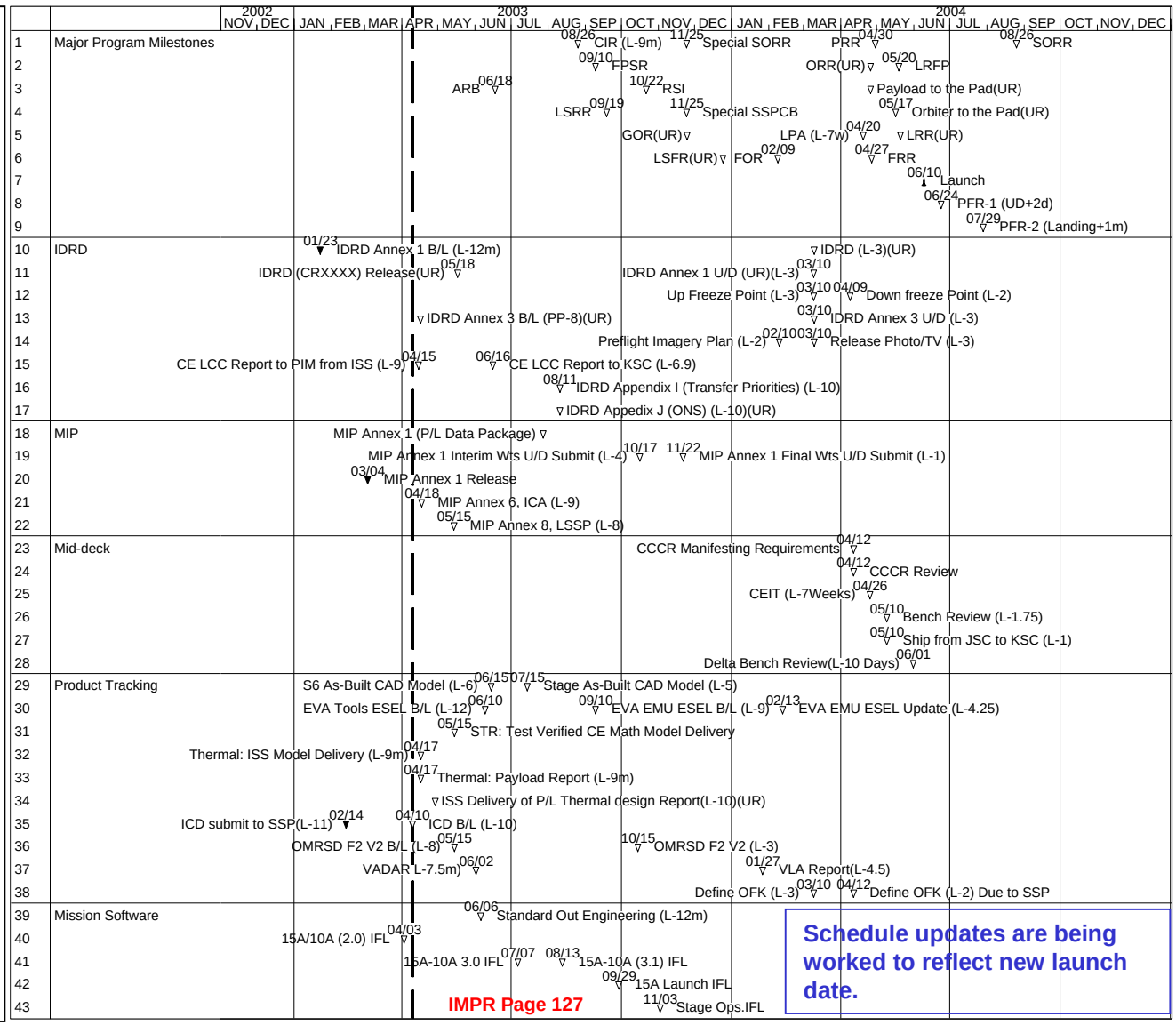
Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

ACCOMPLISHMENTS:

- The new No Earlier Than (NET) launch date for 15A is 6/10/04.
- The Space Station Control Board (SSPCB) established dates for the Cargo Integration Review (8/26/03) and the Flight Operations Review (2/9/04).
- The 15A Launch Package Management (LPM) Team lead coordination discussions with other Launch Package Management Teams
  - Concluded which Program milestones should be tied to launch and which ones are hardware dependent
  - Concluded that imbedded Orbital Replacement Units will not be included on manifests
- The Pump Flow Control Subsystem (PFCS) build decision was reviewed at the Vehicle Control Board (VCB)on 4/7/03.
- The S6 On-orbit ICD was base-lined on 4/4/03
- Release of the Mission Integration Plan Annex 1 was 3/20/03.
- We supported the Decision Tree Team activities.
- We reviewed the Launch Site Support Plan.

ISSUES:

- The final build decision for the PFCS is scheduled for 4/28/03 at the VCB.



Schedule updates are being worked to reflect new launch date.

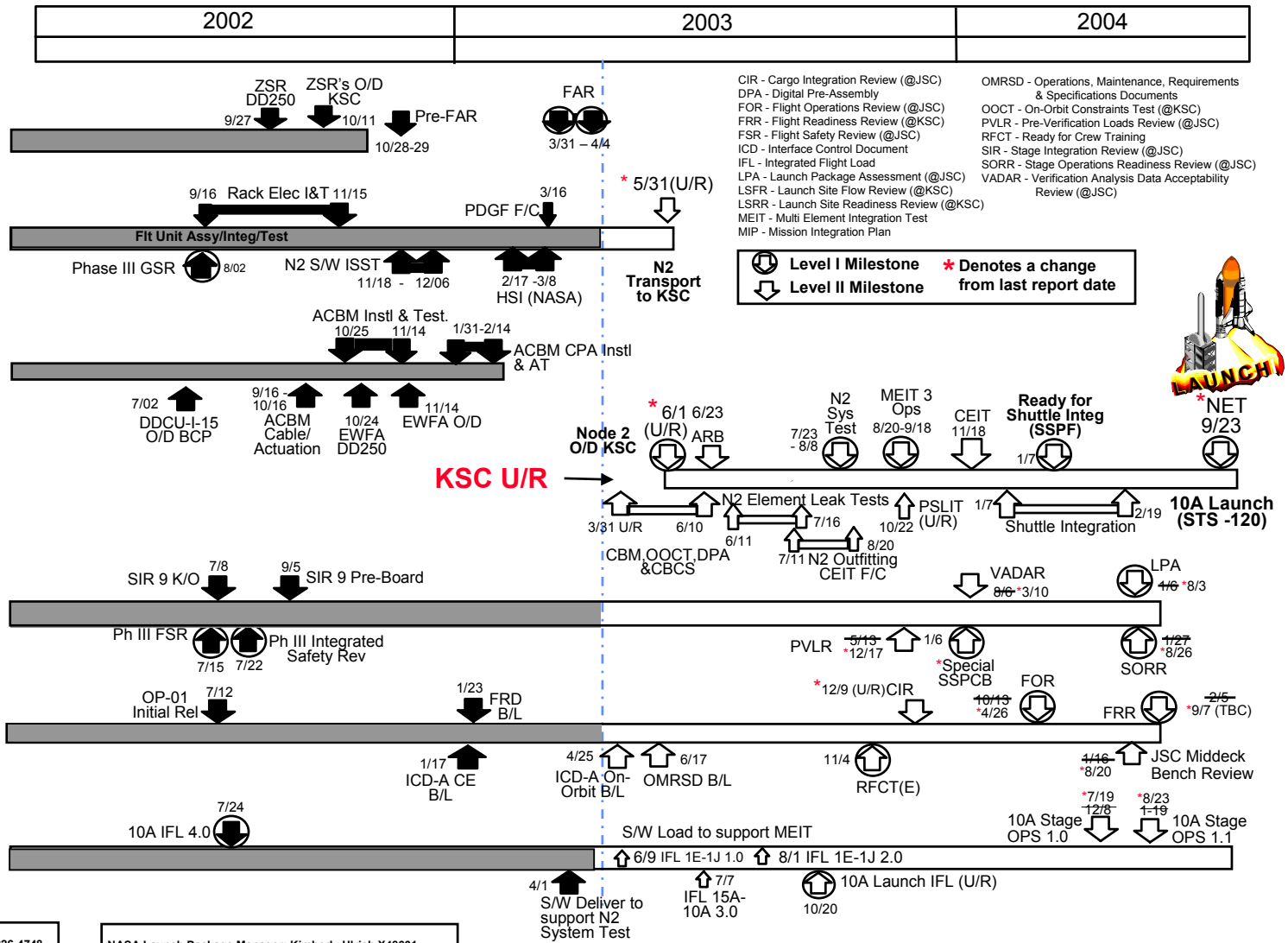
IMPR Page 127

International Space Station
Integrated Flight 10A Summary
(Node 2, DDCU Racks (4), ZSR's)

Status as of: 4/9/03

Flight Health Schedule Assessment: Y

BOEING



CIR - Cargo Integration Review (@JSC)
DPA - Digital Pre-Assembly
FOR - Flight Operations Review (@JSC)
FRR - Flight Readiness Review (@KSC)
FSR - Flight Safety Review (@JSC)
ICD - Interface Control Document
IFL - Integrated Flight Load
LPA - Launch Package Assessment (@JSC)
LSFR - Launch Site Flow Review (@KSC)
LSRR - Launch Site Readiness Review (@KSC)
MEIT - Multi Element Integration Test
MIP - Mission Integration Plan
OMRSD - Operations, Maintenance, Requirements & Specifications Documents
OOCT - On-Orbit Constraints Test (@KSC)
PVLR - Pre-Verification Loads Review (@JSC)
RFCT - Ready for Crew Training
SIR - Stage Integration Review (@JSC)
SORR - Stage Operations Readiness Review (@JSC)
VADAR - Verification Analysis Data Acceptability Review (@JSC)

Level I Milestone
Level II Milestone
* Denotes a change from last report date

Boeing 10A Flight Manager: Mike Nowak (281) 226-4748
Boeing 10A Flight Planner: Kelley Work (281) 244-8096

NASA Launch Package Manager: Kimberly Ulrich X48631
Blackhawk Launch Package Planner: Dana Tobeck X48600

2.2.3-4.5 International Space Station-Launch Package 10A

LPM: Kim Ulrich / OC X48069
LPIM: Steve Huning / OC X48043

Last Update: 4-9-03

Purpose: Provide status of the ISS Launch Package by tracking the completion of mission integration products and milestones. **Goal:** Track to plan.

Accomplishments:

- Initial MIP ICA Submittal Completed
- CR7672 to modify Node2 PDGF terminator connecters to obtain positive clearances with Orbiter approved at MIP
- Validated Node 2 CAD Model delivered on 3/28
- Node 2/3 NASA emblem CR (CR7722) submitted
- Node2 FAR complete

Issues/Concerns:

- Tight clearances between DCSU on ESP and SSRMS LEE during Node 2 berthing to Node 1. DX clearance analysis ECD: 5/23
- NH3 tray install issues – shunt jumper clearance, radiator deployment timelining, lack of cooling while loops shutdown. To JOP: 4/23
- Lab condensation. To VCB: 4/11
- Orbiter clearance analysis of Node2 debris shield lanyards. ECD: 5/26