

2006b

“The TRIAD Algorithm as Maximum-Likelihood Estimation,” Malcolm D. Shuster, *The Journal of the Astronautical Sciences*, Vol. 54, No. 1, January–March, 2006, pp. 113–123.

This work took advantage of a device introduced in 2004c, namely, the use of an effective quadratic cost function to compute the covariance matrix of a deterministic attitude estimation algorithm. The method was formalized in this work and applied to the TRIAD algorithm to show how, within MLE, specific previously discarded components of the unit-vector measurements removed the fourfold degeneracy and converted the TRIAD algorithm to the QUEST algorithm. It led also to a different way to understand the common expression for the TRIAD attitude covariance matrix based on the QUEST measurement model.

Succeeded 2004c.