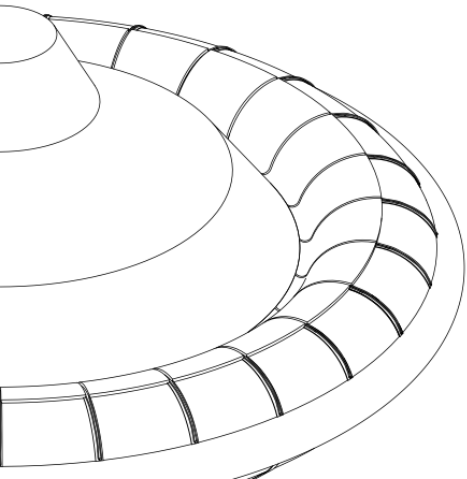


Jet Propulsion Laboratory
California Institute of Technology



Low-Density Supersonic Decelerators (LDSD)



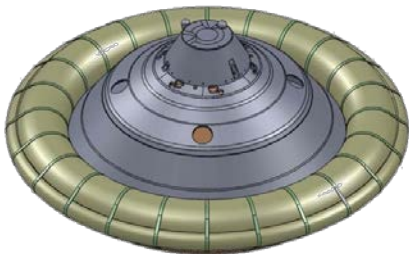
**Mark Adler
Ian Clark
June 14th, 2016
IPPW-13**

LDSD Decelerators and Test Venues

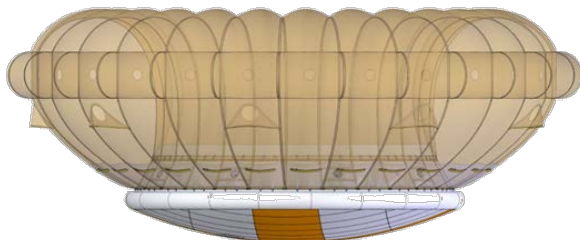


LDSD's technologies will serve as the foundation of supersonic decelerators for the next several decades

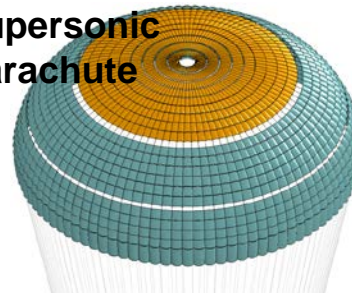
SIAD-R



SIAD-E



Advanced Supersonic Parachute



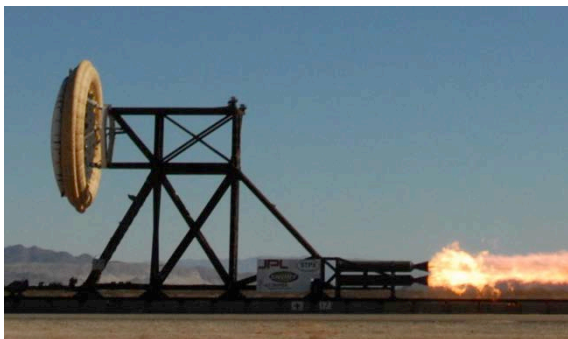
Supersonic Ballute



- 6 m, Mach 3.75 inflatable decelerator
- Negligible aeroelastic deformation
- 50% increase in drag area over MSL
- 8 m, Mach 3.75 inflatable decelerator
- Ram-air inflated, flexible structure
- 2.25x drag area of MSL
- 30.5 m, Mach 2.5 parachute
- Extensible to reefing and clusters
- 2.5x drag area of MSL parachute
- 4.4 m, Mach 3.0 ballute
- Supersonic drogue and pilot
- Ram-air inflated

LDSD is developing the infrastructure necessary to enable the qualification and future development of supersonic decelerator technologies

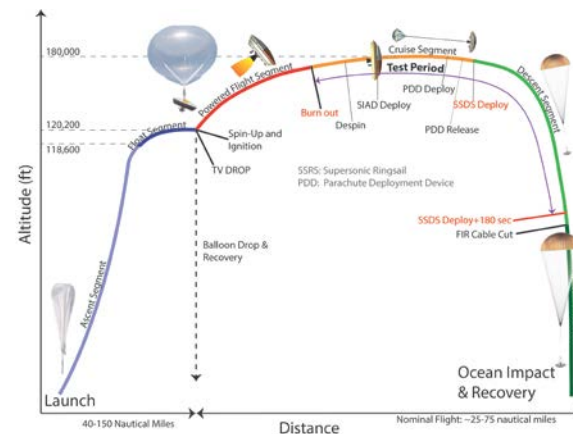
SDV



PDV



SFDT



Acknowledgements



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