

Applications Panel Abstract & Speaker Biography

Airbus Zephyr – Using Lithium Sulfur Batteries to Revolutionise Communications

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The Zephyr aircraft is a High Altitude Long Endurance (HALE) Unmanned Aerial Vehicle (UAV) and holds the world record for longest flight duration for any aircraft: 14 days non-stop. It has been in development since 2004 and uses Lithium Sulfur batteries to store the energy captured by its solar panels and power the aircraft at night. It flies in the stratosphere above the weather to provide 24 hour a day, 365 days a year coverage providing an alternative or complement to satellite-based solutions.



Airbus is developing the Zephyr T to provide communications and internet connectivity to developing world countries without the need for installing expensive infrastructure on the ground. This will enable billions of people to access the internet who have never been able to before in places like South America, Africa, India and Indonesia.

In this presentation, Airbus will introduce the Zephyr T, describe the way that it operates, the need for ultra-lightweight batteries and why Lithium Sulfur is perfect for this application. Furthermore, the battery performance required to improve the aircraft will be discussed to help provide direction and goals for the research community. Finally, the current status of the battery development will be discussed, including ongoing collaborative projects and flight trials.

Speaker Biography:

Sarah Bassett graduated in 1997 from Brunel University with a BEng (Hons) in Electrical and Electronic Engineering. She started work at Nokia Mobile Phones as a Baseband engineer developing Li-ion and Li-poly batteries with suppliers. She then moved to Product Integration and onto Hardware Management and Technology Management leading multidiscipline teams of approximately 50 people. Sarah has been working for Airbus Defence and Space since 2016 as a Project Manager on the Zephyr T project.

