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Author: Dr. Dun Li China Academy of Aerospace Aerodynamics (CAAA), China, ld1010@tom.com

Mr. YueLong He
China Academy of Aerospace Aerodynamics (CAAA), China, aia741@163.com
Mr. Liu Shuai
China Academy of Aerospace Aerodynamics (CAAA), China, ls0478@sina.cn

INVESTIGATION OF FAIRING TYPICAL ATTITUDE AERODYNAMIC CHARACTERISTIC DURING FAIRING SEPARATION

Abstract

The fairing separation is one of the conventional multi-body separation forms. The fairings usually have two typical attitudes: the fairing turn inward or the fairing head outward during the separation. The aerodynamic characteristic that lead to the two different situations is complex. The numerical method and the wind tunnel test are applied to the ideal model fairing 6DOFs' separation research. The work in the paper shows the strong disturbance among the multi-bodys, and points out the trajectory characteristic during separation. The study shows that the two cases are two basic forms of the fairing attitudes during separation. The characteristic of the two forms should be considered while program designing.