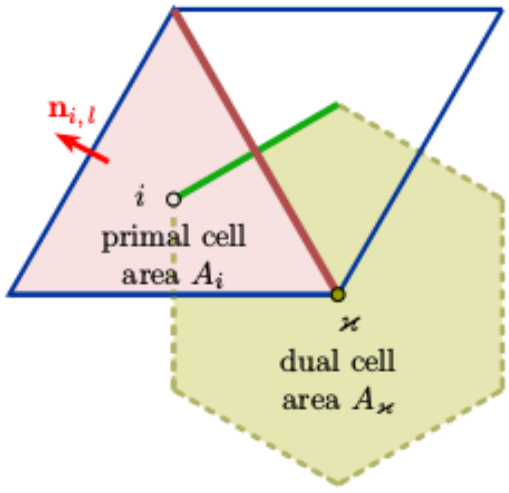
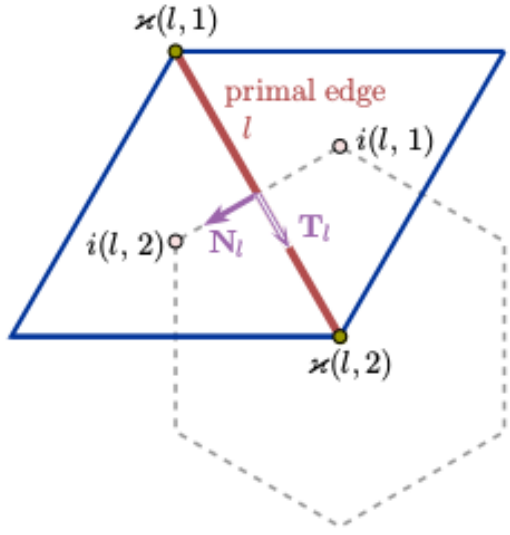
A divergence operator on icosehedral grids





$$\mathrm{div}(v)_i = \frac{1}{A_i} \sum_{l \in \mathcal{E}(i)} v_{n_l} (N_l \cdot n_{i,l}) l$$

ICON Fortran

how to do a div?

GridTools

in a similar fashion

GridTools

How to get edges%primal_edge_length and cells%area?

netCDF file and a converter.

GridTools

and signs?

Next

- average divergence $\overline{\left(\mathrm{div}(v)_0\right)}$: a nested operator
- laplacian $(\nabla_d^2 v)_I \cdot N_I = \mathrm{grad}_n[\mathrm{div}(v)]_I - \mathrm{grad}_\tau[\mathrm{curl}(v)]_I$: nested and fusion
- fourth-order hyper-Laplacian $\nabla_d^4 v = \nabla_d^2(\nabla_d^2 v)$

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