

# Re: Man-Rating Atlas V

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- *From:* "Will McLean" <[mclean1382@xxxxxxx](mailto:mclean1382@xxxxxxx)>
  - *Date:* 2 Oct 2006 06:46:27 -0700
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lou@xxxxxxxxxxxx wrote:

Will McLean wrote:

Nor are the changes for the CEV version *\*that\** minor. Besides the changes you mention, NASA believes it needs a higher thrust upper stage, probably with more RL-10 engines. And the three core configuration, which Atlas has never built.

No, the Atlas that is proposed to be man-rated is the 401 variant, with just one core engine, a single centaur, and no solids. See <http://www.lockheedmartin.com/data/assets/13344.pdf> where this is very explicit.

Which is probably adequate for a LEO ferry, but not for the CEV, which has an explicit requirement of being roomy enough for the longer lunar mission and having enough delta-v to come back from lunar orbit.

Will McLean

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