

## NANOSTAR Phase I Challenge concluded: And the winners are...

**MOON INVADERS from Universidade da Beira Interior (Portugal) and Universidad Politécnica de Madrid (Spain).**

May 29, 2019

In this Phase I competitive challenge, 15 multidisciplinary teams of students from the NANOSTAR universities have predesigned a **nanosatellite space mission to the Moon**. The nanosatellite, equipped with a scientific payload, will perform observations and measurements of the Moon's surface, while executing a close-distance fly-by.

The total number of registered students has raised to **103 students**, which exceeds expectations!

The students have been asked to hand in a design file with the definition of their solution, a preliminary design report, and to showcase their results in a presentation.

The Evaluation Committee, composed of members from all NANOSTAR institutions, have evaluated the received designs and selected the winning proposal. **The evaluation has been made based on:**

- Compliancy with the top-level requirements of the mission
- Project consistency, risk analysis, and physical soundness
- Maximization of the mission figures of merit
- Solution innovativeness
- Document quality
- Presentation quality
- Team management and organization
- Team size, multidisciplinary, gender balance, and interinstitutionality
- Correct usage of NANOSTAR resources, tools, and methodology

### **FIRST PRIZE. Best Team Ranking Top 5:**

1. MOON INVADERS from Universidade da Beira Interior, UBI (Portugal) and Universidad Politécnica de Madrid, UPM (Spain): Gustavo Ribeiro (UBI); Jorge Benedicto (UPM); Francisca Oliveira (UBI); Flávio Rosa (UBI); Pedro Dente (UBI); Emanuel Castanho (UBI).

2. CUBESAT CHEFS from Universidad Carlos III de Madrid, UC3M (Spain): David Tomás Gaitán Rodríguez; Santiago de la Riva; Javier Gómez del Pulgar Vázquez; Miguel Herrera Arozamena; Alberto Marin Cebrián.

3. JANUS-X from Universidad Carlos III de Madrid, UC3M (Spain): Guillermo Escribano; Carlos Paulete; Pau Gago Padreny; Pedro Jiménez; Alejandro Cano Sánchez.

4. L.U.N.A. from Universidad Carlos III de Madrid, UC3M (Spain): Inés Gordo Esteban; Javier Cortina Fernández; Manuel Gavilán Herrera; Enrique Díaz Arenas; Javier Bel Diaz.

5. LASAR-SAT from Universidad Carlos III de Madrid, UC3M (Spain): Raquel Rodríguez Cañas; Lara Sánchez; Anastasiya Osik; Susana Porras; Adrián Capitán.

**Best predesign document:**

CUBESAT CHEFS from Universidad Carlos III de Madrid, UC3M (Spain): David Tomás Gaitán Rodríguez; Santiago de la Riva; Javier Gómez del Pulgar Vázquez; Miguel Herrera Arozamena; Alberto Marin Cebrián.

**Most innovative mission:**

JANUS-X from Universidad Carlos III de Madrid, UC3M (Spain): Guillermo Escribano; Carlos Paulete; Pau Gago Padreny; Pedro Jiménez; Alejandro Cano Sánchez.

**Best management practices:**

EIRB'STRONG from ENSEIRB-MATMECA (France): Louis Goutorbe; Louis Grauwin; Olivier Tomas; Oumayma Belkhadra; Pierre Ferrer; Othmane Ahl Zouaoui; Nouredine Khanfir; Amine Alinsafi; Fakhreddine Sabbari.

**Best oral presentation:**

SELENE from Universidad Politécnica de Madrid, UPM (Spain): Alejandro Fernández Herrero; David Fernandez Pulido; Ignacio Garcia Guerrero; Gabriel Andújar Saltoratto; Imanol Sardon Delgado; Carlos Rodríguez Jamilena

**Congratulations to the winners and all participating student teams!**

The First Prize Team has the chance to act as the Lead Systems Engineering Team to coordinate the future NANOSTAR challenges, where their design solution will serve as the baseline to develop and test several subsystems of their nanosatellite across the NANOSTAR institutions. And the team will attend the [Symposium on Space Educational Activities \(SSEA\)](#) at the University of Leicester (United Kingdom) to present their work.

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**NANOSTAR project**

The nanosatellite standard is today used by many universities and companies to attract the best students and engineers, that supports the universities and industries competitiveness.

Several countries from the north of Europe have strongly invested in this approach, creating a commercial offer that has become very well positioned in the market. However, Southern Europe, despite its strong influence in the space sector, has only 14% of the projects in the European nanosatellite sector and no company created in this field.

**NANOSTAR is a European project to support the training and development of student nanosatellites in the south west of Europe.**

NANOSTAR project is funded by the [Interreg Sudoe Programme](#) through the European Regional Development Fund (ERDF). The project has a total budget of 2 million euros.

The consortium is composed of 2 aerospace clusters, 7 universities plus 3 ESA-BIC centres as associates, in France, Spain and Portugal:

- Aerospace Valley (Project coordinator) [www.aerospace-valley.com](http://www.aerospace-valley.com)
- Madrid Aerospace Cluster [www.madridaerospace.es](http://www.madridaerospace.es)

- Institut Polytechnique de Bordeaux [www.bordeaux-inp.fr](http://www.bordeaux-inp.fr)
- Institut Supérieur de l'Aéronautique et de l'Espace [www.isae-supaero.fr](http://www.isae-supaero.fr)
- Université de Montpellier [www.umontpellier.fr](http://www.umontpellier.fr)
- Universidad Politécnica de Madrid [www.upm.es](http://www.upm.es)
- Universidad Carlos III de Madrid UC3M [www.uc3m.es](http://www.uc3m.es)
- Universidade da Beira Interior UBI [www.ubi.pt](http://www.ubi.pt)
- Instituto Superior Técnico <http://tecnico.ulisboa.pt>

**Associates:**

- ESA BIC Sud France
- Instituto Pedro Nunes - Associação para a Inovação e Desenvolvimento em Ciência e Tecnologia [www.ipn.pt](http://www.ipn.pt)
- Fundación para el Conocimiento madrimsd en su función de ESA BIC España [www.madrimsd.org](http://www.madrimsd.org)



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**For more information, please contact:**

Marion GARITEAU [gariteau@aerospace-valley.com](mailto:gariteau@aerospace-valley.com)

[www.nanostarproject.eu](http://www.nanostarproject.eu)

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