

# Attributes of 'Mass balance estimates across 2000 m traverse' data sets

## I. Mass balance estimates for single gates:

<b>Gate</b>	161 gates numbered clockwise from northwest corner
<b>St A</b>	Unique name of start station of gate
<b>St B</b>	Unique name of end station of gate
<b>Lat A, Lon A</b>	Position of start station in geographic system (decimal degrees)
<b>Lat B, Lon B</b>	Position of end station in geographic system (decimal degrees)
<b>S</b>	Catchment area (km <sup>2</sup> )
<b>Vel_A</b>	Ice velocity at start station (m/year)
<b>Vel_B</b>	Ice velocity at end station (m/year)
<b>Vel_ave</b>	Average velocity across gate (m/year)
<b>Ice_Thick</b>	Average ice thickness across gate (m/year) (Gogineni et al., in press)
<b>R</b>	Ratio of surface and column averaged ice velocity (Huybrecht, 1996)
<b>D</b>	Length of gate (km)
<b>DS</b>	Cummulative length of gates starting from gate 1 (km)
<b>F</b>	Total outgoing flux (cubic km/year of ice)
<b>V_Sci</b>	Total upstream accumulation estimate used in Thomas et al., 2000; Science (cubic km/year of ice)
<b>dh/dt_Sci</b>	Thickening/thinning rate from F and V_Sci (cm/year of ice)
<b>V_JGR</b>	Total upstream accumulation estimate used in Thomas et al., in press; JGR (cubic km/year of ice)
<b>dh/dt_JGR</b>	Thickening/thinning rate from F and V_JGR (cm/year of ice)

## II. Mass balance estimates for medium sized combined gates:

<b>Start_Station</b>	Start station (adjacent gates are combined to give a total of more than 30,000 sq km area)
<b>End_Station</b>	End station
<b>S</b>	Total catchment area (sq km)
<b>V</b>	Total upstream accumulation estimate used in Thomas et al., in press; JGR (cubic km/year of ice)
<b>F</b>	Total outgoing flux (cubic km/year of ice)
<b>dh/dt_JGR</b>	Thickening/thinning rate (cm/year of ice)

### **III. Comparison of mass balance estimates for large combined gates**

<b>Start_Station</b>	Start station
<b>End_Station</b>	Start station
<b>S</b>	Total catchment area (sq km)
<b>F</b>	Total outgoing flux (cubic km/year of ice)
<b>V_in_ice</b>	Total upstream accumulation estimate (cubic km/year of ice) <ul style="list-style-type: none"><li>• OSU_Science used in Thomas et al., 2000; Science</li><li>• OSU_JGR used in Thomas et al., in press; JGR</li><li>• Ohmura_accu based on accumulation map in Ohmura and Reeh, 1991</li><li>• Bales_JGR based on accumulation map in Bales et al., in press, JGR</li></ul>
<b>Av_Acc_ice</b>	Average accumulation (cm/year of ice) <ul style="list-style-type: none"><li>• OSU_Science used in Thomas et al., 2000; Science</li><li>• OSU_JGR used in Thomas et al., in press; JGR</li><li>• Ohmura_accu based on accumulation map in Ohmura and Reeh, 1991</li><li>• Bales_JGR based on accumulation map in Bales et al., in press, JGR</li></ul>
<b>dh/dt_ice</b>	Thickening/thinning rate (cm/year of ice) <ul style="list-style-type: none"><li>• OSU_Science used in Thomas et al., 2000; Science</li><li>• OSU_JGR used in Thomas et al., in press; JGR</li><li>• Ohmura_accu based on accumulation map in Ohmura and Reeh, 1991</li><li>• Bales_JGR based on accumulation map in Bales et al., in press, JGR</li></ul>