



Using altimetry for storm surge applications

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Satellite altimetry can be used for storm surge application by assimilating sea surface height data in to operational models and for calibration purposes and in some regions this can improve storm surge warning capabilities quite dramatically. However, satellite altimetry is limited in both temporal and spatial sampling which for some shallow water regions renders satellite altimetry unimportant for storm surge modelling. Furthermore the accuracy of the altimeter observations degrades close to the coast and data are seldom available in real-time. A huge effort is currently undertaken by the space agencies and other organisations to improve the accuracy and availability of satellite altimetric observations in coastal regions. Furthermore the possible increased number of satellite altimeters in the future and the advent of SWOT and Sentinel-3 like altimeters might dramatically change the use of satellite altimetry for storm surge applications in the future.