

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

NOTICE: 08-GSFC-01

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): Interstellar Boundary Explorer (IBEX) Mission

AGENCY: NASA's Goddard Space Flight Center (GSFC)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: Pursuant to NEPA of 1969, as amended (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), and NASA policy and procedures (14 CFR Part 1216 Subpart 1216.3), NASA has made a Finding of No Significant Impact with respect to the proposed IBEX mission. The proposed action would be the launch of the IBEX mission on a Pegasus XL from the Reagan Test Site (RTS) at Kwajalein Atoll, the Republic of the Marshall Islands. The only other alternative that was considered in detail was No Action.

DATES: Written comments on this FONSI should be submitted to Lizabeth Montgomery at the address provided below and must be postmarked no later than 30 days from publication of this FONSI. While hard copy comments are preferred, NASA will accept Email addressed to Lizabeth R. Montgomery at the address provided below so long as the Email is sent no later than 30 days from publication of this FONSI.

ADDRESSES: The environmental documentation that supports and serves as a basis for this FONSI may be reviewed at:

- Alele Public Library
P.O. Box 629
Majuro, Republic of the Marshall Islands 96960
- Grace Sherwood and Roi-Namur Libraries
P.O. Box 23
Kwajalein, Marshall Islands APO, A.P. 96555
- <http://environment.gsfc.nasa.gov/pegasus.html>

Limited hard copies of the specific environmental documentation named below that supports this FONSI are available on a first-request basis by contacting Lizabeth R. Montgomery at the address, telephone number, and Email address provided below.

FOR FURTHER INFORMATION, CONTACT: Ms. Lizabeth Montgomery, NASA's Goddard Space Flight Center, Safety and Environmental Division, Code 250, Greenbelt, Maryland 20771, Phone: 301-286-0469, Email: Lizabeth.R.Montgomery@nasa.gov

SUPPLEMENTAL INFORMATION

NASA proposes to launch the IBEX spacecraft from RTS in the U.S. Army Kwajalein Atoll in the Republic of the Marshall Islands on a Pegasus launch vehicle. The IBEX mission objective is to discover the global interaction between the solar wind and the interstellar medium. The IBEX Flight System consists of a Spacecraft (spacecraft bus and science payload), a STAR-27 solid rocket motor (SRM), and an adaptor cone. The SRM is used to boost IBEX from the Pegasus injection orbit to its high altitude apogee. The IBEX science payload is contained within the Spacecraft. The science payload consists of two single-pixel sensors that measure energetic neutral atoms from the outer heliosphere (the bubble surrounding our sun and solar system that protects us from local interstellar medium) and a combined electronics unit.

The Pegasus LV is processed and attached to an L-1011 aircraft at Vandenberg Air Force Base (VAFB), California, then ferried to RTS for launch. Limited testing operations on the spacecraft will be conducted at RTS. On the day of launch, the L1011/Pegasus will depart from RTS and then the Pegasus would be released from the L-1011 aircraft at an altitude of approximately 35,000 to 45,000 feet over the Pacific Ocean, at a point southwest of the Kwajalein Atoll.

RTS is located on the U.S. Army Kwajalein Atoll. The U.S. Army Kwajalein Atoll is a subordinate command of the U.S. Army Space and Missile Defense Command located in the Republic of the Marshall Islands, approximately 2,000 nautical miles (3,700 kilometers) southwest of Hawaii. U.S. Army Kwajalein Atoll consists of all or portions of 11 of the 100 islands that enclose a 1,100 square mile (2,850 kilometer square) lagoon, the largest lagoon in the world. Kwajalein is one of 11 islands in the Marshall Islands leased by the U.S. government.

The U.S. Department of Transportation (DOT) Federal Aviation Administration (FAA) has analyzed the potential impacts of Pegasus launches at RTS in previous documents (*Standard Pegasus/Pegasus XL Launches Kwajalein Missile Range Environmental Analysis - 1994*, *Finding of No Significant Impact for Orbital Science Corporation Standard Pegasus/Pegasus XL Launches From Kwajalein Missile Range - 1999*, and *Written Reevaluation - 2004*) and has determined that the activities associated with the Pegasus operations at RTS will not individually or cumulatively significantly impact the quality of the human or natural environment.

NASA has analyzed the potential impacts of missions with spacecraft that are considered routine payloads in an environmental assessment (EA). (Ref: *Final Environmental Assessment for Launch of NASA Routine Payloads on Expendable Launch Vehicles from Cape Canaveral Air Force Station, Florida, and Vandenberg Air Force Base, California, and FONSI*, June 2002). Spacecraft defined as routine payloads utilize materials, quantities of materials, launch vehicles and operational characteristics that are consistent with normal and routine spacecraft preparation and flight activities. The environmental impacts of launching routine payloads fall within the range of routine, ongoing and previously documented impacts that have been determined not to be significant. Spacecraft covered by the EA meet specific criteria ensuring that the spacecraft and its operation and decommissioning do not present any new or substantial environmental or safety concerns. The IBEX mission meets the criteria for a NASA routine payload. The mission

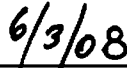
does not present any unique or unusual circumstances that could result in new or substantial environmental impacts.

Based on the analyses set forth in the NASA Routine Payload Environmental Assessment (2002) and previous FAA documents (FONSI (1999), Environmental Analysis (1994), and Written Reevaluation (2004)), NASA has determined that the environmental impacts associated with the IBEX mission will not individually or cumulatively have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement is not required. In making this determination, NASA not only considered that the IBEX mission satisfied the criteria set forth in the NASA Routine Payload Environmental Assessment for spacecraft impacts, but it considered the potential site specific impacts of the IBEX mission set forth and detailed in the DOT documentation identified above.

At a minimum, NASA will take no final action prior to 30 days following the publication of this FONSI. Public comments on the environmental aspects of the proposed IBEX mission are hereby solicited and will be considered before NASA makes its final decision.



Arthur F. Obenschain
Acting Director
NASA's Goddard Space Flight Center



Date