

# 1 - CMIP5 Atmospheric & Oceanic Fluxes

## 1.1 - Home

extract from cholod@ciclad-ng:/loceanfs/pulsation/cholod/wd/cmip5/fluxOA\_estimation directory

<b>sftlf = landfrac</b>
<ul style="list-style-type: none"><li>• we need it to interpolate hfdsA on the pulsation oceanic grid</li><li>• "landfrac" is not a variable name in ESGF. Please look for variable "sftlf", standard name "land_area_fraction". This is the land sea mask of the model in the projects CMIP5, CORDEX, GeoMIP, LUCID, PMIP3, ...</li></ul>
<b>Atmospheric Fluxes</b>
<ul style="list-style-type: none"><li>• <b>hflsA</b> ; "Surface Upward Latent Heat Flux"; (W m-2)</li><li>• <b>hfssA</b> ; "Surface Upward Sensible Heat Flux"; (W m-2)</li><li>• <b>rldsA</b> ; "Surface Downwelling Longwave Radiation"; (W m-2) (Warning : rldsO != rldsA)</li><li>• <b>rldsA</b> ; "Surface Upwelling Longwave Radiation"; (W m-2)</li><li>• <b>rsdsA</b> ; "Surface Downwelling Shortwave Radiation"; (W m-2)</li><li>• <b>rsusA</b> ; "Surface Upwelling Shortwave Radiation"; (W m-2)</li><li>• <b>hfdsA</b> ; "Downward Heat Flux at Sea Water Surface"; (W m-2) (Computed by Chris :-)</li></ul>
<b>Oceanic Fluxes</b>
<ul style="list-style-type: none"><li>• <b>hfdsO</b> ; "Downward Heat Flux at Sea Water Surface"; (W m-2)</li><li>• <b>hflsO</b> ; "Surface Downward Latent Heat Flux"; (W m-2)</li><li>• <b>hfssO</b> ; "Surface Downward Sensible Heat Flux"; (W m-2)</li><li>• <b>rldsO</b> ; "Surface Net Downward Longwave Radiation"; (W m-2) (Warning : rldsO != rldsA)</li><li>• <b>rsntdsO</b> ; "Net Downward Shortwave Radiation at Sea Water Surface"; (W m-2)</li></ul>
<b>O/A flux relation</b>
<ul style="list-style-type: none"><li>• <b>Longwave net Downward</b> : <math>rldsO = rldsA - rldsA</math></li><li>• <b>Shortwave net Downward</b> : <math>rsntdsO = rsdsA - rsusA</math></li><li>• <b>Latent Downward</b> : <math>hflsO = -hflsA</math></li><li>• <b>Sensible Downward</b> : <math>hfssO = -hfssA</math></li><li>• <b>Shortwave net Downward</b> : <math>rsntdsO = rsdsA - rsusA</math></li><li>• <b>Ocean net Downward</b> : <math>hfdsO = hflsO + hfssO + rldsO + rsntdsO</math></li><li>• <b>Atmosphere net Downward</b> : <math>hfdsA = -hflsA - hfssA + rldsA - rldsA + rsdsA - rsusA</math> (Computed by Chris :-)</li></ul>
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