

# EGSIEM

Title: WP 7 – Student Competitions

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**EGSIEM Kick Off Meeting**  
**University of Bern**  
**January 13. – 14. 2015**

# BACKGROUND IDEA

- to make aware young people of the significance of studying our living environment and its impact on our daily life
- to motivate young people to start and pursue a career in Earth sciences, in particular geodesy
- to get to know the gravity field of the Earth and the underlying processes

# TARGET GROUP

- 1) high school graduates (age 15 - 19)
- 2) university undergraduates (BSc. & MSc. )
- EU countries only

# GOAL

<b>Graduated high school students</b>	<b>Undergraduate students</b>
Getting familiar with the wide range of activities in geodesy and geophysics, i.e. from mission design and observation techniques to computation and analysis activities.	Understanding the measurement principle for observing gravity changes and mass monitoring.
Make use of Level-3 products to screen and understand gravity changes.	Understanding spherical harmonics, their properties and their synthesis, the need for filtering and ability to apply simple filters for computing gravity changes.
Understanding the relation between gravity changes and hydrology cycles.	Make use of Level-2 data to compute changes of gravity and equivalent water height.
Ability to describe the reason for gravity changes in different regions, e.g. natural hydrological variations vs extreme events and ice mass loss in Greenland.	Explaining the relation between gravity changes and a satellite's orbit.
Making animations of gravity changes using simple programs.	Describing the concept of current gravity satellite missions and limiting factors.
Understanding the importance of mass monitoring and its impact on our environment.	

Check the proposal, p. 36

# EXAMPLE

- Aliante competition - organized by NATO  
<http://www.project-aliante.org/gb/>
- **1<sup>st</sup> round** based on multiple choice test
- **2<sup>nd</sup> round** based on computations and small research

# ORGANISATION – SUPPORT TEAM

**Main coordinator:** Tamara Bandikova

**Organizing committee:** 4-5 people

**Website support**

**Graphic design support** – for logos, posters, website

**Language support** – multiple languages? (EN, DE, FR, CZ, ...) tbd

**Financial support** – available budget? tbd

**Competition support** – contact person for students, solution

# ORGANISATION - PHASES

- Preparation
- Advertisement
- Competition
- Feedback

# ORGANISATION - PREPARATION

- concept development
- defining schedule
- defining the questions and tasks for round 1 and round 2
- defining the terms of conditions and eligibility
- clarifying the law issues
- defining the price for winners
- graphic design of logos, posters and image material
- website implementation
- network development for advertisement
- selection of the participating universities
- selection of the participating high schools



# ORGANISATION - ADVERTISMENT

## Levels

- European commission
- Local space agencies
- Local ministry of education
- High schools
- Universities
- Local network of EGSIEM members

## Media

- Posters, flyers, videos, press releases

# ORGANISATION - COMPETITION

- **registration**
  - teams of 1-2 students
- **1<sup>st</sup> round**
  - solution check
- **2<sup>nd</sup> round**
  - solution check
- **winner announcement**
  - price award ceremony

# ORGANISATION - FEEDBACK

- Feedback questionnaires
- Evaluation of the feedback
- Implementation of new ideas

# PRELIMINARY SCHEDULE

- Preparation

Jan – Sep 2014

- Advertisement

Oct 2014

- Competition

Nov 2014 – Mai 2015

- Feedback

June 2015

# LUH ACTIVITIES

- **PR commission** – promotion of Geodesy study program
- **SFB 1128 geo-Q**: Mock data challenge project  
Dr. Martin Hewitson, Dr. Neda Darbeheshti
- **FI:GEO** Research initiative

# OPEN QUESTIONS

- Setting the organizing committee
- Ethical principal for dealing with people under age 18
- available budget
- run both competitions simultaneously or separate