



Letter from the Editor

The New Year has started with mixed fortunes for the space programme. Ariane V is on its way out, soon to be replaced with Ariane 6, a welcome new entrant with a European industry pledged to cut costs and look at recoverable stages, as we describe in this issue.

On the other hand, a shadow falls across the successful entry of SpaceX into the black world of Top Secret space operations as the billion dollar Zuma satellite goes missing after launch on 7 January. Despite the surge in blaming SpaceX, it does not appear to be the fault of the Falcon 9 but there are many out there who would wish to topple it from its entry to this most coveted of customers.

In this issue I am very pleased to draw back the veil on Cold War East Germany, with recollections of what it was like to be a "space cadet" in that communist state. And we remember the terrific work done by Bruce McCandless in developing the rocket-powered backpack, work that lives on in the SAFER device after his untimely death.

David Baker

David Baker
d.baker146@btinternet.com

Features

12 Supernatural science

A new capability is coming to the International Space Station, courtesy of a cooperative endeavour between the partners to supplement existing research capabilities.

14 Read all about it!

Dr Jens Heide describes for us the difficulties encountered by German space enthusiasts as they struggled to get information about the space programme from behind the Iron Curtain.

20 Ariane 6 - bigger, better, cheaper

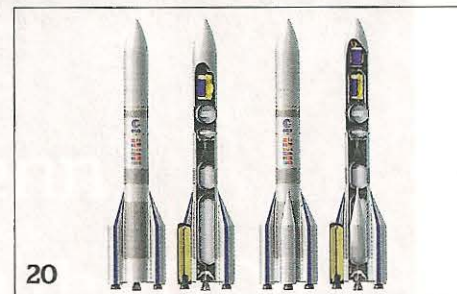
The European Space Agency is counting down to retiring the Ariane V heavy launcher in five years and introducing its successor. SpaceFlight takes a long view and looks at far reaching decisions.

26 Into the blue

New launch vehicles are emerging from billionaire investors and now Jeff Bezos, the world's richest entrepreneur is accelerating development of a launcher to challenge Ariane 6.

30 Hiding in plain sight

Alistair Scott decided that a talk on planetary science in distant star systems was so exciting it needed a fuller and more complete description than that covered in the initial report. We agreed.



Regulars

4 Behind the news

Trump ditches racetrack approach to Mars.

7 Opinion

8 ISS Report

9 December 2017 - 8 January 2018

32 Flashback

March 1968

34 Obituary

Bruce McCandless II (1937-2017)

40 Satellite Digest

542 - December 2017

44 Society news / Diary

What's happened • What's coming up

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.

Editor David Baker, PhD, BSc, FBIS, FRHS Sub Editor Ann Page Creative Consultant Andrée Wilson Design & Production MP3 Media Promotion Gillian Norman Advertising Tel: +44 (0)20 7735 3160 Email: d.baker146@btinternet.com Distribution Warners Group Distribution, The Maltings, Manor Lane, Bourne, Lincolnshire PE10 9PH, England Tel: +44 (0)1778 391 000 Fax: +44 (0)1778 393 668 SpaceFlight, Arthur C. Clarke House, 27-29 South Lambeth Road, London SW8 1SZ, England Tel: +44 (0)20 7735 3160 Fax: +44 (0)20 7582 7167 Email: spaceflight@bis-space.com www.bis-space.com

Published monthly by the British Interplanetary Society. SpaceFlight is a publication that promotes the mission of the British Interplanetary Society. Opinions in signed articles are those of the contributors and do not necessarily reflect the views of the Editor or the Council of the British Interplanetary Society. Registered Company No: 402498. Registered charity No: 250556. The British Interplanetary Society is a company limited by guarantee. Printed in England by Latimer Trend & Company Ltd, Plymouth.

© 2018 British Interplanetary Society 2017 ISSN 0038-6340. All rights reserved. No part of this magazine may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording by any information storage or retrieval system without written permission for the Publishers. Photocopying permitted by license only.