

Spatially variable response of Himalayan glaciers to climate change affected by debris cover

Dirk Scherler^{1*}, Bodo Bookhagen², Manfred R. Strecker¹

1 Institute of Earth and Environmental Science, University Potsdam, Karl-Liebknecht-Str. 24, 14476 Potsdam, Germany

2 Department of Geography, 1832 Ellison Hall, University of California Santa Barbara, Santa Barbara, CA 93106-4060

* e-mail: dirk@geo.uni-potsdam.de

In this document, we provide additional details on our methodological approach, including characteristic examples for the glacier analysis (Figures S1-S3).

In Figure S4, we show the precipitation data that we used for simple modelling of the climate sensitivity and response time of the studied glaciers, which is shown in Figure S5.

We furthermore provide details on the satellite images that were used for obtaining glacier-surface velocities (Tables S1-S2) and for measuring debris-covered glacier areas (Table S3). In addition, we list details on the results of the image correlations, which form the basis for measuring glacier-surface velocities (Table S4). In Table S5, we list all relevant results that we obtained for each of the studied glaciers.

Glacier-surface velocities

Obtaining glacier-surface velocities from optical satellite imagery is a well established method¹⁻⁶. However, when studying alpine glaciers, typical measurement uncertainties are approximately one pixel of the satellite image. We used the program COSI-Corr⁶ for precise orthorectification, co-registration, and sub-pixel correlation of ASTER and SPOT satellite images from 2000 to 2008 (Table S1-S2) and followed the procedures outlined in ref. 7 to obtain accurate surface velocities. We analyzed glacier-surface velocities within twelve heavily ice-covered areas in the greater Himalayan realm and studied any glacier within these areas with enough data coverage to construct a velocity profile along the trunk glacier without significant data gaps. We excluded surging glaciers from our analysis, which alternate between usually rapid advances and longer periods of slow retreat and/or stability. We identified such glaciers from distorted medial moraines⁸.

Surface velocities were obtained along the central flowline of the studied glaciers, which we identified manually, based on the satellite images and the velocity maps (Figure S1). We measured the proportion of the velocity profile extending upstream from the terminus with velocities $<2.5 \text{ m yr}^{-1}$ as an indicator of quasi-stagnant ice (Figure S2). This particular threshold is guided by the average uncertainties in the velocity measurements, which we calculated from the correlation uncertainties, and the associated limitations in discriminating between moving and stagnant ice (Table S4). We tested higher and lower thresholds ($0\text{-}5 \text{ m yr}^{-1}$), but these mostly shift the statistical moments of the distributions to higher and lower fractions, respectively, without producing effects on the relative differences. The temporal separation of the satellite images is generally close to an integer multiple of one year (Table S4) and thus not biased by seasonal velocity variations⁷. Each profile is constructed from

several measurements and final velocities reflect mean annual velocities averaged over the years 2000-2008 or a shorter time span.

Debris cover

The extent of debris cover was determined based on digitized glacier outlines combined with the distribution of clean ice and snow at the end of the hydrological year, obtained from Landsat Thematic Mapper (TM) band TM4/TM5-ratio images⁹ (Figure S1, Table S3). The effect of debris cover on melt rates is well known^{10,11}, and several studies have quantified the relationship between debris thickness and melt rate¹¹⁻¹⁴. At a debris thickness of less than ~2-4 cm, the albedo effect dominates and ice melting accelerates, whereas at a debris thickness of more than ~2-4 cm, the insulation effect dominates and melt rates are lower compared to clean ice. It is presently impossible to quantify debris-cover thickness reliably using remote-sensing methods. However, ground-based studies report common debris-cover thicknesses of 20-200 cm¹²⁻¹⁷, indicating that the insulating effect of debris cover on melt rates may be substantial on some Himalayan glaciers. The percentage of debris cover (by area) on the studied glaciers is unrelated to the size of the glaciers in each of the study regions (Figure S3). Hence, regional differences in the size distribution of the studied glaciers do not affect our results.

Glacier frontal changes

We measured changes in glacier area at the terminus from the earliest and latest suitable orthorectified 15-m resolution ASTER images that were used for the velocity measurements. Combined with glacier widths we calculated mean annual advance or retreat rates during the period of investigation. For most of the glaciers, suitable

scenes separated by at least four years are available and allow determination of frontal changes during the observation period (Table S5).

Identifying the edges of debris-covered glaciers is not possible by standard ice and snow mapping techniques, and despite efforts using automatic mapping⁹, the most accurate procedure is still manual delineation by one expert investigator¹⁸. In our study, the high number of accurately co-registered satellite images facilitates detection of surface-area changes. Following ref. 18, we estimated mapping inaccuracies by comparing several ASTER-based area changes with those obtained from 5-m resolution SPOT images. Although the periods between the available images are not identical, deviations of mean annual frontal changes are on average ~ 5 m yr⁻¹, and up to ~ 20 m yr⁻¹ in the case of one heavily debris-covered glacier. For this study, we assume a uniform uncertainty of ~ 10 m yr⁻¹ for all studied glaciers, which is likely a conservative estimate.

DEM analysis

We estimated the snowline elevation, using orthorectified satellite images (ASTER, SPOT, Landsat ETM+) that were acquired near the end of the hydrological year, when snow cover is lowest¹⁹. We manually determined the surface elevation at the boundary between bright snow and darker ice using a void-filled SRTM based digital elevation model (DEM)²⁰. Snowline elevations vary between years and different aspects on any one glacier by 50-200 m. For this study, we used the ELA estimates to calculate mean slope angles in the accumulation areas, i.e., all catchment areas of a glacier that lie above the ELA. The DEM has a spatial resolution of ~ 90 m and a vertical accuracy better than 16 m²¹. Inaccuracies in measured slope angles due to DEM resolution and accuracy are greater for steeper slope angles, but generally unimportant for the purpose of our study. We measured the slope of the ice surface in

the terminus regions of the studied glaciers along our profiles that follow the central flowline. We calculated mean surface slopes along a distance of 1 km or 2 km upstream from the terminus of glaciers with ≤ 5 km and >5 km length, respectively.

It should be noted that the DEM of ref. 20 has the SRTM-voids filled using, amongst others, Soviet military topographic maps, which date as far back as the 1970's. The possible glacier-surface lowering of some metres between this time and February 2000, when the SRTM DEM has been acquired is unlikely to be significant for the present purpose for three reasons. First, the void-filling is based on converting the SRTM DEM into contour lines, closing the voids by tracing the contours from the topographic maps, converting back to a raster-DEM and using this surface as a source to fill the void. Hence, the voids have been filled with relative, not absolute elevation data. Second, the SRTM data is largely void-free over gentle sloping glacier surfaces. Second, potential elevation changes do not significantly distort the orthorectified near-nadir 3N band ASTER images. Therefore our velocity measurements at the gentle sloping lower parts of glaciers are unaffected by this potential bias.

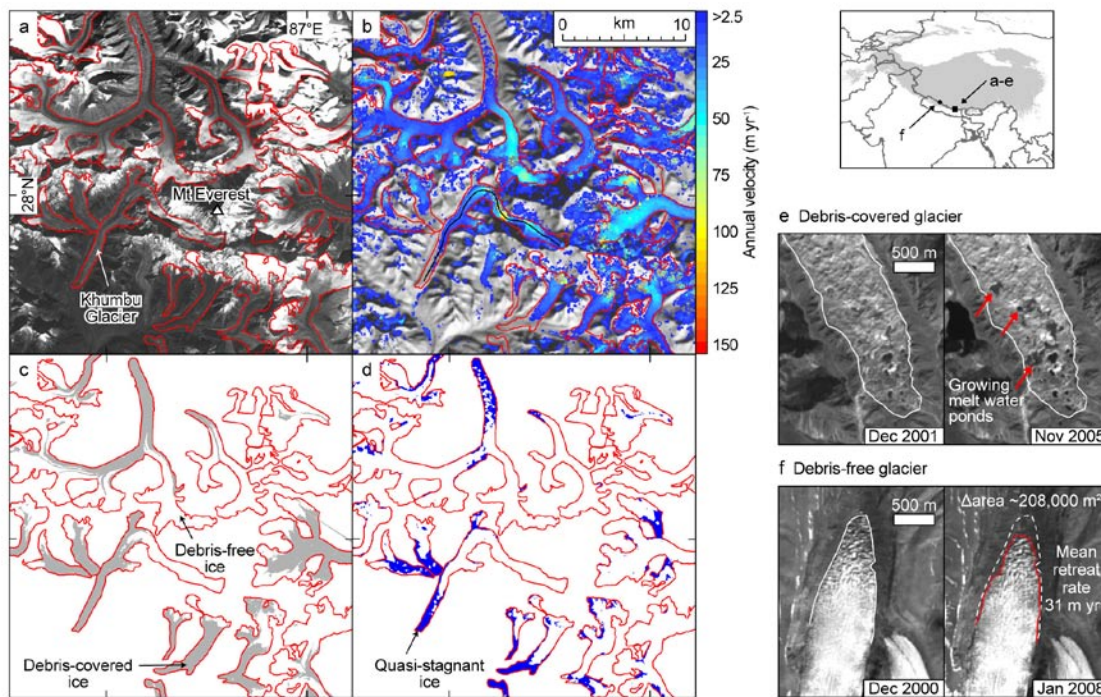


Figure S1: Example of glacier analysis and data from the Mt. Everest region, Nepal. (a) Orthorectified ASTER-satellite images (3N band) from November 2004. Red polygons delineate the studied glaciers. (b) Velocity map derived from correlation of the image in A with images from November 2005. Only velocities $>2.5 \text{ m yr}^{-1}$ are shown. Black line gives trace of profile in Figure S2. (c) Distribution of debris cover derived from combination of mapped glacier extents with Landsat band TM4/TM5-ratio threshold images. (d) Distribution of quasi-stagnant ice, i.e. parts of the glaciers moving at $<2.5 \text{ m yr}^{-1}$. (e) Example of a debris-covered glacier (Ngojumba Glacier, Khumbu Himal, Nepal), which shows no sign of retreat. (f) Example of a debris-free glacier, with an average retreat rate of $\sim 31 \text{ m yr}^{-1}$ between December 2000 and January 2008 (unknown glacier name, Manaslu Himal, Nepal).

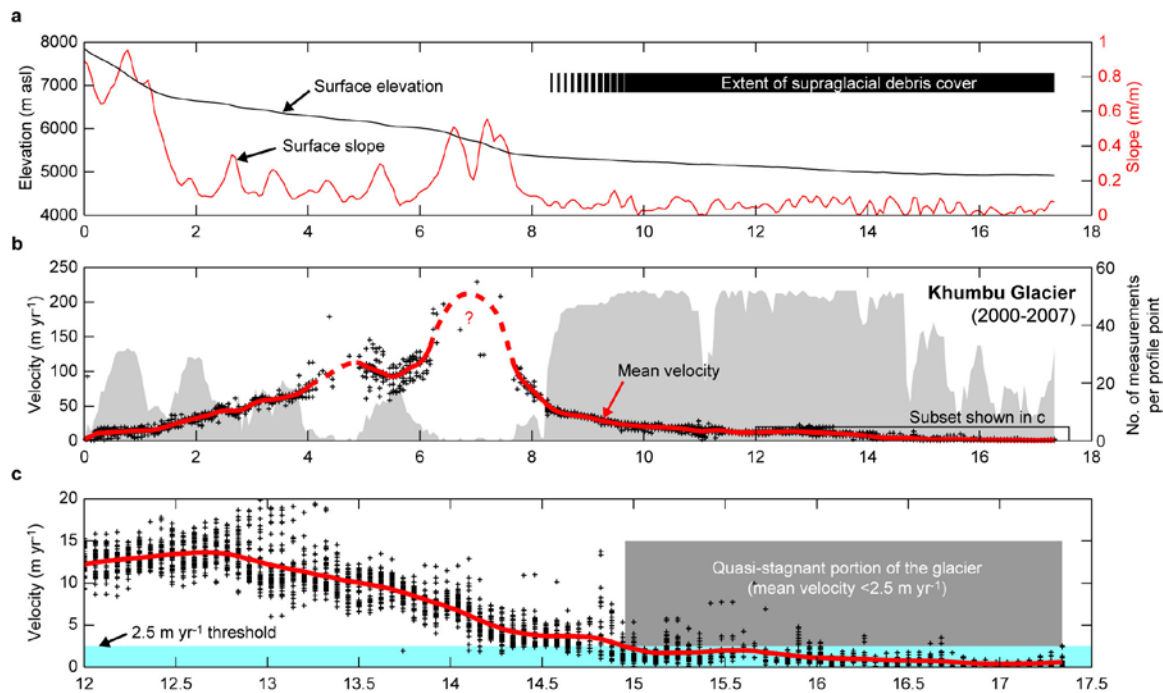


Figure S2: Example of glacier-surface velocities and stagnating terminus region.

(a) Surface elevation (black) and slope (red) along the profile from Khumbu Glacier (see Figure S1 for location). (b) Mean annual surface-velocity (red line), based on a large number of individual measurements (black crosses) between 2000 and 2007. Light-grey polygon in background gives number of velocity measurements per profile point (y-axis on the left side). Velocities at a steep portion (Khumbu Icefall) in the central part of the glacier, between km 6 and 8, are less well constrained, but this part is not relevant for our study. (c) Subset of the velocity in the lower 5.5 km of the glacier. Turquoise area at bottom covers velocities $< 2.5 \text{ m yr}^{-1}$. Dark-grey box indicates mean velocities $< 2.5 \text{ m yr}^{-1}$. The lower $\sim 2.3 \text{ km}$ of this glacier are quasi stagnant.

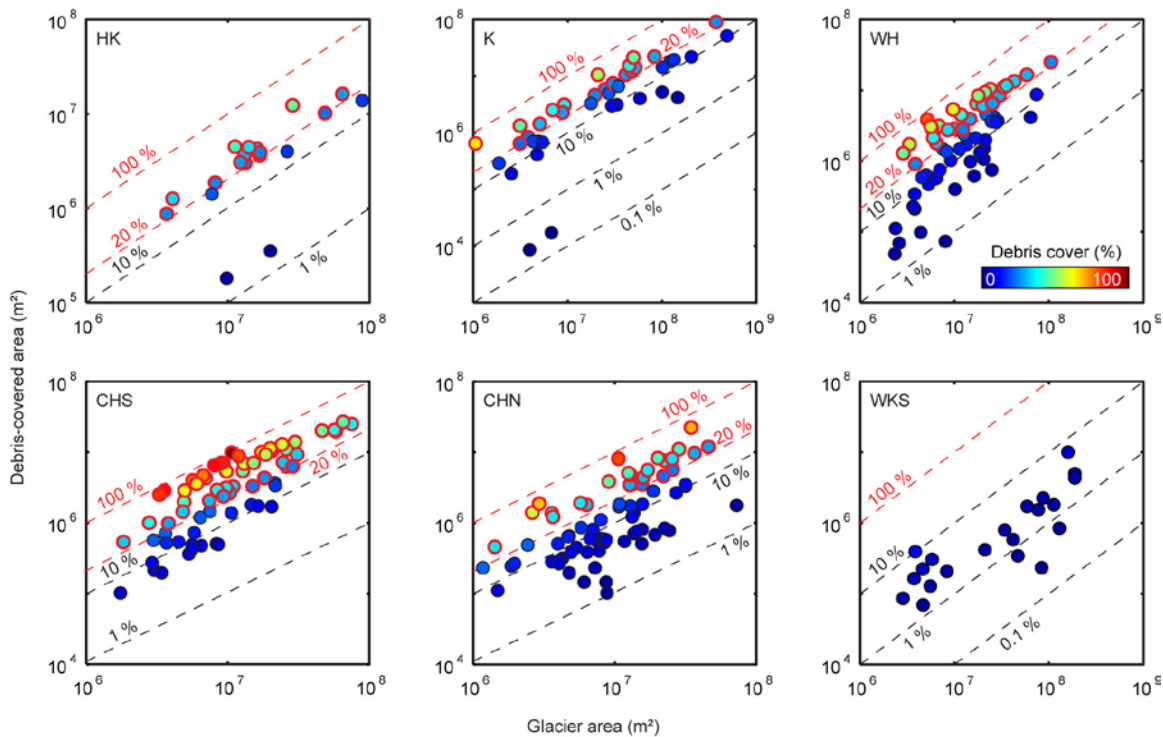


Figure S3: Regional distribution of glacier sizes and debris-covered areas. Glacier areas versus debris-covered glacier areas for all studied glaciers in the six geographic regions, Hindu Kush (HK), Karakoram (K), western Himalaya (WH), southern central Himalaya (CHS), northern central Himalaya (CHN), and West Kunlun Shan (WKS). Colour-coding depicts areal fraction of debris cover. Red-outlined data points represent glaciers with >20% debris cover.

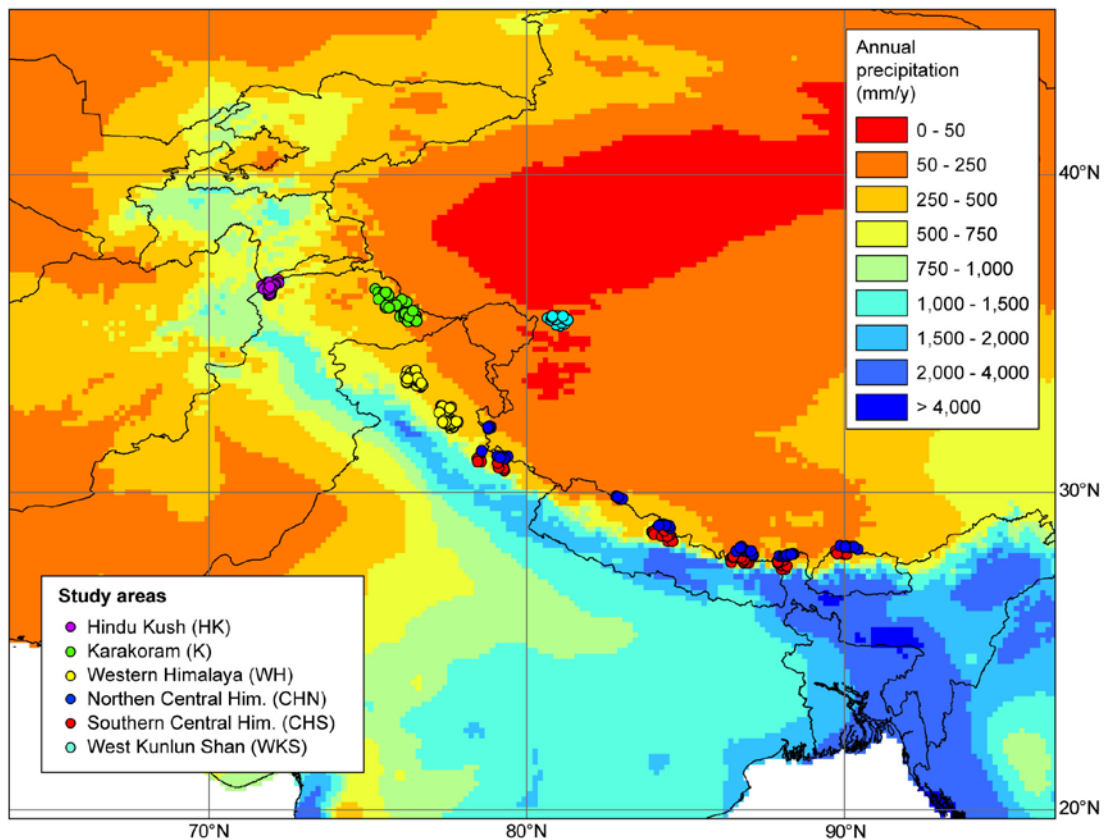


Figure S4: Annual precipitation in the study area. Annual precipitation data from Climate Research unit (CRU) 2.0 data set²², with 10-arc minutes horizontal resolution. Note that due to the scarcity of meteorological stations at high altitudes and in remote areas, particularly in the Karakoram and West Kunlun Shan, the actual annual precipitation may not be depicted correctly. However, the general pattern is identical with other gridded and station-based climatologies.

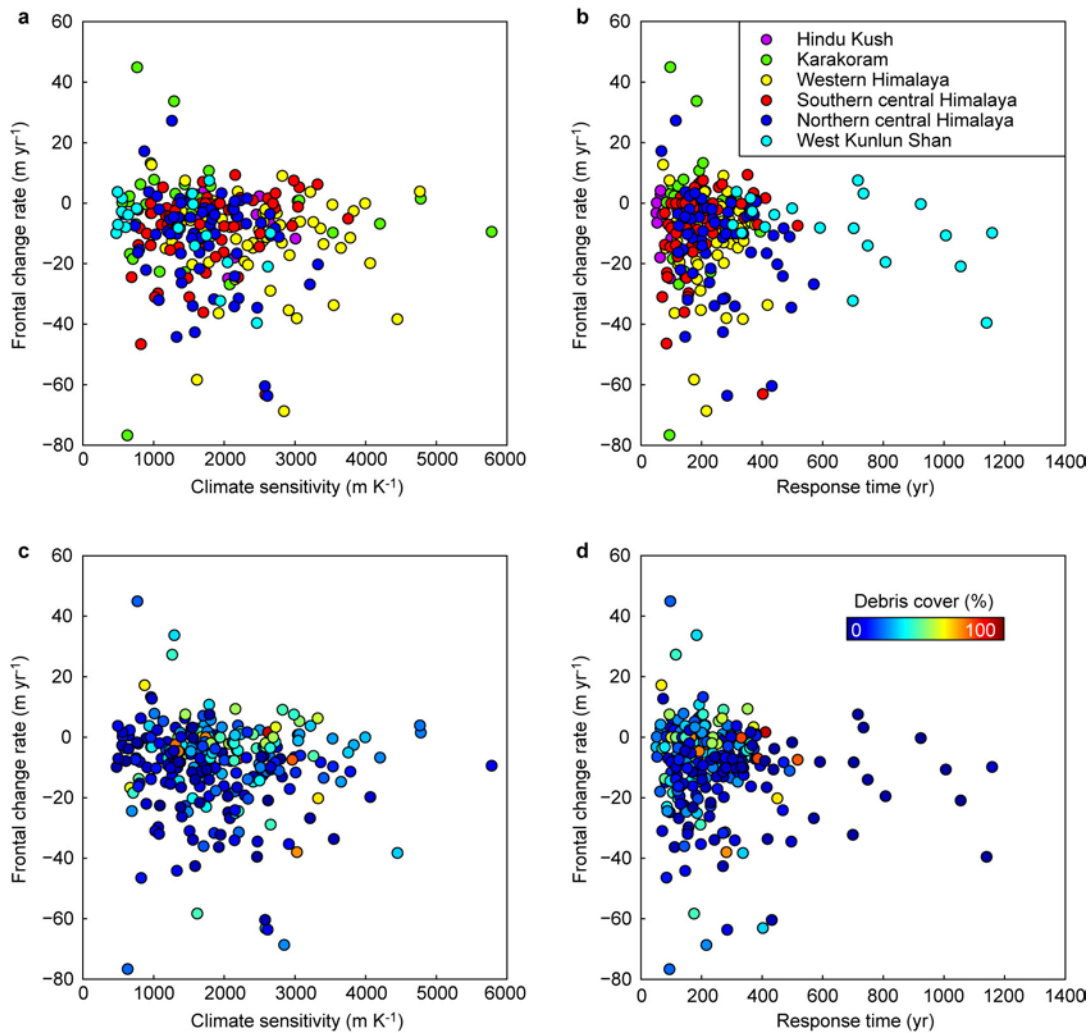


Figure S5: Modelled climate sensitivities (a, c) and response times (b, d) of the studied glaciers. Upper panels (a, b) show data points coloured by geographic region, lower panels show data points coloured by debris cover (in % by area). We modelled climate sensitivity (c) and response time (τ) for each glacier using equations given in ref. 23 and updated in ref. 24: $c = c_1 P^{0.5} s^{-1}$ and $\tau = c_2 \beta^{-1} s^{-1} (1 + 20s)^{-0.5} L^{-0.5}$, with $\beta = 0.006 P^{0.5}$. Here, s is the mean surface slope of the glacier, L is glacier length, β is the balance gradient, and P is the mean annual precipitation (in m yr^{-1}), derived from the CRU 2.0 data set (see Figure S4). c_1 and c_2 are constants that have been calibrated with results from numerical glacier models and take the values 430 and 17.9 (ref. 24). No systematic patterns in response times or climate sensitivities can be observed that could potentially explain the observed discrepancies in frontal change rates.

In the following tables, the geographic regions (if indicated) are part of the main regions that are mentioned in the text. Note that we distinguished glaciers in the central Himalaya based on their position with respect to the topographic divide between the Himalaya to the south and the Tibetan Plateau to the north (see text for details).

Hindu Kush (HK): Chitral (south), Chitral (north)

Karakoram (K): Hispar, Biafo Gyang, Baltoro

Western Himalaya (WH): Jammu, Lahul (south), Lahul (north)

Central Himalaya (CH): Bhutan, Kanchenjunga, Khumbu, Manaslu, Gurla Mandatha, Garhwal (Gangotri), Garhwal (Tons), Leo Pargil

West Kunlun Shan (WKS): West Kunlun Shan

Table S1: List of all ASTER satellite images used in this study.

No.	Geographic region	ASTER Granule ID	Acquisition date (dd.mm.yyyy)	Incidence angle (°)	Cloud cover (%) [†]
1	Bhutan	ASTL1A 0101200458520109050995	20.01.2001	-0.019	60
2	Bhutan	ASTL1A 0111040451360111170671	04.11.2001	-2.832	19
3	Bhutan	ASTL1A 0111200451120111300272	20.11.2001	-0.022	33
4	Bhutan	ASTL1A 0212090448280212220388	09.12.2002	-2.873	42
5	Bhutan	ASTL1A 0301100447490304130278	10.01.2003	-2.873	63
6	Bhutan	ASTL1A 0501060452260501170201	06.01.2005	8.580	70
7	Bhutan	ASTL1A 0501150446180501260416	15.01.2005	-2.826	79
8	Bhutan	ASTL1A 0509280446010509300440	28.09.2005	-0.028	27
9	Bhutan	ASTL1A 0601180445230601230029	18.01.2006	0.022	81
10	Bhutan	ASTL1A 0602100451590602120700	10.02.2006	8.586	80
11	Bhutan	ASTL1A 0602260452140603010086	26.02.2006	8.586	48
12	Bhutan	ASTL1A 0612200446380612250005	20.12.2006	-1.448	73
13	Bhutan	ASTL1A 0701050446530701080251	05.01.2007	-2.832	61
14	Bhutan	ASTL1A 0701210447050701240139	21.01.2007	-0.022	80
15	Bhutan	ASTL1A 0702220447190702270059	22.02.2007	-0.022	51
16	Bhutan	ASTL1A 0703260447200703290416	26.03.2007	-0.017	32
17	Bhutan	ASTL1A 0704020453290704040588	02.04.2007	8.588	52
18	Bhutan	ASTL1A 0705040453140705070028	04.05.2007	8.586	53
19	Bhutan	ASTL1A 0705130446560705170311	13.05.2007	-2.873	41
20	Bhutan	ASTL1A 0705290446510706020317	29.05.2007	-2.870	14
21	Bhutan	ASTL1A 0710110453130710130457	11.10.2007	8.580	43
22	Bhutan	ASTL1A 0712140453090712180402	14.12.2007	8.580	72
23	Kanchenjunga	ASTL1A 0010070507170106171024	07.10.2000	0.022	36
24	Kanchenjunga	ASTL1A 0012010512050107290690	01.12.2000	8.588	64
25	Kanchenjunga	ASTL1A 0012010512140107290691	01.12.2000	8.588	57
26	Kanchenjunga	ASTL1A 0102280504430312150721	28.02.2001	-0.011	74
27	Kanchenjunga	ASTL1A 0104080509330312050170	08.04.2001	8.594	39
28	Kanchenjunga	ASTL1A 0104080509420312050171	08.04.2001	8.594	71
29	Kanchenjunga	ASTL1A 0110260458250111100014	26.10.2001	-5.727	51
30	Kanchenjunga	ASTL1A 0111110457430112140260	11.11.2001	-5.666	38
31	Kanchenjunga	ASTL1A 0111270457290402220471	27.11.2001	0.019	37
32	Kanchenjunga	ASTL1A 0112130456420112270108	13.12.2001	0.019	37
33	Kanchenjunga	ASTL1A 0201050502070201300923	05.01.2002	8.588	64
34	Kanchenjunga	ASTL1A 0201050502160201300924	05.01.2002	8.588	28
35	Kanchenjunga	ASTL1A 0201300455400202170317	30.01.2002	-0.028	77
36	Kanchenjunga	ASTL1A 0204040454430204150209	04.04.2002	-5.727	63
37	Kanchenjunga	ASTL1A 0205130500520205230702	13.05.2002	8.586	18
38	Kanchenjunga	ASTL1A 0205130501010205230703	13.05.2002	8.586	27
39	Kanchenjunga	ASTL1A 0210290454280211121103	29.10.2002	-2.870	51
40	Kanchenjunga	ASTL1A 0408150452490408280597	15.08.2004	0.022	47
41	Kanchenjunga	ASTL1A 0412050452090412170068	05.12.2004	-2.870	62
42	Kanchenjunga	ASTL1A 0502140458310502240663	14.02.2005	8.588	89
43	Kanchenjunga	ASTL1A 0502140458400502240664	14.02.2005	8.588	76
44	Kanchenjunga	ASTL1A 0611090452420611120038	09.11.2006	-2.873	76
45	Kanchenjunga	ASTL1A 0611250452450611290423	25.11.2006	-2.873	70
46	Kanchenjunga	ASTL1A 0711030459100711060158	03.11.2007	5.729	80
47	Kanchenjunga	ASTL1A 0711120452550711150090	12.11.2007	-2.867	82
48	Kanchenjunga	ASTL1A 0711190459030711220179	19.11.2007	8.525	69
49	Kanchenjunga	ASTL1A 0711190459120711220180	19.11.2007	8.525	35
50	Kanchenjunga	ASTL1A 0712300453230801020215	30.12.2007	-2.870	65
51	Khumbu	ASTL1A 0009280513430312080380	28.09.2000	-2.870	25
52	Khumbu	ASTL1A 0009280513510312080381	28.09.2000	-2.870	63
53	Khumbu	ASTL1A 0010140513180106251045	14.10.2000	0.022	37
54	Khumbu	ASTL1A 0010140513270106251046	14.10.2000	0.022	70
55	Khumbu	ASTL1A 0010300512460107110671	30.10.2000	-0.025	27
56	Khumbu	ASTL1A 0112200502200201111046	20.12.2001	0.025	60
57	Khumbu	ASTL1A 0112200502290201111047	20.12.2001	0.025	43
58	Khumbu	ASTL1A 0210040500290210261258	04.10.2002	-2.829	21
59	Khumbu	ASTL1A 0210040500380210261259	04.10.2002	-2.829	49
60	Khumbu	ASTL1A 0211210500340212070707	21.11.2002	-0.041	36
61	Khumbu	ASTL1A 0301080500070303170125	08.01.2003	-0.030	77
62	Khumbu	ASTL1A 0301080500160303170126	08.01.2003	-0.030	48

No.	Geographic region	ASTER Granule ID	Acquisition date (dd.mm.yyyy)	Incidence angle (°)	Cloud cover (%) [†]
63	Khumbu	ASTL1A 0310230459200311050562	23.10.2003	0.019	18
64	Khumbu	ASTL1A 0310230459290311050563	23.10.2003	0.019	25
65	Khumbu	ASTL1A 0410090458300410220102	09.10.2004	0.022	31
66	Khumbu	ASTL1A 0410090458390410220103	09.10.2004	0.022	72
67	Khumbu	ASTL1A 0410250458150411040497	25.10.2004	-2.873	63
68	Khumbu	ASTL1A 0410250458240411040498	25.10.2004	-2.873	77
69	Khumbu	ASTL1A 0411100458100411210130	10.11.2004	-1.480	70
70	Khumbu	ASTL1A 0411100458190411210131	10.11.2004	-1.480	55
71	Khumbu	ASTL1A 0511130458410511190111	13.11.2005	0.022	47
72	Khumbu	ASTL1A 0511290458400512020077	29.11.2005	-0.019	45
73	Khumbu	ASTL1A 0512060504390512090572	06.12.2005	8.588	76
74	Khumbu	ASTL1A 0512150458320512180055	15.12.2005	0.016	43
75	Khumbu	ASTL1A 0602010458090602040117	01.02.2006	-2.876	40
76	Khumbu	ASTL1A 0701190459250701220147	19.01.2007	-2.867	90
77	Khumbu	ASTL1A 0701190459340701220148	19.01.2007	-2.867	67
78	Khumbu	ASTL1A 0801060459270801090347	06.01.2008	0.014	87
79	Khumbu	ASTL1A 0801060459360801090348	06.01.2008	0.014	48
80	Manaslu	ASTL1A 0010120525320106240667	12.10.2000	0.025	38
81	Manaslu	ASTL1A 0011290524260107270734	29.11.2000	0.019	34
82	Manaslu	ASTL1A 0011290524350107270735	29.11.2000	0.019	21
83	Manaslu	ASTL1A 0012150524110108090592	15.12.2000	-0.017	29
84	Manaslu	ASTL1A 0012150524200108090593	15.12.2000	-0.017	21
85	Manaslu	ASTL1A 0102170523210112070649	17.02.2001	2.873	47
86	Manaslu	ASTL1A 0105010515320105140485	01.05.2001	-8.589	55
87	Manaslu	ASTL1A 0210020512460210241099	02.10.2002	0.025	12
88	Manaslu	ASTL1A 0210020512550210241100	02.10.2002	0.025	14
89	Manaslu	ASTL1A 0211030512410211170128	03.11.2002	5.721	57
90	Manaslu	ASTL1A 0211030512490211170129	03.11.2002	5.721	29
91	Manaslu	ASTL1A 0310050511250310180496	05.10.2003	-0.022	14
92	Manaslu	ASTL1A 0310050511330310180497	05.10.2003	-0.022	8
93	Manaslu	ASTL1A 0402100512150402290204	10.02.2004	-0.022	45
94	Manaslu	ASTL1A 0403130511570404015542	13.03.2004	5.729	30
95	Manaslu	ASTL1A 0403130512060404015543	13.03.2004	5.729	44
96	Manaslu	ASTL1A 0409050510550409170312	05.09.2004	2.881	70
97	Manaslu	ASTL1A 0410230510300411020192	23.10.2004	5.729	47
98	Manaslu	ASTL1A 0410230510390411020193	23.10.2004	5.729	32
99	Manaslu	ASTL1A 0411170504130412100771	17.11.2004	-5.727	46
100	Manaslu	ASTL1A 0412030504190412140490	03.12.2004	-5.729	34
101	Manaslu	ASTL1A 0412260510440501090793	26.12.2004	5.732	75
102	Manaslu	ASTL1A 0607020505040607050249	02.07.2006	-8.591	40
103	Manaslu	ASTL1A 0611070504450611100030	07.11.2006	-8.586	59
104	Manaslu	ASTL1A 0611070504540611100031	07.11.2006	-8.586	58
105	Manaslu	ASTL1A 0704070511510704100125	07.04.2007	2.873	59
106	Manaslu	ASTL1A 0704070512000704100126	07.04.2007	2.873	44
107	Manaslu	ASTL1A 0704230511440704260183	23.04.2007	2.870	80
108	Manaslu	ASTL1A 0801040511390801070124	04.01.2008	2.878	69
109	Manaslu	ASTL1A 0801040511480801070125	04.01.2008	2.878	29
110	Gurla Mandatha	ASTL1A 0110310516020111120765	31.10.2001	-8.583	48
111	Gurla Mandatha	ASTL1A 0201030514170201290966	03.01.2002	-8.589	80
112	Gurla Mandatha	ASTL1A 0212280518390301140465	28.12.2002	0.016	88
113	Gurla Mandatha	ASTL1A 0302140518300303100587	14.02.2003	2.832	99
114	Gurla Mandatha	ASTL1A 0302230512170303310409	23.02.2003	-8.583	58
115	Gurla Mandatha	ASTL1A 0306150511380307011009	15.06.2003	-8.591	22
116	Gurla Mandatha	ASTL1A 0309260517080310070441	26.09.2003	1.925	14
117	Gurla Mandatha	ASTL1A 0510100510300510130020	10.10.2005	-8.580	57
118	Gurla Mandatha	ASTL1A 0612230517090612270410	23.12.2006	1.398	77
119	Gurla Mandatha	ASTL1A 0704140517420704170217	14.04.2007	-0.022	48
120	Gurla Mandatha	ASTL1A 0707190517410707230025	19.07.2007	0.022	37
121	Gurla Mandatha	ASTL1A 0711150523170711180135	15.11.2007	8.580	60
122	Garhwal (Gangotri)	ASTL1A 0011090549040303210003	09.11.2000	8.578	55
123	Garhwal (Gangotri)	ASTL1A 0109090542130109210888	09.09.2001	5.699	52
124	Garhwal (Gangotri)	ASTL1A 0111210533440112050016	21.11.2001	-8.589	39
125	Garhwal (Gangotri)	ASTL1A 0112230532340202250746	23.12.2001	-8.586	48
126	Garhwal (Gangotri)	ASTL1A 0201080532060202020960	08.01.2002	-8.586	45
127	Garhwal (Gangotri)	ASTL1A 0205160531070205250344	16.05.2002	-8.583	32
128	Garhwal (Gangotri)	ASTL1A 0310100529250310220539	10.10.2003	-5.727	44
129	Garhwal (Gangotri)	ASTL1A 0310100529340310220540	10.10.2003	-5.727	13
130	Garhwal (Gangotri)	ASTL1A 0407240529140408100758	24.07.2004	-8.586	40

No.	Geographic region	ASTER Granule ID	Acquisition date (dd.mm.yyyy)	Incidence angle (°)	Cloud cover (%) [†]
131	Garhwal (Gangotri)	ASTL1A 0508190534580508220145	19.08.2005	5.729	87
132	Garhwal (Gangotri)	ASTL1A 0510150528360510180881	15.10.2005	-8.583	69
133	Garhwal (Gangotri)	ASTL1A 0609230535100609260202	23.09.2006	2.878	52
134	Garhwal (Gangotri)	ASTL1A 0610090534580610120384	09.10.2006	5.729	62
135	Garhwal (Gangotri)	ASTL1A 0610180528400610210283	18.10.2006	-5.727	76
136	Garhwal (Gangotri)	ASTL1A 0611100535050611130259	10.11.2006	2.873	57
137	Garhwal (Gangotri)	ASTL1A 0705050535450705080221	05.05.2007	2.876	81
138	Garhwal (Gangotri)	ASTL1A 0711060529070711090209	06.11.2007	-8.580	54
139	Garhwal (Gangotri)	ASTL1A 0711060529160711090210	06.11.2007	-8.580	30
140	Garhwal (Gangotri)	ASTL1A 0711220529160711250112	22.11.2007	-8.580	63
141	Garhwal (Gangotri)	ASTL1A 0711220529250711250113	22.11.2007	-8.580	17
142	Garhwal (Tons)	ASTL1A 0111210533440112050016	21.11.2001	-8.589	39
143	Garhwal (Tons)	ASTL1A 0112070533200112220027	07.12.2001	-8.589	53
144	Garhwal (Tons)	ASTL1A 0112300538430201260386	30.12.2001	0.016	30
145	Garhwal (Tons)	ASTL1A 0205160531070205250344	16.05.2002	-8.583	32
146	Garhwal (Tons)	ASTL1A 0304240536010305040110	24.04.2003	0.019	12
147	Garhwal (Tons)	ASTL1A 0310010535290310120326	01.10.2003	-0.025	13
148	Garhwal (Tons)	ASTL1A 0403090536090403230332	09.03.2004	-0.030	59
149	Garhwal (Tons)	ASTL1A 0404260535430405070040	26.04.2004	-0.022	46
150	Garhwal (Tons)	ASTL1A 0409010535020409120470	01.09.2004	-0.030	69
151	Garhwal (Tons)	ASTL1A 0411040534340411120657	04.11.2004	-0.022	23
152	Garhwal (Tons)	ASTL1A 0510150528360510180881	15.10.2005	-8.583	69
153	Garhwal (Tons)	ASTL1A 0510220534470510250071	22.10.2005	-0.017	30
154	Garhwal (Tons)	ASTL1A 0704030536000704060191	03.04.2007	2.876	29
155	Garhwal (Tons)	ASTL1A 0706060535380706110246	06.06.2007	-0.017	22
156	Garhwal (Tons)	ASTL1A 0711130535190711160126	13.11.2007	0.016	41
157	Garhwal (Tons)	ASTL1A 0712310535460801030198	31.12.2007	0.025	47
158	Leo Pargil	ASTL1A 0103170546010201070780	17.03.2001	-2.870	18
159	Leo Pargil	ASTL1A 0111210533260112050014	21.11.2001	-8.589	45
160	Leo Pargil	ASTL1A 0111210533350112050015	21.11.2001	-8.589	29
161	Leo Pargil	ASTL1A 0304240535430305040108	24.04.2003	0.019	10
162	Leo Pargil	ASTL1A 0310010535020310120323	01.10.2003	-0.025	33
163	Leo Pargil	ASTL1A 0310010535110310120324	01.10.2003	-0.025	27
164	Leo Pargil	ASTL1A 0310170535220310290241	17.10.2003	-2.870	67
165	Leo Pargil	ASTL1A 0311020535240311160279	02.11.2003	-2.870	29
166	Leo Pargil	ASTL1A 0409010534450409120468	01.09.2004	-0.030	33
167	Leo Pargil	ASTL1A 0411040534070411120654	04.11.2004	-0.022	89
168	Leo Pargil	ASTL1A 0411040534160411120655	04.11.2004	-0.022	71
169	Leo Pargil	ASTL1A 0509040534310509080554	04.09.2005	2.867	13
170	Leo Pargil	ASTL1A 0510220534300510250069	22.10.2005	-0.017	64
171	Leo Pargil	ASTL1A 0611010540540611040102	01.11.2006	8.588	60
172	Leo Pargil	ASTL1A 0706060535210706110244	06.06.2007	-0.017	30
173	Leo Pargil	ASTL1A 0711060528490711090207	06.11.2007	-8.580	80
174	Leo Pargil	ASTL1A 0711130535010711160124	13.11.2007	0.016	88
175	Leo Pargil	ASTL1A 0711220528580711250110	22.11.2007	-8.580	99
176	Leo Pargil	ASTL1A 0712310535290801030196	31.12.2007	0.025	89
177	Lahul (South)	ASTL1A 0207010543130208150812	01.07.2002	5.729	39
178	Lahul (South)	ASTL1A 0210300536330211130402	30.10.2002	-8.589	50
179	Lahul (South)	ASTL1A 0310080541190310210182	08.10.2003	2.873	28
180	Lahul (South)	ASTL1A 0310080541280310210183	08.10.2003	2.873	38
181	Lahul (South)	ASTL1A 0310240541340311110443	24.10.2003	0.022	52
182	Lahul (South)	ASTL1A 0409080540560409190507	08.09.2004	-0.011	16
183	Lahul (South)	ASTL1A 0409170534440409280460	17.09.2004	-8.580	58
184	Lahul (South)	ASTL1A 0511070534350511100073	07.11.2005	-8.583	61
185	Lahul (South)	ASTL1A 0609300540580610030214	30.09.2006	-0.022	28
186	Lahul (South)	ASTL1A 0610160540360610190142	16.10.2006	0.022	59
187	Lahul (South)	ASTL1A 0610160540450610190143	16.10.2006	0.022	26
188	Lahul (South)	ASTL1A 0611170541010611200053	17.11.2006	1.423	73
189	Lahul (South)	ASTL1A 0705210535140705240094	21.05.2007	-8.591	68
190	Lahul (South)	ASTL1A 0711200541090711230108	20.11.2007	2.873	77
191	Lahul (South)	ASTL1A 0711200541180711230109	20.11.2007	2.873	53
192	Lahul (South)	ASTL1A 0712150535230712190552	15.12.2007	-8.569	54
193	Lahul (North)	ASTL1A 0006250556410205200667	25.06.2000	-0.025	30
194	Lahul (North)	ASTL1A 0008280556270212310499	28.08.2000	0.019	28
195	Lahul (North)	ASTL1A 0210050542310210260531	05.10.2002	-2.873	15
196	Lahul (North)	ASTL1A 0210280548370211110725	28.10.2002	8.586	53
197	Lahul (North)	ASTL1A 0210280548450211110726	28.10.2002	8.586	20
198	Lahul (North)	ASTL1A 0210300536330211130402	30.10.2002	-8.589	50

No.	Geographic region	ASTER Granule ID	Acquisition date (dd.mm.yyyy)	Incidence angle (°)	Cloud cover (%) [†]
199	Lahul (North)	ASTL1A 0310080541190310210182	08.10.2003	2.873	28
200	Lahul (North)	ASTL1A 0310240541250311110442	24.10.2003	0.022	50
201	Lahul (North)	ASTL1A 0409080540470409190506	08.09.2004	-0.011	24
202	Lahul (North)	ASTL1A 0409170534350409280459	17.09.2004	-8.580	22
203	Lahul (North)	ASTL1A 0409170534440409280460	17.09.2004	-8.580	58
204	Lahul (North)	ASTL1A 0510290540340511070136	29.10.2005	0.030	55
205	Lahul (North)	ASTL1A 0511070534260511100072	07.11.2005	-8.583	88
206	Lahul (North)	ASTL1A 0511070534350511100073	07.11.2005	-8.583	61
207	Lahul (North)	ASTL1A 0609300540500610030213	30.09.2006	-0.022	43
208	Lahul (North)	ASTL1A 0610160540360610190142	16.10.2006	0.022	59
209	Lahul (North)	ASTL1A 0706130541260706160194	13.06.2007	-2.873	41
210	Lahul (North)	ASTL1A 0711200541090711230108	20.11.2007	2.873	77
211	Lahul (North)	ASTL1A 0712150535230712190552	15.12.2007	-8.569	54
212	Jammu	ASTL1A 0210120548170210310211	12.10.2002	2.87	57
213	Jammu	ASTL1A 0303050547540303220353	5.3.2003	0.02	58
214	Jammu	ASTL1A 0310310547150311140751	31.10.2003	-0.022	32
215	Jammu	ASTL1A 0503260546510503290271	26.03.2005	2.87	13
216	Jammu	ASTL1A 0510130540230510170292	13.10.2005	-5.73	65
217	Jammu	ASTL1A 0510200546250510220487	20.10.2005	2.884	62
218	Jammu	ASTL1A 0610070546370610100198	07.10.2006	2.870	55
219	Jammu	ASTL1A 0610230546320610260139	23.10.2006	2.88	56
220	Jammu	ASTL1A 0712220541100712260233	22.12.2007	-8.53	52
221	Karakoram (Baltoro)	ASTL1A 0009110607520301210381	11.09.2000	8.580	61
222	Karakoram (Baltoro)	ASTL1A 0108290600030109100540	29.08.2001	8.586	51
223	Karakoram (Baltoro)	ASTL1A 0210030554040210250577	03.10.2002	8.586	46
224	Karakoram (Baltoro)	ASTL1A 0309200552270310020633	20.09.2003	5.672	24
225	Karakoram (Baltoro)	ASTL1A 0310060552460310190240	06.10.2003	8.588	32
226	Karakoram (Baltoro)	ASTL1A 0310220552540311040573	22.10.2003	8.591	44
227	Karakoram (Baltoro)	ASTL1A 0403300552550404130517	30.03.2004	8.588	47
228	Karakoram (Baltoro)	ASTL1A 0408140546140408280137	14.08.2004	-2.873	24
229	Karakoram (Baltoro)	ASTL1A 0409150546040409260541	15.09.2004	-2.873	46
230	Karakoram (Baltoro)	ASTL1A 0502220545470508180153	22.02.2005	0.022	22
231	Karakoram (Baltoro)	ASTL1A 0506210552100506270657	21.06.2005	8.588	47
232	Karakoram (Baltoro)	ASTL1A 0506300546030507040533	30.06.2005	-2.870	78
233	Karakoram (Baltoro)	ASTL1A 0509250551550509280072	25.09.2005	8.583	88
234	Karakoram (Baltoro)	ASTL1A 0607260552400607290068	26.07.2006	5.680	20
235	Karakoram (Biafo Gyang)	ASTL1A 0009110607520301210381	11.09.2000	8.580	61
236	Karakoram (Biafo Gyang)	ASTL1A 0103060603530201020311	06.03.2001	5.729	33
237	Karakoram (Biafo Gyang)	ASTL1A 0105180556200105280799	18.05.2001	-5.727	14
238	Karakoram (Biafo Gyang)	ASTL1A 0108290600030109100540	29.08.2001	8.586	51
239	Karakoram (Biafo Gyang)	ASTL1A 0305310553080306200218	31.05.2003	5.677	30
240	Karakoram (Biafo Gyang)	ASTL1A 0309200552270310020633	20.09.2003	5.672	24
241	Karakoram (Biafo Gyang)	ASTL1A 0411020545360411110367	02.11.2004	-5.677	37
242	Karakoram (Biafo Gyang)	ASTL1A 0504020552210504050375	02.04.2005	5.727	30
243	Karakoram (Biafo Gyang)	ASTL1A 0504020552300504050376	02.04.2005	5.727	12
244	Karakoram (Biafo Gyang)	ASTL1A 0511050545540511080468	05.11.2005	-8.591	40
245	Karakoram (Biafo Gyang)	ASTL1A 0603130545580603160141	13.03.2006	-5.729	18
246	Karakoram (Biafo Gyang)	ASTL1A 0603290546060604010104	29.03.2006	-5.727	50
247	Karakoram (Biafo Gyang)	ASTL1A 0604050552110604080006	05.04.2006	2.837	66
248	Karakoram (Biafo Gyang)	ASTL1A 0604050552200604080007	05.04.2006	2.837	45
249	Karakoram (Biafo Gyang)	ASTL1A 0605160546060605190122	16.05.2006	-5.729	21
250	Karakoram (Biafo Gyang)	ASTL1A 0606170546180606200585	17.06.2006	-8.583	21
251	Karakoram (Biafo Gyang)	ASTL1A 0606240552240606270217	24.06.2006	5.729	18
252	Karakoram (Biafo Gyang)	ASTL1A 0606240552320606270218	24.06.2006	5.729	22
253	Karakoram (Biafo Gyang)	ASTL1A 0607260552310607290067	26.07.2006	5.680	19
254	Karakoram (Biafo Gyang)	ASTL1A 0607260552400607290068	26.07.2006	5.680	20
255	Karakoram (Biafo Gyang)	ASTL1A 0609050546220609080110	05.09.2006	-5.666	56
256	Karakoram (Biafo Gyang)	ASTL1A 0609120552210609150241	12.09.2006	-0.019	44
257	Karakoram (Biafo Gyang)	ASTL1A 0609280552110610010266	28.09.2006	2.837	37
258	Karakoram (Biafo Gyang)	ASTL1A 0610300552040611020126	30.10.2006	-0.022	38
259	Karakoram (Biafo Gyang)	ASTL1A 0611080546070611110148	08.11.2006	-5.735	16
260	Karakoram (Biafo Gyang)	ASTL1A 0612100546110612130029	10.12.2006	-5.729	80
261	Karakoram (Biafo Gyang)	ASTL1A 0701020552370701050476	02.01.2007	5.677	74
262	Karakoram (Biafo Gyang)	ASTL1A 0701020552460701050477	02.01.2007	5.677	40
263	Karakoram (Biafo Gyang)	ASTL1A 0701110546430701140142	11.01.2007	-5.727	74
264	Karakoram (Biafo Gyang)	ASTL1A 0701270546530701300158	27.01.2007	-5.666	36
265	Karakoram (Biafo Gyang)	ASTL1A 0703070553070703100401	07.03.2007	5.727	42
266	Karakoram (Biafo Gyang)	ASTL1A 0703070553160703100402	07.03.2007	5.727	29

No.	Geographic region	ASTER Granule ID	Acquisition date (dd.mm.yyyy)	Incidence angle (°)	Cloud cover (%) [†]
267	Karakoram (Biafo Gyang)	ASTL1A 0703230553070703270137	23.03.2007	5.672	18
268	Karakoram (Biafo Gyang)	ASTL1A 0703230553160703270138	23.03.2007	5.672	20
269	Karakoram (Biafo Gyang)	ASTL1A 0706110552450706140125	11.06.2007	5.727	24
270	Karakoram (Biafo Gyang)	ASTL1A 0706110552540706140126	11.06.2007	5.727	20
271	Karakoram (Biafo Gyang)	ASTL1A 0706270552520706300203	27.06.2007	5.721	21
272	Karakoram (Biafo Gyang)	ASTL1A 0706270553010706300204	27.06.2007	5.721	25
273	Karakoram (Biafo Gyang)	ASTL1A 0711270546320711300252	27.11.2007	-8.580	17
274	Karakoram (Hispar)	ASTL1A 0109300558330110131083	30.09.2001	0.022	15
275	Karakoram (Hispar)	ASTL1A 0109300558420110131084	30.09.2001	0.022	19
276	Karakoram (Hispar)	ASTL1A 0310290558540311120339	29.10.2003	8.588	22
277	Karakoram (Hispar)	ASTL1A 0409130558170409250097	13.09.2004	8.588	18
278	Karakoram (Hispar)	ASTL1A 0409290558120410090296	29.09.2004	8.583	91
279	Karakoram (Hispar)	ASTL1A 0511050545540511080468	05.11.2005	-8.591	40
280	Karakoram (Hispar)	ASTL1A 0511050545450511080467	05.11.2005	-8.591	53
281	Karakoram (Hispar)	ASTL1A 0603110558100603140060	11.03.2006	8.580	1
282	Karakoram (Hispar)	ASTL1A 0604050552110604080006	05.04.2006	2.837	66
283	Karakoram (Hispar)	ASTL1A 0604210552130604240319	21.04.2006	-0.030	59
284	Karakoram (Hispar)	ASTL1A 0606170546180606200585	17.06.2006	-8.583	21
285	Karakoram (Hispar)	ASTL1A 0609120552210609150241	12.09.2006	-0.019	44
286	Karakoram (Hispar)	ASTL1A 0609120552300609150242	12.09.2006	-0.019	40
287	Karakoram (Hispar)	ASTL1A 0609280552110610010266	28.09.2006	2.837	37
288	Karakoram (Hispar)	ASTL1A 0610300552040611020126	30.10.2006	-0.022	38
289	Karakoram (Hispar)	ASTL1A 0705010559020705040176	01.05.2007	8.588	68
290	Karakoram (Hispar)	ASTL1A 0711270546320711300252	27.11.2007	-8.580	17
291	Hindu Kush (North)	ASTL1A 0008310626110301030420	31.08.2000	8.580	10
292	Hindu Kush (North)	ASTL1A 0110050616490110190607	05.10.2001	5.699	31
293	Hindu Kush (North)	ASTL1A 0110140610390110260251	14.10.2001	-0.442	38
294	Hindu Kush (North)	ASTL1A 0207040612490208050489	04.07.2002	8.580	39
295	Hindu Kush (North)	ASTL1A 0209220612360210150796	22.09.2002	8.583	19
296	Hindu Kush (North)	ASTL1A 0210080612070210290273	08.10.2002	5.732	27
297	Hindu Kush (North)	ASTL1A 0608160610540608190236	16.08.2006	8.588	54
298	Hindu Kush (North)	ASTL1A 0609010610490609040147	01.09.2006	8.586	93
299	Hindu Kush (North)	ASTL1A 0705150611050705200121	15.05.2007	8.580	17
300	Hindu Kush (North)	ASTL1A 0707270605150707300190	27.07.2007	0.022	32
301	Hindu Kush (North)	ASTL1A 0708190611270708230087	19.08.2007	8.580	34
302	Hindu Kush (South)	ASTL1A 0008310626200301030421	31.08.2000	8.580	10
303	Hindu Kush (South)	ASTL1A 0106240613190107010540	24.06.2001	-2.829	25
304	Hindu Kush (South)	ASTL1A 0109280611010110120232	28.09.2001	-0.838	15
305	Hindu Kush (South)	ASTL1A 0110140610480110260252	14.10.2001	-0.442	30
306	Hindu Kush (South)	ASTL1A 0207040612580208050490	04.07.2002	8.580	10
307	Hindu Kush (South)	ASTL1A 0209220612450210150797	22.09.2002	8.583	9
308	Hindu Kush (South)	ASTL1A 0210080612150210290274	08.10.2002	5.732	29
309	Hindu Kush (South)	ASTL1A 0306140605210306300523	14.06.2003	0.019	15
310	Hindu Kush (South)	ASTL1A 0310200605060311010292	20.10.2003	-0.022	28
311	Hindu Kush (South)	ASTL1A 0405150605120405270448	15.05.2004	0.022	17
312	Hindu Kush (South)	ASTL1A 0406160604570406290312	16.06.2004	0.022	21
313	Hindu Kush (South)	ASTL1A 0409200604270410010164	20.09.2004	-2.873	50
314	Hindu Kush (South)	ASTL1A 0608160611020608190237	16.08.2006	8.588	35
315	Hindu Kush (South)	ASTL1A 0705150611140705200122	15.05.2007	8.580	18
316	Hindu Kush (South)	ASTL1A 0707270605240707300191	27.07.2007	0.022	28
317	Hindu Kush (South)	ASTL1A 0708190611360708230088	19.08.2007	8.580	43
318	West Kunlun Shan	ASTL1A 0005100543500204120475	10.05.2000	0.027	40
319	West Kunlun Shan	ASTL1A 0005100543590204120476	10.05.2000	0.027	36
320	West Kunlun Shan	ASTL1A 0103100539130201040563	10.03.2001	-5.729	39
321	West Kunlun Shan	ASTL1A 0103260538490202090556	26.03.2001	-0.019	58
322	West Kunlun Shan	ASTL1A 0103260538580202090557	26.03.2001	-0.019	70
323	West Kunlun Shan	ASTL1A 0202160535570203010929	16.02.2002	8.575	78
324	West Kunlun Shan	ASTL1A 0203130529270203290309	13.03.2002	-0.022	68
325	West Kunlun Shan	ASTL1A 0203130529360203290310	13.03.2002	-0.022	55
326	West Kunlun Shan	ASTL1A 0210140535230211031149	14.10.2002	5.699	23
327	West Kunlun Shan	ASTL1A 0304080535030304190316	08.04.2003	8.588	61
328	West Kunlun Shan	ASTL1A 0307220527260308050112	22.07.2003	0.022	14
329	West Kunlun Shan	ASTL1A 0310100528150310220531	10.10.2003	-5.727	36
330	West Kunlun Shan	ASTL1A 0403180528290404040357	18.03.2004	-0.030	49
331	West Kunlun Shan	ASTL1A 0403180528380404040358	18.03.2004	-0.030	36
332	West Kunlun Shan	ASTL1A 0412060533130412180063	06.12.2004	8.580	53
333	West Kunlun Shan	ASTL1A 0412060533220412180064	06.12.2004	8.580	79
334	West Kunlun Shan	ASTL1A 0501160527300501270399	16.01.2005	-0.022	85

No.	Geographic region	ASTER Granule ID	Acquisition date (dd.mm.yyyy)	Incidence angle (°)	Cloud cover (%) [†]
335	West Kunlun Shan	ASTL1A 0501160527390501270400	16.01.2005	-0.022	67
336	West Kunlun Shan	ASTL1A 0502010527270502120308	01.02.2005	-0.019	87
337	West Kunlun Shan	ASTL1A 0502010527360502120309	01.02.2005	-0.019	60
338	West Kunlun Shan	ASTL1A 0503120533440503180318	12.03.2005	8.578	95
339	West Kunlun Shan	ASTL1A 0510060533260510080508	06.10.2005	8.580	62
340	West Kunlun Shan	ASTL1A 0510060533350510080509	06.10.2005	8.580	53
341	West Kunlun Shan	ASTL1A 0602040526540602070254	04.02.2006	0.022	94
342	West Kunlun Shan	ASTL1A 0602040527030602070255	04.02.2006	0.022	67
343	West Kunlun Shan	ASTL1A 0602110533120602140125	11.02.2006	8.572	51
344	West Kunlun Shan	ASTL1A 0602110533210602140126	11.02.2006	8.572	76
345	West Kunlun Shan	ASTL1A 0704120528270704150324	12.04.2007	-0.022	48
346	West Kunlun Shan	ASTL1A 0704120528360704150325	12.04.2007	-0.022	43
347	West Kunlun Shan	ASTL1A 0711290534120712020139	29.11.2007	8.594	49
348	West Kunlun Shan	ASTL1A 0711290534210712020140	29.11.2007	8.594	80
349	West Kunlun Shan	ASTL1A 0712080528070712110194	08.12.2007	0.022	89
350	West Kunlun Shan	ASTL1A 0712080528160712110195	08.12.2007	0.022	80
351	West Kunlun Shan	ASTL1A 0801250528270801280093	25.01.2008	0.025	71

[†]Percentage cloud cover during image acquisition is provided in the metadata of the ASTER images, but, to our experience, is usually overestimated.

Table S2: List of all SPOT satellite images used in this study.

Instrument and Sensor	Processing level	Column (K)	Row (J)	Date (dd.mm.yyyy)	Incidence angle (°)
SPOT 4 HRVIR 1	L1A	208	288	22.09.2001	2.50
SPOT 5 HRG 1	L1A	208	288	17.12.2002	2.03
SPOT 5 HRG 1	L1A	208	288	11.07.2004	1.72
SPOT 5 HRG 2	L1A	208	288	31.08.2005	2.17
SPOT 5 HRG 2	L1A	208	288	06.10.2005	14.44
SPOT 5 HRG 1	L1A	208	288	17.11.2005	2.17

Table S3: List of all LANDSAT satellite images used in this study.

Instrument and Sensor	Processing level	Path	Row	Date (dd.mm.yyyy)
LANDSAT 5 TM	Orthorectified	148	39	29.06.1990
LANDSAT 5 TM	Orthorectified	142	40	11.10.1990
LANDSAT 5 TM	Orthorectified	145	39	15.11.1990
LANDSAT 5 TM	Orthorectified	145	35	15.11.1990
LANDSAT 5 TM	Orthorectified	145	36	17.10.1991
LANDSAT 5 TM	Orthorectified	140	41	17.11.1992
LANDSAT 7 ETM+	Orthorectified	150	35	16.09.1999
LANDSAT 7 ETM+	Orthorectified	147	37	29.09.2000
LANDSAT 7 ETM+	Orthorectified	143	39	10.03.2000
LANDSAT 7 ETM+	Orthorectified	146	38	10.08.2000
LANDSAT 7 ETM+	Orthorectified	147	38	15.10.2000
LANDSAT 7 ETM+	Orthorectified	147	37	15.10.2000
LANDSAT 7 ETM+	Orthorectified	148	37	22.10.2000
LANDSAT 7 ETM+	Orthorectified	151	35	27.10.2000
LANDSAT 7 ETM+	Orthorectified	138	40	17.11.2000
LANDSAT 7 ETM+	Orthorectified	139	41	26.12.2000
LANDSAT 7 ETM+	Orthorectified	149	35	30.09.2001
LANDSAT 7 ETM+	Orthorectified	138	41	20.11.2001

Table S4: Image correlation details.

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
		Scene 1	Scene 2			East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
1	Bhutan	20.01.2001	04.11.2001	0.789	2.8	0.031	2.629	-0.028	2.638	0.042	3.725	0.053	4.721
2	Bhutan	20.01.2001	20.11.2001	0.833	0.0	0.044	2.518	0.054	2.483	0.069	3.537	0.083	4.246
3	Bhutan	20.01.2001	10.01.2003	1.973	2.9	-0.044	2.587	-0.068	2.663	0.081	3.713	0.041	1.882
4	Bhutan	20.01.2001	15.01.2005	3.989	2.8	-0.085	2.568	-0.028	2.613	0.089	3.664	0.022	0.919
5	Bhutan	20.01.2001	18.01.2006	4.997	0.0	-0.071	2.826	0.025	2.891	0.075	4.043	0.015	0.809
6	Bhutan	20.01.2001	20.12.2006	5.918	1.4	0.004	3.250	-0.069	3.576	0.069	4.832	0.012	0.817
7	Bhutan	20.01.2001	22.02.2007	6.093	0.0	0.041	3.327	-0.217	3.645	0.221	4.935	0.036	0.810
8	Bhutan	04.11.2001	09.12.2002	1.096	0.0	-0.006	2.469	-0.065	2.686	0.065	3.649	0.060	3.330
9	Bhutan	04.11.2001	10.01.2003	1.184	0.0	-0.005	2.982	-0.132	3.156	0.132	4.342	0.111	3.669
10	Bhutan	20.11.2001	09.12.2002	1.052	2.9	-0.092	2.192	-0.009	2.436	0.093	3.277	0.088	3.115
11	Bhutan	20.11.2001	10.01.2003	1.140	2.9	-0.106	2.786	-0.249	2.906	0.270	4.026	0.237	3.532
12	Bhutan	20.11.2001	06.01.2005	3.132	8.6	-0.295	3.229	-0.074	2.749	0.304	4.241	0.097	1.354
13	Bhutan	20.11.2001	15.01.2005	3.156	2.8	-0.060	2.595	-0.022	2.619	0.064	3.686	0.020	1.168
14	Bhutan	20.11.2001	18.01.2006	4.164	0.0	-0.038	2.883	-0.016	2.838	0.041	4.045	0.010	0.971
15	Bhutan	20.11.2001	20.12.2006	5.085	1.4	-0.046	3.407	-0.022	3.717	0.051	5.042	0.010	0.992
16	Bhutan	10.01.2003	15.01.2005	2.016	0.0	-0.042	2.452	0.209	2.648	0.213	3.609	0.106	1.790
17	Bhutan	10.01.2003	28.09.2005	2.718	2.8	-0.068	3.197	0.151	3.262	0.166	4.567	0.061	1.681
18	Bhutan	10.01.2003	18.01.2006	3.025	2.9	-0.101	2.850	0.054	2.987	0.115	4.129	0.038	1.365
19	Bhutan	10.01.2003	05.01.2007	3.989	0.0	-0.029	2.608	0.059	2.831	0.066	3.849	0.017	0.965
20	Bhutan	10.01.2003	21.01.2007	4.033	2.9	-0.016	2.602	0.010	2.699	0.019	3.749	0.005	0.930
21	Bhutan	10.01.2003	22.02.2007	4.121	2.9	0.065	3.033	-0.317	3.328	0.323	4.503	0.078	1.093
22	Bhutan	06.01.2005	10.02.2006	1.096	0.0	0.086	2.856	-0.094	2.925	0.127	4.088	0.116	3.730
23	Bhutan	06.01.2005	26.02.2006	1.140	0.0	-0.003	2.775	0.027	2.792	0.027	3.937	0.024	3.454
24	Bhutan	06.01.2005	14.12.2007	2.937	0.0	0.014	2.523	0.043	2.489	0.045	3.545	0.015	1.207
25	Bhutan	15.01.2005	28.09.2005	0.701	2.8	-0.141	2.931	0.199	2.918	0.243	4.136	0.347	5.897
26	Bhutan	15.01.2005	18.01.2006	1.008	2.8	-0.065	2.546	0.090	2.501	0.111	3.568	0.110	3.539
27	Bhutan	15.01.2005	10.02.2006	1.071	11.4	-0.066	3.218	-0.020	3.075	0.069	4.451	0.065	4.155
28	Bhutan	15.01.2005	26.02.2006	1.115	11.4	-0.150	3.456	-0.101	3.154	0.181	4.679	0.163	4.196
29	Bhutan	15.01.2005	20.12.2006	1.929	1.4	-0.250	3.033	-0.240	3.330	0.347	4.504	0.180	2.335
30	Bhutan	15.01.2005	05.01.2007	1.973	0.0	-0.024	2.495	0.062	2.669	0.067	3.654	0.034	1.852
31	Bhutan	15.01.2005	21.01.2007	2.016	2.8	0.131	2.471	-0.128	2.527	0.183	3.534	0.091	1.752
32	Bhutan	15.01.2005	22.02.2007	2.104	2.8	0.211	3.176	-0.227	3.496	0.310	4.723	0.147	2.245
33	Bhutan	15.01.2005	13.05.2007	2.323	0.0	0.082	3.319	0.031	3.707	0.088	4.976	0.038	2.142
34	Bhutan	15.01.2005	29.05.2007	2.367	0.0	-0.023	3.145	0.023	3.717	0.033	4.870	0.014	2.057
35	Bhutan	15.01.2005	14.12.2007	2.912	11.4	-0.079	3.232	0.074	2.680	0.108	4.198	0.037	1.442
36	Bhutan	28.09.2005	18.01.2006	0.307	0.1	0.046	3.167	0.004	3.265	0.046	4.549	0.151	14.824
37	Bhutan	28.09.2005	20.12.2006	1.227	1.4	0.134	3.784	0.192	4.158	0.234	5.623	0.190	4.581
38	Bhutan	28.09.2005	05.01.2007	1.271	2.8	0.154	3.296	-0.241	3.310	0.286	4.671	0.225	3.674
39	Bhutan	28.09.2005	21.01.2007	1.315	0.0	0.203	3.277	-0.008	3.318	0.203	4.663	0.155	3.546
40	Bhutan	28.09.2005	22.02.2007	1.403	0.0	0.189	3.757	-0.092	3.933	0.210	5.440	0.150	3.878
41	Bhutan	28.09.2005	26.03.2007	1.490	0.0	0.256	3.360	-0.047	3.446	0.260	4.813	0.174	3.229
42	Bhutan	28.09.2005	29.05.2007	1.666	2.8	0.084	2.559	-0.040	2.758	0.094	3.762	0.056	2.259
43	Bhutan	18.01.2006	20.12.2006	0.921	1.5	0.144	3.427	-0.154	3.726	0.211	5.062	0.229	5.499
44	Bhutan	18.01.2006	05.01.2007	0.964	2.9	0.158	2.897	-0.124	2.942	0.200	4.129	0.208	4.281
45	Bhutan	18.01.2006	21.01.2007	1.008	0.0	0.056	2.620	-0.045	2.665	0.072	3.738	0.072	3.707
46	Bhutan	18.01.2006	22.02.2007	1.096	0.0	0.214	3.480	-0.274	3.837	0.348	5.180	0.317	4.727
47	Bhutan	18.01.2006	26.03.2007	1.184	0.0	0.159	3.153	-0.124	3.425	0.201	4.655	0.170	3.933
48	Bhutan	26.02.2006	21.01.2007	0.901	8.6	0.197	3.434	0.085	2.937	0.215	4.519	0.238	5.013
49	Bhutan	26.02.2006	22.02.2007	0.989	8.6	0.406	3.829	-0.019	3.513	0.406	5.196	0.411	5.254
50	Bhutan	26.02.2006	26.03.2007	1.077	8.6	0.296	3.651	-0.019	3.191	0.296	4.849	0.275	4.504
51	Bhutan	26.02.2006	14.12.2007	1.797	0.0	-0.256	3.187	0.139	3.276	0.291	4.571	0.162	2.543
52	Bhutan	20.12.2006	14.12.2007	0.984	10.0	-0.044	3.666	0.183	3.152	0.188	4.834	0.191	4.915
53	Bhutan	05.01.2007	14.12.2007	0.940	11.4	-0.095	3.378	0.195	2.968	0.217	4.497	0.231	4.785
54	Bhutan	21.01.2007	14.12.2007	0.896	8.6	-0.202	3.406	0.214	2.977	0.294	4.524	0.328	5.050
55	Kanchenjunga	07.10.2000	27.11.2001	1.140	0.0	-0.012	3.101	0.039	3.105	0.041	4.388	0.036	3.850
56	Kanchenjunga	07.10.2000	13.12.2001	1.184	0.0	0.070	3.103	0.030	3.146	0.076	4.419	0.064	3.734
57	Kanchenjunga	07.10.2000	30.01.2002	1.315	0.1	-0.027	3.812	-0.091	3.673	0.095	5.293	0.072	4.025
58	Kanchenjunga	07.10.2000	29.10.2002	2.060	2.9	-0.033	3.074	0.074	3.144	0.081	4.397	0.039	2.134
59	Kanchenjunga	07.10.2000	15.08.2004	3.858	0.0	0.051	3.338	-0.221	3.464	0.227	4.811	0.059	1.247
60	Kanchenjunga	01.12.2000	27.11.2001	0.989	8.6	0.007	3.913	-0.236	3.214	0.236	5.064	0.238	5.120
61	Kanchenjunga	01.12.2000	13.12.2001	1.033	8.6	0.050	3.902	-0.023	3.207	0.055	5.051	0.053	4.890

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
		Scene 1	Scene 2			East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
62	Kanchenjunga	01.12.2000	05.01.2002	1.096	0.0	-0.223	2.736	0.076	2.550	0.236	3.740	0.215	3.413
63	Kanchenjunga	01.12.2000	30.01.2002	1.164	8.6	0.258	4.364	-0.265	3.626	0.370	5.673	0.317	4.872
64	Kanchenjunga	28.02.2001	29.10.2002	1.666	2.9	-0.076	3.288	0.218	3.414	0.230	4.740	0.138	2.846
65	Kanchenjunga	08.04.2001	13.05.2002	1.096	0.0	-0.075	3.526	0.041	3.454	0.086	4.936	0.078	4.504
66	Kanchenjunga	26.10.2001	04.04.2002	0.438	0.0	0.274	3.387	-0.498	3.599	0.568	4.943	1.296	11.275
67	Kanchenjunga	26.10.2001	29.10.2002	1.008	2.9	-0.137	2.317	0.114	2.342	0.178	3.295	0.176	3.268
68	Kanchenjunga	11.11.2001	29.10.2002	0.964	2.8	-0.018	2.649	-0.068	2.906	0.070	3.932	0.073	4.077
69	Kanchenjunga	11.11.2001	05.12.2004	3.068	2.8	-0.084	2.636	0.252	2.762	0.266	3.818	0.087	1.244
70	Kanchenjunga	27.11.2001	29.10.2002	0.921	2.9	0.104	2.960	-0.111	3.041	0.153	4.244	0.166	4.610
71	Kanchenjunga	27.11.2001	05.12.2004	3.025	2.9	-0.053	3.028	0.105	2.906	0.117	4.197	0.039	1.388
72	Kanchenjunga	27.11.2001	25.11.2006	4.997	2.9	-0.044	3.706	-0.133	3.695	0.140	5.234	0.028	1.047
73	Kanchenjunga	13.12.2001	29.10.2002	0.877	2.9	0.127	3.001	-0.192	3.081	0.230	4.301	0.262	4.906
74	Kanchenjunga	13.12.2001	05.12.2004	2.981	2.9	0.026	2.724	-0.133	2.752	0.135	3.872	0.045	1.299
75	Kanchenjunga	05.01.2002	29.10.2002	0.814	11.5	0.043	3.981	-0.212	3.078	0.216	5.032	0.266	6.184
76	Kanchenjunga	30.01.2002	29.10.2002	0.745	2.8	-0.108	3.653	0.097	3.604	0.145	5.131	0.195	6.886
77	Kanchenjunga	30.01.2002	05.12.2004	2.849	2.8	-0.101	3.718	0.346	3.569	0.360	5.154	0.126	1.809
78	Kanchenjunga	29.10.2002	05.12.2004	2.104	0.0	-0.087	2.977	0.294	3.048	0.306	4.261	0.146	2.025
79	Kanchenjunga	29.10.2002	30.12.2007	5.173	0.0	-0.108	3.133	0.194	3.146	0.222	4.440	0.043	0.858
80	Kanchenjunga	05.12.2004	09.11.2006	1.929	0.0	0.070	3.507	-0.093	3.688	0.116	5.089	0.060	2.638
81	Kanchenjunga	05.12.2004	25.11.2006	1.973	0.0	0.069	3.214	-0.145	3.397	0.161	4.677	0.081	2.371
82	Kanchenjunga	05.12.2004	12.11.2007	2.937	0.0	0.042	3.412	-0.118	3.405	0.125	4.821	0.043	1.641
83	Kanchenjunga	05.12.2004	30.12.2007	3.068	0.0	-0.313	2.899	0.278	2.867	0.419	4.077	0.136	1.329
84	Kanchenjunga	09.11.2006	12.11.2007	1.008	0.0	-0.008	3.205	0.093	3.284	0.094	4.589	0.093	4.551
85	Kanchenjunga	25.11.2006	12.11.2007	0.964	0.0	0.017	3.254	0.093	3.284	0.095	4.623	0.098	4.794
86	Khumbu (South)	28.09.2000	20.12.2001	1.227	2.9	0.289	3.654	-0.449	3.681	0.534	5.186	0.435	4.225
87	Khumbu (South)	28.09.2000	04.10.2002	2.016	0.0	-0.044	2.892	-0.228	3.124	0.232	4.257	0.115	2.111
88	Khumbu (South)	28.09.2000	09.10.2004	4.033	2.9	-0.036	3.003	0.031	3.072	0.047	4.296	0.012	1.065
89	Khumbu (South)	28.09.2000	25.10.2004	4.077	0.0	0.106	3.258	-0.040	3.195	0.113	4.564	0.028	1.119
90	Khumbu (South)	14.10.2000	20.12.2001	1.184	0.0	-0.005	3.312	-0.112	3.361	0.113	4.719	0.095	3.987
91	Khumbu (South)	14.10.2000	04.10.2002	1.973	2.9	-0.048	2.862	-0.173	2.842	0.179	4.034	0.091	2.045
92	Khumbu (South)	14.10.2000	21.11.2002	2.104	0.1	0.110	3.137	-0.063	3.488	0.127	4.692	0.061	2.230
93	Khumbu (South)	14.10.2000	08.01.2003	2.236	0.1	0.161	3.508	-0.175	3.603	0.238	5.029	0.106	2.249
94	Khumbu (South)	14.10.2000	23.10.2003	3.025	0.0	-0.007	2.978	-0.003	3.037	0.008	4.253	0.003	1.406
95	Khumbu (South)	14.10.2000	09.10.2004	3.989	0.0	0.056	3.107	-0.070	2.969	0.090	4.297	0.022	1.077
96	Khumbu (South)	14.10.2000	25.10.2004	4.033	2.9	-0.089	3.133	-0.064	3.093	0.110	4.402	0.027	1.092
97	Khumbu (South)	14.10.2000	10.11.2004	4.077	1.5	-0.036	2.970	0.055	3.066	0.066	4.268	0.016	1.047
98	Khumbu (South)	20.12.2001	04.10.2002	0.789	2.9	-0.090	3.021	-0.106	3.294	0.139	4.469	0.177	5.664
99	Khumbu (South)	20.12.2001	21.11.2002	0.921	0.1	0.151	2.502	0.076	2.827	0.169	3.775	0.184	4.101
100	Khumbu (South)	20.12.2001	08.01.2003	1.052	0.1	0.030	2.811	-0.234	3.061	0.236	4.156	0.224	3.950
101	Khumbu (South)	20.12.2001	23.10.2003	1.841	0.0	-0.012	2.599	-0.116	2.730	0.116	3.769	0.063	2.047
102	Khumbu (South)	20.12.2001	10.11.2004	2.893	1.5	0.045	2.591	-0.094	2.682	0.104	3.729	0.036	1.289
103	Khumbu (South)	20.12.2001	13.11.2005	3.901	0.0	0.033	2.596	-0.077	2.604	0.084	3.678	0.021	0.943
104	Khumbu (South)	20.12.2001	29.11.2005	3.945	0.0	0.003	2.438	-0.104	2.526	0.104	3.510	0.026	0.890
105	Khumbu (South)	20.12.2001	15.12.2005	3.989	0.0	-0.054	2.406	-0.017	2.442	0.057	3.428	0.014	0.859
106	Khumbu (South)	20.12.2001	01.02.2006	4.121	2.9	-0.030	2.525	-0.090	2.522	0.095	3.569	0.023	0.866
107	Khumbu (South)	20.12.2001	19.01.2007	5.085	2.9	-0.064	2.568	-0.152	2.622	0.166	3.670	0.033	0.722
108	Khumbu (South)	04.10.2002	08.01.2003	0.263	2.8	0.215	3.186	-0.111	3.264	0.242	4.561	0.919	17.343
109	Khumbu (South)	04.10.2002	23.10.2003	1.052	2.8	0.192	2.788	0.060	2.735	0.201	3.906	0.191	3.712
110	Khumbu (South)	04.10.2002	09.10.2004	2.016	2.9	-0.052	2.704	0.119	2.683	0.130	3.809	0.064	1.889
111	Khumbu (South)	04.10.2002	10.11.2004	2.104	1.3	-0.102	2.955	-0.210	3.219	0.233	4.370	0.111	2.077
112	Khumbu (South)	04.10.2002	13.11.2005	3.112	2.9	0.031	2.984	0.007	3.169	0.031	4.353	0.010	1.399
113	Khumbu (South)	04.10.2002	29.11.2005	3.156	2.8	0.139	3.194	0.452	3.306	0.473	4.597	0.150	1.457
114	Khumbu (South)	04.10.2002	15.12.2005	3.200	2.8	-0.031	3.244	-0.029	3.401	0.043	4.700	0.013	1.469
115	Khumbu (South)	04.10.2002	19.01.2007	4.296	0.0	-0.018	3.263	-0.113	3.374	0.114	4.694	0.027	1.093
116	Khumbu (South)	21.11.2002	23.10.2003	0.921	0.1	-0.019	2.469	-0.125	2.605	0.126	3.589	0.137	3.899
117	Khumbu (South)	21.11.2002	10.11.2004	1.973	1.4	0.011	2.299	-0.086	2.347	0.087	3.285	0.044	1.665
118	Khumbu (South)	21.11.2002	29.11.2005	3.025	0.0	-0.136	2.399	0.247	2.507	0.282	3.470	0.093	1.147
119	Khumbu (South)	08.01.2003	09.10.2004	1.753	0.1	-0.048	3.693	0.132	3.571	0.141	5.137	0.080	2.930
120	Khumbu (South)	08.01.2003	10.11.2004	1.841	1.5	-0.051	2.881	0.037	2.955	0.063	4.127	0.034	2.242
121	Khumbu (South)	08.01.2003	13.11.2005	2.849	0.1	-0.199	3.158	0.082	3.210	0.215	4.504	0.075	1.581
122	Khumbu (South)	08.01.2003	29.11.2005	2.893	0.0	-0.124	2.915	0.127	3.028	0.177	4.203	0.061	1.453
123	Khumbu (South)	08.01.2003	15.12.2005	2.937	0.0	-0.006	2.859	0.149	3.017	0.150	4.156	0.051	1.415
124	Khumbu (South)	08.01.2003	19.01.2007	4.033	2.8	-0.081	2.822	-0.044	3.022	0.092	4.134	0.023	1.025
125	Khumbu (South)	23.10.2003	09.10.2004	0.964	0.0	0.017	2.880	0.037	2.921	0.041	4.102	0.042	4.253
126	Khumbu (South)	23.10.2003	10.11.2004	1.052	1.5	0.025	2.430	0.108	2.534	0.111	3.511	0.106	3.338
127	Khumbu (South)	23.10.2003	13.11.2005	2.060	0.0	-0.075	2.630	0.136	2.680	0.155	3.755	0.075	1.822

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. ($^{\circ}$)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr^{-1})	
						East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
128	Khumbu (South)	23.10.2003	29.11.2005	2.104	0.0	-0.103	2.491	0.125	2.534	0.162	3.553	0.077	1.689
129	Khumbu (South)	23.10.2003	15.12.2005	2.148	0.0	-0.029	2.596	0.026	2.625	0.039	3.692	0.018	1.719
130	Khumbu (South)	23.10.2003	01.02.2006	2.279	2.9	-0.042	2.538	0.073	2.467	0.084	3.540	0.037	1.553
131	Khumbu (South)	09.10.2004	19.01.2007	2.279	2.9	-0.032	3.158	-0.144	3.215	0.147	4.507	0.065	1.977
132	Khumbu (South)	25.10.2004	13.11.2005	1.052	2.9	-0.147	3.035	0.247	3.060	0.288	4.310	0.274	4.097
133	Khumbu (South)	25.10.2004	29.11.2005	1.096	2.9	-0.083	3.119	-0.064	3.156	0.105	4.437	0.096	4.048
134	Khumbu (South)	25.10.2004	15.12.2005	1.140	2.9	-0.167	3.293	0.020	3.314	0.169	4.672	0.148	4.099
135	Khumbu (South)	25.10.2004	19.01.2007	2.236	0.0	-0.018	3.287	-0.106	3.461	0.108	4.774	0.048	2.135
136	Khumbu (South)	10.11.2004	13.11.2005	1.008	1.5	-0.089	2.338	0.003	2.527	0.089	3.442	0.088	3.414
137	Khumbu (South)	10.11.2004	29.11.2005	1.052	1.5	-0.129	2.416	0.002	2.520	0.129	3.491	0.123	3.318
138	Khumbu (South)	10.11.2004	15.12.2005	1.096	1.5	-0.133	2.548	-0.009	2.619	0.134	3.654	0.122	3.335
139	Khumbu (South)	10.11.2004	01.02.2006	1.227	1.4	-0.097	2.655	-0.038	2.654	0.104	3.754	0.085	3.059
140	Khumbu (South)	10.11.2004	19.01.2007	2.192	1.4	-0.104	2.690	-0.042	2.687	0.112	3.802	0.051	1.735
141	Khumbu (South)	15.12.2005	19.01.2007	1.096	2.9	-0.060	2.409	-0.293	2.431	0.299	3.422	0.272	3.122
142	Khumbu (South)	01.02.2006	19.01.2007	0.964	0.0	-0.022	2.372	-0.234	2.532	0.235	3.470	0.244	3.598
143	Khumbu (North)	28.09.2000	04.10.2002	2.016	0.0	0.035	2.017	0.063	2.007	0.072	2.845	0.036	1.411
144	Khumbu (North)	28.09.2000	09.10.2004	4.033	2.9	-0.008	2.215	0.084	2.231	0.084	3.144	0.021	0.780
145	Khumbu (North)	28.09.2000	25.10.2004	4.077	0.0	0.043	2.604	0.090	2.702	0.100	3.752	0.024	0.920
146	Khumbu (North)	28.09.2000	10.11.2004	4.121	1.4	0.068	2.541	0.056	2.603	0.088	3.637	0.021	0.883
147	Khumbu (North)	28.09.2000	19.01.2007	6.312	0.0	0.101	2.908	0.009	2.861	0.101	4.080	0.016	0.646
148	Khumbu (North)	14.10.2000	20.12.2001	1.184	0.0	0.026	2.221	-0.019	2.227	0.032	3.145	0.027	2.657
149	Khumbu (North)	14.10.2000	04.10.2002	1.973	2.9	-0.003	1.731	0.016	1.725	0.016	2.444	0.008	1.239
150	Khumbu (North)	14.10.2000	08.01.2003	2.236	0.1	0.124	2.998	-0.106	2.905	0.163	4.175	0.073	1.868
151	Khumbu (North)	14.10.2000	23.10.2003	3.025	0.0	0.013	1.929	0.052	1.879	0.054	2.693	0.018	0.890
152	Khumbu (North)	14.10.2000	09.10.2004	3.989	0.0	-0.002	1.985	0.018	1.964	0.018	2.793	0.004	0.700
153	Khumbu (North)	14.10.2000	25.10.2004	4.033	2.9	-0.026	2.307	0.026	2.297	0.037	3.256	0.009	0.807
154	Khumbu (North)	14.10.2000	10.11.2004	4.077	1.5	-0.010	2.100	0.064	2.085	0.064	2.959	0.016	0.726
155	Khumbu (North)	30.10.2000	20.12.2001	1.140	0.1	0.009	1.901	0.030	1.866	0.031	2.664	0.028	2.338
156	Khumbu (North)	30.10.2000	04.10.2002	1.929	2.8	-0.007	1.837	0.012	1.859	0.014	2.614	0.007	1.355
157	Khumbu (North)	30.10.2000	08.01.2003	2.192	0.0	0.088	3.060	-0.203	3.015	0.221	4.296	0.101	1.960
158	Khumbu (North)	30.10.2000	23.10.2003	2.981	0.0	0.008	1.664	-0.003	1.709	0.008	2.385	0.003	0.800
159	Khumbu (North)	30.10.2000	09.10.2004	3.945	0.0	-0.020	1.904	-0.058	2.052	0.061	2.800	0.015	0.710
160	Khumbu (North)	30.10.2000	10.11.2004	4.033	1.5	-0.026	2.019	0.009	2.004	0.028	2.845	0.007	0.705
161	Khumbu (North)	30.10.2000	19.01.2007	6.225	2.8	0.009	2.286	0.047	2.088	0.048	3.096	0.008	0.497
162	Khumbu (North)	20.12.2001	04.10.2002	0.789	2.9	-0.011	2.049	0.053	2.130	0.054	2.956	0.069	3.746
163	Khumbu (North)	20.12.2001	08.01.2003	1.052	0.1	0.082	2.699	-0.382	2.855	0.391	3.928	0.371	3.734
164	Khumbu (North)	20.12.2001	23.10.2003	1.841	0.0	0.023	1.817	0.003	1.872	0.023	2.609	0.012	1.417
165	Khumbu (North)	20.12.2001	09.10.2004	2.805	0.0	0.001	2.098	0.019	2.118	0.019	2.981	0.007	1.063
166	Khumbu (North)	20.12.2001	10.11.2004	2.893	1.5	-0.009	1.964	-0.017	1.958	0.019	2.774	0.007	0.959
167	Khumbu (North)	20.12.2001	19.01.2007	5.085	2.9	-0.034	1.959	-0.030	1.811	0.045	2.667	0.009	0.525
168	Khumbu (North)	04.10.2002	23.10.2003	1.052	2.8	0.037	1.658	0.054	1.636	0.065	2.329	0.062	2.214
169	Khumbu (North)	04.10.2002	09.10.2004	2.016	2.9	-0.007	1.767	0.026	1.792	0.027	2.517	0.014	1.248
170	Khumbu (North)	04.10.2002	25.10.2004	2.060	0.0	0.020	2.153	0.024	2.206	0.031	3.083	0.015	1.496
171	Khumbu (North)	04.10.2002	10.11.2004	2.104	1.3	-0.003	2.049	0.035	2.194	0.035	3.002	0.017	1.427
172	Khumbu (North)	04.10.2002	19.01.2007	4.296	0.0	-0.039	2.572	-0.026	2.646	0.047	3.690	0.011	0.859
173	Khumbu (North)	08.01.2003	23.10.2003	0.789	0.0	-0.096	2.936	0.171	2.901	0.196	4.127	0.248	5.231
174	Khumbu (North)	08.01.2003	09.10.2004	1.753	0.1	-0.170	3.052	0.185	3.005	0.251	4.283	0.143	2.443
175	Khumbu (North)	08.01.2003	10.11.2004	1.841	1.5	-0.069	2.739	0.129	2.750	0.146	3.882	0.079	2.108
176	Khumbu (North)	23.10.2003	09.10.2004	0.964	0.0	0.000	1.597	-0.006	1.599	0.006	2.260	0.006	2.343
177	Khumbu (North)	23.10.2003	10.11.2004	1.052	1.5	-0.008	1.721	0.015	1.724	0.016	2.436	0.016	2.316
178	Khumbu (North)	23.10.2003	19.01.2007	3.244	2.9	-0.037	2.093	0.020	1.929	0.042	2.847	0.013	0.878
179	Khumbu (North)	09.10.2004	19.01.2007	2.279	2.9	0.028	2.243	0.009	2.236	0.029	3.167	0.013	1.389
180	Khumbu (North)	25.10.2004	19.01.2007	2.236	0.0	0.062	2.548	0.117	2.560	0.133	3.612	0.059	1.616
181	Khumbu (North)	10.11.2004	19.01.2007	2.192	1.4	-0.020	2.123	0.072	2.141	0.075	3.015	0.034	1.376
182	Manaslu	29.11.2000	02.10.2002	1.841	0.0	-0.188	3.142	0.043	3.178	0.193	4.469	0.105	2.427
183	Manaslu	29.11.2000	05.10.2003	2.849	0.0	-0.160	3.005	0.056	3.087	0.169	4.308	0.059	1.512
184	Manaslu	29.11.2000	10.02.2004	3.200	0.0	0.011	3.624	-0.083	3.707	0.084	5.184	0.026	1.620
185	Manaslu	15.12.2000	02.10.2002	1.797	0.0	0.108	2.727	0.074	2.960	0.131	4.024	0.073	2.239
186	Manaslu	15.12.2000	05.10.2003	2.805	0.0	-0.004	2.577	-0.011	2.707	0.011	3.738	0.004	1.332
187	Manaslu	17.02.2001	05.10.2003	2.630	2.9	-0.147	4.045	0.157	3.900	0.215	5.619	0.082	2.136
188	Manaslu	17.02.2001	10.02.2004	2.981	2.9	0.035	3.717	0.109	3.858	0.115	5.357	0.038	1.797
189	Manaslu	17.02.2001	07.04.2007	6.137	0.0	0.059	3.609	-0.133	3.773	0.145	5.221	0.024	0.851
190	Manaslu	02.10.2002	05.10.2003	1.008	0.0	-0.019	2.145	0.021	2.260	0.028	3.116	0.028	3.091
191	Manaslu	03.11.2002	23.10.2004	1.973	0.0	-0.004	2.941	-0.015	2.831	0.015	4.082	0.008	2.069
192	Manaslu	03.11.2002	26.12.2004	2.148	0.0	0.033	2.886	-0.016	2.815	0.037	4.032	0.017	1.877
193	Manaslu	13.03.2004	23.10.2004	0.614	0.0	-0.014	3.255	0.084	3.366	0.086	4.682	0.139	7.629

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
		Scene 1	Scene 2			East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
194	Manaslu	13.03.2004	17.11.2004	0.682	11.5	-0.253	4.269	0.166	3.448	0.303	5.487	0.444	8.044
195	Manaslu	13.03.2004	03.12.2004	0.726	11.5	0.088	4.501	0.196	3.410	0.214	5.647	0.295	7.778
196	Manaslu	13.03.2004	07.04.2007	3.068	2.9	0.052	3.050	0.125	2.978	0.135	4.262	0.044	1.389
197	Manaslu	13.03.2004	04.01.2008	3.814	2.9	-0.127	3.388	0.231	3.410	0.264	4.807	0.069	1.260
198	Manaslu	23.10.2004	07.11.2006	2.041	14.3	-0.029	3.905	-0.013	2.886	0.032	4.856	0.016	2.379
199	Manaslu	23.10.2004	07.04.2007	2.455	2.9	-0.033	3.666	-0.032	3.649	0.046	5.172	0.019	2.107
200	Manaslu	23.10.2004	04.01.2008	3.200	2.9	-0.189	3.029	0.201	2.965	0.276	4.239	0.086	1.325
201	Manaslu	03.12.2004	07.11.2006	1.929	2.9	0.095	3.198	0.040	2.966	0.103	4.362	0.053	2.262
202	Manaslu	26.12.2004	07.11.2006	1.866	14.3	0.024	3.718	-0.016	3.060	0.029	4.815	0.016	2.581
203	Manaslu	26.12.2004	04.01.2008	3.025	2.9	-0.024	2.558	-0.017	2.541	0.029	3.606	0.010	1.192
204	Manaslu	07.11.2006	04.01.2008	1.159	11.5	-0.140	4.123	0.058	2.930	0.152	5.058	0.131	4.364
205	Manaslu	07.04.2007	04.01.2008	0.745	0.0	-0.120	3.544	0.179	3.696	0.216	5.120	0.289	6.871
206	Gurla Mandatha	31.10.2001	28.12.2002	1.159	8.6	-0.270	3.413	-0.198	2.854	0.336	4.450	0.289	3.839
207	Gurla Mandatha	31.10.2001	26.09.2003	1.904	10.5	-0.382	3.304	-0.062	2.654	0.387	4.238	0.203	2.226
208	Gurla Mandatha	03.01.2002	28.12.2002	0.984	8.6	-0.282	3.790	0.216	3.239	0.355	4.986	0.361	5.069
209	Gurla Mandatha	03.01.2002	23.12.2006	4.973	10.0	-0.054	3.509	0.287	3.090	0.292	4.676	0.059	0.940
210	Gurla Mandatha	28.12.2002	26.09.2003	0.745	1.9	-0.025	2.581	0.088	2.702	0.092	3.736	0.124	5.014
211	Gurla Mandatha	28.12.2002	10.10.2005	2.786	8.6	0.090	3.532	0.010	3.158	0.090	4.737	0.032	1.700
212	Gurla Mandatha	28.12.2002	23.12.2006	3.989	1.4	0.030	3.689	-0.110	4.162	0.114	5.562	0.029	1.394
213	Gurla Mandatha	14.02.2003	23.12.2006	3.858	1.4	0.086	2.522	-0.034	2.777	0.093	3.751	0.024	0.972
214	Gurla Mandatha	23.02.2003	23.12.2006	3.833	10.0	-0.004	3.600	-0.368	3.368	0.368	4.930	0.096	1.286
215	Gurla Mandatha	26.09.2003	10.10.2005	2.041	10.5	0.530	3.005	-0.063	2.351	0.534	3.815	0.261	1.869
216	Gurla Mandatha	26.09.2003	23.12.2006	3.244	0.5	-0.044	4.241	0.581	4.427	0.583	6.130	0.180	1.890
217	Gurla Mandatha	23.12.2006	14.04.2007	0.307	1.4	-0.089	3.351	-0.374	3.937	0.385	5.170	1.254	16.849
218	Gurla Mandatha	23.12.2006	19.07.2007	0.570	1.4	-0.041	4.225	-0.312	4.288	0.315	6.020	0.552	10.563
219	Gurla Mandatha	23.12.2006	15.11.2007	0.896	7.2	-0.076	4.035	0.200	3.645	0.214	5.438	0.239	6.070
220	Gurla Mandatha	14.04.2007	19.07.2007	0.263	0.0	-0.229	3.891	0.263	4.107	0.348	5.658	1.324	21.511
221	Gurla Mandatha	14.04.2007	15.11.2007	0.589	8.6	-0.349	3.972	0.538	3.889	0.641	5.558	1.088	9.436
222	Garhwal (Gangotri)	09.11.2000	09.09.2001	0.833	2.9	0.144	3.354	0.457	3.374	0.479	4.757	0.575	5.712
223	Garhwal (Gangotri)	09.11.2000	10.10.2003	2.918	14.3	0.004	5.376	0.100	3.679	0.100	6.515	0.034	2.233
224	Garhwal (Gangotri)	10.11.2000	19.08.2005	4.775	2.8	0.183	3.891	0.098	4.020	0.208	5.595	0.044	1.172
225	Garhwal (Gangotri)	11.11.2000	09.10.2006	5.912	2.8	-0.297	3.490	-0.041	3.079	0.300	4.655	0.051	0.787
226	Garhwal (Gangotri)	09.09.2001	10.10.2003	2.085	11.4	0.003	3.487	-0.007	2.811	0.008	4.479	0.004	2.148
227	Garhwal (Gangotri)	09.09.2001	24.07.2004	2.874	14.3	0.299	3.268	-0.218	3.269	0.370	4.622	0.129	1.608
228	Garhwal (Gangotri)	09.09.2001	23.09.2006	5.041	2.8	0.267	3.098	-0.096	2.864	0.284	4.219	0.056	0.837
229	Garhwal (Gangotri)	09.09.2001	09.10.2006	5.085	0.0	0.145	3.297	0.014	2.935	0.146	4.414	0.029	0.868
230	Garhwal (Gangotri)	09.09.2001	10.11.2006	5.173	2.8	-0.016	3.334	-0.062	3.213	0.064	4.630	0.012	0.895
231	Garhwal (Gangotri)	21.11.2001	10.10.2003	1.885	2.9	0.181	3.114	0.013	2.729	0.181	4.141	0.096	2.197
232	Garhwal (Gangotri)	21.11.2001	24.07.2004	2.674	0.0	0.316	3.759	-0.051	3.919	0.320	5.430	0.120	2.031
233	Garhwal (Gangotri)	21.11.2001	15.10.2005	3.901	0.0	0.454	3.235	-0.075	3.174	0.460	4.532	0.118	1.162
234	Garhwal (Gangotri)	23.12.2001	10.10.2003	1.797	2.9	-0.389	4.298	0.169	3.780	0.424	5.724	0.236	3.185
235	Garhwal (Gangotri)	23.12.2001	06.11.2007	5.874	0.0	0.060	4.076	-0.181	3.733	0.191	5.527	0.032	0.941
236	Garhwal (Gangotri)	23.12.2001	22.11.2007	5.918	0.0	0.075	3.628	-0.090	3.552	0.117	5.077	0.020	0.858
237	Garhwal (Gangotri)	08.01.2002	10.10.2003	1.753	2.9	-0.022	4.051	0.289	3.933	0.290	5.646	0.165	3.220
238	Garhwal (Gangotri)	08.01.2002	15.10.2005	3.770	0.0	-0.028	3.799	0.079	3.972	0.084	5.496	0.022	1.458
239	Garhwal (Gangotri)	10.10.2003	24.07.2004	0.789	2.9	0.116	3.366	0.308	3.276	0.329	4.697	0.416	5.953
240	Garhwal (Gangotri)	11.10.2003	18.08.2005	1.855	11.5	0.230	4.842	0.385	4.251	0.448	6.444	0.242	3.474
241	Garhwal (Gangotri)	11.10.2003	15.10.2005	2.014	2.9	0.228	3.208	0.227	2.878	0.322	4.309	0.160	2.140
242	Garhwal (Gangotri)	11.10.2003	23.09.2006	2.953	8.6	1.165	4.791	-0.462	3.564	1.254	5.972	0.425	2.022
243	Garhwal (Gangotri)	12.10.2003	09.10.2006	2.995	11.5	0.135	4.449	0.107	3.275	0.172	5.525	0.058	1.845
244	Garhwal (Gangotri)	24.07.2004	19.08.2005	1.071	14.3	-0.074	4.070	0.191	3.179	0.204	5.165	0.191	4.821
245	Garhwal (Gangotri)	24.07.2004	15.10.2005	1.227	0.0	0.039	3.489	-0.016	3.600	0.042	5.013	0.034	4.084
246	Garhwal (Gangotri)	24.07.2004	09.10.2006	2.211	14.3	-0.124	5.202	-0.037	3.683	0.129	6.373	0.058	2.883
247	Garhwal (Gangotri)	24.07.2004	10.11.2006	2.299	11.5	0.069	5.283	0.059	4.180	0.091	6.737	0.040	2.931
248	Garhwal (Gangotri)	19.08.2005	23.09.2006	1.096	2.9	-0.070	3.499	-0.038	3.732	0.079	5.115	0.072	4.668
249	Garhwal (Gangotri)	19.08.2005	18.10.2006	1.164	11.5	0.101	5.177	0.250	4.167	0.269	6.646	0.231	5.707
250	Garhwal (Gangotri)	19.08.2005	10.11.2006	1.227	2.9	-0.104	3.682	-0.221	3.989	0.244	5.428	0.199	4.423
251	Garhwal (Gangotri)	15.10.2005	23.09.2006	0.940	11.5	0.045	4.614	-0.021	3.591	0.050	5.847	0.053	6.222
252	Garhwal (Gangotri)	15.10.2005	09.10.2006	0.984	14.3	0.122	4.330	0.081	3.426	0.147	5.521	0.149	5.614
253	Garhwal (Gangotri)	15.10.2005	18.10.2006	1.008	2.9	0.010	3.525	0.242	2.859	0.242	4.539	0.240	4.502
254	Garhwal (Gangotri)	15.10.2005	10.11.2006	1.071	11.5	-0.008	4.428	0.226	3.423	0.226	5.596	0.211	5.224
255	Garhwal (Gangotri)	23.09.2006	09.10.2006	0.044	2.9	-0.049	2.417	0.142	2.261	0.151	3.310	3.438	75.502
256	Garhwal (Gangotri)	23.09.2006	10.11.2006	0.132	0.0	0.165	2.957	0.301	3.063	0.343	4.258	2.608	32.376
257	Garhwal (Gangotri)	18.10.2006	06.11.2007	1.052	2.9	-0.218	3.769	-0.016	3.405	0.218	5.080	0.207	4.828
258	Garhwal (Tons)	07.12.2001	01.10.2003	1.816	8.6	-0.087	3.854	0.073	3.546	0.114	5.237	0.063	2.883
259	Garhwal (Tons)	07.12.2001	22.10.2005	3.877	8.6	0.194	3.691	0.082	3.200	0.210	4.885	0.054	1.260

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
						East-West		North-South		Mean	SD	Mean	SD
		Scene 1	Scene 2			Mean	SD	Mean	SD				
260	Garhwal (Tons)	30.12.2001	01.10.2003	1.753	0.0	-0.058	2.879	0.066	3.353	0.088	4.420	0.050	2.521
261	Garhwal (Tons)	30.12.2001	09.03.2004	2.192	0.0	0.064	3.146	-0.102	3.336	0.121	4.585	0.055	2.092
262	Garhwal (Tons)	30.12.2001	04.11.2004	2.849	0.0	-0.002	2.296	0.008	2.525	0.008	3.413	0.003	1.198
263	Garhwal (Tons)	30.12.2001	22.10.2005	3.814	0.0	0.117	2.687	0.047	2.913	0.126	3.963	0.033	1.039
264	Garhwal (Tons)	01.10.2003	09.03.2004	0.438	0.0	0.177	3.602	-0.572	4.122	0.598	5.474	1.365	12.488
265	Garhwal (Tons)	01.10.2003	01.09.2004	0.921	0.0	-0.025	2.859	0.218	3.153	0.220	4.257	0.239	4.624
266	Garhwal (Tons)	01.10.2003	04.11.2004	1.096	0.0	0.296	2.518	-0.115	2.923	0.317	3.858	0.289	3.520
267	Garhwal (Tons)	01.10.2003	22.10.2005	2.060	0.0	0.117	2.057	0.109	2.334	0.159	3.111	0.077	1.510
268	Garhwal (Tons)	01.10.2003	13.11.2007	4.121	0.0	-0.006	2.501	0.000	2.932	0.006	3.854	0.002	0.935
269	Garhwal (Tons)	09.03.2004	04.11.2004	0.658	0.0	-0.019	3.327	0.140	3.629	0.142	4.924	0.215	7.488
270	Garhwal (Tons)	09.03.2004	13.11.2007	3.682	0.0	-0.057	3.575	-0.120	4.023	0.133	5.382	0.036	1.462
271	Garhwal (Tons)	01.09.2004	04.11.2004	0.175	0.0	0.046	3.409	0.459	4.155	0.461	5.375	2.630	30.652
272	Garhwal (Tons)	01.09.2004	13.11.2007	3.200	0.0	0.020	3.549	-0.213	4.090	0.214	5.415	0.067	1.692
273	Garhwal (Tons)	04.11.2004	22.10.2005	0.964	0.0	-0.024	2.071	0.051	2.295	0.056	3.091	0.058	3.205
274	Garhwal (Tons)	04.11.2004	13.11.2007	3.025	0.0	-0.044	2.097	0.070	2.260	0.083	3.083	0.027	1.019
275	Garhwal (Tons)	22.10.2005	13.11.2007	2.060	0.0	-0.024	2.066	-0.018	2.220	0.030	3.033	0.015	1.472
276	Leo Pargil	17.03.2001	24.04.2003	2.104	2.9	0.147	2.597	0.039	2.927	0.152	3.913	0.072	1.860
277	Leo Pargil	17.03.2001	01.10.2003	2.542	2.8	-0.134	2.707	0.448	2.931	0.467	3.990	0.184	1.569
278	Leo Pargil	17.03.2001	17.10.2003	2.586	0.0	0.021	2.987	1.015	3.210	1.015	4.385	0.392	1.695
279	Leo Pargil	17.03.2001	04.11.2004	3.638	2.8	0.013	2.698	-0.004	3.150	0.013	4.147	0.004	1.140
280	Leo Pargil	17.03.2001	31.12.2007	6.795	2.9	-0.018	2.648	0.114	2.938	0.115	3.955	0.017	0.582
281	Leo Pargil	21.11.2001	04.11.2004	2.956	8.6	-0.146	3.016	-0.165	2.322	0.220	3.806	0.075	1.287
282	Leo Pargil	21.11.2001	22.10.2005	3.921	8.6	0.089	3.506	-0.088	2.955	0.125	4.585	0.032	1.170
283	Leo Pargil	24.04.2003	04.11.2004	1.534	0.0	-0.249	3.738	0.300	4.019	0.390	5.488	0.254	3.577
284	Leo Pargil	24.04.2003	22.10.2005	2.499	0.0	-0.228	3.875	0.304	4.279	0.380	5.772	0.152	2.310
285	Leo Pargil	01.10.2003	01.09.2004	0.921	0.0	0.077	1.753	-0.040	1.957	0.087	2.627	0.094	2.854
286	Leo Pargil	01.10.2003	04.11.2004	1.096	0.0	0.147	2.404	0.218	2.497	0.263	3.466	0.240	3.163
287	Leo Pargil	01.10.2003	22.10.2005	2.060	0.0	0.146	1.969	0.176	2.304	0.229	3.031	0.111	1.471
288	Leo Pargil	01.10.2003	01.11.2006	3.088	8.6	-0.129	2.819	0.063	2.096	0.143	3.513	0.046	1.138
289	Leo Pargil	01.10.2003	06.06.2007	3.682	0.0	0.296	2.646	-0.369	3.178	0.473	4.136	0.129	1.123
290	Leo Pargil	01.10.2003	13.11.2007	4.121	0.0	0.191	2.716	0.130	2.781	0.231	3.888	0.056	0.943
291	Leo Pargil	01.10.2003	31.12.2007	4.252	0.1	0.302	3.227	-0.220	3.276	0.373	4.598	0.088	1.081
292	Leo Pargil	02.11.2003	31.12.2007	4.164	2.9	0.193	3.055	-0.466	3.209	0.504	4.431	0.121	1.064
293	Leo Pargil	01.09.2004	22.10.2005	1.140	0.0	0.013	2.335	0.259	2.541	0.260	3.451	0.228	3.028
294	Leo Pargil	01.09.2004	06.06.2007	2.762	0.0	0.314	2.696	-0.411	2.912	0.518	3.968	0.187	1.437
295	Leo Pargil	04.11.2004	22.10.2005	0.964	0.0	-0.052	2.015	-0.054	2.210	0.075	2.990	0.078	3.101
296	Leo Pargil	04.11.2004	13.11.2007	3.025	0.0	0.029	2.353	-0.002	2.417	0.029	3.373	0.009	1.115
297	Leo Pargil	04.11.2004	31.12.2007	3.156	0.0	0.123	2.857	0.229	3.056	0.260	4.183	0.082	1.325
298	Leo Pargil	22.10.2005	06.06.2007	1.622	0.0	0.285	2.941	-0.212	3.525	0.355	4.590	0.219	2.830
299	Leo Pargil	22.10.2005	13.11.2007	2.060	0.0	0.090	2.548	0.031	2.660	0.095	3.683	0.046	1.788
300	Leo Pargil	22.10.2005	31.12.2007	2.192	0.0	0.195	3.098	0.063	3.397	0.205	4.597	0.093	2.098
301	Lahul (South)	01.07.2002	08.10.2003	1.271	2.9	-0.176	4.108	0.222	4.467	0.283	6.069	0.223	4.774
302	Lahul (South)	30.10.2002	08.10.2003	0.940	11.5	0.064	4.047	-0.118	3.397	0.134	5.284	0.143	5.623
303	Lahul (South)	30.10.2002	24.10.2003	0.984	8.6	-0.010	3.931	0.059	3.221	0.060	5.082	0.061	5.167
304	Lahul (South)	30.10.2002	17.09.2004	1.885	0.0	-0.063	3.704	-0.201	3.984	0.211	5.440	0.112	2.886
305	Lahul (South)	30.10.2002	07.11.2005	3.025	0.0	-0.398	2.868	0.166	2.828	0.431	4.028	0.142	1.332
306	Lahul (South)	30.10.2002	30.09.2006	3.921	8.6	0.365	4.275	0.066	3.557	0.371	5.561	0.095	1.419
307	Lahul (South)	30.10.2002	16.10.2006	3.964	8.6	0.055	3.865	-0.083	3.009	0.100	4.898	0.025	1.235
308	Lahul (South)	30.10.2002	17.11.2006	4.052	10.0	0.101	4.259	1.045	4.042	1.050	5.872	0.259	1.449
309	Lahul (South)	30.10.2002	20.11.2007	5.060	11.5	0.119	3.950	0.205	3.156	0.237	5.056	0.047	0.999
310	Lahul (South)	30.10.2002	15.12.2007	5.129	0.0	-0.089	3.950	0.061	3.853	0.108	5.518	0.021	1.076
311	Lahul (South)	08.10.2003	08.09.2004	0.921	2.9	0.036	2.532	0.038	2.696	0.052	3.698	0.057	4.018
312	Lahul (South)	08.10.2003	17.09.2004	0.945	11.5	0.054	3.936	0.103	3.190	0.116	5.067	0.123	5.360
313	Lahul (South)	08.10.2003	07.11.2005	2.085	11.5	-0.116	3.957	0.181	3.348	0.215	5.184	0.103	2.486
314	Lahul (South)	08.10.2003	30.09.2006	2.981	2.9	-0.017	2.491	-0.071	2.504	0.073	3.532	0.024	1.185
315	Lahul (South)	08.10.2003	16.10.2006	3.025	2.9	0.011	2.996	0.173	3.134	0.173	4.336	0.057	1.434
316	Lahul (South)	08.10.2003	17.11.2006	3.112	1.5	-0.188	4.018	0.650	3.898	0.677	5.599	0.217	1.799
317	Lahul (South)	08.10.2003	21.05.2007	3.619	11.5	0.853	4.677	-0.470	4.753	0.974	6.668	0.269	1.843
318	Lahul (South)	08.10.2003	20.11.2007	4.121	0.0	-0.010	3.265	0.099	3.292	0.100	4.637	0.024	1.125
319	Lahul (South)	08.10.2003	15.12.2007	4.189	11.4	-0.204	4.361	0.130	3.758	0.242	5.757	0.058	1.374
320	Lahul (South)	24.10.2003	08.09.2004	0.877	0.0	0.043	2.688	-0.251	3.174	0.255	4.159	0.290	4.744
321	Lahul (South)	24.10.2003	30.09.2006	2.937	0.0	0.055	2.499	-0.190	2.692	0.198	3.673	0.067	1.251
322	Lahul (South)	24.10.2003	16.10.2006	2.981	0.0	0.207	2.727	-0.058	2.811	0.215	3.916	0.072	1.314
323	Lahul (South)	24.10.2003	20.11.2007	4.077	2.9	-0.126	3.013	0.108	3.171	0.166	4.374	0.041	1.073
324	Lahul (South)	08.09.2004	07.11.2005	1.164	8.6	0.215	4.090	0.197	3.775	0.291	5.566	0.250	4.780
325	Lahul (South)	08.09.2004	30.09.2006	2.060	0.0	-0.079	1.981	0.127	2.251	0.150	2.998	0.073	1.455

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
						East-West		North-South					
						Scene 1	Scene 2	Mean	SD	Mean	SD	Mean	SD
326	Lahul (South)	08.09.2004	16.10.2006	2.104	0.0	-0.008	2.769	0.082	3.097	0.083	4.155	0.039	1.975
327	Lahul (South)	17.09.2004	07.11.2005	1.140	0.0	-0.014	3.840	0.136	3.801	0.137	5.403	0.120	4.741
328	Lahul (South)	17.09.2004	30.09.2006	2.036	8.6	-0.013	4.256	0.072	3.381	0.073	5.436	0.036	2.670
329	Lahul (South)	17.09.2004	16.10.2006	2.079	8.6	-0.122	4.082	0.170	3.605	0.209	5.447	0.100	2.619
330	Lahul (South)	17.09.2004	17.11.2006	2.167	10.0	-0.193	4.663	0.254	4.723	0.319	6.637	0.147	3.063
331	Lahul (South)	17.09.2004	21.05.2007	2.674	0.0	0.414	4.482	-0.745	4.669	0.852	6.472	0.319	2.420
332	Lahul (South)	17.09.2004	20.11.2007	3.175	11.5	-0.048	4.104	-0.209	3.709	0.215	5.531	0.068	1.742
333	Lahul (South)	17.09.2004	15.12.2007	3.244	0.0	-0.007	4.210	0.103	4.011	0.103	5.815	0.032	1.793
334	Lahul (South)	07.11.2005	30.09.2006	0.896	8.6	-0.053	4.156	-0.479	3.466	0.482	5.412	0.538	6.041
335	Lahul (South)	07.11.2005	16.10.2006	0.940	8.6	0.039	3.763	0.011	3.140	0.040	4.901	0.043	5.215
336	Lahul (South)	07.11.2005	17.11.2006	1.027	10.0	-0.166	3.908	0.346	3.331	0.384	5.135	0.374	4.998
337	Lahul (South)	07.11.2005	21.05.2007	1.534	0.0	0.443	4.341	-0.455	4.626	0.635	6.344	0.414	4.135
338	Lahul (South)	07.11.2005	20.11.2007	2.036	11.5	0.015	3.705	0.113	2.942	0.114	4.731	0.056	2.324
339	Lahul (South)	07.11.2005	15.12.2007	2.104	0.0	-0.055	3.723	0.195	3.729	0.203	5.269	0.096	2.504
340	Lahul (South)	16.10.2006	20.11.2007	1.096	2.9	-0.041	2.936	0.164	3.058	0.169	4.240	0.154	3.869
341	Lahul (South)	16.10.2006	15.12.2007	1.164	8.6	-0.096	4.460	0.088	3.832	0.130	5.880	0.112	5.050
342	Lahul (South)	17.11.2006	20.11.2007	1.008	1.5	-0.165	2.686	0.311	3.053	0.352	4.067	0.349	4.033
343	Lahul (North)	25.06.2000	28.08.2000	0.175	0.0	-0.227	3.138	0.147	3.352	0.270	4.591	1.541	26.186
344	Lahul (North)	28.08.2000	24.10.2003	3.156	0.0	0.180	3.423	-0.009	3.443	0.180	4.855	0.057	1.538
345	Lahul (North)	28.08.2000	08.09.2004	4.033	0.0	0.131	2.636	-0.053	2.547	0.142	3.666	0.035	0.909
346	Lahul (North)	28.08.2000	17.09.2004	4.058	8.6	-0.263	3.606	0.102	3.040	0.282	4.716	0.070	1.162
347	Lahul (North)	28.08.2000	29.10.2005	5.173	0.0	0.206	3.393	0.015	3.382	0.207	4.791	0.040	0.926
348	Lahul (North)	08.10.2003	08.09.2004	0.921	2.9	-0.030	2.964	0.042	3.078	0.052	4.273	0.056	4.642
349	Lahul (North)	08.10.2003	17.09.2004	0.945	11.5	-0.079	3.956	0.062	2.924	0.101	4.920	0.107	5.205
350	Lahul (North)	08.10.2003	29.10.2005	2.060	2.8	-0.046	2.973	0.297	3.055	0.301	4.263	0.146	2.069
351	Lahul (North)	08.10.2003	07.11.2005	2.085	11.5	-0.190	3.885	0.217	3.114	0.288	4.979	0.138	2.388
352	Lahul (North)	08.10.2003	30.09.2006	2.981	2.9	-0.098	2.783	-0.077	2.971	0.125	4.071	0.042	1.366
353	Lahul (North)	08.10.2003	16.10.2006	3.025	2.9	-0.131	2.874	0.169	2.975	0.214	4.137	0.071	1.368
354	Lahul (North)	24.10.2003	08.09.2004	0.877	0.0	-0.040	2.910	0.017	3.068	0.044	4.228	0.050	4.823
355	Lahul (North)	24.10.2003	17.09.2004	0.901	8.6	0.216	2.867	0.314	2.973	0.382	4.130	0.423	4.582
356	Lahul (North)	24.10.2003	07.11.2005	2.041	8.6	0.232	2.844	-0.156	3.174	0.280	4.262	0.137	2.088
357	Lahul (North)	24.10.2003	16.10.2006	2.981	0.0	0.001	3.059	-0.187	3.104	0.187	4.358	0.063	1.462
358	Lahul (North)	08.09.2004	17.09.2004	0.025	8.6	0.044	2.942	0.150	3.006	0.157	4.207	6.352	170.606
359	Lahul (North)	08.09.2004	07.11.2005	1.164	8.6	0.272	2.499	0.229	2.772	0.356	3.732	0.305	3.205
360	Lahul (North)	08.09.2004	16.10.2006	2.104	0.0	0.066	3.131	0.374	3.289	0.380	4.541	0.180	2.158
361	Lahul (North)	17.09.2004	29.10.2005	1.115	8.6	0.137	3.899	0.038	3.303	0.142	5.110	0.127	4.583
362	Lahul (North)	17.09.2004	07.11.2005	1.140	0.0	0.027	3.302	0.075	3.308	0.080	4.674	0.070	4.101
363	Lahul (North)	17.09.2004	30.09.2006	2.036	8.6	0.024	3.539	0.115	2.776	0.118	4.498	0.058	2.209
364	Lahul (North)	17.09.2004	16.10.2006	2.079	8.6	0.144	3.838	0.191	3.190	0.239	4.991	0.115	2.400
365	Lahul (North)	29.10.2005	30.09.2006	0.921	0.1	0.127	2.860	-0.029	3.142	0.130	4.249	0.141	4.615
366	Lahul (North)	29.10.2005	16.10.2006	0.964	0.0	0.276	3.010	-0.128	2.991	0.304	4.244	0.315	4.400
367	Lahul (North)	29.10.2005	20.11.2007	2.060	2.8	0.003	3.027	0.173	3.189	0.173	4.396	0.084	2.134
368	Lahul (North)	07.11.2005	30.09.2006	0.896	8.6	0.022	3.959	-0.068	3.327	0.071	5.171	0.079	5.772
369	Lahul (North)	07.11.2005	16.10.2006	0.940	8.6	0.166	3.782	-0.074	3.174	0.182	4.938	0.194	5.254
370	Lahul (North)	07.11.2005	20.11.2007	2.036	11.5	0.027	4.040	0.040	2.997	0.049	5.030	0.024	2.471
371	Lahul (North)	30.09.2006	16.10.2006	0.044	0.0	0.027	2.590	0.459	2.981	0.459	3.949	10.477	90.078
372	Lahul (North)	30.09.2006	20.11.2007	1.140	2.9	0.091	3.146	-0.247	3.354	0.263	4.599	0.231	4.035
373	Lahul (North)	30.09.2006	15.12.2007	1.208	8.5	-0.240	4.638	0.162	3.707	0.290	5.938	0.240	4.914
374	Lahul (North)	16.10.2006	20.11.2007	1.096	2.9	0.070	3.105	0.402	3.246	0.408	4.492	0.372	4.099
375	Lahul (North)	16.10.2006	15.12.2007	1.164	8.6	-0.178	4.744	0.018	3.977	0.179	6.190	0.154	5.317
376	Jammu	12.10.2002	05.03.2003	0.395	2.9	0.048	3.866	-0.058	4.027	0.075	5.582	0.191	14.149
377	Jammu	12.10.2002	31.10.2003	1.052	2.9	-0.067	3.266	0.158	3.242	0.171	4.602	0.163	4.374
378	Jammu	12.10.2002	26.03.2005	2.455	0.0	-0.056	3.752	-0.019	4.006	0.059	5.489	0.024	2.236
379	Jammu	12.10.2002	13.10.2005	3.005	8.6	0.818	5.158	0.162	3.609	0.833	6.296	0.277	2.095
380	Jammu	12.10.2002	20.10.2005	3.025	0.0	-0.134	3.046	0.306	2.949	0.334	4.240	0.110	1.402
381	Jammu	05.03.2003	31.10.2003	0.658	0.0	-0.205	3.473	0.251	3.924	0.324	5.240	0.492	7.970
382	Jammu	05.03.2003	26.03.2005	2.060	2.9	0.040	2.835	-0.043	2.652	0.059	3.882	0.028	1.884
383	Jammu	05.03.2003	20.10.2005	2.630	2.9	0.035	3.536	0.267	3.757	0.270	5.159	0.103	1.962
384	Jammu	05.03.2003	07.10.2006	3.595	2.8	0.171	3.473	0.103	3.649	0.199	5.037	0.055	1.401
385	Jammu	05.03.2003	23.10.2006	3.638	2.9	0.055	3.579	0.103	3.816	0.116	5.232	0.032	1.438
386	Jammu	31.10.2003	26.03.2005	1.403	2.9	0.117	3.748	-0.123	4.007	0.170	5.486	0.121	3.911
387	Jammu	31.10.2003	20.10.2005	1.973	2.9	0.318	2.948	0.052	2.858	0.323	4.106	0.164	2.082
388	Jammu	31.10.2003	07.10.2006	2.937	2.9	0.088	2.971	-0.084	3.030	0.121	4.244	0.041	1.445
389	Jammu	31.10.2003	23.10.2006	2.981	2.9	0.152	2.841	-0.104	2.741	0.185	3.947	0.062	1.324
390	Jammu	26.03.2005	20.10.2005	0.570	0.0	-0.038	3.453	0.290	3.811	0.292	5.142	0.513	9.024
391	Jammu	26.03.2005	07.10.2006	1.534	0.0	0.018	3.361	0.184	3.607	0.185	4.930	0.121	3.213

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
		Scene 1	Scene 2			East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
392	Jammu	26.03.2005	23.10.2006	1.578	0.0	0.056	3.592	0.155	3.771	0.165	5.208	0.104	3.300
393	Jammu	26.03.2005	22.12.2007	2.742	11.4	-0.160	4.449	0.108	3.595	0.193	5.720	0.070	2.086
394	Jammu	13.10.2005	07.10.2006	0.984	8.6	-0.228	4.938	-0.173	3.665	0.286	6.150	0.291	6.253
395	Jammu	13.10.2005	23.10.2006	1.027	8.6	-0.241	4.819	0.125	3.351	0.272	5.870	0.265	5.713
396	Jammu	20.10.2005	07.10.2006	0.964	0.0	-0.066	2.693	-0.031	2.692	0.073	3.808	0.076	3.949
397	Jammu	20.10.2005	23.10.2006	1.008	0.0	0.104	2.726	0.215	2.835	0.239	3.933	0.237	3.901
398	Jammu	20.10.2005	22.12.2007	2.173	11.4	-0.358	4.476	0.232	3.659	0.427	5.782	0.196	2.661
399	Jammu	07.10.2006	22.12.2007	1.208	11.4	-0.240	4.345	0.115	3.488	0.266	5.572	0.220	4.612
400	Jammu	23.10.2006	22.12.2007	1.164	11.4	-0.394	4.551	0.234	3.773	0.459	5.912	0.394	5.077
401	Karakorum (Baltoro)	11.09.2000	29.08.2001	0.964	0.0	0.069	3.535	-0.002	3.451	0.069	4.941	0.072	5.123
402	Karakorum (Baltoro)	11.09.2000	03.10.2002	2.060	0.0	-0.169	3.657	0.140	3.011	0.220	4.737	0.107	2.299
403	Karakorum (Baltoro)	11.09.2000	20.09.2003	3.025	2.9	-0.495	3.881	0.079	2.928	0.501	4.862	0.166	1.607
404	Karakorum (Baltoro)	11.09.2000	06.10.2003	3.068	0.0	-0.921	4.077	0.545	3.380	1.070	5.296	0.349	1.726
405	Karakorum (Baltoro)	11.09.2000	22.10.2003	3.112	0.0	-0.186	4.128	0.096	3.203	0.210	5.225	0.067	1.679
406	Karakorum (Baltoro)	11.09.2000	15.09.2004	4.014	11.5	0.211	5.558	-0.019	4.075	0.212	6.892	0.053	1.717
407	Karakorum (Baltoro)	29.08.2001	03.10.2002	1.096	0.0	-0.158	3.984	-0.227	3.507	0.277	5.307	0.252	4.843
408	Karakorum (Baltoro)	29.08.2001	20.09.2003	2.060	2.9	-0.542	3.889	-0.181	3.102	0.572	4.975	0.278	2.415
409	Karakorum (Baltoro)	29.08.2001	06.10.2003	2.104	0.0	-0.188	4.013	0.007	3.506	0.189	5.329	0.090	2.533
410	Karakorum (Baltoro)	29.08.2001	22.10.2003	2.148	0.0	-0.063	4.109	-0.218	3.534	0.227	5.420	0.105	2.523
411	Karakorum (Baltoro)	03.10.2002	20.09.2003	0.964	2.9	-0.049	3.306	-0.093	3.170	0.105	4.580	0.109	4.749
412	Karakorum (Baltoro)	03.10.2002	06.10.2003	1.008	0.0	-0.001	2.865	0.280	2.947	0.280	4.110	0.278	4.077
413	Karakorum (Baltoro)	03.10.2002	22.10.2003	1.052	0.0	-0.223	3.095	0.031	2.947	0.225	4.274	0.214	4.062
414	Karakorum (Baltoro)	03.10.2002	30.03.2004	1.490	0.0	0.116	3.618	-0.458	3.558	0.473	5.075	0.317	3.405
415	Karakorum (Baltoro)	20.09.2003	06.10.2003	0.044	2.9	0.191	2.850	0.193	2.749	0.271	3.959	6.187	90.321
416	Karakorum (Baltoro)	20.09.2003	22.10.2003	0.088	2.9	0.063	3.181	0.271	3.042	0.278	4.401	3.175	50.203
417	Karakorum (Baltoro)	20.09.2003	30.03.2004	0.526	2.9	0.076	3.406	-0.374	3.411	0.382	4.820	0.726	9.164
418	Karakorum (Baltoro)	20.09.2003	14.08.2004	0.901	8.5	-0.042	5.278	-0.084	3.775	0.094	6.489	0.104	7.199
419	Karakorum (Baltoro)	20.09.2003	21.06.2005	1.753	2.9	0.207	3.977	-0.006	4.369	0.207	5.907	0.118	3.369
420	Karakorum (Baltoro)	20.09.2003	25.09.2005	2.016	2.9	0.230	3.859	-0.097	3.622	0.250	5.293	0.124	2.625
421	Karakorum (Baltoro)	20.09.2003	26.07.2006	2.849	0.0	-0.013	3.086	0.177	2.964	0.177	4.279	0.062	1.502
422	Karakorum (Baltoro)	06.10.2003	30.03.2004	0.482	0.0	0.050	3.223	-0.359	3.262	0.362	4.586	0.751	9.511
423	Karakorum (Baltoro)	06.10.2003	14.08.2004	0.858	11.5	0.268	5.530	-0.398	4.246	0.479	6.972	0.559	8.130
424	Karakorum (Baltoro)	06.10.2003	22.02.2005	1.384	8.6	0.598	5.676	0.019	4.009	0.599	6.949	0.433	5.023
425	Karakorum (Baltoro)	06.10.2003	21.06.2005	1.710	0.0	0.107	3.932	-0.060	3.888	0.123	5.530	0.072	3.235
426	Karakorum (Baltoro)	06.10.2003	25.09.2005	1.973	0.0	0.094	3.690	-0.207	3.603	0.227	5.157	0.115	2.615
427	Karakorum (Baltoro)	22.10.2003	30.03.2004	0.438	0.0	0.202	3.372	-0.425	3.408	0.470	4.794	1.073	10.937
428	Karakorum (Baltoro)	22.10.2003	21.06.2005	1.666	0.0	0.093	3.987	-0.090	4.019	0.129	5.661	0.078	3.399
429	Karakorum (Baltoro)	22.10.2003	25.09.2005	1.929	0.0	0.271	3.770	-0.111	3.747	0.292	5.315	0.152	2.756
430	Karakorum (Baltoro)	30.03.2004	22.02.2005	0.901	8.6	-0.315	5.562	-0.003	3.928	0.315	6.809	0.350	7.554
431	Karakorum (Baltoro)	30.03.2004	25.09.2005	1.490	0.0	-0.037	3.956	-0.050	3.893	0.063	5.550	0.042	3.724
432	Karakorum (Baltoro)	30.03.2004	26.07.2006	2.323	2.9	-0.046	3.668	0.101	3.498	0.111	5.069	0.048	2.182
433	Karakorum (Baltoro)	14.08.2004	15.09.2004	0.088	0.0	-0.021	2.883	-0.196	2.854	0.197	4.056	2.249	46.266
434	Karakorum (Baltoro)	14.08.2004	22.02.2005	0.526	2.9	0.170	4.226	-0.218	3.836	0.277	5.707	0.526	10.850
435	Karakorum (Baltoro)	14.08.2004	30.06.2005	0.877	0.0	-0.165	4.690	0.036	3.884	0.168	6.089	0.192	6.945
436	Karakorum (Baltoro)	15.09.2004	22.02.2005	0.438	2.9	0.315	4.316	-0.024	4.119	0.316	5.966	0.721	13.610
437	Karakorum (Baltoro)	15.09.2004	25.09.2005	1.027	11.5	0.235	5.556	-0.059	4.372	0.242	7.070	0.236	6.881
438	Karakorum (Baltoro)	25.09.2005	26.07.2006	0.833	2.9	-0.312	4.089	0.101	3.899	0.328	5.650	0.393	6.783
439	Karakorum (Biafo Gyang)	11.09.2000	18.05.2001	0.682	14.3	-0.490	4.349	-0.043	3.485	0.492	5.573	0.722	8.169
440	Karakorum (Biafo Gyang)	11.09.2000	29.08.2001	0.964	0.0	-0.278	3.302	0.040	2.989	0.281	4.454	0.291	4.618
441	Karakorum (Biafo Gyang)	11.09.2000	20.09.2003	3.025	2.9	0.047	3.581	0.055	2.765	0.072	4.524	0.024	1.496
442	Karakorum (Biafo Gyang)	06.03.2001	18.05.2001	0.200	11.5	-0.120	4.513	0.019	3.928	0.122	5.983	0.609	29.915
443	Karakorum (Biafo Gyang)	06.03.2001	31.05.2003	2.236	0.1	-0.050	3.579	-0.077	3.416	0.092	4.948	0.041	2.213
444	Karakorum (Biafo Gyang)	06.03.2001	02.11.2004	3.663	11.4	-0.225	4.502	0.153	3.754	0.272	5.862	0.074	1.600
445	Karakorum (Biafo Gyang)	18.05.2001	31.05.2003	2.036	11.4	0.091	4.186	-0.066	3.263	0.113	5.307	0.055	2.607
446	Karakorum (Biafo Gyang)	18.05.2001	20.09.2003	2.342	11.4	0.346	4.187	0.477	3.692	0.590	5.582	0.252	2.383
447	Karakorum (Biafo Gyang)	18.05.2001	02.11.2004	3.463	0.1	-0.120	3.363	0.290	3.603	0.314	4.928	0.091	1.423
448	Karakorum (Biafo Gyang)	18.05.2001	16.05.2006	4.997	0.0	0.060	2.991	-0.080	2.790	0.100	4.090	0.020	0.818
449	Karakorum (Biafo Gyang)	29.08.2001	20.09.2003	2.060	2.9	0.087	3.645	0.112	2.878	0.142	4.644	0.069	2.254
450	Karakorum (Biafo Gyang)	31.05.2003	16.05.2006	2.962	11.4	-0.135	4.112	0.102	3.212	0.169	5.218	0.057	1.762
451	Karakorum (Biafo Gyang)	31.05.2003	24.06.2006	3.068	0.1	0.054	3.339	0.093	3.198	0.108	4.624	0.035	1.507
452	Karakorum (Biafo Gyang)	31.05.2003	26.07.2006	3.156	0.0	0.129	3.720	0.096	3.443	0.160	5.069	0.051	1.606
453	Karakorum (Biafo Gyang)	20.09.2003	02.11.2004	1.121	11.3	-0.374	4.310	0.169	3.720	0.411	5.694	0.367	5.081
454	Karakorum (Biafo Gyang)	20.09.2003	02.04.2005	1.534	0.1	0.040	3.438	-0.214	3.398	0.217	4.834	0.142	3.151
455	Karakorum (Biafo Gyang)	20.09.2003	16.05.2006	2.655	11.4	0.049	4.456	-0.483	4.181	0.486	6.110	0.183	2.302
456	Karakorum (Biafo Gyang)	20.09.2003	24.06.2006	2.762	0.1	0.081	3.389	-0.115	3.441	0.140	4.830	0.051	1.749
457	Karakorum (Biafo Gyang)	20.09.2003	26.07.2006	2.849	0.0	-0.113	3.081	0.062	3.013	0.128	4.310	0.045	1.512

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
		Scene 1	Scene 2			East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
458	Karakorum (Biafo Gyang)	02.11.2004	05.11.2005	1.008	2.9	-0.268	2.872	0.262	2.831	0.375	4.033	0.372	4.000
459	Karakorum (Biafo Gyang)	02.11.2004	13.03.2006	1.359	0.1	0.185	3.600	-0.224	3.719	0.291	5.176	0.214	3.809
460	Karakorum (Biafo Gyang)	02.11.2004	29.03.2006	1.403	0.1	0.233	3.457	-0.281	3.622	0.365	5.007	0.260	3.570
461	Karakorum (Biafo Gyang)	02.11.2004	05.04.2006	1.422	8.5	-0.117	4.637	-0.328	3.878	0.348	6.045	0.245	4.251
462	Karakorum (Biafo Gyang)	02.11.2004	16.05.2006	1.534	0.1	0.122	3.580	-0.171	3.821	0.210	5.236	0.137	3.413
463	Karakorum (Biafo Gyang)	02.11.2004	17.06.2006	1.622	2.9	0.181	3.671	-0.132	3.892	0.224	5.350	0.138	3.299
464	Karakorum (Biafo Gyang)	02.11.2004	24.06.2006	1.641	11.4	0.160	4.522	-0.393	4.165	0.424	6.148	0.258	3.746
465	Karakorum (Biafo Gyang)	02.11.2004	26.07.2006	1.729	11.4	0.069	4.625	-0.261	4.100	0.270	6.181	0.156	3.575
466	Karakorum (Biafo Gyang)	02.11.2004	05.09.2006	1.841	0.0	0.112	3.577	-0.110	3.535	0.157	5.029	0.085	2.732
467	Karakorum (Biafo Gyang)	02.11.2004	28.09.2006	1.904	8.5	0.179	4.613	-0.307	3.927	0.355	6.058	0.187	3.182
468	Karakorum (Biafo Gyang)	02.11.2004	08.11.2006	2.016	0.1	-0.109	3.020	0.264	3.093	0.286	4.323	0.142	2.144
469	Karakorum (Biafo Gyang)	02.11.2004	10.12.2006	2.104	0.1	0.052	3.832	-0.074	3.848	0.090	5.431	0.043	2.581
470	Karakorum (Biafo Gyang)	02.11.2004	11.01.2007	2.192	0.1	-0.017	3.526	-0.050	3.602	0.053	5.041	0.024	2.300
471	Karakorum (Biafo Gyang)	02.11.2004	27.01.2007	2.236	0.0	0.065	3.343	-0.092	3.378	0.112	4.753	0.050	2.126
472	Karakorum (Biafo Gyang)	02.11.2004	07.03.2007	2.342	11.4	0.077	4.425	-0.305	3.744	0.315	5.796	0.134	2.474
473	Karakorum (Biafo Gyang)	02.11.2004	23.03.2007	2.386	11.3	0.151	4.537	-0.264	3.914	0.304	5.992	0.128	2.511
474	Karakorum (Biafo Gyang)	02.11.2004	27.11.2007	3.068	2.9	-0.061	3.258	0.259	3.172	0.266	4.547	0.087	1.482
475	Karakorum (Biafo Gyang)	02.04.2005	13.03.2006	0.945	11.5	-0.156	4.341	0.232	3.481	0.279	5.564	0.296	5.886
476	Karakorum (Biafo Gyang)	02.04.2005	29.03.2006	0.989	11.5	-0.054	4.085	0.291	3.143	0.296	5.154	0.300	5.211
477	Karakorum (Biafo Gyang)	02.04.2005	05.04.2006	1.008	2.9	-0.016	2.773	0.151	2.564	0.151	3.777	0.150	3.746
478	Karakorum (Biafo Gyang)	02.04.2005	16.05.2006	1.121	11.5	0.285	4.694	-0.127	4.039	0.312	6.193	0.279	5.526
479	Karakorum (Biafo Gyang)	02.04.2005	24.06.2006	1.227	0.0	-0.083	3.711	-0.030	3.716	0.089	5.251	0.072	4.278
480	Karakorum (Biafo Gyang)	02.04.2005	28.09.2006	1.490	2.9	-0.224	3.801	0.391	3.677	0.451	5.288	0.302	3.548
481	Karakorum (Biafo Gyang)	02.04.2005	02.01.2007	1.753	0.1	-0.135	3.728	-0.090	3.595	0.163	5.179	0.093	2.954
482	Karakorum (Biafo Gyang)	02.04.2005	07.03.2007	1.929	0.0	-0.069	2.972	0.159	2.930	0.173	4.174	0.090	2.164
483	Karakorum (Biafo Gyang)	02.04.2005	23.03.2007	1.973	0.1	-0.079	2.854	0.130	2.832	0.152	4.021	0.077	2.038
484	Karakorum (Biafo Gyang)	05.11.2005	13.03.2006	0.351	2.9	0.317	3.857	0.055	3.733	0.322	5.368	0.918	15.308
485	Karakorum (Biafo Gyang)	05.11.2005	16.05.2006	0.526	2.9	0.189	3.765	-0.044	3.836	0.194	5.375	0.368	10.218
486	Karakorum (Biafo Gyang)	05.11.2005	17.06.2006	0.614	0.0	0.185	3.829	-0.173	3.990	0.253	5.530	0.413	9.011
487	Karakorum (Biafo Gyang)	05.11.2005	28.09.2006	0.896	11.4	0.098	4.784	-0.235	3.802	0.255	6.111	0.284	6.821
488	Karakorum (Biafo Gyang)	05.11.2005	30.10.2006	0.984	8.6	-0.393	4.765	-0.179	3.771	0.432	6.077	0.439	6.178
489	Karakorum (Biafo Gyang)	05.11.2005	08.11.2006	1.008	2.9	-0.058	2.918	0.012	3.364	0.059	4.453	0.059	4.417
490	Karakorum (Biafo Gyang)	05.11.2005	11.01.2007	1.184	2.9	-0.102	3.843	-0.044	3.555	0.111	5.235	0.094	4.423
491	Karakorum (Biafo Gyang)	05.11.2005	27.01.2007	1.227	2.9	-0.030	3.467	-0.054	3.431	0.062	4.878	0.050	3.974
492	Karakorum (Biafo Gyang)	05.11.2005	07.03.2007	1.334	14.3	-0.364	4.583	-0.259	3.540	0.447	5.791	0.335	4.340
493	Karakorum (Biafo Gyang)	05.11.2005	27.11.2007	2.060	0.0	-0.155	3.349	0.071	3.151	0.170	4.598	0.083	2.232
494	Karakorum (Biafo Gyang)	13.03.2006	07.03.2007	0.984	11.5	-0.006	4.272	0.109	3.589	0.109	5.579	0.111	5.672
495	Karakorum (Biafo Gyang)	13.03.2006	23.03.2007	1.027	11.4	0.111	4.198	-0.249	3.506	0.272	5.469	0.265	5.324
496	Karakorum (Biafo Gyang)	13.03.2006	27.11.2007	1.710	2.9	-0.052	3.917	0.129	4.027	0.140	5.618	0.082	3.286
497	Karakorum (Biafo Gyang)	29.03.2006	27.01.2007	0.833	0.1	-0.035	3.301	-0.083	3.488	0.090	4.802	0.108	5.765
498	Karakorum (Biafo Gyang)	29.03.2006	07.03.2007	0.940	11.5	0.039	4.180	0.080	3.496	0.089	5.449	0.095	5.799
499	Karakorum (Biafo Gyang)	29.03.2006	23.03.2007	0.984	11.4	0.054	4.429	0.003	3.469	0.055	5.626	0.055	5.720
500	Karakorum (Biafo Gyang)	29.03.2006	27.11.2007	1.666	2.9	-0.101	3.870	0.111	3.845	0.150	5.456	0.090	3.275
501	Karakorum (Biafo Gyang)	05.04.2006	07.03.2007	0.921	2.9	0.001	3.064	0.167	2.953	0.167	4.255	0.182	4.622
502	Karakorum (Biafo Gyang)	05.04.2006	23.03.2007	0.964	2.8	0.071	3.126	0.181	3.055	0.195	4.371	0.202	4.532
503	Karakorum (Biafo Gyang)	05.04.2006	27.11.2007	1.647	11.4	-0.248	4.687	0.165	4.142	0.298	6.255	0.181	3.799
504	Karakorum (Biafo Gyang)	16.05.2006	17.06.2006	0.088	2.9	0.135	2.757	-0.147	2.659	0.199	3.830	2.274	43.685
505	Karakorum (Biafo Gyang)	16.05.2006	08.11.2006	0.482	0.0	0.104	3.780	0.452	4.203	0.464	5.652	0.962	11.722
506	Karakorum (Biafo Gyang)	16.05.2006	27.01.2007	0.701	0.1	0.133	3.865	0.087	4.088	0.159	5.626	0.227	8.021
507	Karakorum (Biafo Gyang)	16.05.2006	27.06.2007	1.115	11.5	-0.129	4.457	0.159	3.728	0.205	5.811	0.184	5.211
508	Karakorum (Biafo Gyang)	16.05.2006	27.11.2007	1.534	2.9	-0.087	3.750	0.215	4.036	0.232	5.509	0.151	3.591
509	Karakorum (Biafo Gyang)	17.06.2006	08.11.2006	0.395	2.8	-0.144	3.878	0.037	4.178	0.148	5.700	0.376	14.449
510	Karakorum (Biafo Gyang)	17.06.2006	27.01.2007	0.614	2.9	0.042	4.129	-0.221	4.484	0.225	6.096	0.366	9.933
511	Karakorum (Biafo Gyang)	17.06.2006	11.06.2007	0.984	14.3	0.071	4.171	0.137	3.352	0.154	5.351	0.157	5.441
512	Karakorum (Biafo Gyang)	17.06.2006	27.06.2007	1.027	14.3	-0.078	4.304	0.211	3.523	0.225	5.562	0.219	5.414
513	Karakorum (Biafo Gyang)	17.06.2006	27.11.2007	1.447	0.0	-0.043	3.818	-0.067	4.157	0.080	5.644	0.055	3.902
514	Karakorum (Biafo Gyang)	24.06.2006	11.06.2007	0.964	0.0	0.131	2.970	0.106	2.714	0.168	4.024	0.175	4.172
515	Karakorum (Biafo Gyang)	24.06.2006	27.06.2007	1.008	0.0	-0.058	2.987	0.102	2.847	0.117	4.127	0.116	4.093
516	Karakorum (Biafo Gyang)	26.07.2006	27.06.2007	0.921	0.0	0.040	2.748	0.104	2.717	0.111	3.864	0.121	4.197
517	Karakorum (Biafo Gyang)	12.09.2006	27.11.2007	1.208	8.6	-0.246	4.843	-0.028	4.410	0.248	6.550	0.205	5.421
518	Karakorum (Biafo Gyang)	28.09.2006	27.11.2007	1.164	11.4	-0.320	4.704	0.065	3.954	0.326	6.146	0.280	5.278
519	Karakorum (Biafo Gyang)	30.10.2006	27.11.2007	1.077	8.6	0.012	4.635	0.042	3.983	0.044	6.111	0.041	5.675
520	Karakorum (Biafo Gyang)	08.11.2006	27.01.2007	0.219	0.1	0.479	3.557	-0.150	3.665	0.502	5.107	2.291	23.302
521	Karakorum (Biafo Gyang)	08.11.2006	27.11.2007	1.052	2.8	-0.095	3.046	0.269	3.008	0.285	4.281	0.271	4.069
522	Karakorum (Biafo Gyang)	11.01.2007	27.11.2007	0.877	2.9	0.270	3.987	-0.034	3.808	0.272	5.513	0.310	6.289
523	Karakorum (Biafo Gyang)	27.01.2007	27.11.2007	0.833	2.9	0.065	3.651	0.352	3.670	0.358	5.177	0.430	6.216

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
						East-West		North-South		Mean	SD	Mean	SD
		Scene 1	Scene 2			Mean	SD	Mean	SD				
524	Karakorumk (Hispar)	30.09.2001	29.10.2003	2.079	8.6	0.052	4.378	0.057	3.613	0.077	5.676	0.037	2.730
525	Karakorumk (Hispar)	29.10.2003	13.09.2004	0.877	0.0	-0.234	3.510	0.112	3.489	0.260	4.949	0.296	5.645
526	Karakorumk (Hispar)	29.10.2003	29.09.2004	0.921	0.0	-0.342	4.166	-0.094	3.938	0.354	5.732	0.385	6.227
527	Karakorumk (Hispar)	29.10.2003	11.03.2006	2.367	0.0	0.100	3.538	-0.184	3.509	0.209	4.983	0.088	2.105
528	Karakorumk (Hispar)	11.03.2006	12.09.2006	0.507	8.6	0.044	4.669	0.274	4.145	0.278	6.244	0.548	12.319
529	Karakorumk (Hispar)	11.03.2006	01.05.2007	1.140	0.0	-0.058	4.075	-0.026	4.346	0.063	5.958	0.056	5.227
530	Karakorumk (Hispar)	30.09.2001	29.10.2003	2.079	8.6	0.327	4.809	0.133	3.808	0.354	6.134	0.170	2.950
531	Karakorumk (Hispar)	30.09.2001	13.09.2004	2.956	8.6	0.040	4.258	-0.050	3.332	0.064	5.407	0.022	1.829
532	Karakorumk (Hispar)	30.09.2001	12.09.2006	4.953	0.0	0.038	3.206	-0.192	3.265	0.195	4.576	0.039	0.924
533	Karakorumk (Hispar)	30.09.2001	28.09.2006	4.997	2.8	0.122	2.964	-0.025	2.953	0.124	4.184	0.025	0.837
534	Karakorumk (Hispar)	30.09.2001	30.10.2006	5.085	0.0	-0.044	3.419	0.306	3.563	0.310	4.938	0.061	0.971
535	Karakorumk (Hispar)	29.10.2003	13.09.2004	0.877	0.0	0.116	3.261	-0.148	2.998	0.188	4.430	0.215	5.053
536	Karakorumk (Hispar)	13.09.2004	12.09.2006	1.997	8.6	0.262	4.257	0.004	3.101	0.262	5.267	0.131	2.637
537	Karakorumk (Hispar)	05.11.2005	05.04.2006	0.414	11.4	-0.305	5.090	-0.270	4.038	0.408	6.498	0.986	15.706
538	Karakorumk (Hispar)	05.11.2005	21.04.2006	0.458	8.6	-0.921	4.952	-0.233	4.185	0.950	6.483	2.077	14.170
539	Karakorumk (Hispar)	05.11.2005	17.06.2006	0.614	0.0	0.741	4.240	-0.509	4.232	0.898	5.990	1.464	9.761
540	Karakorumk (Hispar)	05.11.2005	12.09.2006	0.852	8.6	-0.458	5.092	-0.240	4.042	0.517	6.501	0.606	7.630
541	Karakorumk (Hispar)	05.11.2005	28.09.2006	0.896	11.4	-0.348	5.041	-0.165	3.734	0.385	6.273	0.430	7.002
542	Karakorumk (Hispar)	05.11.2005	30.10.2006	0.984	8.6	-0.631	4.930	0.010	3.471	0.631	6.029	0.642	6.130
543	Karakorumk (Hispar)	05.11.2005	27.11.2007	2.060	0.0	-0.371	4.102	0.033	3.509	0.372	5.398	0.181	2.620
544	Karakorumk (Hispar)	05.04.2006	21.04.2006	0.044	2.9	-0.078	2.299	0.139	2.300	0.159	3.252	3.637	74.184
545	Karakorumk (Hispar)	05.04.2006	17.06.2006	0.200	11.4	0.079	4.748	-0.178	3.997	0.195	6.206	0.975	31.031
546	Karakorumk (Hispar)	05.04.2006	12.09.2006	0.438	2.9	-0.125	3.497	0.304	3.656	0.329	5.059	0.750	11.542
547	Karakorumk (Hispar)	05.04.2006	28.09.2006	0.482	0.0	-0.149	3.357	0.121	3.728	0.192	5.016	0.398	10.403
548	Karakorumk (Hispar)	05.04.2006	30.10.2006	0.570	2.9	-0.111	3.500	0.032	3.810	0.116	5.174	0.203	9.079
549	Karakorumk (Hispar)	21.04.2006	12.09.2006	0.395	0.0	-0.149	3.693	0.157	3.877	0.216	5.355	0.549	13.573
550	Karakorumk (Hispar)	21.04.2006	28.09.2006	0.438	2.9	-0.110	3.348	0.179	3.621	0.210	4.931	0.479	11.250
551	Karakorumk (Hispar)	21.04.2006	30.10.2006	0.526	0.0	-0.169	3.628	0.010	3.885	0.169	5.316	0.321	10.105
552	Karakorumk (Hispar)	17.06.2006	27.11.2007	1.447	0.0	-0.205	4.416	-0.062	4.123	0.215	6.041	0.148	4.176
553	Karakorumk (Hispar)	12.09.2006	28.09.2006	0.044	2.9	0.062	2.740	0.097	3.080	0.115	4.122	2.618	94.039
554	Karakorumk (Hispar)	12.09.2006	30.10.2006	0.132	0.0	-0.274	3.656	0.104	3.849	0.293	5.308	2.231	40.364
555	Karakorumk (Hispar)	12.09.2006	27.11.2007	1.208	8.6	-1.842	5.252	-0.440	4.326	1.894	6.804	1.567	5.632
556	Karakorumk (Hispar)	28.09.2006	30.10.2006	0.088	2.9	-0.157	2.989	0.237	3.223	0.284	4.396	3.241	50.141
557	Karakorumk (Hispar)	28.09.2006	27.11.2007	1.164	11.4	0.028	5.029	-0.023	3.972	0.036	6.408	0.031	5.504
558	Karakorumk (Hispar)	30.10.2006	27.11.2007	1.077	8.6	0.001	5.104	-0.086	3.949	0.086	6.453	0.080	5.993
559	Chitral (North)	31.08.2000	04.07.2002	1.841	0.0	0.313	3.084	-0.518	3.208	0.605	4.450	0.329	2.417
560	Chitral (North)	31.08.2000	22.09.2002	2.060	0.0	-0.029	2.253	0.096	2.065	0.100	3.056	0.049	1.484
561	Chitral (North)	14.10.2001	04.07.2002	0.721	9.0	0.036	3.771	0.027	3.748	0.045	5.317	0.062	7.378
562	Chitral (North)	14.10.2001	22.09.2002	0.940	9.0	-0.094	3.196	0.003	2.404	0.094	4.000	0.100	4.256
563	Chitral (North)	04.07.2002	16.08.2006	4.121	0.0	-0.209	3.216	0.274	3.112	0.344	4.475	0.084	1.086
564	Chitral (North)	04.07.2002	01.09.2006	4.164	0.0	-0.268	3.543	0.332	3.513	0.427	4.990	0.103	1.198
565	Chitral (North)	22.09.2002	16.08.2006	3.901	0.0	0.201	2.614	-0.030	2.613	0.203	3.696	0.052	0.947
566	Chitral (North)	22.09.2002	01.09.2006	3.945	0.0	0.093	2.970	0.051	2.889	0.106	4.144	0.027	1.050
567	Chitral (North)	16.08.2006	19.08.2007	1.008	0.0	-0.007	2.361	0.031	2.200	0.032	3.227	0.031	3.201
568	Chitral (North)	01.09.2006	27.07.2007	0.901	8.6	0.030	3.586	-0.041	3.107	0.051	4.744	0.056	5.264
569	Chitral (North)	01.09.2006	19.08.2007	0.964	0.0	-0.025	2.875	0.008	2.725	0.026	3.962	0.027	4.108
570	Chitral (South)	31.08.2000	22.09.2002	2.060	0.0	0.002	2.285	0.020	2.076	0.021	3.087	0.010	1.498
571	Chitral (South)	24.06.2001	28.09.2001	0.263	2.0	-0.058	3.042	0.147	3.232	0.158	4.438	0.601	16.875
572	Chitral (South)	24.06.2001	14.10.2001	0.307	2.4	-0.148	3.201	0.099	3.452	0.178	4.708	0.581	15.342
573	Chitral (South)	24.06.2001	22.09.2002	1.247	11.4	-0.074	3.446	0.151	3.055	0.168	4.606	0.135	3.695
574	Chitral (South)	24.06.2001	14.06.2003	1.973	2.8	0.208	3.042	-0.208	2.877	0.294	4.187	0.149	2.122
575	Chitral (South)	24.06.2001	20.10.2003	2.323	2.8	0.016	3.065	0.011	3.420	0.020	4.593	0.009	1.977
576	Chitral (South)	24.06.2001	16.06.2004	2.981	2.9	0.188	2.600	-0.141	2.614	0.235	3.687	0.079	1.237
577	Chitral (South)	24.06.2001	20.09.2004	3.244	0.0	-0.181	3.110	0.247	3.313	0.306	4.544	0.094	1.401
578	Chitral (South)	28.09.2001	14.06.2003	1.710	0.9	0.196	3.150	-0.220	3.620	0.295	4.799	0.172	2.807
579	Chitral (South)	28.09.2001	20.10.2003	2.060	0.8	-0.002	2.669	0.134	2.558	0.134	3.697	0.065	1.795
580	Chitral (South)	28.09.2001	16.06.2004	2.718	0.9	0.078	3.139	-0.061	3.612	0.099	4.786	0.036	1.761
581	Chitral (South)	28.09.2001	20.09.2004	2.981	2.0	-0.069	2.878	-0.079	2.925	0.105	4.104	0.035	1.377
582	Chitral (South)	14.10.2001	14.06.2003	1.666	0.5	0.156	3.457	-0.497	4.104	0.520	5.366	0.312	3.221
583	Chitral (South)	14.10.2001	20.10.2003	2.016	0.4	0.093	2.710	0.089	2.582	0.129	3.743	0.064	1.856
584	Chitral (South)	14.10.2001	16.06.2004	2.674	0.5	0.202	3.385	-0.311	3.900	0.371	5.164	0.139	1.931
585	Chitral (South)	14.10.2001	20.09.2004	2.937	2.4	0.049	2.693	-0.042	2.674	0.064	3.795	0.022	1.292
586	Chitral (South)	22.09.2002	20.09.2004	1.997	11.5	0.050	3.356	0.000	2.507	0.050	4.189	0.025	2.097
587	Chitral (South)	22.09.2002	19.08.2007	4.910	0.0	0.086	2.821	-0.084	2.647	0.121	3.868	0.025	0.788
588	Chitral (South)	08.10.2002	19.08.2007	4.866	2.8	0.116	3.221	-0.057	3.070	0.129	4.450	0.027	0.914
589	Chitral (South)	14.06.2003	15.05.2004	0.921	0.0	0.061	2.412	0.000	2.408	0.061	3.408	0.066	3.703

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
		Scene 1	Scene 2			East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
590	Chitral (South)	14.06.2003	16.06.2004	1.008	0.0	-0.044	2.565	0.018	2.434	0.047	3.536	0.047	3.507
591	Chitral (South)	14.06.2003	27.07.2007	4.121	0.0	-0.214	2.880	0.279	2.936	0.352	4.113	0.085	0.998
592	Chitral (South)	20.10.2003	15.05.2004	0.570	0.0	0.092	3.162	-0.133	3.581	0.162	4.778	0.284	8.384
593	Chitral (South)	20.10.2003	16.06.2004	0.658	0.0	0.041	3.323	-0.104	3.838	0.112	5.077	0.170	7.721
594	Chitral (South)	20.10.2003	20.09.2004	0.921	2.9	-0.027	3.257	0.043	3.233	0.051	4.589	0.056	4.985
595	Chitral (South)	16.06.2004	20.09.2004	0.263	2.9	-0.257	3.447	-0.130	4.076	0.288	5.338	1.095	20.296
596	Chitral (South)	16.06.2004	27.07.2007	3.112	0.0	-0.135	2.723	0.146	2.736	0.199	3.861	0.064	1.240
597	Chitral (South)	20.09.2004	16.08.2006	1.904	11.5	-0.022	3.570	0.041	2.877	0.047	4.585	0.025	2.408
598	Chitral (South)	20.09.2004	27.07.2007	2.849	2.9	0.120	2.950	-0.087	3.220	0.149	4.367	0.052	1.533
599	Chitral (South)	16.08.2006	15.05.2007	0.745	0.0	0.361	3.025	-0.187	2.904	0.407	4.193	0.546	5.627
600	Chitral (South)	16.08.2006	19.08.2007	1.008	0.0	0.032	2.774	-0.020	2.562	0.038	3.776	0.038	3.746
601	West Kunlun Shan	10.03.2001	10.10.2003	2.586	0.0	0.108	3.382	0.059	3.217	0.123	4.668	0.047	1.805
602	West Kunlun Shan	26.03.2001	16.02.2002	0.896	8.6	-0.120	3.832	0.093	3.447	0.152	5.154	0.170	5.753
603	West Kunlun Shan	26.03.2001	13.03.2002	0.964	0.0	-0.014	3.689	-0.051	3.752	0.053	5.262	0.055	5.457
604	West Kunlun Shan	26.03.2001	18.03.2004	2.981	0.0	0.015	3.274	-0.013	3.264	0.020	4.623	0.007	1.551
605	West Kunlun Shan	16.02.2002	14.10.2002	0.658	2.9	0.133	3.481	0.339	3.488	0.364	4.928	0.554	7.495
606	West Kunlun Shan	16.02.2002	08.04.2003	1.140	0.0	0.238	3.169	0.015	3.211	0.239	4.511	0.210	3.958
607	West Kunlun Shan	16.02.2002	06.12.2004	2.805	0.0	-0.012	3.308	0.261	3.355	0.261	4.711	0.093	1.679
608	West Kunlun Shan	13.03.2002	18.03.2004	2.016	0.0	0.005	3.796	0.139	4.003	0.139	5.517	0.069	2.736
609	West Kunlun Shan	13.03.2002	16.01.2005	2.849	0.0	-0.068	3.348	0.127	3.656	0.144	4.958	0.051	1.740
610	West Kunlun Shan	13.03.2002	01.02.2005	2.893	0.0	0.046	3.202	0.006	3.382	0.046	4.657	0.016	1.610
611	West Kunlun Shan	14.10.2002	06.12.2004	2.148	2.9	0.066	3.613	0.298	3.565	0.305	5.076	0.142	2.363
612	West Kunlun Shan	14.10.2002	12.03.2005	2.411	2.9	-0.120	3.344	-0.160	3.455	0.200	4.808	0.083	1.994
613	West Kunlun Shan	14.10.2002	06.10.2005	2.981	2.9	0.025	3.393	0.126	3.508	0.129	4.881	0.043	1.637
614	West Kunlun Shan	08.04.2003	06.12.2004	1.666	0.0	-0.111	3.674	0.468	3.730	0.481	5.235	0.289	3.143
615	West Kunlun Shan	08.04.2003	12.03.2005	1.929	0.0	0.019	3.326	0.232	3.281	0.233	4.672	0.121	2.422
616	West Kunlun Shan	08.04.2003	06.10.2005	2.499	0.0	0.003	3.537	0.166	3.641	0.166	5.076	0.066	2.032
617	West Kunlun Shan	08.04.2003	11.02.2006	2.849	0.0	-0.062	3.338	0.226	3.423	0.234	4.782	0.082	1.678
618	West Kunlun Shan	10.10.2003	06.10.2005	1.992	14.3	0.115	3.274	0.087	2.969	0.145	4.419	0.073	2.219
619	West Kunlun Shan	18.03.2004	16.01.2005	0.833	0.0	-0.012	3.382	0.088	3.527	0.089	4.886	0.106	5.867
620	West Kunlun Shan	18.03.2004	01.02.2005	0.877	0.0	0.041	3.223	0.035	3.401	0.054	4.686	0.061	5.345
621	West Kunlun Shan	18.03.2004	04.02.2006	1.885	0.1	0.055	3.266	0.007	3.343	0.055	4.673	0.029	2.479
622	West Kunlun Shan	18.03.2004	12.04.2007	3.068	0.0	-0.067	2.951	0.113	2.941	0.132	4.166	0.043	1.358
623	West Kunlun Shan	06.12.2004	01.02.2005	0.156	8.6	0.005	3.371	-0.259	3.095	0.259	4.576	1.661	29.305
624	West Kunlun Shan	06.12.2004	12.03.2005	0.263	0.0	0.128	3.147	-0.299	3.290	0.325	4.552	1.236	17.309
625	West Kunlun Shan	06.12.2004	06.10.2005	0.833	0.0	0.047	3.206	-0.202	3.231	0.208	4.551	0.250	5.465
626	West Kunlun Shan	06.12.2004	04.02.2006	1.164	8.6	0.020	3.735	-0.431	3.371	0.431	5.032	0.370	4.321
627	West Kunlun Shan	06.12.2004	11.02.2006	1.184	0.0	0.019	3.209	-0.312	3.144	0.312	4.492	0.264	3.796
628	West Kunlun Shan	06.12.2004	12.04.2007	2.348	8.6	0.208	3.710	-0.317	3.446	0.379	5.063	0.161	2.157
629	West Kunlun Shan	06.12.2004	29.11.2007	2.981	0.0	0.092	3.279	-0.127	3.290	0.157	4.645	0.053	1.558
630	West Kunlun Shan	16.01.2005	12.03.2005	0.151	8.6	0.248	3.487	0.166	3.312	0.299	4.809	1.982	31.917
631	West Kunlun Shan	16.01.2005	04.02.2006	1.052	0.0	0.191	2.962	0.031	3.166	0.193	4.335	0.184	4.121
632	West Kunlun Shan	16.01.2005	11.02.2006	1.071	8.6	-0.011	3.417	0.400	3.226	0.400	4.699	0.374	4.386
633	West Kunlun Shan	16.01.2005	12.04.2007	2.236	0.0	-0.071	3.464	0.188	3.592	0.201	4.990	0.090	2.232
634	West Kunlun Shan	01.02.2005	12.03.2005	0.107	8.6	0.047	3.234	-0.086	3.108	0.098	4.485	0.920	41.974
635	West Kunlun Shan	01.02.2005	06.10.2005	0.677	8.6	0.021	3.996	0.019	3.697	0.028	5.444	0.042	8.045
636	West Kunlun Shan	01.02.2005	04.02.2006	1.008	0.0	0.180	2.708	0.050	2.826	0.186	3.915	0.185	3.883
637	West Kunlun Shan	01.02.2005	11.02.2006	1.027	8.6	-0.069	3.282	-0.157	2.961	0.171	4.421	0.166	4.303
638	West Kunlun Shan	01.02.2005	12.04.2007	2.192	0.0	0.021	3.415	0.065	3.537	0.069	4.916	0.031	2.243
639	West Kunlun Shan	01.02.2005	08.12.2007	2.849	0.0	0.039	3.603	-0.071	3.686	0.081	5.154	0.028	1.809
640	West Kunlun Shan	01.02.2005	25.01.2008	2.981	0.0	0.154	2.900	0.009	3.109	0.154	4.251	0.052	1.426
641	West Kunlun Shan	12.03.2005	06.10.2005	0.570	0.0	-0.065	3.369	-0.062	3.335	0.090	4.741	0.158	8.319
642	West Kunlun Shan	12.03.2005	04.02.2006	0.901	8.6	0.012	3.631	-0.085	3.415	0.086	4.984	0.095	5.530
643	West Kunlun Shan	12.03.2005	11.02.2006	0.921	0.0	0.054	3.163	0.178	3.178	0.186	4.484	0.202	4.871
644	West Kunlun Shan	12.03.2005	12.04.2007	2.085	8.6	0.001	3.552	0.026	3.182	0.026	4.769	0.012	2.287
645	West Kunlun Shan	12.03.2005	29.11.2007	2.718	0.0	0.043	3.333	0.151	3.438	0.157	4.788	0.058	1.762
646	West Kunlun Shan	06.10.2005	11.02.2006	0.351	0.0	0.186	3.413	-0.201	3.322	0.274	4.763	0.780	13.581
647	West Kunlun Shan	06.10.2005	12.04.2007	1.515	8.6	0.140	3.738	0.173	3.346	0.222	5.016	0.147	3.311
648	West Kunlun Shan	06.10.2005	29.11.2007	2.148	0.0	0.047	3.644	0.133	3.649	0.141	5.157	0.066	2.401
649	West Kunlun Shan	06.10.2005	08.12.2007	2.173	8.6	0.087	4.028	0.032	3.811	0.093	5.545	0.043	2.552
650	West Kunlun Shan	04.02.2006	12.04.2007	1.184	0.0	-0.041	3.397	0.185	3.412	0.189	4.815	0.160	4.068
651	West Kunlun Shan	04.02.2006	08.12.2007	1.841	0.0	-0.280	3.944	0.137	3.809	0.312	5.483	0.169	2.978
652	West Kunlun Shan	04.02.2006	25.01.2008	1.973	0.0	0.253	3.097	0.002	3.292	0.253	4.520	0.128	2.291
653	West Kunlun Shan	11.02.2006	12.04.2007	1.164	8.6	0.085	3.551	-0.196	3.295	0.213	4.844	0.183	4.160
654	West Kunlun Shan	11.02.2006	29.11.2007	1.797	0.0	0.001	3.408	0.180	3.421	0.180	4.829	0.100	2.687
655	West Kunlun Shan	11.02.2006	08.12.2007	1.822	8.6	-0.043	3.990	0.018	3.759	0.046	5.482	0.026	3.009

No.	Geographic region	Date (dd.mm.yyyy)		Time span (yr)	Incidence angle diff. (°)	Image-cross correlation residual offset (m)				Total displacement uncertainty (m)		Velocity uncertainty (m yr ⁻¹)	
		Scene 1	Scene 2			East-West		North-South		Mean	SD	Mean	SD
						Mean	SD	Mean	SD				
656	West Kunlun Shan	11.02.2006	25.01.2008	1.953	8.5	0.083	3.783	-0.224	3.723	0.239	5.308	0.122	2.717
657	West Kunlun Shan	12.04.2007	29.11.2007	0.633	8.6	-0.068	3.693	0.003	3.486	0.068	5.079	0.108	8.025

Note: The mean of the mean velocity uncertainty (column 13) is 0.252 m yr⁻¹, its median is 0.096 m yr⁻¹. The mean of the standard deviation (SD) of the velocity uncertainty (column 14) is 5.112 m yr⁻¹, its median is 2.687 m yr⁻¹. Because the distributions of the mean and SD are asymmetric, the means are shifted towards high values, we regard the median values as more indicative of average velocity uncertainties for our study.

Table S5: Glaciers and frontal changes

Glacier ID	Region	Glacier area (km ²)	Estimated snowline (m asl)	Date 1 (dd.mm.yyyy)	Date 2 (dd.mm.yyyy)	Mean-annual area change (m ² yr ⁻¹)	Front width (m)	Mean-annual frontal change (m yr ⁻¹)	Percentage of profile with mean velocity (<i>u</i>) < 2.5 m yr ⁻¹ (%)	Debris cover (%)	Mean slope above snowline (°)	Mean slope terminus region (°)
101	HK	13.4	5000	31.08.2000	19.08.2007	1448	507	2.9	4.1	22.5	31.1	5.7
102	HK	16.0	5400	31.08.2000	19.08.2007	1139	483	2.4	25.6	26.9	34.4	4.4
103	HK	13.3	5000	31.08.2000	19.08.2007	2275	547	4.2	0.0	27.8	33.2	5.6
104	HK	16.9	4850	31.08.2000	19.08.2007	-2311	576	-4.0	5.7	21.3	31.7	5.2
105	HK	49.0	5200	31.08.2000	19.08.2007	-5589	312	-17.9	0.0	21.0	31.1	10.2
106	HK	3.7	4600	31.08.2000	19.08.2007	-3844	635	-6.1	13.4	23.5	28.7	5.4
107	HK	4.1	4850	31.08.2000	19.08.2007	-2636	801	-3.3	1.9	30.6	34.4	9.9
108	HK	7.8	5100	31.08.2000	19.08.2007	-2521	392	-6.4	11.5	18.2	32.9	11.7
201	HK	14.2	5400	31.08.2000	19.08.2007	-2033	385	-5.3	2.4	31.5	33.0	7.4
202	HK	9.9	5150	28.09.2001	27.07.2007	-7202	290	-24.8	0.0	1.8	29.4	10.3
203	HK	8.2	5200	31.08.2000	19.08.2007	54	377	0.1	0.6	22.8	34.7	8.5
204	HK	17.0	5200	NaN	NaN	NaN	NaN	NaN	5.0	23.0	35.8	4.7
205	HK	12.4	5150	24.06.2001	27.07.2007	-1883	339	-5.6	0.0	25.0	33.6	10.7
206	HK	11.3	5200	NaN	NaN	NaN	NaN	NaN	9.2	39.6	37.2	7.8
207	HK	20.1	5300	24.06.2001	27.07.2007	-4923	593	-8.3	0.0	1.8	32.1	15.1
208	HK	29.0	5200	31.08.2000	19.08.2007	-2759	749	-3.7	2.6	43.0	37.4	7.5
209	HK	26.5	5100	31.08.2000	19.08.2007	-9636	826	-11.7	0.0	15.1	33.5	5.6
210	HK	89.7	5550	NaN	NaN	NaN	NaN	NaN	5.0	15.6	32.0	5.9
211	HK	65.0	5180	NaN	NaN	NaN	NaN	NaN	0.0	25.2	32.9	4.1
301	K	5.2	4700	NaN	NaN	NaN	NaN	NaN	0.0	27.9	32.3	9.4
302	K	33.0	4750	NaN	NaN	NaN	NaN	NaN	0.4	20.6	33.4	3.0
303	K	59.7	4850	30.09.2001	30.10.2006	3786	1191	3.2	0.0	6.8	27.6	5.5
304	K	103.6	4800	30.09.2001	30.10.2006	-73394	2741	-26.8	0.0	5.1	27.6	6.1
305	K	127.2	4700	30.09.2001	12.09.2006	988	1281	0.8	0.0	14.3	26.7	5.4
306	K	137.5	4900	30.09.2001	12.09.2006	-9037	936	-9.7	0.0	14.4	27.5	4.6
307	K	387.8	4500	30.09.2001	30.10.2006	1981	1336	1.5	0.5	23.8	29.4	6.1
308	K	4.8	4700	30.09.2001	30.10.2006	2761	443	6.2	0.0	8.5	29.6	7.8
309	K	42.5	4800	30.09.2001	13.09.2004	2266	398	5.7	0.8	25.2	31.8	6.9
401	K	502.0	4850	11.09.2000	27.06.2007	-16105	1723	-9.3	0.0	10.3	23.8	4.5
402	K	6.9	4700	18.05.2001	27.06.2007	-6007	267	-22.5	0.8	0.3	29.5	10.0
403	K	34.1	4900	NaN	NaN	NaN	NaN	NaN	1.0	9.2	24.5	9.8
404	K	25.8	4400	NaN	NaN	NaN	NaN	NaN	0.0	23.3	27.3	9.1
405	K	49.7	4000	NaN	NaN	NaN	NaN	NaN	0.0	24.6	24.4	8.9
407	K	209.8	4800	NaN	NaN	NaN	NaN	NaN	0.0	10.7	23.6	2.5
408	K	150.9	5050	NaN	NaN	NaN	NaN	NaN	2.3	2.8	24.7	1.7
409	K	85.0	4600	NaN	NaN	1007	1013	1.0	0.0	26.6	28.8	4.6
410	K	4.0	4700	11.09.2000	27.06.2007	-127	382	-0.3	9.0	0.2	24.8	8.0
501	K	19.9	5050	18.05.2001	27.06.2007	3251	416	7.8	0.0	23.4	26.4	8.9
502	K	18.2	5150	11.09.2000	30.03.2004	-8026	354	-22.7	0.0	18.1	27.6	8.3
503	K	9.5	5000	03.10.2002	25.09.2005	14601	433	33.7	0.0	33.3	31.7	7.7
504	K	9.1	5000	11.09.2000	26.07.2006	-4562	331	-13.8	0.7	25.2	29.6	8.5
505	K	30.2	4900	11.09.2000	30.03.2004	3188	504	6.3	0.0	9.9	27.8	7.6
506	K	27.9	4900	11.09.2000	26.07.2006	1159	408	2.8	0.0	18.1	28.7	8.9
507	K	21.6	4850	11.09.2000	26.07.2006	67	394	0.2	0.0	48.9	33.5	7.8
508	K	53.3	4800	11.09.2000	30.03.2004	-1038	340	-3.1	0.0	26.7	27.9	8.5
509	K	31.0	4900	11.09.2000	25.09.2005	NaN	NaN	NaN	0.0	24.1	29.1	5.7
510	K	35.3	5100	NaN	NaN	NaN	NaN	NaN	0.0	19.2	30.1	7.9
511	K	46.3	5200	NaN	NaN	7211	673	10.7	0.0	33.6	31.9	4.3
512	K	51.0	5000	11.09.2000	30.03.2004	1515	897	1.7	0.0	42.6	33.3	4.5
513	K	1.1	5000	03.10.2002	25.09.2005	-2475	148	-16.7	9.3	59.8	34.1	16.5
514	K	2.6	5250	11.09.2000	26.07.2006	175	336	0.5	0.0	7.3	28.6	11.4
515	K	1.9	5200	29.08.2001	21.06.2005	-1573	229	-6.9	2.5	15.2	32.6	19.4
516	K	3.9	5000	11.09.2000	26.07.2006	-23686	309	-76.7	0.0	21.4	28.8	16.2
517	K	7.1	4900	11.09.2000	26.07.2006	NaN	NaN	NaN	1.1	35.1	29.4	12.3
518	K	5.0	5100	NaN	NaN	94	555	0.2	0.0	14.1	32.7	15.8
519	K	4.4	5200	03.10.2002	30.03.2004	6248	472	13.2	0.0	15.8	26.1	9.5
520	K	3.2	4950	29.08.2001	21.06.2005	-6381	348	-18.3	0.0	41.8	31.4	11.2
521	K	5.6	5100	11.09.2000	26.07.2006	921	380	2.4	0.0	12.3	33.4	14.2
522	K	3.2	4950	03.10.2002	30.03.2004	16935	377	44.9	0.0	20.4	32.9	13.6
523	K	658.1	5050	03.10.2002	21.06.2005	-11532	1716	-6.7	0.0	24.8	31.0	6.0
601	WH	7.8	5200	11.09.2000	26.07.2006	2465	626	3.9	4.7	19.0	29.1	7.6
602	WH	21.6	5000	22.10.2000	22.12.2007	-4688	702	-6.7	0.0	7.0	19.9	6.5
603	WH	6.4	4850	12.10.2002	07.10.2006	2725	302	9.0	1.6	43.5	27.0	7.7
604	WH	24.9	5000	12.10.2002	07.10.2006	NaN	NaN	NaN	4.3	41.8	28.1	4.5
605	WH	27.3	4900	NaN	NaN	-2437	736	-3.3	1.0	15.7	25.7	4.8
606	WH	22.4	4850	22.10.2000	07.10.2006	-12467	928	-13.4	4.2	20.4	26.4	6.4
607	WH	21.2	5050	12.10.2002	07.10.2006	-5889	451	-13.1	0.5	5.0	21.2	7.5

Glacier ID	Region	Glacier area (km ²)	Estimated snowline (m asl)	Date 1 (dd.mm.yyyy)	Date 2 (dd.mm.yyyy)	Mean-annual area change (m ² yr ⁻¹)	Front width (m)	Mean-annual frontal change (m yr ⁻¹)	Percentage of profile with mean velocity (u) < 2.5 m yr ⁻¹ (%)	Debris cover (%)	Mean slope above snowline (°)	Mean slope terminus region (°)
608	WH	21.9	4650	22.10.2000	07.10.2006	-15596	540	-28.9	0.4	42.7	30.5	5.1
609	WH	17.3	5150	31.10.2003	07.10.2006	-4301	519	-8.3	7.6	12.3	26.2	5.8
610	WH	17.7	4900	22.10.2000	07.10.2006	-12963	878	-14.8	0.0	37.0	25.9	4.5
611	WH	31.1	4700	22.10.2000	07.10.2006	-8111	551	-14.7	2.0	27.1	25.8	4.7
612	WH	25.6	5000	31.10.2003	22.12.2007	-4983	818	-6.1	1.8	14.3	23.9	4.3
613	WH	29.9	4900	22.10.2000	22.12.2007	-8324	728	-11.4	0.0	12.5	24.8	4.4
614	WH	20.7	5000	12.10.2002	22.12.2007	-1639	646	-2.5	0.0	29.0	28.2	6.0
615	WH	34.5	4650	05.03.2003	22.12.2007	-81487	2128	-38.3	0.0	31.9	27.6	3.6
616	WH	60.9	4900	31.10.2003	22.12.2007	-343	826	-0.4	1.0	27.3	28.5	5.2
617	WH	44.8	4800	05.03.2003	22.12.2007	26	871	0.0	2.2	30.3	28.9	5.5
618	WH	66.9	5050	31.10.2003	22.12.2007	-25714	1301	-19.8	0.0	6.2	22.9	4.2
619	WH	2.5	5150	05.03.2003	22.12.2007	-459	402	-1.1	0.0	4.5	19.3	7.8
620	WH	2.7	5200	05.03.2003	22.12.2007	-4705	558	-8.4	0.0	2.6	18.4	8.6
621	WH	6.3	5000	05.03.2003	22.12.2007	-9999	803	-12.5	0.0	8.9	20.9	6.1
622	WH	7.1	4850	12.10.2002	07.10.2006	-2759	445	-6.2	0.6	44.8	26.8	5.0
623	WH	5.2	5200	12.10.2002	07.10.2006	-1739	833	-2.1	2.4	12.3	26.0	7.6
624	WH	4.0	4650	22.10.2000	22.12.2007	-5927	525	-11.3	0.0	23.1	30.7	6.7
625	WH	6.0	4600	12.10.2002	07.10.2006	NaN	NaN	NaN	8.8	48.4	31.7	3.7
626	WH	10.5	5180	NaN	NaN	-19992	595	-33.6	0.6	3.8	18.4	8.4
627	WH	6.6	4850	12.10.2002	07.10.2006	-5319	495	-10.7	0.0	27.3	24.3	6.9
701	WH	6.6	5000	31.10.2003	07.10.2006	-3734	251	-14.9	0.0	8.5	23.2	19.0
702	WH	10.4	5250	25.06.2000	16.10.2006	-5048	568	-8.9	5.8	27.8	33.0	7.1
703	WH	15.3	5200	25.06.2000	13.06.2007	428	553	0.8	0.0	6.4	22.2	15.2
704	WH	7.2	5350	25.06.2000	16.10.2006	-3428	425	-8.1	0.0	10.3	30.4	6.5
705	WH	13.7	5400	24.10.2003	16.10.2006	-6616	559	-11.8	0.0	12.5	29.9	7.5
706	WH	22.2	5300	28.08.2000	20.11.2007	-6181	321	-19.3	1.2	8.9	24.3	5.6
707	WH	25.7	5350	08.10.2003	20.11.2007	-7219	1172	-6.2	0.0	2.9	28.1	6.0
708	WH	15.2	5200	28.08.2000	30.09.2006	-1809	302	-6.0	0.6	25.9	29.5	7.2
709	WH	19.3	5300	25.06.2000	30.09.2006	-1711	517	-3.3	0.0	6.9	25.2	5.7
710	WH	18.6	5200	30.10.2002	20.11.2007	-1215	384	-3.2	4.4	45.6	31.6	4.8
711	WH	28.9	5200	28.08.2000	13.06.2007	-1131	270	-4.2	0.0	12.2	26.7	9.1
712	WH	77.1	5300	28.08.2000	13.06.2007	-23690	672	-35.3	0.3	11.5	24.2	4.6
713	WH	2.4	5500	28.08.2000	20.11.2007	-823	158	-5.2	0.0	2.0	29.1	7.6
714	WH	3.4	5400	28.08.2000	20.11.2007	-2435	447	-5.4	6.3	50.8	35.0	7.9
715	WH	5.5	5250	25.06.2000	13.06.2007	-1626	291	-5.6	0.0	8.6	23.5	14.0
716	WH	3.9	5000	28.08.2000	20.11.2007	-6660	511	-13.0	5.2	5.4	23.1	7.0
717	WH	4.5	5450	25.06.2000	16.10.2006	-2070	539	-3.8	0.0	2.1	33.4	9.6
718	WH	6.2	5400	08.10.2003	20.11.2007	-2254	906	-2.5	13.5	34.3	30.9	6.3
719	WH	8.3	5450	25.06.2000	13.06.2007	-2816	391	-7.2	0.0	0.9	18.4	8.4
720	WH	12.2	4800	28.08.2000	20.11.2007	-16120	797	-20.2	1.1	36.9	29.4	4.7
801	WH	4.7	5550	25.06.2000	13.06.2007	-2330	220	-10.6	0.0	12.5	27.4	7.5
802	WH	5.3	5000	08.10.2003	20.11.2007	-18550	489	-37.9	2.2	73.0	34.2	6.9
803	WH	9.4	5000	30.10.2002	15.12.2007	-9062	465	-19.5	0.0	10.9	22.9	10.0
804	WH	8.8	5150	30.10.2002	15.12.2007	-13114	523	-25.1	1.6	31.1	28.3	8.1
805	WH	8.5	5450	30.10.2002	15.12.2007	-2813	358	-7.9	0.0	16.0	24.8	9.5
806	WH	11.8	5100	30.10.2002	20.11.2007	-5065	296	-17.1	0.0	12.6	23.1	6.3
807	WH	13.1	5000	30.10.2002	15.12.2007	-8434	414	-20.4	0.0	18.4	28.2	9.3
808	WH	10.0	5000	30.10.2002	20.11.2007	-908	441	-2.1	5.1	54.3	29.3	6.0
809	WH	26.1	4950	30.10.2002	15.12.2007	-23835	347	-68.7	0.0	25.0	24.1	5.2
810	WH	16.7	5000	30.10.2002	15.12.2007	-4944	136	-36.4	2.9	3.7	18.9	9.4
811	WH	36.8	4900	30.10.2002	15.12.2007	2582	697	3.7	2.7	31.6	26.7	4.5
812	WH	109.3	5150	30.10.2002	15.12.2007	1341	351	3.8	3.0	23.0	24.0	4.8
813	WH	3.8	5100	30.10.2002	15.12.2007	3413	268	12.7	0.0	6.0	26.6	15.2
814	WH	3.0	5500	08.09.2004	15.12.2007	-15567	267	-58.3	0.0	43.4	28.1	7.5
815	WH	3.9	5450	08.10.2003	15.12.2007	-4730	372	-12.7	2.4	8.7	24.7	8.5
816	WH	12.6	4900	08.10.2003	20.11.2007	-11699	840	-13.9	1.8	22.2	26.4	6.7
817	WH	5.8	5850	30.10.2002	15.12.2007	2205	294	7.5	0.0	52.8	26.9	7.3
901	CHN	8.1	5750	30.10.2002	15.12.2007	-5545	676	-8.2	1.9	13.7	23.3	6.8
902	CHN	15.8	5500	21.11.2001	06.06.2007	-14688	468	-31.4	2.1	22.0	23.6	5.4
903	CHN	16.2	5450	17.03.2001	01.11.2006	-6249	625	-10.0	4.2	27.6	24.7	6.1
904	CHN	1.4	5800	17.03.2001	31.12.2007	994	265	3.8	7.1	32.2	24.7	12.4
905	CHN	4.3	5750	21.11.2001	31.12.2007	-10791	1059	-10.2	1.4	7.3	20.5	7.6
906	CHN	3.7	5650	21.11.2001	31.12.2007	-1857	268	-6.9	7.5	37.5	28.8	6.9
907	CHN	3.7	5500	21.11.2001	06.06.2007	-2442	465	-5.3	7.8	32.7	25.8	8.6
1001	CHS	12.8	5200	17.03.2001	01.11.2006	857	462	1.9	0.0	42.6	29.3	7.6
1002	CHS	21.5	5150	07.12.2001	31.12.2007	-2291	299	-7.7	0.0	17.4	27.8	6.4
1003	CHS	28.9	4900	22.09.2001	31.12.2007	-1065	677	-1.6	0.4	38.6	27.2	6.8
1004	CHN	23.0	4950	22.09.2001	13.11.2007	NaN	NaN	NaN	14.0	33.3	25.1	6.1
1005	CHS	7.5	5200	NaN	NaN	-17099	475	-36.0	0.0	19.5	26.9	5.5
1006	CHS	17.5	4750	21.11.2001	31.12.2007	0	593	0.0	16.9	57.8	34.5	5.1
1007	CHS	4.9	5000	30.12.2001	31.12.2007	-10096	414	-24.4	6.4	40.4	32.0	7.0
1101	CHN	6.4	5500	07.12.2001	31.12.2007	-1729	375	-4.6	1.0	28.2	30.8	8.8

Glacier ID	Region	Glacier area (km ²)	Estimated snowline (m asl)	Date 1 (dd.mm.yyyy)	Date 2 (dd.mm.yyyy)	Mean-annual area change (m ² yr ⁻¹)	Front width (m)	Mean-annual frontal change (m yr ⁻¹)	Percentage of profile with mean velocity (u) < 2.5 m yr ⁻¹ (%)	Debris cover (%)	Mean slope above snowline (°)	Mean slope terminus region (°)
1102	CHS	18.2	5400	09.09.2001	09.10.2006	-4163	415	-10.0	7.7	24.0	26.7	6.0
1103	CHN	26.1	5650	09.11.2000	09.10.2006	-738	431	-1.7	2.9	21.8	23.8	5.4
1104	CHS	20.6	5350	09.09.2001	09.10.2006	3710	693	5.4	4.7	51.1	36.3	5.6
1105	CHS	26.2	5700	09.11.2000	09.10.2006	613	315	1.9	0.0	24.3	29.4	8.1
1106	CHS	57.2	5500	09.09.2001	09.10.2006	-5020	351	-14.3	8.0	36.6	29.9	5.1
1107	CHS	30.2	5450	09.09.2001	09.10.2006	440	488	0.9	0.3	46.9	32.8	6.7
1108	CHS	115.0	5150	09.11.2000	09.10.2006	-4448	872	-5.1	0.0	32.0	32.0	6.8
1109	CHN	2.5	5700	09.09.2001	09.10.2006	-407	265	-1.5	7.5	19.7	31.9	5.7
1110	CHN	6.2	5450	09.09.2001	09.10.2006	-3673	347	-10.6	3.6	2.4	27.8	6.6
1111	CHN	2.6	5700	09.09.2001	09.10.2006	-558	274	-2.0	24.4	52.9	32.1	7.7
1112	CHN	3.0	5400	09.09.2001	09.10.2006	4320	251	17.2	0.0	63.1	35.8	10.7
1113	CHS	6.4	5700	09.09.2001	10.11.2006	2799	393	7.1	2.4	18.6	26.7	9.5
1114	CHN	5.8	5750	09.09.2001	09.10.2006	NaN	NaN	NaN	15.0	32.7	28.5	6.0
1115	CHN	9.2	5500	NaN	NaN	8801	322	27.3	3.8	42.0	31.1	6.7
1201	CHN	7.6	5650	21.11.2001	10.11.2006	-14321	415	-34.5	2.7	7.5	21.1	5.8
1202	CHN	10.9	5700	31.10.2001	14.04.2007	-817	214	-3.8	0.0	15.8	22.3	7.3
1203	CHN	22.4	5650	03.01.2002	14.04.2007	-12444	1115	-11.2	0.0	20.8	24.7	4.3
1204	CHN	24.8	5650	28.12.2002	14.04.2007	-30646	1145	-26.8	0.0	3.1	18.6	4.5
1205	CHN	22.8	5650	28.12.2002	19.07.2007	-58953	976	-60.4	0.0	3.7	22.5	5.1
1206	CHN	7.1	5650	28.12.2002	15.11.2007	-11339	470	-24.1	2.3	11.4	23.8	5.0
1207	CHN	8.6	5800	31.10.2001	19.07.2007	-9716	586	-16.6	0.0	6.1	22.0	5.5
1301	CHS	7.4	5850	28.12.2002	19.07.2007	-4548	337	-13.5	2.0	27.9	26.6	6.0
1302	CHS	11.0	5600	15.12.2000	07.04.2007	NaN	NaN	NaN	3.6	29.9	28.2	6.2
1303	CHS	14.8	5600	NaN	NaN	NaN	NaN	NaN	0.0	12.3	21.2	7.8
1304	CHN	13.9	5950	NaN	NaN	-32724	960	-34.1	2.4	10.2	19.6	4.7
1305	CHS	10.4	5700	15.12.2000	04.01.2008	-12017	488	-24.6	4.5	25.6	37.1	6.4
1306	CHS	15.1	5750	17.02.2001	07.04.2007	-1207	506	-2.4	5.1	22.0	27.9	7.5
1307	CHN	15.8	5950	29.11.2000	04.01.2008	-3566	296	-12.0	0.0	3.2	23.7	6.5
1308	CHS	9.3	5700	17.02.2001	04.01.2008	NaN	NaN	NaN	0.0	73.9	37.4	5.9
1309	CHN	32.2	6000	NaN	NaN	-5292	788	-6.7	1.1	10.4	21.7	6.3
1310	CHS	20.6	5950	15.12.2000	04.01.2008	-12701	410	-31.0	0.0	8.3	33.0	5.2
1311	CHS	24.8	5850	01.05.2001	04.01.2008	-4760	394	-12.1	18.5	29.1	29.4	3.0
1312	CHS	20.1	5700	29.11.2000	04.01.2008	3855	610	6.3	0.0	56.6	35.3	5.4
1313	CHS	16.5	5800	03.11.2002	04.01.2008	-5993	372	-16.1	4.3	10.5	21.1	1.9
1314	CHS	29.0	5800	17.02.2001	04.01.2008	-7925	448	-17.7	0.0	21.8	25.0	7.1
1315	CHS	3.0	5800	17.02.2001	04.01.2008	-544	350	-1.6	2.8	7.0	25.4	12.7
1316	CHS	3.6	5700	15.12.2000	10.02.2004	1901	364	5.2	0.0	19.4	29.3	6.6
1317	CHS	3.0	5650	15.12.2000	10.02.2004	-1241	305	-4.1	0.0	19.0	30.2	6.7
1318	CHS	4.8	5650	15.12.2000	10.02.2004	7311	NaN	NaN	0.0	29.8	28.2	9.8
1319	CHN	5.5	5900	15.12.2000	10.02.2004	-840	419	-2.0	0.0	8.3	27.1	9.1
1320	CHN	11.9	5800	15.12.2000	04.01.2008	-13694	826	-16.6	0.0	4.6	21.4	8.2
1321	CHS	6.6	5900	15.12.2000	04.01.2008	-2673	383	-7.0	0.0	7.3	28.5	18.5
1322	CHS	5.0	5700	02.10.2002	07.04.2007	-743	NaN	NaN	17.4	58.0	33.3	7.5
1323	CHN	7.9	6000	15.12.2000	04.01.2008	-17497	517	-33.8	0.0	5.1	24.6	7.5
1324	CHS	5.3	5800	29.11.2000	04.01.2008	-4261	622	-6.9	0.0	6.9	25.9	8.7
1325	CHN	8.8	5900	15.12.2000	04.01.2008	-20543	949	-21.6	0.0	1.6	26.4	6.1
1326	CHN	5.9	5800	15.12.2000	04.01.2008	-10707	338	-31.7	9.4	14.7	26.9	5.8
1401	CHS	5.6	6150	15.12.2000	10.02.2004	-8353	1027	-8.1	4.5	8.7	28.2	13.3
1402	CHS	9.8	5600	20.12.2001	13.11.2005	-831	375	-2.2	45.8	55.0	29.9	3.4
1403	CHS	9.8	5750	28.09.2000	19.01.2007	-36605	580	-63.1	2.1	32.2	31.0	2.6
1404	CHN	13.0	6000	28.09.2000	19.01.2007	575	394	1.5	0.0	26.3	29.6	10.0
1405	CHN	13.1	5800	20.12.2001	06.01.2008	NaN	NaN	NaN	1.6	36.4	32.3	3.1
1406	CHS	9.1	6300	NaN	NaN	-3812	517	-7.4	37.6	78.2	42.9	4.9
1407	CHS	13.1	5800	20.12.2001	06.01.2008	4919	524	9.4	6.9	52.9	37.2	2.3
1408	CHN	15.9	5950	28.09.2000	19.01.2007	-10347	909	-11.4	0.0	5.1	18.7	5.3
1409	CHS	15.3	6300	30.10.2000	06.01.2008	-10830	784	-13.8	0.0	46.5	36.0	2.8
1410	CHN	13.1	6200	20.12.2001	06.01.2008	NaN	NaN	NaN	2.7	13.4	22.6	7.1
1411	CHN	17.4	6150	NaN	NaN	292	298	1.0	19.2	32.3	24.6	3.5
1412	CHN	29.0	6050	30.10.2000	06.01.2008	-1594	364	-4.4	6.6	38.5	27.9	4.5
1413	CHN	12.8	6150	30.10.2000	06.01.2008	-869	436	-2.0	11.5	39.8	31.0	4.8
1414	CHS	10.7	5700	28.09.2000	06.12.2005	873	543	1.6	10.8	92.6	38.6	2.6
1415	CHN	19.0	6300	28.09.2000	19.01.2007	1102	700	1.6	5.8	14.9	26.5	5.7
1416	CHS	31.1	6000	30.10.2000	06.01.2008	-294	278	-1.1	19.5	30.0	28.9	2.8
1417	CHS	21.9	6050	20.12.2001	06.01.2008	NaN	NaN	NaN	0.0	15.5	28.9	3.2
1418	CHN	25.9	6150	NaN	NaN	500	713	0.7	4.1	31.2	30.8	3.5
1419	CHN	37.2	6200	28.09.2000	06.12.2005	NaN	NaN	NaN	1.2	26.3	32.5	2.1
1420	CHN	20.6	5800	NaN	NaN	-2672	764	-3.5	16.4	40.2	29.5	1.9
1421	CHS	0.9	5700	30.10.2000	06.01.2008	-1657	770	-2.2	0.0	12.6	28.3	13.7
1422	CHN	35.1	5500	14.10.2000	06.01.2008	-8309	413	-20.1	3.0	64.3	27.1	5.6
1423	CHS	18.7	5800	20.12.2001	13.11.2005	0	652	0.0	13.8	49.9	34.3	1.8
1424	CHS	1.7	5650	14.10.2000	19.01.2007	-5154	1082	-4.8	0.0	5.9	24.4	7.9
1425	CHS	58.4	6000	14.10.2000	06.01.2008	0	999	0.0	13.1	34.4	29.5	2.2

Glacier ID	Region	Glacier area (km ²)	Estimated snowline (m asl)	Date 1 (dd.mm.yyyy)	Date 2 (dd.mm.yyyy)	Mean-annual area change (m ² yr ⁻¹)	Front width (m)	Mean-annual frontal change (m yr ⁻¹)	Percentage of profile with mean velocity (<i>u</i>) < 2.5 m yr ⁻¹ (%)	Debris cover (%)	Mean slope above snowline (°)	Mean slope terminus region (°)
1426	CHN	1.9	6200	28.09.2000	19.01.2007	NaN	NaN	NaN	0.0	13.1	28.2	13.8
1427	CHS	5.7	5600	NaN	NaN	-55215	NaN	NaN	50.5	71.0	35.3	3.7
1428	CHS	3.6	6300	20.12.2001	06.01.2008	-63	474	-0.1	50.7	81.2	40.1	4.1
1429	CHS	1.8	5750	20.12.2001	06.01.2008	-1744	404	-4.3	5.1	29.3	38.2	12.3
1430	CHS	3.3	6300	28.09.2000	19.01.2007	-857	363	-2.4	41.0	76.4	42.8	2.8
1431	CHN	7.4	6250	20.12.2001	06.01.2008	-9039	888	-10.2	3.2	3.1	20.8	8.0
1432	CHS	8.1	5700	30.10.2000	06.01.2008	-2109	303	-7.0	44.4	80.8	39.5	2.5
1433	CHN	10.8	5550	28.09.2000	19.01.2007	-2361	514	-4.6	39.1	74.6	33.5	2.2
1434	CHS	7.0	5800	28.09.2000	19.01.2007	NaN	NaN	NaN	33.3	62.4	40.4	4.0
1435	CHS	6.8	5700	NaN	NaN	NaN	NaN	NaN	31.1	69.6	42.1	3.5
1436	CHN	4.8	6100	NaN	NaN	271	509	0.5	0.0	13.6	21.2	7.2
1437	CHN	13.5	6300	28.09.2000	06.12.2005	-12600	773	-16.3	2.3	9.1	20.6	6.8
1438	CHN	8.1	6200	30.10.2000	06.01.2008	68	463	0.1	6.5	7.5	20.4	8.3
1501	CHS	8.5	5500	28.09.2000	06.12.2005	-757	237	-3.2	20.6	34.5	30.1	2.6
1502	CHN	5.0	5600	01.12.2000	30.12.2007	NaN	NaN	NaN	0.0	7.7	28.1	7.1
1503	CHN	11.0	5500	NaN	NaN	-1649	542	-3.0	0.0	16.8	20.5	8.2
1504	CHS	6.1	5650	01.12.2000	30.12.2007	1440	429	3.4	32.3	59.5	30.1	2.9
1505	CHS	10.7	5550	01.12.2000	30.12.2007	-36434	784	-46.5	0.0	13.1	28.1	3.4
1506	CHN	32.2	5950	07.10.2000	30.12.2007	-35006	792	-44.2	0.0	10.9	25.6	3.5
1507	CHS	26.0	5400	01.12.2000	30.12.2007	-3126	405	-7.7	1.2	42.8	33.6	6.8
1508	CHS	57.4	5450	27.11.2001	30.12.2007	-11633	507	-22.9	7.6	36.0	33.6	2.6
1509	CHS	75.8	5500	01.12.2000	30.12.2007	-7117	491	-14.5	11.8	33.5	27.5	1.7
1510	CHS	65.8	5400	01.12.2000	30.12.2007	4628	614	7.5	0.7	41.4	27.7	6.1
1511	CHN	1.2	5700	07.10.2000	30.12.2007	-1334	384	-3.5	0.0	19.4	28.2	16.8
1512	CHN	1.5	5850	07.10.2000	30.12.2007	-4504	295	-15.3	0.0	7.3	27.3	9.3
1513	CHS	2.8	5400	01.12.2000	30.12.2007	-2594	376	-6.9	32.1	35.8	24.6	5.2
1514	CHN	2.0	5800	01.12.2000	30.12.2007	-2108	283	-7.4	0.0	13.4	25.4	16.7
1515	CHN	4.8	5650	01.12.2000	30.12.2007	-9043	556	-16.3	0.0	13.5	27.2	9.0
1516	CHS	3.4	5750	01.12.2000	30.12.2007	-2582	350	-7.4	1.6	5.8	24.3	10.0
1517	CHS	4.5	5600	01.12.2000	30.12.2007	-5860	672	-8.7	3.5	11.9	23.2	11.2
1518	CHN	8.5	6000	01.12.2000	30.12.2007	-19177	600	-32.0	0.0	6.9	24.9	5.5
1519	CHS	8.3	5750	01.12.2000	30.12.2007	-3556	357	-10.0	3.8	6.1	30.4	9.2
1520	CHS	3.7	5700	01.12.2000	30.12.2007	NaN	NaN	NaN	3.0	14.0	27.5	16.2
1521	CHS	5.6	5800	NaN	NaN	-14649	493	-29.7	0.0	7.7	24.1	8.9
1522	CHN	4.2	5900	07.10.2000	30.12.2007	-6815	309	-22.1	2.5	7.2	26.0	9.0
1523	CHN	8.8	5950	01.12.2000	30.12.2007	863	370	2.3	0.0	6.6	25.5	8.8
1524	CHN	3.6	5650	01.12.2000	30.12.2007	-2724	293	-9.3	0.0	7.8	25.1	10.0
1525	CHS	5.8	5600	07.10.2000	30.12.2007	-5335	384	-13.9	0.0	12.5	26.3	7.8
1526	CHN	4.9	5800	01.12.2000	30.12.2007	-15392	361	-42.6	0.0	4.0	23.2	10.7
1527	CHN	6.5	5700	07.10.2000	30.12.2007	-8803	336	-26.2	0.0	5.9	24.6	8.0
1601	CHS	8.6	4950	07.10.2000	30.12.2007	-4170	270	-15.4	0.0	5.7	19.9	9.9
1602	CHN	9.0	6050	04.11.2001	14.12.2007	-17442	754	-23.1	0.0	1.1	15.3	10.2
1603	CHN	6.8	5950	20.01.2001	26.03.2007	-2606	500	-5.2	0.0	8.9	22.9	8.5
1604	CHS	12.1	5300	20.01.2001	14.12.2007	0	547	0.0	22.6	74.0	38.4	3.2
1605	CHS	9.4	5400	20.01.2001	18.01.2006	-3627	430	-8.4	1.4	25.3	31.0	13.4
1606	CHN	19.7	5650	20.01.2001	14.12.2007	-7657	666	-11.5	0.0	3.4	25.7	7.7
1607	CHN	13.9	5750	20.01.2001	29.05.2007	-5984	1321	-4.5	0.0	5.1	24.5	17.4
1608	CHN	15.9	6150	20.01.2001	14.12.2007	NaN	NaN	NaN	0.0	11.5	18.6	1.8
1609	CHN	46.8	5700	NaN	NaN	3159	944	3.3	6.4	25.7	25.5	2.6
1610	CHN	14.6	5650	20.01.2001	18.01.2006	-9200	654	-14.1	0.0	5.3	21.0	2.4
1611	CHN	27.7	5750	20.01.2001	14.12.2007	-39174	616	-63.6	0.0	9.7	22.9	3.5
1612	CHS	24.4	5300	20.01.2001	29.05.2007	0	560	0.0	0.7	53.3	34.1	2.9
1613	CHS	46.7	5100	20.01.2001	21.01.2007	0	1105	0.0	7.5	43.6	30.2	2.8
1614	CHN	73.7	5850	20.01.2001	18.01.2006	-9833	1504	-6.5	0.0	2.4	15.3	1.1
1615	CHN	4.1	5650	20.01.2001	26.03.2007	-12218	1213	-10.1	5.8	6.5	21.8	10.2
1616	CHS	2.9	5200	04.11.2001	11.10.2007	-7616	246	-31.0	1.4	9.4	22.1	8.7
1617	CHS	3.8	5300	04.11.2001	11.10.2007	-15021	615	-24.4	5.6	25.9	27.1	18.5
1618	CHN	4.0	5950	04.11.2001	14.12.2007	-3706	362	-10.2	3.8	12.6	23.6	9.7
1701	WKS	6.0	5850	20.01.2001	14.12.2007	605	362	1.7	0.0	5.1	21.4	12.3
1702	WKS	3.8	5850	26.03.2001	12.04.2007	-811	303	-2.7	0.0	4.2	15.5	14.2
1703	WKS	5.7	5850	26.03.2001	29.11.2007	-866	225	-3.8	0.0	2.3	17.4	10.6
1704	WKS	4.8	5800	26.03.2001	08.12.2007	-2004	252	-8.0	0.0	1.4	23.0	12.2
1705	WKS	8.6	5950	10.05.2000	08.12.2007	-838	487	-1.7	0.0	2.4	22.9	9.4
1706	WKS	48.7	5900	16.02.2002	29.11.2007	-268	1173	-0.2	0.0	0.7	11.1	6.1
1707	WKS	21.9	5850	10.05.2000	29.11.2007	-3241	395	-8.2	0.0	1.9	17.8	6.6
1708	WKS	43.5	5850	10.05.2000	08.12.2007	-18644	1749	-10.7	0.0	1.3	10.4	6.0
1709	WKS	35.5	5800	10.05.2000	08.12.2007	1731	543	3.2	0.0	2.2	17.6	7.5
1710	WKS	87.3	6000	26.03.2001	08.12.2007	NaN	NaN	NaN	9.5	0.3	8.1	2.9
1711	WKS	61.3	5850	NaN	NaN	-1869	231	-8.1	0.0	2.8	16.9	10.8
1712	WKS	90.7	5800	10.05.2000	08.12.2007	-11303	803	-14.1	0.0	2.5	18.2	6.0
1713	WKS	166.6	5900	16.02.2002	29.11.2007	-37571	3844	-9.8	5.3	6.1	11.3	4.5
1714	WKS	117.4	5700	13.03.2002	25.01.2008	-49649	1255	-39.6	17.8	1.5	12.5	4.4

Glacier ID	Region	Glacier area (km ²)	Estimated snowline (m asl)	Date 1 (dd.mm.yyyy)	Date 2 (dd.mm.yyyy)	Mean-annual area change (m ² yr ⁻¹)	Front width (m)	Mean-annual frontal change (m yr ⁻¹)	Percentage of profile with mean velocity (u) < 2.5 m yr ⁻¹ (%)	Debris cover (%)	Mean slope above snowline (°)	Mean slope terminus region (°)
1715	WKS	198.1	5750	10.03.2001	29.11.2007	-15822	809	-19.6	0.0	2.5	16.3	6.5
1716	WKS	80.8	5800	10.03.2001	29.11.2007	6602	869	7.6	0.0	1.9	16.3	8.2
1717	WKS	196.1	5800	26.03.2001	08.12.2007	-20334	630	-32.3	0.0	2.2	16.3	6.9
1718	WKS	133.2	5800	10.05.2000	08.12.2007	-24843	1190	-20.9	0.0	0.6	11.4	5.4
1719	WKS	2.9	5800	10.05.2000	08.12.2007	-1915	194	-9.9	0.0	2.9	18.6	16.3
1720	WKS	4.0	5930	10.05.2000	08.12.2007	826	223	3.7	0.0	9.9	24.8	18.2
1721	WKS	4.8	5850	10.03.2001	29.11.2007	-1416	200	-7.1	0.0	4.7	21.7	16.9

Note: For glaciers with “NaN’s” (Not a Number) in columns 5-9, we could not confidently map area changes in the terminus region because of poor visibility, e.g., due to snow cover or low image coverage. For glaciers with “NaN’s” in columns 8-9, defining a front width was problematic. For these glaciers we did not obtain mean-annual frontal change rates.

Supplementary Material References

1. Bindschadler, R.A., Scambos, T.A. Satellite-image-derived velocity field of an Antarctic ice stream. *Science*, **252**, 242–252 (1991).
2. Scambos, T.A., Dutkiewicz, M.J., Wilson, J.C., Bindschadler, R.A. Application of image cross-correlation to the measurement of glacier velocity using satellite image data. *Remote Sens. Environ.*, **42**, 177–186 (1992).
3. Kääb, A. Combination of SRTM3 and repeat ASTER data for deriving alpine glacier flow velocities in the Bhutan Himalaya. *Remote Sens. Environ.*, **94**, 463–474 (2005).
4. Stearns, L., Hamilton, G. A new velocity map for Byrd Glacier, East Antarctica, from sequential ASTER satellite imagery. *Ann. Glaciol.*, **41**, 71–76 (2005).
5. Howat, I.M., Joughin, I., Scambos, T.A. Rapid changes in ice discharge from Greenland outlet glaciers. *Science*, **315**, 1559–1561 (2007).
6. Leprince, S., Barbot, S., Ayoub, F., Avouac, J.-P. Automatic and precise orthorectification, coregistration, and subpixel correlation of satellite images, application to ground deformation measurements. *IEEE Trans. Geosci. Remote Sensing*, **45**, 1529–1558, doi: 10.1109/TGRS.2006.888937 (2007).
7. Scherler, D., Leprince, S., Strecker, M.R. Glacier-surface velocities in alpine terrain from optical satellite imagery - Accuracy improvement and quality assessment. *Remote Sens. Environ.*, **112**, 3806–3819, doi:10.1016/j.rse.2008.05.018 (2008).
8. Barrand, N. E., Murray, T. Multivariate controls on the incidence of glacier surging in the Karakoram Himalaya. *Arct. Antarct. Alp. Res.*, **38**, 489–498 (2007).
9. Paul, F., Huggel, C., Kääb, A. Combining satellite multispectral image data and a digital elevation model for mapping debris-covered glaciers. *Remote Sens. Environ.*, **89**, 510–518 (2004).
10. Ogilvie, I.H. The effect of superglacial débris on the advance and retreat of some Canadian glaciers, *J. Geol.*, **12**, 722–743 (1904).
11. Østrem, G. Ice melting under a thin layer of moraine, and the existence of ice cores in moraine ridges. *Geogr. Ann.*, **41**, 228–230 (1959).
12. Mattson, L.E., Gardner, J.S., Young, G.J. Ablation on Debris Covered Glaciers: an Example from the Rakhiot Glacier, Punjab, Himalaya, in *Snow and Glacier Hydrology* (eds Young, G.J.), 289–296 (IAHS Publ. 218, Wallingford, 1993).
13. Kayastha, R.B., Takeuchi, Y., Nakawo, M., Ageta, Y. Practical prediction of ice melting beneath various thickness of debris cover on Khumbu glacier, Nepal, using a positive degree-day factor, in *Debris-covered glaciers* (eds Nakawo, M., Raymond, C.F., Fountain, A.), 71–82 (IAHS Publ. 264, Wallingford, 2000).
14. Mihalcea, C., et al. Ice ablation and meteorological conditions on the debris-covered area of Baltoro glacier, Karakoram, Pakistan. *Ann. Glaciol.* **43**, 292–300 (2006).
15. Shroder, J.F., Bishop, M.P., Copland, L., Sloan, V.F. Debris-covered glaciers and rock glaciers in the Nanga Parbat Himalaya, Pakistan. *Geogr. Ann., Ser. A, Phys. Geogr.*, **82**, 17–31 (2000).
16. Owen, L.A., Derbyshire, E., Scott, C.H. Contemporary sediment production and transfer in high-altitude glaciers. *Sed. Geol.* **155**, 13–36 (2003).
17. Heimsath, A.M., McGlynn, R.S. Quantifying headwall retreat rates in the Nepal High Himalaya. *Geomorphology*, **97**, 5–23 (2008).
18. Bolch, T., Buchroithner, M., Pieczonka, T., Kunert, A. Planimetric and volumetric glacier changes in the Khumbu Himal, Nepal, since 1962 using Corona, Landsat TM and ASTER data. *J. Glaciol.*, **54**, 592–600.

19. Rabatel, A., Dedieu, J.-P., Vincent, C. Using remote-sensing data to determine equilibrium-line altitude and mass-balance time series: validation on three French glaciers, 1994-2002. *J. Glaciol.*, **51**(175), 539-546 (2005).
20. de Ferranti, J., 3" resolution digital elevation data for High Asia.
<http://www.viewfinderpanoramas.org/dem3.html> (Access: January 2007)
21. Farr, T.G., et al. The Shuttle Radar Topography Mission. *Rev. Geophys.*, **45**, RG2004, doi:10.1029/2005RG000183 (2007).
22. New, M., Lister, D., Hulme, M., Makin, I. A high-resolution data set of surface climate over global land areas. *Climate Research*, **21**, 1-25 (2002).
23. Oerlemans, J. Extracting a climate signal from 169 glacier records. *Science*, **308**, 675-677 (2005).
24. Leclercq, P., Oerlemans, J. Temperature reconstruction from glacier length fluctuations, an update. Submitted to *Climate Dynamics* (2010).