

## Calls for Cooperation On Space Threats

Feb. 23—Russian government and scientific institutions have responded to the Feb. 15 Chebarkul meteor explosion and the near-Earth asteroid flyby of the same day with specific ideas to address the asteroid threat.

In addition to statements by Deputy Prime Minister Rogozin and State Duma International Affairs Committee chairman Pushkov, cited above, other high-level government and scientific figures are speaking out. For example:

- On Feb. 18, Lidiya Rykhlova of the Russian Academy of Sciences Institute of Astronomy described a 58-billion-ruble (approximately \$2 billion), ten-year program for asteroid defense, proposed by the Russian Academy of Sciences in 2010-2011. Rykhlova said that the program has been approved by the Russian Space Agency, Roscosmos, and now “it is on Rogozin’s desk.” She said that Russia is aiming to establish one or two telescopes dedicated to finding asteroid threats.

- Nikolai Patrushev, the secretary of the Russian Security Council, in a Feb. 20 interview with the government daily *Rossiyskaya Gazeta*, also discussed the Chebarkul meteorite and the asteroid threat in general. He called for international cooperation on this issue, and raised the challenge posed by long-period comets:

“We put this question on the agenda for discussion at the III International Meeting of Senior Security Representatives, in June 2012 in St. Petersburg. The Russian Security Council has repeatedly proposed to develop an Intergovernmental Targeted Program to counteract space threats associated with the asteroid and comet danger and the build-up of space trash. . . . Comets may also present an even greater danger, since their velocity as a rule is greater than that of asteroids, reaching several tens of km/sec. The great majority of

known comets have very elongated elliptical orbits, so the task of forecasting their appearance and trajectories is extremely complex. At present, the only comets that can be considered accessible for observation and threat evaluation for a collision with Earth are short-period comets with orbits within the Solar System.”

- Another important call for international cooperation came Feb. 20 from Konstantin Tsytko, representative of the Chelyabinsk Region in the Federation Council, Russia’s upper house of Parliament, who called for a heads-of-state summit. He addressed the “economic consequences not only in Russia, but also worldwide,” stating that “both the Russian government and the international community are paying special attention to the asteroid threat and the need to protect the planet Earth as a whole from the dangers that space objects pose.”

Referring to the Chebarkul meteorite, Tsytko said, “I think it will result in increased investments in science and technology that can provide early warning or will affect asteroids, meteors, and comets, so they will not reach the Earth. . . . It would be logical to hold an international conference with the participation of heads-of-state to discuss the problem of an asteroid threat to Earth. Chelyabinsk is the first city in the history of our civilization that has survived a space attack.”

- Also on Feb. 20, RIA Novosti reported that Russia’s Aerospace Defense Forces have been given the task of defending against objects descending from space. “The Aerospace Defense Forces have been ordered to handle this issue and come up with a plan to protect Russia from these ‘space travelers,’” said Maj. Gen. Igor Makushev, aviation commander for the western Military District.

“None of the existing systems, either Russian or American, detected this space object until it entered the atmosphere,” Director of the Astronomy Institute of the Russian Academy of Sciences Boris Shustov said Feb. 20. Shustov said that astronomers have discovered and catalogued only 2% of potentially dangerous space objects about 50 meters in size, which are capable of causing a catastrophe worse than the 1908 Tunguska Event, the largest such incident in recorded history. It was believed to be caused by the explosion of a meteor or comet over central Russia. “It is a sign of our ignorance, since we should be able to monitor about at least 90%, if not all of these objects,” Shustov said.