

Perform **conserv\_interp**(is\_ice, is\_wet, ice\_thickness,

ice\_elevation, bedrock\_bathy, init\_draft)

**for**  $(i, j) \in \text{NEMO columns}$  **do**

**if**  $\text{is\_ice}(i, j) \geq 0.5$  **then**

**if**  $\text{is\_wet}(i, j) \geq 0.5$  **then**

*Ice, wet  $\rightarrow$  cavity*

$\text{draft}(i, j) = \text{ice\_thickness}(i, j) - \text{ice\_elevation}(i, j)$

**else**

*Ice, dry  $\rightarrow$  grounded ice*

$\text{draft}(i, j) = \text{bedrock\_bathy}(i, j)$

**else**

*No ice*

**if**  $\text{is\_wet}(i, j) \geq 0.5$  **then**

*No ice, wet  $\rightarrow$  open ocean*

$\text{draft}(i, j) = 0$

**else**

*No ice, dry  $\rightarrow$  bedrock continent*

$\text{draft}(i, j) = 0$

$\text{bedrock\_bathy}(i, j) = 0$

*f.ETISh keeps the front from moving but  
the post-processing can lead to such cases.*

**if**  $\text{draft}(i, j) > 0$  **and**  $\text{init\_draft}(i, j) = 0$  **then**

$\text{draft}(i, j) = 0$

*Force retreat advancing ice-shelf front*

**else if**  $\text{draft}(i, j) = 0$  **and**  $\text{init\_draft}(i, j) > 0$  **then**

$\text{draft}(i, j) = 10 \text{ m}$

*Force fill retreating ice-shelf front*