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Experimental testing for the GRACE follow-on Laser Ranging Instrument

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The Gravity Recovery and Climate Experiment (GRACE) determines the Earth's field of gravity based on measurements of the variations of the separation between two satellites provided by a microwave ranging system. For the GRACE Follow-On mission, currently planned to be launched in 2017, an additional experimental Laser Ranging Interferometer with improved intersatellite ranging performance is being developed to demonstrate the technology. An overview of laboratory experiments at the AEI Hannover to test key aspects of the instrument will be presented.