

Estimate CryoSat-2 time series at point  $i$  using:  
7th-order polynomial  
3rd-order surface topography

$H_{topo}$  Seasonal term  $H(t_i)_{seasonal}$

$$H(t_i) = H(t_i)_{poly} + H_{topo} + H(t_i)_{seasonal,cryo}$$



Remove Seasonal term  $H(t_i)_{seasonal,cryo}$  estimated from  
CryoSat-2 data

$$H(t_i) = H(t_i)_{poly} + H_{topo}$$



Add Seasonal term  $H(t_i)_{seasonal,ice1/ice2}$  estimated from  
ICESat and ICESat-2 data

$$H(t_i) = H(t_i)_{poly} + H_{topo} + H(t_i)_{seasonal,ice/ice2}$$