

Horizontal and vertical wind measurements from GOCE angular accelerations

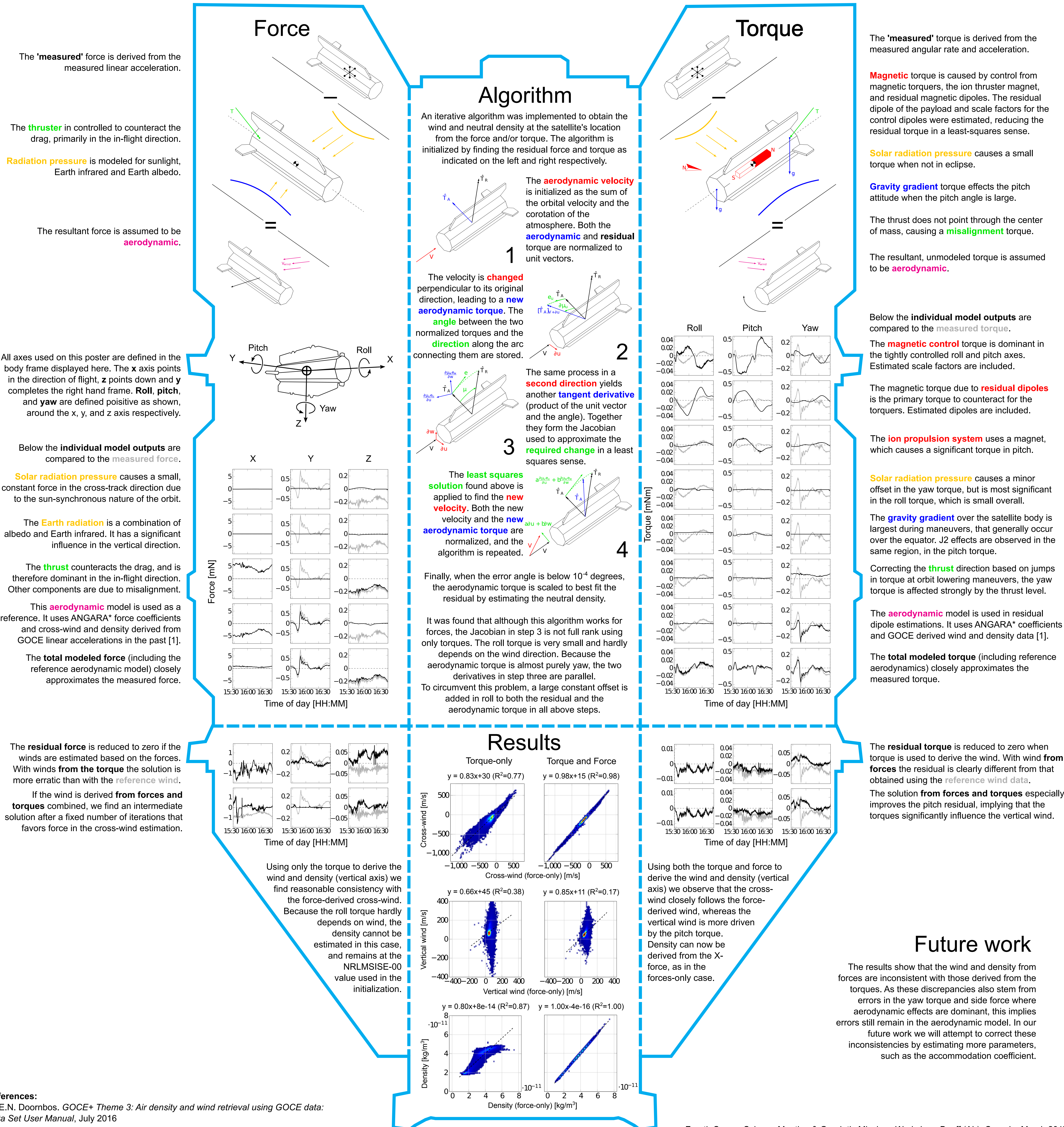


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In the past the linear accelerations measured by GOCE have been used to derive the neutral density and cross-wind in the thermosphere [1]. On this poster the result of a similar effort is presented, in which the angular accelerations were used for the same purpose. Although modeling the disturbance torque requires a greater effort than modeling the force (compare the left and right wing), a similar level of detail can be obtained from both sources. Combining the forces and torques will in the future allow for estimating more aerodynamic parameters.

All time series are taken on May 28, 2011; the results section uses data from the whole month of May, 2011.



References:
[1] E.N. Doornbos. GOCE+ Theme 3: Air density and wind retrieval using GOCE data: Data Set User Manual, July 2016

*ANGARA is a Monte-Carlo simulator developed by HTG, Göttingen.