



Deutsches Zentrum
DLR für Luft- und Raumfahrt e.V.
in der Helmholtz-Gemeinschaft

Free-TV from Moon

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AMSAT-DL

Successful cooperation between a private association (AMSAT-DL) and DLR

Mission

+Main Instruments:

- + Slewable HDTV camera combined with a high gain antenna
- + Sensor imaging infrared spectrometer for mineralogy of lunar silicates and temperature measurements
- + Camera for monitoring of impact flashes on lunar night side caused by meteoroid impact events
- + Camera technology test for interplanetary and planetary approach navigation

+Transfer: using Weak-Stability-Boundary

Satellite

- +Launch mass: ~670 kg into GTO
- +Propulsion: 400 N, 1625 m/s delta-v
- +Diameter: 2.3 m
- +Height: 1.7 m
- +Power: ~ 380 W (45° solar angle)
- +Data Rate: 30 Mbit/s using TV dish
- +Comm.: X-, S-, L-Band and UHF
- +Desinged using Concurrent Engineering

Public Participation

- +Receiving live images from the lunar surface using a commercially available satellite TV dish at home
- +Utilizing data of all instruments
- +Spending free time to support the satellite project via AMSAT-DL
- +Public ownership due to donations

Cost

- +Partnership between AMSAT-DL and DLR
- +Satellite built by AMSAT-DL (analogue P3D)
- +Payload, science, launch and early operation phase by DLR

→ effective and attractive exploration mission with costs comparable to an Earth satellite

