

# BIS Cosford Space Conference

Propulsion, Launchers and the Future

Sat 15 - Sun 16 July 2023

RAF Museum, Midlands UK



British  
Interplanetary  
Society

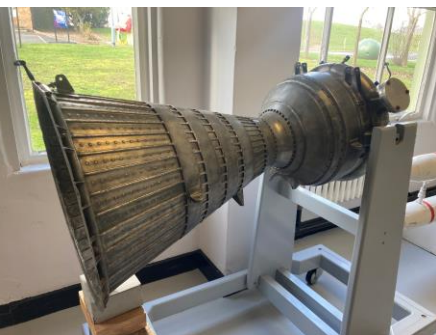
[bis-space.com/events](https://bis-space.com/events)

The theme of this year's Conference is **Propulsion, Launchers and the Future** and covers a broad range of topics including the current developments, early heritage, and near-horizon propulsion systems and their applications. The event will also feature talks focused on advanced propulsion concepts, highlighting the longer-term possibilities for space exploration and missions that will be enabled by future advances in spacecraft, launch vehicle and propulsion technologies.

The programme is split over two days with themes including:

## Day 1 - SATURDAY 15 July 10:00 – 17:00

Propulsion Heritage & Current Technology Developments



- Early rocket technology and heritage
- Lessons learned and perspectives on the future
- The challenges of propulsion development
- Key programmes, people, places and politics
- Current propulsion development and test activities

## Day 2 - SUNDAY 16 July 10:00 – 17:00

Propulsion Applications, NewSpace Challenges and Advanced Concepts

- Near horizon propulsion technologies
- Vertical and horizontal launch systems
- NewSpace systems, operations and challenges
- Advanced nuclear and electric propulsion concepts
- High-energy missions in and beyond the solar system





## Time Propulsion Heritage & Current Technology Developments

**09:00** Arrival, Registration & Coffee

**10:00** Day 1 Welcome Address, Safety Notices & Introduction & Aims of the Conference

**10:10** **Morning Session** - Propulsion Heritage, Early Developments and Lessons Learned

10:10 - 10:40 1. [Keynote] **Technology is not Enough! –Or Why good Ideas don't always get adopted**  
Bob Parkinson

10:40 - 11:10 2. **TESTING, TESTING – A History of Early Static Firings at Westcott**  
John Harlow

[20min] Coffee & Networking Break

11:30 - 12:00 3. **Barbados or Brancaster: a last resort for Black Arrow?**  
Doug Millard, Science Museum

12:00 - 12:30 4. **Blue Steel, Skybolt and Politics**  
Rod Woodcock

**12:30** Photocall  
**Lunch + Free Museum Access**  
Free time for Museum Walkabout  
+Optional guided talks on selected exhibits in 'Cold War Museum'

**14:00** **Afternoon Session** – Propulsion Technology, Development and Testing

14:00 - 14:30 5. **A new supply chain for a new frontier**  
Mike Curtis-Rouse, Satellite Applications Catapult

14:30 - 15:00 6. **Analysis of Film Cooling for a 3kN LOX/butane Demonstrator Engine**  
Zoë Ashford, Cranfield University

[20min] Coffee & Networking Break

15:20 - 15:50 7. **Recent Activities at Westcott and Airborne Engineering Ltd**  
James Macfarlane, Airborne Engineering Ltd.

15:50 - 16:20 8. **Development and operations of Green Propulsion for Satellites**  
Jeroen Wink, Dawn Aerospace

**16:20** Day 1 Comments & Closing Remarks

**16:50** Close



## Time Propulsion Applications, NewSpace Challenges & Advanced Concepts

**09:00** Arrival, Registration & Coffee

**10:00** Day 2 Welcome Address, Safety Notices & Reflections on Yesterday, What's to come today

**10:10** **Morning Session** - Propulsion Applications, Launcher Developments and NewSpace Challenges

10:10 - 10:40 **1. Spaceplane Propulsion Development**

Jeroen Wink, Dawn Aerospace

10:40 - 11:10 **2. UK Vertical Orbital Launch Development**

Ned Robertson, Skyrora

[20min] Coffee & Networking Break

11:30 - 12:00 **3. Scalable Propulsion and Launch Systems Development**

David Robertson, Thistle Rocketry

12:00 - 12:30 **4. Space Traffic Control - Progress and Puzzles**

Stuart Eves

**12:30** Photocall

**Lunch + Free Museum Access**

Free time for Museum Walkabout

+Optional guided talks on selected exhibits in 'Hangar 1'

**14:00** **Afternoon Session** – Advanced Propulsion System Concepts, Mission Studies

14:00 - 14:30 **5. Optimizing a Nuclear-Electric Vehicle for Outer Planet Missions using a Small Modular Reactor**

Bob Parkinson

14:30 - 15:00 **6. Using the Scorpion as an Interplanetary Transportation System**

Mark Hemsell, Hemsell Astronautics Ltd.

[20min] Coffee & Networking Break

15:20 - 15:50 **7. Discovery III: Missions to the Outer Planets & Beyond using Laser/ICF Propulsion**

Kelvin Long, Interstellar Research Centre

15:50 - 16:20 **8. Project Icarus: Fusion Mission Concepts – Sons of Daedalus**

Rob Swinney

**16:20** Day 2 Comments & Closing Remarks

**16:50** Close

Delegates at the conference have **free parking and access to the museum** throughout the event, which offers an extensive collection of historic aircraft and propulsion exhibits. Free time to explore the museum is built into the programme on each day, including **optional guided talks/Q&A sessions** by selected exhibits relevant to several of the talks at the conference. Tickets are available online through [www.bis-space.com/cosford2023](http://www.bis-space.com/cosford2023)



Conference Venue:  
**RAF Museum Midlands**  
LYSANDER AVENUE  
COSFORD, TF11 8UP

**“The BIS Cosford Space Conference is a place where anybody with an interest in propulsion can come together to hear about the past, present and future direction of rocket and spacecraft technology”**

See more and book online at [bis-space.com/cosford2023](http://bis-space.com/cosford2023)



The **British Interplanetary Society** is dedicated to promoting the exploration of space for the benefit of humanity, by connecting people to create, educate and inspire, and advance knowledge in all aspects of astronautics



The BIS is celebrating its 90<sup>th</sup> anniversary in on 13 October 2023. Join us at the 20<sup>th</sup> Reinventing Space Conference & Gala Dinner in Liverpool. See more at [www.bis-space.com/reinventing space](http://www.bis-space.com/reinventing space)



The BIS Cosford Space Conference is organised by the British Interplanetary Society at the RAF Museum, Midlands UK from 15 to 16 July 2023. For more information, please contact the BIS office on +44 (0)20 7735 3160 or email us at: [events@bis-space.com](mailto:events@bis-space.com)  
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