

Abstract Submitted
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Expected Along-Track Geopotential Resolution for the GRACE Follow-On Mission.¹ PETER BENDER, KAIXUAN KANG, Dept. of Physics, Univ of Colorado - Boulder — The GRACE Follow-On Mission (GFO) is scheduled for launch early in 2018. Changes in the separation between the 2 satellites will be measured to determine variations along track in the geopotential height. The microwave system for measuring the separation will have about the same accuracy as for the GRACE Mission, but there also will be an experimental laser interferometry system with roughly a factor 20 lower measurement noise requirement. And the expected low frequency noise level from the accelerometers on the GFO satellites is about a factor 3 lower than for GRACE. However, the accuracy of global maps of the geopotential every 30 days is not expected to improve much because of the time variations in the geopotential during that time. Still, the improved along-track geopotential variation accuracy is expected to be scientifically valuable. This is partly because it permits analyses of time variations at short wavelengths from other data sources to be evaluated. The accuracy improvement expected for along-track wavelengths of roughly 2,000 km and shorter will be described. The analysis has been done using only frequencies of 1.25 cy/rev and lower in correcting for the acceleration noise, and 4 rev data arcs.

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