

CMIP-5 scaling  
with time delay

Observed  
intervall

Antarctic  
ice-sheet models

Global mean  
temperature  
increase

Subsurface  
Antarctic ocean  
temperature

Basal ice shelf  
melting

Antarctic outlet  
sea-level  
response

$$\Delta T_O(t) = \alpha_r \cdot \Delta T_G(t - \tau_r)$$

$$\Delta m = \beta \cdot \Delta T_O$$

$$\Delta S(t) = \int_0^t d\tau \Delta m(\tau) \cdot R_r(t - \tau)$$