cosmogram 14 1985 april 17
james e. oberg, rt 2, box 350,
dickinson, texas 77539 usa

WHITHER SALYUT? (Continued). On Apr 8 TASS said: "Soviet cosmonaut Pyotr Klimuk has announced that he and his colleagues are preparing for new space missions to carry out new peaceful research programs....[He] pointed out that Soviet long-term orbital stations of the Salyut series have proved to be reliable and expedient."

AIR & COSMOS 16 Mar said that the announced retirement led one to think that the launch of Salyut-8 was coming up soon, but that Salyut-7 would be kept on station in case of launch problems.

AVIATION WEEK now (Apr 15 issue) says that a major command breakdown has forced the abandonment of the station. Further inquiry elicited the details that observers are unsure if a command decoder box has just broken, or if a power failure has crippled those circuits, but in either case, the Soviets have been unable to get Salyut-7 to follow ground commands sent up. Now if this is so, surely we would see it begin to tumble in coming weeks, and we would see a continued uncontrolled decay leading to a Skylab-style reentry. Time will tell.

ALSO, AW reported that Reagan had been about to make a public invitation to Gorbachyov to join in a Shuttle-Salyut flight, but removed the invitation from a planned speech after the murder of Army officer Nicholson.

WHY SHUTTLE-SALYUT? I've been asked by a pretty highly-placed fellow to help define practical applications of a Shuttle/Salyut mission. The obvious joint activities involve medical, MKF-6M, and materials experiments. But does anybody have any novel ideas on what useful and valuable projects could be made possible by a combined synergistic shuttle and salyut operation? I promise an attentive and appreciative audience, not just myself.

REGARDING SHUTTLE-SALYUT, the latest NASA launch manifest lists a number of missions to high inclinations compatible (with adjustment) to 51.6 degrees [Hope the Soviets don't go to 65 for the next Salyut, that would be out of reach of standard shuttle launchings!]. They are:

Spacelab D-1 STS-61-A 85 Oct 16
SL EOM-1/2 STS-61-K 86 Sep 3
SLS-1 (SL-4) unassigned late 86
LDEF-2 hi-inc STS 71-F 87 Feb 3
IML-1 SL,LM STS-71-K 87 May 7
ROSAT/sunlab STS-71-Q 87 Sep 21

on new Soviet boosters:

Pentagon 4th edition of "Soviet Military Power" (released early this month) has complete list of Soviet boosters with SL designations. No surprises here, but I think it is the first time an official DoD document has used such terms. The table is:

column 1, DoD designation
column 2, lift-off wt, 1000 kg
column 3, lift-off thrust, 1000 kg
column 4, payload to 180 km, kg
column 5, Sheldon code w/ Vick adds

SL-3	290	410	6,300	A-1
SL-4	310	420	7,500	A-2e
SL-6	310	420	2,100	A-2
SL-8	120	160	1,700	C
SL-11	180	280	4,000	F-1
SL-12	680	900	-	D-1e
SL-13	670	900	19,500	D-1
SL-14	190	280	5,500	F-2
MLLV	400	600	15,000+	K
HLLVs	2000	3000	30,000	L
HLLV6	--	4000	150,000	M

MLLV=Medium Lift Launch Vehicle
HLLV=Heavy-Lift Launch Vehicle
HLLVs= HLLV shuttle
HLLV given for "six or more strap-on boosters".

Note that the payload for the SL-6 cannot be correct for low-earth orbit, but is for escape. Yet no value (escape or otherwise) was given for the SL-12.

AW reported (Mar 18) that the MLLV carries the DoD designation SL-X-16 and the HLLV carries the code "SLW",

which I believe should rather be "SL-W" ("SL-X" was DoD code for the "G" vehicle of 1969, and I suppose SL-Y and SL-Z were used up in the intervening decade and a half). The shuttleski is supposedly just called the "SLW shuttle". SL-X-16 launch is expected "relatively soon" (the English for which is, "anybody's guess").

RUPPE (SPACEFLIGHT, Feb 1985, p. 63) has some interesting observations on this subject based on conversations with Soviet engineers:

1. "Cosmos test model is pure research and is not connected with a specific follow-on project." I'm moving to that position myself, since Sagdeyev asserted it explicitly and since none of the proposed missions for the small spaceplane (like the silly "space interceptor") make any sense to me.

2. "Heavy Lift Shuttle does not exist". Then what is atop that Bison and what is all the concrete at Tyuratam for? I can't believe Ruppe's contacts know what we're referring to.

3. "No decision made to use H2/O2 cryogenic propellants". I cannot believe this since I've talked directly with people who have seen overhead views of cryogenic tanks far in excess of those needed to support just LO2 at all three of the new launch complexes.

4. "HLLV is real". OK, but what good is it? I can't believe they are spending all that treasure for a much bigger Salyut or a manned Mars trip, considering where they are now and where their funding priorities are now. By elimination, starsky wars?

Illustrations in Pentagon booklet are unexciting except a nice sketch of the ASAT pads and support hangar, and a painting of the shuttleski atop a Bison. The painting appears to have been redone from an identical view published late last year in a Japanese magazine, which I also receive regularly. This is not quite so naked an act of plagiarism as copying C.P. Vick's copyrighted drawings directly out of Aviation Week, which last year's edition did and which nobody has yet expressed any apologies for. Sic 'em, Pat!

Other quotations: (p. 58), "In 1992, the condition for a launch to Mars will be favorable, and the Soviets are considering a manned expedition to that planet at that time" [JEO: Don't we wish it were true!]. (p. 59), "In late 1984, a new Soviet auxiliary ship was seen arrayed with extensive radomes and antennaae. The ship, named after the first commander of the Strategic rocket Forces, Marshal M.I. Nedelin, appears to be a new space and missile support ship capable of a variety of missions, including support to strategic forces worldwide. On its maiden voyage the NEDELIN transited directly from the Baltic to the port of Vladivostok.... An additional ship of the NEDELIN-class is under construction." [JEO: If they are building a TDRSS-sky, why build these ships??]

HOW ABOUT KOSMOS-1603?? The Pentagon document did NOT back up Aviation Week's Mar 18 claim that 1603 was a new generation of heavy military ELINT. I think that such an idea is far-fetched, but the near future will tell. If it is a new class of active military satellite, we'll see subsequent launches to set up a constellation. If no such launches occur, it will look like a one-of-a-kind bird, most likely a propulsion test. If it is a new liquid hydrogen upper stage, I suggest we call it "D-2e".

GAMMA-1 LAUNCH "SOON". Izvestiya on March 10 said the Soviet-French "Gamma-1" observatory will be launched "soon". This is the astronomy payload based on the "Progress" bus, recall. Scientific director of the project is V.G. Kirillov-Ugryumov; deputy head of the project is V. M. Balebanov

VENERA-15 has died. Venera-16 still responding to communications (Mar 16 account). And Oberg now again responding to communication, too!

Jim O!