

HS: Measurements of Glacier Area, Thickness and Volume — (January 2012)

Key to Source Numbers

0001	Driedger and Kennard 1986	0002	Hodge 1979
0003	Jacobel 1995	0004	Macheret et al. 1988
0005	Zhuravlev 1981	0006	Zhuravlev 1985
0007	Björnsson 1981	0008	Nikitin et al. 2000a
0009	Su et al. 1984	0010	Navarro et al. 2005
0011	Nikitin et al. 2000b	0012	Navarro et al. 2009
0013	Pattyn et al. 2009	0014	Binder et al. 2009
0015	Ekman 1971	0016	Glazovskij et al. 1991
0017	Dowdeswell et al. 1986	0018	Gergan et al. 1999
0019	Björnsson 1986	0020	Aric and Brückl 2001
0021	Thyssen and Kohnen 1968	0022	Förtsch and Vidal 1958
0023	Förtsch et al. 1955	0024	Förtsch 1958
0025	Förtsch and Vidal 1956	0026	Förtsch and Vidal 1957
0027	Giese 1963	0028	Brockamp 1958
0029	Cherkasov 1965	0030	Brown et al. 2010
0031	Prinz et al. 2011	0032	Fischer 2009
0033	Brown et al. 1986	0034	Bælum and Benn 2011
0035	Dowdeswell et al. 2002	0036	Dowdeswell et al. 2004
0037	Rippin et al. 2003	0038	Span et al. 2005
0039	Hyndman 1965	0040	Paterson and Koerner 1974
0041	Macheret et al. 1999	0042	Fischer et al. 2007
0043	Wu et al. 2011	0044	Ma et al. 2008
0045	Wang and Pu 2009	0046	Ma et al. 2010

Bibliography — Measurements of Glacier Area, Thickness and Volume
(January 2012)

- Aric, K., and E. Brückl, 2001, Eisdickenmessungen auf Gletschern der Ostalpen, in Hammerl, C., W. Lenhardt, R. Steinacker and P. Steinhaus, eds., *Zentralanstalt fur Meteorologie und Geodynamik 1851-2001: 150 Jahre Meteorologie in Österreich*, 768-780. HS0020
- Bælum, K., and D.I. Benn, 2011, Thermal structure and drainage system of a small valley glacier (Tellbreen, Svalbard), investigated by ground penetrating radar, *The Cryosphere*, **5**(1), 139-149. HS0034
- Binder, D., E. Brückl, K.H. Roch, M. Behm, W. Schöner and B. Hynek, 2009, Determination of total ice volume and ice-thickness distribution of two glaciers in the Hohe Tauern region, Eastern Alps, from GPR data, *Annals of Glaciology*, **50**(51), 71-79. HS0014
- Björnsson, H., 1981, Radio-echo sounding maps of Storglaciären, Isfallsglaciären and Rabots glaciär, northern Sweden, *Geografiska Annaler*, **63A**(3-4), 225-231. HS0007
- Björnsson, H., 1986, Surface and bedrock topography of ice caps in Iceland mapped by radio-echo sounding, *Annals of Glaciology*, **8**, 11-19. HS0018
- Brockamp, B., 1958, Reflektionsseismische Wiederholungsmessungen auf dem Pasterzen Gletscher und ihre Bedeutung für die Feststellung von Gletscher- und Inlandeisschwankungen, *International Association of Scientific Hydrology*, **48**, 509-513. HS0028
- Brown, J., J. Harper and N. Humphrey, 2010, Cirque glacier sensitivity to 21st century warming: Sperry Glacier, Rocky Mountains, USA, *Global and Planetary Change*, **74**(2), 91-98. HS0030
- Brown, C.S., L.A. Rasmussen and M.F. Meier, 1986, Bed topography inferred from airborne radio-echo sounding of Columbia Glacier, Alaska, *Professional Paper 1258-G*, U.S. Geological Survey, Reston, VA. 26p. HS0033
- Cherkasov, P.A., 1965, Sejsmicheskoe zondirovanie lednikov bassejna reki Aganakty Tentekskoj v khrebrete Dzhungarskij Alatau, *Glyatsiolog. Issled. v Kazakhstane*, **5**, 117-134. HS0029
- Dowdeswell, J.A., T.J. Benham, M.R. Gorman, D. Burgess and M.J. Sharp, 2004, Form and flow of the Devon Island Ice Cap, Canadian Arctic, *Journal of Geophysical Research*, **109**(F2), F02002, doi: 10.1029/2003JF000095. HS0036
- Dowdeswell, J.A., R.P. Bassford, M.R. Gorman, M. Williams, A.F. Glazovskij, Yu. Ya. Macheret, A.P. Shepherd, Y.V. Vasilenko, L.M. Savatyugin, H.-W. Hubberten, and H. Miller, 2002, Form and flow of the Academy of Sciences Ice Cap, Severnaya Zemlya, Russian High Arctic, *Journal of Geophysical Research*, **107**(B4), 2076, doi:10.1029/2000JB000129. HS0035
- Dowdeswell, J.A., D.J. Drewry, A.P.R. Cooper, M.R. Gorman, O. Liestøl and O. Orheim, 1986, Digital mapping of the Nordaustlandet ice caps from airborne geophysical investigations, *Annals of Glaciology*, **8**, 51-58. HS0017
- Driedger, C.L., and P.M. Kennard, 1986, Glacier volume estimation on Cascade volcanoes: an analysis and comparison with other methods, *Annals of Glaciology*, **8**, 59-64. HS0001
- Ekman, S.R., 1971, Seismic investigations on the Nordaustlandet ice caps, *Geografiska Annaler*, **53A**, 1-13. HS0015

- Fischer, A., 2009, Calculation of glacier volume from sparse ice-thickness data, applied to Schaufelferner, Austria, *Journal of Glaciology*, **55**(191), 453-460. HS0032
- Fischer, A., N. Span, M. Kuhn, M. Massimo and M. Butschek, 2007, Radarmessungen der Eisdicke Österreichischer Gletscher. Band II: Messungen 1999 bis 2006, *Österreichische Beiträge zu Meteorologie und Geophysik*, **39**. HS0042
- Förtsch, O., 1958, Ergebnisse seismischer Untersuchungen auf den Gletschern der Ostalpen, *Zeitschrift für Geophysik*, **24**, 161-167. HS0024
- Förtsch, O., and H. Vidal, 1958, Seismo-glaziologische Studien auf einem Gletscherfleck, *Zeitschrift für Gletscherkunde und Glazialgeologie*, **4**, 35-45. HS0022
- Förtsch, O., and H. Vidal, 1957, Die seismische Vermessung des Grossen Gurgler Ferners in den Ötztaler Alpen im Spätsommer 1956, *Gerlands Beiträge zur Geophysik*, **67**, 1-30. HS0026
- Förtsch, O., and H. Vidal, 1956, Die Ergebnisse der seismische Messungen auf dem Hintereis Ferner in den Ötztaler Alpen 1954, *Gerlands Beiträge zur Geophysik*, **65**, 45-70. HS0025
- Förtsch, O., H.J. Schneider and H. Vidal, 1955, Seismische Messungen auf dem Gepatsch- und Kesselwand Ferner in den Ötztaler Alpen, *Gerlands Beiträge zur Geophysik*, **64**, 233-261. HS0023
- Gergan, J.T., D.P. Dobhal and R. Kaushik, 1999, Ground penetrating radar ice thickness measurements of Dokriani bamak (glacier), Garhwal Himalaya, *Current Science*, **77**(1), 169-174. HS0018
- Giese, P., 1963, Some results of seismic refraction work at the Gepatsch Glacier in the Ötztal Alps, *International Association of Scientific Hydrology*, **61**, 154-161. HS0027
- Glazovskij, A.F., T.N. Konstantinova, Yu.Ya. Macheret, M.Yu. Moskalevskij, L.I. Bobrova and L.V. Sankina, 1991, Tolshchina l'da i podlednyj rel'ef lednika Frit'ofa po dannym nazemnoj radiolokatsionnoj s'emki, *Materialy Glyatsiologicheskikh Issledovaniy*, **72**, 161-166. HS0016
- Hodge, 1979, HS0005
- Hyndman, R.D., 1965, Gravity measurements on the Devon Island Ice Cap and an adjoining glacier, *Journal of Glaciology*, **5**(40), 489-496. HS0039
- Jacobel, 1995, HS0006
- Ma, L.L., L.D. Tian, J.C. Pu and P.L. Wang, 2010, Recent area and volume change of Kangwure Glacier in the middle of Himalayas, *Chinese Science Bulletin*, **55**(20), 2088-2096. HS0046
- Ma, L.L., L.D. Tian, W. Yang and W. Tang, 2008, Measuring the depth of Gurenhekou Glacier in the south of the Tibetan Plateau using GPR and estimating its volume based on the outcomes, *Journal of Glaciology and Geocryology*, **30**(5), 783-788. HS0044
- Macheret, Yu.Ya., A.F. Glazovskij, J.A. Dowdeswell and M.R. Gorman, 1999, Ice cap volume change on Franz Josef Land during last 40 years, *Zeitschrift für Gletscherkunde und Glazialgeologie*, **35**(2), 103-116. HS0041
- Macheret, Yu.Ya., P.A. Cherkasov and L.I. Bobrova, 1988, Tolshchina i ob'em lednikov Dzhungarskogo Alatau po dannym aeroradiozondirovaniya, *Materialy Glyatsiologicheskikh Issledovaniy*, **62**, 60-71. HS0004

- Navarro, F.J., J. Otero, Yu.Ya. Macheret, E.V. Vasilenko, J.J. Lapazaran, A.P. Ahlstrøm and F. Machío, 2009, Radioglaciological studies on Hurd Peninsula glaciers, Livingston Island, Antarctica, *Annals of Glaciology*, **50**(51), 17-24. HS0012
- Navarro, F.J., A.F. Glazovskij, Yu. Ya. Macheret, E.V. Vasilenko, M.I. Corcuera and M.L. Cuadrado, 2005, Ice-volume changes (1936-1990) and structure of Aldegondabreen, Spitsbergen, *Annals of Glaciology*, **42**, 158-162. HS0010
- Nikitin, S.A., A.V. Vesnin, A.V. Osipov and N.V. Iglovskaya, 2000a, Rezul'taty radiozondirovaniya lednikov Tsentral'nogo Altaya (Severo-Chujskij i Yuzhno-Chujskij khrebyty), *Materialy Glyatsiologicheskikh Issledovaniy*, **88**, 145-148. HS0008
- Nikitin, S.A., A.V. Osipov, A.V. Vesnin and N.V. Iglovskaya, 2000b, Raspredelenie zapasov l'da v Severo-Chujskom khrebyte Tsentral'nogo Altaya po dannym radiolokatsionnogo zondirovaniya, *Materialy Glyatsiologicheskikh Issledovaniy*, **90**, 107-111. HS0011
- Paterson, W.S.B., and R.M. Koerner, 1974, Radio-echo sounding of four ice caps in Arctic Canada, *Arctic*, **27**(3), 225-233. HS0040
- Pattyn, F., C. Delcourt, D. Samyn, B. de Smedt and M. Nolan, 2009, Bed properties and hydrological conditions underneath McCall Glacier, Alaska, USA, *Annals of Glaciology*, **50**(51), 80-84. HS0013
- Prinz, R., A. Fischer, L. Nicholson, S. Gruber and G. Kaser, 2011, Rapid decline of the ice volume of tropical Lewis Glacier, Mount Kenya, during the last half century, *Geophysical Research Letters*, **38**, doi:10.1029/2011GL046717. submitted. HS0031
- Rippin, D.M., I. Willis, N. Arnold, A. Hodson, J. Moore, J. Kohler and H. Björnsson, 2003, Changes in geometry and subglacial drainage of Midre Lovénbreen, Svalbard, determined from digital elevation models, *Earth Surface Processes and Landforms*, **28**(3), 273-298. HS0037
- Span, N., A. Fischer, M. Kuhn, M. Massimo and M. Butschek, 2005, Radarmessungen der Eisdicke Österreichischer Gletscher. Band I: Messungen 1995 bis 1998, *Österreichische Beiträge zu Meteorologie und Geophysik*, **33**. HS0038
- Su, Z., L. Ding and C. Liu, 1984, Glacier thickness and its reserves calculation on Tianshan Mountains, *Xinjiang Geography*, **7**(2), 37-44. HS0009
- Thyssen, F., and J. Kohnen, 1968, Eissemische Untersuchungen auf dem Schmiedingerkees, *Polarforschung*, **6**, 78-82. HS0021
- Wang, N.L., and J.C. Pu, 2009, Ice thickness, sounded by ground penetrating radar, on the Bayi Glacier in the Qilian Mountains, China, *Journal of Glaciology and Geocryology*, **31**(3), 431-435. HS0045
- Wu, L.H., Z.Q. Li, P.Y. Wang, H.L. Li and F.T. Wang, 2011, Sounding the Sigong River Glacier No.4 in Mt. Bogda area, the Tianshan Mountains by using ground penetrating radar and estimating the ice volume, *Journal of Glaciology and Geocryology*, **33**(2), 276-282. HS0043
- Zhuravlev, A.B., 1981, O zavisimosti mezhdu ploshchad'yu i ob'emom lednikov, *Materialy Glyatsiologicheskikh Issledovaniy*, **40**, 262-265. HS0005
- Zhuravlev, A.B., 1985, Korrelyatsionniy metod otsenki zapasov l'da v lednikakh, *Materialy Glyatsiologicheskikh Issledovaniy*, **52**, 241-249. HS0006