

This README file explains the file headers in the 3 types of files published in

Ahlstrøm, A. P., S. B. Andersen, M. L. Andersen, H. Machguth, F. M. Nick, I. Joughin, C. H. Reijmer, R. S. W. van de Wal, J. P. Merryman Boncori, J. E. Box, M. Citterio, D. van As, R. S. Fausto, and A. Hubbard: Seasonal velocities of eight major marine-terminating outlet glaciers of the Greenland ice sheet from continuous in situ GPS instruments, in press for Earth System Science Data (previously published in Earth Syst. Sci. Data Discuss., 6, 27-57, 2013).

File types:

1. input.txt: Data file containing raw data entering into the velocity calculation procedure
2. [name]\_xy[XXX].txt: Output file from calculated averaged positions, over a time window of [XXX] hours
3. [name]\_vel[XXX].txt: Output file from calculated averaged velocities, over a time window of [XXX] hours

In general: -99999 value indicates not enough (less than chosen limit) samples available to calculate average.

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Header information below for each file type

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"input.txt"

- nr Counter
- jday Day of the year
- date Date (year-month-day)
- time Time (hours:minutes:seconds)
- lat Latitude (degrees N)
- lon Longitude (degrees W)
- height Elevation (m above WGS-84)

NOTE: in some cases, elevation (labelled "height") was not measured. This parameter is not included in the velocity calculation.

"[name]\_xy[XXX].txt"

XXX indicates number of hours for window averaging

- nr Counter
- jday Day of the year
- date Date (year-month-day)
- time Time (hours:minutes:seconds)
- dt Time difference with previous correct sample
- lat XXX window averaged latitude (degrees N)
- lon XXX window averaged longitude (degrees W)
- latm Distance to first sampled average latitude location (in m) based on XXX averaged latitude
- lonm Distance to first sampled average longitude location (in m) based on XXX averaged longitude
- dy Latitude displacement (in m) based on two consecutive correct XXX window averaged latitude samples
- dx Longitude displacement (in m) based on two consecutive correct XXX window averaged longitude samples
- dxy Absolute displacement (in m) based on two consecutive correct XXX window averaged samples
- dir Direction of displacement (dxy) with respect to geographic North (in degrees)
- count Summed weights of used samples within averaging window
- limit Fraction of maximum summed weight available in averaged window
- nri Counter of input files

"[name]\_vel[XXX].txt"

XXX indicates number of hours for window averaging

- nr Counter
- jday Day of the year
- date Date (year-month-day)
- time Time (hours:minutes:seconds)

- xvel Velocity in longitude direction based on XXX window averaged displacement in longitude (m/yr)
- yvel Velocity in latitude direction based on XXX window averaged displacement in latitude (m/yr)
- xyvel Absolute velocity based on XXX window averaged absolute displacement (m/yr)
- dir Direction of displacement related to xyvel with respect to geographic North (in degrees)
- xvelaver XXX window averaged velocity in longitude direction based on XXX window averaged displacement in longitude (m/yr)
- yvelaver XXX window averaged velocity in latitude direction based on XXX window averaged displacement in latitude (m/yr)
- totvelaver XXX window averaged absolute velocity based on XXX window averaged absolute displacement (m/yr)
- diraver Direction of displacement related to totvelaver with respect to geographic North (in degrees)
- count Summed weights of used samples within averaging window
- limit Fraction of maximum summed weight available in averaged window