“Global Space Propulsion System Market Forecast to Exceed $10B by 2023”


February 27, 2019

Propelling the Small Satellite Revolution
Anatomy of a Satellite

Mission payload

Satellite ‘Bus’
• Structure
• Solar panels
• Batteries
• Avionics
• Computing
• Radio
• Propulsion
Reliance on Terrestrial Components is a Double-edged Sword

*Review*

**A Brief Review of Heavy-Ion Radiation Degradation and Failure of Silicon UMOS Power Transistors**

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**Figure 5.** Schematic cross section illustrating an ion strike through the gate oxide on the sidewall of the trench in a UMOS power device. After ref. [7].
Space is Different

My 2018 F-150 King Ranch

- 11 Safety Recalls
- 45 Technical Service Bulletins
- Has been re-fueled 135 times
- 6 oil changes
- New brake pads, tires, radiator