



Letter from the Editor

An amazing start to 2019 punctuated by the first soft-landing on the far side of the Moon by China's Chang'e 4, sustained by Israel's Beresheet soft-lander on a Falcon 9. As we raise in the news analysis (page 2) everyone it seems is now heading for Earth's nearest celestial neighbour. By the way, America got to the far side first with Ranger 4 on 26 April 1962, but it was not in a survivable condition!

Congratulations must go to Skyrora for recovering the first stage of the UK's only national satellite launcher – Black Arrow – now being prepared for display (page 16). The fortunes of that company too warrant applause as they pioneer a resurgence in UK launch vehicles.

It is getting close to the month we celebrate the 50th anniversary of the first humans to land on the Moon and we have the first of three articles this month preparing some background on the impact of that event (page 28). It is also fascinating for me to see the emerging collection of original Apollo documents now in the hands of legitimate collectors, each with a deep sense of history.

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OUR MISSION STATEMENT

The British Interplanetary Society promotes the exploration and use of space for the benefit of humanity, connecting people to create, educate and inspire, and advance knowledge in all aspects of astronautics.

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Scottish firm Orbex is planning a radical approach to a launch vehicle for the small satellite market that will fly from the UK.

16 Return of the Black Arrow

Ken MacTaggart FBIS delves into archives to celebrate the return of an iconic example of British engineering excellence: the first stage of the late-lamented Black Arrow rocket.

22 Patch works - the art of Space Age heraldry

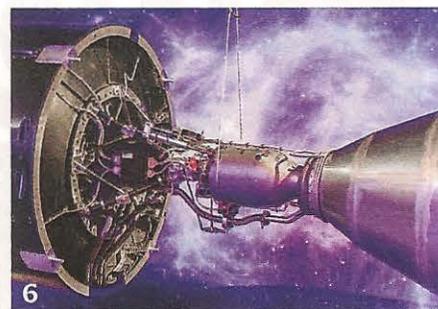
Space-sleuth and historian Joel W. Powell looks at the remarkable array of mission patches and logos that have, sometimes controversially, adorned spacecraft over the last 60 years.

28 The Impact of Apollo - Part 1

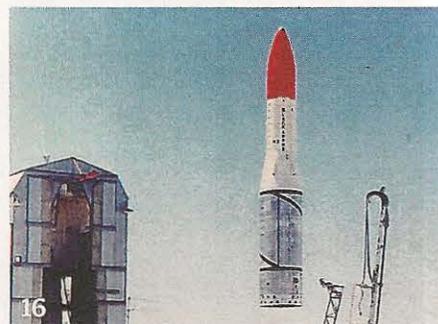
Nick Spall FBIS begins his three-part series surveying the impact of the Moon landings on human society, technology and the subsequent development of space exploration.

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Long-time collector of space-age artefacts and memorabilia Mark Yates describes a particularly important document from the Apollo 16 mission – the Cue Card preparing the astronauts for their EVAs in the rugged lunar highlands.



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