

OUFTI - 1

CubeSat activities at the
University of Liège, Belgium



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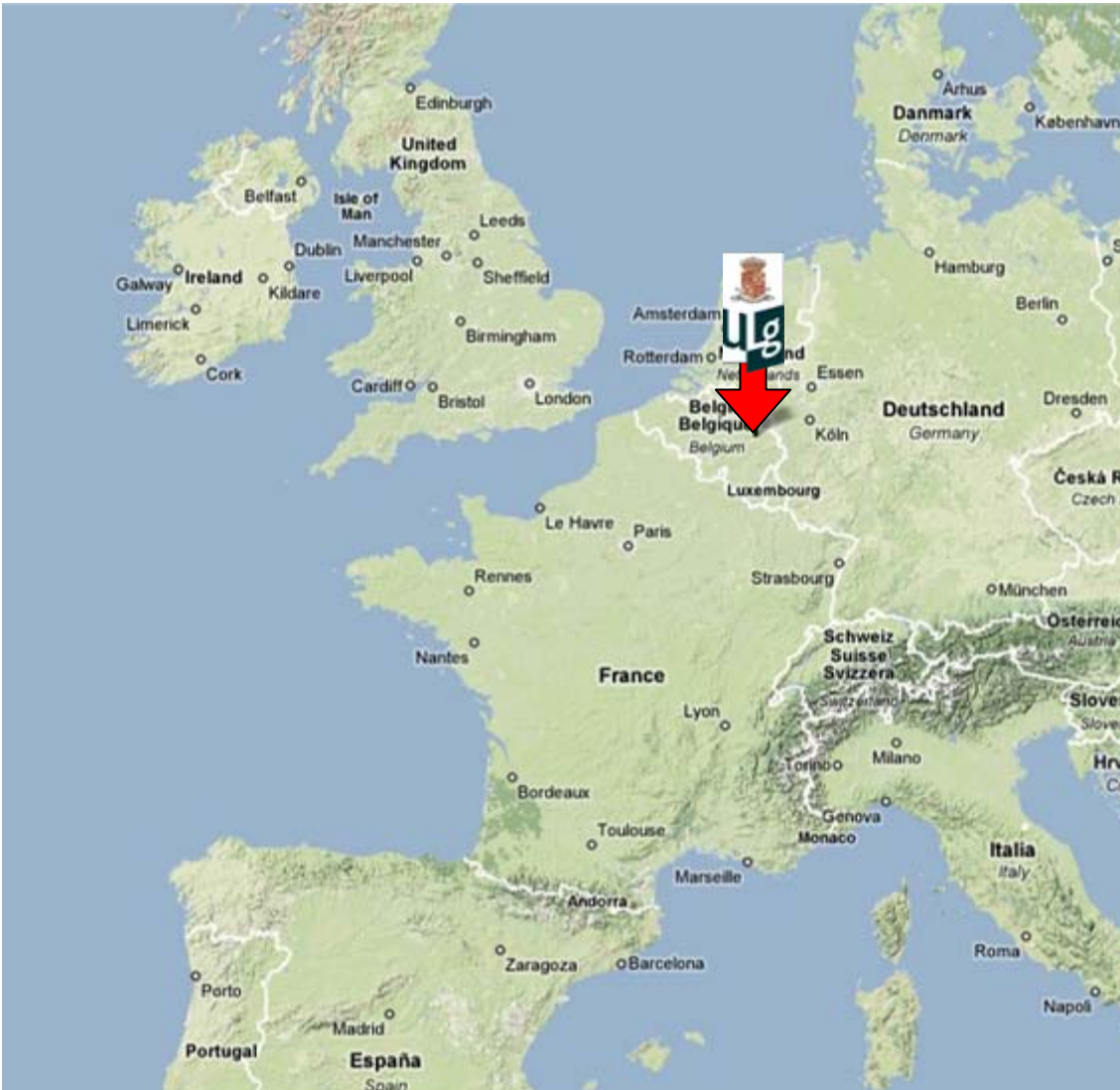
University of Liège, Belgium

1st IAA Conference on University Satellites Missions
and Cubesat Workshop

Roma, 27 January 2011



University of Liège (“ULg”) ?



1. Objectives
2. OUFTI-1
 - In a few words
 - Student team
 - Unique experience
3. OUFTI-2
4. QB50
5. Conclusion

Primary Goal

→ Hands-on satellite experience for students



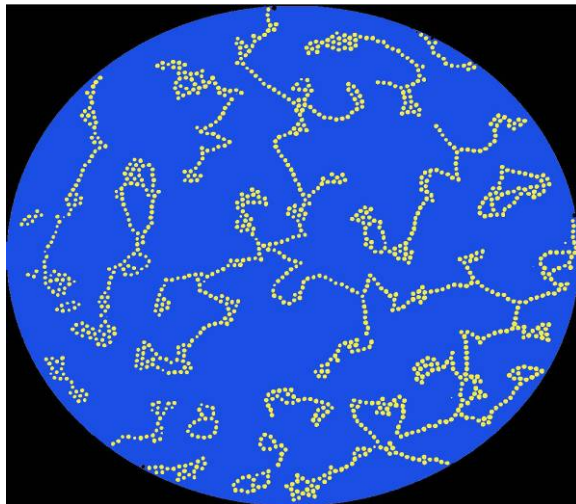
1. Objectives

Primary Goal

→ Hands-on satellite experience for students

Long-term Goal

→ Series of CubeSats for scientific experiments

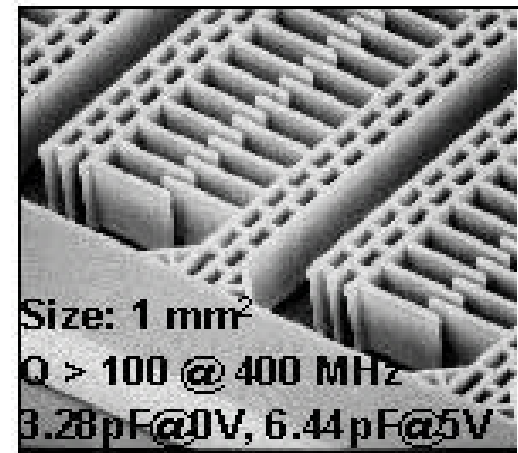


Granular materials
(Prof. Vandewalle)

*Institut Royal
Météorologique*



Radiometers



MEMS
(ULg - CSL)

1. Objectives

Primary Goal

→ Hands-on satellite experience for students

Long-term Goal

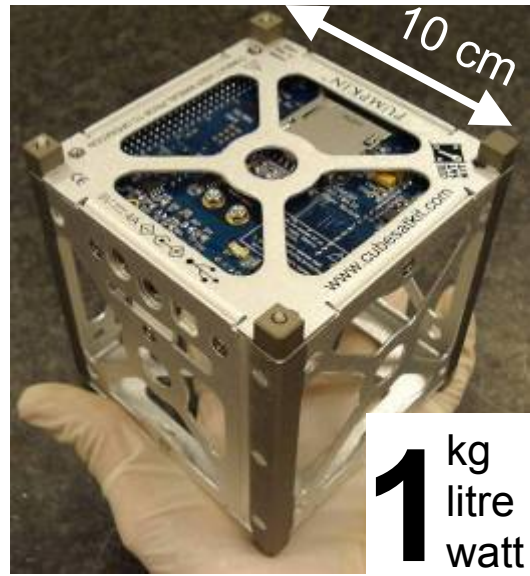
→ Series of CubeSats for scientific experiments

Short-term Goal

→ OUFTI - 1

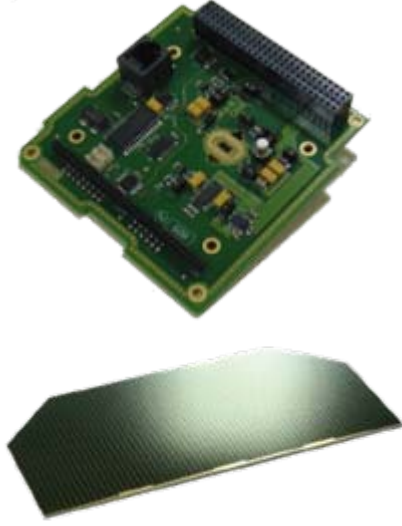


2. OUFTI-1 – In a few words

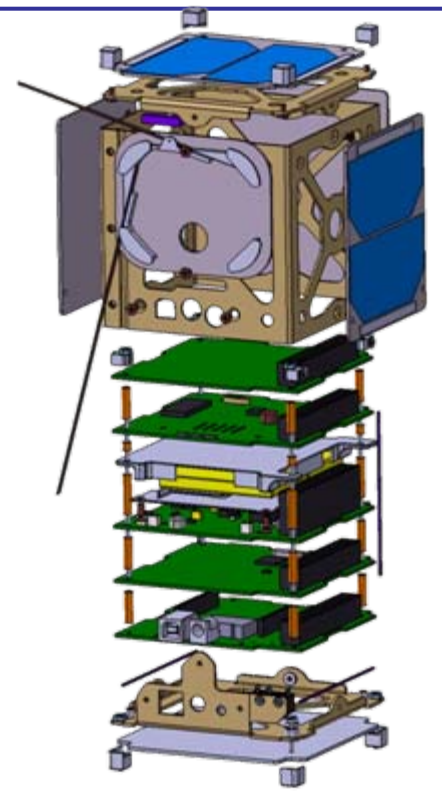


1 kg
litre
watt

CubeSat standard



Three payloads



Subsystems developed by students



VEGA Maiden Flight (2011)

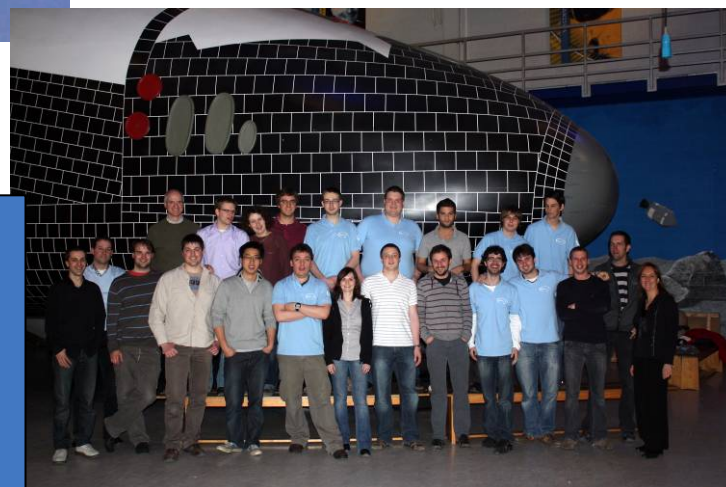
2. OUFTI-1 – Student team



07-08: 3 students



08-09: 13 students



09-10: 15 students



10-11:
11 students

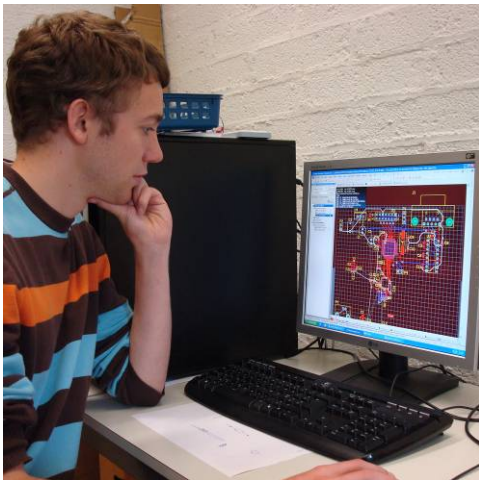


2. OUFTI-1 – Unique experience

- Unusual MS theses:



Team spirit



Industrial approach



Discussions & decisions

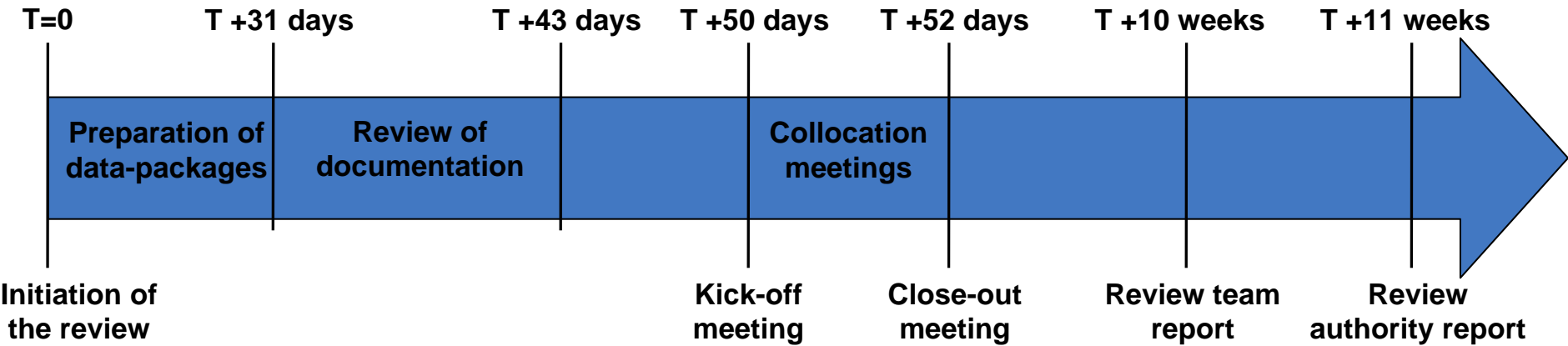


Communication

2. OUFTI-1 – Unique experience

- Use of international standards

Example: review process in 2010: - based on ECSS standard
 - 11-weeks long
 - External experts



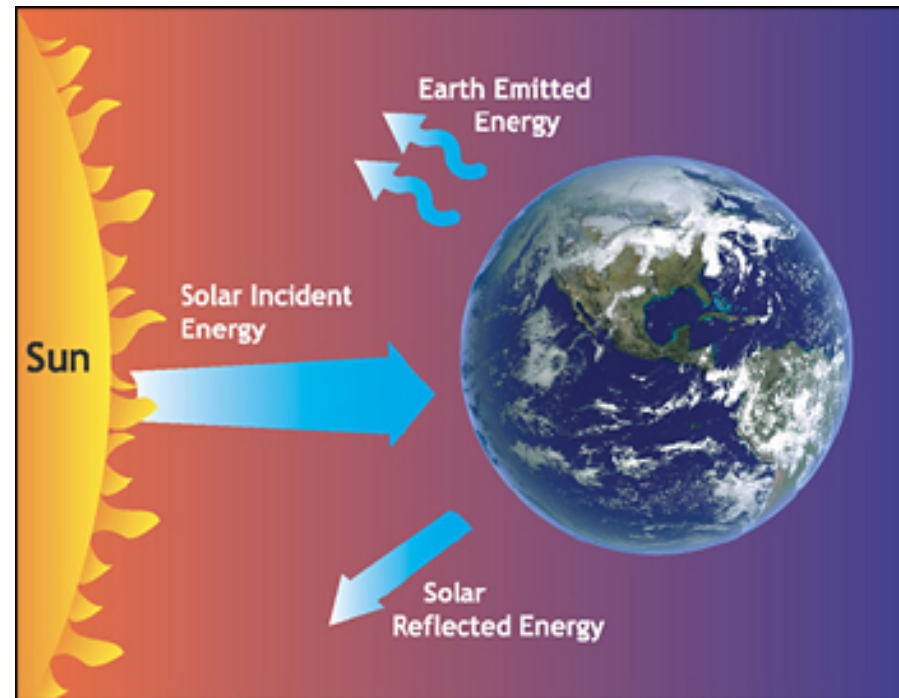
2. OUFTI-1 – Unique experience

- 4 generations of students:
 - 28 graduated students
 - 11 prizes
 - 11 ongoing MS theses





- In collaboration with the Royal Meteorological Institute
- Objective: measure the **true imbalance**
- Instrument: **Slmba** (Solar Earth Imbalance radiometer)
- **Interests:** climatology, oceanology, information over global warming, etc.



4. QB50



- International network
- 50 double CubeSats
- Lower thermosphere (90 – 300 km)
- Multi-points, in-situ, long-duration (3months) measurements
- + re-entry research



Conclusions

- Unique hands-on experience for students
- Students hired by space industry:
Spacebel, Thales ETCA, CSL, NASA, ...
- Long-term perspectives
- Enriching experience for all !





www.oufti.ulg.ac.be



Thank you for your attention !

