



## COMPASS final report: low cost Robotic Lunar Lander

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By -

No binding. Book Condition: New. This item is printed on demand. Original publisher: Cleveland, Ohio : National Aeronautics and Space Administration, Glenn Research Center, 2010 OCLC Number: (OCoLC)738500910 Excerpt: . . . 2. 5 Small Launch Vehicle Details A number of small class launch vehicles were examined for use in this mission. The Minotaur and Falcon class vehicles were the two that were most appropriate to the launch mass required for the Robotic Lunar Lander. 2. 5. 1 Minotaur Minotaur V is a five-stage evolutionary version of the Minotaur IV space launch vehicle ( SLV ) to provide an extremely cost-effective capability to launch small spacecraft into high-energy trajectories, including geosynchronous transfer orbits ( GTO ) and trans-lunar missions. The first three stages of the Minotaur V are the unmodified Peacekeeper solid rocket motors. The stage four motor is nominally a Star-48GV. The fifth stage can be either attitude controlled or spinning. The attitude-controlled version nominally uses the same Orion-38 motor that has been extensively flight demonstrated on multiple Orbital launch vehicles, including Pegasus, Taurus, and Minotaur I. For a spinning configuration, a Star-37FM is used to provide maximum performance. The Minotaur V avionics, structures, and fairing are common with...



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