

EGU2020-1561

<https://doi.org/10.5194/egusphere-egu2020-1561>

EGU General Assembly 2020

© Author(s) 2020. This work is distributed under the Creative Commons Attribution 4.0 License.



## Automating Tide Gauge Quality Control

**Joanne Williams** and Andrew Matthews

National Oceanography Centre, Liverpool, United Kingdom of Great Britain and Northern Ireland (joll@noc.ac.uk)

Tide gauges provide a vital component in coastal flooding alert systems, and as a record of past events. They are used to record short duration extremes such as tsunamis, storm surges lasting a few hours, regular tides, and long term changes in relative sea-level. Globally, there is far more tide gauge data in existence than is available in the public domain for research. A significant factor obstructing the release of data is that quality control of tide-gauge records is still carried out with a great deal of manual inspection, and is therefore labour-intensive. Automated systems must carefully distinguish between spikes due to instrumental error and genuine rare extreme events; and between damaged instruments and still water. The National Oceanography Centre automatic quality control software aims to enable analysis of any high-frequency tide-gauge record around the world with minimal manual intervention or parameter selection. We demonstrate the implementation in Matlab and discuss the successes and challenges of the software.

**How to cite:** Williams, J. and Matthews, A.: Automating Tide Gauge Quality Control, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-1561, <https://doi.org/10.5194/egusphere-egu2020-1561>, 2019