

DocumentID	241416
Vortragstitel	DLR-Kompaktsatellit: A Small German Spacecraft Developed by DLR for Substantial Scientific Return
Autoren	J.F. Pedersen, R. Findlay, H. Müller, O. Eßmann
Preisträger	
Vortragssprache	englisch
Seiten	8
Veranstaltung	Deutscher Luft- und Raumfahrtkongress 2011
Veranstaltungsort	Bremen
Veröffentlicht in	Deutscher Luft- und Raumfahrtkongress, Tagungsband - Manuskripte, 2011; Seite 1443 - 1451; DGLR e.V.; Bonn; 2011
Stichwörter	Satellite Technology
Abstract	<p>In 2007 the German Aerospace Centre (DLR) initiated the DLR-Kompaktsatellit program with the objective to create a small, flexible platform on which future advanced scientific DLR missions could be based. The first mission selected for the Kompaktsatellit program was AsteroidFinder, a mission to characterize the unknown Inner Earth Object (IEO) population in terms of mass, size and distribution. With an estimated total mass of 100-150kg excluding the payload the DLR-Kompaktsatellit is classified as a small satellite, and will be the first satellite above 20kg developed under the management of the department of Satellite Systems (TY) at the DLR Institute of Space Systems in Bremen. The development and later the utilisation of DLR-Kompaktsatellit involves several DLR institutes throughout Germany. The satellite platform is designed using subsystems and units which are both new developments by DLR and commercial off the shelf (COTS) parts procured from German and European industry. The AsteroidFinder mission is envisaged to be launched in 2014, and the project is scheduled to conduct the Preliminary Design Review and enter Phase C during 2011. The development of a small satellite with the scientific return of AsteroidFinder represents a great challenge for the involved parties. However with a highly integrated and innovative team, augmented by the use of modern engineering practices and technologies, it is shown that such challenges can be met within the constraints of small satellite projects, and that the objectives of the DLR-Kompaktsatellit program can be met within the framework of a mission such as AsteroidFinder.</p>