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PRESS RELEASE

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For the first time Berliner Glas optics in outer space

On 25 July 2013 Europe's largest and most sophisticated telecommunications satellite, Alphasat, was launched successfully into outer space on board an Ariane-5 rocket. On 06 August 2013 Alphasat reached its preliminary position on a geostationary orbit at an altitude of approx. 36,000 kilometers. Once it reaches its final position it should revolutionize broadband communication in mobile telephony over the next 15 years.
Alphasat's main objective is the expansion of the global mobile network of the British mobile telephone service provider Inmarsat.

Apart from Inmarsat's commercial payload, additional room is offered by the satellite to technologies that are supposed to be tested in geostationary orbit under the special conditions of outer space. These four technological demonstration systems for the ESA also include a laser communications terminal (LCT) that Tesat-Spacecom has developed on behalf of Deutsches Zentrum für Luft- und Raumfahrt (DLR) (German Aerospace Center) with funds from Bundesministerium für Wirtschaft und Technologie (Federal Ministry of Economics and Technology) (code 50 YH 0632).
The Berliner Glas Group supplied a very sophisticated optical component for this communications terminal.

The new data highway in outer space
The LCT on board Alphasat ought to enhance communication in space. This system transmits data using light. This can transmit significantly larger volumes of data (at present approx. 1.8 gigabits per second corresponding to 130 DVDs per hour) in the same way that the introduction of fiber glass on the ground has speeded up communication. These terminals are also smaller and lighter than before and require less energy, constituting significant progress for operators of communication satellites.
For the first time the LCT on Alphasat is now testing transmission between low-orbit Earth observation satellites and a geostationary satellite at distances of up to 45,000 km. It was developed and built in preparation for the European Data Relay System EDRS.
This can significantly improve Earth observation performance and will enable round-the-clock information exchange between satellites in the future.

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The Berliner Glas Group is currently producing several optical components and systems for other laser-communications terminals that will be launched in the near future.

About Berliner Glas:
The BERLINER GLAS GROUP (www.berlinerglas.com) is one of the leading European providers of optical key components, assemblies and systems as well as high-quality refined technical glass. With more than 1,100 employees, BERLINER GLAS develops, produces and integrates optics, mechanics and electronics into innovative system solutions for its customers. As OEM partners from prototyping to volume production, the BERLINER GLAS GROUP companies serve innovative customers in various market segments – laser and space technology, semiconductor industry, medical technology, metrology, analytics, defense and the display industry.

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