Title

Demisability analysis of Reaction Wheels

Abstract

The object of this study is to further investigate the break-up processes of a reaction wheel during re-entry.

The ball bearing unit (BBU) was already identified as a key element (demising late) during the demise process in previous studies.

Potential design changes are analyzed with regards to the optimization of demisability.

First simulations show that a reaction wheel with an aluminum rotating mass (and with no design modifications) is demisable at and above release height of 87 km.

Potential design modifications are presented that improve the demisability even further.

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