

## Making plans for the ICON documentation

### Wishes

- Keep documentation updated with new releases.
- Format that can be referenced in publications.
- Distributed with model code.
- Combined documentation for formulation and implementation would be useful.
- Tutorial most useful for getting started.
- Scientific performance can be covered in peer reviewed articles.

### Marco's proposal

As many of us now work with storm resolving resolutions, we feel a lack of documentation for the Sapphire Physics. Such a documentation should cover:

- Turbulent diffusion
  - Vertical diffusion for storm resolving simulations
  - Smagorinsky diffusion for large eddy simulations
- Surface properties
  - Land domain: JSBACH
  - Ocean domain: prescribed with or without ice, mixed layer, or coupled
- Cloud processes
  - Saturation adjustment
  - Cloud microphysics (single moment “graupel”)
  - Cloud cover
- Radiation
  - PSRAD scheme
  - RTE-RRTMGP scheme
  - Insolation: orbit, zenith angle, solar irradiance
  - Surface properties: albedo, emissivity
  - Atmospheric composition: gases, clouds optical properties and overlap, aerosol distributions and optical properties
- Coupling of processes: dynamics to physics, and between physical processes
- Infrastructure available/needed for physics

Further discussion is needed. No decision have been taken so far.

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