**Supplementary Materials for Surface Meltwater Drainage**

**and Ponding on Amery Ice Shelf, East Antarctica,**

**1973–2019**

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# SUPPLEMENTARY VIDEOS

1. Supplementary Video 1: MODIS time-series of meltwater flow into unsaturated snow (2006-01-20 to

2006-02-25).

<https://figshare.com/articles/media/Supplementary_Video_1_Flow_into_Unsaturated_Snow/7691978>

2. Supplementary Video 2: Sentinel-1 C-Band Synthetic Aperture Radar time-series from November 2015

to April 2018. Code to create this video from Google Earth Engine courtesy of Stef Lhermitte.

[https://figshare.com/articles/media/Supplementary\_Video\_3\_Sentinel-1\_Synthetic\_Aperture\_](https://figshare.com/articles/media/Supplementary_Video_3_Sentinel-1_Synthetic_Aperture_Radar_video/7691984)

[Radar\_video/7691984](https://figshare.com/articles/media/Supplementary_Video_3_Sentinel-1_Synthetic_Aperture_Radar_video/7691984)

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# IMAGERY USED

**Table S1.** Table of Landsat Images Used.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Scene ID | Date Created | Platform | Resolution (m) | Sections | Used in Fig.: |
| LT04\_L1GS\_127109\_19880221\_20170209\_01\_T2 | 1988-02-21 | Landsat 4 | 30 | 4.1,4.2, | 4a, |
| LT04\_L1GS\_127110\_19880221\_20170209\_01\_T2 | 1988-02-21 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LT04\_L1GS\_127111\_19880221\_20170209\_01\_T2 | 1988-02-21 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LT04\_L1GS\_127112\_19880221\_20170209\_01\_T2 | 1988-02-21 | Landsat 4 | 30 | 4.1,4.2, | 4a, |
| LT04\_L1GS\_127109\_19880308\_20170209\_01\_T2 | 1988-03-08 | Landsat 4 | 30 | 4.1,4.2, | 4a, |
| LT04\_L1GS\_127111\_19880308\_20170209\_01\_T2 | 1988-03-08 | Landsat 4 | 30 | 4.1,4.2, | 4a, |
| LT04\_L1GS\_127112\_19880308\_20170209\_01\_T2 | 1988-03-08 | Landsat 4 | 30 | 4.1,4.2, | 4a, |
| LT41281101989077XXX12 | 1989-03-19 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LT41281111989077XXX12 | 1989-03-19 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LT04\_L1GS\_128109\_19891231\_20170201\_01\_T2 | 1989-12-31 | Landsat 4 | 30 | 4.1, 4.2 | 4a, 4c, |
| LT04\_L1GS\_128110\_19891231\_20170201\_01\_T2 | 1989-12-31 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 4c, 10a |
| LT04\_L1GS\_128111\_19891231\_20170201\_01\_T2 | 1989-12-31 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 4c, 10a |
| LT04\_L1GS\_128112\_19891231\_20170201\_01\_T2 | 1989-12-31 | Landsat 4 | 30 | 4.1,4.2, 4.1, | 4a, 4c, |
| LT41281101990016XXX02 | 1990-01-17 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LT41281111990016XXX02 | 1990-01-17 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LM51281101992014AAA03 | 1992-01-14 | Landsat 5 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LT04\_L1GS\_128110\_19920223\_20170124\_01\_T2 | 1992-02-23 | Landsat 4 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LE07\_L1GT\_126109\_20030106\_20170126\_01\_T2 | 2003-01-06 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_126110\_20030106\_20170126\_01\_T2 | 2003-01-06 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_126111\_20030106\_20170126\_01\_T2 | 2003-01-06 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_126112\_20030106\_20170126\_01\_T2 | 2003-01-06 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_128110\_20040107\_20170122\_01\_T2 | 2004-01-07 | Landsat 7 | 30 | 4.1,4.5 | 10a |
| LE07\_L1GT\_128111\_20040107\_20170122\_01\_T2 | 2004-01-07 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128112\_20040107\_20170122\_01\_T2 | 2004-01-07 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_127111\_20040116\_20170124\_01\_T2 | 2004-01-16 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_127109\_20040201\_20170123\_01\_T2 | 2004-02-01 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_127110\_20040201\_20170123\_01\_T2 | 2004-02-01 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_127111\_20040201\_20170123\_01\_T2 | 2004-02-01 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_127112\_20040201\_20170123\_01\_T2 | 2004-02-01 | Landsat 7 | 30 | 4.1, | 4c, |
| LE07\_L1GT\_128109\_20040311\_20170121\_01\_T2 | 2004-03-11 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128110\_20040311\_20170121\_01\_T2 | 2004-03-11 | Landsat 7 | 30 | 4.1, 4.5 | 4b, 10a |
| LE07\_L1GT\_128111\_20040311\_20170121\_01\_T2 | 2004-03-11 | Landsat 7 | 30 | 4.1, 4.5 | 4b, 10a |
| LE07\_L1GT\_128112\_20040311\_20170121\_01\_T2 | 2004-03-11 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_126109\_20050111\_20170116\_01\_T2 | 2005-01-11 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_126110\_20050111\_20170117\_01\_T2 | 2005-01-11 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_126111\_20050111\_20170117\_01\_T2 | 2005-01-11 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_126112\_20050111\_20170116\_01\_T2 | 2005-01-11 | Landsat 7 | 30 | 4.1 | 4c |

**Table S1 continued from previous page**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LE07\_L1GT\_126110\_20050127\_20170116\_01\_T2 | 2005-01-27 | Landsat 7 | 30 | 4.1, 4.5 | 4b, 10a, |
| LE07\_L1GT\_126111\_20050127\_20170116\_01\_T2 | 2005-01-27 | Landsat 7 | 30 | 4.1, 4.5 | 4b, 10a, |
| LE07\_L1GT\_128109\_20060112\_20170111\_01\_T2 | 2006-01-12 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_128110\_20060112\_20170111\_01\_T2 | 2006-01-12 | Landsat 7 | 30 | 4.1, 4.5 | 4b, 4c, 10a |
| LE07\_L1GT\_128111\_20060112\_20170111\_01\_T2 | 2006-01-12 | Landsat 7 | 30 | 4.1, 4.5 | 4b, 4c, 10a |
| LE07\_L1GT\_128112\_20060112\_20170111\_01\_T2 | 2006-01-12 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_128109\_20070131\_20170105\_01\_T2 | 2007-01-31 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128110\_20070131\_20170105\_01\_T2 | 2007-01-31 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128111\_20070131\_20170105\_01\_T2 | 2007-01-31 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128112\_20070131\_20170105\_01\_T2 | 2007-01-31 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_126110\_20080308\_20161230\_01\_T2 | 2008-03-08 | Landsat 7 | 30 | 4.1, 4.5 | 10a |
| LE07\_L1GT\_126111\_20080308\_20161230\_01\_T2 | 2008-03-08 | Landsat 7 | 30 | 4.1, 4.5 | 10a |
| LE07\_L1GT\_126112\_20080308\_20161230\_01\_T2 | 2008-03-08 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128109\_20090120\_20161222\_01\_T2 | 2009-01-20 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128110\_20090120\_20161222\_01\_T2 | 2009-01-20 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128111\_20090120\_20161222\_01\_T2 | 2009-01-20 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128112\_20090120\_20161222\_01\_T2 | 2009-01-20 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_128109\_20100208\_20161217\_01\_T2 | 2010-02-08 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_128110\_20100208\_20161215\_01\_T2 | 2010-02-08 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_128111\_20100208\_20161217\_01\_T2 | 2010-02-08 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_128112\_20100208\_20161217\_01\_T2 | 2010-02-08 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_126109\_20110128\_20161210\_01\_T2 | 2011-01-28 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_126110\_20110128\_20161210\_01\_T3 | 2011-01-28 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_126111\_20110128\_20161210\_01\_T4 | 2011-01-28 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_126112\_20110128\_20161210\_01\_T5 | 2011-01-28 | Landsat 7 | 30 | 4.1 | 4c |
| LE07\_L1GT\_127109\_20120122\_20161204\_01\_T2 | 2012-01-22 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_127110\_20120122\_20161204\_01\_T2 | 2012-01-22 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_127111\_20120122\_20161203\_01\_T2 | 2012-01-22 | Landsat 7 | 30 | 4.1 | – |
| LE07\_L1GT\_126111\_20130101\_20161127\_01\_T2 | 2013-01-01 | Landsat 7 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LE07\_L1GT\_126111\_20130117\_20161127\_01\_T2 | 2013-01-17 | Landsat 7 | 30 | 4.1, 4.2, 4.5 | 4a, 10a |
| LE07\_L1GT\_126112\_20130117\_20161126\_01\_T2 | 2013-01-17 | Landsat 7 | 30 | 4.1, 4.2 | 4a, |
| LE07\_L1GT\_126110\_20130218\_20161125\_01\_T2 | 2013-02-18 | Landsat 7 | 30 | 4.1, 4.2, 4.3, 4.5 | 4a, 4b, 10a, 10b |
| LE07\_L1GT\_126111\_20130218\_20161125\_01\_T2 | 2013-02-18 | Landsat 7 | 30 | 4.1, 4.2, 4.3, 4.5 | 4a, 4b, 10a, 10b |
| LC08\_L1GT\_128110\_20140126\_20170426\_01\_T2 | 2014-01-26 | Landsat 8 | 30 | 4.1, 4.2, 4.3, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_128111\_20140126\_20170426\_01\_T2 | 2014-01-26 | Landsat 8 | 30 | 4.1, 4.2, 4.5,4.5 | 4a10a, 10b |
| LC08\_L1GT\_128109\_20140211\_20170425\_01\_T2 | 2014-02-11 | Landsat 8 | 30 | 4.1,4.2, 4.3, 4.5 | 4a, 4c,10b |
| LC08\_L1GT\_128110\_20140211\_20170425\_01\_T2 | 2014-02-11 | Landsat 8 | 30 | 4.1, 4.2, 4.3, 4.5 | 4a, 4b, 4c, 10a, 10b |
| LC08\_L1GT\_128111\_20140211\_20170425\_01\_T2 | 2014-02-11 | Landsat 8 | 30 | 4.1, 4.2, 4.3, 4.5 | 4a, 4b, 4c, 10a, 10b |
| LC08\_L1GT\_128112\_20140211\_20170425\_01\_T2 | 2014-02-11 | Landsat 8 | 30 | 4.1, 4.2, 4.3, 4.5 | 4a, 4c,10b |
| LC08\_L1GT\_128110\_20140227\_20170425\_01\_T2 | 2014-02-27 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_128111\_20140227\_20170425\_01\_T2 | 2014-02-27 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_128110\_20141228\_20170415\_01\_T2 | 2014-12-28 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |

**Table S1 continued from previous page**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LC08\_L1GT\_128111\_20141228\_20170415\_01\_T2 | 2014-12-28 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_128109\_20141228\_20170415\_01\_T2 | 2014-12-28 | Landsat 8 | 30 | 4.1,4.2,4.5 | 4a,10b |
| LC08\_L1GT\_128112\_20141228\_20170415\_01\_T2 | 2014-12-28 | Landsat 8 | 30 | 4.1,4.2,4.5 | 4a,10b |
| LC08\_L1GT\_127110\_20150122\_20170413\_01\_T2 | 2015-01-22 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_127111\_20150122\_20170413\_01\_T2 | 2015-01-22 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_128109\_20150129\_20170413\_01\_T2 | 2015-01-29 | Landsat 8 | 30 | 4.1,4.2, 4.3, 4.5 | 4a, 4b, 4c,10b |
| LC08\_L1GT\_128112\_20150129\_20170413\_01\_T2 | 2015-01-29 | Landsat 8 | 30 | 4.1,4.2, 4.3, 4.5 | 4a, 4b, 4c,10b |
| LC08\_L1GT\_128110\_20150129\_20170413\_01\_T2 | 2015-01-29 | Landsat 8 | 30 | 4.1, 4.2, 4.3,4.5 | 4a, 10a , 4c,10b |
| LC08\_L1GT\_128111\_20150129\_20170413\_01\_T2 | 2015-01-29 | Landsat 8 | 30 | 4.1, 4.2, 4.3, 4.5 | 4a4c, 10a, 10b |
| LO08\_L1GT\_128110\_20150302\_20170412\_01\_T2 | 2015-03-02 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LO08\_L1GT\_128111\_20150302\_20170412\_01\_T2 | 2015-03-02 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LO08\_L1GT\_128109\_20150302\_20170412\_01\_T2 | 2015-03-02 | Landsat 8 | 30 | 4.1,4.2,4.5 | 4a,10b |
| LO08\_L1GT\_128112\_20150302\_20170412\_01\_T2 | 2015-03-02 | Landsat 8 | 30 | 4.1,4.2,4.5 | 4a,10b |
| LC08\_L1GT\_128110\_20151215\_20170331\_01\_T2 | 2015-12-15 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_128111\_20151215\_20170331\_01\_T2 | 2015-12-15 | Landsat 8 | 30 | 4.1, 4.2, 4.5 | 4a, 10a, 10b |
| LC08\_L1GT\_128109\_20151215\_20170331\_01\_T2 | 2015-12-15 | Landsat 8 | 30 | 4.1,4.2,4.5 | 4a,10b |
| LC08\_L1GT\_128112\_20151215\_20170331\_01\_T2 | 2015-12-15 | Landsat 8 | 30 | 4.1,4.2,4.5 | 4a,10b |
| LC08\_L1GT\_128109\_20160201\_20170405\_01\_T2 | 2016-02-01 | Landsat 8 | 30 | 4.1,4.3,4.5 | 10b |
| LC08\_L1GT\_128110\_20160201\_20170405\_01\_T2 | 2016-02-01 | Landsat 8 | 30 | 4.1, 4.3, 4.5 | 10a, 10b |
| LC08\_L1GT\_128111\_20160201\_20170405\_01\_T2 | 2016-02-01 | Landsat 8 | 30 | 4.1, 4.3, 4.5 | 10a, 10b |
| LC08\_L1GT\_128110\_20160217\_20170329\_01\_T2 | 2016-02-17 | Landsat 8 | 30 | 4.1, 4.5, | 10a, 10b |
| LC08\_L1GT\_128111\_20160217\_20170329\_01\_T2 | 2016-02-17 | Landsat 8 | 30 | 4.1, 4.5, | 10a, 10b |
| LC08\_L1GT\_128112\_20160217\_20170329\_01\_T2 | 2016-02-17 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127109\_20160226\_20170329\_01\_T2 | 2016-02-26 | Landsat 8 | 30 | 4.1, 4.5 | 4c,10b |
| LC08\_L1GT\_127110\_20160226\_20170329\_01\_T2 | 2016-02-26 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 10a, 10b |
| LC08\_L1GT\_127111\_20160226\_20170329\_01\_T2 | 2016-02-26 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 10a, 10b |
| LC08\_L1GT\_127112\_20160226\_20170329\_01\_T2 | 2016-02-26 | Landsat 8 | 30 | 4.1,4.3, 4.5 | 4c,10b |
| LC08\_L1GT\_128110\_20161201\_20170317\_01\_T2 | 2016-12-01 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_128111\_20161201\_20170317\_01\_T2 | 2016-12-01 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_127110\_20161210\_20170317\_01\_T2 | 2016-12-10 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_127111\_20161210\_20170317\_01\_T2 | 2016-12-10 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_127109\_20161210\_20170317\_01\_T2 | 2016-12-10 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127112\_20161210\_20170317\_01\_T2 | 2016-12-10 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_128110\_20170102\_20170312\_01\_T2 | 2017-01-02 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_128111\_20170102\_20170312\_01\_T2 | 2017-01-02 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_128109\_20170102\_20170312\_01\_T2 | 2017-01-02 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_128112\_20170102\_20170312\_01\_T2 | 2017-01-02 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127109\_20170127\_20170214\_01\_T2 | 2017-01-27 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127110\_20170127\_20170214\_01\_T2 | 2017-01-27 | Landsat 8 | 30 | 4.1, 4.4, 4.5 | 5, 8, 10a, 10b |
| LC08\_L1GT\_127111\_20170127\_20170214\_01\_T2 | 2017-01-27 | Landsat 8 | 30 | 4.1, 4.4, 4.5 | 5, 8, 10a, 10b |
| LC08\_L1GT\_127112\_20170127\_20170214\_01\_T2 | 2017-01-27 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_128109\_20170203\_20170215\_01\_T2 | 2017-02-03 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 9,10b |

**Table S1 continued from previous page**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LC08\_L1GT\_128110\_20170203\_20170215\_01\_T2 | 2017-02-03 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 9, 10a, 10b |
| LC08\_L1GT\_128111\_20170203\_20170215\_01\_T2 | 2017-02-03 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 9, 10a, 10b |
| LC08\_L1GT\_128112\_20170203\_20170215\_01\_T2 | 2017-02-03 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 9, 10b |
| LC08\_L1GT\_127109\_20170228\_20170316\_01\_T2 | 2017-02-28 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127110\_20170228\_20170316\_01\_T2 | 2017-02-28 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_127111\_20170228\_20170316\_01\_T2 | 2017-02-28 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_127112\_20170228\_20170316\_01\_T2 | 2017-02-28 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127110\_20180114\_20180120\_01\_T2 | 2018-01-14 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_127111\_20180114\_20180120\_01\_T2 | 2018-01-14 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_128109\_20180206\_20180221\_01\_T2 | 2018-02-06 | Landsat 8 | 30 | 4.1, 4.5 | 4c,10b |
| LC08\_L1GT\_128110\_20180206\_20180221\_01\_T2 | 2018-02-06 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 10a, 10b |
| LC08\_L1GT\_128111\_20180206\_20180221\_01\_T2 | 2018-02-06 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 10a, 10b |
| LC08\_L1GT\_128112\_20180206\_20180221\_01\_T2 | 2018-02-06 | Landsat 8 | 30 | 4.1, 4.5 | 4c,10b |
| LC08\_L1GT\_128110\_20180222\_20180308\_01\_T2 | 2018-02-22 | Landsat 8 | 30 | 4.1, 4.5 | 10a,10b |
| LC08\_L1GT\_128111\_20180222\_20180308\_01\_T2 | 2018-02-22 | Landsat 8 | 30 | 4.1, 4.5 | 10a,10b |
| LC08\_L1GT\_127109\_20190101\_20190130\_01\_T2 | 2019-01-01 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127110\_20190101\_20190130\_01\_T2 | 2019-01-01 | Landsat 8 | 30 | 4.1, 4.5 | 10a,10b |
| LC08\_L1GT\_127111\_20190101\_20190130\_01\_T2 | 2019-01-01 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_127112\_20190101\_20190130\_01\_T2 | 2019-01-01 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_129109\_20190115\_20190131\_01\_T2 | 2019-01-15 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_129110\_20190115\_20190131\_01\_T2 | 2019-01-15 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_129111\_20190115\_20190131\_01\_T2 | 2019-01-15 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_129112\_20190115\_20190131\_01\_T2 | 2019-01-15 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_127109\_20190117\_20190117\_01\_RT | 2019-01-17 | Landsat 8 | 30 | 4.1, 4.5 | 1, 3, 10b |
| LC08\_L1GT\_127110\_20190117\_20190117\_01\_RT | 2019-01-17 | Landsat 8 | 30 | 4.1, 4.5 | 1, 3, 10a, 10b |
| LC08\_L1GT\_127111\_20190117\_20190117\_01\_RT | 2019-01-17 | Landsat 8 | 30 | 4.1, 4.5 | 1, 3, 10a, 10b |
| LC08\_L1GT\_127112\_20190117\_20190117\_01\_RT | 2019-01-17 | Landsat 8 | 30 | 4.1, 4.5 | 1, 3, 10b |
| LC08\_L1GT\_128109\_20190124\_20190205\_01\_T2 | 2019-01-24 | Landsat 8 | 30 | 4.1, 4.5 | 6,10b |
| LC08\_L1GT\_128110\_20190124\_20190205\_01\_T2 | 2019-01-24 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 6, 10a, 10b |
| LC08\_L1GT\_128111\_20190124\_20190205\_01\_T2 | 2019-01-24 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 6, 10a, 10b |
| LC08\_L1GT\_128112\_20190124\_20190205\_01\_T2 | 2019-01-24 | Landsat 8 | 30 | 4.1, 4.5 | 4c, 6, 10b |
| LC08\_L1GT\_126109\_20190126\_20190206\_01\_T2 | 2019-01-26 | Landsat 8 | 30 | 4.1, 4.5 | 4c,10b |
| LC08\_L1GT\_126110\_20190126\_20190206\_01\_T2 | 2019-01-26 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_126111\_20190126\_20190206\_01\_T2 | 2019-01-26 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_126112\_20190126\_20190206\_01\_T2 | 2019-01-26 | Landsat 8 | 30 | 4.1, 4.5 | 10b |
| LC08\_L1GT\_128110\_20190313\_20190325\_01\_T2 | 2019-03-13 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |
| LC08\_L1GT\_128111\_20190313\_20190325\_01\_T2 | 2019-03-13 | Landsat 8 | 30 | 4.1, 4.5 | 10a, 10b |

**Table S2.** Sentinel-1 SAR images used in Fig. 6, 7, 8, 9. (Abbreviations: Instrument Configuration, IC; Instrument Mode, IM; Interferometric Wide, IW )

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Index | Cycle  Number | Date | I.C | I.M |
| S1A\_IW\_GRDH\_1SSH\_20151129T222756\_20151129T222825\_008825\_00C98B\_B320 | 65 | 2015-11-29 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20151211T222755\_20151211T222824\_009000\_00CE6F\_C75B | 66 | 2015-12-11 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160503T222757\_20160503T222822\_011100\_010BA8\_2E72 | 78 | 2016-5-3 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160527T222802\_20160527T222827\_011450\_0116FB\_1A2B | 80 | 2016-5-27 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160608T222802\_20160608T222827\_011625\_011C74\_3B29 | 81 | 2016-6-8 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160702T222804\_20160702T222829\_011975\_012788\_C1A0 | 83 | 2016-7-2 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160714T222759\_20160714T222824\_012150\_012D4D\_D926 | 84 | 2016-7-14 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160726T222805\_20160726T222830\_012325\_0132F7\_27D6 | 85 | 2016-7-26 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160807T222800\_20160807T222825\_012500\_0138DA\_45C4 | 86 | 2016-8-7 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160819T222801\_20160819T222826\_012675\_013E9C\_13E8 | 87 | 2016-8-19 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160831T222801\_20160831T222826\_012850\_01448E\_B60A | 88 | 2016-8-31 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160912T222802\_20160912T222827\_013025\_014A22\_81CB | 89 | 2016-9-12 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20160924T222802\_20160924T222827\_013200\_014FF7\_16D8 | 90 | 2016-9-24 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20160930T222720\_20160930T222745\_002304\_003E57\_A142 | 20 | 2016-9-30 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161006T222802\_20161006T222827\_013375\_015571\_2138 | 91 | 2016-10-6 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20161012T222721\_20161012T222746\_002479\_0042EB\_E4DC | 21 | 2016-10-12 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161018T222802\_20161018T222827\_013550\_015B08\_2B69 | 92 | 2016-10-18 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20161024T222720\_20161024T222745\_002654\_0047CC\_8D16 | 22 | 2016-10-24 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161030T222802\_20161030T222827\_013725\_016061\_2BAE | 93 | 2016-10-30 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20161105T222720\_20161105T222745\_002829\_004CA8\_6DD0 | 23 | 2016-11-5 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161111T222802\_20161111T222827\_013900\_0165F4\_874F | 94 | 2016-11-11 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20161117T222720\_20161117T222745\_003004\_0051B4\_0A4E | 24 | 2016-11-17 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161123T222802\_20161123T222827\_014075\_016B3D\_2671 | 95 | 2016-11-23 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20161129T222720\_20161129T222745\_003179\_00568B\_C521 | 25 | 2016-11-29 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161205T222801\_20161205T222826\_014250\_0170BC\_8E18 | 96 | 2016-12-5 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20161211T222719\_20161211T222744\_003354\_005BA9\_297C | 26 | 2016-12-11 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161217T222801\_20161217T222826\_014425\_017640\_2851 | 97 | 2016-12-17 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20161223T222719\_20161223T222744\_003529\_006089\_922B | 27 | 2016-12-23 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20161229T222801\_20161229T222826\_014600\_017BB9\_9D46 | 98 | 2016-12-29 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170104T222717\_20170104T222742\_003704\_0065D5\_69E3 | 28 | 2017-1-4 0:00:00 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170116T222717\_20170116T222742\_003879\_006ADC\_B5C6 | 30 | 2017-1-16 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170122T222759\_20170122T222824\_014950\_018671\_9F50 | 101 | 2017-1-22 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170128T222717\_20170128T222742\_004054\_007029\_B65B | 30 | 2017-1-28 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170203T222759\_20170203T222824\_015125\_018BBC\_9121 | 101 | 2017-2-3 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170209T222716\_20170209T222741\_004229\_00754C\_6843 | 31 | 2017-2-9 0:00:00 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170209T222651\_20170209T222716\_004229\_00754C\_4C11 | 31 | 2017-2-9 22:26:51 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170209T222716\_20170209T222741\_004229\_00754C\_6843 | 31 | 2017-2-9 22:27:16 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170209T222741\_20170209T222806\_004229\_00754C\_86B4 | 31 | 2017-2-9 22:27:41 | 1 | IW |

**Table S2 continued from previous page**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S1A\_IW\_GRDH\_1SSH\_20170212T220338\_20170212T220403\_015256\_018FEF\_B5E2 | 101 | 2017-2-12 22:03:38 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170212T220403\_20170212T220428\_015256\_018FEF\_0CC2 | 101 | 2017-2-12 22:04:03 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170215T222758\_20170215T222823\_015300\_019149\_0455 | 102 | 2017-2-15 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170221T222716\_20170221T222741\_004404\_007A9F\_BFF1 | 32 | 2017-2-21 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170227T222758\_20170227T222823\_015475\_0196A0\_2F25 | 103 | 2017-2-27 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170305T222716\_20170305T222741\_004579\_007FB8\_D617 | 33 | 2017-3-5 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170311T222758\_20170311T222823\_015650\_019BE9\_80F0 | 104 | 2017-3-11 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170317T222717\_20170317T222742\_004754\_0084E5\_0027 | 34 | 2017-3-17 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170323T222759\_20170323T222824\_015825\_01A11C\_7019 | 105 | 2017-3-23 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170329T222717\_20170329T222742\_004929\_0089E4\_15B0 | 35 | 2017-3-29 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170404T222759\_20170404T222824\_016000\_01A64E\_281A | 106 | 2017-4-4 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170410T222717\_20170410T222742\_005104\_008EF0\_846B | 36 | 2017-4-10 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170416T222800\_20170416T222825\_016175\_01ABAC\_B985 | 107 | 2017-4-16 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170422T222718\_20170422T222743\_005279\_0093FE\_B342 | 37 | 2017-4-22 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170428T222800\_20170428T222825\_016350\_01B0FB\_B451 | 108 | 2017-4-28 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170504T222719\_20170504T222744\_005454\_009901\_4C7C | 38 | 2017-5-4 0:00:00 | 1 | IW |
| S1A\_EW\_GRDM\_1SSH\_20170509T151959\_20170509T152103\_016506\_01B5BB\_8607 | 108 | 2017-5-9 15:19:59 | 5 | EW |
| S1A\_IW\_GRDH\_1SSH\_20170510T222801\_20170510T222826\_016525\_01B646\_AB77 | 109 | 2017-5-10 0:00:00 | 5 | IW |
| S1A\_EW\_GRDM\_1SSH\_20170510T160047\_20170510T160152\_016521\_01B622\_8975 | 108 | 2017-5-10 16:00:47 | 5 | EW |
| S1A\_IW\_GRDH\_1SSH\_20170510T222736\_20170510T222801\_016525\_01B646\_2E41 | 109 | 2017-5-10 22:27:36 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170510T222801\_20170510T222826\_016525\_01B646\_AB77 | 109 | 2017-5-10 22:28:01 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170510T222826\_20170510T222851\_016525\_01B646\_AEEA | 109 | 2017-5-10 22:28:26 | 5 | IW |
| S1A\_EW\_GRDM\_1SSH\_20170512T154427\_20170512T154532\_016550\_01B708\_5474 | 109 | 2017-5-12 15:44:27 | 5 | EW |
| S1B\_IW\_GRDH\_1SSH\_20170513T220258\_20170513T220323\_005585\_009C83\_CAE9 | 38 | 2017-5-13 22:02:58 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170513T220323\_20170513T220348\_005585\_009C83\_8345 | 38 | 2017-5-13 22:03:23 | 1 | IW |
| S1A\_EW\_GRDM\_1SSH\_20170514T152805\_20170514T152909\_016579\_01B7F9\_36BA | 109 | 2017-5-14 15:28:05 | 5 | EW |
| S1B\_IW\_GRDH\_1SSH\_20170516T222719\_20170516T222744\_005629\_009DC5\_C138 | 39 | 2017-5-16 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170522T222801\_20170522T222826\_016700\_01BBAC\_2B01 | 110 | 2017-5-22 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170528T222720\_20170528T222745\_005804\_00A2D2\_EE26 | 40 | 2017-5-28 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170603T222802\_20170603T222827\_016875\_01C116\_7868 | 111 | 2017-6-3 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170609T222720\_20170609T222745\_005979\_00A7E8\_9EEB | 41 | 2017-6-9 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170615T222803\_20170615T222828\_017050\_01C67B\_37EA | 112 | 2017-6-15 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170621T222721\_20170621T222746\_006154\_00AD04\_579D | 42 | 2017-6-21 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170627T222804\_20170627T222829\_017225\_01CBCE\_1883 | 113 | 2017-6-27 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170703T222722\_20170703T222747\_006329\_00B20F\_65D7 | 43 | 2017-7-3 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170709T222804\_20170709T222829\_017400\_01D113\_04C8 | 114 | 2017-7-9 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170715T222723\_20170715T222748\_006504\_00B704\_5E7F | 44 | 2017-7-15 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170721T222805\_20170721T222830\_017575\_01D666\_0AD0 | 115 | 2017-7-21 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170727T222723\_20170727T222748\_006679\_00BC00\_E13A | 45 | 2017-7-27 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170802T222806\_20170802T222831\_017750\_01DBC0\_BDB2 | 116 | 2017-8-2 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170808T222724\_20170808T222749\_006854\_00C110\_F0DF | 46 | 2017-8-8 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170814T222806\_20170814T222831\_017925\_01E114\_741A | 117 | 2017-8-14 0:00:00 | 5 | IW |

**Table S2 continued from previous page**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S1B\_IW\_GRDH\_1SSH\_20170820T222724\_20170820T222749\_007029\_00C629\_969D | 47 | 2017-8-20 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170826T222807\_20170826T222832\_018100\_01E660\_F019 | 118 | 2017-8-26 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170901T222725\_20170901T222750\_007204\_00CB38\_1108 | 48 | 2017-9-1 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170907T222807\_20170907T222832\_018275\_01EBB0\_7C7A | 119 | 2017-9-7 0:00:00 | 5 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170909T154433\_20170909T154503\_018300\_01EC7F\_BD9C | 119 | 2017-9-9 15:44:33 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170910T220305\_20170910T220330\_007335\_00CF0C\_BB13 | 48 | 2017-9-10 22:03:05 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170910T220330\_20170910T220355\_007335\_00CF0C\_817B | 48 | 2017-9-10 22:03:30 | 1 | IW |
| S1A\_EW\_GRDM\_1SDH\_20170911T152811\_20170911T152915\_018329\_01ED7A\_367E | 119 | 2017-9-11 15:28:11 | 5 | EW |
| S1A\_IW\_GRDH\_1SSH\_20170912T160848\_20170912T160917\_018344\_01EDF3\_6136 | 119 | 2017-9-12 16:08:48 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170913T222726\_20170913T222751\_007379\_00D05C\_BC0B | 49 | 2017-9-13 0:00:00 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170913T222701\_20170913T222726\_007379\_00D05C\_8732 | 49 | 2017-9-13 22:27:01 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170913T222726\_20170913T222751\_007379\_00D05C\_BC0B | 49 | 2017-9-13 22:27:26 | 1 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170913T222751\_20170913T222816\_007379\_00D05C\_197D | 49 | 2017-9-13 22:27:51 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20170919T222808\_20170919T222833\_018450\_01F116\_7B0F | 120 | 2017-9-19 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20170925T222726\_20170925T222751\_007554\_00D567\_377E | 50 | 2017-9-25 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171001T222808\_20171001T222833\_018625\_01F67D\_3761 | 121 | 2017-10-1 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171007T222726\_20171007T222751\_007729\_00DA70\_EC2C | 51 | 2017-10-7 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171013T222808\_20171013T222833\_018800\_01FBCD\_0B14 | 122 | 2017-10-13 0:00:00 | 5 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171019T222726\_20171019T222751\_007904\_00DF66\_4CDF | 52 | 2017-10-19 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171025T222808\_20171025T222833\_018975\_02011D\_C9B9 | 123 | 2017-10-25 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171031T222726\_20171031T222751\_008079\_00E46F\_6158 | 53 | 2017-10-31 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171106T222808\_20171106T222833\_019150\_020686\_CC53 | 124 | 2017-11-6 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171112T222726\_20171112T222751\_008254\_00E99A\_7580 | 54 | 2017-11-12 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171118T222808\_20171118T222833\_019325\_020C00\_B825 | 125 | 2017-11-18 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171124T222726\_20171124T222751\_008429\_00EEE7\_F305 | 55 | 2017-11-24 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171130T222807\_20171130T222832\_019500\_021178\_11A3 | 126 | 2017-11-30 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171206T222725\_20171206T222750\_008604\_00F47A\_4A48 | 56 | 2017-12-6 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171212T222807\_20171212T222832\_019675\_0216F6\_D410 | 127 | 2017-12-12 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171218T222725\_20171218T222750\_008779\_00FA0E\_F749 | 57 | 2017-12-18 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20171224T222806\_20171224T222831\_019850\_021C58\_1881 | 128 | 2017-12-24 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20171230T222724\_20171230T222749\_008954\_00FFA8\_D53A | 58 | 2017-12-30 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180105T222806\_20180105T222831\_020025\_0221E0\_2228 | 129 | 2018-1-5 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180111T222724\_20180111T222749\_009129\_010561\_4763 | 59 | 2018-1-11 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180117T222806\_20180117T222831\_020200\_02276F\_9BC8 | 130 | 2018-1-17 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180123T222723\_20180123T222748\_009304\_010B16\_9770 | 60 | 2018-1-23 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180129T222805\_20180129T222830\_020375\_022CFE\_86F9 | 131 | 2018-1-29 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180204T222723\_20180204T222748\_009479\_0110D3\_2DDD | 61 | 2018-2-4 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180210T222805\_20180210T222830\_020550\_023299\_2D2E | 132 | 2018-2-10 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180216T222723\_20180216T222748\_009654\_011697\_7F35 | 62 | 2018-2-16 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180222T222805\_20180222T222830\_020725\_02382C\_418B | 133 | 2018-2-22 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180228T222723\_20180228T222748\_009829\_011C62\_EF4E | 63 | 2018-2-28 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180306T222805\_20180306T222830\_020900\_023DB6\_CD64 | 134 | 2018-3-6 0:00:00 | 6 | IW |

**Table S2 continued from previous page**

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| --- | --- | --- | --- | --- |
| S1B\_IW\_GRDH\_1SSH\_20180312T222723\_20180312T222748\_010004\_012242\_E23D | 64 | 2018-3-12 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180318T222805\_20180318T222830\_021075\_02433C\_3C56 | 135 | 2018-3-18 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180324T222723\_20180324T222748\_010179\_0127EB\_6912 | 65 | 2018-3-24 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180330T222805\_20180330T222830\_021250\_0248CA\_C0B2 | 136 | 2018-3-30 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180405T222724\_20180405T222749\_010354\_012D9B\_F964 | 66 | 2018-4-5 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180411T222806\_20180411T222831\_021425\_024E43\_A112 | 137 | 2018-4-11 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180417T222724\_20180417T222749\_010529\_013332\_5BD0 | 67 | 2018-4-17 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180423T222806\_20180423T222831\_021600\_0253B4\_E8C9 | 138 | 2018-4-23 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180429T222725\_20180429T222750\_010704\_0138CE\_BDB5 | 68 | 2018-4-29 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180505T222807\_20180505T222832\_021775\_02593D\_E498 | 139 | 2018-5-5 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180511T222725\_20180511T222750\_010879\_013E74\_923B | 69 | 2018-5-11 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180517T222807\_20180517T222832\_021950\_025ECD\_7503 | 140 | 2018-5-17 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180523T222726\_20180523T222751\_011054\_014425\_51BA | 70 | 2018-5-23 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180529T222808\_20180529T222833\_022125\_02646E\_195B | 141 | 2018-5-29 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180604T222726\_20180604T222751\_011229\_0149C9\_40EA | 71 | 2018-6-4 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180610T222809\_20180610T222834\_022300\_0269E3\_19A7 | 142 | 2018-6-10 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180616T222727\_20180616T222752\_011404\_014F24\_9F3E | 72 | 2018-6-16 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180622T222810\_20180622T222835\_022475\_026F29\_9FA0 | 143 | 2018-6-22 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180628T222728\_20180628T222753\_011579\_015497\_0D17 | 73 | 2018-6-28 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180704T222810\_20180704T222835\_022650\_027447\_87D3 | 144 | 2018-7-4 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180710T222729\_20180710T222754\_011754\_015A01\_2618 | 74 | 2018-7-10 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180716T222811\_20180716T222836\_022825\_027992\_FE6C | 145 | 2018-7-16 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180722T222730\_20180722T222755\_011929\_015F5A\_0673 | 75 | 2018-7-22 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180728T222812\_20180728T222837\_023000\_027F1A\_75E5 | 146 | 2018-7-28 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180803T222730\_20180803T222755\_012104\_01649E\_7C59 | 76 | 2018-8-3 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180809T222812\_20180809T222837\_023175\_028491\_E211 | 147 | 2018-8-9 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180815T222731\_20180815T222756\_012279\_016A07\_502C | 77 | 2018-8-15 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180821T222813\_20180821T222838\_023350\_028A3C\_13E2 | 148 | 2018-8-21 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180827T222731\_20180827T222756\_012454\_016F79\_FF90 | 78 | 2018-8-27 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180902T222814\_20180902T222839\_023525\_028FC9\_641C | 149 | 2018-9-2 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180908T222732\_20180908T222757\_012629\_0174DF\_01C1 | 79 | 2018-9-8 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180914T222814\_20180914T222839\_023700\_029562\_7BCF | 150 | 2018-9-14 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20180920T222732\_20180920T222757\_012804\_017A39\_F6B6 | 80 | 2018-9-20 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20180926T222814\_20180926T222839\_023875\_029B12\_0A59 | 151 | 2018-9-26 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20181002T222733\_20181002T222758\_012979\_017F94\_737C | 81 | 2018-10-2 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20181008T222815\_20181008T222840\_024050\_02A0D4\_AF26 | 152 | 2018-10-8 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20181014T222733\_20181014T222758\_013154\_0184E8\_AD98 | 82 | 2018-10-14 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20181020T222815\_20181020T222840\_024225\_02A687\_8862 | 153 | 2018-10-20 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20181026T222733\_20181026T222758\_013329\_018A57\_4488 | 83 | 2018-10-26 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20181101T222815\_20181101T222840\_024400\_02AC41\_528D | 154 | 2018-11-1 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20181107T222733\_20181107T222758\_013504\_018FD3\_35FE | 84 | 2018-11-7 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20181113T222814\_20181113T222839\_024575\_02B2AC\_4245 | 155 | 2018-11-13 0:00:00 | 6 | IW |

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| --- | --- | --- | --- | --- |
| S1B\_IW\_GRDH\_1SSH\_20181119T222733\_20181119T222758\_013679\_019556\_B460 | 85 | 2018-11-19 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20181125T222814\_20181125T222839\_024750\_02B91B\_8E0B | 156 | 2018-11-25 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20181201T222732\_20181201T222757\_013854\_019AF5\_97C3 | 86 | 2018-12-1 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20181207T222814\_20181207T222839\_024925\_02BEF4\_F802 | 157 | 2018-12-7 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20181213T222732\_20181213T222757\_014029\_01A0A3\_453F | 87 | 2018-12-13 0:00:00 | 1 | IW |
| S1A\_IW\_GRDH\_1SSH\_20181219T222813\_20181219T222838\_025100\_02C54D\_5A79 | 158 | 2018-12-19 0:00:00 | 6 | IW |
| S1B\_IW\_GRDH\_1SSH\_20181225T222731\_20181225T222756\_014204\_01A673\_5561 | 88 | 2018-12-25 0:00:00 | 1 | IW |