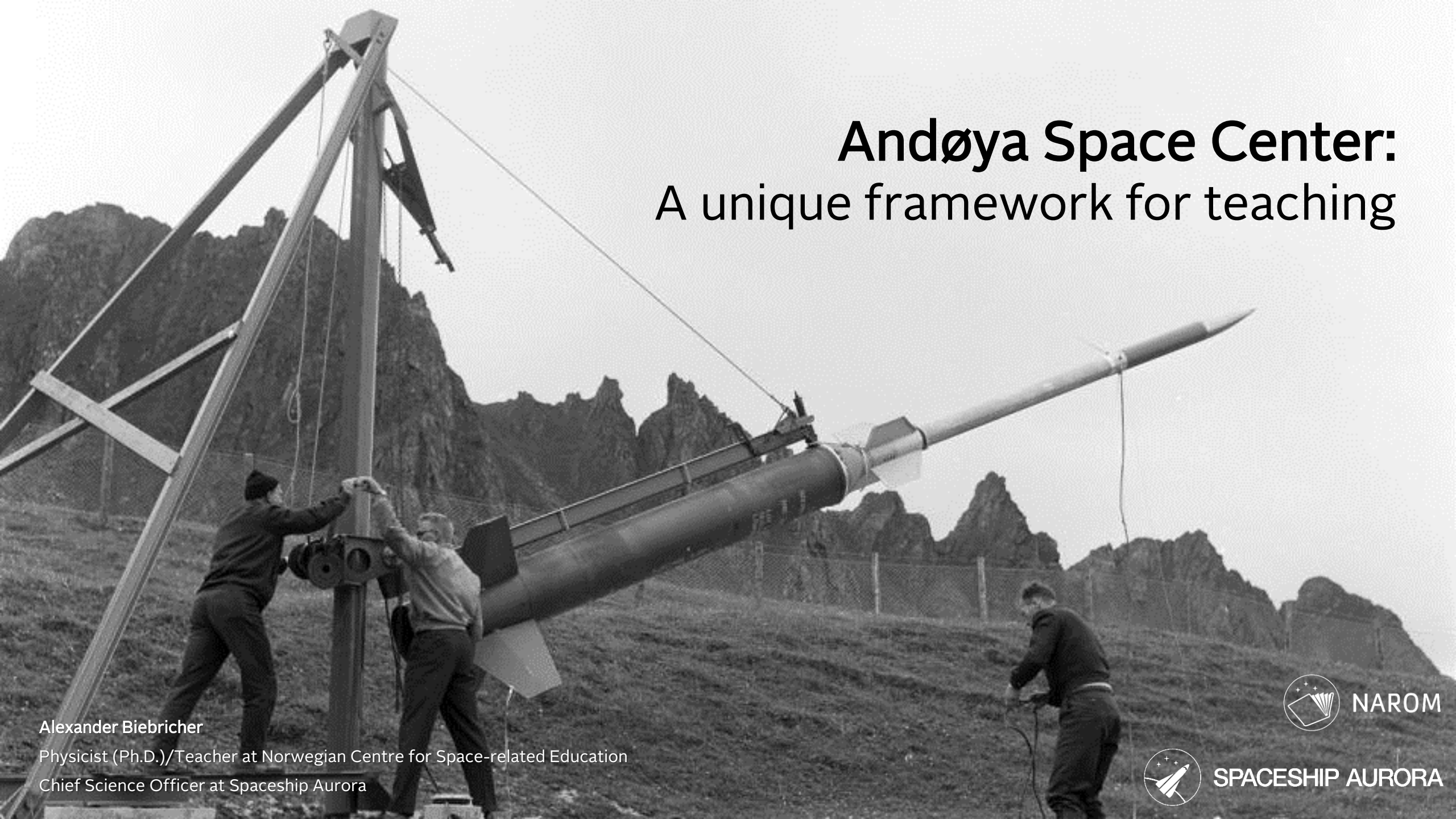


Andøya Space Center:
A unique framework for teaching

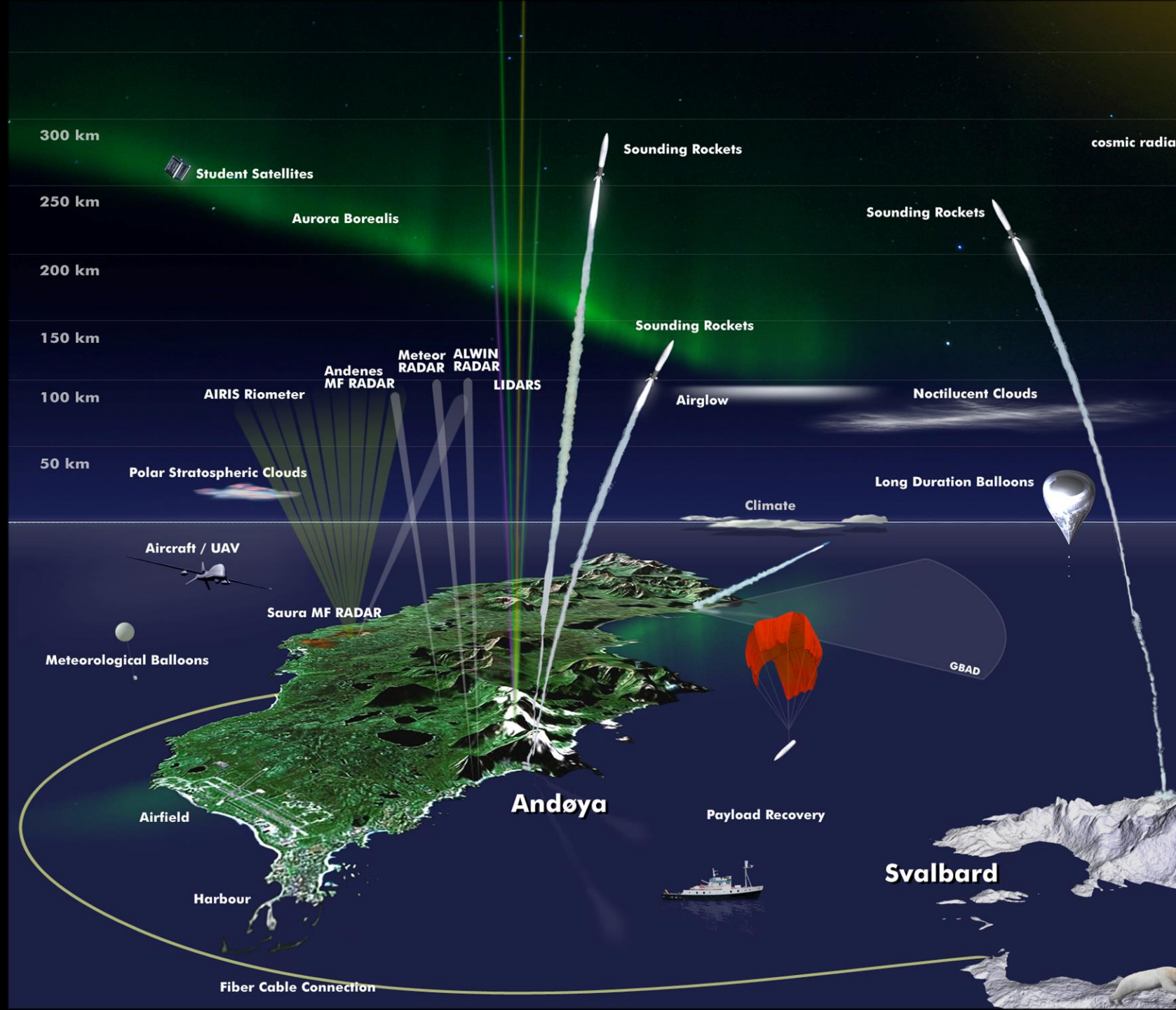
Alexander Biebricher
Physicist (Ph.D.)/Teacher at Norwegian Centre for Space-related Education
Chief Science Officer at Spaceship Aurora

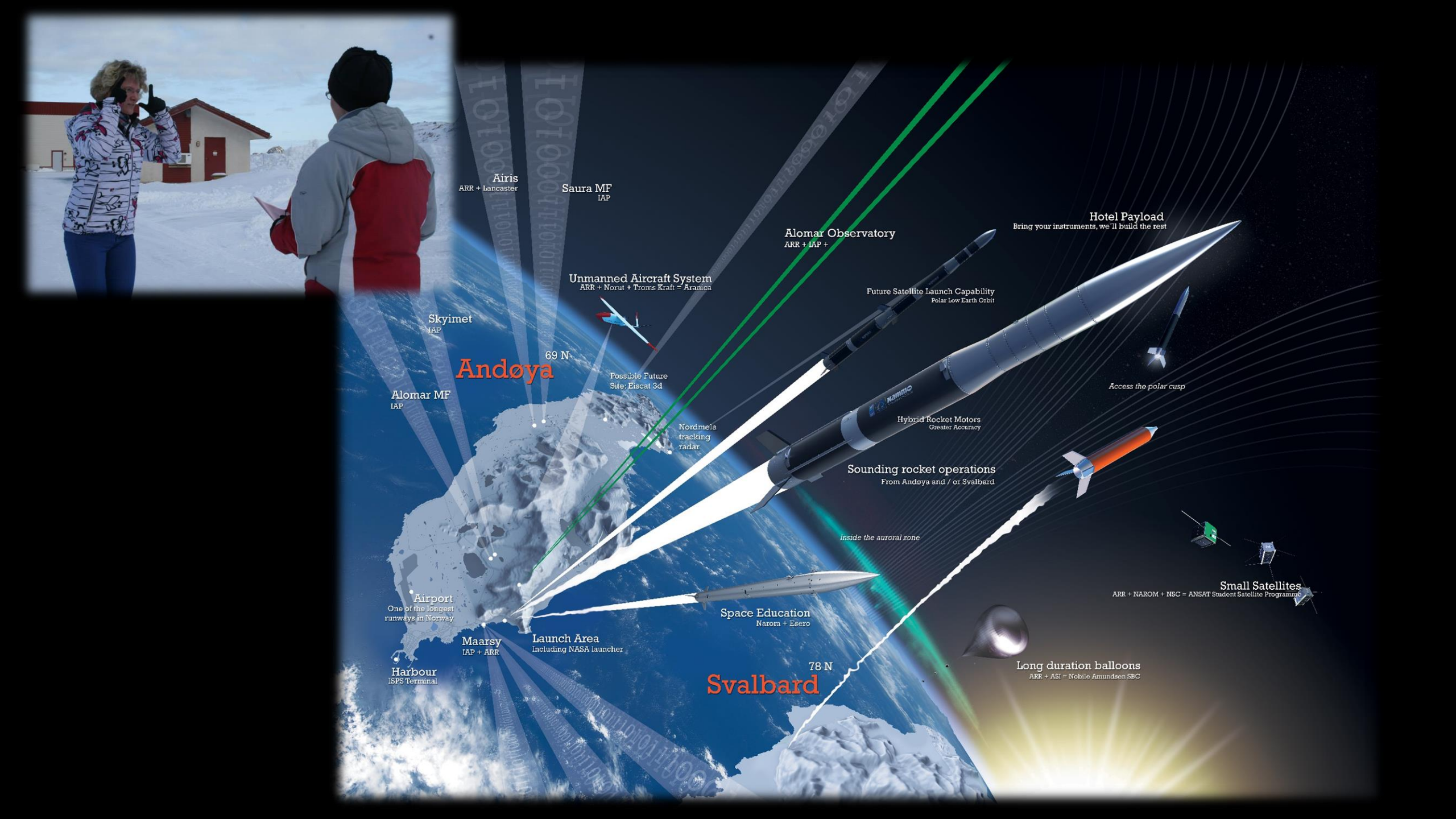
NAROM

SPACESHIP AURORA

ANDØYA SPACE CENTER

- Rocket operations
- Rocket payload development
- Technology testing
- Ground-based instrumentation
- Scientific balloons
- Unmanned aerial systems




Airis
ARR + Lancaster
Saura MF
IAP
Alomar Observatory
ARR + IAP +
Hotel Payload
Bring your instruments, we'll build the rest
Unmanned Aircraft System
ARR + Norut + Troms Kraft = Aranica
Future Satellite Launch Capability
Polar Low Earth Orbit
Skyimet
IAP
69 N
Andøya
Possible Future
Site: Eiscat 3d
Alomar MF
IAP
Access the polar cusp
Hybrid Rocket Motors
Greater Accuracy
Nordmela
tracking
radar
Sounding rocket operations
From Andøya and / or Svalbard
Inside the auroral zone
Small Satellites
ARR + NAROM + NSC = ANSAT Student Satellite Programme
Airport
One of the longest
runways in Norway
Space Education
Narom + Esero
Maarsy
IAP + ARR
Launch Area
Including NASA launcher
Harbour
ISPS Terminal
78 N
Svalbard
Long duration balloons
ARR + ASI = Nobile Amundsen SBC

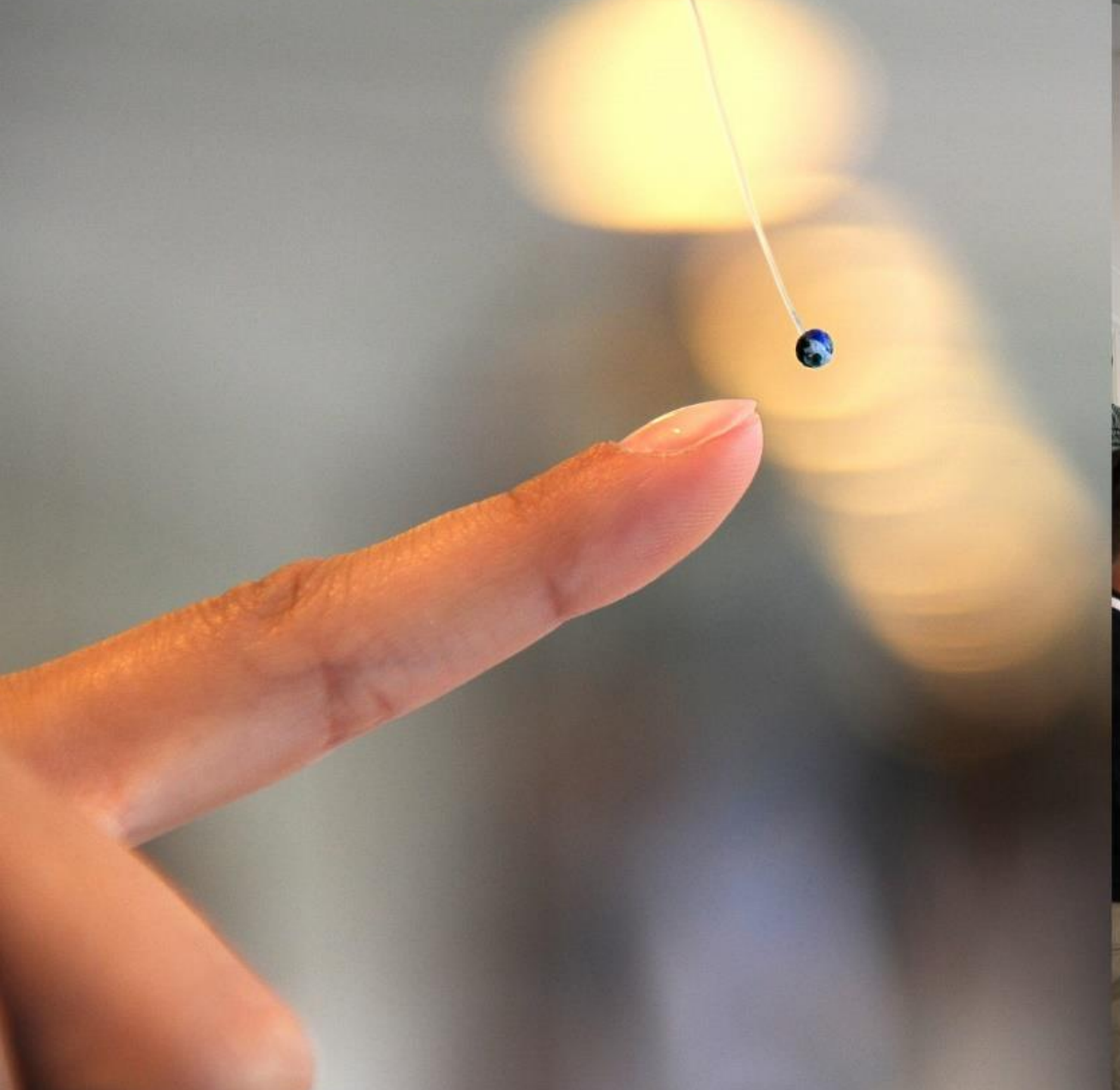
NASA

esa

AURORA skycam

Europe
Greenland
Greenland Sea
Barents Sea
Sea
ICELAND
NORWAY
SWEDEN
FINLAND
RUSSIA
ESTONIA
LATVIA
LITHUANIA
BELARUS
DENMARK
North Atlantic Ocean
North Sea
UNITED KINGDOM
IRELAND
NETHERLANDS
GERMANY
POLAND
UKRAINE
BELGIUM
LUX.
CZECH REPUBLIC
SLOVAKIA
MOLDOVA
FRANCE
SWITZ.
AUSTRIA
HUNGARY
ROMANIA
SLOVENIA
CROATIA
BOSNIA AND HERZEGOVINA
Serbia
BULGARIA
Black Sea
Bay of Biscay
PORTUGAL
SPAIN
ITALY
Adriatic Sea
ALB.
TURKEY
GREECE
Tyrrhenian Sea
Ionian Sea
Mediterranean Sea
MOROCCO
ALGERIA
TUNISIA
MALTA
Scale 1:19,500,000
Lambert Conformal Conic Projection, standart parallels 40°N and 56°N
300 Kilometers
300 Nautical Miles

”Det kändes som detta var the pinnancle of aurora science så ja, det var väldigt bra ämneskunskap. Vi fick även tillfälle att lyssna på varandra, både under våra föredrag, grupparbeten och sociala stunder. ”



SPACE CAMP
NASA Visitor Center
Space & Rocket Center
HUNTSVILLE, ALABAMA

ANDØYA
MISSION
CONTROL
ANDØYA
MISSION
CONTROL

MultiCop

MORABA
ESA astronaut, Adj. Prof. KTH
European Space Camp
Andenes, 30 June 2016
FAKULTET FOR NATURVITENSKAP OG TEKNOLOGI

I den norske romteknologi-industrien omsettes det om lag syv milliarder kroner hvert år, og aktiviteten øker kraftig. Bildet viser ALOMAR, et luftforskningsobservatorium på fjellet Ramnan utenfor Andenes.

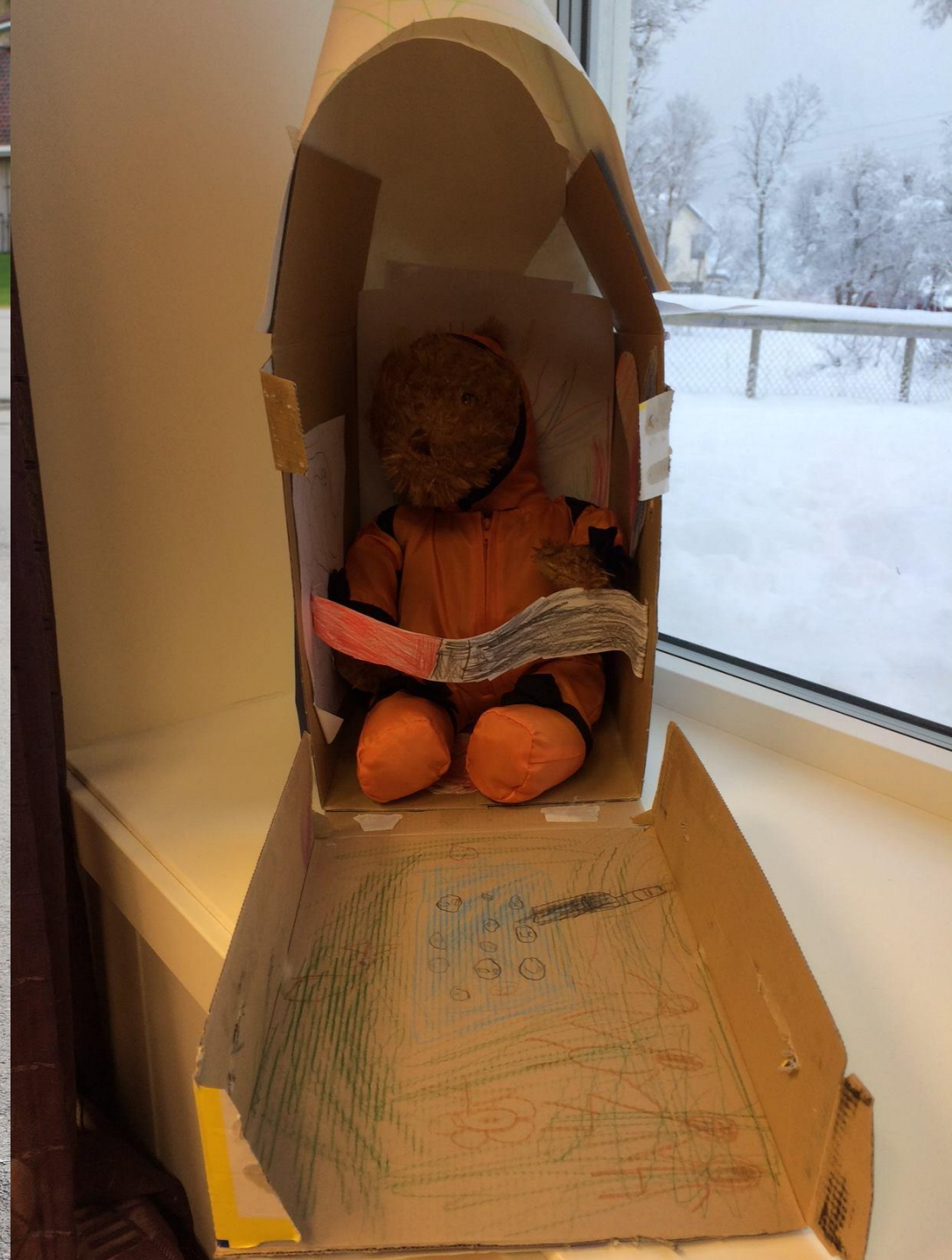
FOTO: Andøya Space Center

Norge er verdensledende i utviklingen av satellitt- og romteknologi

ALEXANDER BIEBRICHER FYSIKER OG FAGLÆRER I NASJONALT SENTER FOR ROMRELATERT OPPLÆRING

OPPDATERT: 15.JUN.2016 10:09 | PUBLISERT: 15.JUN.2016 08:30

ANDOYA SPACE CENTER
NARDM
SVALBA TIKKEN
LONGYEARBYEN 13'N



NAROM on social media: *naromasc*
Spaceship Aurora: *spaceshipaurora*
I'm there, too: *alexbiebricher*