

SOYUZ-TM5 UNDOCKED IN NIGHT 5/6 SEPT. 1988; LANDING 24 HOURS POSTPONED.

It has no sense to repeat all the news already published widely via press, television, radio a.s.o. about the critical situation during the return flight of the Protons 1 and 3 in their Soyuz-TM5. As a regular listener to the radiotraffic of the Soviet s/c I will report about this all from my monitoring experience during those tense hours. With as a timetable my logs of previous returnflights of Soyuzy, I predicted the estimated landing time approx. 0213UT on 6 Sept. '88. So I started my watch at about 0145UT and heard how Radio Moscow just finished a direct radioreport from the landing area near Arkalyk in Kazakhstan. The search and reception parties were waiting over there and TsUP reported that the Soyuz-TM5 was undocked from MIR, separated the Orbital module from the the s/c and was about to fire the retro-rockets. Without any comment the report stopped and did not come back before the estimated landing time. So I knew that as the Russians say: "Chto to ne to" (Something wrong). The English broadcast of Radio Moscow at 0200UT repeated the estimated landing time: 0210UT, the Russian broadcast did not even mention the returnflight! So I knew that my original plan to go asleep within an hour had to be cancelled. The first pass of MIR was in its 14657th orbit, from 0322-0327UT. Tuning my receivers, plugging the right antenna cables, preparing my recorders, ten minutes before, I did with "trembling" fingers, as I expected to hear Soyuz-TM5 still in orbit and already then I was aware what this could mean ... A Soyuz-TM5 landing during this orbit and the orbit to follow would mean an emergency landing far from the planned landing zone or a delay of 24 hours with all possible consequences: the microclimate and fuel on board are sufficient but only for a short period. Before I heard the Radiotelephony from MIR as well as from Soyuz-TM5 I heard both Telemetry transmitters. (MIR +- 166.125mc and S-TM5 +- 166.138 mc).

In Soyuz-TM5 Lyakhov was very busy reading out data, larded with abbreviations and difficult technical terms. He also spoke about "separation" and the fact that they were ready for that. An important role played a device with the name "Чайка", also saying that this now was in the "emergency mode". It was obvious that Lyakhov had to deal with a very complicated situation. His voice, as always loud and clear, demonstrated a good concentration, but also tension. Titov and Manarov could be heard on the MIR frequency. They now and spoke about the problems of S-TM5. Manarov grumbled that this was the first time in 12 years that such a situation did arise. Titov asked TsUP for technical details and whether TsUP received data from the S-TM5 telemetry. They spoke about 6 seconds. During the next pass in MIR orbit 14658, again radiotraffic from both s/c from 0456-0503UT. Lyakhov had switched off something and as he repeatedly got S.K.D. he concluded that "it yet started to work". While monitoring the traffic of MIR and S-TM5 during the emergency situation I tried to discover what went wrong. It was obvious that the computer now and then had switched off the engine due to unexpected data about attitude, speed, and position of S-TM5. In a conversation with Titov TsUP confirmed that it had something to do with equipment about which remarks had been given during checks the day before. The abbreviation T.V.P. was used in this context. During this pass Lyakhov also reported the fuelconsumption or fuel still available as given by the S.I.R.T. (Sistema Izmereniya Raskhoda Tyopleva), 1499 KG. During the passes to come 0630-0636UT and 0802-0810UT radiotraffic went on. Once Lyakhov muttered: "sudba" (the fate) and "koshmar" (it's a nightmare), but he kept calm. His Afghan partner in distress also did. Sometimes he drew Lyakhov's attention to things important for Lyakhov's action. He did not say much and certainly did not panic. Obviously Mohmand was a good support for Lyakhov. During the last pass (0942-0944UT) there was only Telemetry on 116.138 mc. The ADS- and LOS times of Soyuz-TM5 meanwhile confirmed that S-TM5 was in a somewhat lower orbit.

For the possible landing in the morning of 7 Sept. I calculated approx. 0100UT, a calculation still based on the MIR orbit. So it might be a dozen minutes earlier. And as news much later confirmed it was: 0050UT now south of Dzhezkazgan (East of Baykunur). So now only the MIR cosmonauts were still in orbit and they went asleep; only during the last pass that day they could be heard again. It has no sense to try to analyse all what happened now and write about this in this report. I have recorded a lot of