Kurt Lindstrom

Overview of the New Horizons
DEIS
New Horizons Mission to Pluto

- NASA will not launch if it is not SAFE!
- Over the past 40 years, RTGs have been used safely and reliably. Some of these successes include:
  - Six Apollo Flights to the Moon
  - Two Pioneer Spacecraft to Jupiter and Saturn
  - Two Mars Viking Landers
  - Two Voyager Missions to the Outer Planets
  - Galileo Mission to Jupiter
  - Ulysses Mission to the Sun’s Poles
  - Cassini-Huygens Mission to Saturn
Impacts of a successful launch – the most likely outcome – would come mainly from the Atlas V solid propellant booster exhaust emissions; these would include:

- Temporary effects on local air quality near the launch site.
- Short-term ozone degradation along the vehicle's flight path.

These impacts are common for many launch vehicles that use solid propellant boosters.
Unlikely accidents could occur during preparation for and launch of the spacecraft. The two accidents of principal concern are:

- A liquid propellant spill during fueling operations, which would be minimized via remotely operated actions that would shut down the system.
- A vehicle failure in or near the launch area during the first few seconds of flight, resulting in:
  - Emissions of combusted propellants that chemically resemble those from a normal launch and would not reach levels that threaten public health.
  - Debris that would likely fall on or near the launch pad or into the Atlantic Ocean.

Very unlikely accidents are also addressed.
There is a 99.6% probability that the mission will result in no release of radiological material.

Less than half of accidents with a release (0.16%) would result in more than 0.1 latent cancer fatalities.

There is a 1 in 1.1 million chance of an accident with a release that would result in more than 0.5 latent cancer fatalities.

The most likely outcome (938 out of 1,000) is a successful launch to Pluto.