Avalon Airships, Ltd.

Peter Lobner, 28 July 2019

Avalon Airships is a small airship design firm that was incorporated in 2017 in Manchester, UK. In partnership with the University of Manchester, Avalon has developed three very advanced airship conceptual designs for a range of applications. Their website is here:

https://www.avalon-airships.com

The three airship concepts are named EOS, Hemera, and Aether.

- All are designed for very low environmental impact.
- All have electric propulsion systems.
- EOS and Hemera are hybrid airships designed to operate from water. They both have water ballast systems. Helium provides a fraction of the lift. Short Takeoff and Landing (STOL) is required.
- Aether is a variable buoyancy airship designed to operate from land. External ballast is not required. Designed for Vertical Takeoff and Landing (VTOL) operations.

Dimensions and load carrying capacities of these airships are not currently available.

**EOS:** This hybrid airship concept is a zero emission, electrically-propelled, unmanned autonomous airship platform that can be configured for a wide range of applications, including police, freight, search and rescue, and entertainment. This airship is designed to land in water and add water ballast quickly to ensure stability after landing. This airship has a range of over 300 miles (482 km) and long airborne endurance. The police version can be equipped to launch a small, remotely-piloted drone that can deliver supplies and equipment for direct aid in emergencies.
Renderings of the EOS concept in flight. Source: Avalon Airships

Renderings of mini drone carried by EOS. Source: Avalon Airships
Two renderings of EOS concept after water landing.  
*Source: Avalon Airships*
**Hemera:** This large hybrid airship concept is designed to operate as a luxury tourist ferry, providing passengers with an indulgent yet sustainable way to travel. Helium provides a large fraction of lift, with the balance generated by vectored thrust electric propulsion and aerodynamic lift from the fuselage. A water ballast system increases the weight of the airship as soon as it lands on the surface of the water. Range is over 600 miles (966 km) at more than 80 mph (129 kph).

*Hemera concept in flight. Source: Avalon Airships*

*Hemera concept after water landing. Source: Avalon Airships*
Aether: This large, luxury airship was designed in the UK in 2013 by Mac Byers as his final year university project for his Transport Design BA (Hons) degree at the University of Huddersfield. This design demonstrates a “Sky Cruise” concept that is intended to capture the imagination of the public and kindle excitement and energy for the next generation of airship technology. Aether implements a variable buoyancy system similar to the Control-of-Static-Heaviness (COSH) system developed by Aeros Corporation for their Aeroscraft airships. With all-electric propulsion, Aether would have a range is over 1,000 miles (1,609 km).

You can watch the video, “Aether Cruise Experience,” which provides an incredible animated view of a short walkthrough and cruise on the Aether airship here:

https://www.youtube.com/watch?v=7LKgtdNFi-q
Aether concept in flight. Source: Avalon Airships

Aether concept in flight. Source: http://www.ifitshipitshere.com/
Aether concept landing. Source: Avalon Airships

Aether concept landing. Source: Avalon Airships

Aether concept on the ground. Source: http://www.ifitshipitshere.com/
Aether concept on the ground. Source: Avalon Airships

Aether concept on the ground. Source: http://www.ifitshipitshere.com/
Three views of Aether concepts for interior public space.
Source: http://www.ifitshipitshere.com/
Aether concept for interior public space, access to staterooms.
Source: http://www.ifitshipitshere.com/

Two views of Aether concept for a private stateroom.
Source: http://www.ifitshipitshere.com/