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INSTITUTIONAL RISK MANAGEMENT AND COSMIC HAZARDS

Abstract

Institutional Risk Management and Cosmic Hazards Joseph N. Pelton Space agencies typically see the issue of institutional risk management in the context of the safety of people on the ground near launch sites and astronauts. This paper suggests that space agencies, in light of new information gathered from new space probes, need to give new priority to cosmic space hazards. To do otherwise may find space agencies subject to organization risk, devastating legislative hearings, or worse. The question will be what did space agencies do to minimize a major cosmic catastrophe? Today we are learning much more about so-called “cosmic hazards”. Most recently we have learned of changes to the earth’s magnetic poles and losses in the natural protective shielding provided by the Van Allen Belts. In light of increased urbanization, dependence on modern infrastructure, and a variety of cosmic threats, global space agencies look at this also as an the institutional risk. They, in particular, need to consider the need to create structured programs related to planetary defense. There is major institutional risk in not doing so. This involves national space agency’s programs, but also internationally in the context of an initiative akin to the IADC. The U.N. General Assembly has now sanctioned the creation of the International Asteroid Warning Network (IAWN) as well as the Space Mission Planning Advisory Group (SMPAG) in Dec. 2014. The UN Committee on the Peaceful Uses of Outer Space has a Working Group on the Long Term Sustainability of Outer Space Activities that is considering such issues as solar storms, a weakened geomagnetosphere and orbital debris. The InterAgency space Debris Committee (IADC) has assisted the UN COPUOS to devise voluntary guidelines to minimize orbital debris. There should now form a global space agency committee to assist the COPUOS Sustainability efforts. There is a bill in the U.S. Congress that would require the US Dept. of Homeland Security to take solar risk and natural EMPs seriously and report on the nature of this risk. Space agencies should take heed. What should be done? (a) Adopt the consideration of cosmic hazards and planetary defense as a “top strategic goal”; (b) create an organized cosmic risk assessment unit to consider all types of cosmic and space-based hazards and what can be done.