

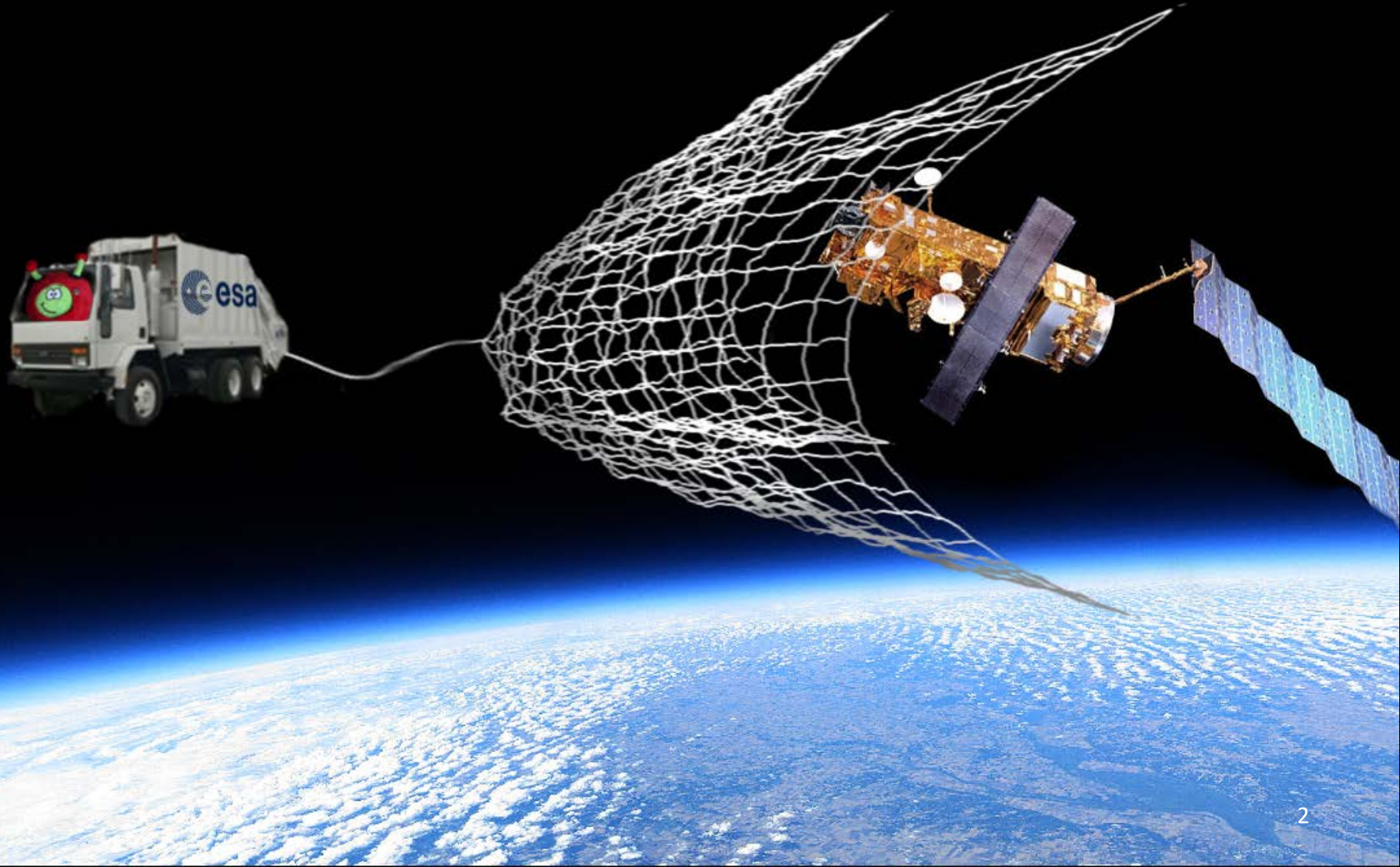
Net and Ejector

for Active Debris Removal
and Tools for Their Design

Wojciech Gołębiowski
SKA Polska



e.deorbit

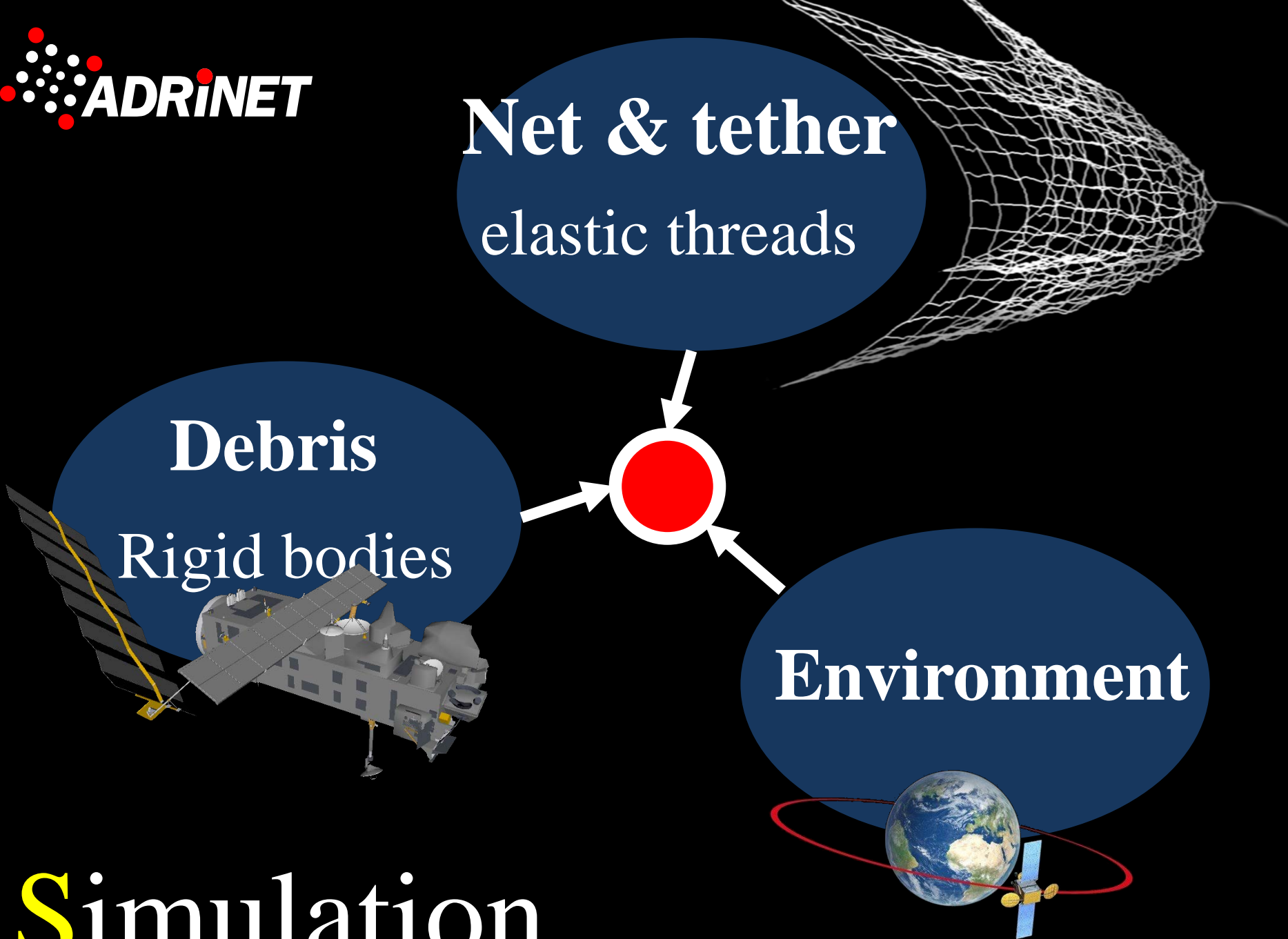


Net & tether
elastic threads

Debris
Rigid bodies

Environment

Simulation



Cosserat rods

contacts & groups

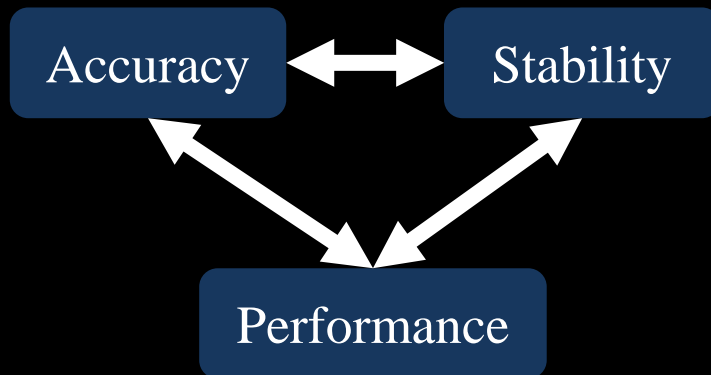
semi-implicit Euler

non-linear materials

Python scripting

multiplatform

GUI





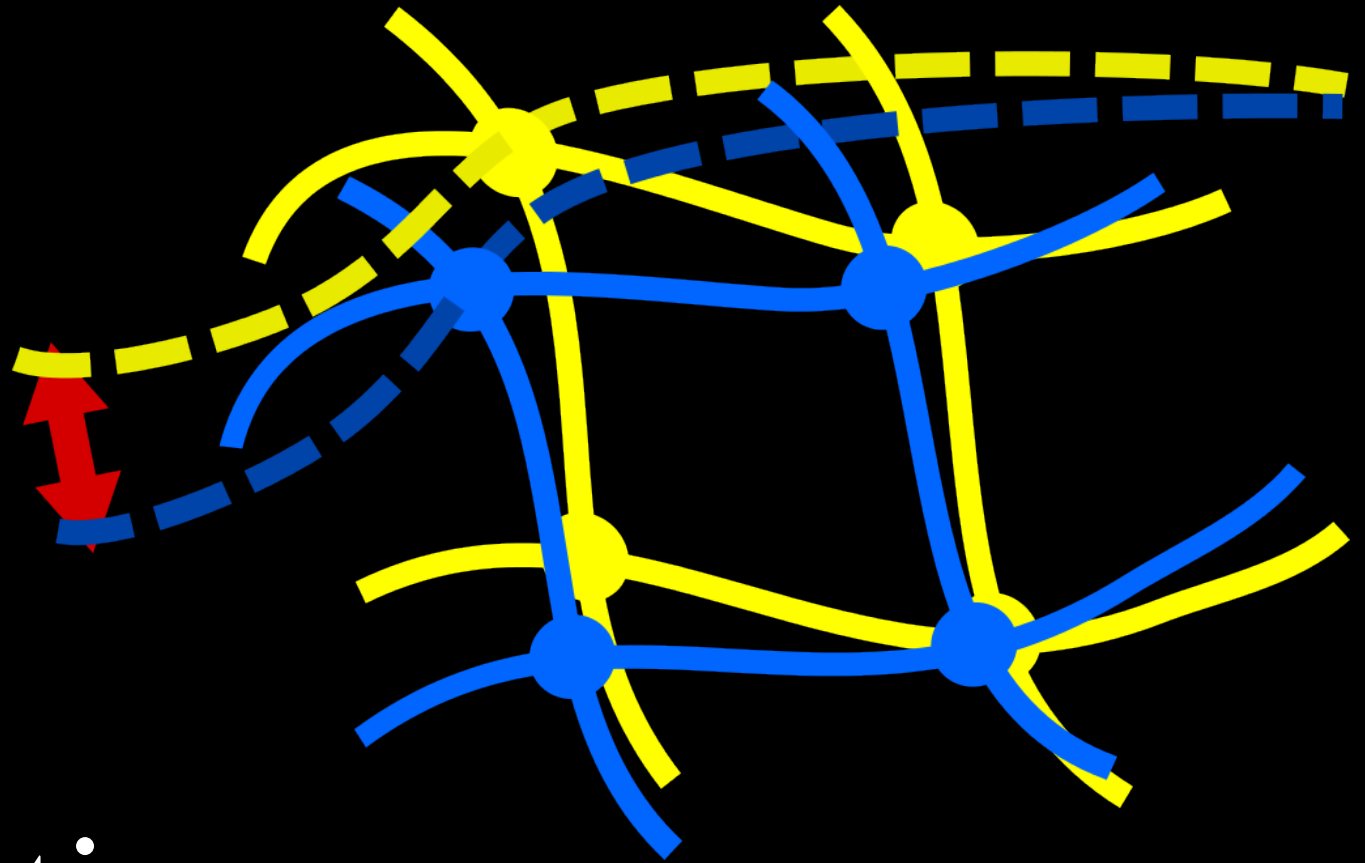
Simulator GUI



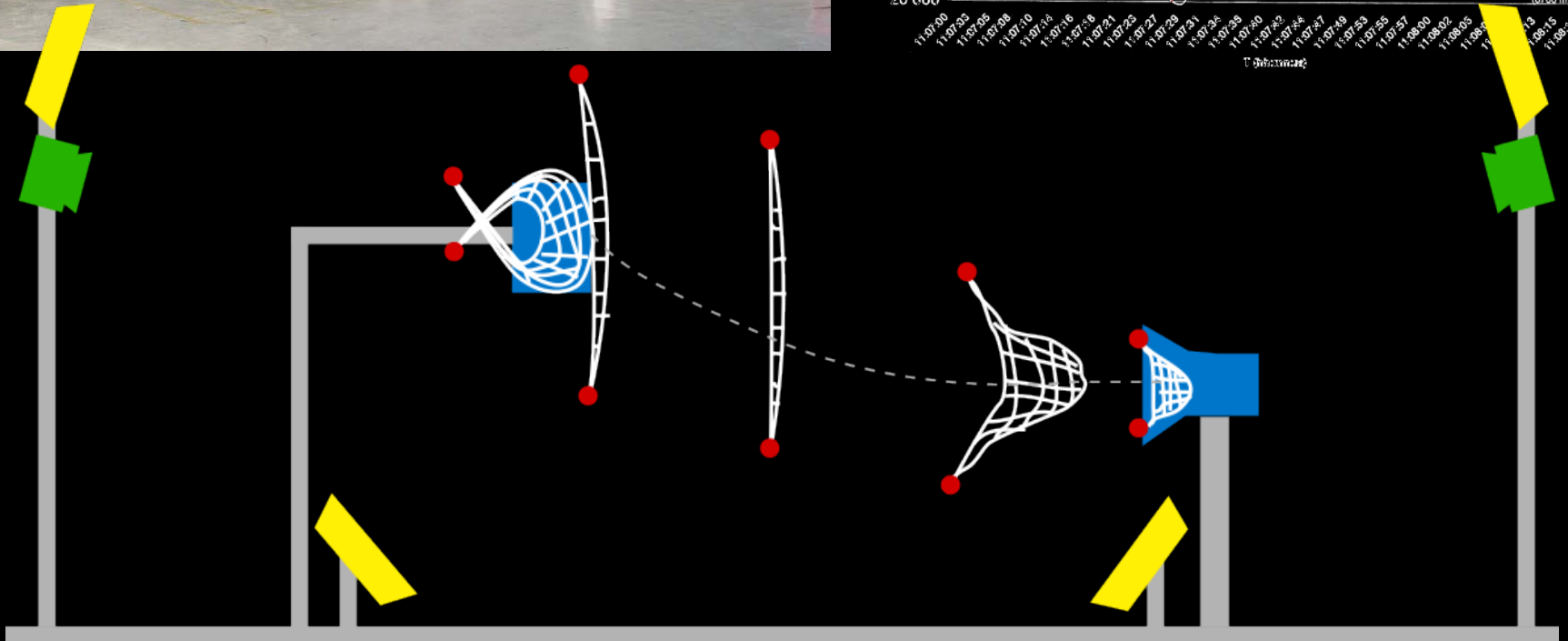
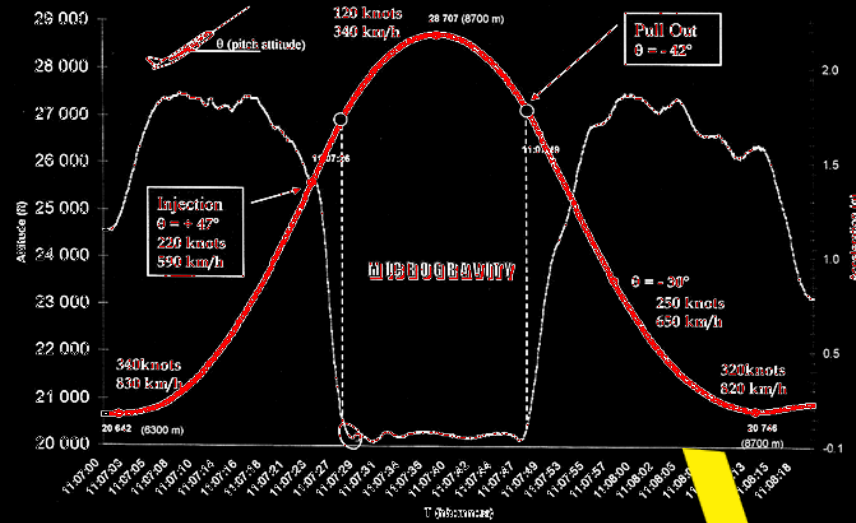
Full **s**cale **s**imulation

experiment – simulation

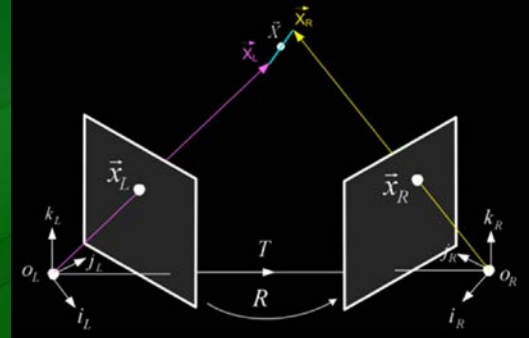
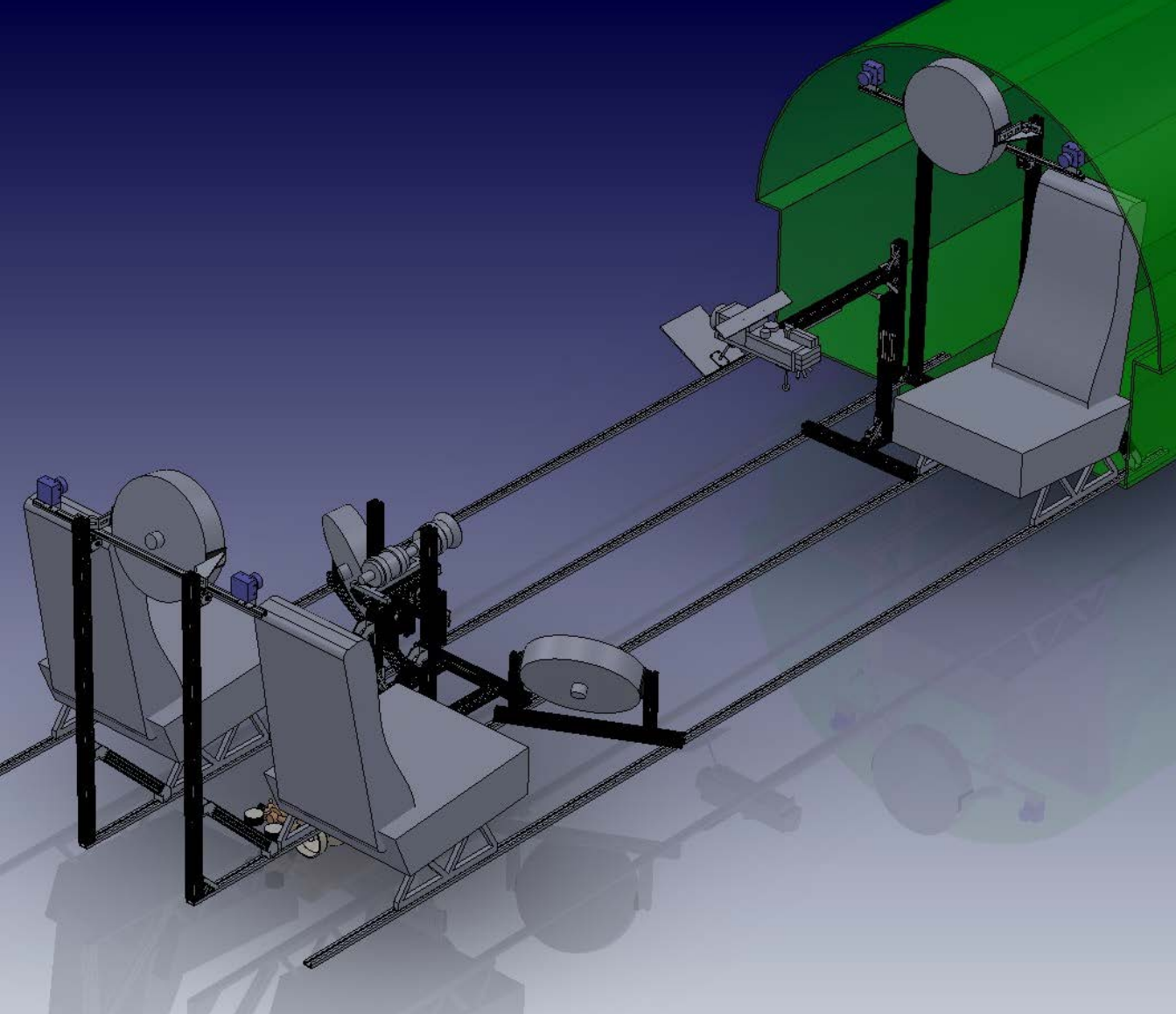
= error



Validation



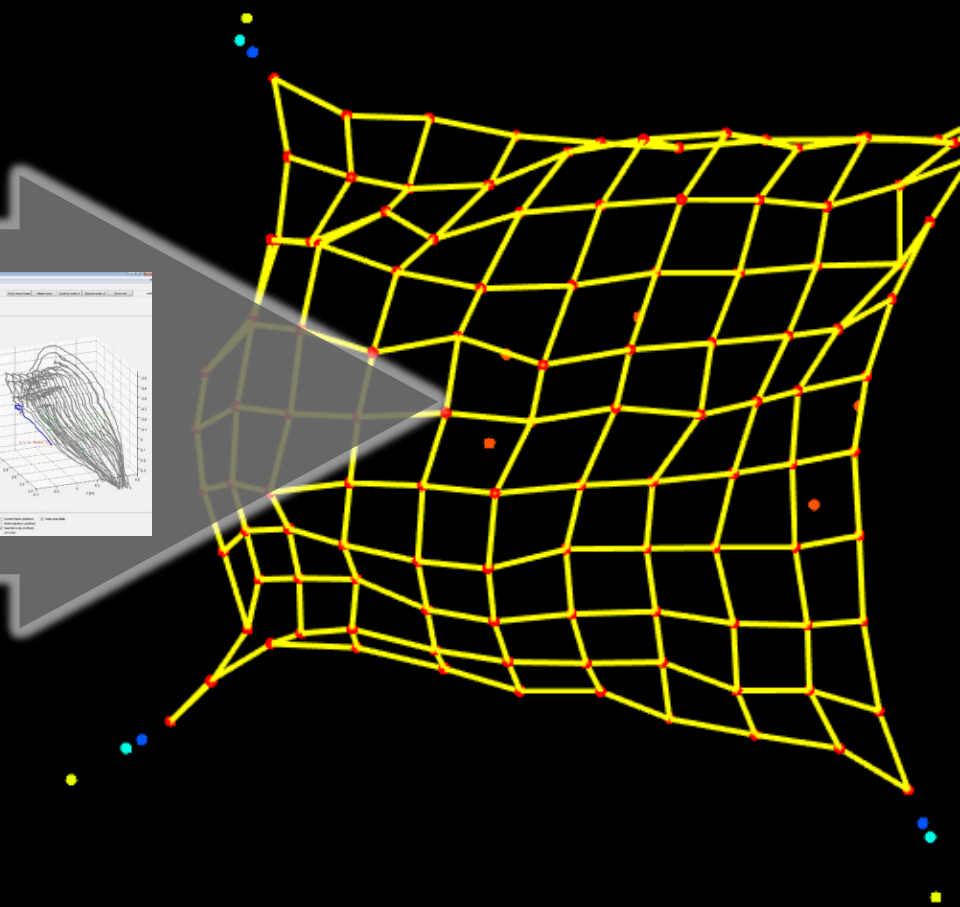
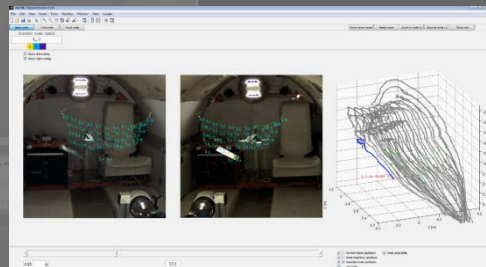
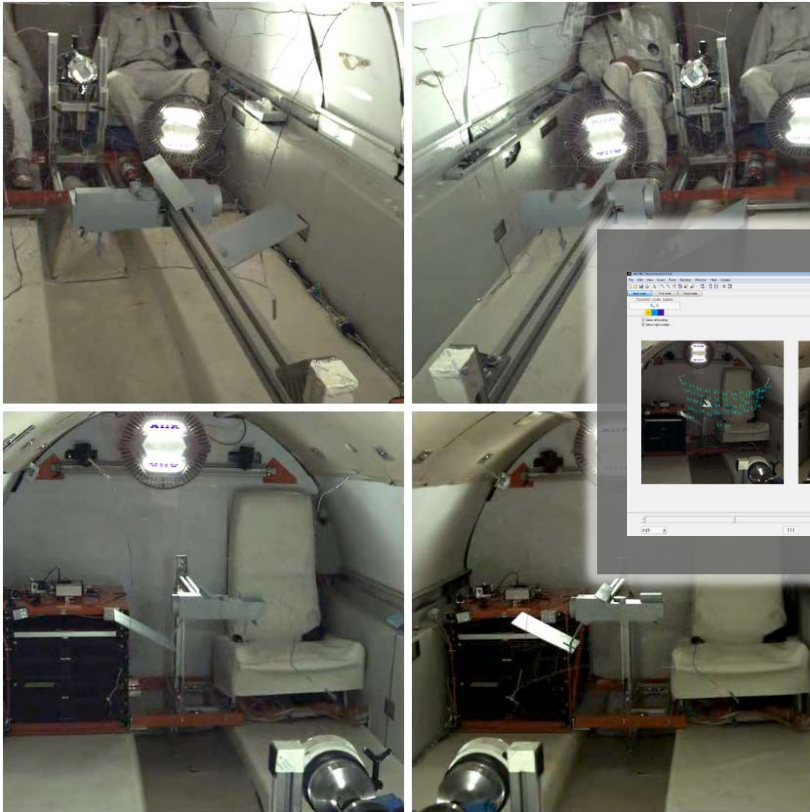
Experiment scheme



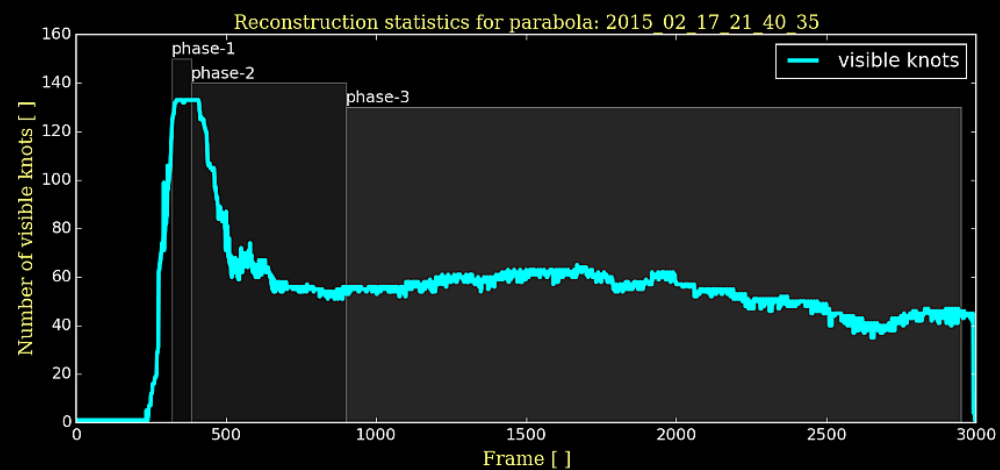
$2048\text{px} \times 2048\text{px} \times 175 \text{ fps} = 700 \text{ MB/s}$

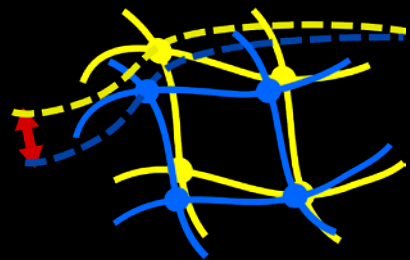


Flight

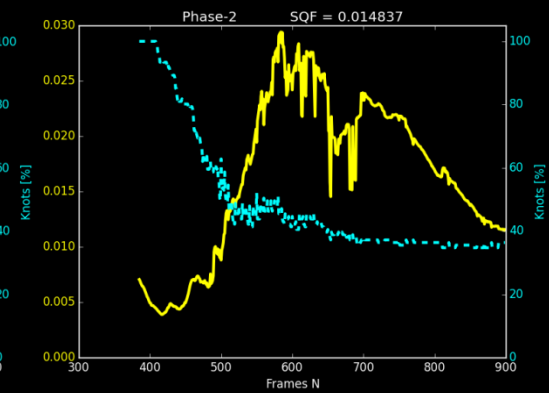
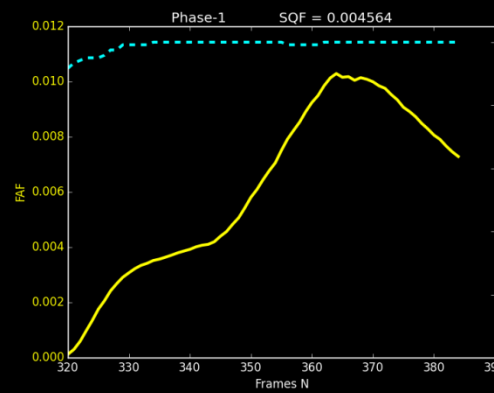


Reconstruction





Validation





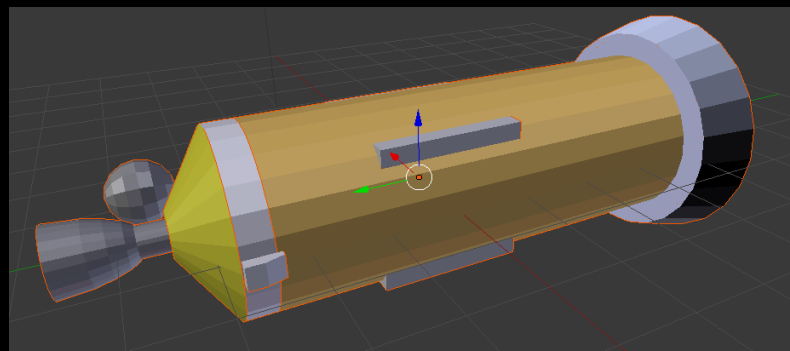
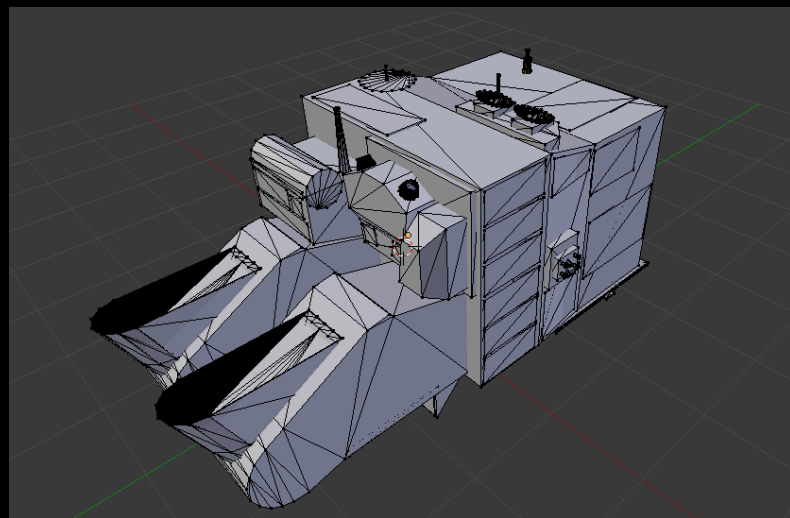
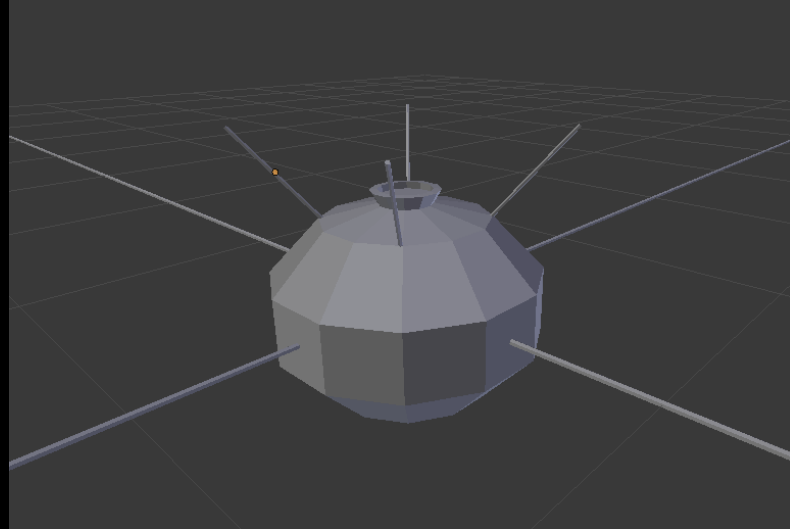
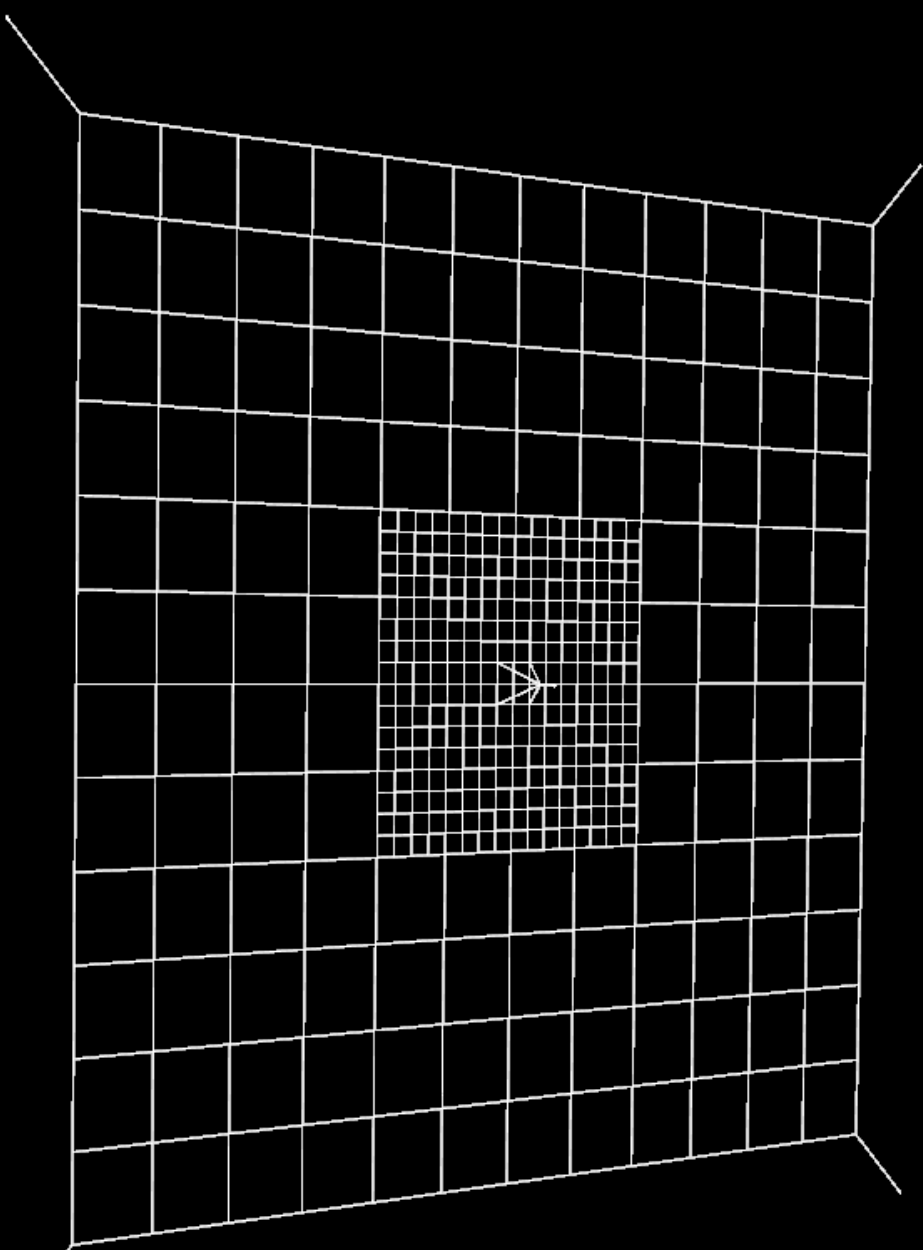
Orbit cleaning services

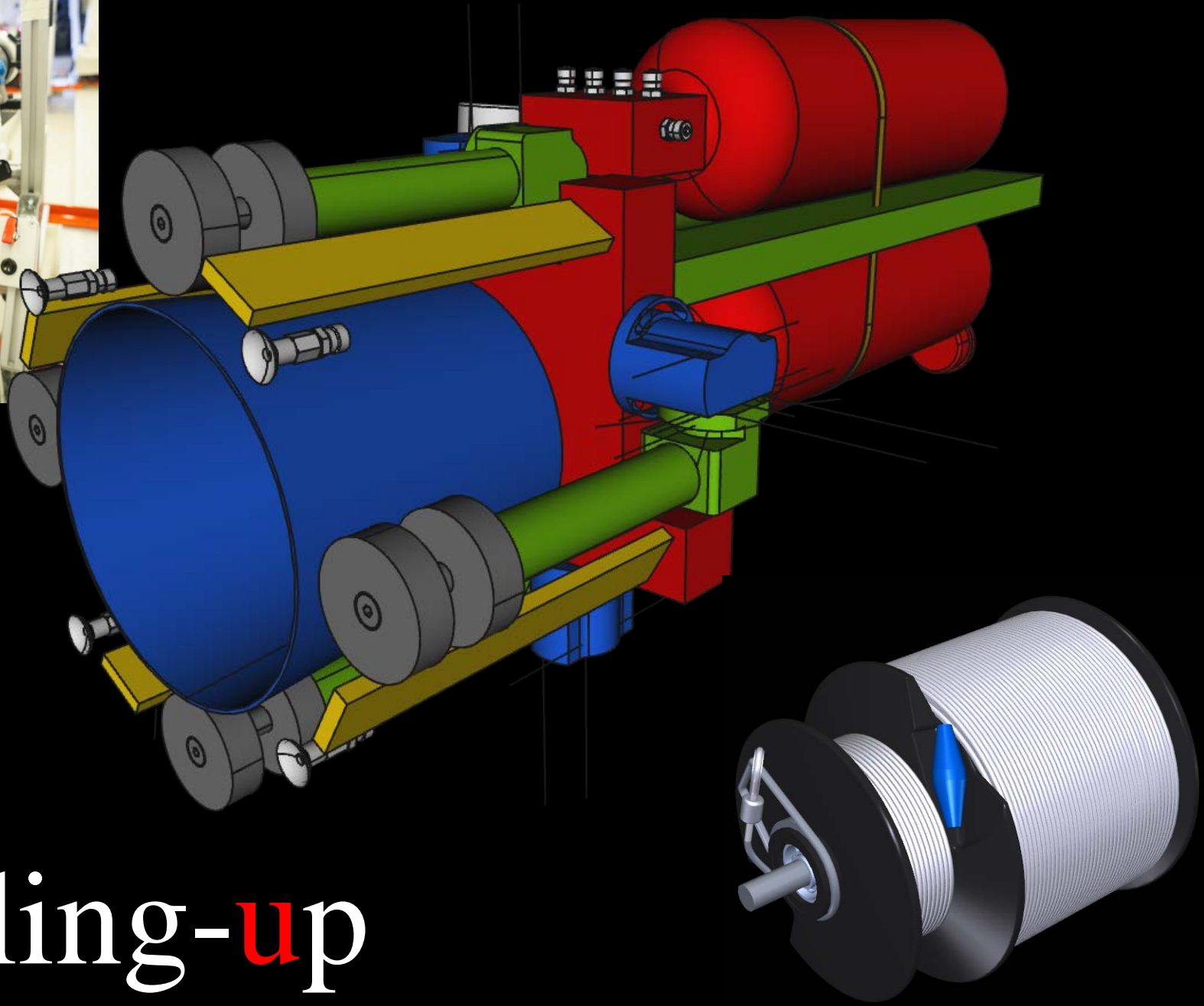
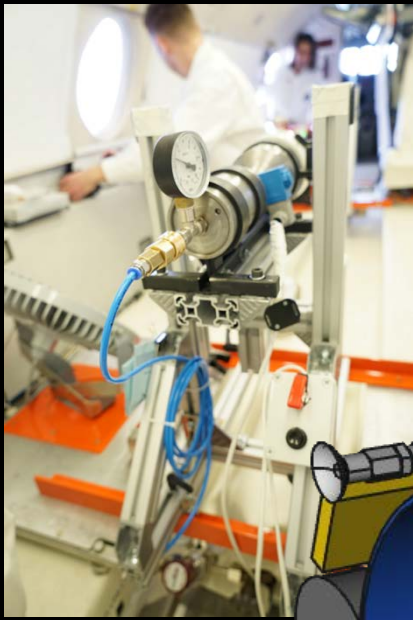
Scaling-up

Demonstration
& Validation

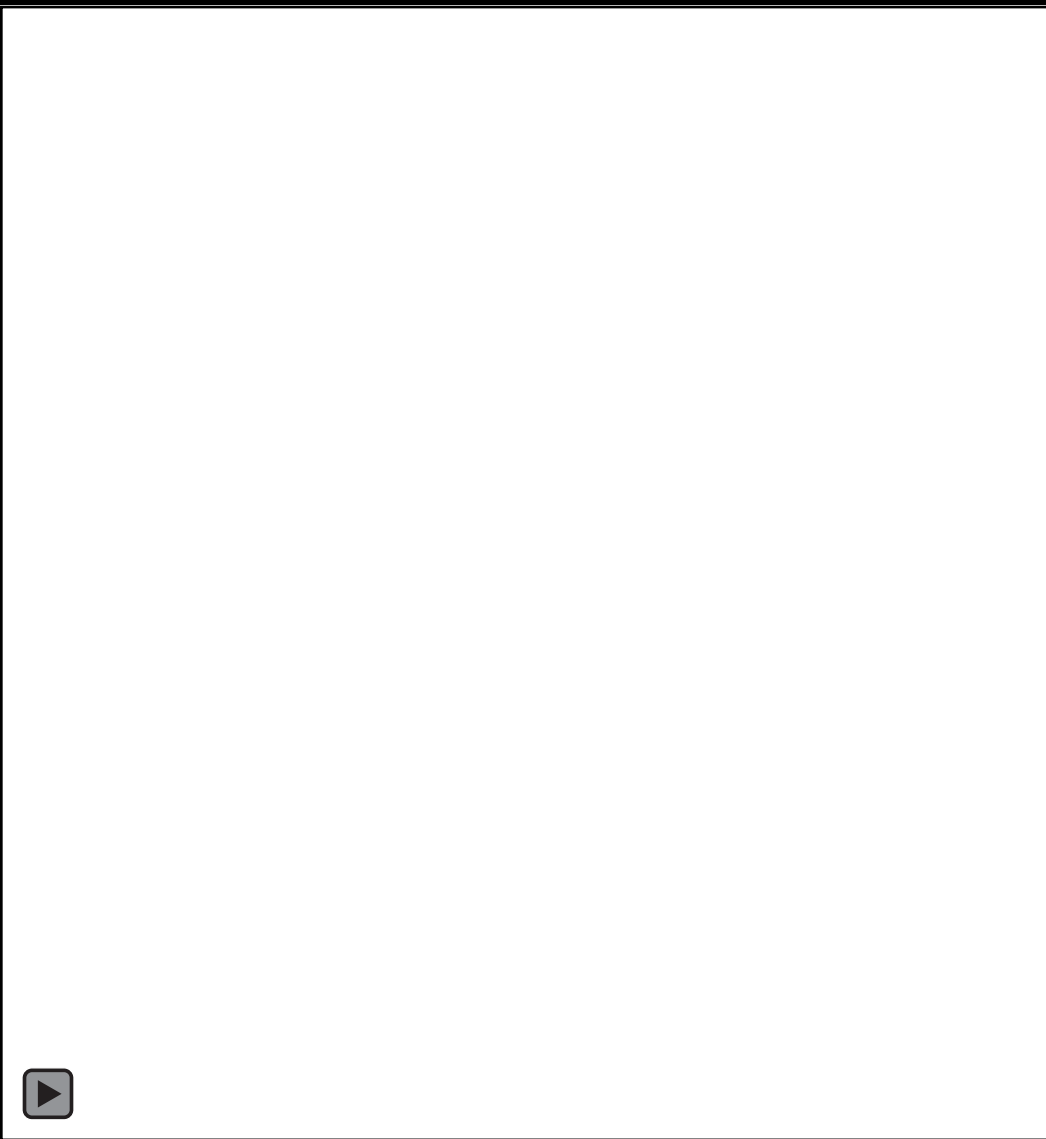
Business
plan

Scaling-up

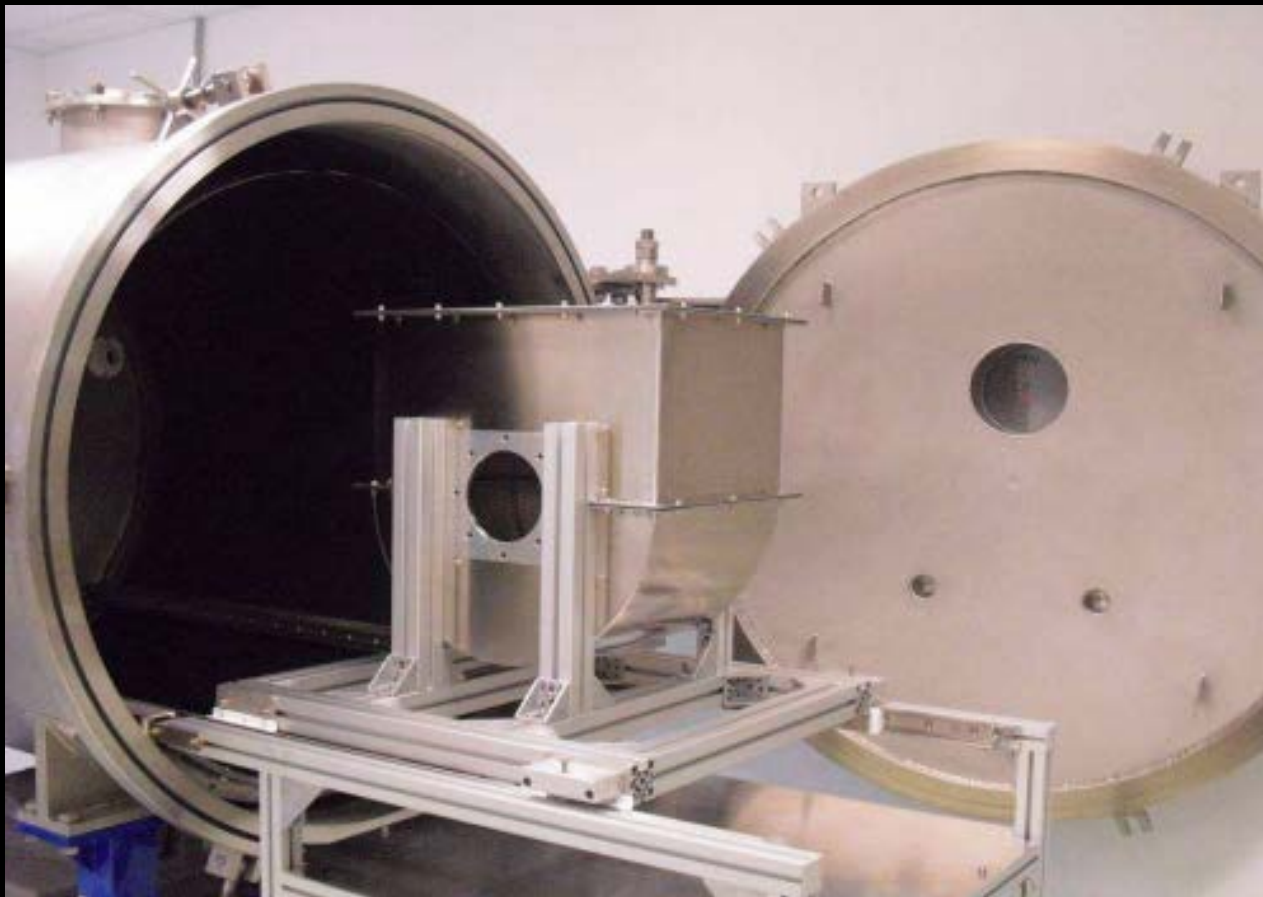




Scaling-up



Demonstration



ThalesAlenia
A Thales / Finmeccanica Company *Space*

Validation

ADR1EN



Stam

SKA Polska

optiNav

Large System
Integrators

Satellite
Manufacturers



Launchers

Spaceflight
companies



Space Agencies

Governments

Satellite operators

Business plan



H2020 project (GA n. 666758),
financed by the EC
through the SME Instrument.



www.ska-polska.pl
w.golebiowski@ska-polska.pl