

## Re: Plutonium on Next Atlas V – Bad Idea?

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*Source:* <http://sci.tech-archive.net/Archive/sci.space.policy/2005-08/msg00881.html>

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- *From:* Cardman <[do-not@xxxxxxxxxxxx](mailto:do-not@xxxxxxxxxxxx)>
  - *Date:* Mon, 15 Aug 2005 18:42:05 GMT
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On 15 Aug 2005 08:57:53 -0700, "Ed Kyle" <[edkyle99@xxxxxxxxxxxx](mailto:edkyle99@xxxxxxxxxxxx)> wrote:

>No one would need to hug an RTG. The study  
>says that there is about a 1 in 300 chance  
>that plutonium will be released.

Yes, most likely when it hits the ground. Although depending on the flight path that could also be water.

>This would be the result of impact forces during  
>a launch vehicle explosion cracking open the RTGs,  
>releasing plutonium.

I doubt that a rocket explosion would do a good job in cracking an RTG open. The payload is on top after all, where it should simply go up and then down again.

What has been ignored in this thread so far is that launch failures usually do not involve explosions at all. So the failure of this launch is much more likely in the 2nd or 3rd stages, usually when the engine fails to start. That would mean no trip to Pluto and mostly likely a rapid reentry and a drop into one of our many oceans.

>The Atlas 551 configuration, because it is composed of more  
>parts, has a higher chance of launch failure (a predicted 6.2%  
>chance of failure) than the versions that have flown to date.

Sounds fair enough. Although should one of those SRBs fail, then I guess that the main engine could compensate.

So that is a 6.2% chance of failure and a 0.3% chance of plutonium release. Most likely when it smacks into the ground. In other words there is an 18.6% chance that during a launch failure some plutonium would be released.

Then they can go and clean it up.

This New Horizon's probe is due to be launched in January.

Cardman.

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• ***Follow-Ups:***

- ◆ ***Re: Plutonium on Next Atlas V – Bad Idea?***  
◇ *From:* Henry Spencer
- ◆ ***Re: Plutonium on Next Atlas V – Bad Idea?***  
◇ *From:* Ed Kyle
- ◆ ***Re: Plutonium on Next Atlas V – Bad Idea?***  
◇ *From:* Damon Hill

• ***References:***

- ◆ ***Plutonium on Next Atlas V – Bad Idea?***  
◇ *From:* Ed Kyle
- ◆ ***Re: Plutonium on Next Atlas V – Bad Idea?***  
◇ *From:* Cardman
- ◆ ***Re: Plutonium on Next Atlas V – Bad Idea?***  
◇ *From:* Ed Kyle
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