**Changes in area, flow speed and structure of southwest Antarctic Peninsula ice shelves in the 21st century**

Tom Holt1 and Neil F Glasser1

1Centre for Glaciology, Department of Geography and Earth Sciences, Aberystwyth University, Aberystwyth, Wales, United Kingdom, SY23 3DB.

Corresponding author: toh08@aber.ac.uk

**Supplementary Table S1**

**Table S1**. Satellite scenes used in this study to measure area change, examine ice shelf structures and calculate surface flow speed. Table arranged by satellite sensor, ice shelf covered and scene date.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Satellite sensor** **(max. resolution)** | **Ice shelf coverage** | **Scene date (DD/MM/YYYY)** | **Scene ID** | **Area change** | **Structures** | **Flow speed** |
| ASTER (15 m) | Bach | 30/12/2004 | AST\_L1T\_00312302004052259\_20150507171152\_15883 |  | ✔ |  |
| Landsat 7 ETM+ (15 m panchromatic & pan-sharpened) | Bach | 10/11/2009 | LE07\_L1GT\_218111\_20091110\_20161219 | ✔ | ✔ |  |
| Stange | 19/12/2009 | LE07\_L1GT\_219112\_20091219\_20161218 | ✔ | ✔ |  |
| George VI North | 29/01/2010 | LE07\_L1GT\_218109\_20100129\_20161217 | ✔ | ✔ |  |
| George VI South | 10/11/2009 | LE07\_L1GT\_218112\_20091110\_20161219 | ✔ | ✔ |  |
| Landsat 8 OLI | Bach | 27/11/2013 | LC08\_L1GT\_220111\_20131127\_20170428 | ✔ | ✔ |  |
| Bach | 11/02/2015 | LO08\_L1GT\_219111\_20150211\_20170413 | ✔ |  |  |
| Bach | 15/01/2017 | LC08\_L1GT\_219111\_20170115\_20170311 | ✔ |  |  |
| Bach | 17/12/2017 | LC08\_L1GT\_219111\_20171217\_20171224 | ✔ |  |  |
| Bach | 06/02/2019 | LC08\_L1GT\_219111\_20190206\_20190221 | ✔ |  | ✔ |
| Bach | 07/12/2019 | LC08\_L1GT\_219111\_20191207\_20191217 |  |  | ✔ |
| Bach | 24/01/2020 | LC08\_L1GT\_219111\_20200124\_20200128 | ✔ |  |  |
| Stange | 27/11/2013 | LC08\_L1GT\_220112\_20131127\_20170428 | ✔ | ✔ |  |
| Stange | 10/01/2015 | LC08\_L1GT\_139132\_20150110\_20170415 | ✔ |  |  |
| Stange | 22/01/2017 | LC08\_L1GT\_220112\_20170122\_20170311 | ✔ |  |  |
| Stange | 10/02/2018 | LC08\_L1GT\_220112\_20180210\_20180222 | ✔ |  |  |
| Stange | 28/01/2019 | LC08\_L1GT\_220112\_20190128\_20190206 | ✔ |  |  |
| Stange | 20/02/2019 | LC08\_L1GT\_221111\_20190220\_20190308 |  |  | ✔ |
| Stange | 20/02/2019 | LC08\_L1GT\_221112\_20190220\_20190308 |  |  | ✔ |
| Stange | 05/12/2019 | LC08\_L1GT\_221111\_20191205\_20191217 |  |  | ✔ |
| Stange | 05/12/2019 | LC08\_L1GT\_221112\_20191205\_20191217 |  |  | ✔ |
| Stange | 30/12/2019 | LC08\_L1GT\_140132\_20191230\_20200111 | ✔ | ✔ |  |
| George VI North | 31/12/2013 | LC08\_L1GT\_218109\_20131231\_20170427 | ✔ | ✔ |  |
| George VI North | 04/02/2015 | LC08\_L1GT\_218109\_20150204\_20170413 | ✔ |  |  |
| George VI North | 04/03/2017 | LC08\_L1GT\_219109\_20170304\_20170316 | ✔ |  |  |
| George VI North | 26/12/2017 | LC08\_L1GT\_218109\_20171226\_20180103 | ✔ |  |  |
| George VI North | 06/02/2019 | LC08\_L1GT\_219109\_20190206\_20190221 | ✔ |  | ✔ |
| George VI North | 17/01/2020 | LC08\_L1GT\_218109\_20200117\_20200128 | ✔ | ✔ | ✔ |
| George VI South | 24/12/2013 | LC08\_L1GT\_217112\_20131224\_20170427 | ✔ | ✔ |  |
| George VI South | 27/12/2014 | LC08\_L1GT\_217112\_20141227\_20170415 | ✔ |  |  |
| George VI South | 17/01/2017 | LC08\_L1GT\_217112\_20170117\_20170311 | ✔ |  |  |
| George VI South | 25/03/2018 | LC08\_L1GT\_217112\_20180325\_20180404 | ✔ |  |  |
| George VI South | 06/12/2018 | LC08\_L1GT\_217112\_20181206\_20181211 | ✔ |  |  |
| George VI South | 06/02/2019 | LC08\_L1GT\_219112\_20190206\_20190221 |  |  | ✔ |
| George VI South | 15/02/2019 | LC08\_L1GT\_218111\_20190215\_20190222 |  |  | ✔ |
| George VI South | 15/02/2019 | LC08\_L1GT\_218112\_20190215\_20190222 |  |  | ✔ |
| George VI South | 29/10/2019 | LC08\_L1GT\_218111\_20191029\_20191114 |  |  | ✔ |
| George VI South | 29/10/2019 | LC08\_L1GT\_218112\_20191029\_20191114 |  |  | ✔ |
| George VI South | 07/12/2019 | LC08\_L1GT\_219112\_20191207\_20191217 |  |  | ✔ |
| George VI South | 25/12/2019 | LC08\_L1GT\_217112\_20191225\_20200110 | ✔ | ✔ |  |
| Sentinel 2 | Stange | 19/12/2019 | S2B\_MSIL2A\_20191219T134959\_N0213\_R081\_T17CNU\_20191219T172240 | ✔ | ✔ |  |
| Stange | 19/12/2019 | S2B\_MSIL2A\_20191229T134959\_N0213\_R081\_T17CPV\_20191229T172134 | ✔ | ✔ |  |
| Stange | 19/12/2019 | S2B\_MSIL2A\_20191219T134959\_N0213\_R081\_T18CVD\_20191219T172240 | ✔ | ✔ |  |
| George VI North | 19/01/2020 | S2B\_MSIL1C\_20200119T131859\_N0208\_R095\_T19DDC\_20200119T142732 | ✔ | ✔ |  |
| George VI North | 19/01/2020 | S2B\_MSIL1C\_20200119T131859\_N0208\_R095\_T19DEC\_20200119T142732 | ✔ | ✔ |  |