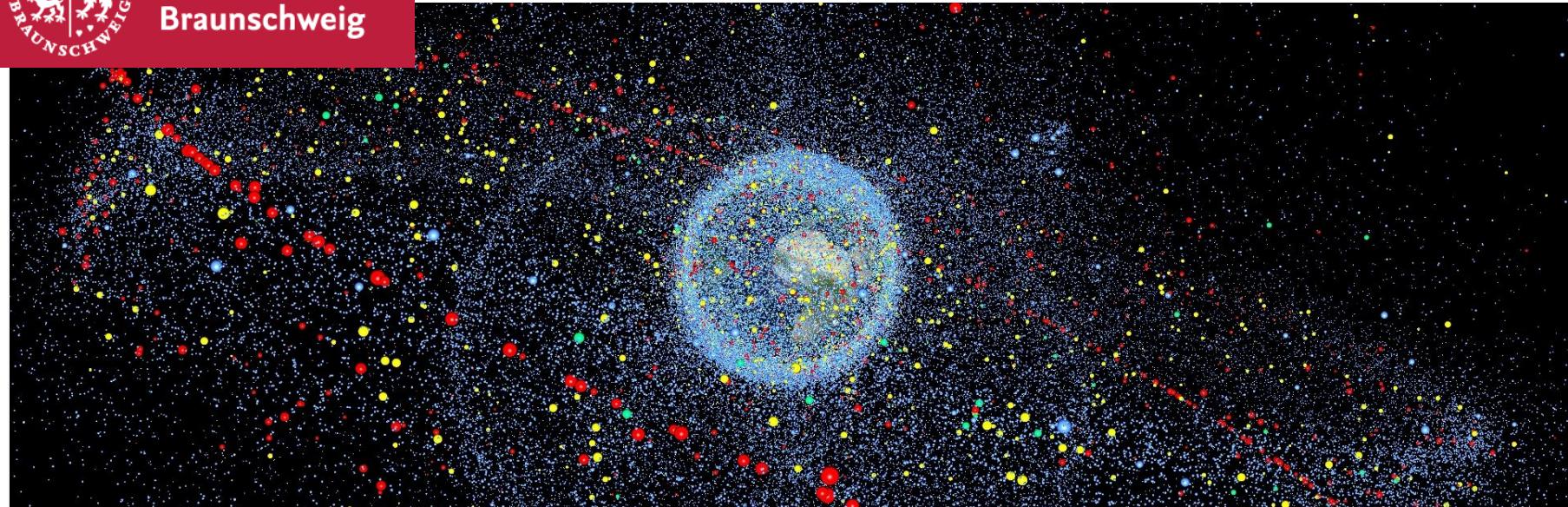




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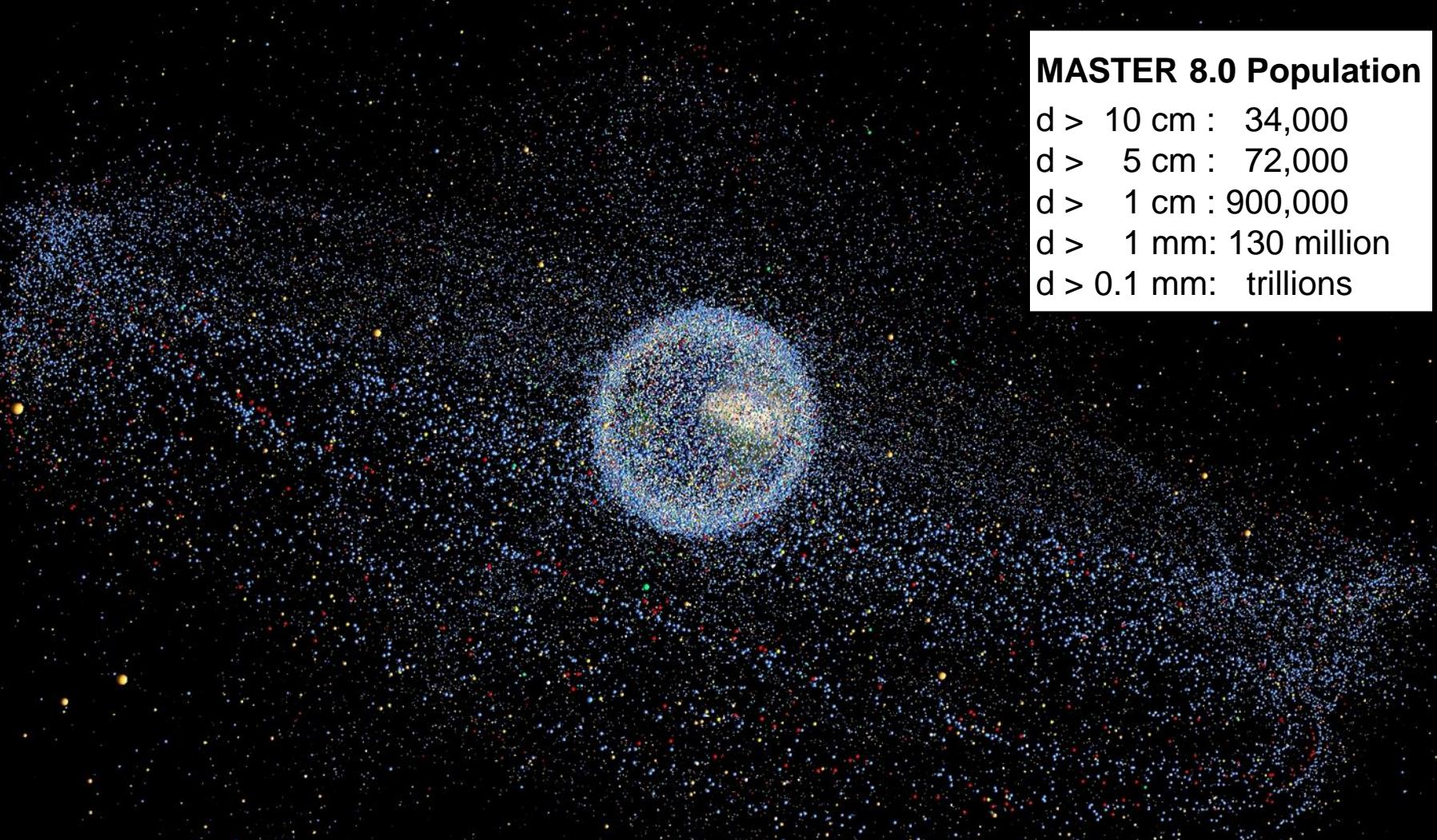
Institut für
Raumfahrtsysteme



The Validation of the MASTER Model

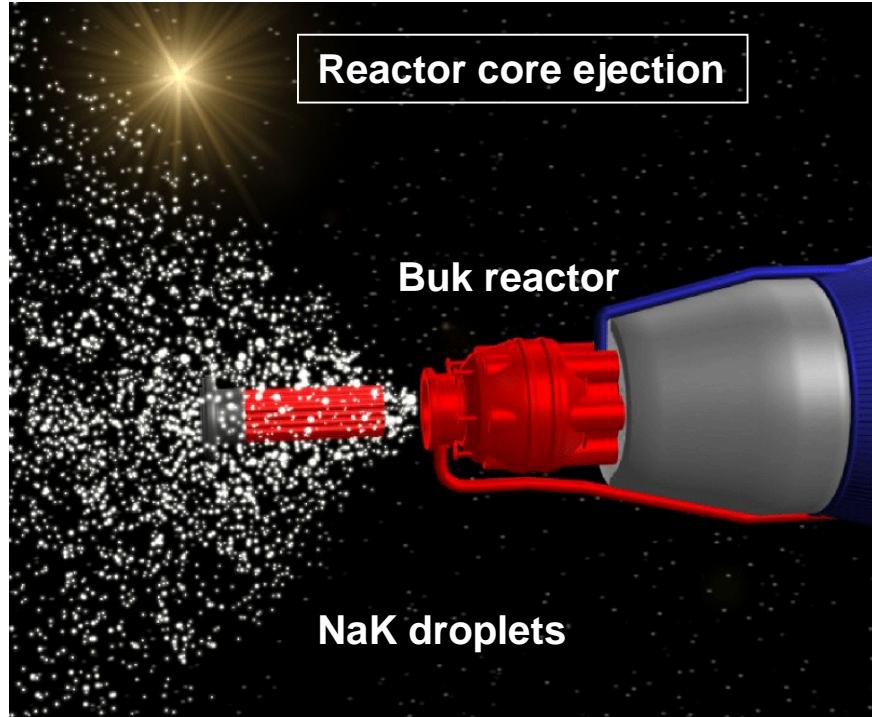
Carsten Wiedemann
Institut für Raumfahrtsysteme

Number of Objects: New Results



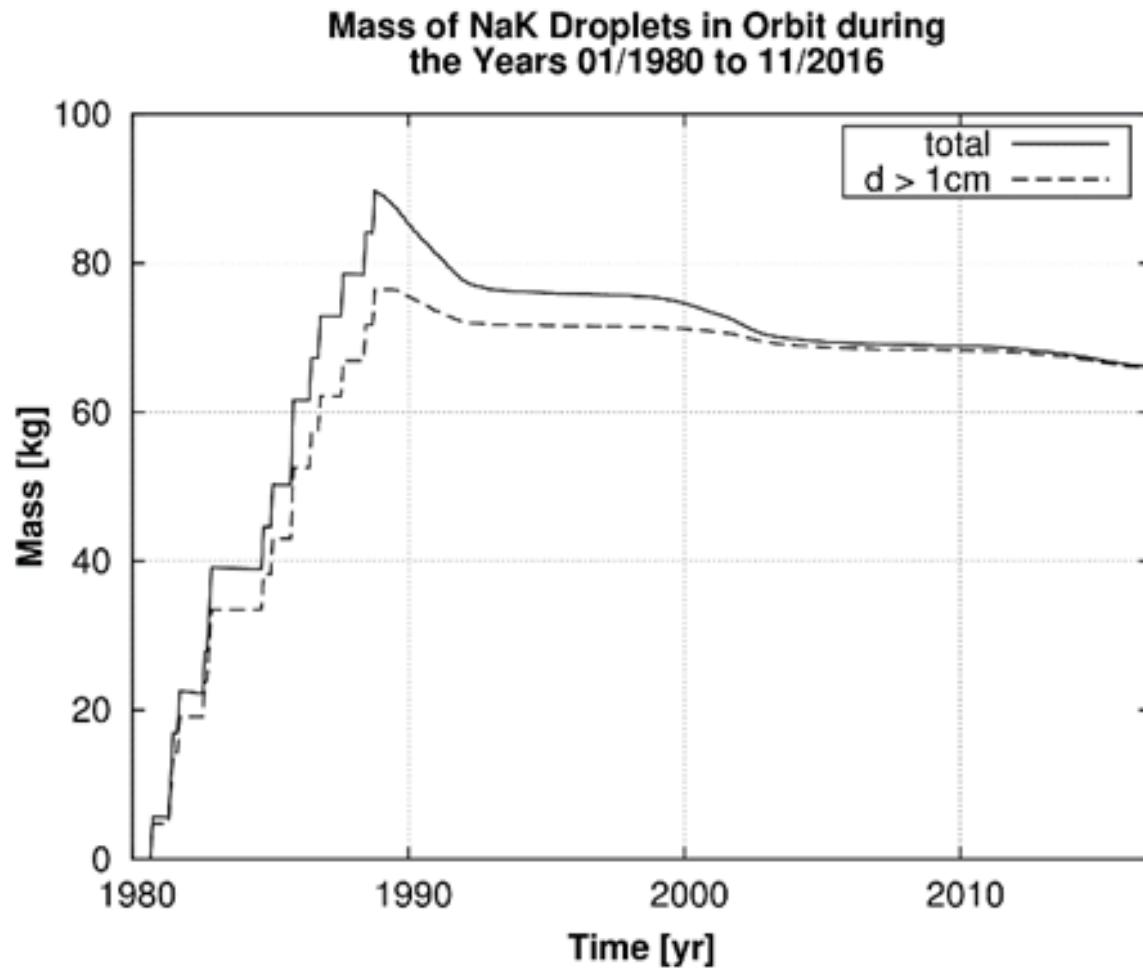
Liquid Metal Droplets

RORSAT: Nuclear reactors in space



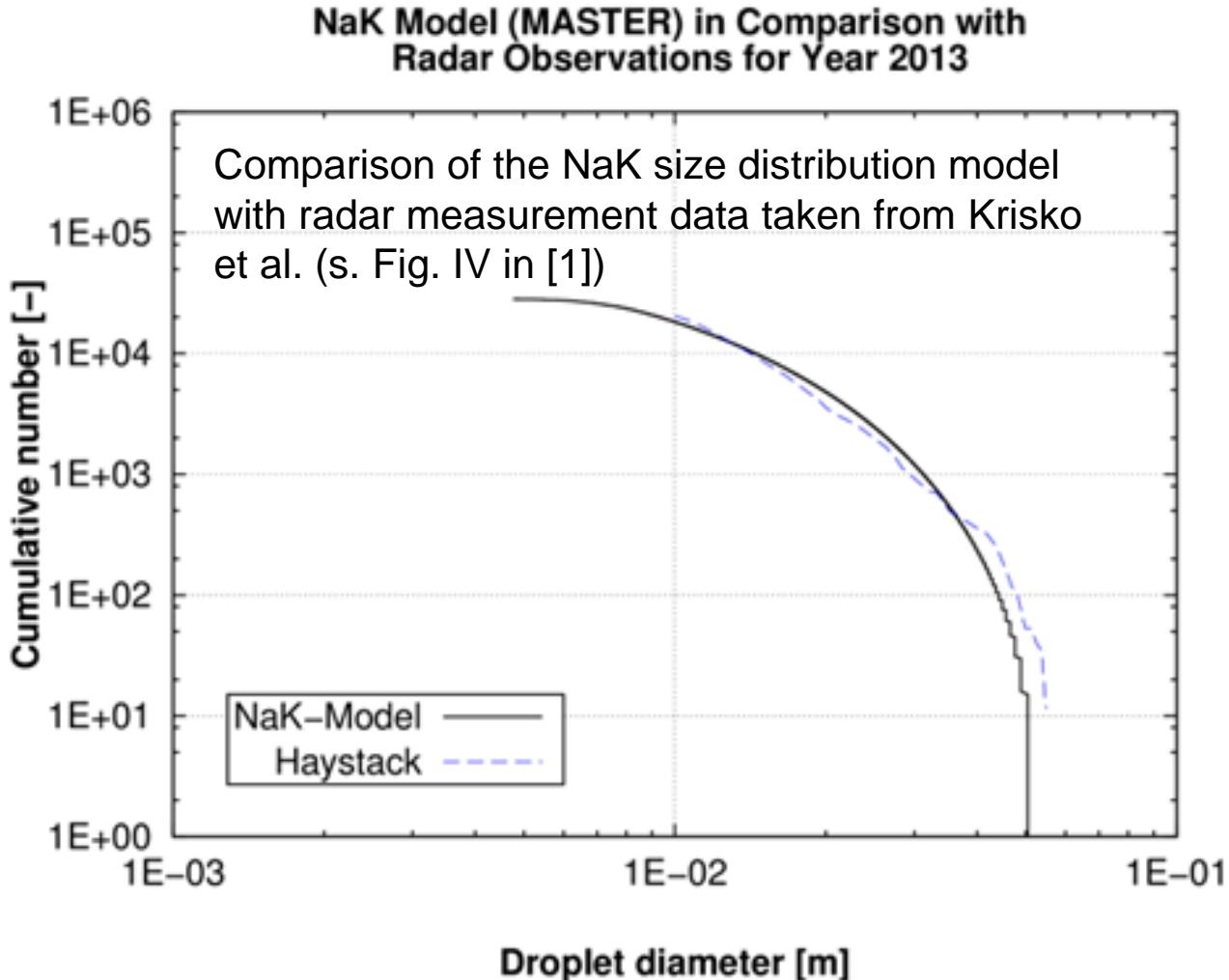
It is assumed that the release of reactor coolant is an **uncontrolled, unintentional by-product** of the core ejection process. A total of **16 core ejections events** have taken place.

Simulation of Release Events (1)



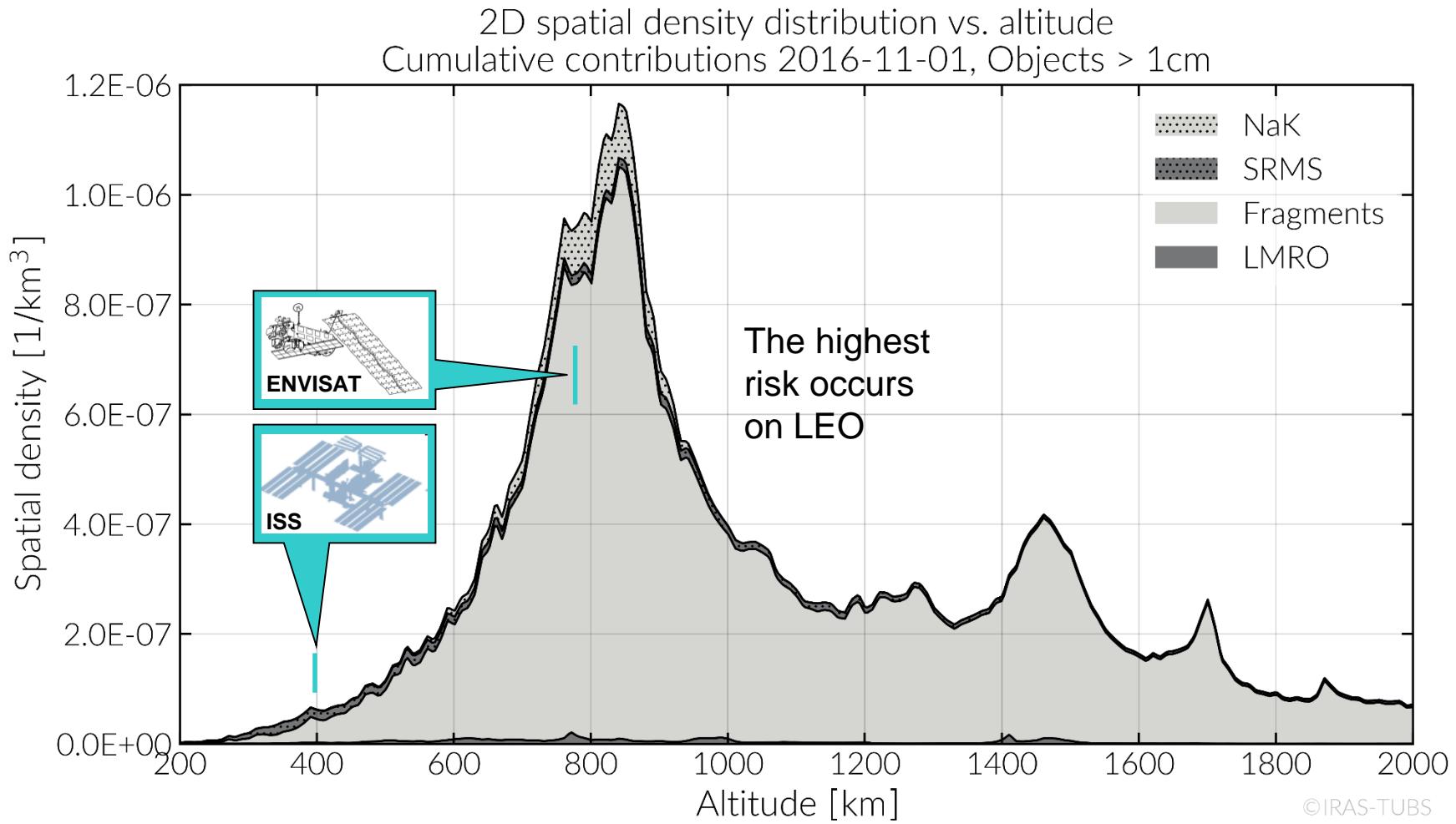
Simulated mass of NaK droplets in orbit

Validation

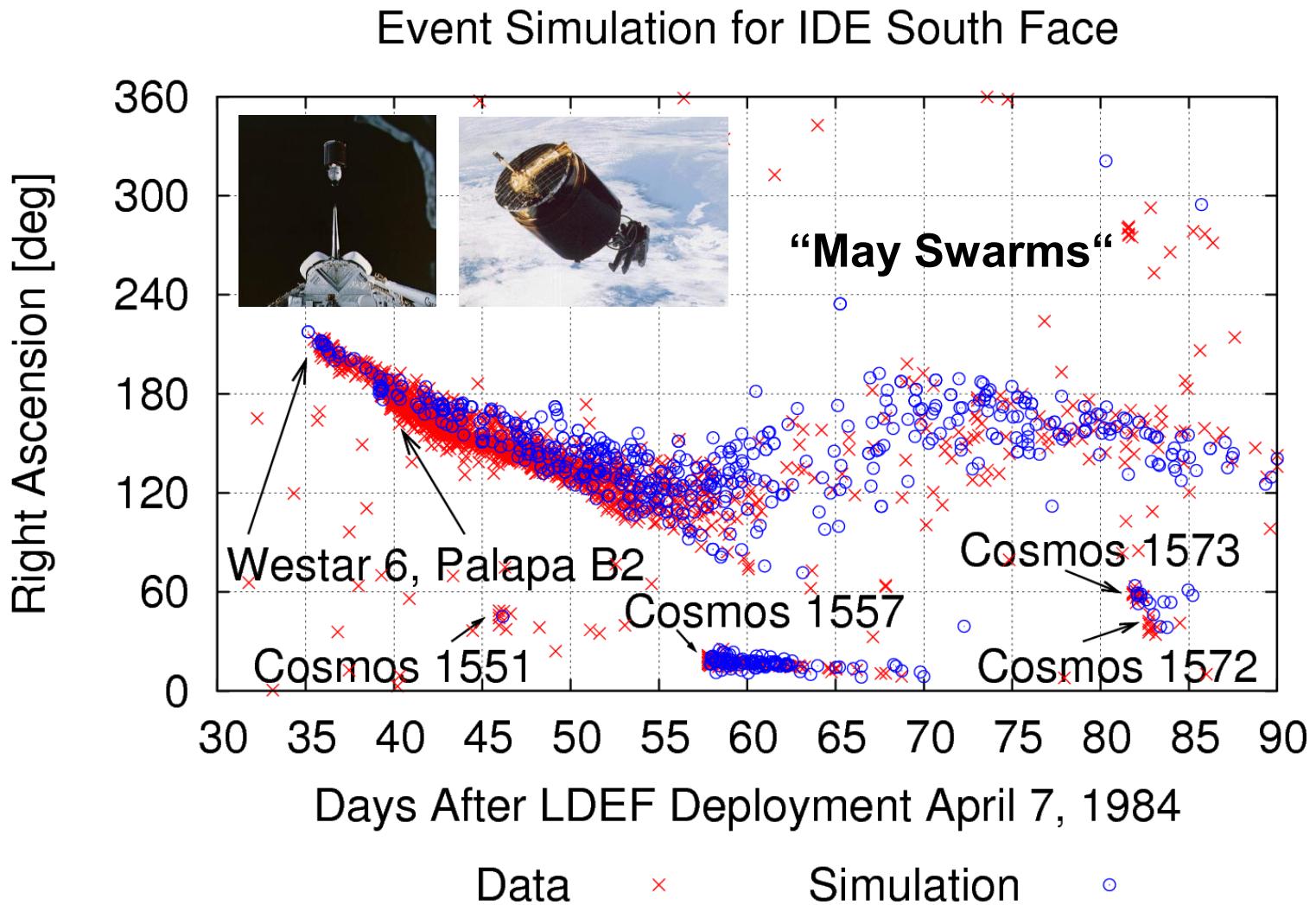


[1] Krisko, P., Vavrin, A., Anz-Meador, P., NASA orbital debris large-object baseline populations in ORDEM 3.0, 64th International Astronautical Congress 2013 (IAC 2013), September 23 - 27, 2013, Beijing, China, paper IAC-13-A6.P9.

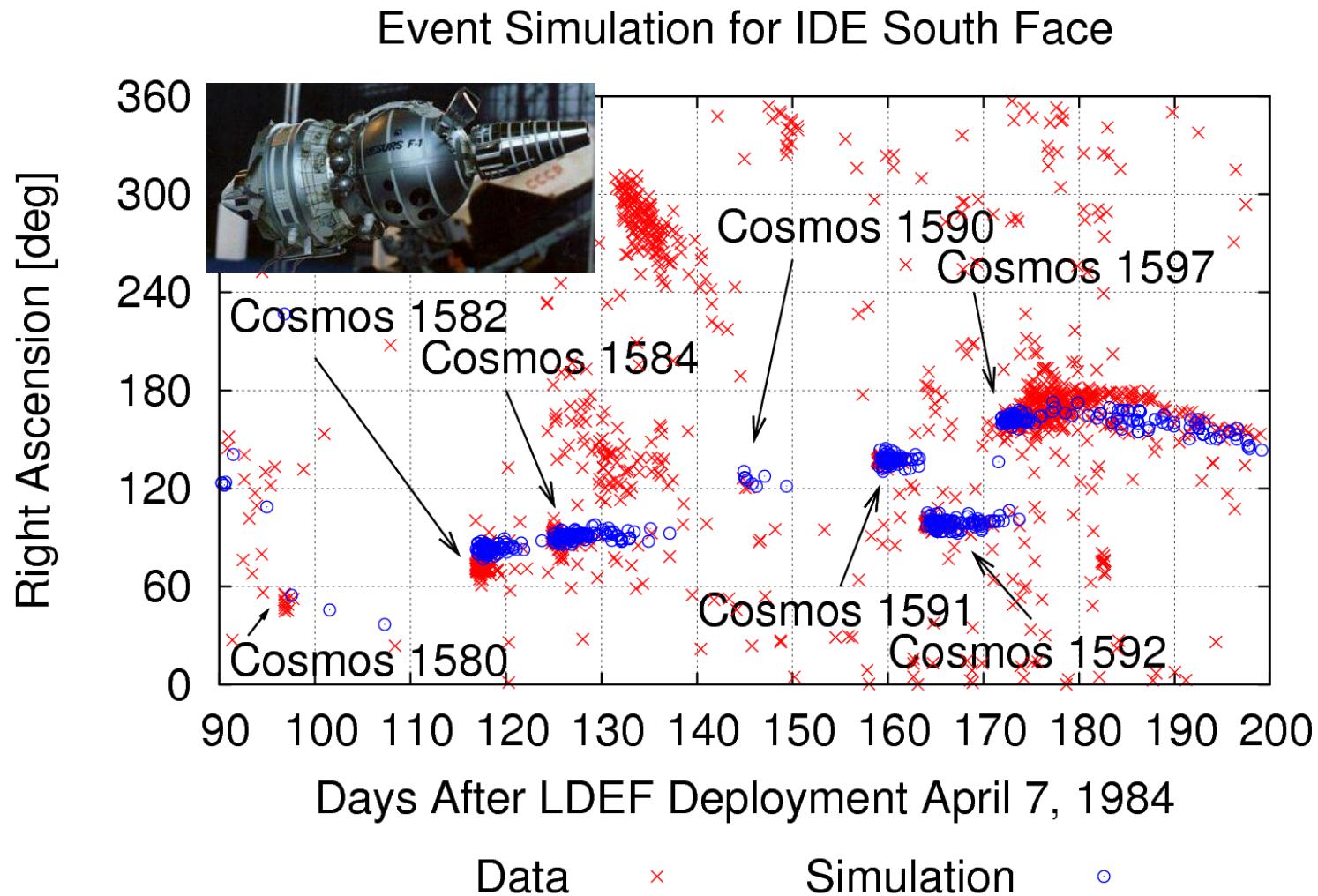
Spatial Density (2016)



Validation of the Small Particle Size Regime (1)



Validation of the Small Particle Size Regime (2)



Size Distribution LEO

