Strategizing for the Future: Modeling

1. Physical coupling

    a. Roughness length
        - atmosphere-ice interface
        - ice-ocean interface
        - polar atmosphere-ocean

    b. Geostrophic winds / currents, turning angles, stratification

    c. Quadratic drag versus “residual” drag

    d. Clouds, radiation, aerosols, coupling surface layer and planetary boundary

    e. High resolution, high-frequency coupling issues

    f. Sub-gridscale

    g. Snow processes, observations

    h. tides

2. Marginal Ice Zone

    a. Wave-ice interaction

    b. Floe Size Distribution, form drag.

    c. Drag coefficients, melt slipping

3. Biogeochemical coupling.

    a. Mushy layer

    b. Piston velocity, biological-ice pump.

    c. Salinity, DIC

    d. Ikaite, iron, algae, black carbon, DMS

    e. Aerosols, precursors

    f. Frost flowers, sulphate, bromine, salt

g. Young ice