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We compare new annual altimetry reconstructions of changes in the Greenland Ice Sheet with GRACE/GRACE-FO mascons from GSFC across seven regional basins (from Mouginot et al., 2019). The reconstructions are the first continuous laser altimetry-based reconstruction of the Greenland Ice Sheet's mass balance from 1994 to 2020, developed from ICESat (2003 - 2009), ICESat-2 (2018 - present), Airborne Ice Mapping (1993-2008), and Operation Ice Bridge (2009-2021, last land ice flight in 2019 in Greenland). We show that these reconstructions agree well with GRACE, provided that differences in spatial resolutions between the altimetry and GRACE estimates are resolved and mass change from outlying glaciers and ice caps are considered. This presentation will focus on the validation of the reconstructions against GRACE, highlighting an upcoming paper on this new altimetry product.
Meeting homepage
GRACE-FO 2025 Science Team Meeting
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