

PRACTICAL INFORMATION



➔ DATE

From Monday, October 11th 2010 at 1:00 PM (Pre-Programme) until Tuesday, October 12th 2010 at 6:00 PM

➔ VENUE

Palais des Beaux-Arts
Place du Manège | 6000 Charleroi
Belgium



An access map is available on: www.space-days.com
Parking will be provided for Space Days participants.

➔ REGISTRATION

Registration in advance is mandatory but participation is free. Please register at: www.space-days.com before October 5th 2010.

➔ ACCOMMODATION

The organisers have negotiated special rates at the Charleroi Airport Hotel, close to the Brussels South Charleroi Airport and linked to the Space Days location by shuttle. See our website for more information.

➔ CONFERENCE SECRETARIAT

C/O EVENTIS
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SPACE DAYS

THIRD EDITION

WALLONIE ESPACE is pleased to invite you to its 3rd edition of Space Days, to be held in Charleroi (Belgium) on October 11th & 12th, 2010. This year, the theme focuses on "Launchers, from Modelling to Operations".

WALLONIE ESPACE is a professional association of industrial manufacturing companies, software and engineering companies, universities and laboratories specialised in space programs, research and development, in Wallonia and Brussels. The members are actively demonstrating their expertise and excellence in spacecraft design and manufacturing, modelling software development, engineering services, on-board and ground software, space applications and spin-offs.

WALLONIE ESPACE is member of the SKYWIN cluster of the Walloon Region of Belgium.

@ www.wallonie-espace.be



WALLONIE ESPACE



SPACE DAYS

THIRD EDITION

➔ 2010 Highlights

- Guided tour of the Belgian Space Industries involved in launcher design, modelling and manufacturing (GDTECH, OPEN ENGINEERING, SABCA, SAMTECH, SONACA, SPACEBEL, Techspace Aero, Thales Alenia Space ETCA).
- International keynote speeches by ESA, ASTRIUM ST, Arianespace, ELV and Snecma, SAFRAN Group.
- Round table on future Launchers with key representatives.
- International scientific presentations on Launcher and Propulsion Modelling by Finite Element Analysis experts from SAMTECH, ESA-ESTEC, ASTRIUM ST, Snecma-SAFRAN Group, SABCA and OPEN ENGINEERING.
- Conferences by Wallonie Espace members on launcher technologies.
- Space village and exhibition.

info@space-days.com
www.space-days.com



Wallonie Espace
& Skywin Present

SPACE DAYS

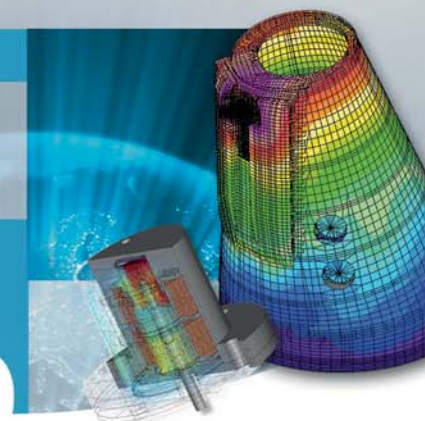
THIRD EDITION

Launchers: From Modelling to Operations

Conferences - Workshops - Exhibition

Special Round Table with key representatives of the European Launcher community

Charleroi, Belgium
October 11th
and 12th 2010



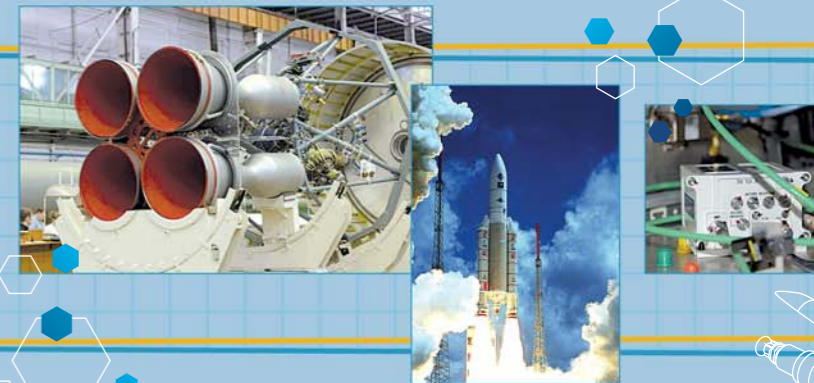
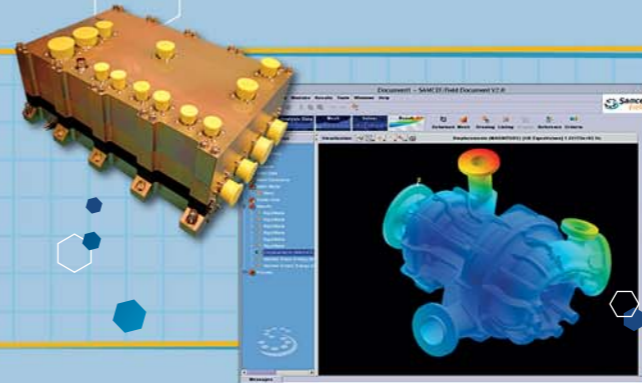
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LAUNCHERS :

FROM MODELLING TO OPERATIONS



PROGRAMME



2010 → Launchers: From Modelling to Operations

The launchers market is more than ever at the centre of European and Space news. In 2009, 40 launchers sent 49 satellites and spacecraft into orbit. Until the end of the 1960s, only the United States and the USSR possessed launchers. Since then, the Ariane family has become a major player, with a total current market share greater than 50%, compared to its main commercial competitors: Proton from ILS and Zenith from Sea Launch. Moreover, Arianespace has just celebrated 30 years of success and the launch of the 50th Ariane 5.

The Belgian manufacturers (SABCA, SONACA, Techspace Aero and Thales Alenia Space ETCA) as well as the Finite Element Analysis (FEA) software developers of the SAMTECH Group with the University of Liège have more than 40 years of accumulated know-how in the field of launchers and spacecraft. They were precursors in Europe and joined from the beginning the great adventure of Ariane 1, 2, 3, 4 and 5. They are also participating in the Russian Soyuz launcher, which will soon take off from French Guyana, and in the development of the future Vega launcher. They offer a unique and wide expertise in many launcher and propulsion aspects of design, modelling and manufacturing: tests and control benches, on-board electronic devices, metallic and composite structures, mechanisms, thermal control and verification, ablation, mechatronics, turbopumps rotor dynamics, cryogenic benches, servomechanisms, command and control software etc.

Rendez-vous at Space Days 2010 to meet the essential players on the European market and discuss every aspect of today's and tomorrow's launchers, from modelling to operations!

Monday, October 11th 2010 (Pre-Programme)

- 13:00 - 18:00 → Guided tour of Belgian companies involved in launchers and modelling
(Details and registration on www.space-days.com)
- 18:30 - 20:00 → Welcoming cocktail and inaugural speeches at the "Palais des Beaux-Arts" in Charleroi

Tuesday, October 12th 2010, morning

- 8:00 - 9:00 → Registration and morning coffee
- 9:00 - 9:30 → Welcoming speeches by the **Ministry of the Belgian Science Policy and the Wallonie Espace President**

FUTURE LAUNCHERS

9:30 - 10:30 → **Keynote Speakers - Session One**

- **Toni Tolker-Nielsen, ESA:** The European launchers family and the ESA vision about their evolutions
- **Silvio Sandrone, ASTRIUM ST:** Ariane 5, its evolution and Ariane 6
- **Francesco Depasquale, ELV:** Vega LV qualification status and evolution perspective

10:30 - 11:00 → Coffee break

11:00 - 11:30 → **Keynote Speakers - Session Two**

- **Snecma-SAFRAN Group representative:** Ariane 5 ME, a good framework for Vinci

- **Michel Doubovick, Arianespace:** Arianespace launchers' needs for the future

11:30 - 12:45 → **Round Table** Which future launchers for Europe?

With the participation of key representatives of Arianespace, ESA, ELV, ASTRIUM ST and SNECMA-SAFRAN Group

12:45 - 14:00 → Buffet lunch in the Space village

Tuesday, October 12th 2010, afternoon

ROOM A : LAUNCHER'S MODELLING

- 14:00 - 14:30 **Didier Granville, SAMTECH:** Overview of SAMTECH computer aided engineering techniques applicable to the space sector
- 14:30 - 15:00 **Gianluigi Baldesi, ESA-ESTEC:** The importance of virtual prototyping/modelling in the space domain, in particular for launchers
- 15:00 - 15:30 **Patrick Bugnon, ASTRIUM ST:** SAMCEP contribution to advanced non linear problems related to the Ariane 5 launcher
- 15:30 - 16:00 Coffee break
- 16:00 - 16:30 **Alain Pyre, Snecma-SAFRAN Group, Spaces Engines Division:** An overview of recent Finite Element Analyses performed with SAMCEP in the field of Liquid Rocket Engines
- 16:30 - 17:00 **Alain Dumont, SABCA:** Interest of Finite Element Analysis with SAMCEP software in the frame

of launch vehicle structures and equipment design process at SABCA

- 17:00 - 17:30 **Pascal De Vincenzo, OPEN ENGINEERING:** New challenges in multiphysics simulations for some space applications based on partnerships supported by ESA and SKYWIN

ROOM B : LAUNCHER'S TECHNOLOGY

- 14:00 - 14:30 **Christian Deprez, Thales Alenia Space ETCA:** Thales Alenia Space ETCA, a European leader for on-board equipment and benches for launchers
 - 14:30 - 15:00 **Paul Parisi, SPACEBEL:** From satellites to launchers: support to the development of the Flight Programme Software of VEGA
 - 15:00 - 15:30 **Jean-Hervé Lecat, Centre Spatial de Liège (ULg):** Health Monitoring, Contactless Measurements and Wireless in harsh environments
 - 15:30 - 16:00 Coffee break
 - 16:00 - 16:30 **Jean-Luc Bozet, University of Liège (ULg):** Bearings & seals for liquid oxygen turbopump
 - 16:30 - 17:00 **Jérôme d'Agruma, SAFRAN (Techspace Aero):** European leader in liquid rocket propulsion flow control equipment
 - 17:00 - 17:30 **Christophe Delrez, Amos:** VINCI Altitude Simulation Vacuum Chamber Design And Manufacturing
- 17:30 - 17:45 → **Wrap-up and closure**

Further details on www.space-days.com