|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Time interval of S1 images (yyyy-mm-dd) | Glacier velocity per sub-division at Solheimajoküll (m/day) | | | | | | Average by date (m/day) |
| Date | 1 | 2 | 3 | 4 | 5 | 6 |  |
| 20150129-20150210 | 0.19 | 0.14 | 0.36 | 0.34 | 0.50 | 0.42 | **0.32** |
| 20150210-20150318 | 0.06 | 0.13 | 0.18 | 0.13 | 0.30 | 0.51 | **0.22** |
| 20150318-20150330 | 0.26 | 0.26 | 0.36 | 0.49 | 0.36 | 0.32 | **0.34** |
| 20150330-20150423 | 0.07 | 0.12 | 0.20 | 0.33 | 0.36 | 0.61 | **0.28** |
| 20150423-20150505 | 0.14 | 0.24 | 0.20 | 0.34 | 0.33 | 0.35 | **0.27** |
| 20150505-20150517 | 0.05 | 0.16 | 0.16 | 0.32 | 0.69 | 1.10 | **0.41** |
| 20150517-20150529 | 0.06 | 0.16 | 0.21 | 0.30 | 0.29 | 0.81 | **0.31** |
| 20150529-20150610 | 0.07 | 0.08 | 0.16 | 0.18 | 0.33 | 0.65 | **0.25** |
| 20150610-20150622 | 0.10 | 0.10 | 0.19 | 0.24 | 0.26 | 0.51 | **0.23** |
| 20150622-20150704 | 0.06 | 0.08 | 0.14 | 0.25 | 0.32 | 0.46 | **0.22** |
| 20150704-20150716 | 0.13 | 0.08 | 0.14 | 0.15 | 0.25 | 0.52 | **0.21** |
| 20150716-20150728 | 0.13 | 0.13 | 0.12 | 0.19 | 0.32 | 0.49 | **0.23** |
| 20150728-20150809 | 0.03 | 0.05 | 0.08 | 0.13 | 0.22 | 0.56 | **0.18** |
| 20150809-20150821 | 0.13 | 0.11 | 0.14 | 0.18 | 0.41 | 0.46 | **0.24** |
| 20150821-20150902 | 0.08 | 0.12 | 0.08 | 0.10 | 0.30 | 0.26 | **0.16** |
| 20150902-20150914 | 0.07 | 0.06 | 0.09 | 0.16 | 0.27 | 0.41 | **0.18** |
| 20150914-20150926 | 0.04 | 0.07 | 0.05 | 0.05 | 0.20 | 0.22 | **0.10** |
| 20150926-20151008 | 0.13 | 0.18 | 0.23 | 0.24 | 0.24 | 0.31 | **0.22** |
| 20151008-20151020 | 0.07 | 0.18 | 0.16 | 0.26 | 0.43 | 0.43 | **0.25** |
| 20151020-20151101 | 0.04 | 0.18 | 0.12 | 0.15 | 0.27 | 0.66 | **0.24** |
| 20151101-20151113 | 0.04 | 0.12 | 0.21 | 0.28 | 0.43 | 0.47 | **0.26** |
| 20151113-20151125 | 0.12 | 0.08 | 0.11 | 0.24 | 0.28 | 0.34 | **0.19** |
| 20151125-20151207 | 0.16 | 0.19 | 0.21 | 0.31 | 0.37 | 0.27 | **0.25** |
| 20151207-20151219 | 0.13 | 0.14 | 0.17 | 0.26 | 0.28 | 0.31 | **0.22** |
| 20151219-20151231 | 0.27 | 0.18 | 0.16 | 0.26 | 0.66 | 0.85 | **0.40** |
| 20151231-20160112 | 0.24 | 0.23 | 0.21 | 0.15 | 0.28 | 0.45 | **0.26** |
| 20160112-20160124 | 0.08 | 0.12 | 0.22 | 0.20 | 0.70 | 0.66 | **0.33** |
| 20160124-20160205 | 0.20 | 0.41 | 0.38 | 0.25 | 0.69 | 1.17 | **0.52** |
| 20160217-20160229 | 0.21 | 0.24 | 0.35 | 0.29 | 0.45 | 0.39 | **0.32** |
| 20160229-20160312 | 0.10 | 0.29 | 0.45 | 0.29 | 0.49 | 0.47 | **0.35** |
| 20160312-20160324 | 0.14 | 0.16 | 0.39 | 0.36 | 0.33 | 0.47 | **0.31** |
| 20160324-20160405 | 0.16 | 0.19 | 0.18 | 0.38 | 0.56 | 0.52 | **0.33** |
| 20160405-20160417 | 0.14 | 0.15 | 0.33 | 0.37 | 0.27 | 0.27 | **0.26** |
| 20160417-20160429 | 0.17 | 0.08 | 0.16 | 0.21 | 0.47 | 0.51 | **0.27** |
| 20160429-20160511 | 0.08 | 0.14 | 0.26 | 0.23 | 0.20 | 0.21 | **0.19** |
| 20160505-20160217 | 0.14 | 0.14 | 0.22 | 0.18 | 0.77 | 1.08 | **0.42** |
| 20160511-20160523 | 0.13 | 0.12 | 0.13 | 0.18 | 0.40 | 0.67 | **0.27** |
| 20160523-20160604 | 0.04 | 0.11 | 0.16 | 0.15 | 0.42 | 0.51 | **0.23** |
| 20160604-20160628 | 0.08 | 0.07 | 0.08 | 0.19 | 0.32 | 0.33 | **0.18** |
| 20160628-20160722 | 0.07 | 0.07 | 0.05 | 0.14 | 0.33 | 0.38 | **0.17** |
| 20160722-20160803 | 0.07 | 0.13 | 0.11 | 0.10 | 0.27 | 0.20 | **0.15** |
| 20160803-20180815 | 0.04 | 0.06 | 0.16 | 0.14 | 0.30 | 0.46 | **0.19** |
| 20160815-20160827 | 0.03 | 0.09 | 0.14 | 0.12 | 0.32 | 0.44 | **0.19** |
| 20160827-20160908 | 0.04 | 0.03 | 0.03 | 0.08 | 0.22 | 0.30 | **0.12** |
| 20160908-20161002 | 0.03 | 0.05 | 0.09 | 0.06 | 0.12 | 0.14 | **0.08** |
| 20161002-20161014 | 0.06 | 0.10 | 0.07 | 0.11 | 0.08 | 0.22 | **0.11** |
| 20161014-20161026 | 0.05 | 0.08 | 0.09 | 0.10 | 0.18 | 0.39 | **0.15** |
| 20161026-20161107 | 0.03 | 0.07 | 0.08 | 0.19 | 0.30 | 0.39 | **0.18** |
| 20161107-20161119 | 0.11 | 0.14 | 0.24 | 0.31 | 0.23 | 0.37 | **0.23** |
| 20161119-20161201 | 0.26 | 0.11 | 0.17 | 0.30 | 0.22 | 0.33 | **0.23** |
| 20161201-20161213 | 0.14 | 0.15 | 0.26 | 0.37 | 0.37 | 0.40 | **0.28** |
| 20161213-20161225 | 0.13 | 0.23 | 0.21 | 0.25 | 0.34 | 0.27 | **0.24** |
| 20161225-20170106 | 0.19 | 0.09 | 0.25 | 0.17 | 0.27 | 0.52 | **0.25** |
| 20170106-20170118 | 0.12 | 0.13 | 0.25 | 0.20 | 0.32 | 0.52 | **0.26** |
| 20170118-20170211 | 0.08 | 0.14 | 0.11 | 0.29 | 0.43 | 0.76 | **0.30** |
| 20170211-20170223 | 0.13 | 0.25 | 0.27 | 0.16 | 0.45 | 0.58 | **0.31** |
| 20170223-20170307 | 0.11 | 0.23 | 0.28 | 0.23 | 0.50 | 0.58 | **0.32** |
| 20170307-20170319 | 0.07 | 0.18 | 0.27 | 0.28 | 0.27 | 0.55 | **0.27** |
| 20170319-20170331 | 0.14 | 0.20 | 0.16 | 0.32 | 0.58 | 0.64 | **0.34** |
| 20170331-20170412 | 0.09 | 0.09 | 0.15 | 0.42 | 0.48 | 0.43 | **0.28** |
| 20170412-20170424 | 0.08 | 0.09 | 0.18 | 0.31 | 0.38 | 0.31 | **0.22** |
| 20170424-20170506 | 0.03 | 0.17 | 0.38 | 0.87 | 0.44 | 0.81 | **0.45** |
| 20170506-20170518 | 0.09 | 0.10 | 0.16 | 0.15 | 0.77 | 0.57 | **0.31** |
| 20170518-20170530 | 0.04 | 0.18 | 0.23 | 0.24 | 0.51 | 0.95 | **0.36** |
| 20170530-20170611 | 0.08 | 0.13 | 0.15 | 0.16 | 0.48 | 1.05 | **0.34** |
| 20170611-20170623 | 0.06 | 0.04 | 0.11 | 0.13 | 0.37 | 0.40 | **0.19** |
| 20170623-20170705 | 0.10 | 0.09 | 0.08 | 0.15 | 0.34 | 0.33 | **0.18** |
| 20170705-20170717 | 0.11 | 0.11 | 0.12 | 0.22 | 0.40 | 0.54 | **0.25** |
| 20170717-20170729 | 0.09 | 0.11 | 0.18 | 0.24 | 0.37 | 0.24 | **0.21** |
| 20170729-20170810 | 0.10 | 0.16 | 0.22 | 0.14 | 0.37 | 0.32 | **0.22** |
| 20170810-20170822 | 0.04 | 0.06 | 0.09 | 0.16 | 0.36 | 0.27 | **0.17** |
| 20170822-20170903 | 0.11 | 0.19 | 0.09 | 0.14 | 0.44 | 0.33 | **0.21** |
| 20170903-20170915 | 0.17 | 0.14 | 0.18 | 0.14 | 0.21 | 0.18 | **0.17** |
| 20170915-20170927 | 0.13 | 0.13 | 0.13 | 0.06 | 0.27 | 0.26 | **0.16** |
| 20170927-20171009 | 0.09 | 0.13 | 0.13 | 0.21 | 0.25 | 0.21 | **0.17** |
| 20171009-20171021 | 0.10 | 0.14 | 0.11 | 0.18 | 0.16 | 0.20 | **0.15** |
| 20171021-20171102 | 0.07 | 0.07 | 0.08 | 0.11 | 0.25 | 0.24 | **0.14** |
| 20171102-20171114 | 0.12 | 0.13 | 0.18 | 0.36 | 0.55 | 0.63 | **0.33** |
| 20171114-20171126 | 0.19 | 0.23 | 0.29 | 0.49 | 0.45 | 0.32 | **0.33** |
| 20171126-20171208 | 0.06 | 0.13 | 0.25 | 0.24 | 0.41 | 0.41 | **0.25** |
| 20171208-20171220 | 0.13 | 0.16 | 0.28 | 0.15 | 0.35 | 0.57 | **0.27** |
| 20171220-20180101 | 0.17 | 0.17 | 0.20 | 0.29 | 0.48 | 0.21 | **0.25** |
| 20180101-20180113 | 0.11 | 0.22 | 0.17 | 0.47 | 0.42 | 0.65 | **0.34** |
| 20180113-20180125 | 0.25 | 0.18 | 0.23 | 0.42 | 0.34 | 0.40 | **0.30** |
| 20180125-20180206 | 0.21 | 0.32 | 0.41 | 0.35 | 0.44 | 0.35 | **0.35** |
| 20180206-20180218 | 0.18 | 0.12 | 0.32 | 0.23 | 0.30 | 0.50 | **0.28** |
| 20180218-20180302 | 0.12 | 0.29 | 0.32 | 0.21 | 0.18 | 0.54 | **0.28** |
| 20180302-20180314 | 0.10 | 0.13 | 0.35 | 0.34 | 0.44 | 0.28 | **0.28** |
| 20180314-20180326 | 0.19 | 0.14 | 0.31 | 0.43 | 0.38 | 0.24 | **0.28** |
| 20180326-20180407 | 0.15 | 0.18 | 0.20 | 0.34 | 0.45 | 0.48 | **0.30** |
| 20180407-20180419 | 0.13 | 0.17 | 0.35 | 0.48 | 0.71 | 1.05 | **0.48** |
| 20180419-20180501 | 0.08 | 0.10 | 0.14 | 0.21 | 0.55 | 0.49 | **0.26** |
| 20180501-20180513 | 0.10 | 0.09 | 0.16 | 0.36 | 1.42 | 0.93 | **0.51** |
| 20180513-20180525 | 0.09 | 0.12 | 0.08 | 0.32 | 0.59 | 0.46 | **0.28** |
| 20180525-20180606 | 0.09 | 0.16 | 0.22 | 0.36 | 0.66 | 1.03 | **0.42** |
| 20180606-20180618 | 0.05 | 0.08 | 0.15 | 0.20 | 0.33 | 0.56 | **0.23** |
| 20180618-20180630 | 0.11 | 0.08 | 0.16 | 0.21 | 0.37 | 0.57 | **0.25** |
| 20180630-20180712 | 0.08 | 0.10 | 0.06 | 0.10 | 0.39 | 0.84 | **0.26** |
| 20180712-20180724 | 0.08 | 0.11 | 0.14 | 0.07 | 0.26 | 0.32 | **0.16** |
| 20180724-20180805 | 0.08 | 0.10 | 0.09 | 0.09 | 0.21 | 0.52 | **0.18** |
| 20180805-20180817 | 0.05 | 0.09 | 0.14 | 0.06 | 0.34 | 0.61 | **0.22** |
| 20180817-20180829 | 0.05 | 0.12 | 0.11 | 0.17 | 0.27 | 0.35 | **0.18** |
| 20180829-20180910 | 0.04 | 0.09 | 0.13 | 0.12 | 0.25 | 0.21 | **0.14** |
| 20180910-20180922 | 0.06 | 0.11 | 0.13 | 0.15 | 0.34 | 0.68 | **0.25** |
| 20180922-20181004 | 0.15 | 0.15 | 0.13 | 0.27 | 0.24 | 0.42 | **0.23** |
| 20181004-20181016 | 0.07 | 0.16 | 0.10 | 0.21 | 0.47 | 0.79 | **0.30** |
| 20181016-20181028 | 0.03 | 0.05 | 0.24 | 0.26 | 0.42 | 0.37 | **0.23** |
| 20181028-20181109 | 0.08 | 0.18 | 0.17 | 0.07 | 0.42 | 0.59 | **0.25** |
| 20181109-20181121 | 0.05 | 0.12 | 0.14 | 0.18 | 0.35 | 0.53 | **0.23** |
| 20181121-20181203 | 0.10 | 0.10 | 0.19 | 0.21 | 0.28 | 0.55 | **0.24** |
| 20181203-20181215 | 0.10 | 0.20 | 0.25 | 0.28 | 0.49 | 0.80 | **0.35** |
| 20181215-20181227 | 0.05 | 0.08 | 0.09 | 0.31 | 0.55 | 0.64 | **0.29** |
| Average by sub-division (m/day) | **0.10** | **0.14** | **0.18** | **0.23** | **0.38** | **0.49** | **0.26** |

**Table S6.** Mean glacier velocities in (m/day) units expressed in each sub-division or stretch at Solheimajoküll (Figure 1) from 2015 to 2018.