

FROM: ALPHA

TO: MCC-H
MCC-M
HSG-M

SHIP'S LOG 11 MAR

Up at midnight. We're still trying to figure out what day it is. Docking yesterday went well, even with the station's configuration delays. Got some I MAX shots in during approach. Comm could have been better--we are still learning things about the system and how best to configure it based on what we are doing. A few of the areas we need work on are the setups for VHF comm. to Shuttle from the Lab, and the duration we can operate with the transmitters for lines 1 and 2 turned on in the SM.

Cargo transfer was going well yesterday, until we hit a snag finding EVA connectors to pass to the shuttle EVA'ers. We knew where all the bags we received from 5A were, but we couldn't identify how these connectors were "contained". The IMS data on these items did not give any detail except "crewlock bag". We asked the ground for help, and got enough information to start narrowing down which bag we were looking for. We finally located the special EVA bag (unmarked) with the connectors inside.

[REDACTED MATERIAL - 24 lines]

Shep starts the lab IMV valve installation, with Yuri and Sergei helping with IMS searches and chasing parts and tools. We look for, but can't find the IMV valves, which are not in the right bag. The label on the bag says "IMV valves" but they're not in there. (Besides the labeling problems, we are still receiving bags which are not properly id'd in the database--no bar code or bag description.)

Access to the port and starboard NPRV's is hampered by 2 large panels that won't come off. We remove pieces of seat track, and that helps somewhat, but the port panel (P1-01) is still mechanically hung up. In order to get more clearance, we query the ground and ask to detach the portside hatch track. We get the OK, and can't get the ground strap coupling to "uncouple". So we take out the TORK fastener which is holding the end of the strap to the hatch track frame. After freeing up the hatch track, we can see a bit behind the panel, and one of the Dzus fasteners is hung up in its sleeve. It is unhooked from its wire bail, but the small circular clip which keeps it captive is jamming in the panel hole. So we go for the hammer and drive it out. (not everybody gets to hammer on \$1.4B of hardware). This has happened now on 3 of the lab Dzus fittings, and a long term solution for this should definitely be pursued.

Sergei's got the I MAX ready for our last 30 seconds of exterior film. We're trying to get a handle on the best time to be ready for Jim and Susan's walk.

We finally make some headway with the IMV valves--but the ductwork does not agree with what is illustrated in the assembly ops book. More comm. with Houston about

part numbers. It seems we have a drawing out of config and the correct parts are onboard. The next task is to seat the IMV manual handles—but they are real tool challenges. Tightening the allen screws is physically “not possible” with the tools called out in the procedure, due to interference with the valve body. We snag a 5/16” ball-tip hex driver we got from Atlantis’s toolbag and that’s the only way the IMV valves went “in” today. We button up the surviving fasteners and clean up the forward lab endcone. Total time for the procedure—7 hours. Scheduled—2. (Thank you sir, may we please have another?)

Sergei gets an IMAX “shot of opportunity”, with Jim motoring past the lab window on the end of the arm. Should be an outstanding segment.

[REDACTED MATERIAL - 3 lines]

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP’S LOG 06 MAR

630 Up and trying to get ready for the docking test.

[REDACTED MATERIAL - 27 lines]

Sergei and Yuri are hooking up some telemetry, trying to verify that the instrumentation on the velo-ergometer is good. The IFM yesterday on the velo worked—it’s now back on line.

Sergei is also inputting new parameters for Plasma Crystal. The experiment is going great from our end. We are definitely seeing some unexpected results and the science team in Moscow is really excited. We are very happy that some serious science is going down to the ground. Sergei cranks up the experiment for about a 2 hour session in the morning.

Shep is in the lab putting up the ZSR’s. Now we have some time to read the directions, and of course, the 2 we put up right away when 5A was in town were not quite right. (Marsha was not around to supervise.) So we have to wrestle with all the loose gear in the P1 bay and fix the “shield” in P2 ZSR. Ground checks with the ZSR control officer and we’re not supposed to put up Overhead 3 in the lab—special request from Exp. 2. We’re wondering if they did manage to manifest the sauna.

Sergei gets some exercise on TVIS. The treadmill is still hanging in there. We do the weekly checks—no changes to the hardware except slight chafing on a few of the bungee sheaths rigged as stabilizers. Nothing serious. Electric box temp is 87.6 and motor temp is 89.5.

[REDACTED MATERIAL - 4 lines]

ÖÖĪ gives us the word that they're changing the form 24 for tomorrow. It seems the second airconditioning unit—ÑÊÂ 2 has shut itself down. Low oil pressure in the compressor. They want the power supply for No. 1 put in. We are asking Moscow lots of questions—like “where” the oil is going. Apparently ground telemetry indicated this was developing for a while. We ask why no words were ever mentioned in the 8 O'Clock reports on this. We had a lot of work and testing with the airconditioning units with 4A docked and it really torpedoed our timeline. We don't want to enter into more of this lightly. We ask what is moved off the timeline tomorrow to make room for the 4-5 hours of IFM work on the power supply—but we don't get a clear answer on that one.

We shoot one IMAX scene after dinner. We are probably going to finish 1 interior roll before 5A.1 arrival. We'll have to see how it holds up as far as fogging.

Data—TEPC call down. Format per Med Ops:

06 Mar/18:20:08/0.000/0.34/4170/1/301/302/.000/1.83/OE

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG 02 MAR

Up early. We were working late last night with the PCS configuration “patches”, and wrestling with the UNIX commands. Laptops were reloaded and left shut down while other files were uploaded to the MDM's. The word from Houston this a.m. is to wait another rev to connect the first laptop so that we're sure the changes to the C&C computers are complete.

Moscow says we can lay off the “Shumomer” ops for today. (3 hours scheduled). We are happy.

Yuri is missing 5 emails in his outlook “Send” folder. He drafted these up last night, and they were left in his Outbox. They should be showing in his “Send” folder, but they're not there, and Outbox is empty. We think an old mail (ost) file was uplinked and overwrote what Yuri did. We call Houston to see if the outgoing files can be recovered. Houston puts this in work.

Sergei and Yuri start the morning organizing the page changes for the Russian data file. This is scheduled for an hour, but takes closer to 3. The Russian books desperately need markings on their binders so you can tell which book is which when they are stacked up.

Sergei and Yuri are working "Plasma Crystal" in parallel all a.m. The telescience terminal is set up aft of the Central Post, stbd side. It is flat on the bulkhead, keyboard and screen facing forward. It's a big piece of equipment and it seems an awkward orientation, but it's a compromise. At least the PAO pictures will be interesting. Our ability to properly locate the computer and chassis has been severely restricted by the short power cord. We don't have any other choices here. Sergei and Yuri work a vacuum valve set-up problem for a while and finally get the internal chamber to go to complete vacuum. We get a few words in with some of the science team in Moscow. Data takes start tomorrow, and we should be sending some images down of what is going on.

Shep starts the day with a review of the 5A.1 mission plan. After a "go" from Houston, we finish the PCS display checkouts and load the new software on the 2nd PCS in the SM. Backup PCS machines 6023 and 6024 are also loaded with the 5A.060.P1 software. The keyboard work goes much more smoothly than last night, but we still think most of this work could be done with the File Manager application available on the Sun OS.

[REDACTED MATERIAL – 4 lines]

Everyone gets a workout in on the TVIS and the IRED. TVIS is continuing to operate normally. Cap screws on the front stabilizer boxes were tightened today as requested. Scraping on the fwd IRED canister is about the same—intermittent and at all load settings. We are thinking there is something inside the canister which is shifting around. The resistance for the can is somewhat decreased, especially in its lower ranges. The IRED is still functioning and we want to keep using it.

We do the private medical conferences (PMC's) on S-Band. The comm. is considerably better on our end than the OCA links we have had before. We recommend keeping this configuration. We should also test the OCA video/Sband voice just to see how this works.

We are continuing to unload the Progress at a steady pace. Keeping track of everything with the database is key, and we don't want to do this in a big hurry.

We finish the day with chow and "Hurricane". The DVD players are awesome. Thanks again, guys!

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
MCC-M

HSG-M

SHIP'S LOG 01 MAR

Unload Progress, Plasma Crystal, and work on PMA 3 day. Yuri and Sergei are configuring the experiment can in the 'I OI' with its vacuum and electrical connections. We finally locate it on the nadir hatch, and it's not completely clear of the passageway, but close.

[REDACTED MATERIAL – 22 lines]

Sergei and Yuri are doing the "plasma crystal" rigging and wiring off and on for the rest of the morning. We are to start the evacuation of the experiment can a bit later.

We are getting more work done in the lab in between other jobs. Most of it is final rigging for the computers and peripherals. The plans never adequately timeline this stuff, as you have to think for a while where gear needs to be and sometimes this is the most time-consuming part. We used the radio LAN for a while to carry the whole network but it is just too slow. It will not support adequate data transfers for IMS or other large files like picture downloads. So for right now, we have an ethernet line between the Node and Lab.

The RF access point (#1) is mounted in the aft hatchway of the lab. Square antenna is pointing in the nadir direction. We know this is not what ground wants, but the entire station is accessible on the RF net through this gateway. You can even be down in the Soyuz with your laptop and still stay on line. Putting this on the forward bulkhead as requested is just not suitable the way the lab is laid out right now.

We all get our exercise on the treadmill and in the "sport-zall". TVIS maintenance checks were performed 2 days ago. Results were OK—no new chafing or other damage. Box temp was 92.6 and electric motor temp was 90.32.

We eat some dinner and watch about 40 min of "Hurricane". Then everybody gets back to work. Sergei and Yuri are shooting a tape to be downlinked on the Russian "biosphere" experiment, and then unloading more Progress gear.

[REDACTED MATERIAL - 9 lines]

-----END OF LOG ENTRY -----

FROM: ALPHA

TO: MCC-H
 MCC-M

HSG-M

SHIP'S LOG 24-25 FEB (Late Entry)

24 FEB

0030 We are getting up and moving about after a short night. Yuri's bunked on the SM port bulkhead in the small diameter of the module. We have the hatch to the $\bar{\text{I}}\bar{\text{O}}\bar{\text{I}}$ closed so the living volume is the smallest we have had to put up with since we docked the Soyuz. We made a request to leave the $\bar{\text{I}}\bar{\text{O}}\bar{\text{I}}$ hatch open, as we had configured a number of things in there for "plasma crystal" which need to be changed back, but $\bar{\text{O}}\bar{\text{O}}\bar{\text{I}}$ turned us down. We moved the file server back into the FGB so we can get at messages, world map, etc. Mail has been cut off for a while as the OCA machine has been unhooked and put in the FGB. Anyway, going through the vehicle and closing all the hatches was a good exercise in how we might deal with a slow cabin leak situation, where we want to avoid damaging wire runs, etc. and we have an hour or so to close things up.

We start into the systems on SM, shutting everything off. This goes quickly, as Sergei and Yuri have done this lots before on Mir. We save $\bar{\text{A}}\bar{\text{N}}\bar{\text{O}}$ for last, and we'll probably turn that on first when we get back aboard. We set up the comm., although we are not completely certain that the configuration is going to perform based on the testing the last two days. We put some chow and the DVD player in the Soyuz and close the hatch about 0530.

It takes 2 orbits to get the first set of hooks off and the docking tunnel pressure checked. We get the "Austin Powers" sequel in while all this is taking place. (Maybe a Soyuz first here). We are down in the $\bar{\text{n}}\bar{\text{i}}\bar{\text{o}}\bar{\text{n}}\bar{\text{e}}\bar{\text{a}}\bar{\text{a}}\bar{\text{i}}\bar{\text{u}}\bar{\text{e}}\bar{\text{a}}\bar{\text{i}}\bar{\text{i}}\bar{\text{a}}\bar{\text{d}}\bar{\text{a}}\bar{\text{o}}$ and Shep has definitely forgotten how small the couches are. We finally are ready to do the second set of hooks and undock just after 1000. Comm is through Sband link now and we aren't getting voice up from Moscow. Yuri broadcasts in the blind anyway. We come off the docking adapter pretty briskly, and we are moving straight aft. It's kind of surprising how little rotation we have picked up in the separation. We drift out to 30 meters or so and Yuri starts flying manually. We have a timeline where $\bar{\text{O}}\bar{\text{O}}\bar{\text{I}}$ wants us to be based on comm. coverage and lighting, but we are not real happy that there seems to be no real loss of comm. plan once we are off. We had asked about this, but were told that we should just "sit tight" till we come back into radio contact. We pick up Moscow the radio. Yuri does his usual great job flying us around and we make a short trip up the underside of the station. Visibility, lighting, target contrast are all OK. Then we get to hang out for the final approach. Moscow gives the go, and we are moving in. About 3 meters out, we get a "wait" call as the TV picture on the ground is suddenly bad. Nobody's very happy about this—it's a bad place for a "wait—out". Fortunately, Moscow comes back quickly and gives us a go.

We make contact—it's a moderate bump with the docking mechanism. Then the docking program starts working to tighten everything up. Then a second set of hooks from FGB, and pressure checks. More DVD. We have a good seal, and we equalize the docking tunnel, and then to the station.

1320 We're opening up the FGB nadir hatch, and we start equalizing and opening the other hatches onboard. Sergei queries the ground about the FGB- Ĩ Ő Ĩ equalization valve, and we get the word that it's open. Sergei cracks the hatch and it pops off and cruises into the compartment pretty smartly. (it weighs maybe 60 kilos). Ears are popping and dust is flying. We guess we had a few extra mm. in the Soyuz. The lab software is not happy and we get Dp/Dt messages, along with some other warnings that appear unrelated.

We're back inside the station and it does seem good to get back "home". Everything is as we left it, and now we get to turn everything back on again, and re-rig all the hatches and cabling. The station air temperature has dropped maybe 5-8 degrees F, and is noticeably cool. We figure this is what happens when you turn all the electrical loads off. Powering everything back up takes the rest of the afternoon, and by early p.m., we are all ready to call it a day.

25 FEB

Sunday. Sergei and Yuri are getting ready for TORU refresher training. Shep is in the lab working on the rest of the SSC reconfiguration. We get the server moved back to the lab, and the RF access points set up and talking. Just as a test, we take a laptop into the SM and it is still staying on the radio network. It is talking to the access point in the Node through all the hatchways. Radio LAN speed is pretty slow, though. The mobile laptop is reading about 15K bits/sec, which is way under what we have on the Ethernet. Other SSC's on the net (fixed) are reading 30K over the radio LAN "bridge". We plan on making a comprehensive test of the network speed soon.

We have the afternoon set aside for TVI S repair. We had tried to change out 2 broken slats last week, but we were not happy with the belt configuration and how it ran. Ground uplinked an additional procedure which requires pulling the TVI S out of its pit and freeing up the belt to work on its underside. We start into this and the work goes fairly smoothly. We pull the treadmill out and loosen the belt tensioners. After moving the belt around a bit, we recover the one lost rivnut. It is "swaged" on the top, with part of the screw broken off inside of it. At first, we don't understand why this happened, but this becomes clear after we notice that the washers on the treadmill slats have interior holes with 2 slightly different sizes. We did not have any heads up on this. The small washers definitely hang up on the shaft of the rivnut. (picture of this sent down in the Checs folder Mon. night).

We straighten out the other bent rivnuts and assemble everything per procedure. We have some clean up steps to perform but we decide these can wait till Monday. We knock off at about 1900 to eat and enjoy the rest of the weekend, although the planners have promised us a light Monday and Tues. (We'll see).

FROM: ALPHA

TO: MCC-H
MCC-M
HSG-M

SHIP'S LOG 22 FEB

The day really gets off to a bad start. The server connection to the net is down hard. We worked on it last night until 0100 and could not bring it up. We were doing the file server part of network reconfiguration yesterday. This moved the FS to the lab—we also extended the Ethernet lan from the Node into the lab (not part of the procedure). This allowed the server to rejoin the network without delay, rather than waiting much later when the RF access points are set up. The plan was working well, and the server was online from mid afternoon. At about 2200, we were reconfiguring some mail files which, with a lot of help from Windows NT, got put in the wrong place during the backup procedure. When we finished restoring the files, the network was down and would not come back up. We worked this for several hours. Finally, jiggling some cables brings just a part of the net back. (that really instills confidence in the stability of your network).

So as of 0700, we have to use the OCA machine for daily planning. Fortunately, ground has uplinked everything to the OCA's directories, so at least we have what we need onboard. But when we try and print, the printer locks up. It is not happy with the net now either. So Shep and Sergei start trying to figure out what is going on. After trying lots of other computer tricks that don't work, we put another network card in the server and that seems to fix the server problem. We power cycle the printer and that comes back. We are having a hard time understanding the how and why, but everything is working.

Yuri and Sergei are configuring for the Soyuz comm. checks, with Sband patched in. We have minimally readable comm., with some echo. We are getting good reception with Sband patched into the Russian intercom system, but apparently Houston is still reading us with lots of echo. We have occasionally had other loops up which might be producing this problem, but there are other instances where our comm. config has been completely by the book and we still have problems. (hey—we are writing the book!)

Shep does the checks in the lab for NH3 in the fluid loops. Readings are essentially unchanged from a week ago--nominal. The ammonia sample bag is still a mess to deal with—there is just no way to do this without loose fluid drops.

Shep gets on the TVIS to see how bad the loose slat is that Sergei noticed last night. We had put in 2 new slats and torqued them down hard. One of the screws from the replacement slat is gone, and Shep puts a new screw in the hole

and it just turns. Looking more closely, the rivnut which catches the screw is completely out of the belt. We take off the back cover for the TVIS and turn the belt by hand. Everything seems useable. Shep turns the treadmill on, and walks unpowered. Belt is still OK. With moderate speed, the belt is still happy, but we have a clicking noise on the forward belt cover. On closer inspection, we have another tread which is bowed up and is hitting the cover as it passes under. We think this tread may be cracked on the underside, and is flexing more than anticipated. We talk to Houston about taking off the front cover as well.

Right after lunch, we tag up with Exp-2 on the OCA. Comm is minimally adequate—we can get the main points across if everyone speaks slowly. We try and warn out the next crew that we think the docked period will be very busy, based on our 4A and 5A experiences.

Yuri and Sergei are going over the undocking details. ÖÖÏ sends up a really nice set of computer graphics to help Yuri get oriented as to the station views he will see.

We get a session in on the IRED before the end of the workday. We do the cable and gear inspection, and all looks normal. The forward canister is still scraping its cable thimble. It sounds like light mechanical contact. We have taken this apart 5 times now to reset it, most recently Monday, and it is still unhappy. We are going to let the pieces fight it out.

Shep has a good Ham Radio school contact with Merivale School, in Ottawa. We get about 15 excellent questions--this is a very worthwhile activity for station crews.

At the end of the day we talk with TVIS engineers about the problems so far. We are no go for treadmill ops for a while. We have shot several digital pictures of the broken belt slats and the other ones that look suspect and they are in the OCA down\DCS folder tonight. We are not looking forward to field-stripping the TVIS, but we have a feeling that one is coming. Just not tomorrow, please.

Last thing today is the FPP hookup, which is still having trouble connecting with the NCU. We restart this several times with no joy. The SSC is talking to the NCU, but the data downloads won't start coming in.

We could really use some more power sockets in the Node. Especially for 5A.1 ops, where we will have an SSC, access point, CBCS, IMAX, FPP, and maybe bar code reader (if we ever get that working) all looking for electricity. Getting our hands on another UOP will be most welcome.

Tonight's movie—"The Green Mile".

TEPC DATA (format per Med Ops C/L p. 458):

22 Feb/13:13:45/0.008/21.65/1629/1/211/212/.014/76.43/0E

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG 21 FEB

0700 We are getting up—Shep heads right for the coffee locker, but Yuri and Sergei have a small blood draw first thing after wakeup. After that, it is a set up for “Ñiðóó” which is Russian for octopus, because that’s what you look like with electrodes all over your body. We get words from Houston that we are to stand down on the TVI S for the day—our exercise periods have turned into an IFM to change out 2 broken slats on the treadmill.

[REDACTED MATERIAL - 5 lines]

Shep starts on the TVI S IFM, as the procedure looks easy and we only have to take off 6 screws. Plus we want to get our exercise in. Pulling up the cover is not all that straightforward. The instructions omit any mention of 2 screws which tie in to the back of the cover through a blind “sleeve”. These have to come off so the cover can be pulled up. The slats come off readily, and both are cracked completely through. 2 washers are missing from the underside of the slats. Putting on the new slats is not simple. The nuts backing the screws are “rivnuts” and most of these are spinning freely in their holes on the treadmill belt. So getting them to thread up is very difficult. Shep and Sergei finally manage to put on both slats and get them torqued down. Lots of little hardware problems. The new screws with the thread lock won't work, as they have too much friction with the rivnut and we can't keep the rivnut from turning with the screw. So we use the old ones. Now we test the belt, and the new slats are sticking up maybe .010” from the rest of the belt surface. And the rubbing with the back cover is unacceptable. So we pry up the cover to provide more clearance between it and the belt. We get on the TVI S and do a run and everything looks OK.

Shep and Sergei joke about “Bayes’ Theorem”, which roughly states that knowing that 2 slats out of maybe 150 have failed in 115 days, one should be able to calculate the probability that another will fail in the next 3 weeks—what are the odds?

We get a late start on the network reconfiguration. We did manage some get ahead tasks yesterday, so we are hoping that everything will level out by mid afternoon. The PCS and SSC are already set up in the Lab, and the file server has an Ethernet leg and power ready to go. We put the server in the Lab and power it up, and it is running fine—it is still logically

on the same network as before when it lived in FGB. Then we start the real guts of the reconfiguration—setting up the expansion chassis and backing up the server. The work goes slow—we are still seeing very inconsistent performance from the “Ghost” software for imaging disks. We spend almost all afternoon on this and we work it until early p.m. We finally get the server reconfigured with its new load, but we do not get to the RF Lan set up steps. We leave the server on the Ethernet hardline for the time being.

Yuri gets more “shumomer” acoustic readings. This is way past our next most fun thing to do now.

Mid afternoon, we do an OCA media event and a spot for the Houston Rodeo. The OCA is reverting to its previous mischief, where we are simplex comm. Everytime we want to hear or speak, we have to toggle a button on the keyboard to switch this. We think this has got to be a software problem. Sergei comes up with a temporary fix where we swap the headset and speaker jacks, which gets us through the session today. Unfortunately, comm. on the uplink from the media rep was intermittently unreadable.

Sergei gets on the treadmill and quickly answers our earlier question about Bayes. Probability 100%--as we have another slat with a crack in it. We think the best thing to do here is just keep running on TVI S and see what happens.

We finish up the LAN work and call it a day. Movie tonight is the last ½ of “Frequency”—sort of a chick-flick, but it does get better at the end.

----- END OF LOG ENTRY -----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG 20 FEB

We are back to the usual 0630 get up. The monthly med-ops leg-check and mass-measurement “pogo-ops”. After breakfast, Sergei and Yuri start configuring the “Plasma-Crystal”, a science experiment that will live in there for a while. Shep does the periodic maintenance on the CSA-CP combustion products analyzer—prime and backup unit all nominal.

TVI S is still hanging in there. We all run on it today and we do the periodic maintenance checks. The good news-- bungees are doing well—TVI S is more stable at all speeds than before we put them on. We have noted a “clacking” noise for several days, and we finally pin it down to 2 cracked treads in the belt. They are right together, about 5 inches in from the right edge of the belt. The crack goes across each tread, leaving 2 individual pieces. The break is allowing the pieces to ride up a bit, and the occasional “clack” is the piece

rubbing the rear enclosure of the treadmill. TVI S temperatures are normal—electric box—88.5, motor temp 90.7. The check of the SLD cables shows that the plastic sheathing on the “left” cable has a minor split in it. The metal cable is intact. See below for more data on TVI S wires requested earlier.

We all review the emergency “red books” for part of the morning and the afternoon. This is a good exercise—but we do need a cleaner transition as to when we should put down the “old” red books and pick up the new ones.

We take most of the FGB interior stowage pictures as requested. However, we need to reshoot several of these, as we have too much slave flash in what we thought was going to be dark enclosures.

Finished the day with some more exercise. Shep took the forward IRED canister apart one more time to reset the cord and reduce the internal scraping. We notice some improvement, but it is still making noise.

We have some dinner and watch part of “Frequency” (strange movie, although not as strange as “Usual Suspects” which we saw last night).

2230—Secured the SSC in the lab and set up FPP in the Node. Looking forward to tomorrow when we don’t have to move SSC machines anymore to do this.

DATA

TVI S Table (OCA 1495)

X indicates broken. Blank indicates no damage to cable

	FWD		AFT	
	R	L	R	L
1A	X	X	X	X
1B	X	X	X	X
2A				
2B				
3A	X	X	X	X
3B	X	X	X	X
4A				
4B				

-----END OF LOG ENTRY -----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG 19 FEB

President's Day. We need it. Thinking a lot about how to organize the lab. We are waiting on the "big picture" logistics plan for 5A.1 so we can put stuff away now and not have to move it again. We are also interested in whether the MPLM is going to be "combat loaded" so that gear can move right into stowage locations without a lot of sorting onboard.

We keep initiating radio contacts with Moscow using callsign "Alpha" but we only get " Ì ÊÑ" back as a response. Wondering if there is a message here.

We are exploring the comm loop set ups. Any time panel 2 or 3 are "active" in SM, and RSA 2 or 1 are in a public call with GND 3 or 4, then voice from SM is going out S Band (and maybe VHF as well). We are apparently "hot mike" if the ICOM (Æ Ĩ Ó) is pushed. We're not sure what is happening when button "1" is pushed—whether we are powering a transmitter or not. We would like to have a way to listen for Sband calls in SM and respond PTT. A simple diagram would sure go a long way here.

We notice today that the deck and overhead racks in the Node are oriented 180 degrees out from how they are arranged in the lab. We saw this a long time ago on a training drawing and thought this was a drafting error. Our apologies to DT for the comments on this—drawings were correct. We can't figure out if this should be an SPN or a "Crew Squawk"? Maybe those Shuttle guys just hooked up the lab backwards.

We have been receiving CD ROM's from the ground via Shuttle which have been difficult to read. We've had problems with both operational software and entertainment discs. These occasionally have some foreign material on the surface which gets in the way of the disk reader hardware. The new Russian laptop software image was the most significant example. We think there is some glue residue left on the disks from sticky notes or labels.

We are most certainly enjoying the DVD players—they are great! We are ready for movie night with the ground! A big "Alpha" thanks to all the folks who worked this—Hiep/Maury/Judy/Carol/Sue/Keith/Steve/Gabrielle + Karl King and Scott Stubbs.

Sergei cranks up two excellent software apps that came up on 5A. The first is a very detailed "World Map" which runs on Russian laptop 3. Detail on the map is down to the "Webster TX" level. The second app is outstanding even by Russian standards—a combined bird's eye view, world map, and star field which runs on the Russian PCS. It also reads state vector and attitude quaternion updates directly on the bus. Very slick. (Now if we could get

a couple of large format LCD screens to hang in the front of the Central Post, we could give "Enterprise" a run).

Early evening, we fly right on top of X68 as Atlantis is waving off. We can see straight down on both pads and the SLF—looks inviting. We are looking forward to seeing that close up.

-----END OF LOG ENTRY -----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG 13 FEB

We are up and getting recalibrated as to what we are doing for the day. We see the server hung up, and reboot. The OSTPV does not seem to have a file for today. We talk to Houston and the correct file was thought to be onboard, but ground suspects the KFX file transfer had problems. Houston resends.

We give ground the bad news on the PMA 3 CPA panel. We noted sometime during the last part of gear transfer that one of the electrical connector stubs (on CPA 3 we think) is snapped off at the base. The connector is loose, and the metal sleeves for the individual wiring are visible inside the break.

More bad news—we have also noticed that the wires which ride up and down between the isolator "bars" and the TVI S platform are breaking. All the top sets of wires are broken-on all 4 corners. Other sets on the bars are damaged or broken as well. Each bar presently has 2 functional pairs of wire attachments. We are sending digital pictures down tonight.

We do more of the Lab setups today-condensate "T" installation and the Node filter replacement. We spend the rest of the day cleaning up the wiring and rigging in the Lab. Wire trays are going to prove very handy. We have put down 3 sections so far. We have the PCS and SSC 3 now located on rack panel S6—they are handy to the ATU, and the rack surfaces are easier to work around. We could do a bit better location job if we had some more run on the 1553 data line for the PCS.

We finish the day with I MAX cleaning and we get 2 shots in the lab done. Both are gear transfer scenes with the "Orlan" and some camera moves. (F 5.6, 40mm lens—we promise we will use the other ones).

A big thanks from us to the ECLSS team for the help in the lab—particularly on the AR rack. Keeping the info coming as fast as we asked for it was very motivating. Ready to do it again.

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
MCC-M
HSG-M

SHIP'S LOG 12 FEB

Monday started out a normal day. Yuri and Shep take out the capture latches from the Node vestibule and tie off all the electrical connectors. We install the closeout cover around the sides of the vestibule. We are waiting to close out the overhead, as we still have the Sband jumper interference problem. We note the closeout cover is hemmed backwards.

Sergei is working for most of the day with the Russian laptop software reloads and checks of central post computer 1.

We continue the lab setup from Sunday. The main task is to activate the AR rack, with all the CO2 and contaminant removal equipment. We spend some time hunting for the “condensate T” which we finally find at the bottom of a CTB. Rigging the umbilicals to the AR rack proves far from easy.

In the middle of the 2nd EVA, we catch Beemer and Tom outside the lab window. Sergei does his usual IMAX magic and we think we have the shot in the can. Lab window, EVA crew, sunrise—it doesn't get much better.

We have to slice the foam off of the LTL “T” sample valve just to get enough clearance to put it on. Even so, it has a very tight fit with part of the rack structure, and will go on only one way. None of the larger lines are “fairlead”—which is to say free of sharp bends or interference with other connections. We float the AR rack “up” out of its fittings, and take off all the umbilical support structure. This frees all the lines up considerably. (all not part of the procedure).

[REDACTED MATERIAL – 4 lines]

We take a break about midnight for some chow. Houston calls --the Sband IFM message is onboard, and MPEG movies for the procedure will come up overnight. We peruse the message over some chicken fajitas and decide we can do it now. (We are very ready for some better comm.) We clear the decks,

break out the large vise-grips, and about 15 minutes later, the connector is clocked correctly and installed. We parley with Houston for some email, which we haven't seen for a day and a half.

Back to the AR rack in the Lab--we are supposed to insulate the LTL "T" connector, but all the insulation got used the day before on the IMV valve job. We "milk" the rubber insulation sleeve down enough and tape it down. It'll have to do. Putting on the thermal mitten on the water lines is a significant battle. Shep and Sergei work this one item for 1 ½ hours, moving things and trying to get it over the connectors without destroying something. We finally put it up and get it latched. We are still not real happy with the fit, but it is on. Houston brings up the comm. in the lab, and we are very glad that the IFM is OK, and the ATU's really work.

We wrestle the MCA vacuum jumper in place, which is a 25' armored line about 3" in diameter. It takes a "come along" line to get the hose up to the couplings, as the jumper is so rigid. We finally get this mated around 0230 and the next job is to open a vacuum valve to the MCA. The procedure has a callout for the "utility door". Of course, there's no marking on the ARS rack which says this. We even have a cue card on the rack face (these are great, by the way), and this does not indicate which door we need to open either. We start taking the launch bolts off all the doors to hunt around. In the process, one of the washers floats down inside the rack—we can't retrieve it because our hands are full of the other 40 non-captive fasteners we just took off.

0300—We talk to Houston and tell them we have a lost washer in the rack. Houston is discussing unhooking everything we just made up, as nobody's sure the washer won't get into something critical. We are determined not to lose the day's work, and we are hunting the entire lab for the washer. No joy. We pop the rack out of its fittings and shake it to bring the washer up. This also does not work. We finally inventory every loose launch fastener in the lab, and we are still short one washer. We finally get the word around 0430 that ground has decided the filtration screens in the rack systems will block the washer, and we call it a night.

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG

1100. Lab ingress. We have been waiting a long time for this day. Moscow's on the VHF with some comments about the central post computer work and software reloads. Russian

laptop is still “offline” with no data. The US PCS won't come up and talk to the C&C MDM either. We switch over to Houston and get more words and updates on the day's plan. OCA has been reconnected to the early comm. system so we have the messages and mail onboard we have missed for the last day or so. We value email to the ground highly—even a day of not having it is disagreeable.

We try the few other computer tricks we know and the PCS won't come on line. The shuttle PCS is not up either. We are OK without computer comm for a while today, but doing the outfitting will certainly be less efficient without a handy computer.

We have spent a lot of time organizing books, tools, cables, ODF, computers, cameras, etc. in the Node. The module is a forest of wiring, bags, and gear. It's time equalize pressure in the vestibule and open the Node hatch to get ready for ingress. We visit with several Atlantis crew and coordinate a “go” time. We want to send TV down and we are also getting ready to shoot the first IMAX scene “as it happens”. Don't know that we can get this “in” with all the things that are converging, but we are trying. With both UOP's offline in the Node, we are having to get real inventive to put power to the IMAX lights. We get late word to clean the camera—we don't have time to do it per procedure so we just hook up the vacuum cleaner and give the mechanism a shot.

It's go time for the hatch opening. Taco hands Shep the DD 250 for the “end user”. We are honored to sign--just hope the bill does not come with it. Sergei's cranking the IMAX, goggles down, and we're all going in. The lab is well lit, very spacious, and clean. (probably the last time we'll be able to say that). We spend several minutes just looking around our new home. Even with many racks yet to be plugged in, the lab is a very impressive piece of hardware.

Marsha and Taco start orchestrating all the outfitting tasks. We are all feeling very pressed for time, particularly with the computer problems. Exp-1 was trained on some of the activities months ago, but having the Shuttle crew right on top of how to do everything is a big help.

[REDACTED MATERIAL - 3 lines]

We still can't get a PCS connection in the SM, so we consider if a laptop can talk to the MDM's from the lab. This is not scheduled for today, but we put all the hardware pieces together, with some IMS help from the ground, and plug a laptop in the lab. We don't have time to dig for a procedure, and once again, we use the training drawings to figure out which UOP and bus to be on. We start the laptop—we are in. We also have SSC 3 dragged in from the Node to provide OSTP and MPV support. The lab's mini-“central post” is operational. The desktops, bogen brackets, and ethernet goodies that Atlantis brought prove to be essential items.

Everyone is climbing over racks and closeouts. Marsha is keeping all the action pointed in the right direction—Shep and Yuri chasing tools and parts and passing bags, Taco pulling out plumbing, Sergei, Beamer, and Roman working in the endcone on ducts and valves. Tom on

the videocam. All is very much like the SEAL saying-- "two shooting, two looting, and one taking pictures."

Yuri does an exceptional job finishing off the IMV valve installation and insulation job. We think he's ready for his air-conditioning license. Of course, he had a lot of practice with NEA-2 and the thermal cover.

We are working through the day on hardcopy data file, which is the way to go for this type of work, but with so many hands, we don't have enough copies to keep up. Shep can't find some of the procedures in MPV, and we learn later that we need to reload a new MPV set for the new material. Somehow we missed this word. The numbering system on the procedures is a big help in identifying exactly which procedure is of interest, but we wish the numbers were somehow unique—we have procedures in different systems groups with the identical numerical "coordinates".

We note today there are several disconnects between Form 24 and OSTPV. Mid day chow times for all of us do not agree. Actually, we think the Russian plan is a little more realistic—the OSTPV has us "turning to" for a good 7 hours before we get a break for lunch. We do not get the exercise periods in for the day—we can not do the lab work and take time for it. Everyone missed a period yesterday—for the same reason.

Impact driver gets a workout today. Unbolting, rotating and installing the ARS rack reveals some significant hardware problems. Mounting the K-bars, one of the holes and threaded inserts in the boss on top of the rack looks to be misdrilled. (We put calipers on this). Again, having drawings in hand on the rack fittings is invaluable. There were some other fittings and launch closeouts that we wrestled with. Sergei put the wrenches to one in particular that was preventing the ARS rack from laying down. We are getting good at figuring out alternate ways to do things, again, having had lots of practice on the SM and FGB.

At the end of the day, we have a large chunk of the lab setup complete.

We get a roll of IMAX shot in the midst of the day's work. 2 scenes on the hatch open, and 2 with the rack relocation. We are happy with the lighting and all the camera details. All exposures are f 5.6 or ½ stop higher.

We can't say enough about the good work of the Atlantis crew--They came, they saw, they installed. All in all, it was a landmark day for the station. We now have what looks to be at least 40 meters of open hatchway from the SM wardroom to the front of the lab.

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H

MCC-M
HSG-M

SHIP'S LOG 08 FEB

We get to sleep in as part of our shifting for the 5A mission. Everyone's up around 0930, with our first call to Moscow an hour later. Some last minute preparations for the undocking, arranging cameras, opening up the large deck window. We are pitched down what looks to be about 40-45 degrees. We have a great view aft with the horizon across the viewfield. Yuri is setting up the docking TV.

1130 Progress undock. The cargo ship moves away below us—it's quick compared to a Shuttle departure. We can see the outline of the spacecraft--the spotlight is pretty bright. Even though it is a night pass over Russia, the snow and cloud cover make the Earth background very visible. It looks a lot like twilight although we are well past the terminator. The engine pulse on Progress is also very visible and vehicle starts a slow rotation as well. We're observing thru the large deck window. We try to get some video images on the camcorder but the light level is very low. The Progress moves below and a little bit forward on us. It is just a black speck now against the cloud cover. The only way we can pick it up is that it does not appear to move with the cloud cover. Sergei is using the laser rangefinder to get some trajectory data on the departure.

Houston gives us a heads-up on a Caution and Warning tone on PCS that we did not clear.

[REDACTED MATERIAL - 2 lines]

We get an early start on unloading PMA 3. We do this methodically, with everything moved in the database as well. If we broke down the time we spent on this today, it would be about 30 minutes moving and securing all the items, and about 2 1/2 hours working with the IMS database to make sure everything was "fixed".

Yuri and Sergei do some more troubleshooting on the -Y Kurs radar set. The medical locker is swung out of the way. The scopemeter shows an open circuit on one of the test connections. This could be the problem experienced Monday.

We ask Houston for more of the big picture for FPP ops during the 5A docked period. With only 1 UOP and lots of power users, we need to have a lot of flexibility as to what gets plugged in. IMAX takes a lot of connections for shoots in the Node (4 lights and an audio battery charger). We discuss turning FPP off during the day, and just running it at night. This is a very workable solution for us.

We spend the rest of the day cleaning up the Node and the rest of Alpha. The IMAX gear is all out, batteries OK, camera tests OK. Waiting on some film.

[REDACTED MATERIAL - 13 lines]

We finish the day with some exercise, chow, and the last of the movies we have not seen yet. Tonight's selection-- "History of Navy SEALs". We think this is very appropriate, as we will probably soon have a use for the quote: "the only easy day was yesterday."

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG 07 FEB

100th Day. We have been talking with the Capcoms about making this a station tradition—observance of an expedition's 100th day in orbit. Of course, a lab module surrounded by a shuttle all going Mach 25 would be a good start.

[REDACTED MATERIAL - 11 lines]

The Wiener comes "up" this a.m. with a blank screen, although it is still processing and "routing". Sergei reboots it and it runs normally.

We spend the day packing up the last of the gear and putting it into Progress. The last bag of clothes, the last AAA and EOL's are put inside. All the foam packing left over that we can find is in as well. (Cutting up some of the large blocks of foam was interesting). We manage to put all the non-collapsible food containers in as well. We can see the entire FGB deck now. (Haven't had this cleared off for months.)

A lot of additional time today is spent just squaring things away, putting stuff in the right stowage location, and getting ready for docked ops. The Node is looking clean as well, although this won't last long when we start rigging IMAX equipment and destowing PMA 3.

We secure the FGB hatch and start the pressure integrity checks on Progress. It looks to be tight. Moscow goes over the undocking details for tomorrow.

ÖÃ and ÖÃ "lane" changes commanded by the ground are transparent to us—no alarms received onboard. We talk to Glavni about the predocking plan to reconfigure computers for redundancy.

All hands get a workout in on the TVIS and the IRED. Both are functioning normally.

We get some chow and rig for movies. We watch "Full Metal Jacket". This has some of the finest "drill sergeant" scenes in moviedom. Good orientation for the next OCA pass with Houston. We observe "100th Night" with the flight control team, an ancient tradition at all

the service academies. On the 100th night before graduation, the seniors and "plebes" (or "swabs", etc.) swap their "roles" for a short period. This is intended as a practical exercise in how leaders and those being led "see" each other. We talk with the team in Houston and exchange some words on the humorous and maybe less than memorable things we have done up here. We hope this will be a new addition to the growing list of station traditions. (We are also hearing rumors of patches). Thanks again to Flight and Capcom for fitting this in today.

We stay up for late news on the Atlantis launch. We have a good OCA tie in about 5 minutes after MECO. All hands are really glad we have the crew and the shuttle on the way to us. Great job by the launch and control teams.

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
 MCC-M
 HSG-M

SHIP'S LOG 06 FEB

0340 "This is your wake-up call." Same signature at the central post as last evening; a "Dp/Dt alarm". The manovacometer is stable, so we are pretty sure it's the same problem. We check some of the systems again, and things look OK. Shep and Sergei have their SSC's plugged into "UPS" sockets now, and the Weiner is still running, so we look at mail until the central computer restarts everything. We take a quick look at Elektron and it is running ok. The other systems are happy, and we decide to wait till the first a.m. call with Moscow to restart the CKB airconditioning unit.

First work for Sergei this a.m is more adventure with the "shumomer". Moscow is discussing taking noise data with SM panels open and then closed. We talk about how to fix the noise onboard and we would go after some of the bigger noisemakers first and worry about panel insulation later.

Shep is in the Node doing the last part of some wire run cleanups for the IWIS. We want them well out of the way so they can remain that way for a while. We're also putting together the shopping cart at the "tools-R-us" depot in the Node. The NiMH batteries are at full charge and power tools are in standby mode.

We are still having file transfer problems with OCA. The system looks fine on our end, and we have had good performance as recently as 2 days ago. We are reluctant to change out hardware. Houston tries several times to send up files without success. We finally

receive today's Ops Summary through the Russian packet comm. system. (Major style points to the ground team for throwing the book out and going with what works.)

We are studying all the 5A material. Shep finally locates the CDH drawing with the Node MDM/bus reconfiguration details. He feels much better. A big thanks to the planners for making a slot in the timeline to do this.

Yuri and Sergei work on the Orlan comm. configuration from the Ĩ Ő Ĥ during several VHF passes today. We still don't have it working the way it should be—too much background noise.

Sergei and Yuri also get some work in on the Kurs connectors for the aft docking port. We are still testing this.

We change out the OCA chassis late afternoon and that seems to work some magic. OCA is back on line. We do have some kind of speaker-microphone configuration problem, but that may be a default we have to go reset.

Shep, Sergei and Yuri all work the RAMV measurements for about 25 minutes—it's one of the first times we have used the intercom system to pass word from the Node to the central post. We will probably be doing this a lot more with the lab attached. Data listed below.

We ate some dinner and watched the last part of "City of Angels". Shep did his best to explain to Yuri and Sergei what the phrase "chick flick" means.

DATA

(cw. Rotation. read down
in 3 columns then up)

Knob	valve	rheost.	valve	rheost.
1	81.6	308.39	81.5	308.39
2	81.6	308.39	81.5	308.39
3	81.6	298.95	81.5	297.32
4	67.3	272.61	66.7	269.55
5	62.3	243.03	61.3	242.79
6	56.4	215.48	53.7	212.06
7	46.8	164.20	43.9	165.79
8	30.5	145.32	24.8	150.55
9	22.1	99.23		18.6 102.22
10	15.7	80.30		18.6 87.27
11	15.7	70.33		8.1 73.32
12	5.7	55.38		5.7 60.26
13	5.7	43.42		5.7 45.41

14 5.7 37.44 5.7 37.44
15 5.7 37.44 start ccw (read up 2 columns)

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
MCC-M
HSG-M

SHIP'S LOG 05 FEB

0712 First comm. with Moscow. Apparently Houston's been having some trouble with the OCA file transfer. We already saw that mail and some of the execute package did not make it up. We already have the OCA reboot started when Houston asks. We are missing some operational messages, and we don't seem to have the .htm file which points to each day's execute package. We ask Houston about this too, and finally get it squared away a few hours later.

[REDACTED MATERIAL - 18 lines]

We remove old OSTPV files as requested by Houston, and do a time sync and back up on the SSC file server.

FPP is checked several times and seems to be running fine all day. We have stayed off IMS in the Node just to keep the FPP happy today. But we have a feeling IMS " . . . will be back."

TEPC data is recorded and put in the data section below. TEPC sensing unit is now relocated to inboard side of SM panel 438, just inside Sergei's cayuta.

Shep and Sergei work the CMG jumper removal and the TCS Quick Disconnect procedure. We are moving all the foam stowed on top of NOD D1 anyway, so it seems like a good time to do several things together. We call up OCA 1005, but there is nothing in the file there for CMG jumper removal. (File size is 0 K). We take off the Node panel and remove the jumpers. Bus connectors are mated and everything looks correct. We shoot some closeout photos and put the panel back up. Squaring away the IMS details for the CMG gear would have added another 15-20 minutes to this task today, but we decided to wait until FPP ops are over.

Yuri is organizing the gear transfer and having some issues with OCA 918—which shows some revisions done this a.m. The new message should be marked 918A, or "B", etc. to show us it has been changed—but isn't. And it still says 20 non-collapsible food containers are to

go down on shuttle We are going to put these in Progress based on last words from Capcom.

Working the TCS QD's; none of the fittings have the thermal mittens on them as shown in the pictures. Everything disconnected, bagged and taped according to the new procedure. The annotations are good and very clear. Our thanks to the folks who jumped on this. The Node panels are still very difficult to reinstall and fit up right—even with a couple of fasteners threaded up, many of the remaining ones fail to “find” their captive nuts. We noted that on the P1 panel, there is a lengthy 3 page fit up procedure “decal” which explains how to put the panel back on. Unfortunately, it’s on the back side of the panel.

After lunch, we have a very good OCA contact with the JASON expedition. We get interactive contact with students in Hawaii, the US, and the UK during the 15 minute pass. We have been waiting a long time for this kind of educational broadcast from station—and now we are doing it.

TVIS checks performed. SLD's look fine, electric box temp is 92.0 and motor temp is 92.4. Yuri is very happy he has to do the TVIS fitness eval again, because the ground didn't get their telemetry Friday. (Thank you sir, may I please have another)

TEPC relocated. Forgot to do this earlier but it was moved about 1812. TEPC put just inside of aft edge of SM 437. Electronic unit is now on SM 448. TEPC power cycled to give a mark on the move time.

We have a warning light -failed smoke sensor(SM #6). We check the electrical communication of the sensor circuit a bit later, and that is working.

1944. Right during evening chow, we get the 2 red lights, tones, and all the fans shutting down—“Dp/Dt”. This is our second set of red lights in the last hour. All hands to the central post to see what is up.

[REDACTED MATERIAL - 12 lines]

We have a last comm. pass with Houston, and it is “reboot the OCA” again. We have been having great audio and video performance with OCA, but apparently the KFX file transfer is not happy. More work on this tomorrow.

DATA

TEPC call down data per Med Ops checklist:

09:50:17/.001/8.89/1001/1/77/78/.004/37.72/0E

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
MCC-M
HSG-M

SHIP'S LOG 02 FEB

0700 We are up and getting ready for Friday. We are also ready for the weekend. This may be the last relatively free one we have for a while.

First work today is to check out why ÑÓ is showing bad "konservant" quality. Sergei and Shep look at the hardware, the mal procedure, and the drawings. After a few test cycles, the indication clears. We had run out of flush water last night, but this was refilled prior to this. Maybe some kind of transient flow problem. The indication has not reappeared. Gotta love those drawings.

Shep goes into the Node to restart SSC 3 and run some more FPP data takes. SSC 3 boots and loads service packs 5 and 6 without error, and FPP experiment looks nominal.

Yuri is working almost the entire a.m. on stowing gear in Progress and updating the IMS database. Almost every moveable object in SM with a bar code is now in the database.

Shep starts the Node I TCS quick-disconnect procedure in OCA 1048 with some help from Sergei. There's a fine picture in the procedure, but we can't access the place the arrows are pointing to without removing an additional panel, NOD 1S2-33. Then, when this panel is off, we are looking at permanent insulation surrounding the water lines and something is definitely amiss. We pull off the other panel called out, NOD 1 D2-14, and can see only "gamah" fittings and no identifying markings at all. We write up a quick note for Houston so ground can read about the problems as we are talking to Expedition 2 on OCA.

1315 We try to get OCA comm. with Exp 2 for about 20 minutes and we don't have a full 2-way link. Exp 2 is at the BME console, and we do have good comm. with the front room. So about 1340 or so, we do the crew tag up with the crew at the Capcom console. Comm is still lower quality than we are used to, but we are able to respond to all the questions. Apparently Yuri U has sent Yuri G. 4 emails recently which have not been received on this end.

After lunch, Shep downlads the CMG data. Everything looks normal with the CMG's. Data listed in the last section.

Sergei and Shep start the RAMV checkout procedure. The knob in the Node does not have numbered positions on it, so we make up the correct markings with black pen and tape and put these on. (We also noted today that numerous fire port decals in the Node are identified with panel numbers which are incorrect—they don't agree with the numbers of the panels they are on). Getting started with the RAMV procedure, Shep enables the valve and gets a failure indication right away. We wait to talk to Houston on this one also.

Yuri gets his monthly treadmill check on the TVIS with the Russian monitoring gear. TVIS is working OK.

We do a PAO contact with MSFC to open the Payload Ops Center for station. Voice quality is good, maybe a bit better than the usual OCA comm. with Houston. We are happy that we have some payload activity to talk about even before the center is in official operation.

We get some more words from Capcom regarding the Node quick disconnects—we are looking at the wrong lines (but we had a lot of help from the picture). Also, the panel access to the other set of QD's is behind a different panel than that called out. RAMV problem is a simple fix—we just did not have the RPC on before we started.

Shep goes back in the Node and disconnects the 2 QD's we can access, takes some closeout photos, and puts the paneling back in place. We are going to ask to pick up the rest of the procedure Mon. It involves moving a lot of gear on D1 panel, and we just did not have time for that today. We have all the excess foam and some other light trash stowed there for Progress. We didn't get to the rest of the RAMV job either, so we are requesting that be moved to early next week as well.

We get more word from the Capcoms late in the day that we should not plan on Shuttle taking down the 20 empty non-collapsible food containers. This is going to be OK with us, as we think all will fit in Progress. Thanks for the timely answer.

We finish the day in the "sport-zal" and catch the early showing of "Tombstone" in the wardroom.

DATA

CMG status words 1/5/6/8/9/11 for each CMG:

CMG 1 incrementing/2404/0510/257B/2585/0A7B

CMG 2 incrementing/2404/0510/227E/23BD/0A5D

CMG3 incrementing/2404/0510/2224/214C/0A67

CMG 4 incrementing/2404/0510/21EE/218A/0A71

-----END OF LOG ENTRY-----

FROM: ALPHA

TO: MCC-H
MCC-M
HSG-M

SHIP'S LOG 01 FEB

I W I S day. After the initial comm. check and breakfast, we go through the ops summary and the 8 o' clock report. The "red" change text is a very useful addition. Yuri starts into the logistics work—he is getting his arms around everything for the 5A transfer—we have a number of questions on this which are listed at the end of the log.

Shep starts in the Node rigging the I W I S hardware. Moving the RSU to port works well with the cable runs. Everything is made up so it is out of the way as much as possible. Getting gear out of the I W I S bag is unwieldy, as there are lots of loose cables, pieces, and ziplock bags flying around. A packet floats out with EVA fresnel lenses in it—this definitely belongs somewhere else. We would prefer to see things packed so they can not float around so much once a bag is open.

Putting in the accelerometers goes slowly, particularly for the location behind the S4 closeout. The photo is not at all clear, and it takes maybe 20 minutes just to figure out exactly what the procedure is trying to explain. This is definitely the case where a single good sketch or simple drawing would be much better. We stick the forward accelerometer in place also, exactly as described in the procedure and photo, and realize after all the data takes that the X, Y, Z orientation markings on the sensor do not agree with the station global coordinates. X on the sensor is pointed in the minus Y direction on station. Please advise what is correct here.

Sergei and Yuri are loading more sound level meter data onto laptop 3. This is now becoming our really most favorite thing to do.

[REDACTED MATERIAL - 17 lines]

Sergei does the monthly physical test on the T V I S treadmill, using the Russian monitoring equipment.

2nd Harness cord changed out on I RED.

We copy the request from Houston on the timex watches. We will keep using the ones we have onboard—there are some workarounds we can apply that will help the limited "alarm" situation. We don't request any more watches be sent up on 5A, but thanks to all the crew equipment folks for asking. As a heads-up to Exp 2, any plans to use the timex download capability should include more laptop I R transmitters. We have 1 onboard, but more will be required if the next crew wants to fully use this capability.

[REDACTED MATERIAL - 2 lines]

Logistics questions for 5A ops (ref OCA 0918, page 2):

I tems to prepare for transfer to STS on FD 9—

I tem 5. Centerline Micrometeoroid Debris cover assembly

Question—are we to give the whole assembly to Shuttle, or just the stiffener rods? The “comments” make this confusing.

Item 7. We don't think we have any Humidity Condensate Sample bags, unless these have been stowed someplace we have missed. Can ground advise us where to look for these?

Item 8. We have only 2 Chemical Archive Bags.

Items to swap during 5A (page 3)—

We want to have absolute confirmation of item 12, Food Containers, (non collapsible), that Shuttle is ready to take 20 of these. This is quite a lot of volume to stow onboard.—We request this info ASAP.

[REDACTED MATERIAL – 4 lines]

NiMH batteries. We have 5.

PCS 3.0 GB Hard Drive (760 XD) 4A load (2). We have these. Would like to request we keep the drives onboard as spares to be loaded with other software as required.

-----END OF LOG ENTRY -----