

=== keff_in_SeaIceZone ===

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URL: The most recent routines can be downloaded from

AGU Index Terms: Air-sea interactions, Ice mechanics and air-sea-ice exchange processes, Turbulence, diffusion, and mixing processes, Gases, Biogeochemical Cycles

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== Description == The Matlab routines contained in this distribution calculate the effective gas transfer velocity (k_{eff}) for sea-ice-covered waters where turbulence can arise from (1) ice-water drag, (2) air-water drag and (3) buoyant convection. The routines are based on the parameter model described in:

Loose, B., W. R. McGillis, D. Perovich, C. J. Zappa, and P. Schlosser (2013), A parameter model of gas exchange for the seasonal sea ice zone, *Ocean Sci. Discuss.*, 10(4), 1169–1204.

== Installation ==

1. **DEPENDENCIES:** These routines require the Gibbs Seawater Toolbox (gsw), which can be downloaded from <http://www.teos-10.org/>. the gsw Toolbox contains the UNESCO state equations for the thermodynamic properties of seawater. No other dependencies should exist.
2. Untar the contents of the distribution and change the Matlab directory to be inside the folder location. See screenshot below.



3. Open/run/edit example.m. This routine has characteristic values of the input parameters for keff_SIZ.m

== Changelog ==

11.18.13 – Updated all routines to use Gibbs Seawater Toolbox instead of CSIRO Seawater toolbox.

Please report any errors or bugs to osoberlice@gmail.com