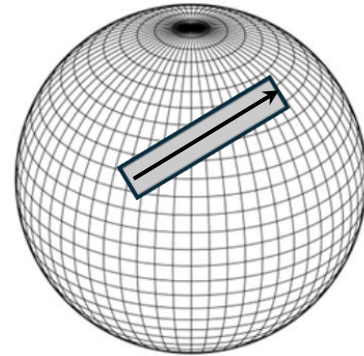


ICON-CoCiP in 2-way coupling

ICON on multiple processors, CoCiP on 1 processor,
YAC-coupler



ICON

Integrates atmospheric dynamics on global icosahedral (triangular) grids with 2-moment ice microphysics including contrail- ΔT , Δq_v changes. Computes radiation using a radiation model (ecRad) accounting for contrail cover, ice water content, and number and size of contrail ice particles

For Contrail integration:
 p , T , q_v , q_i , q_s , u , v , w , GP , $TACI$
and for diagnostics:
 $TOA-rad$, $SRF-rad$, T_{2m} , $Prec$

For ICON dynamics: ΔT , Δq_v
For radiation: N_i , r_{eff} , $cover$,
 IWC of contrails

CoCiP initiates contrail segments along traffic (GAIA) in flight segments versus time, height, longitude and latitude when SAC fulfilled. Integrates contrail properties with nearest-neighbor or triangular interpolation in ICON data. Performs several Runge-Kutta time steps per ICON time step