

Greenhouse gases
(CO₂, CH₄, N₂O)

NH ice sheet albedo + height
(Ganopolski et al., 2011)

Orbital forcing
(Berger, 1978)



Acceleration factor 5

LOVECLIM

Atmosphere
ECBilt
T21
3 levels

Ocean/sea ice
CLIO
3x3
21 levels

Vegetation
VeCODE

Calculate anomalies with respect to present-day



ΔT_a

ΔP

ΔT_o



Penn State University ice sheet model

Shallow ice & shallow shelf
Cliff & hydrofracturing parameterizations
40 km resolution



Sea level forcing

(Spratt & Lisiecki, 2016)