

Re: Orbital mechanics folks...why does the ISS reboost matter?

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Source: <http://sci.tech-archive.net/Archive/sci.space.shuttle/2006-12/msg00015.html>

- *From:* John Doe <jdoe@xxxxxxx>
 - *Date:* Sat, 02 Dec 2006 07:19:43 -0500
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Jim Oberg wrote:

See http://www.jamesoberg.com/books/spt/new-CHAPTERSw_figs.pdf,
the Appendix 1 to chapter 1,
for generic background, then we can chat.

This doesn't explain the original question.

Isn't the position of the space station more or less random (in practical terms) along the orbital path at the time the plane crosses over KSC ? (aka: launch time for Shuttle)

Does increasing the station's altitude (and increasing the time needed for a full orbit) really make such a big change to the relative position of ISS to KSC at the time the orbital plane passes over KSC ?

I can understand that having ISS higher/slower means that with the Shuttle's initial lower orbit (faster), the speed difference between the two is greater, which means the shuttle can close the gap to catch up to the ISS faster.

But I do not understand why a lower station would only generate "good" rendez vous every second day while a slightly higher orbit would allow shuttle to launch any day.

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