



CENTRE NATIONAL D'ÉTUDES SPATIALES



CANSAT France



Where are we today?



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Among a panel of experimental activities piloted by CNES/ Education...

Rocketry and Balloon:
UFAE and UPBE programs

Secondary school /
High school



Projects on environmental issues:
ARGONAUTICA, CALISPHAIR...

Secondary school



Experimental Rocketry:
C SPACE (Summer camp)

University



Parabolic flight campaigns
AIRBUS 300 ZERO-G

High school /
University



Cansat
Competition

University





- 300 students
- One week
- International
- Projects integration
- Launches
- Conferences
- On the beach !







We Can Sat in France ...





We Can Sat in France ...

Reasons for CNES Involvement

- Satellite / interplanetary probe oriented → complementary to Rocketry
- Safer / easiest than Rocket projects.
- Interesting space technique's: on board computer / software / IMU / GPS / RF links...
- Possible to launch on tethered balloon
- Challenging (competition)
- International cross participation / European competition to develop

Historic of activity in France

- Cansat available on Rocket (during C SPACE) since 2006
- French student club participation to Japanese competition in 2007
- Exciting Spanish competition in Madrid with LEEM, in April 2008
- Feasibility of cansat release from a tethered Balloon during C'Space 2008
- First competition in France during C'Space 2009



We Can Sat in France ...

Present Rules

- International class (33 cl/300g) and open class (1l / 1kg)
- Annually Imposed missions (choice between 4 or 5 missions)
- One Free mission proposed by the students
- Come back mission well come (bonus)



Available documentation (English translation available)

- Cansat competition design guide
- Cansat mission proposal for 2009 competition (2010 very soon)
- Registration form for 2010 competition

Provided by the organisation:

- Technical support to the teams, during the development phase.
- Tethered balloon with release system (cansat Bay)
- Release of the cansat at 150 m altitude / Possibility to extend to 500 m under consideration
- RF emitter / Reception station if necessary
- Weather conditions during the competition

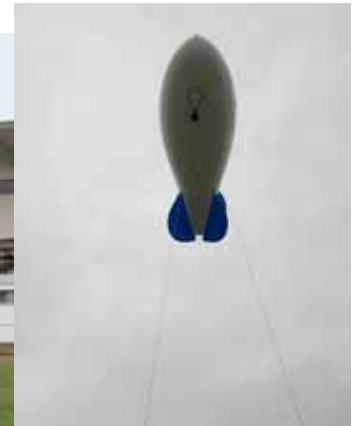


CANSAT France 2009 competition

- 25th and 26th (morning) august 2009
- Football area on the CELM site
- 3 teams: Budstar (ISAE), EOLE (INSA), CAMCAN (Norway)
- Presentation of the projects and presentation of the flight analysis in the conference room, in front of the jury.
- Atmospheric sounding missions
- 2 come back mission / 1 video mission
- Participation of Astrium / Thales Alenia Space and ESA to the Jury

■ Tethered balloon release system

- No stress for the cansat
- Release is trigger by the ground
- Easily reusable
- 6 cansat / hour
- Limited altitude but sufficient flight time for a large range of missions.





CANSAT France 2010 competition

- In the frame of C 'Space 2010 in Biscarrosse, 2 days, between 15th and 31 August 2010.
- 10 teams expected
- Non French teams are very welcome
- Accommodations on the site of the CELM





CANSAT France proposals for a European cansat competition

- European team coordinated by ESA. Goal: common rules / web site / links with the national competition.
- An annually European competition, organized by one host country (among the “cansat country”), changing each year.
 - 3 days
 - An international jury from the agencies and space industry.

Planning:

- Validation of the European competition concept in Biscarosse in august 2010: ESA sponsoring for a team of each “cansat country” to take part to the competition.
- First European competition in 2011.