Interactive comment on “Surface Ocean CO$_2$ Atlas (SOCAT) gridded data products” by C. L. Sabine et al.

Anonymous Referee #2

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This manuscript describes a gridded version of the Surface Ocean CO$_2$ Atlas (SOCAT), complementing the previously released, ungridded data compilation. Here, the carefully quality controlled and flagged observations (6.5 million data points) are organized onto a 1x1 degree grid, compatible with World Ocean Atlas products, with increased resolution in coastal regions (0.25x0.25 degrees). The interpolation is minimal, simple and transparent. It is described clearly leaving the user with a clear understanding of the product and the ability to make choices based on the flagging. The quality controlled and uniformly processed CO$_2$ data are provided on the grid, along with attendant meta-data including the number of samples and variance within grid cells.

This is a tremendous and valuable product. It will no doubt be used very widely as a research tool in the oceanographic, carbon cycle and climate communities. The scientists who have gathered, processed and presented these data in an accessible and transparent product are to be highly commended.