| Year | Date (mm/dd) | Time [UTC] | Localization | Coordinates | Principal observer | Classification type | Snow depth [m] | Water equivalent of snow cover [mm] | Bulk density [kg m$^{-3}$] | Layer density | Grain shape | Grain size | Hardness | Wetness | Temperature |
|------|-------------|------------|--------------|-------------|-------------------|-------------------|-------------|--------------------------------|-----------------|-------------|------------|----------|----------|---------|------------|
| 2021 | 04/23       | 18:00      | H4           | F           | BL                | F                 | 1.63        | 630.61                          | 387             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 04/23       | 15:00      | H9           | F           | BL                | F                 | 2.55        | 935.70                          | 367             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2020 | 04/03       | 18:20      | H6X          | F           | ML                | F                 | 1.56        | 592.84                          | 380             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/06       | 18:00      | H9           | F           | BL                | F                 | 2.88        | 1110.4                         | 386             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2018 | 04/24       | 02:45      | H6           | S           | ML                | F                 | 2.12        | 863.27                          | 407             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 04/24       | 00:10      | H9           | F           | ML                | F                 | 3.40        | 1352.36                         | 398             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2017 | 05/11       | 13:00      | H4           | F           | BL                | F                 | 0.90        | 352.54                          | 383             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/12       | 16:00      | H9           | F           | BL                | F                 | 3.07        | 1219.67                         | 397             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2016 | 04/25       | 09:00      | H4           | F           | DK                | F                 | 1.02        | 394.11                          | 386             | BC          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 04/25       | 13:00      | H6           | F           | DK                | F                 | 1.69        | 719.64                          | 426             | BC          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 04/29       | 12:10      | H9           | F           | DK                | F                 | 2.88        | 1296.48                         | 450             | BC          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2015 | 04/29       | 11:30      | H4           | F           | ML                | F                 | 1.45        | 710.10                          | 490             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 04/29       | 18:00      | H6           | F           | ML                | F                 | 2.00        | 890.81                          | 445             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 04/29       | 13:00      | H9           | F           | ML                | F                 | 3.00        | 1319.90                         | 440             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/23       | 16:10      | H4           | F           | ML                | F                 | 1.65        | 786.56                          | 477             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/23       | 12:20      | H6           | F           | ML                | F                 | 2.20        | 1022.93                         | 465             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2014 | 05/05       | 16:00      | H4           | F           | ML                | F                 | 1.60        | 592.92                          | 371             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/05       | 20:00      | H6           | F           | ML                | F                 | 2.10        | 828.50                          | 395             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/06       | 01:00      | H9           | F           | ML                | F                 | 2.78        | 1199.06                         | 431             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 06/13       | 13:00      | H4           | F           | DK                | F                 | 1.02        | 494.99                          | 485             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2013 | 05/11       | 20:00      | H6           | F           | ML                | C                 | 1.72        | 769.36                          | 447             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/11       | 17:00      | H9           | F           | ML                | C                 | 3.15        | 1431.52                         | 454             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/11       | 23:40      | H4           | F           | ML                | C                 | 1.20        | 526.91                          | 439             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| 2012 | 05/12       | 17:00      | H9           | S           | AN                | C                 | 4.45        | 1879.88                         | 413             | P           | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/21       | 12:10      | H4           | F           | AN                | C                 | 1.98        | 898.70                          | 454             | P           | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 05/21       | 12:00      | H6           | S           | AN                | C                 | 2.03        | 918.99                          | 453             | P           | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 06/21       | 10:00      | H4           | S           | ML                | C                 | 1.33        | 672.60                          | 506             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
|      | 06/21       | 12:45      | H6           | S           | ML                | C                 | 1.54        | 872.05                          | 566             | WE          | ✓         | ✓        | ✓        | ✓        | ✓          |
| Year | Day | Time | Location | Activity | Weather | Notes |
|------|-----|------|----------|----------|---------|-------|
| 2011 | 04/16 | 09:00 | H4 | S | DP | C | 1.72 | 743.40 | 432 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2010 | 04/18 | 09:00 | H4 | F | DP | C | 1.57 | 658.30 | 419 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2009 | 04/20 | 09:00 | H9 | S | DP | C | 1.20 | 598.49 | 499 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2008 | 04/22 | 09:00 | H4 | S | DP | C | 1.43 | 577.26 | 404 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2007 | 04/24 | 09:00 | H9 | S | AN | LP/C | 1.52 | 549.60 | 362 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2006 | 04/26 | 09:00 | H1 | S | DP | LP/C | 1.68 | 750.26 | 447 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2005 | 04/28 | 09:00 | H4 | S | DP | LP/C | 1.20 | 490.40 | 427 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2004 | 05/01 | 09:00 | H9 | S | DP | LP/C | 1.30 | 335.09 | 434 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2003 | 05/02 | 09:00 | H1 | S | AN | LP/C | 1.43 | 577.26 | 404 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2002 | 05/03 | 09:00 | H4 | S | AN | LP/C | 1.52 | 549.60 | 362 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| 2001 | 05/04 | 09:00 | H9 | S | AN | LP/C | 1.68 | 750.26 | 447 | WE | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ☑️ | ✗ |
| Year | Date   | Time | Location | Classification | Layer Density | Vp | J4 | MP | LP | Data  |
|------|--------|------|----------|----------------|---------------|----|----|----|----|-------|
| 1995 | 05/31  | *    | HC       | PG            | *             | x  | x  | x  | x  | x     |
|      | 06/02  | *    | Vp       | PG            | *             | 1.85| 760.10| 411| x  | x     |
|      | 06/28  | *    | Vp       | PG            | *             | 1.50| 760.80| 507| x  | x     |
| 1994 | 04/20  | *    | HC       | M             | PG            | *  | 1.80| 729.90| 406| x     |
|      | 04/23  | *    | Vp       | PG            | *             | 1.90| 706.70| 372| x  | x     |
| 1993 | 04/15  | 12:20| HC       | M             | JL            | 2.05| 747.90| 365| x  | ✓     |
|      | 05/21  | 18:00| Vp       | JL            | LP            | 2.15| 841.10| 391| x  | ✓     |
| 1992 | 04/21  | *    | HC       | M             | MP            | 1.65| 599.50| 363| x  | ✓     |
|      | 04/14  | *    | Vp       | MP            | LP            | 2.20| 917.10| 417| x  | ✓     |
| 1991 | 05/03  | *    | HC       | M             | PG            | 3.10| 1377.20| 444| x  | ✓     |
| 1990 | 04/07  | *    | HC       | M             | MP            | 2.05| 896.50| 437| x  | x     |
|      | 04/05  | *    | Vp       | MP            | *             | 2.50| 962.00| 385| x  | x     |
| 1989 | 03/27  | 10:40| HF       | JL            | LP            | 1.06| *    | ✓  | x  | x     |
|      | 03/30  | 12:10| HC       | M             | JL            | 1.66| 552.20| 333| x  | ✓     |
|      | 04/11  | *    | HC       | M             | PG            | 1.92| 641.70| 334| x  | x     |
|      | 05/01  | 19:30| Vp       | JL            | LP            | 2.12| 783.90| 370| x  | ✓     |
|      | 09/03  | *    | J4       | PG            | LP            | 1.58| 745.64| 472| x  | ✓     |

**Supplementary Table 1.** Summary presenting available data in Hansbreen Snowpit Dataset. Data: available (blue), not measured (red), no data (black). Abbreviations: *A*Localization: H[number] – the position of a nearby ablation stake, HC – Hans Cabin, Hf – Hansbreen front, Vp – Vrangpeiset; *B*Coordinates: F – fixed GPS location, M – estimation based on map calibration, S – estimation based on ablation stake location; *C*Principal observer: AN – Adam Nawrot, BL – Bartłomiej Luks, DK – Daniel Kępski, DP – Dariusz Puczko, JL – Jan Leszkiewicz, KM – Krzysztof Migala, ML – Michał Laska, MP – Marian Pulina, PG – Piotr Głowacki; *D*Classification type: F – Fierz et al.\(^{11}\), C – Colbeck et al.\(^{10}\), LP – Leszkiewicz and Pulina\(^{17}\); *E*Layer density: WE – Winter Engineering snow density cutter, BC – box-shaped density cutter with a digital scale, P – Pesola spring scale with a 100 cm\(^3\) cylinder cutter. For the complete reference, see: the manuscript.