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Space transportation: Young engineers from all over Europe preparing for the future in Bordeaux

Le Haillan, Bordeaux, 22 July 2010

On this final day of the 11th Summer School of the Community of Ariane Cities (CVA) held in Bordeaux, the highlights were the presentations of the results of the team project on rocket propulsion, the jury's verdict and the closing certificate award ceremony. This marked the culmination of four weeks of intense activity for the 39 young participants, who came from the "Ariane Cities" of Augsburg, Barcelona, Bordeaux, Bremen, Cayenne, Colleferro (Rome), Kourou, Les Mureaux, Madrid and Toulouse. Sharing a common background in engineering, these participants were all third-year-plus university students or recent graduates already working in the space industry.

Invited by CVA founding-members the Urban Community of Bordeaux and the firm Snecma Propulsion Solide, other partners in the region contributed to this rich educational experience by opening their doors to the participants for site visits (see photo below). The Arts et Métiers ParisTech school of engineering provided the host venue for the Summer School at its campus in Talence, contributing its know-how to devise the course curriculum and making available its accommodation, lecture rooms and laboratories to enable the participants to build, stand-test and launch rockets powered by water and compressed air. Some of the students came from other Arts et Métiers campuses: Aix-en-Provence, Angers and Metz.

Catherine Goetz, Director of Studies at Arts et Métiers, Talence, summed things up as follows: *"Our school warmly thanks our CVA partners in Toulouse for having suggested we organise this year's CVA Summer School. This event has proved to be a great experience with an international dimension for all to see. We are keen to maintain links with this travelling summer fixture over the coming years and we hope to be able to continue each year to send some of our engineering students to other Ariane Cities"*.



Firms specialising in space transportation in the Bordeaux region opened their doors to the CVA Summer School for visits. The 39 young participants from 15 European cities were thus able to appreciate for themselves the know-how on site at the DGA'S CAEPE rocket test facility, SNPE Matériaux Energétiques, SAFRAN-Snecma Propulsion Solide and (photo above) EADS Astrium.

One of the programme's highlights was the in-flight verification, during the launches carried out on Sunday 18 July, of the predictions for final altitude, launch repetivity, robustness of design and construction – parameters which were then evaluated by the members of the jury.

Christophe Magnière, an engineer at Snecma Propulsion Solide who also heads the national youth association for space sciences AJSEP, supervised the team-based work, during which both healthy competition and collaboration were encouraged. He emphasised the following: *“The teamwork was remarkable, not just between the participants but also with the AJSEP members, experienced volunteers who skilfully supervised the work, observing best engineers’ practice but also allowing full scope for creative flair and initiative.”*

Contributors from the worlds of industry and academia, other Ariane Cities and space agencies added theoretical and practical training sessions on a variety of different subjects: the history of the Ariane programme, European strategy on access to space, designing satellite launch systems, current and future propulsion technologies, manufacturing processes, launch operations from the CSG in French Guiana, cost control and Media communication. The cost of these additional contributors giving their time and travelling to the Summer School was covered by the European Space Agency (ESA), Arianespace, Avio, the French space agency CNES, DGA/CAEPE, EADS Astrium, MT Aerospace, Planète Sciences, SNPE Matériaux Energétiques, Snecma Vernon, the Universities of Augsburg, Bremen, Liège, ISAE Toulouse and the International Space University (ISU) jointly.

In addition, workshops were held on multicultural and multidisciplinary teamwork and on building and launching micro-rockets. The participants were also able to take up one of two language-learning options: technical English or beginners’ French.

The Community of Ariane Cities draws together 18 cities and urban communities and as many industrial firms involved in Europe’s Ariane launcher programme, with the following objectives in mind: informing citizens of the importance of investing in space and European cooperation; inspiring new generations to gravitate towards scientific and technical studies; and training the space professionals of tomorrow.

Each component of the training programme is geared to the participants’ age and knowledge level, but the common denominator is sensitising them to the basics of intercultural learning and European cooperation in the field of technology. The students learn about the various parties involved in the design, manufacture and deployment of Ariane launchers; they visit research and industrial facilities in the host-city area; and they jointly reflect on the future of European cooperation in space.

For more information, please contact:

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