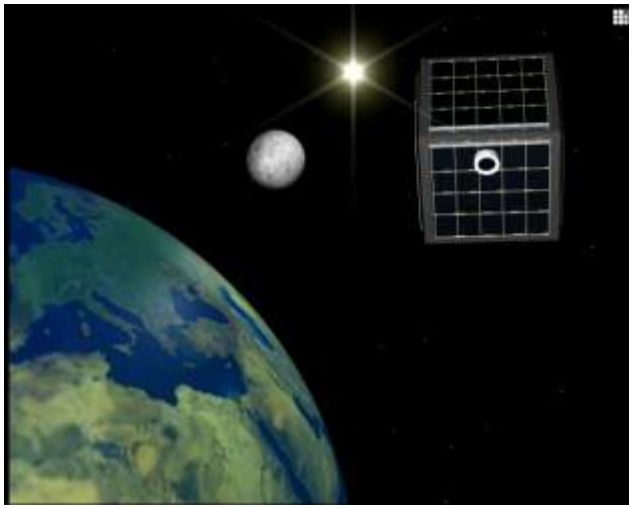


Chair of Space Technology at TU Berlin

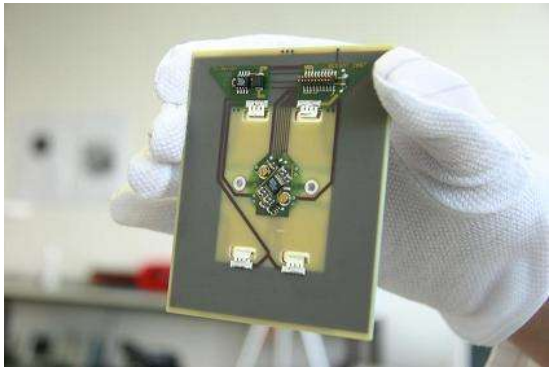
Prof. Dr.-Ing. Klaus Briess

Technische Universität Berlin – Berlin Institute of Technology
Dptm. of Aeronautics and Astronautics

Chair of Space Technology
Marchstr. 12, D-10587 Berlin, Germany
Klaus.Briess@ilr.tu-berlin.de

3 Main Points at Chair of Space Technology

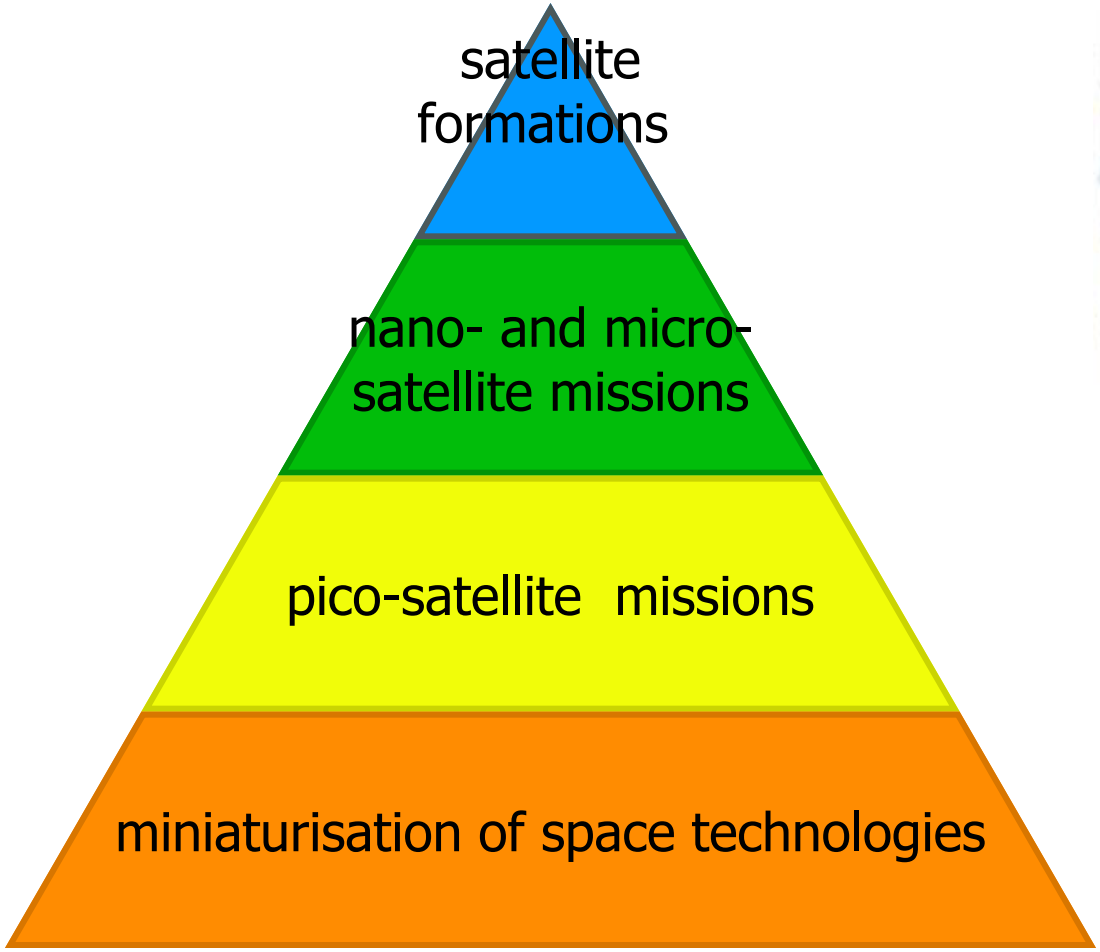
Hands-on education

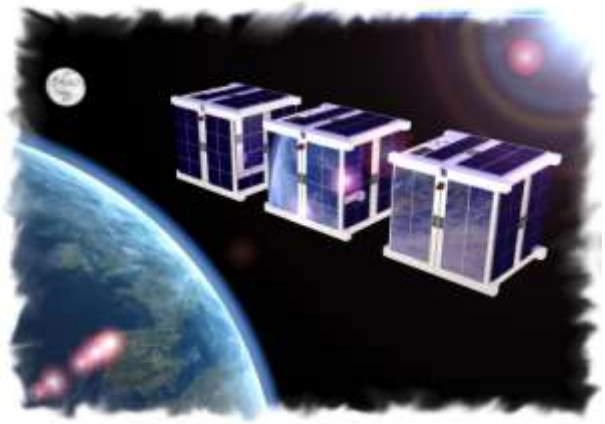


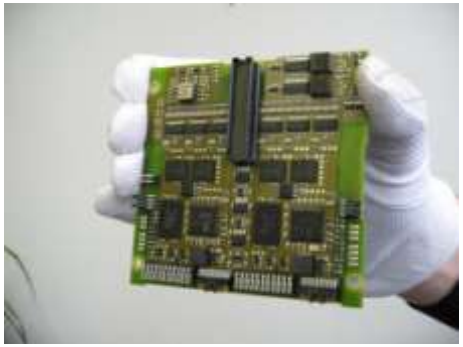
Technology research

Curricula in space technologies (univ., post graduates, TEMPUS)

Space Technology Research







Qualification model of a redundant spacecraft bus computer

Mission Control Center at TU Berlin

Antennas

- UHF
- S-Band

UHF/VHF Antenna

S-Band Antenna (Ø 3m)

Mission Control Center

- mission planning
- telemetry
- tele-command
- offline analyses & archive

Mission Control Center

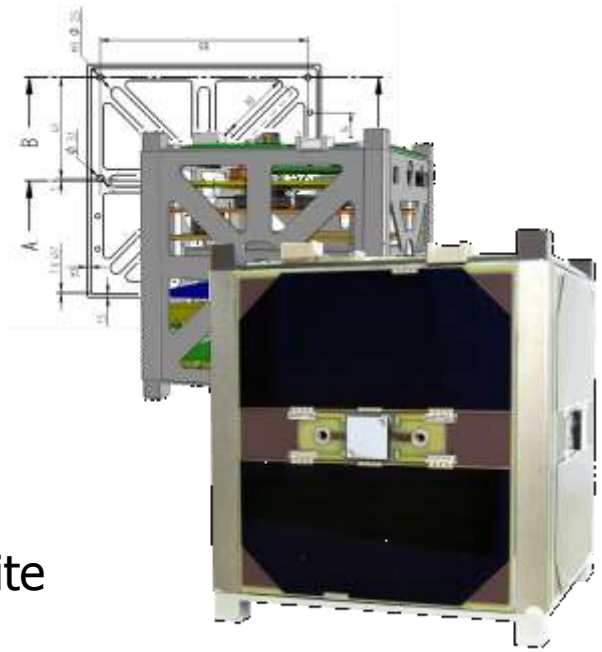
BEESAT-1

BEESAT : Berlin Experimental & Educational Satellite

Mission Objectives

- On-orbit verification of newly developed reaction wheels
- Education of students in satellite design and operations

Launch:	23.09.2009 with PSLV-C14
Orbit:	721 km, SSO, circular
Mission duration:	1 year
Mission operations:	TU Berlin
Special feature:	Single failure tolerant pico satellite
successors:	2010/11: BEESAT-2 2012: BEESAT-3



BEESAT-1

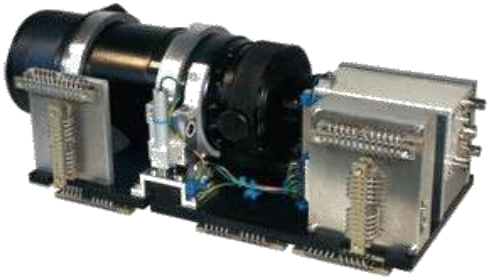
LAPAN-TUBSAT

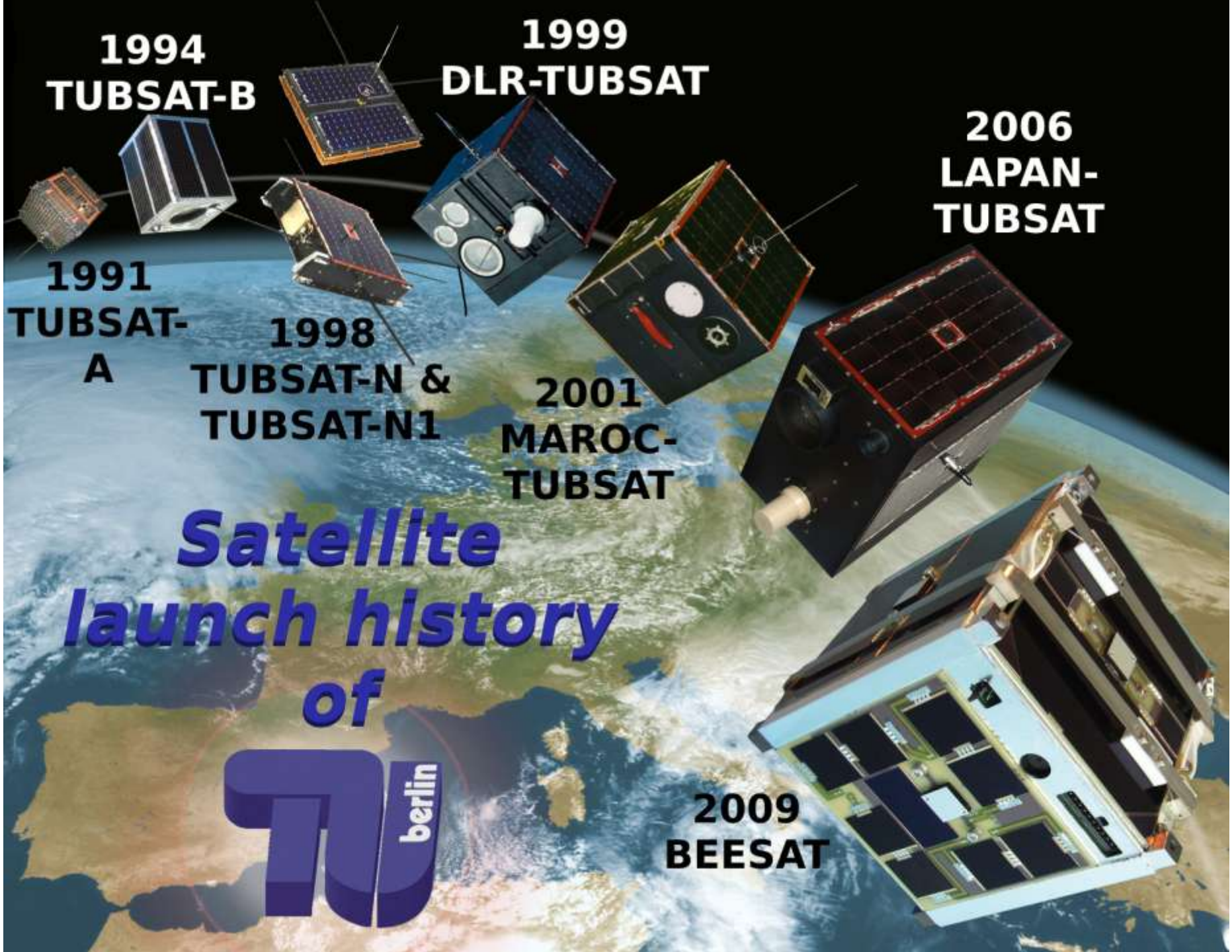
Working Group Prof. Dr. U.Renner

LAPAN-TUBSAT is a cooperation between TU Berlin and the National Institute of Aeronautics and Space of Indonesia. It was launched with an Indian PSLV on Jan. 10, 2007.
It's design follows the TUBSAT family with dimensions of 45x45x27cm and a mass of about 56kg.

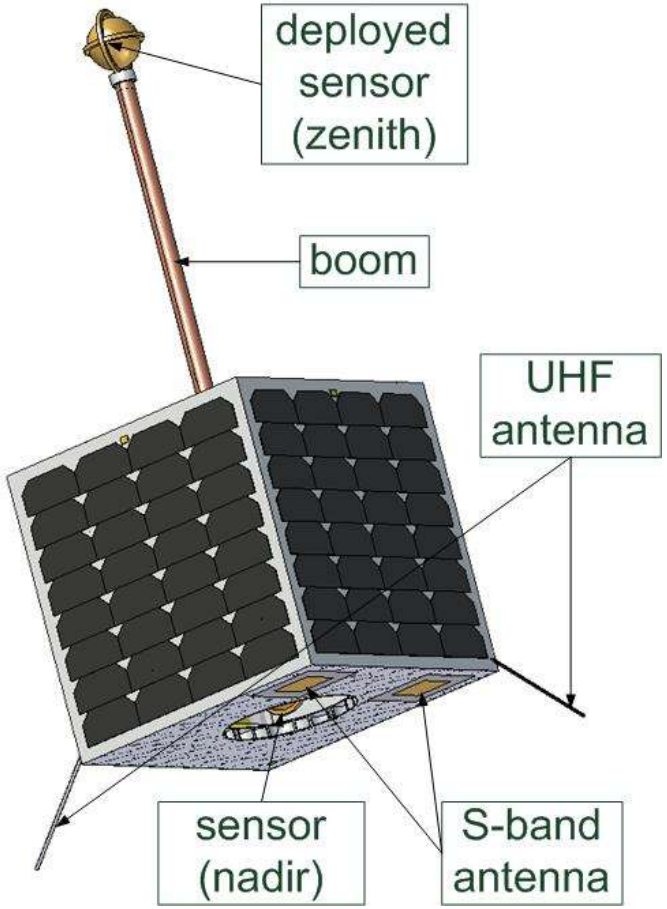
LAPAN TUBSAT

LAPAN-TUBSAT




1994
TUBSAT-B
1999
DLR-TUBSAT
2006
LAPAN-
TUBSAT
1991
TUBSAT-
A
1998
TUBSAT-N &
TUBSAT-N1
2001
MAROC-
TUBSAT
Satellite
launch history
of
berlin
2009
BEESAT

In Preparation: Nano Satellite Mission for Space Weather Observation



space weather satellite

Mission objectives:

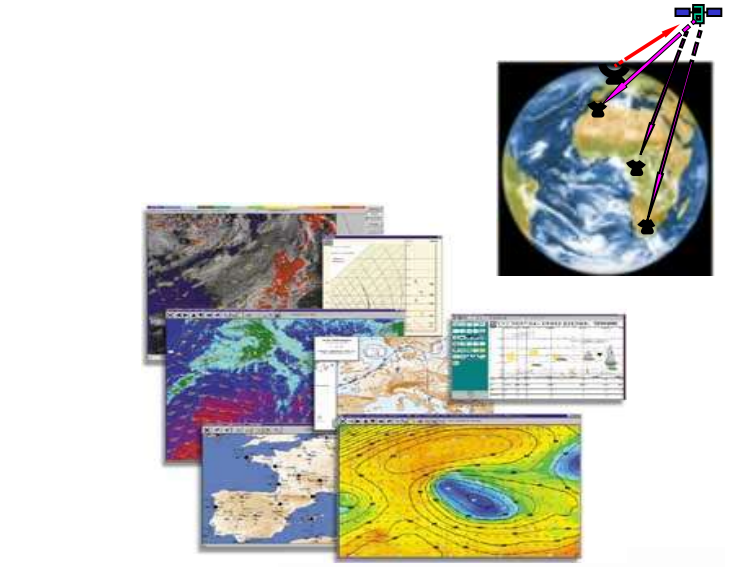
to investigate solar EUV radiation and emissions of the atmosphere as well as parameters of ionospheric plasma

- **Nanosatellite**
- Dimensions: 35 x 35 x 35 cm^3
- Mass: 15 kg
- Power requirement: 11 W
- Passive thermal control

GEONetCast first terminal at the TU Berlin

Ther first GEONetCast terminal is installed and tested in Berlin.

The aim is to do a workshop and install the first pilot GEONetCast terminal for SEOCA-Projekt in Usbekistan during the current visit.



Many thanks for your attention !