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Abstract #XXX (to be filled by the organizers)

Preferred Topics: AEROST / CLINAV / SUSTAV (3 maximum from the list of topics)

Corresponding author: NEUMANN Frank

e-mail of corresponding author: info@imieu.eu

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Title

A small long endurance LTA with H₂ as lift gas and FC propulsion system

Authors

Patrick Hendrick ^{1*}, Julien Gagnon & Thomas Laporte⁴

* Corresponding author

¹ Professor, Université Libre de Bruxelles, 1050 BRUSSELS, patrick.hendrick@ulb.be

² Ecole de Technologie Supérieure, Montreal, Canada

³ CTO, HyLight, Paris, France

Abstract

The development phase, the static tests and the flight tests of a small (9-10 m length) LTA drone (UAV) using H₂ as a lifting gas and H₂ as a “fuel” for the electric propulsion system using a PEMFC and electric motors driving small propellers will be completely described. The development of a new skin and of the gas bags for the H₂ lifting gas will be also described and explained, with the tests that were performed [Milova]. The performance of the small airship drone will be detailed as well (see Figure).



References

Milova P., Caeymaex N., Hendrick P. (2017), 'FlyWin, a H₂ lifting gas airship demonstrator', 7th EUCASS conference, Milano (Italy).