

**Sent:** Tuesday, September 11, 2012 10:27 AM

**Subject: Moscow Announces 'Get Well' Plan for Space Program Crisis -- "What Crisis? To the Moon!"**

1. Monday in Moscow, as promised, government officials announced their strategy to repair serious defects in the Russian space industry that have been revealed by a series of expensive and embarrassing spaceflight failures.

2. As rockets have crashed, satellites died or gone off course, at an alarming rate, the official answer is "Let's Go to The Moon". This self-delusional goal is supposed to 'focus' the disorganized and sloppy space industry.

3. This is like the proverbial marriage in trouble where the recovery plan is, "Let's go have a baby, it will give us a common goal." We know how well that usually works.

4. Top Moscow officials have issued discordant and contradictory diagnoses and diktats about what ails their space program. For some, it's a cultural gap caused by decades of neglect of the workforce. For others, it is NOT a 'systemic' problem at all, but a localized "here and there" kind of superficial awkwardness.

5. The Russian problems are our problems, too, because of the profound US/Russian partnership on the International Space Station, as well as the short-term decision [made by the previous White House administration] to rely solely on Russian spacecraft to transport US astronauts into space while a new generation of US 'space taxi' vehicles are being developed.

6. The prescriptions in Moscow seem equally self-delusional as the diagnoses. Putin wants a return to "1930's discipline", a terrifying prospect for the workforce. Other officials want to force the managers and workers to personally pay for the costs of reflights of failed missions -- like, from their retirement accounts or something? Others want to lure talented engineers and reliability experts into the over-aged under-staffed workforce with salaries that are only half -- instead of as currently one quarter -- what the same skilled people could earn in other industries. To prevent current employees from considering emigration, Soviet-era foreign travel restrictions for space workers are being reinstated.

7. For background, I suggest my article in the current issue of 'Astronautics and Aeronautics', professional magazine of the US aerospace industry, written early this year in response to the previous run of space disasters and bureaucratic responses. [http://www.jamesoberg.com/oberg\\_aerospace\\_america\\_2012.pdf](http://www.jamesoberg.com/oberg_aerospace_america_2012.pdf)

8. One specific paragraph gives me particular pride, since the latest Russian space failure last month was of the 'Briz' upper stage on a commercial launch of communications satellites. I endorsed the insight of a Russian journalist who "referred to inadequate investigation of a persistent 10% failure rate for the Briz upper stage. 'Often they don't even have the source data needed for analysis,' he stated, 'and they accept easily fixable malfunctions as true causes.' The accidents have continued, and he urged: 'We need to find out if it's due to design errors or defective parts,' since without an accurate diagnosis, any 'fix' will have only a placebo effect on future launches. This was another prescient warning of disasters yet to come." And it happened exactly as forecast.

9. The article's conclusion was also prophetic: discussing the official responses to the failures, I wrote: "While these are laudable goals with a reasonably high likelihood of success in the long run—especially if sufficient young talent is induced

to enter the aerospace labor market—the priority in terms of attention and resources given to the defense-related industries may leave the spaceflight industry recovery underfunded & undermanaged, even with Popovkin's best efforts. And the 'long run' implies that many factors that contributed to recent problems remain in effect, even if diminished. **The lamentably long list of recent Russian space setbacks—and their worldwide consequences— may not be complete."**

10. What are the deep-down systemic problems that the top Russian space officials seem unable to recognize, or to effectively remedy? The most clear-sighted commentary on that came from another Russian journalist last year, Konstantin Bogdanov, the Novosti News Agency analyst on space and defense industries. <http://en.rian.ru/analysis/20110401/163324373.html>

11. Bogdanov's pessimistic conclusion is that the glory days of the Soviet space program will NEVER return. Russia needs to become reconciled to a significantly scaled-back set of ambitions for space activities.

12. "[The program's] capacity for working miracles disappeared in the 1990s when the colossal monolith crumbled along with the system that had spawned it, leaving a sea of bitterness and grudges in its wake, as well as nostalgia for a lost paradise for engineers and technicians," Bogdanov wrote: "The fall of the aerospace industry was cruelly sobering after several decades of intoxication with the limitless possibilities afforded under the Soviet space program."

13. How did this happen? Bogdanov continued: "The seeds of the Soviet space industry's tragic downfall had been sown in its very creation. It could not have been otherwise. Without those fatal flaws it would have never emerged, and would have failed to accomplish all those stunning feats that won respect world over. "

14. The program had a series of unique environmental factors: the best and brightest minds of Soviet high-tech academies; special rewards for workers such as hospitals, stores, and foreign travel; unlimited budgets; rewarding and earth-shaking professional challenges; practical immunity from ideological oppression by the state; and others. Every one of these advantages disappeared with the fall of the USSR and not one can be reconstituted.

15. Bogdanov concluded: "Even the Soviet Union , with its supposedly developed socialist society, could not escape the Darwinist dialectic. Highly specialized 'species' are unavoidably doomed to a bright, albeit brief, existence when the environment to which they were so perfectly adapted vanishes in an instant."

16. In his metaphor, which I find compellingly clear, is that the 'good old days' of the Moscow space industry were like a hothouse orchid that flourishes under a combination of narrow and rare factors, and without them, it withers irreversibly.

17. If that is a valid analogy, the unrelenting sequence of space setbacks and the aimless thrashing around of top officials is entirely explained.

18. And it's scary for the future of any other partners tied to this faltering, fatally-flawed entity. The sooner NASA reconstitutes human access to space and gets its big booster on line -- strategies supported by the current White House -- the better.