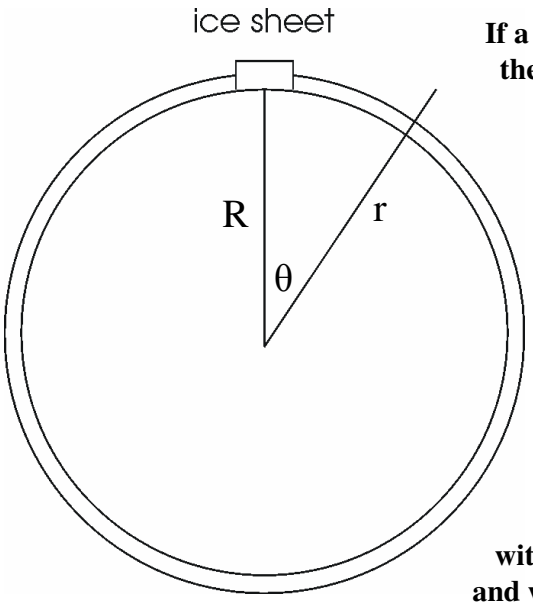
Uniforme Zeespiegel & Zwaartekrachtseffect



If a point-like ice sheet of mass M_I forms, then the eustatic sea-level fall is simply:

$$\epsilon_E = \frac{M_I}{A_w \rho_w}$$

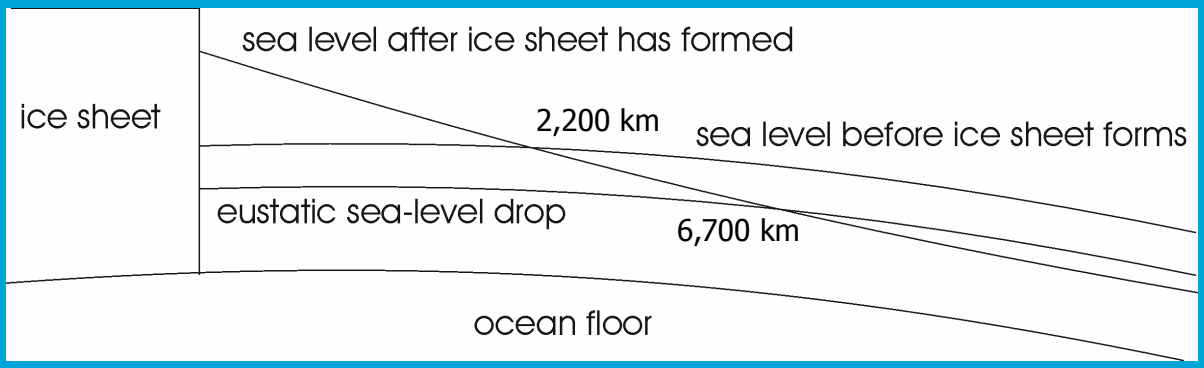
with A_w the ocean surface area and ρ_w the density of the water or ice.

With self-gravitation taken into account the sea-level change becomes (equipotential surface !!!):

$$\epsilon_1(\theta) = \frac{M_I R}{M_E}\left(\frac{1}{2\sin(\theta/2)} - 1 - \frac{\rho_E}{3\rho_w}\right)$$

with M_E the mass of the Earth with density ρ_E and with the last term the eustatic sea-level drop.

Effect van Zwaartekracht op Zeespiegel



Smeltwater verdeelt zich als een sinusfunctie over de oceanen

NIET GELIJKMATIG !!!!