# INFERENCE OF PRESENT-DAY SEA-LEVEL CHANGE FOR THE EAST COAST OF NORTH AMERICA


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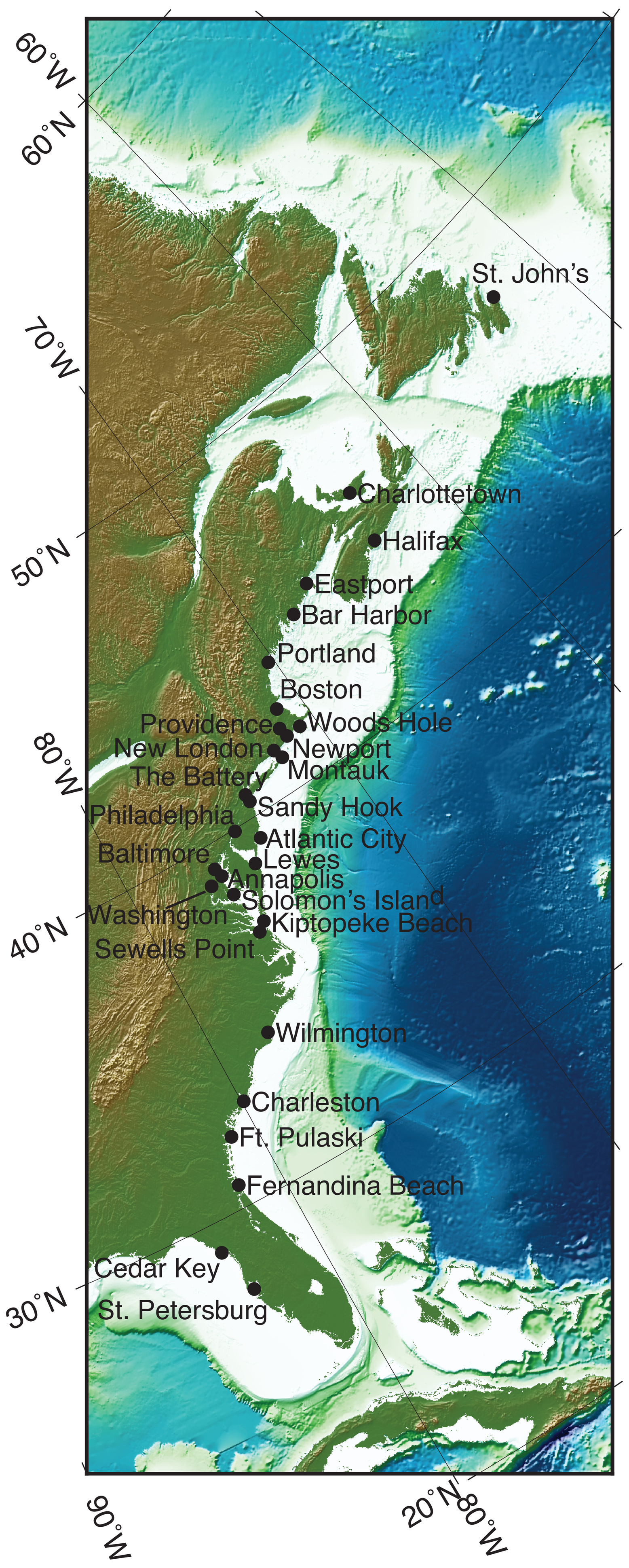
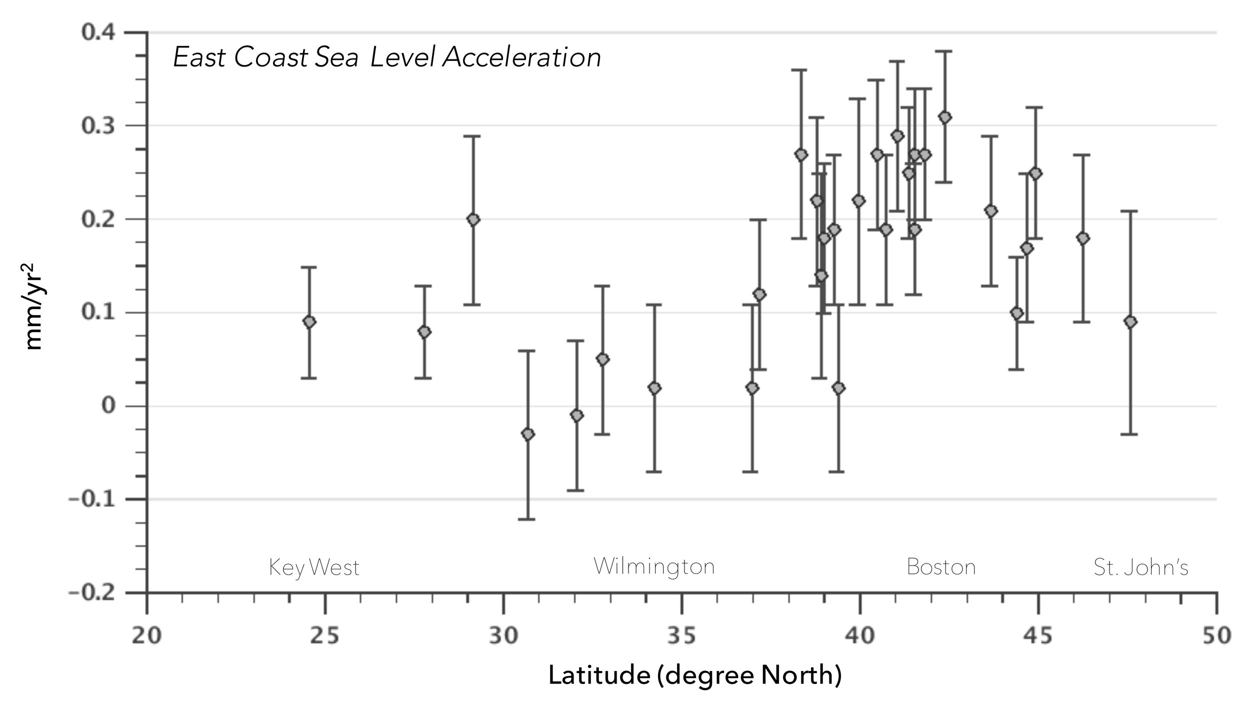
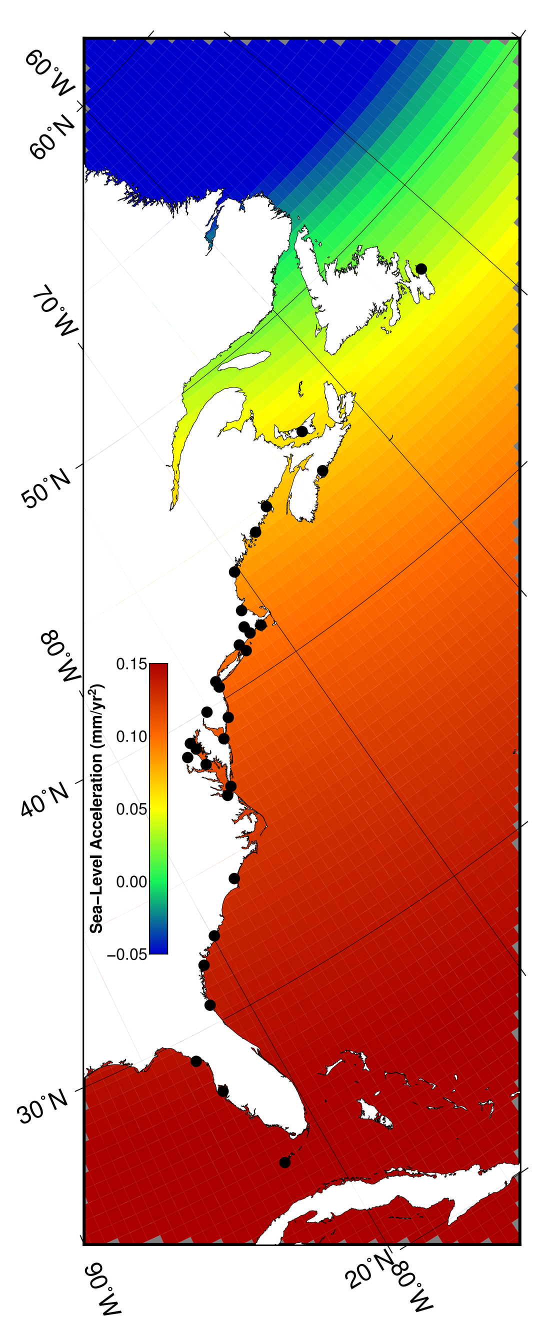


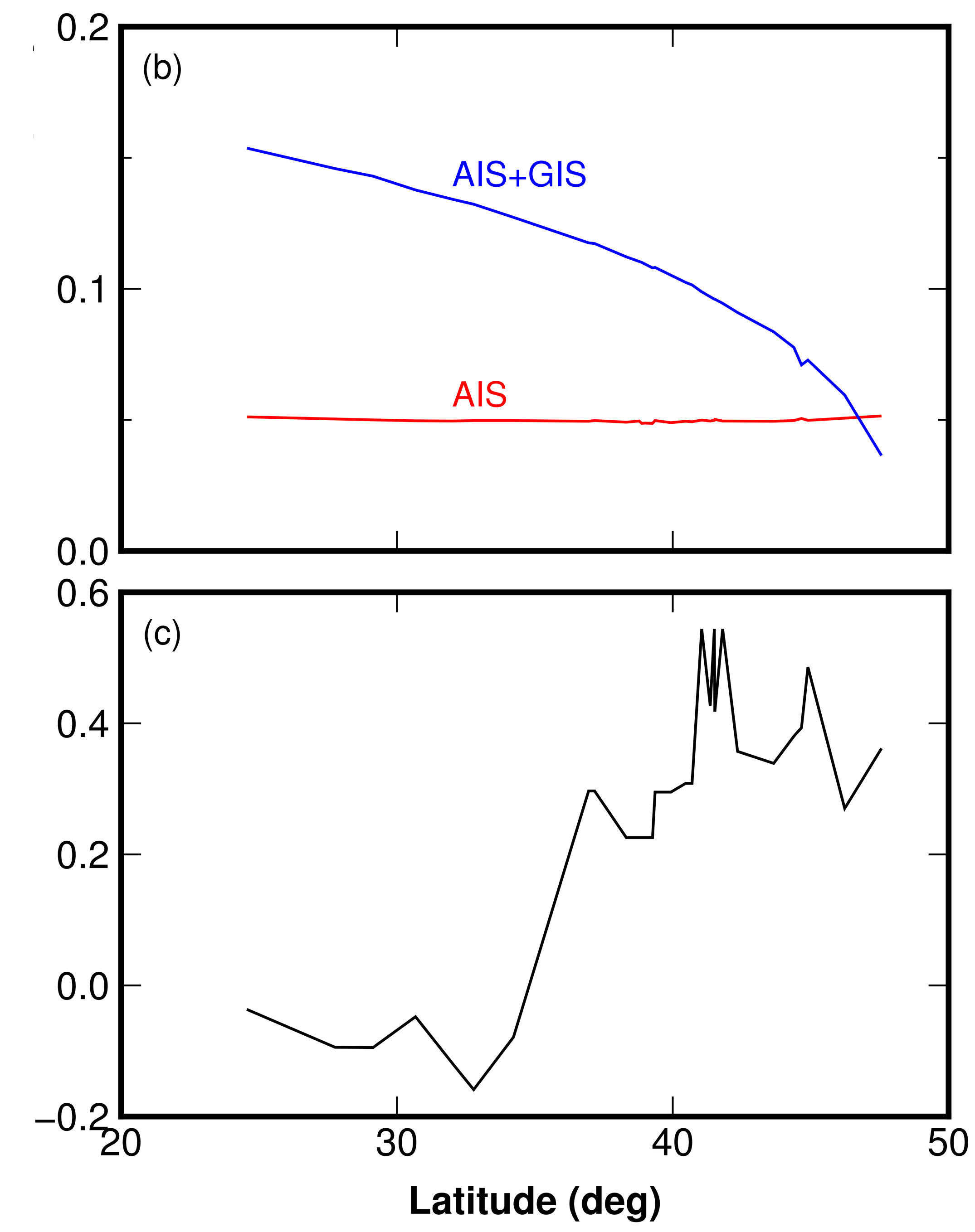

**1. Location map of tide gauges** used in this study. The East Coast of North America has a great spatial variability in sea-level change (SLC); understanding its implications is scientifically and societally important.



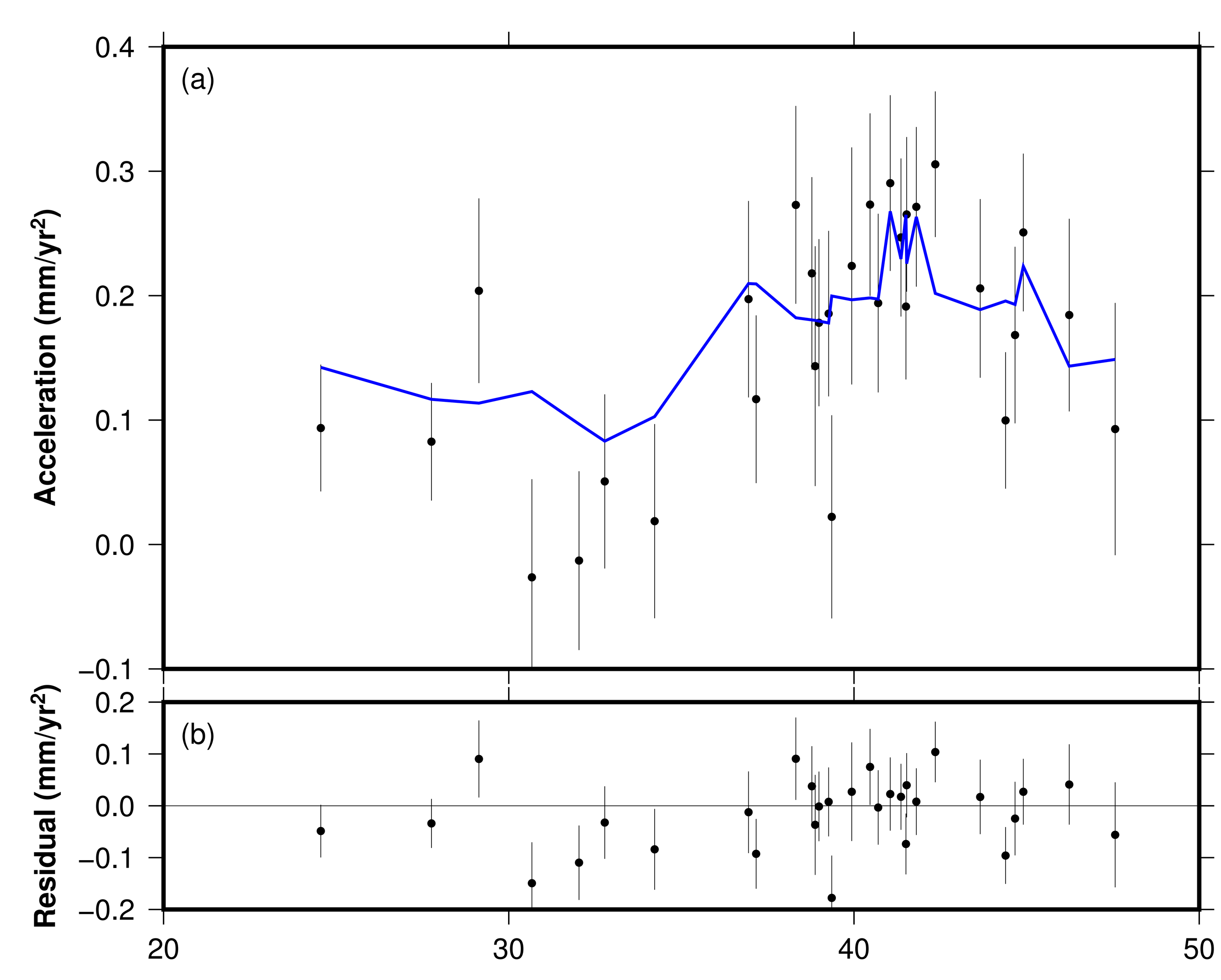

**2.** East coast sea-level acceleration at tide-gauge locations versus latitude. Tide-gauge records exhibit **acceleration starting in roughly 1990**, consistent with global studies [e.g., *Church and White*, 2006; *Hay et al.*, 2015] as well as regional studies [e.g., *Boon*, 2012; *Kopp*, 2013].



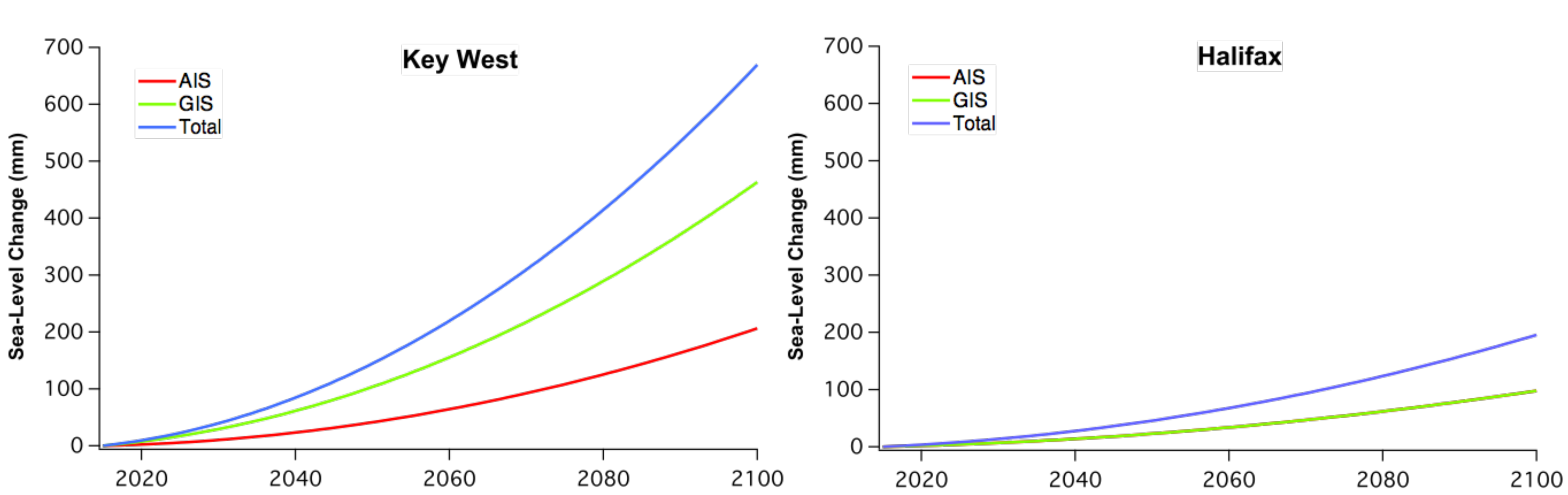

**3. Contributions to SLC** were calculated based on several physical processes, including GIS and AIS ice-mass change (above, based on *Velicogna et al.* [2014]), ocean circulation and density changes (GECCO2), IB, and GIA. One parameter was estimated for the entire data set, a scale factor for the ocean-model contribution.




**4. SLC budgets:** (b) Sea-level acceleration for the AIS (red) and AIS plus GIS (blue) based on models for AIS and GIS mass loss and solution of the Sea-Level Equation. (c) Sea-level acceleration from the GECCO2 ocean estimate.




**5. O**bserved sea-level acceleration (points with error bars) and postfit model (blue line). The weighted rms difference between the data and model is 0.07 mm yr$^{-2}$, and the reduced $\chi^2$ difference is 0.75, indicating a good fit.




**6 Different futures for different cities.** The graphs are based only on the GIS and AIS components. Given the expectation for rapidly increased melting [e.g., *Hansen et al.*, 2016] these could well be minimal estimates for the SLC. Long-term changes in ocean density changes and circulation could increase these estimates further.