AquaSat: a dataset to enable remote sensing of water quality for inland waters

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Key Points:

- We present an open dataset that matches Landsat imagery to *in-situ* water quality measurements
- The dataset, AquaSat, is the largest such dataset ever assembled with more than 500k matchups
- We also publish all code to encourage improving and expanding AquaSat

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Abstract

Satellite predictions of inland water quality requires pairing *in-situ*.

Suggested section heads

1 Introduction

The main text should start with an introduction. Except for short manuscripts (such as comments and replies), the text should be divided into sections, each with its own heading.

Headings should be sentence fragments and do not begin with a lowercase letter or number. Capitalize the first letter of each word (except for prepositions, conjunctions, and articles that are three or fewer letters).

2 Materials and Methods

Here is text on Materials and Methods.

Do not use bulleted lists; enumerated lists are okay. Use #. for list for a cleaner LaTeX output.

1. First element
2. Second element

2.1 A descriptive heading about methods

Please use ONLY \citet and \citep for reference citations. DO NOT use other cite commands (e.g., \cite, \citeyear, \nocite, \citealp, etc.). Example \citet and \citep: . . . as shown by Levitus et al. (2012), Nuncio, Luis, and Yuan (2011) and Raphael (2004) . . . as shown by (Levitus et al., 2012), (Nuncio et al., 2011), (Raphael, 2004). . . . has been shown (e.g., Levitus et al., 2012; Nuncio et al., 2011; Raphael, 2004).

3 Data

Or section title might be a descriptive heading about data

Table 1.   Time of the Transition Between Phase 1 and Phase 2[a]

Run	Time (min)
$l1$	260
$l2$	300
$l3$	340
$h1$	270
$h2$	250
$h3$	380
$r1$	370
$r2$	390

[a]Footnote text here.

As of 2018 we recommend use of the TrackChanges package to mark revisions. The trackchanges package adds five new LaTeX commands:

\note[editor]{The note}

\annote[editor]{Text to annotate}{The note}

\add[editor]{Text to add}

\remove[editor]{Text to remove}

\change[editor]{Text to remove}{Text to add}

complete documentation is here: http://trackchanges.sourceforge.net/

4 Results

Or section title might be a descriptive heading about the results

Enter Figures and Tables near as possible to where they are first mentioned: DO NOT USE \psfrag or \subfigure commands. DO NOT USE \newcommand, \renewcommand, or \def, etc.
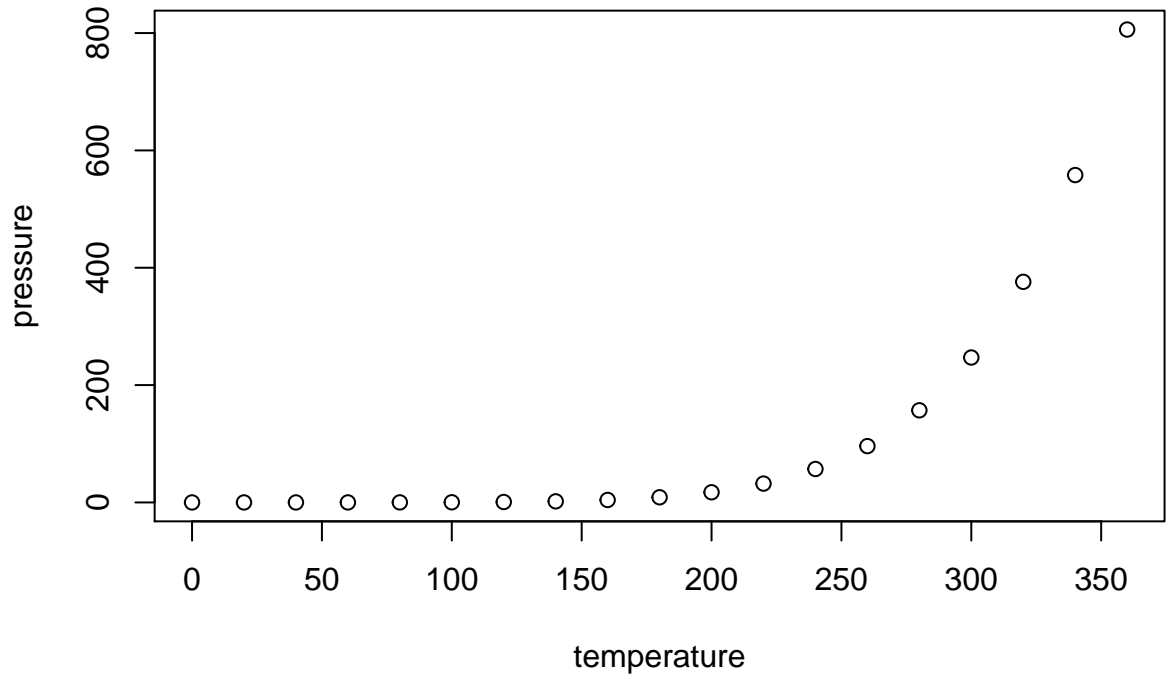
Example table

Figure 1. Please caption every figure

AGU prefers the use of {sidewaystable} over {landscapetable} as it causes fewer problems.

If using numbered lines, please surround equations with \begin{linenomath*}...
\end{linenomath*}

$$y|f \sim g(m, \sigma) \tag{1}$$

5 Conclusions

A Here is a sample appendix

Optional Appendix goes here

Optional Glossary, Notation or Acronym section goes here:

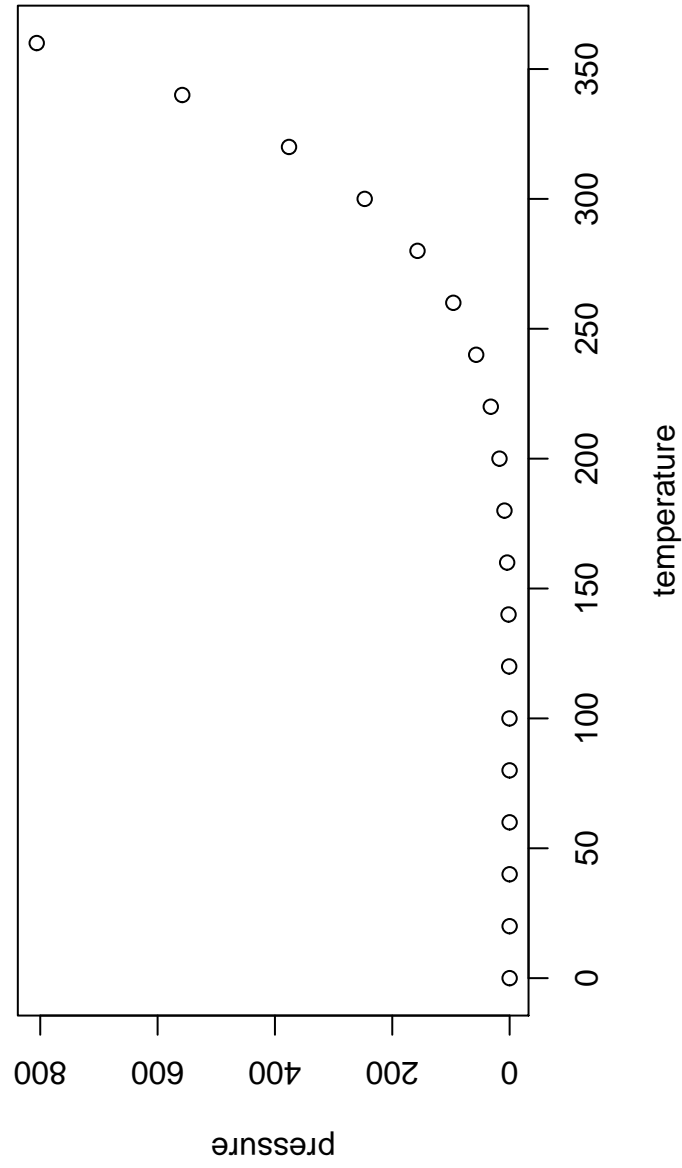Glossary is only allowed in Reviews of Geophysics

Figure 2. Please caption every figure

[h]

Table 2. Caption here

one	two	three
four	five	six

Glossary

Term Term Definition here

Term Term Definition here

Term Term Definition here

Acronyms

Acronym Definition here

EMOS Ensemble model output statistics

ECMWF Centre for Medium-Range Weather Forecasts

Notation

$a + b$ Notation Definition here

$e = mc^2$ Equation in German-born physicist Albert Einstein's theory of special relativity that showed that the increased relativistic mass (m) of a body comes from the energy of motion of the body—that is, its kinetic energy (E)—divided by the speed of light squared (c^2).

References

Levitus, S., Yarosh, E. S., Zweng, M. M., Antonov, J. I., Boyer, T. P., Baranova, O. K., ... Seidov, D. (2012). World ocean heat content and thermosteric sea level change (0-2000), 1955-2010. *Geophysical Research Letters*, *39*, 1–5. Retrieved from `http://www.agu.org/pubs/crossref/pip/2012GL051106.shtml` doi: 10.1029/2012GL051106

Nuncio, M., Luis, A. J., & Yuan, X. (2011). Topographic meandering of Antarctic Circumpolar Current and Antarctic Circumpolar Wave in the ice-ocean-atmosphere system. *Geophysical Research Letters*, *38*(13), 1–5. doi: 10.1029/2011GL046898

Raphael, M. N. (2004). A zonal wave 3 index for the Southern Hemisphere. *Geophysical Research Letters*, *31*(23), 1–4. Retrieved from `http://doi.wiley.com/10.1029/2004GL020365` doi: 10.1029/2004GL020365