

## **“The Launch Facilities Are Unique”**

*Engineers and Students Visit the Spaceport in Kourou*

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### **HARDTHAUSEN.**

Sweating in 30 degrees Celsius and 90 percent humidity instead of working arduously in front of a computer screen on PhD work. At the spaceport of Kourou in French Guiana, one can see in full-scale what can be experienced in Lampoldshausen only by using subscale methods. Such an opportunity was given to three PhD students of the German Aerospace Center (DLR) Lampoldshausen facility. And they weren't the only ones to benefit; 30 European students visited the summer school of the CVA (Community of Ariane Cities) in Lampoldshausen this year. Every year, students travel to one of the 35 cities which participate in the development of the Ariane rocket family.

### **In the Middle of the Boonies.**

In the first week of December, a total of 50 students and engineers flew over the Atlantic to Kourou, where they spent a day visiting the spaceport. Experiencing a bit of the land and the people was as important as the visit to Devil's Island, the location of a former French prisoner colony. Those who took part were equally fascinated by the harbor which was seemingly “in the middle of nowhere.” “It wasn't really what I had expected in a harbor; rather, it simply looked like the end of the river,” Johannes Lux explained. Still, rocket parts from all over Europe are shipped there, and satellites are transported to Kourou via aircraft as well.

Along with his colleagues, Lux conducts fundamental research on atomization and injection using model combustion chambers in Lampoldshausen. “Perhaps our current research will someday influence engine development,” pondered the 30-year-old.

The future of the spaceport in Kourou and that of the operating company Arianespace was an important topic. “It was certainly interesting to hear about where things are going,” Jan Deeken said. For example, Arianespace said it wants to launch the Russian Soyuz rockets from Kourou starting in 2009.

### **An Expensive Element.**

The engines of the Ariane family of launch vehicles are tested in Lampoldshausen. “The engine is the most expensive part on the whole apparatus. Without the work in Lampoldshausen, the rockets would not start,” Lux said. In Kourou many teams of people come together to build the rockets. In technical jargon, this part is referred to as systems integration. The size of the finished rockets and the European automated transfer vehicle (ATV), which is scheduled to launch in February and dock with the International Space Station (ISS), made them an impressive sight. “The integration of the entire launcher was very interesting. I was pretty fascinated by its size,” Lux commented. “The entire place was very interesting,” his colleague Jan Deeken added.

**Highly Motivated.**

“I have never seen so many highly motivated people,” Johannes Lux explained. Both Lux and Deeken noted how easy it was to speak with the engineers on less technical level, too. Deeken remembered, “They talked about their job and their life in Kourou.” Of course, the two technically-oriented individuals were very happy to have made the new social contacts, too.

Approximately every two months, rockets carrying satellites on board are propelled into space from Kourou. “The launch facilities are definitely unique. I’d like to go back sometime to see a launch,” Lux said. Both Lux and Deeken also said they could easily imagine themselves spending a set amount of time working in Kourou.

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