GimnazijaVič
SECONDARY SCHOOL
Gimnazija Vič

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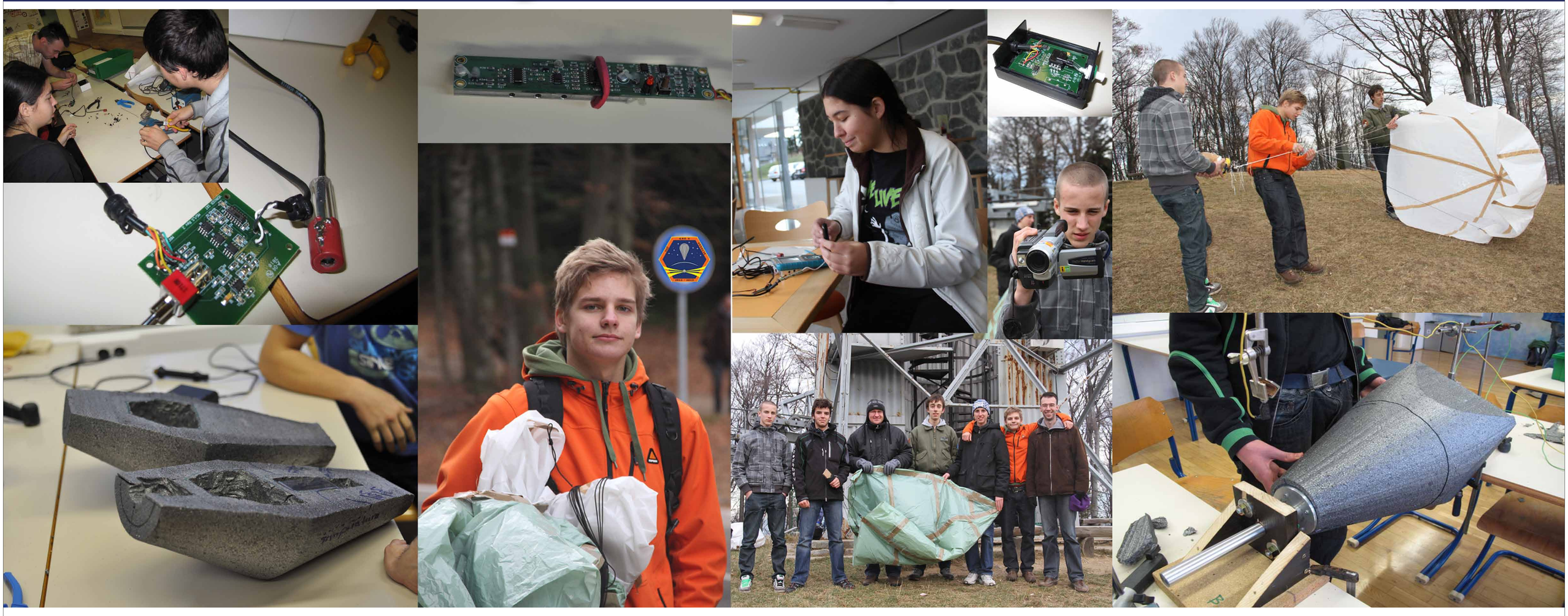
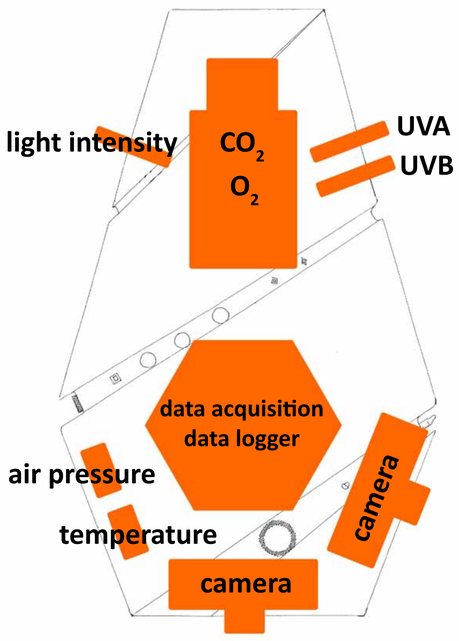
Vič Goes to Space
Making an Atmospheric Probe



The goal of the project was to make an atmospheric probe and equip it with different sensors, living micro organisms, a parachute and a helium baloon, and two high resolution cameras. The probe was lifted to an altitude of 32 km; during the ascent some of the data was transmitted via the GSM signal, and the rest was collected after the fall.

Problem overview

- Testing the students' creativity and their autonomous problem solving capacity.
- Measurements of the **altitude dependence** of:
  - atmospheric temperature, air pressure, CO2 and O2 concentration,
  - light intensity, UVA and UVB light radiation,
  - researching the survival capacity of two cultures according to the probe's exterior and interior conditions.



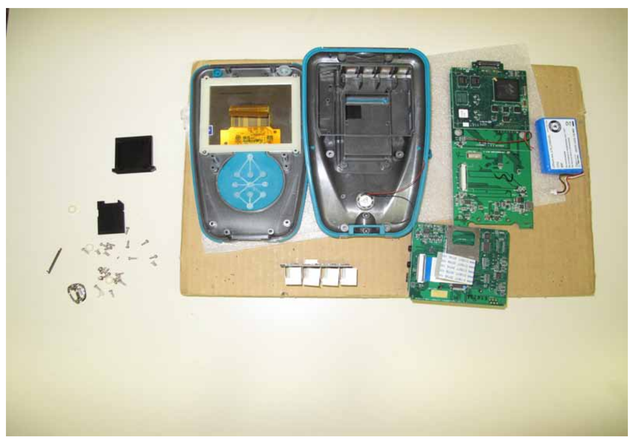
Distribution of the elements inside of the probe.

Data

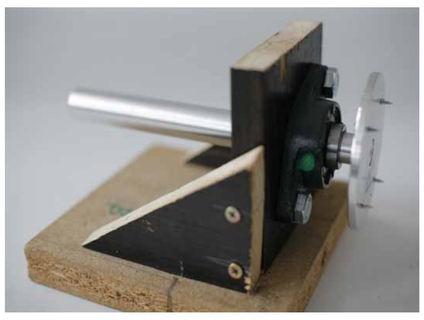
- Altitude dependence of atmospheric pressure, wind speed analysis at different heights.
- Forecast of the probe's horizontal drift under different weather conditions.
- Sensors' technical documentation.
- Various manufacturer's technical sheets (material, tracking system, prepared micro organisms' samples from the faculty collection …).

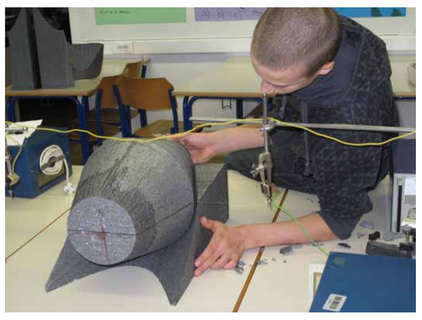
Methods

- Testing the sensors at low temperature and making the necessary adaptations.



- Horizontal drift analysis for different weather conditions and different height.
- Construction of the hot wire lathe.





- Construction of the probe's outer shell and parashute models.

- Soldering of the probe's elements.

- Parachute testing.