Physical reference system

\[ \Delta T_s^0 = S_0 \cdot \Delta F \]
\[ \Delta T_s = S_0 \cdot (\Delta F + c_1 \cdot \Delta T_s) \]

Thermal forcing change by biogeochemical feedback

\[ d^* \cdot \delta(\Delta C_a) = d^* \cdot (\Delta C_a^0 - \Delta C_a) \]

Biogeochemical reference system

\[ \Delta C_a^0 = M_0 \cdot \Delta E \]
\[ \Delta C_a = M_0 \cdot (\Delta E + d_1 \cdot \Delta C_a) \]

Radiative forcing due to emissions

\[ \Delta F \]

Biogeochemical feedback induced by physical climate change

\[ c^* \cdot \Delta T_s \]

CO₂ emissions

\[ \Delta E \]