Intensidad de la radiación que incide en la superficie

Presión a diferentes alturas

Velocidad durante la caída

Humedad del aire

Altura

Aceleración

Temperatura del suelo

Posición con GPS

Velocidad con la que impacta en el suelo

Densidad del aire

Elevación del terreno a partir de imágenes

Temperatura que alcanza la lata por el rozamiento con el aire

Composición del aire a diferentes alturas

Radiación de microondas

Ondas de radio

Campo magnético

Dirección y velocidad del viento

Partículas sólidas en suspensión

Fuerza de atracción que ejerce la Tierra

Introducir un pequeño drone con una cámara (o algo), soltarlo antes del aterrizaje y controlarlo desde la estación (eso a parte de todo lo que le metamos a la lata)

Controlar el vuelo y hacer fotos de la zona

Desde tierra, abrir el paracaídas cuando estemos a la altura mínima para que la lata sobreviva

Contador Geiger.

Determinación de orientación mediante LSM303.

Aterrizaje controlado.

Rover de exploración después del aterrizaje

CANSAT+sonda estilo Philae

Determinación de orientación mediante sun senor

Ground station casera al estilo satNOGS

Monitorización de espectro de frecuencias

Escuchas espacio aéreo con SDR en cansat

Alimentación por paneles solares

Constelación de sensores ZIGBEE autónomos desplegados desde CANSAT.

**CANSAT 2013**

The **Beginners category** is intended for teams with no prior experience in designing and building a CanSat or a similar project.The winning teams in this category are:

1. [**Gamma team**](http://www.cansat.eu/2014-teams/84-eu-competition/how-to-apply/316-team-gamma), Europaschule SZ SII Utbremen from Bremen in Germany. Their **Apollo 12** experiment will measure the temperature and humidity profile during descent.
2. [**R.E.D team**](http://www.cansat.eu/2014-teams/84-eu-competition/how-to-apply/320-team-red), Gymnasium Vegesack, also from Bremen in Germany. Their **Recyclable Ecological Designs (R.E.D.)** experiment will test an alternative energy system based on solar panels.
3. [**ViannoSat team**](http://www.cansat.eu/2014-teams/84-eu-competition/how-to-apply/321-team-viannosat), Lyceum of Viannos from the Greek island of Crete. Their experiment will test deployment of a tethered satellite to measure Earth's magnetic field.
4. [**Carmen Sylva 1 team**](http://www.cansat.eu/how-to-apply/314-team-carmen-sylva-1), “Carmen Sylva” High School from Eforie Sud, also in Romania. Their CanSat will study the atmosphere and magnetic field, and attempt a controlled landing.
5. [**GrecoSat team**](http://www.cansat.eu/2014-teams/84-eu-competition/how-to-apply/317-team-grecosat), IES El Greco from Toledo in Spain. They will measure atmospheric gases and attempt a landing cushioned by an air bag.

The **Advanced category** is intended for teams that already have some practical experience or come from a technical background and are therefore able to undertake a more complex project.

1. [**PragSAT team**](http://www.cansat.eu/2014-teams/84-eu-competition/how-to-apply/319-team-pragsat), Secondary Technical School of Electrotechnical Engineering from Jecna in the Czech Republic. Their payload will measure 3D acceleration and magnetic fields.
2. [**Aristarchus team**](http://www.cansat.eu/2014-teams/79-eu-competition/313-team-aristarchus), 3rd General Lyceum of Mytiline from Strati Myrivili in Greece. Their CanSat will make observations of the Sun.
3. [**Kraksat 2014 team**](http://www.cansat.eu/2014-teams/84-eu-competition/how-to-apply/318-team-kraksat-2014), Liceum Ogólnokształcące from Kraków in Poland. Their payload will measure radiation changes to detect life.
4. [**Ro-Sat One team**](http://www.cansat.eu/2014-teams/84-eu-competition/how-to-apply/315-team-ro-sat-one), National College of Computer Science from Piatra Neamt in Romania. Their CanSat will obtain data during descent and after landing with a rover.

**CANSAT 2012**

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| Azorean shearwater | Portugal | The Secondary mission that we have chosen for our CanSat is to monitor the rising of sea levels and detection of oil spills in the Azores archipelago. |
| Bolyai | Romania | We will measure the dust density in the atmosphere (in mg/m3) both at the launch campaign in Norway and in our region, as well. |
| Delacosa | Spain | The main objective of our CanSat is to make a 3D map of Andenes’s surface. To achieve this objective, we will use two cameras in order to obtain the photos which will be later processed to make the 3D map |
| Dj Auxaltation | Belgium | We intend to stabilize the cansat during parachute descent and to prove that we did by using a variety of sensors. We will use solar power as much as possible. |
| The Flying Dutchcan | The Netherlands | We will design a CanSat that, on descent, will measure temperature, pressure, light intensity, and altitude. |
| Icaromenippus 3D | Greece | GPS location, flight analysis and 3D mapping of Planetary surface.  **Second champion in Cansats 2012 competition** |
| Jecnaci | Czech Republic | GPS position will give information about Cansat position during measurment of atmospheric temperature and pressure and possibly other measured physical quantities. Measured data will be transmitted to a ground station and saved as data files. We also try to write data to a Cansat memory card and to copy this data to a PC after cansat has landed. |
| Navican | Norway | The CanSat will navigate autonomously in the air while descending, in order to hit a predetermined target point on the ground. |
| Satelite | France | Our second mission would be to calculate the height of the can by taking videos with an embaded camera. From the images taken we would recalculate the height with more accuracy. And we would transmit the sequences of the CanSat's fall on our high school website in real time. |
| Snovir 1 | Denmark | Planetary investigation with analysis of the atmosphere and surface conditions made by a light-weight and low-cost CanSat, which can be dropped several places around the planet in question. We will collect dust from the surface with small electromagnets with different strength. The amount of dust collected will help us to determine whether the dust have been made in a wet environment or not. If there is sign of water, human settlement or formation of organic material would be possible. |

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| Yes, we cansat! | Austria | Our Cansat will be designed to measure the strength and anisotropies of the ultraviolet radiation in direct or reverse flight direction. In space it could be used to analyse fixed stars, the cosmic background radiation field, to find pulsars or high density gas congregations. |
| Aspire | United Kingdom | We aim to direct our CanSat to a specific area on the ground, having pre-programmed said location into a GPS on the CanSat itself. This will mimic the auto correction mechanisms of long-term, unmanned satellites. We aim to integrate some degree of AI into the project, where the self-correction system works off a feedback from the GPS in real time. |
| Enforce | Italy | ENFoRCE (ENrico Fermi Research Cansat Experiment) is a small, can sized vehicle capable of acquiring advanced telemetry and executing different types of telecommand operations in two very different modes. The system is capable of conducting both aerial manoeuvres and ground locomotion through the use of the same control mechanism. |
| Rocket | Ireland | Integration of accelerometer into CanSat, with significant error control coding in data transmission software. |
| Alpha | Scotland | **First champion of the Cansats 2012 competition** |

**CANSAT 2010**

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| Brussels Vikings | Belgium | The CanSat will determine its position with a 3D accelerometer and a GPS-module, and its attitude with a 3D magnetometer. |
| X-GymZR | Czech Republic | Ecological landing system (made of recycled or recyclable materials). |
| 2009x CanSat | Denmark | We will carry out the mandatory missions, where we calculate the height using our measurements of temperature and pressure. In our secondary mission we want to do GPS measurements and acceleration measurements. We want to compare the height from the GPS measurements to the calculated height. We want to save all acceleration measurements on board the satellite on a memory card in order to study the period of acceleration during the launch. |
| Icaromenippus | Greece | We will acquire samples from the atmosphere and possibly from the terrain and try to analyse them for bacillary activity, and measure certain chemicals attached to life forms like Methane gas, Carbon Dioxide, Oxygen, photosynthesis etc. |
| Truailliu | Ireland | We will measure air temperature, air pressure and the levels of methane and carbon dioxide in the air to help indicate levels of pollution in the atmosphere. |

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| Tassoni | Italy | We would like to calculate the height reached by our cansat by means of iteration of the integration of the classical kinematics formulas starting from acceleration. We would like as well to detect also the moment the payload is released by the rocket and the start of the descent, the fall condition of the CanSat trajectory. |
| Levanger Cancrushers | Norway | Make an airbag that can protect the CanSat during impact. The airbag must be inflated after deployment from the rocket. An accelerometer will be used to investigate the acceleration during decent and the forces in action during impact. |
| Reynaldosat | Portugal | Studying the flight effects on yeast: weight and its work after flight. |
| DeSoto | Spain | The secondary mission is to turn the CanSat toward the Sun. The scientific objective is to take measurements of the solar radiation. |
| Hot Ice | Sweden | We want to start such a process in the rocket during the space-trip. Hopefully the process and the crystals can be affected by the extreme circumstances around the rocket. We will start the crystallization in the rocket by having a device poking the container. We will also start the same crystallization process on Earth. |
| Eclipse | United Kingdom | The cansat would act as a Dropsonde, producing a wind profile of its descent to facilitate the accurate placement of the drop of a hypothetical second payload.  How the cansat is moved by the wind during the descent can be turned into accurate data about wind velocities at different altitudes.  Knowing wind patterns can significantly improve the precision of airdrop placement if the wind is corrected for in the release of a payload. |