



# PRESS RELEASE

## Confidence in SKYLON

ESA report commissioned by UK Space Agency finds "no impediments" to further development of Reaction Engines' SKYLON Spaceplane

The report states that:

- Success on future engine test would mean "a major breakthrough in propulsion worldwide"
- No critical topics have been identified that would prevent a successful development of the engine.

**Abingdon, United Kingdom – 24<sup>th</sup> May 2011.** The UK Space Agency's report on the SKYLON technical assessment for which the European Space Agency (ESA) was commissioned has concluded that it could not find anything that would prevent successful continued development of SKYLON and agreed with objectives of the proposed next stage of the development programme.

Reaction Engines will conduct an important demonstration of the engine's key pre-cooler technology later in the summer.

SKYLON is an unpowered, reusable single stage to orbit (SSTO) spaceplane that will provide reliable access to space and be capable of delivering payloads of up to 15 tonnes into Low Earth Orbit (LEO, approx. 300km) at about 1/50<sup>th</sup> of the cost of traditional expendable launch vehicles, such as rockets. SKYLON's SABRE engines use liquid hydrogen combined with oxygen from the air at altitudes up to 26km and speeds of up to Mach 5 before switching over to on-board liquid oxygen for the final stage of ascent.

The UK Space Agency's commissioned report concluded that *'no impediments or critical items have been identified for either the SKYLON vehicle or the SABRE engine that are a block to further developments'*.

Dr David Parker, Director of Technology, Science and Exploration at the UK Space Agency, said, *"Both SABRE and SKYLON are exciting new technologies which could transform access to space. ESA's positive assessment should give everyone increased confidence that Reaction*



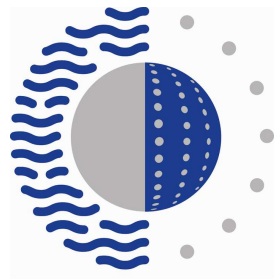
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*Engines are on the right track. We are looking forward to the upcoming technology tests with interest."*

The UK Space Agency's technical assessment process was comprised of two parts. The first was a series of visits by technical experts from ESA to review Reaction Engines' designs and witness critical tests of component performance.

The second part was the SKYLON System Requirement Review, held on the 20<sup>th</sup> and 21<sup>st</sup> September 2010, at which almost 100 international aerospace experts posed questions and made comments on SKYLON's technical and economic feasibility. *"The review ended with a consensus that no technical or economic impediments to the development of SKYLON or SABRE had been found."*

Reaction Engines consider the review a success, and its spaceplane is attracting renewed interest from the international aerospace community.

Alan Bond, inventor of the SABRE engine and Reaction Engines' Managing Director, commented: *"Space has many things to offer humanity, but the sheer expense of rockets - which have served us well in the past - is inhibiting the growth of commercial activity in space. To take one example, SKYLON promises to cut the cost of launching communication satellites, on which the digital revolution depends, by an order of magnitude. SKYLON will be fully commercial to operate and develop - generating jobs and investment for UK plc. We are delighted that this independent report from the UK Space Agency expresses confidence in SKYLON."*

- MAIN ENDS -



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## About Reaction Engines

Established in 1989, Reaction Engines Ltd designs and develops advanced space transport vehicles and propulsion systems. By applying a combination of established physical principles and innovative engineering design, the company is currently developing a range of products that will enable the commercial exploitation of space.

Reaction Engines is located at the Culham Science Centre in Oxfordshire where it has its main offices and heat exchanger research facility. The company also has several other manufacturing and test premises in the area.

For more information about Reaction Engines please visit [www.reactionengines.co.uk](http://www.reactionengines.co.uk)

## About the UK Space Agency

The UK Space Agency is at the heart of UK efforts to explore and benefit from space. It is responsible for all strategic decisions on the UK civil space programme and provides a clear, single voice for UK space ambitions.



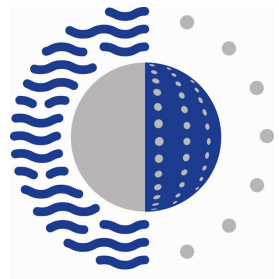
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Second only to the USA in space science, the UK's thriving space sector contributes £7.5bn a year to the UK economy, directly employs 24,900 and supports a further 60,000 jobs across a variety of industries.

The UK Space Agency:

- . Co-ordinates UK civil space activity
- . Encourages academic research
- . Supports the UK space industry
- . Raises the profile of UK space activities at home and abroad
- . Increases understanding of space science and its practical benefits
- . Inspires our next generation of UK scientists and engineers
- . Licences the launch and operation of UK spacecraft
- . Promotes co-operation and participation in the European Space Programme

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Report available on the UK Space Agency's website: <http://www.bis.gov.uk/ukspaceagency>

### About the European Space Agency

The European Space Agency (ESA) is a research and development (R&D) agency working on behalf of its 18 member states and one associate member. These are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK, and the Czech Republic, and Canada (associate member). By pooling the resources of its member states, ESA undertakes programmes and activities far beyond the scope of any single European country, developing the launchers, spacecraft and ground facilities needed to keep Europe at the forefront of global space activities.



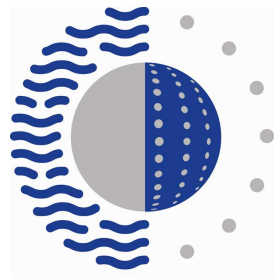
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