



## Launching NASA's New Horizons Mission

Florida's Cape Canaveral will launch NASA's New Horizons mission to Pluto in January. This is a short summary of the mission and its launch safety plans.


Many of the key questions about Pluto and its moon Charon can only be answered from the vantage point of a spacecraft flying close to these remote worlds. Given Pluto's great distance from Earth and small size, study of the planet continues to challenge even the best instruments and skills of planetary astronomers and engineers.

**Radioisotopes:** A radioisotope thermoelectric generator, or RTG, provides electric power to the New Horizons spacecraft and its science instruments. An RTG consists of two elements: a heat source that contains plutonium dioxide; and a set of solid-state thermocouples that convert the plutonium's energy into electricity. The RTG carries approximately 11 kilograms (24 pounds) of plutonium dioxide. Such materials have been safely launched from the Spaceport many times over the past four decades.

**Launch Safety:** As with any launch from the Spaceport, Brevard County provides information to the public about emergency operations in the event of a launch accident. The cloud (or plume) that could occur in the event of a launch accident refers to the visible plume of combusted and non-combusted rocket propellants from the rocket that could pose an immediate threat to public health. County, State and Federal safety officials will inform the public of any potential hazard from launch vehicle chemicals. For the New Horizons launch there is also a one in 350 chance of a launch accident that could release plutonium – but even in the event of a release, the highest expected exposure to any one person would be less than one rem over 50 years. In comparison, the average exposure that a person would receive from naturally occurring sources of radiation in the United States is three tenths of a rem annually or 15 rem over 50 years. No health consequences would be expected from such a low level of exposure.

**Public Safety:** NASA has been planning with Brevard County, the State of Florida and other Federal agencies to ensure the public is safe in the event of a launch accident. Teams of experts will be pre-positioned during the launch to quickly collect data and provide advice regarding any potential radiation release. In case of an accident, the county will advise the public to remain in cars, homes or other buildings until measurements show that no radiation release has occurred. In the event of an accident, consult the guidance provided on the next page, which is also available in the Brevard County telephone directory.

# Emergency Information: Rocket and Missile Launch Accidents



Extensive precautions have been taken to ensure your safety. US Air Force personnel are prepared to terminate any launch vehicle that strays from its planned flight path ensuring that any falling debris is contained within the CCAS or KSC property lines. Launches are suspended until favorable meteorological conditions exist to prevent an unacceptable concentration of toxic chemical from an accident from endangering the general public should an accident occur. Although a launch accident may be startling, an integrated Brevard County Emergency Management & US Air Force team follows specific guidelines to ensure the public's safety. In the unlikely event a potentially toxic plume (cloud) from an accident drifts towards your area, remain calm & follow these instructions:

## Shelter In Place

- Bring pets inside.
- Go indoors or remain indoors.
- Close all doors & windows.
- Do not use fireplaces – close damper.
- Listen to Radio/TV broadcasts for instructions. This incident may last for several hours before an 'All Clear' is broadcasted.
- If in an automobile, close all windows & vents, switch A/C to recirculate or turn off. Proceed away from the area. Listen to radio broadcasts for instructions.

If an accident occurs during the New Horizons launch:

## **Launch Accident Safety Information**

Call: 211 or 321-631-9155 from a cell phone or outside Brevard County

Website: [www.embrevard.com](http://www.embrevard.com)

Monitor: Space Coast Government TV/Local TV

## **For Emergency Assistance:**

Call: 911