

Re: Best wishes to student 'tether de-orbit' experiment to launch Friday

Source: <http://sci.tech-archive.net/Archive/sci.space.policy/2007-09/msg00526.html>

- *From:* af250@xxxxxxxxxxxxxxxxxxxxxx (John Park)
 - *Date:* 20 Sep 2007 20:04:12 GMT
-

"Jim Oberg" (joberg@xxxxxxxxxxxxxxxxxx) writes:

Russia's Foton science satellite will include an innovative space transportation experiment that is testing a theoretically cheaper method of returning small cargo from the international space station – and it's been designed and developed by a team of students organized by the European Space Agency.

The approach is to use a space tether as a transportation mechanism, a concept so risky and revolutionary that existing space agencies have for years been afraid of even trying it out for fear of an embarrassing failure.

The Young Engineers Satellite 2, or YES2 for short, is piggybacking into orbit aboard a Russian science satellite named Foton-M3, due for launch at 7 a.m. ET Friday. The Foton satellite had two major advantages – some extra space for a hitchhiker, and a low orbit around Earth (about 155 miles, or 250 kilometers). As a result, the ticket was pretty cheap.

The low orbit is critical because the YES2 objective is to demonstrate the ability to fling a small landing capsule down into the atmosphere without the use of rockets at all. Instead, the tiny 12-pound (5.5-kilogram) heat-shielded sphere, nicknamed "Fotino," will be lowered from the Foton-M3 to the end of a 19-mile-long (30-kilometer-long) fishline-thin tether (the reel is called "Floyd"), and then released.

How accurately can the landing point be predicted using this technique?

--John Park

.