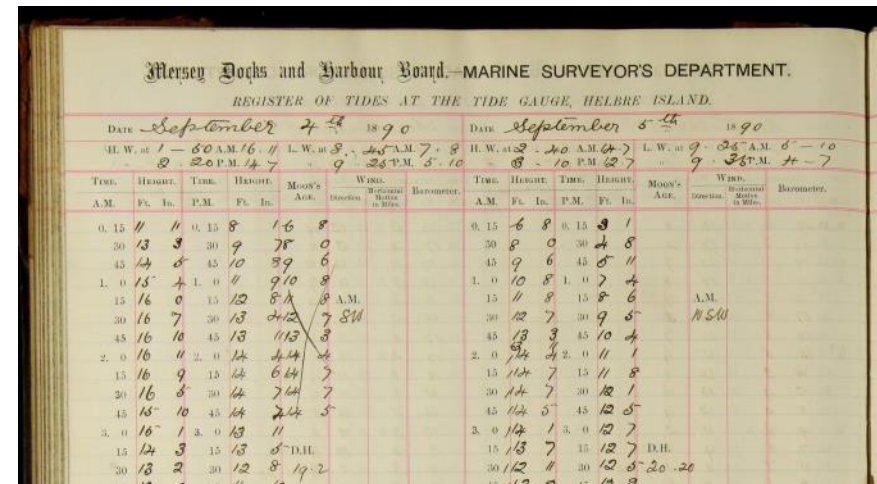
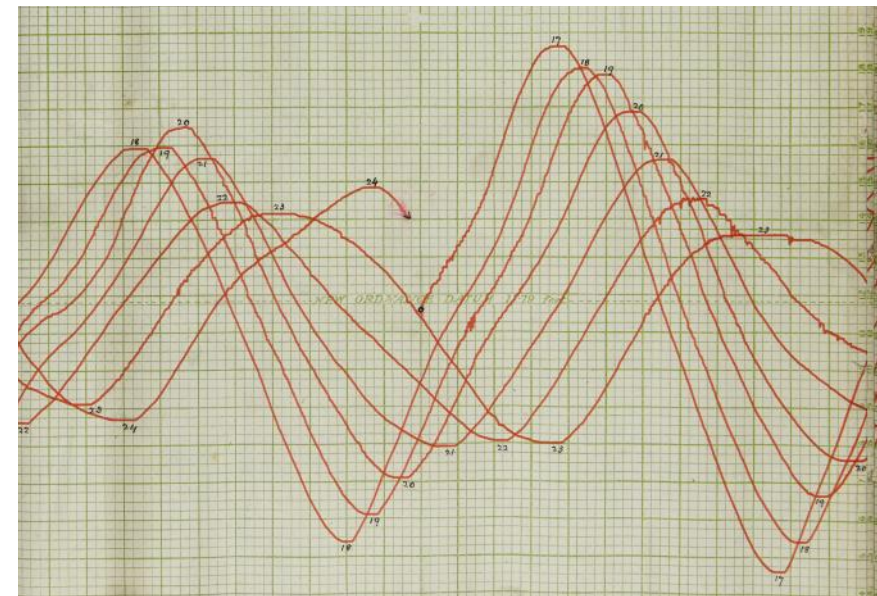


## Data under threat

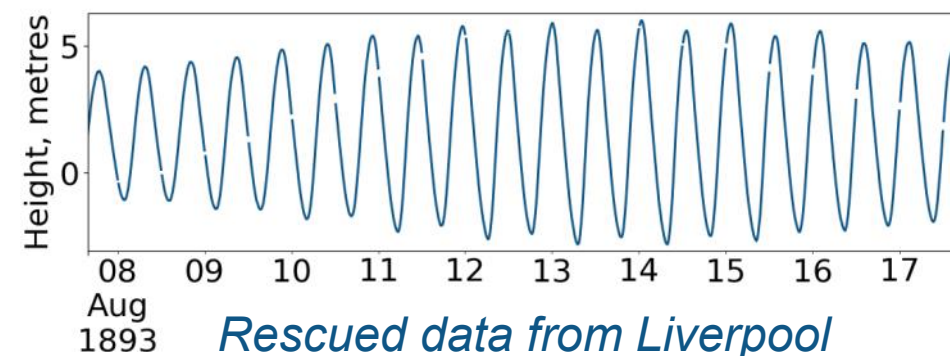
- Our knowledge of sea level rise, tides and extremes relies on data from tide gauges
- Large amounts of data remains inaccessible, existing as physical charts and ledgers
- Digitising these data is time consuming, expensive, and difficult to fund
- Lots exists in the form of tidal charts, but here we're considering ledgers of tabulated values



Ledger with transcription errors  
(click for full image)



A typical tidal chart  
(click for full image)



Rescued data from Liverpool

## How does it work?

- Volunteers are asked to enter a column of data
- Each column is entered by five different volunteers
- We collate and compare the results and produce complete time series
- So far, 6 years have been digitised by over 2000 volunteers, but the project continues
- Complications: values are in feet and inches, negative values exist

## Lessons learnt

- The process is working well: outputs will be quality controlled and banked at bodc.ac.uk
- More problems have occurred due to errors with the original transcription than with the data entry
- Volunteers have reported many issues through the website's talk boards
- Running the project is more time consuming than setting it up
- It's a great way to tell the public about your data

## How can the data be rescued?

- Ledgers contains many minor transcription errors and changes in format, making machine based method difficult
- Crowd sourced approaches using platforms such as zooniverse.org have been successful in other fields (in particular meteorology)
- Our project uses volunteers to digitise 50 years of sea level heights recorded every 15 minutes from two sites in North West England.