

Olle Norberg

Director of IRF

ACCESS TO SPACE

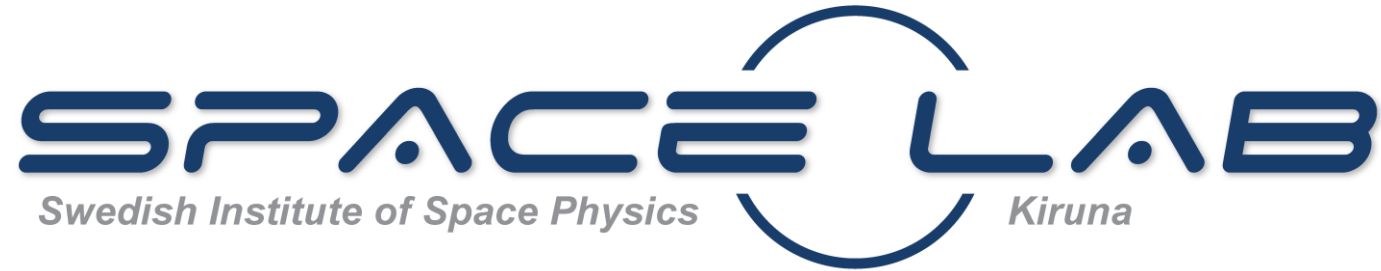
IRF SPACELAB

Olle Norberg – 2021-12-01

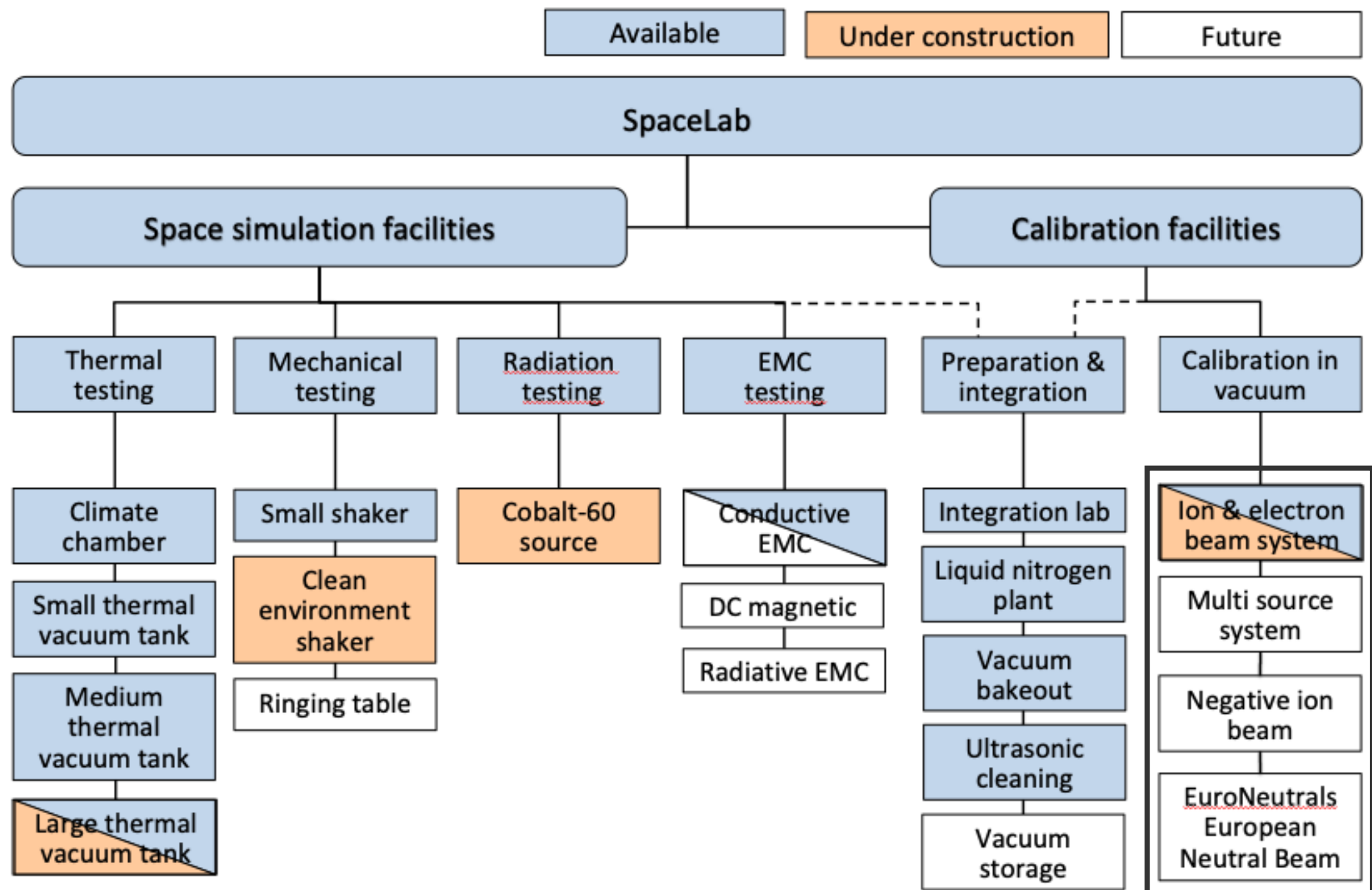


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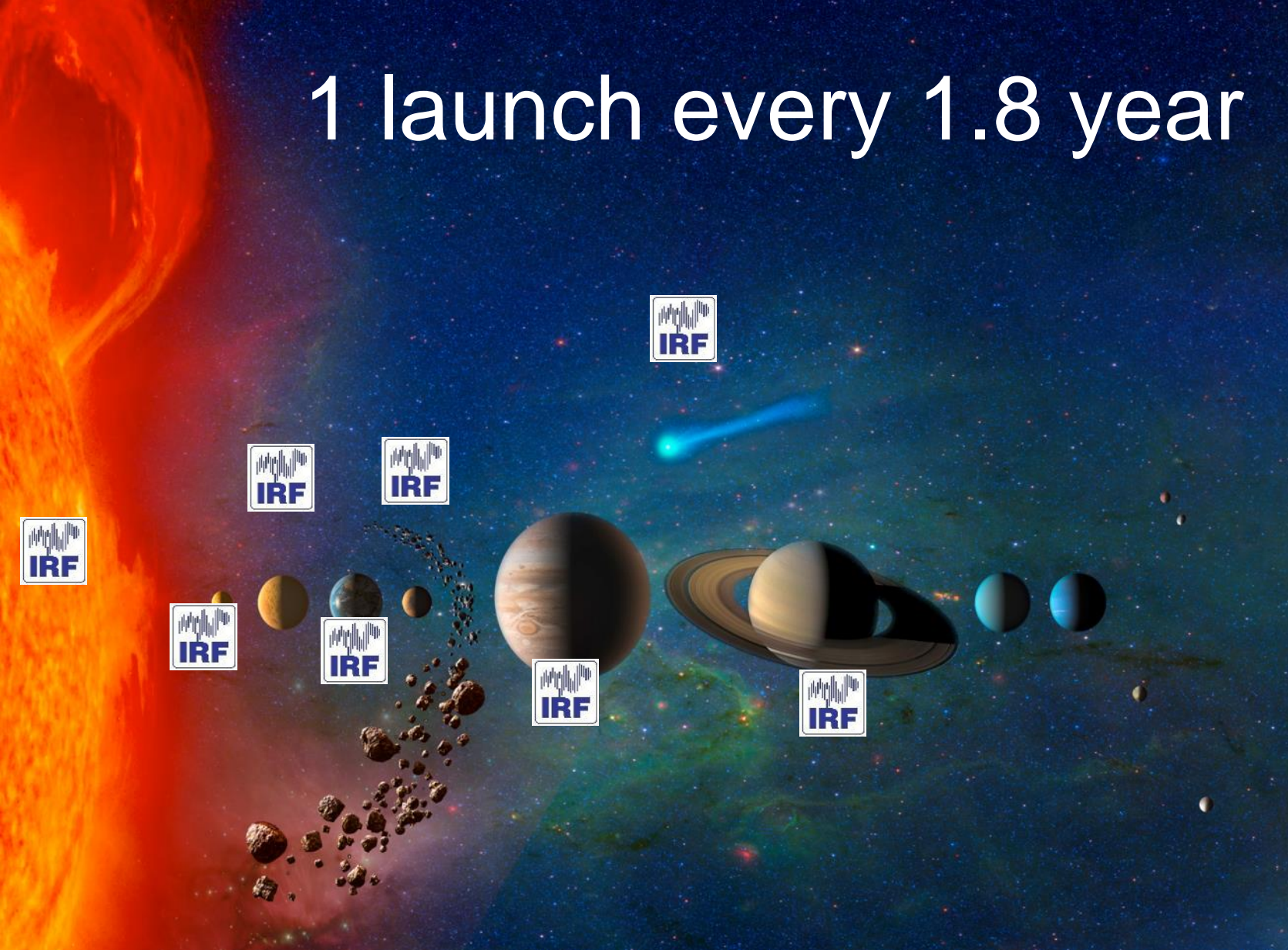


- What is SpaceLab?
 - A facility for development, testing, and qualification of space systems, subsystems, instruments, and components.
 - SpaceLab serves academia and research (for example IRF, LTU, KTH) as well as start-ups and commercial customers.
 - Collaboration is foreseen with Esrangle in connection to the SmallSat Express project, with users in need of test and qualification infrastructure near the launch site.

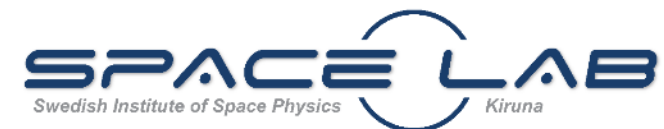


1 launch every 1.8 year

JUICE

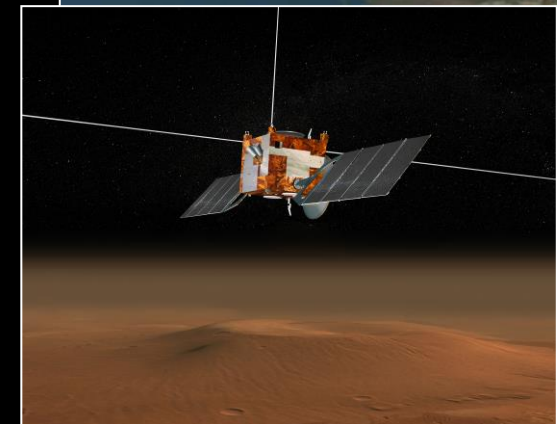
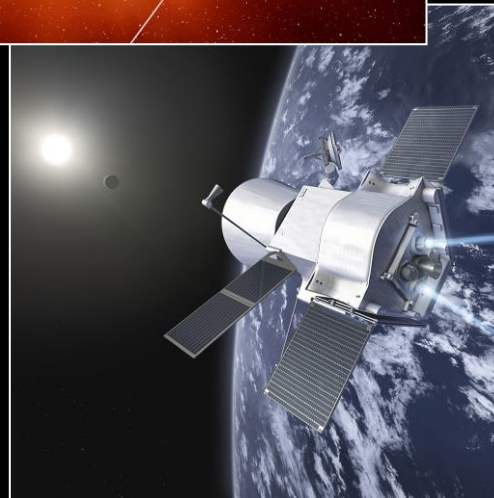
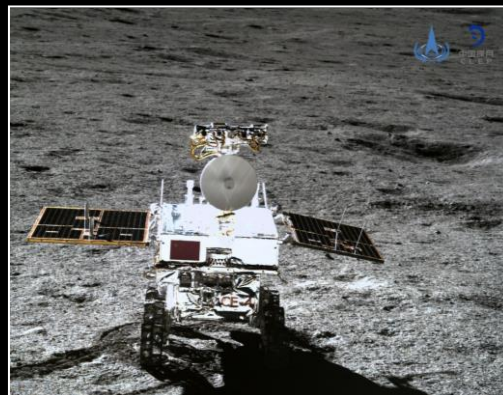
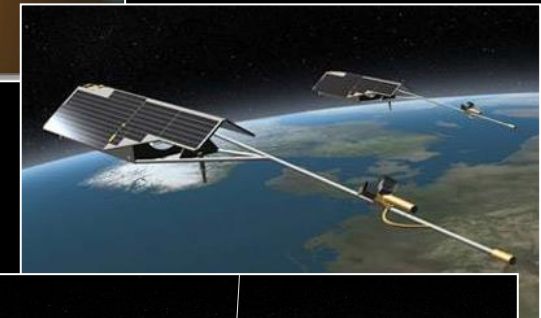
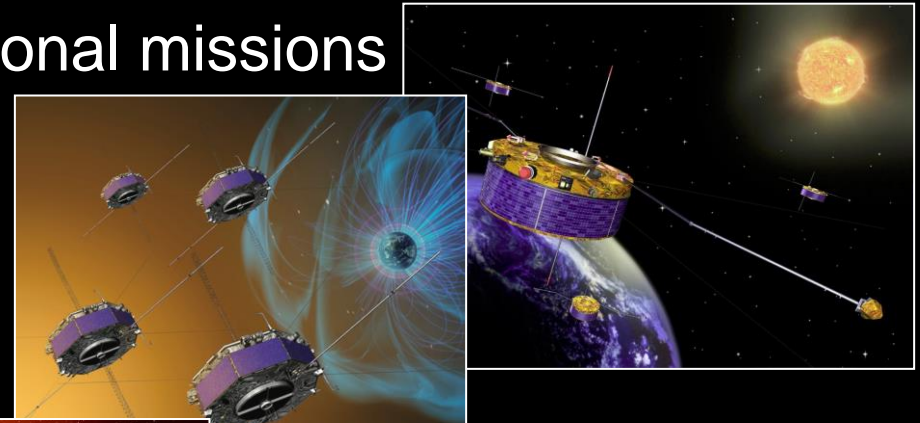


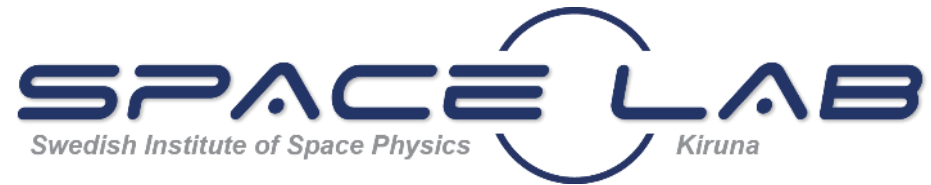
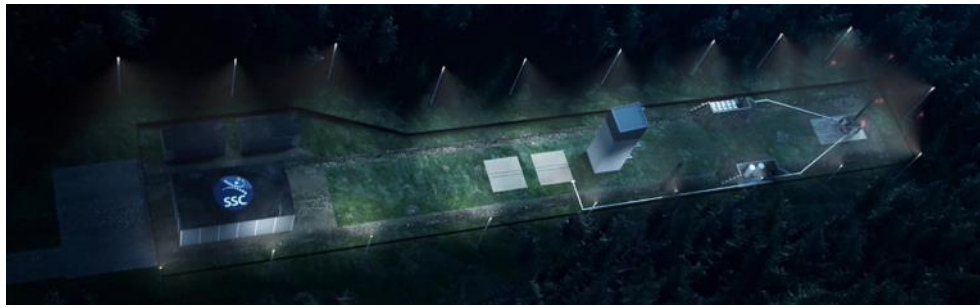
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Current missions

- Currently 16 instruments on operational missions
 - 4x ESA Cluster
 - 4x NASA Magnetospheric Multi Scales (MMS)
 - 3x ESA Swarm
 - 1x ESA Mars Express
 - 2x ESA BepiColombo
 - 1x CNSA Chang'e 4
 - 1x ESA Solar orbiter





Kiruna Airport

5km

36km



Orbit



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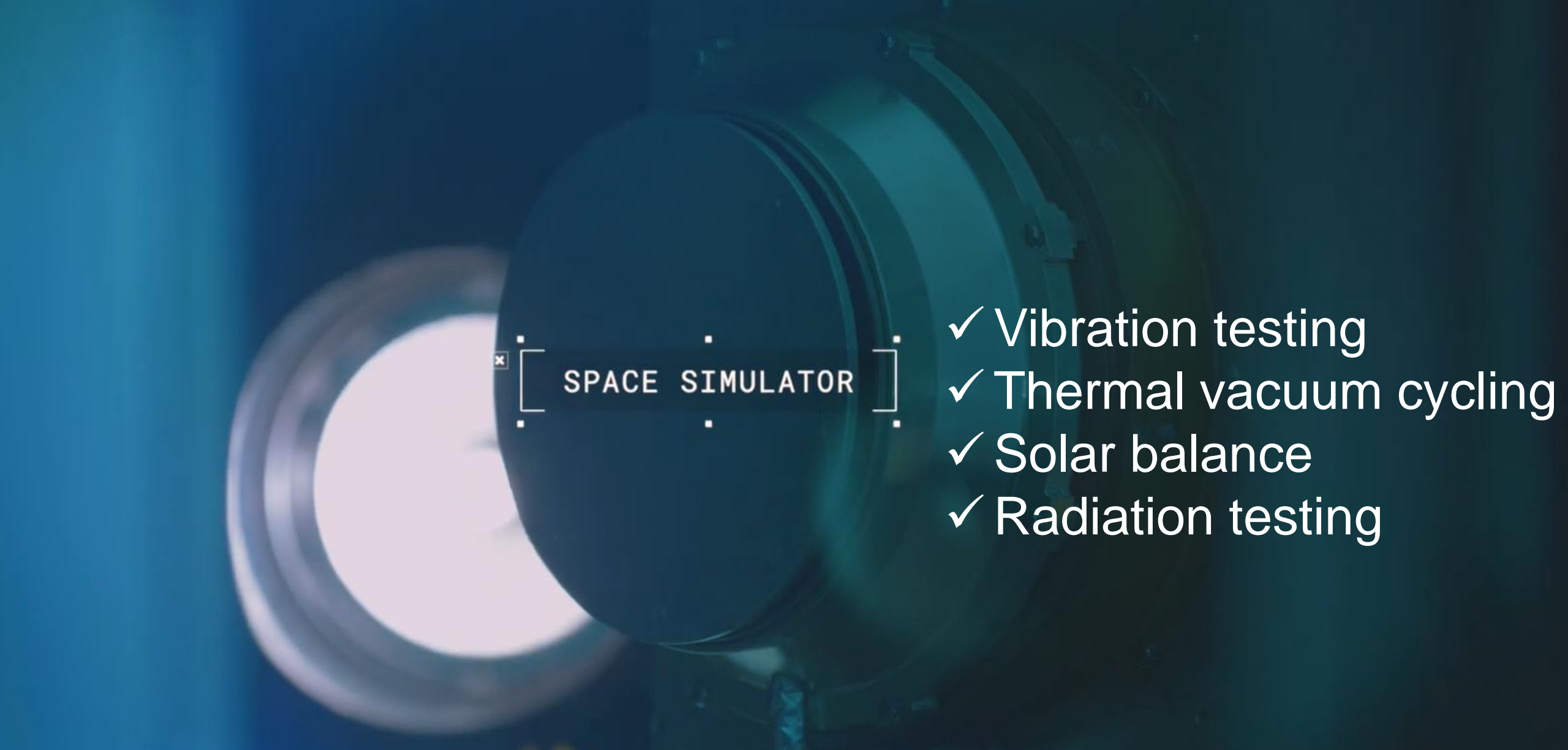


3 out of 10
cubesats fail
prematurely



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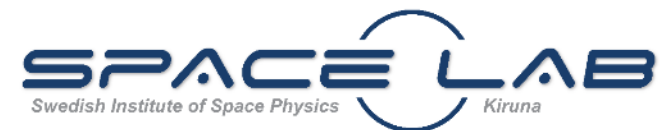


SPACE SIMULATOR

- ✓ Vibration testing
- ✓ Thermal vacuum cycling
- ✓ Solar balance
- ✓ Radiation testing



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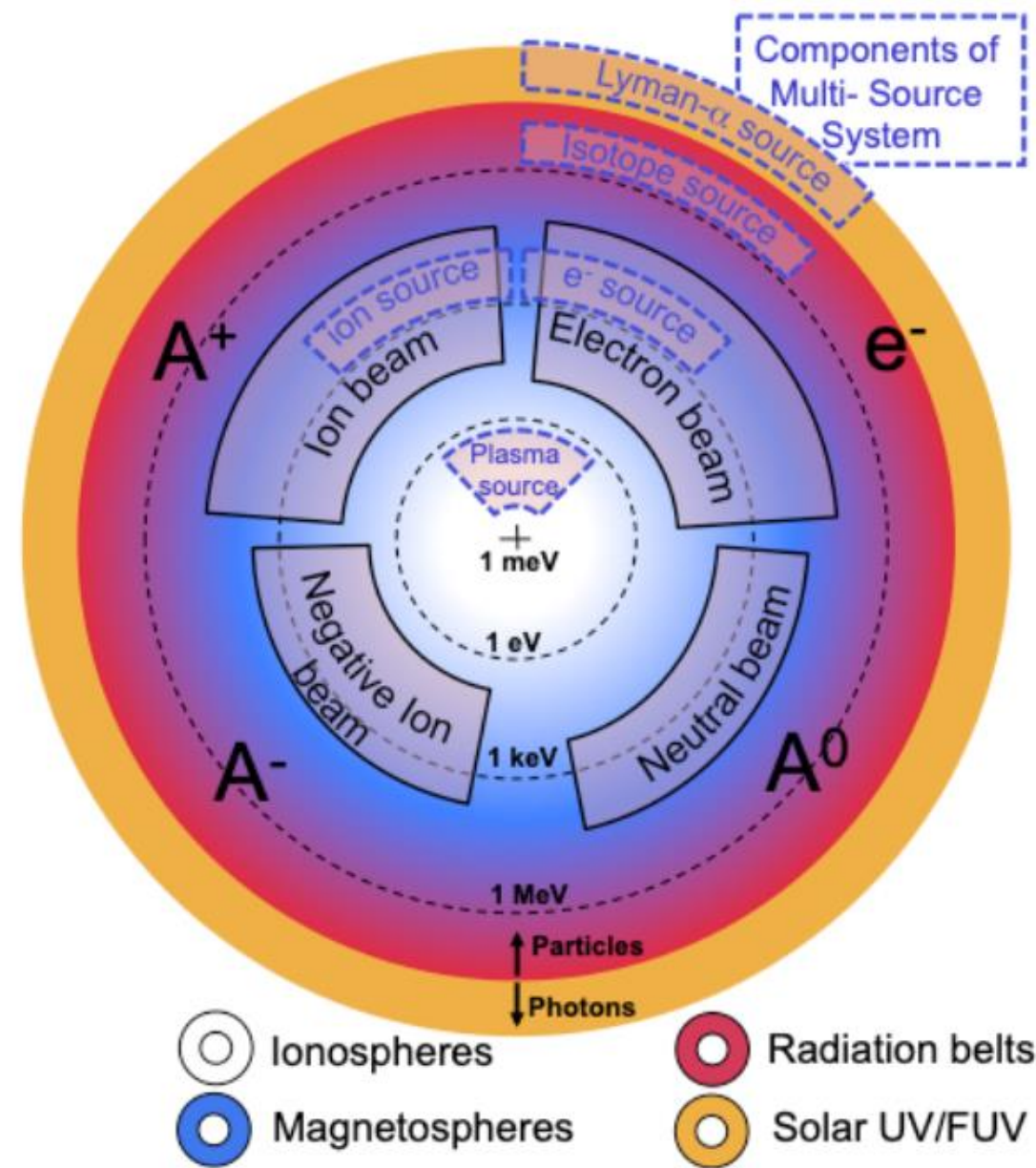
Facility development



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Future facility development: SpacePlasmaLab

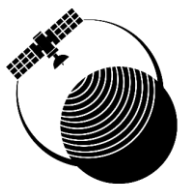




RIT2021



Swedish
Research
Council



Kvarken Space Center

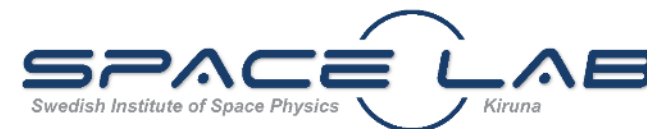


Kempestiftelserna

Stiftelserna J.C. Kempes och Seth M. Kempes
minne



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TAKE THE STEP OUT INTO SPACE, WITH US!

— SPACE ENVIRONMENTAL TESTING —



SPACE LAB
Swedish Institute of Space Physics Kiruna



SPACELAB.IRF.SE

Norrskensprognos!

- We are ready test the IRF Aurora alert system now.
- Sign up to be a beta tester and get aurora alerts by email.
- Sign up sheet at top of the Aula
- Online participants, email yamau@irf.se to sign up

www (www@irf.se) <aurora-alerts@irf.se>

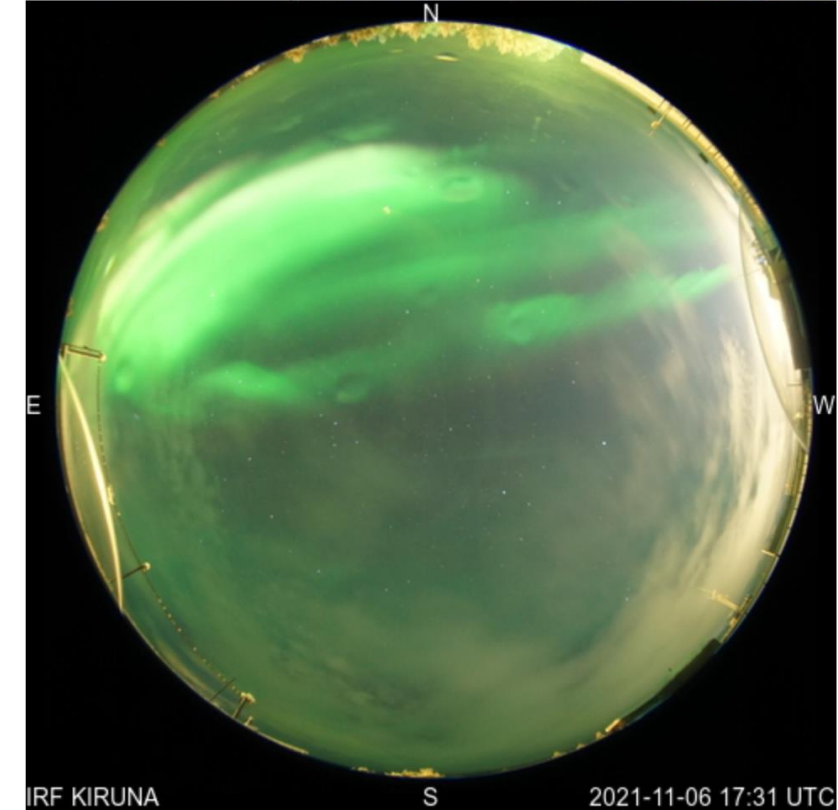
2021-11-06 at 18:32

To: aurora-alerts@irf.se

Reply-To: www@irf.se

Strong aurora is detected at Kiruna camera

2021-11-06 17:31 UTC Strong aurora is detected at Kiruna camera, see: [IRF Allsky-Camera](#)



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