

EGU22-6422

<https://doi.org/10.5194/egusphere-egu22-6422>

EGU General Assembly 2022

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



The Pyxis project: a sounding rocket developed by Skyward Experimental Rocketry from Politecnico di Milano in collaboration with the Scientific High School “Cigna-Baruffi-Garelli” – Mondovì

Paolo Tealdi¹, Luciano Battocchio², Fabrizio Innocenti³, Giovanni (John) Aimo⁴, **Federico Corallo**⁵, Nicolò Donghi⁵, Matteo Colombo⁵, Nicolò Florio⁵, Alberto Nidasio⁵, Alessandro Del Duca⁵, Davide Rosato⁵, Lorenzo Cucchi⁵, Lorenzo Ciuti⁵, and Virginia Porro⁵

¹I.I.S. “Cigna-Baruffi-Garelli” – Mondovì - Scientific High School, Electronic Department, Mondovì (CN), Italy
(paolo.tealdi@gmail.com)

²LB Space SAS di Battocchio Luciano & C, Torino, Italy (luciano.battocchio@lbspace.it)

³Bleb Technology srl, Prato, Italy (f.innocenti@bleb.it)

⁴John Aimo Balloons s.a.s., Mondovì, Italy (john@aimoballoons.com)

⁵Skyward Experimental Rocketry, Politecnico di Milano - Milan, Italy (presidenza@skywarder.eu)

The Pyxis project is a sounding rocket developed by Skyward Experimental Rocketry from Politecnico di Milano, with the ultimate goal of participating in the European Rocketry Challenge in October 2022. The rocket, which will be the most advanced Italian sounding rocket ever developed by university students, will give the opportunity to hold a payload of 1U inside the nosecone. After lift-off, the rocket will rapidly reach the apogee at 3000 meters, where the nosecone with the payload bay will be ejected and recovered independently from the rocket thanks to an autonomous guided parafoil. For the payload development the team is collaborating with the students at the Scientific High School “Cigna-Baruffi-Garelli” – Mondovì, as they are creating a sensing platform, through the use of Blebricks sensors (IoT sensors), capable of detecting environmental data such as pressure, temperature and quality of the air, storing it on board for post-flight analysis.

The students at “Cigna-Baruffi-Garelli” are already involved also in another STEM experience with hot air/stratospheric balloons called infoBalloons, presented last year at EGU 2021 (Tealdi, P., Innocenti, F., and Aimo, G. (.: infoBalloons: an Italian High School educational self-made budget friendly STEM experience with hot air/stratospheric balloons, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-13420, <https://doi.org/10.5194/egusphere-egu21-13420>, 2021). infoBalloons 2.0 is a selected Sounding Balloon (SB) Experiments in the 2nd HEMERA Call for Proposals (HEMERA H2020. *This project has received funding from the European Union's Horizon 2020 research and Innovation programme under grant agreement No 730970*).

An added value in the Pyxis project is the participation as partners of LB Space with Luciano Battocchio (retired Space Engineer - Exomars Parachute Program Manager), Bleb Technology with Fabrizio Innocenti (CEO), John Aimo Balloons with Giovanni (John) Aimo.

