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C. J. VAN DER VEEN

PROFESSOR, DEPARTMENT OF GEOGRAPHY

UNIVERSITY OF KANSAS

Education:

1986	Ph.D., State University of Utrecht, Physics Thesis topic: *"Ice sheets, atmospheric CO_2, and sea level"*.
1982	M.S., ("doctoraal") State University of Utrecht, Physical Oceanography and Meteorology. Thesis topics: *"The energy budget of the tidal currents in the southern North Sea"* and *"Numerical modelling of the ocean mixed layer in shallow seas with tidal friction"*.
1978	B.S., ("kandidaats") State University of Utrecht, Physics.

Positions held:

2009-present	Professor, Department of Geography, University of Kansas
2006-2009	Associate Professor, Department of Geography, University of Kansas
2003-2006	Visiting Associate Professor, Department of Geological Sciences, The Ohio State University
1999	Interim Director, Byrd Polar Research Center, The Ohio State University
1997-2006	Research Scientist, Byrd Polar Research Center, The Ohio State University
1992-2006	Adjunct Assistant Professor, Department of Geography, The Ohio State University.
1990-1997	Senior Research Associate, Byrd Polar Research Center, The Ohio State University.
1987-1990	Research Associate, Byrd Polar Research Center, The Ohio State University.
1986-1987	Post doctoral Fellow, Byrd Polar Research Center, The Ohio State University.
1982-1986	Ph.D. student at the State University of Utrecht.

Service:

2010	Chief Scientific Editor for the Annals of Glaciology, Proceedings of the IGS symposium on *"Earth vanishing ice"* to be held in Columbus, OH (September)
2009	Co-organizer Summer School on *"Ice sheet models for the 21st Century"* held in Portland, OR (August 3-14).
2008	Co-convenor Workshop on *"Improving Ice-Sheet Models"* held in St. Petersburg, Russia (July 5-7, 2008).
2008	Member of the NASA ROSES Cryosphere proposal review panel.
2006 - present	Chair SCAR Expert Group on Ice Sheet Mass Balance and Sea Level (ISMASS).
2006	Co-convenor AGU Fall Meeting session C14, *"Advances in observations of ice sheets and glaciers: mass balance and beyond"* held in San Francisco, California (December, 2006).
2005	Co-convenor AGU Fall Meeting session C41*"The Dynamics of Glacier System Response: tidewater glaciers and the ice streams and outlet glaciers of Greenland and Antarctica"* held in San Francisco, California (December, 2005).
2004	Associate editor for the Annals of Glaciology, Vol. 40, Proceedings of the IGS symposium on *"Ice and Water Interactions"*, held in Portland, Oregon (July, 2004).
2003 - present	Member of the Publications Committee of the International Glaciological Society.
2002	Co-Chief Editor for the Annals of Glaciology, Vol. 36, Proceedings of the IGS symposium on *"Fast Glacier Flow"*, held in Yakutat, Alaska (June 10-14, 2002).
2000	Member of the NSF Polar Glaciology Program Antarctic proposal review panel.
1999	Associate editor for the Annals of Glaciology, Vol. 31, Proceedings of the IGS symposium on *"The Verification of Cryospheric Models: Bringing data and modelling scientists together"*, held in Zurich, Switzerland (August 16-20, 1999).
1999	Interim Director, Byrd Polar Research Center.
1999 - 2006	Editor *Polar Geography*.
1997	Convenor of the *"Workshop on Tidewater Glaciers"*, Feb. 28 - March 2.
1996 - 2003	Chair of the Executive Committee of the Byrd Polar Research Center.
1994	Member of the NSF Polar Glaciology Program Antarctic proposal review panel.
1994	Associate editor for the Annals of Glaciology, Vol. 21, Proceedings of the IGS symposium on *"The Role of the Cryosphere in Global Change"*, held in Columbus, Ohio (August 7-12, 1994).
1994	Member of the local organising committee for the IGS symposium on *"The Role of the Cryosphere in Global Change"* , held in Columbus, Ohio (August 7-12, 1994).

1985	Main organizer of a three-day workshop on *"The dynamics of the West Antarctic Ice Sheet"* held in Utrecht (May 6-8, 1985).
1984 - 1987	Member, Special Committee, reporting to the Dutch government on the possible effects of a CO_2-induced climatic warming.

Field experience:

6 / 2004	Glacial geology fieldwork near the ice margin, Kangerlussuaq, West Greenland (Byrd Polar Research Center and University of Illinois at Chicago expedition)
7 / 2003	Glacial geology fieldwork near the ice margin, Jakobshavn Isbræ, West Greenland (Byrd Polar Research Center expedition).
11 / 1988 – 1 / 1989	Glaciology fieldwork in West Antarctica (NASA and Byrd Polar Research Center expedition).
5 - 6 / 1987	Glaciology fieldwork in Central Greenland (Byrd Polar Research Center expedition).
11 / 1985 – 1 / 1986	Glaciology fieldwork in West Antarctica (Institute of Polar Studies expedition).
5 - 6 / 1980	Member of two, two-week expeditions with the Dutch oceanographical research vessel *Tyro*, to collect data for M.S. research.
5 / 1979	Joined a one-month cruise of the Dutch weather ship to the northern Atlantic Ocean to perform oceanographical observations.

Courses taught (University of Kansas):

Spring 2010	Topics in Environmental Studies: Climate change in Greenland and the Arctic ENVR 720 (3 credit hours) (together with David Braaten, Sharon Billings, and Joane Nagel)
Spring 2010	Principles of Physical Geography Geography 104 (3 credit hours)
Fall 2009	Geography of the Energy Crisis Geography 556 (3 credit hours)
Spring 2009	State of the Planet Geography 531/731 (3 credit hours)
Spring 2009	Principles of Physical Geography Geography 104 (3 credit hours)
Fall 2008	Glaciers and Landscape Geography 332 (3 credit hours)
Summer 2008	Teaching Climate & Cryosphere Geography 731 (3 credit hours) (workshop for teachers)
Spring 2008	Understanding Climate Change Science Geography 531/731 (3 credit hours) (together with Johannes Feddema)

Spring 2008	Advanced Geostatistics Geography 716 (3 credit hours)
Fall 2007	Geography of the Energy Crisis Geography 556 (3 credit hours).
Spring / Summer 2007	Introduction to Glacier Dynamics Geography 531 (3 credit hours) (webcast to the University of Stockholm, .with auditing students at Penn State, Ohio State University and the University at Buffalo).
Spring 2007	Advanced Dynamic Meteorology ATMO 660 (3 credit hours).
Fall 2006	Glaciers and Landscape Geography 531 (3 credit hours).

Courses taught (Ohio State University):

Spring 2006	Glaciers and Pleistocene Geology Geological Sciences 650 (5 credit hours)
Winter 2006	Fueling our economy after Peak Oil Arts and Sciences 137.11 (2 credit hours) (together with Garry McKenzie)
Winter 2006	Global change and sustainability in the Earth System Geological Sciences 663 (5 credit hours) (together with Garry McKenzie and Lonnie Thompson)
Fall 2005	Sustainability and Peak Oil: exploring pathways for our future Geological Sciences 694 (3 credit hours) (together with Garry McKenzie)
Fall 2005	Earth Systems I: Geologic Environment Geological Sciences 100N (5 credit hours)
Spring 2005	Glaciers and Pleistocene Geology Geological Sciences 650 (5 credit hours)
Winter 2005	Computational Geology Geological Sciences 245 (5 credit hours)
Fall 2004	Earth Systems I: Geologic Environment Geological Sciences 100N (5 credit hours)
Fall 2004	Quaternary and Precambrian glacial deposits of the central Great Lakes Geological Sciences 850 (3 credit hours – 6 day fieldtrip) (together with Garry McKenzie)
Spring 2004	Earth Systems I: Geologic Environment Geological Sciences 100N (5 credit hours)
Winter 2004	Computational Geology Geological Sciences 245 (5 credit hours) (together with John Olesik)

Winter 2004	Glaciers and Pleistocene Geology Geological Sciences 650 (5 credit hours)
Fall 2003	Seminar in Geophysics Geological Sciences 880 (3 credit hours)
Spring 2003	Global Climate and Environmental Change: Individuals Matter Geography H294 (5 credit hours; Honors Class) (together with Ellen Mosley-Thompson)
Fall 2001	Glaciers and Pleistocene Geology Geological Sciences 650 (5 credit hours)
Spring 2001	Geographical Analysis II Geography 883-02 (4 credit hours)
Winter 2001	Geographical Analysis I Geography 883-01 (4 credit hours).

Publications:

2009 Dahl-Jensen, J. Bamber, C.E. Bøggild, E. Buch, J.H. Christensen, K. Dethloff, M. Fahnestock, S. Marshall, M. Rosing, K. Steffen, R. Thomas, M. Truffer, M. van den Broeke, and C.J. van der Veen, The Greenland Ice Sheet in a changing climate. *Arctic Monotoring and Assessment Program (AMAP), Oslo*, 115 pp.

2009 Van der Veen, C.J., Y. Ahn, B.M. Csatho, E. Mosley-Thompson, and W.B. Krabill, Surface roughness over the northern half of the Greenland Ice Sheet from airborne laser altimetry. *Journal of Geophysical Research,* **114**, F01001, doi:10.1029/2008JF001067.

2008 Berliner, L.M., K. Jezek, N. Cressie, Y. Kim, C.Q. Lam, and C.J. van der Veen, Physical-statistical modeling of ice-stream dynamics. *Journal of Glaciology,* **54**, 705-714.

2008 Berliner, L.M., N. Cressie, K. Jezek, Y. Kim, C.Q. Lam, and C.J. van der Veen, Equilibrium dynamics of ice streams: a Bayesian statistical analysis. *Statistical Methods & Applications*, **17**, 145-165.

2008 Csatho, B., T. Schenk, C.J. van der Veen, and W. Krabill, Intermittent thinning of Jakobshavn Isbræ, West Greenland, since the Little Ice Age. *Journal of Glaciology*, **54**, 131-144.

2007 Forman, S.L., L. Marin, C. van der Veen, C. Tremper, and B. Csatho, Little Ice Age and neoglacial landforms at the Inland Ice margin, Isunguata Sermia, Kangerlussuaq, west Greenland. *Boreas*, **36**, 341-351.

2007 Nick, F.M., C.J. van der Veen, and J. Oerlemans, Controls on advance of tidewater glaciers: results from numerical modeling applied to Columbia Glacier. *Journal of Geophysical Research,* **112**, F03S24, doi:10.1029/2006JF000551.

2007 Van der Veen, C.J., T. Leftwich, R. von Frese, B.M. Csatho, and J. Li, Subglacial topography and geothermal heat flux: potential interactions with drainage of the Greenland ice sheet. *Geophysical Research Letters*, **34**, L12501, doi: 10.1029/2007GL030046.

2007 Van der Veen, C.J., K.C. Jezek, and L. Stearns, Shear measurements across the northern margin of Whillans Ice Stream. *Journal of Glaciology,* **53**, 17-29.

2007 Van der Veen, C.J., Fracture propagation as means of rapidly transferring surface meltwater to the base of glaciers. *Geophysical Research Letters*, **34**, L01501, doi: 10.1029/2006GL028385.

2006 Monaghan, A.J., D.H. Bromwich, R.L. Fogt, S-H. Wang, P.A. Mayewski, D.A. Dixon, A. Ekaykin, M. Frezzotti, I. Goodwin, E. Isaksson, S.D. Kaspari, V.I. Morgan, H. Oerter, T.D. Van Ommen, C.J. van der Veen, and J. Wen, Insignificant change in Antarctic snowfall since the International Geophysical Year. *Science*, **313**, 827-831.

2006 Van der Veen, C.J., Reevaluating Hubbert's Prediction of U.S. Peak Oil. *EOS*, **87**, 199&202.

2006 Raymond, C.F., G.A. Catania, N. Nereson, and C.J. van der Veen, Bed radar reflectivity across the north margin of Whillans Ice stream, West Antarctica, and implications for margin processes. *Journal of Glaciology*, **52**, 3-10.

2005[1] Van der Veen, C.J., and B. Csatho, Spectral characteristics of Greenland lichen. *Géographie Physique et Quaternaire*, **59**, 63-73.

2005[1] Csatho, B., C.J. van der Veen, and C. Tremper, Trimline mapping from multispectral Landsat ETM+ imagery. *Géographie Physique et Quaternaire*, **59**, 49-62.

2005 Stearns, L., K. Jezek, and C.J. van der Veen, Decadal scale variations in ice flow along Whillans Ice Stream and its tributaries, West Antarctica. *Journal of Glaciology*, **51**, 147-157.

2005 Schenk, T., B. Csatho, C.J. van der Veen, H. Brecher, Y. Ahn, and T. Yoon, Registering imagery to ICESat data for measuring elevation changes on Byrd Glacier, Antarctica. *Geophysical Research Letters*, **32**, L23S05. doi: 1029/2005GL024328.

2005 Csatho, B., Y. Ahn, T. Yoon, C.J. van der Veen, S. Vogel, G. Hamilton, D. Morse, B. Smith, and V.B. Spikes., ICESat measurements reveal complex pattern of elevation changes on Siple Coast ice streams, Antarctica. *Geophysical Research Letters*, **32**, LS23S04, doi: 1029/2005GL024289.

2004 Van der Veen, C.J., Glacier Mass Balance. In: *Encyclopedia of the Arctic, volume 2 (G-N)* (ed. M. Nuttall), 744-745.

2004 Van der Veen, C.J., Glacier Ice. In: *Encyclopedia of the Arctic, volume 2 (G-N)* (ed. M. Nuttall), 742-744.

2002[2] Van der Veen, C.J., Recent accumulation rate changes in south Greenland from internal layering. *Polar Geography*, **26(4)**, 308-320.

2002 Van der Veen, C.J., Polar ice sheets and global sea level: how well can we predict the future? *Global and Planetary Change*, **32**, 165-194.

2002 Van der Veen, C.J., Calving Glaciers. *Progress in Physical Geography*, **26(1)**, 96-122.

2001[3] Van der Veen, C.J., E. Mosley-Thompson, K.C. Jezek, I.M. Whillans and J.F. Bolzan, Accumulation rates in south and central Greenland. *Polar Geography*, **25(2)**, 79-162

2001 Van der Veen, C.J., Greenland Ice Sheet response to external forcing. *Journal of Geophysical Research*, **106(D24),** 34,047-34,058.

[1] Published in 2006
[2] Published in 2003
[3] Published in 2002

2001 Van der Veen, C.J., D.H. Bromwich, B.M. Csatho and C. Kim, Trend surface analysis of Greenland precipitation. *Journal of Geophysical Research*, **106(D24)**, 33,909-33,918.

2001 Whillans, I.M. and C.J. van der Veen, Transmission of stress between an ice stream and interstream ridge. *Journal of Glaciology*, **47**, 433-440.

2001 Whillans, I., C. Bentley and C.J. van der Veen, Ice streams B and C. In: *The West Antarctic Ice Sheet: Behavior and Environment* (eds. R.B. Alley and R.A. Bindschadler), American Geophysical Union, Washington DC, Antarctic Research Series, vol. 77, 257-281.

2000[3] Van der Veen, C.J., K.C. Jezek, E. Mosley-Thompson, I.M. Whillans and J.F. Bolzan, Two decades of glaciological observations in south and central Greenland, 1980-1981 and 1987-1989. *Polar Geography*, **24(4)**, 259-349.

2000[4] Van der Veen, C.J., Fourier and the greenhouse effect. *Polar Geography*, **24(2)**, 132-152.

1999[5] Van der Veen, C.J., Crevasses on glaciers. *Polar Geography*, **23(3)**, 213-245.

1999[5] Lazzara, M.A., K.C. Jezek, T.A. Scambos, D.R. MacAyeal and C.J. van der Veen, On the recent calving of icebergs from the Ross Ice Shelf. *Polar Geography*, **23(3)**, 201-212.

1999[5] Van der Veen, C.J., Evaluating the performance of cryospheric models. *Polar Geography*, **23(2)**, 83-96.

1999[5] Csathó, B.M., J.F. Bolzan, C.J. van der Veen, A.F. Schenk and D-C. Lee, Surface velocities of a Greenland outlet glacier from high-resolution visible satellite imagery. *Polar Geography*, **23(1)**, 71-82.

1999[5] Van der Veen, C.J., Sea level forecast build on hot air but no science. *Polar Geography*, **23(1)**, 1-11.

1999 Van der Veen, C.J., E. Mosley-Thompson, A.J. Gow and B.G. Mark, Accumulation at South Pole: comparison of two 900 year records. *Journal of Geophysical Research*, **104(D24),** 31,067-31,077.

1999 Van der Veen, C.J. and J.F. Bolzan, Interannual variability in net accumulation on the Greenland Ice Sheet: observations and implications for mass-balance measurements. *Journal of Geophysical Research*, **104(D2)**, 2009-2014.

1999 Van der Veen, C.J., I.M. Whillans and A.J. Gow, On the frequency distribution of net annual accumulation at the South Pole. *Geophysical Research Letters*, **26**, 239-242.

1998 Van der Veen, C.J., W.B. Krabill, B.M. Csatho and J.F. Bolzan, Surface roughness on the Greenland Ice Sheet from airborne laser altimetry. *Geophysical Research Letters*, **25**, 3887-3890.

1998 Sohn, H-G, K.C. Jezek and C.J. van der Veen, Jakobshavn Glacier, West Greenland: 30 years of spaceborne observations. *Geophysical Research Letters*, **25**, 2699-2702.

1998 Van der Veen, C.J., Fracture mechanics approach to penetration of bottom crevasses on glaciers. *Cold Regions Science and Technology*, **27**, 213-223.

1998 Van der Veen, C.J., Fracture mechanics approach to penetration of surface crevasses on glaciers. *Cold Regions Science and Technology*, **27**, 31-47.

[4] Published in 2001
[5] Published in 2000

1997 Venteris, E.R., I.M. Whillans and C.J. van der Veen, Effect of extension rate on terminus position, Columbia Glacier, Alaska, U.S.A., *Annals of Glaciology*, **24**, 49-53.

1997 Whillans, I.M. and C.J. van der Veen, The role of lateral drag in the dynamics of ice stream B, Antarctica. *Journal of Glaciology*, **43**, 231-237.

1996 Van der Veen, C.J., Tidewater calving. *Journal of Glaciology*, **42**, 375-385.

1996 Van der Veen, C.J. and I.M. Whillans, Model experiments on the evolution and stability of ice streams. *Annals of Glaciology*, **23**, 129-137.

1995 Whillans, I.M. and C.J. van der Veen, Reply to Lliboutry's letter "Why calculated basal drags of ice streams can be fallacious." *Journal of Glaciology*, **41**, 205-206.

1994 Van der Veen, C.J. and I.M. Whillans, Development of fabric in ice. *Cold Regions Science and Technology*, **22**, 171-195.

1993 Whillans, I.M. and C.J. van der Veen, New and improved determinations of velocity of ice streams B and C, West Antarctica. *Journal of Glaciology*, **39**, 483-490.

1993 Whillans, I.M. and C.J. van der Veen, Patterns of calculated basal drag on ice streams B and C, Antarctica. *Journal of Glaciology*, **39**, 437-446.

1993 Van der Veen, C.J. and K.C. Jezek, Seasonal variations in brightness temperatures for central Antarctica. *Annals of Glaciology*, **17**, 300-306.

1993 Van der Veen, C.J., Interpretation of short-term ice-sheet elevation changes inferred from satellite altimetry. *Climatic Change*, **23**, 383-405.

1993 Van der Veen, C.J. and I.M. Whillans, Location of mechanical controls on Columbia Glacier, Alaska, U.S.A., prior to its rapid retreat. *Arctic and Alpine Research*, **25**(2), 99-105.

1992 Van der Veen, C.J. and I.M. Whillans, Determination of a flow center on an ice cap. *Journal of Glaciology*, **38**, 412-416.

1991 Van der Veen, C.J., State of balance of the cryosphere. *Reviews of Geophysics*, **29**, 433-455.

1990 Van der Veen, C.J. and I.M. Whillans, Flow laws for glacier ice: comparison of numerical predictions and field measurements. *Journal of Glaciology*, **36**, 324-339.

1989 Whillans, I. M., Y. H. Chen, C. J. van der Veen, and T. J. Hughes, Force budget: III, Application to three-dimensional flow of Byrd Glacier, Antarctica. *Journal of Glaciology*, **35**, 68-80.

1989 Van der Veen, C. J. and I. M. Whillans, Force budget: II. Application to two-dimensional flow along the Byrd Station Strain Network, Antarctica. *Journal of Glaciology*, **35**, 61-67.

1989 Van der Veen, C. J. and I. M. Whillans, Force budget: I. Theory and numerical methods. *Journal of Glaciology*, **35**, 53-60.

1989 Van der Veen, C. J., A numerical scheme for calculating stresses and strain rates in glaciers. *Mathematical Geology*, **21**, 363-377.

1988 Van der Veen, C. J., Projecting future sea level. *Surveys in Geophysics*, **9**, 389-418.

1987 Van der Veen, C. J., Ice sheets and the CO_2 problem. *Surveys in Geophysics*, **9**, 1-42.

1987 Van der Veen, C.J., Longitudinal stresses and basal sliding: a comparative study. In: *Dynamics of the West Antarctic Ice Sheet* (eds. C.J. van der Veen and J. Oerlemans), D. Reidel Publ. Co., Dordrecht, 223-248.

1987 Van der Veen, C. J., The West Antarctic Ice Sheet: the need to understand its dynamics. In: *Dynamics of the West Antarctic Ice Sheet* (eds. C. J. van der Veen and J. Oerlemans), D. Reidel Publ. Co., Dordrecht, 1-16.

1986 Van der Veen, C. J., Numerical modelling of ice shelves and ice tongues. *Annales Geophysicae*, **4**(B), 45-54.

1985 Van der Veen, C. J., Response of a marine ice sheet to changes at the grounding line. *Quaternary Research*, **24**, 257-267.

1984 Van der Veen, C. J. and J. Oerlemans, Global thermodynamics of a polar ice sheet. *Tellus*, **36**(A), 228-235.

In Press:

In Review:

Beem, L.H., K.C. Jezek, and C.J. van der Veen, Basal melt concentration below ice stream shear margins, Whillans Ice Stream, West Antarctica. *Geophysical Research Letters.*

Nick, F.M., C.J. van der Veen, A. Vieli and D.I. Benn A physically based calving model applied to marine outlet glaciers and implications for their dynamics. *Journal of Glaciology.*

Books:

1999 Van der Veen, C. J., *Fundamentals of Glacier Dynamics*, A. A. Balkema, Rotterdam, 462 pp.

1987 Van der Veen, C. J. and J. Oerlemans (eds.), *Dynamics of the West Antarctic Ice Sheet.* D. Reidel Publ. Co., Dordrecht, 368 pp.

1984 Oerlemans, J. and C. J. van der Veen, *Ice Sheets and Climate*. D. Reidel Publ. Co., Dordrecht, 217 pp.

Book chapters:

2009 Turner, J and 8 others (eds.), Antarctic Climate Change and the Environment. Cambridge, U.K.: Scientific Committee on Antarctic Research. Contributing author to chapters 2 and 4.

2004 Van der Veen, C. J and A.J. Payne, Modelling land-ice dynamics. In: *Mass balance of the Cryosphere: Observations and Modelling of Contemporary and Future Changes*) eds. J.L. Bamber and A.J. Payne), Cambridge University Press, Cambridge, 183-246.

1993 Whillans, I.M. and C.J. van der Veen, Controls on changes in the West Antarctic Ice Sheet. In: *Ice in the Climate System* (ed. W.R. Peltier). NATO ASI Series Vol. I12, Springer Verlag, Berlin, 47-54.

1992 Van der Veen, C.J., Land ice and climate. In: *Climate System Modeling* (ed. K. Trenberth), Cambridge University Press, 437-450.

Non-refereed publications:

2010 Cogley, J.G., J.S. Kargel, G. Kaser, and C.J. van der Veen, Tracking the source of glacier misinformation. *Science*, **327**, 522.

2008 Van der Veen, C.J., V.I. Lytle, and S. Gogineni, Observations to support predictions of sea level – CReSIS' contribution toward understanding the term glacial speed. *Earthzine*, April 7, 2008, www.earthzine.org.

2007 Van der Veen, C.J., and ISMASS Members: A need for more realistic ice-sheet models. *SCAR Report No. 30*, 27 pp.

2003 Csatho, B., T. Schenk, S. Shin, and C. J. van der Veen: Investigating long-term behavior of Greenland outlet glaciers using high resolution imagery. In: *Proceedings of IGARSS 2002*, 1047-1050, published on CD-ROM.

2001 Van der Veen, C.J., Book Review: The Arctic. Environment, People, Policy, edited by Mark Nuttall and Terry V. Callaghan. *Polar Geography*, **25(1)**, 72-77.

2001 Van der Veen, K. and R. Alley, Obituary: Ian M. Whillans (1944-2001). *Ice*, **126/127**, 44-45.

2001 Van der Veen, C.J., Book Review: Glaciers and Environmental Change, by A. Nesje and S.O. Dahl. *Bulletin of the American Meteorological Society*, **82**, 2040-2042.

2001 Van der Veen, C.J., Book Review: The two-mile time machine: Ice cores, abrupt climate change and our future, by Richard B Alley. *EOS*, **82(4)**, January 23, 2001. Also in: *Earth in Space*, **13(8)**, 14-15.

2000 Kim, C., B. Csatho, R. Thomas and C. J. van der Veen, Studying and monitoring the Greenland Ice Sheet using GIS techniques. *International Archives of Photogrammetry and Remote Sensing*, **XXXIII (B7)**, 678-685.

2000 Kieffer, H., J.S. Kargel, R. Barry, R. Bindschadler, M. Bishop, D. MacKinnon, A. Ohmura, B. Raup, M. Antoninetti, J. Bamber, M. Braun, I. Brown, D. Cohen, L. Copland, J. DueHagen, R.V. Engeset, B. Fitzharris, K. Fujita, W. Haeberli, J.O. Hagen, D. Hall, M. Hoelzle, M. Johansson, A. Kaab, M. Keonig, V. Konovalov, M. Maisch, F. Paul, F. Rau, N. Reeh, E. Rignot, A. Rivera, M. de Ruyter de Wildt, T. Scambos, J. Schaper, G. Scharfen, J. Schroder, O. Solomina, D. Thompson, K. van der Veen, T. Wohlleben and N. Young, New eyes in the sky measure glaciers and ice sheets. *EOS*, **81(24)**, June 13, 2000.

1999 Van der Veen, C.J., Correspondence: A disagreement about global warming. *Polar Record*, **35(193)**, 167-168.

1998 Van der Veen, C.J., Letter to the Editor: Melting, Maybe. *Science*, **281**, 1285-1286.

1997 Van der Veen, C.J., Backstress: what it is and how it affects glacier flow. In: *Calving Glaciers: Report of a Workshop, February 28 - March 2, 1997 (ed. C.J. van der Veen).* BPRC Report No. 15, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, 173-180.

1997 Van der Veen, C.J., Controls on the position of iceberg-calving fronts. In: *Calving Glaciers: Report of a Workshop, February 28 - March 2, 1997 (ed. C.J. van der Veen).* BPRC Report No. 15, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, 163-172.

1997 Sohn, H-G, K.C. Jezek and C.J. van der Veen, Seasonal variations in terminus position of Jakobshavn Glacier, West Greenland. In: *Calving Glaciers: Report of a Workshop, February 28 - March 2, 1997 (ed. C.J. van der Veen).* BPRC Report No. 15, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, 137-140.

1997 Van der Veen, C.J., Letter to the Editor: California traffic has been making kinematic waves since fifties. *Physics Today*, **50**(10), 140-141.

1992 Van der Veen, C.J., Ice sheets: growing or shrinking? *Earth in Space*, **5**, 5-9.

1991 Van der Veen, C.J., Mass balance of the cryosphere. In: *Towards an integrated system for measuring long term changes in global sea level.* Report of a workshop held at Woods Hole Oceanographic Institution, May 1990, Joint Oceanographic Institutions, Inc., Washington, D.C., 77-83.

1990 Whillans, I.M. and C.J. van der Veen, Application of the Global Positioning System in Antarctica. *Antarctic Journal of the U.S.*, **25**(2), 6-9.

1989 Tseng, Y.H., I.M. Whillans and C.J. van der Veen, Ionospheric effects on GPS in Central Antarctica. *Proceedings, 5th International Geodetic Symposium on Satellite Positioning*, Las Cruces, New Mexico, March 13-17, 1989, 1114-1123.

1989 Whillans, I.M. and C.J. van der Veen, Design of strain networks: experience from glaciology. *Proceedings, 5th International Geodetic Symposium on Satellite Positioning*, Las Cruces, New Mexico, March 13-17, 1989, 842-848.

1985 Van der Veen, C. J., West Antarctic Ice Sheet Dynamics (Meeting Report). *EOS*, **66**, 732-733.

Abstracts:

2009 Csatho, B.M., A.F. Schenk, C.J. van der Veen, and W.B. Krabill, Reconstruction of Greenland Ice Sheet changes from laser altimetry measurements. *EOS*, **90**, Fall Meeting Suppl. Abstract G52A-04.

2009 Van der Veen, C.J., Ice sheet mass balance and sea level (ISMASS). International Symposium on Glaciology in the International Polar Year, Keynote 2.

2008 Nick, F.M., C.J. van der Veen, and A. Vieli, A calving law for ice sheet models; Investigating the role of surface melt on dynamics of Greenland outlet glaciers. *EOS* **89**, Fall Meeting Suppl. Abstract C31C-0513.

2008 Csatho, B., and C.J. van der Veen, Subglacial control on ice flow in northern Greenland. GSA Northeastern Section, 43rd Annual Meeting (27-29 March 2008), Abstract 135687.

2007 Van der Veen, C.J., A need for more realistic ice-sheet models. *EOS*, **88**, Fall Meeting Supplement, Abstract C42A-08.

2007 Leftwich, T.E., C.J. van der Veen, R.R. von Frese, and B. Csatho, Crustal geothermal controls on ice sheet dynamics of Greenland. *EOS*, **88**, Fall Meeting Supplement, Abstract C41C-06.

2007 Van der Veen, C.J., A community-driven ice-sheet modeling initiative. Canadian Geophysical Union Annual Meeting, Abstract C02-1B5.8.

2007 Van der Veen, C.J., B. Csatho, and T. Schenk, Intermittent thinning of Jakobshavn Isbræ, west Greenland, since the Little Ice Age. Canadian Geophysical Union Annual Meeting, Abstract H06-4B4.1 (Invited).

2006 Leftwich, T.E., C.J. van der Veen, R.R. von Frese, and B. Csatho, Subglacial topographic controls on the geothermal heat flux of the Greenland Ice Sheet. *EOS*, **87**, Fall Meeting Supplement, Abstract C41A-0319.

2006 Huh, K.I., B. Csatho, C.J. van der Veen and Y. Ahn, Reconstructing Holocene glacier changes in west Greenland from Multispectral ASTER imagery. *EOS*, **87**, Fall Meeting Supplement, Abstract C11A-1134.

2005 Nick, F.M., and C.J. van der Veen, Controls on advance of tidewater glaciers: results from numerical modeling applied to Columbia Glacier, Alaska. *EOS*, **86**, Fall Meeting Supplement, Abstract C44A-05.

2005 Csatho, B., C.J. van der Veen, T. Schenk, and R. Thomas, Intermittent thinning of Jakobshavn Isbræ since the Little Ice Age, reconstructed from photogrammetry, remote sensing and glacial geologic evidence. *EOS*, **86**, Fall Meeting Supplement, Abstract C41A-08.

2005 Cressie, N., L.M. Berliner, K. Jezek, C.J. van der Veen, Y. Kim, and C.Q. Lam, Hierarchical Bayesian modeling of the movement of ice streams. *EOS*, **86**, Fall Meeting Supplement, Abstract NG22A-06.

2004 Van der Veen, C.J., B. Csatho, Y. Ahn, W. Krabill, and E. Mosley-Thompson, Analysis of surface roughness derived from airborne laser altimetry on the Greenland Ice Sheet and comparison with stratigraphic records. *EOS*, **85**, Fall Meeting Supplement, Abstract C12B-03.

2004 Braun, A., B. Csatho, K. van der Veen, T.J. Wilson, R.R.B. von Frese, J.J. Daniels, M. Bevis, and C.K. Shum, Greenland: a geophysical target for the International polar Year. *Geophysical Research Abstracts*, **6**, 06485.

2004 Van der Veen, C.J., A calving boundary condition for numerical ice-sheet models. *Geophysical Research Abstracts*, **6**, 03166.

2003 Braun, A., B. Csatho, K. van der Veen, T.J. Wilson, R.R. VonFrese, J.J. Daniels, M. Bevis, and C.K. Shum, Greenland: a geophysical target for the International Polar Year? *EOS*, **86**, Fall Meeting Supplement, Abstract C41C-0996.

2003 Csatho, B., T. Schenk, K. Huh, C.J. van der Veen, I. Lee, V.B. Spikes, and W. Krabill, ICESat calibration-validation and mass balance studies in Antarctica. *EOS*, **86**, Fall Meeting Supplement, Abstract C32A-0444.

2003 Van der Veen, C.J., B. Csatho, and A.F. Schenk, Investigating long-term behavior of Greenland outlet glaciers using high-resolution satellite and aerial imagery. *30th International Symposium on Remote Sensing of Environment*, Honolulu, Hawaii (Nov. 10-14, 2003).

2001 Csatho, B., T. Wilson, K. van der Veen and J. Kiss, Investigation of geologic control on ice sheets using airborne geophysics and remote sensing. *II International Workshop on Geo-Electro-Magnetism*, Lerici, Italy (Sept. 26-28, 2001).

2001 Stearns, L.A., I.M. Whillans, and C.J. van der Veen, Controls on ice stream motion. *EOS*, **82**, Spring Meeting Supplement, Abstract H52A-12.

2000 Van der Veen, C.J., Polar ice sheets and global sea level: how well can we predict the future? *EOS*, **81**, Fall Meeting Supplement, Abstract U62A-09.

2000 Van der Veen, C.J., Controls on the position of iceberg calving fronts. *EOS*, **81**, H51E-10.

1996 Van der Veen, K., E. Venteris and I. Whillans, Flow of Columbia Glacier, Alaska. Ice, 110, 10.

1994 Van der Veen, C.J. and I.M. Whillans, Search for controls on ice stream speed and width. *EOS*, **75**, 225.

1994 Whillans, I.M. and C.J. van der Veen, Stress maps for Columbia Glacier, Alaska. *EOS*, **75**, 222.

1990 Van der Veen, C.J., Interpretation of short-term ice-sheet elevation changes inferred from satellite altimetry. *EOS*, **71**, 1307-1308.

1988 Whillans, I.M. and C.J. van der Veen, Force Budget: general theory. *Annals of Glaciology*, **11**, 212.

1988 Whillans, I.M., Y.H. Chen, C.J. van der Veen and T.J. Hughes, Force budget: application to three-dimensional flow of Byrd Glacier. *Annals of Glaciology*, **11**, 212.

1988 Van der Veen, C.J. and I.M. Whillans, Force budget: numerical methods and application to two-dimensional flow along the Byrd Station Strain Network, West Antarctica. *Annals of Glaciology*, **11**, 210.

1988 Van der Veen, C.J., I.M. Whillans and J.F. Bolzan, Anistropy in polar ice. *EOS*, **69**, 366.

1988 Whillans, I.M. and C.J. van der Veen, Local patterns in strain rate on ice streams B and C, and shortcomings with the flow law. *EOS*, **69**, 366.

Internal Reports:

2006 Van der Veen, C.J., *Oil's History of Booms and Busts: Towards the Ultimate Downturn.* BPRC Report No. 21, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, 46 pp.

1997 Van der Veen, C.J. (ed.), *Calving Glaciers: Report of a Workshop, February 28 - March 2, 1997.* BPRC Report No. 15, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, 194 pp.

1996 Van der Veen, C.J., *Glacier Dynamics into the Next Century: A Ten-Year Plan for the Glacier Dynamics Group.* BPRC Technical Report No. 96-02, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, 26 pp.

1995 Van der Veen, C.J., *Controls on calving rate and basal sliding: observations from Columbia Glacier, Alaska, prior to and during its rapid retreat, 1976-1993*. BPRC Report No. 11, Byrd Polar Research Center, The Ohio State University, Columbus, Ohio, 72 pp.

1988 Van der Veen, C.J., *Decoding TI-4100 tapes bit by bit*. Unpublished report, 91 pp.

1986 Van der Veen, C.J., *Ice sheets, atmospheric CO_2, and sea level*. Ph. D. thesis, State University of Utrecht, 184 pp.

1985 Van der Veen, C.J., *Some thoughts about the stress distribution in ice sheets and ice shelves.* IMOU Report R85-4, Institute of Meteorology and Oceanography, State University of Utrecht, 37 pp.

1985 Van der Veen, C.J., *On the wind-driven circulation: the Munk theory updated*. IMOU Report V85-2, Institute of Meteorology and Oceanography, State University Utrecht, 20 pp.

1983 Van der Veen, C.J., *A note on the equilibrium profile of a free floating ice shelf*. IMOU Report V83-15, Institute of Meteorology and Oceanography, State University Utrecht, 15 pp.

Grants received:

2009 Leuschen, C.J. (PI), D.A. Braaten, S.P Gogineni, S.A. Seguin, and C.J. van der Veen (co-PIs), *MRI: Development of an anechoic chamber and instrumentation for remote sensing of polar regions and transportation interdisciplinary research and education.* NSF-ARC, $1,374,617 (5 years).

2008 Leuschen, C.J. (PI) and C.J. van der Veen (co-PI), *Collaborative Research: Subglacial water intrusion in Greenland.* NSF-ARC, $161,016 (2 years).

2007 Van der Veen, C.J. (PI), *Collaborative Research: IPY: POLENET/Greenland: using bedrock geodesy to constrain past and present day changes in Greenland's ice mass.* NSF – The Ohio State University, $22,812 (2 years).

2006 Van der Veen, C.J. (PI), *Long-term mass balance of the Pacific Ocean Sector of Antarctica based on multisensor fusion.* NASA – University at Buffalo, $19,992 (3 years).

2005 Jezek, K.C. (PI), E. Mosley-Thompson, L.G. Thompson, C.J. and van der Veen (Co-PIs), *Science and Technology Center: Ice sheets and sea level rise.* NSF – University of Kansas, $2,281,157; matching funds (OSU), $2,965,504 (5 years).

2005 Van der Veen, C.J. (PI), *Investigating the dynamics of tidewater glaciers with application to Columbia Glacier, Alaska, and Kangerlussuaq Glacier, east Greenland.* NSF-ARC, $180,847 (2 years) (NSF-ARC 0520427).

2004 Van der Veen, C.J. (PI) and B.M. Csatho (co-PI), *Pilot study for using ASTER images to map glacial geomorphology.* NASA, $14,442 (1 year).

2003 Van der Veen, C.J. (PI), D.H. Bromwich, K.C. Jezek, E. Mosley-Thompson, and L.G. Thompson (co-PIs), *Glacial Assessment: Past, Present and Future – Acquisition of essential research instrumentation.* NSF, $354,171; matching funds (OSU and OBR), $151,787 (1 year).

2003 Csatho, B.M. (PI), A.F. Schenk and C.J. van der Veen, C.J. (co-PIs), *Investigating long-term behavior of outlet glaciers in Greenland.* NASA, $78,430 (1 year).

2002 Van der Veen, C.J. (PI), L.M. Berliner, N.A. Cressie and K.C. Jezek (Co-PIs), *Dynamics of Ice Streams: A Physical statistical Approach.* NSF, $366,525 (2 years).

2001 Van der Veen, C.J. (PI), D.H. Bromwich, B.M. Csatho and E. Mosley-Thompson (Co-PIs), *Understanding Recent Mass Changes of the Greenland Ice Sheet.* NASA, $570,000 (3 years).

2001 Jezek, K.C. (PI) and C.J. van der Veen (Co-PI), *Mobile Sensor Web for Polar Ice Sheets.* NASA, $436,437 (5 years).

2001 Van der Veen, C.J., *Modeling Greenland outlet glaciers.* NASA, $70,761 (2 years). (NAG5-10978; RF-741140).

2000 Van der Veen, C.J. (PI) and A.F. Schenk (Co-PI), *Greenland surface velocities and flow features from high resolution visible satellite imagery.* NSF-OPP, $239,527 (3 years). (OPP-9911981; RF-739360).

1999 Van der Veen, C.J., Modeling Greenland outlet glaciers. NASA, $70,761 (1 year). (NAG5-8632; RF-737823).

1998 Van der Veen, C.J. (PI) and J.F. Bolzan (Co-PI), Interpreting the mass balance of the Greenland Ice Sheet. NSF-OPP, $136,366 (1 year). (OPP-9807521; RF-736310).

1997 Whillans, I.M. (PI) and C.J. van der Veen (Co-PI), *Stress transmission at ice-stream shear margins.* NSF-OPP, $207,170 (4 years). (OPP-9615127; RF-733711).

1997 Van der Veen, C.J., *Workshop on tidewater glaciers.* NSF-OPP, $13,870 (6 months). (OPP-9701756; RF-733678 & RF-733501).

1994 Van der Veen, C.J. (PI) and I.M. Whillans (Co-PI), *Studies on the mechanical controls of Columbia Glacier, Alaska, U.S.A., during its rapid retreat*. NSF-OPP, $208,285 (3 years). (OPP-9321556; RF-729143).

1994 Whillans, I.M. (PI) and C.J. van der Veen (Co-PI), *Mass balance and ice-stream mechanics in West Antarctica*. NSF-OPP, $399,092 (3 years).(OPP-9316509; RF-728733).

1990 Whillans, I.M. (PI) and C.J. van der Veen (Co-PI), *Mass balance and ice-stream mechanics in West Antarctica*. NSF-DPP, $405,000 (3 years). (OPP-9020760; RF-725115).

1990 Van der Veen, C.J. (PI), *Numerical studies on the onset of, and controls on fast streaming flow*. NSF-DPP, $90,000 (2 years). (DPP-9017445; RF-724857).

1990 Van der Veen, C.J. (PI), *Numerical studies on the onset of, and controls on fast streaming flow*. NOAA, $75,548 (2 years). (NA90AA-D-AC501; RF-724070).

1990 Van der Veen, C.J. (PI), *The effect of stochastic and non-stochastic climate forcing on the interpretation of satellite-derived changes in ice-sheet topography*. NASA, $31,071 (1 year).

1988 Van der Veen, C.J. (PI), *An anisotropic flow law for ice*. OSU Board of Regents' Research Challenge Program Investigator's Fund, $3,225 (2 months).

Meetings, Conferences, etc.: (Presentations are marked *)

2009 *Summer School on "Ice sheet models for the 21st century", Portland State University, Portland, OR (August 3-14). ***(Co-organizer)***

2009 *International Symposium on "Glaciology in the International Polar Year", Newcastle, UK (July 27-31). ***(Invited Keynote Lecture)***

2008 *Workshop on "Building a next-generation community ice sheet model." Los Alamos National Laboratories, Los Alamos, NM (August 18-20). ***(Invited)***

2008 SCAR/IASC IPY Open Science Conference. St. Petersburg, Russia (July 8-11).

2008 *Workshop on "Improving Ice Sheet Models." St. Petersburg, Russia (July 5-7).

2008 *Eighth Annual Center for Atmosphere and Ocean Science winter Workshop on "Predicting sea level in the 21st century: the role of ice-ocean interaction." New York University, NY (February 22-23). ***(Invited)***

2007 *American Geophysical Union – Fall Meeting, San Francisco, CA (December 10-14). ***(Invited)***

Future Climate Change Research and Observations: GCOS, WCRP and IGBP learning from the IPCC Fourth Assessment Report (AR4). Sydney, Australia (October 4-6). ***(Invited)***

*Department of Meteorology, Stockholm University (June 23-30).

*Canadian Geophysical Union – Annual Meeting, St. John's, Newfoundland (May 29-June 1). ***(Invited).***

2006 *American Geophysical Union – Fall Meeting, San Francisco, CA (December 11-15).

*University of Kansas, Lawrence, KS (March 2-3).

*Texas A&M, College Station, TX (February 12-14).

2004 *American Geophysical Union – Fall Meeting, San Francisco, CA (December 13-17).

*European Geophysical Union – 1st General Assembly, Nice, France (April 25-30). ***(Invited).***

2002 International Glaciological Symposium on "Fast Glacier Flow", Yakutat, AK (June 10-14). (Poster).

2001 Global Change Open Science Conference "Challenges of a Changing Earth", Amsterdam, the Netherlands (July 10-13, 2001).

*Workshop on "Autonomous Long-Range Ice Sheet Traverses", Washington DC (February 14-15).

2000 *PARCA Meeting, Granlibakken, Tahoe City CA (September 22-23).

Workshop on "Scientific Applications of Synthetic Aperture Radar (SAR) Satellites", Los Angeles, California (June 26-28).

*PARCA Meeting, Boulder CO (February 10-11).

1999 International Symposium on "The Verification of Cryospheric Models", Zurich, Switzerland (August 16-20). (Poster).

Workshop on "Satellite Measurements and Monitoring of Glaciers and Ice Sheets", Zurich, Switzerland (August 14-15).

1998 Chapman Conference on "The West Antarctic Ice Sheet", Orono, Maine (September 14-18). (Poster).

IPCC workshop on "Rapid Non-Linear Climate Change", Noordwijkerhout, The Netherlands (March 31 - April 2). ***(Invited).***

1997 *EISMINT workshop on "Rheology and anisotropy", Grindelwald, Switzerland (September 28-30). (***Invited***).

Third EISMINT workshop on "Model Intercomparison", Grindelwald, Switzerland (September 25-27). (***Invited***).

*Workshop on "Tidewater Glaciers", Mohican State Park (Columbus), Ohio (February 28 - March 2).

1996 *Midwestern Glaciologists Meeting, DeKalb, Illinois (April 19-21).

1995 EISMINT - International Symposium on ice-sheet modelling, Chamonix, France (September 18-22). (Poster).

1994 *Northwestern Glaciologists Meeting, Tacoma, Washington (December 2-3).

International Symposium on "The Role of the Cryosphere in Global Change", Columbus, Ohio (August 7-12). (Poster).

Second EISMINT workshop on "Model Intercomparison", Bremerhaven, Germany (June 22-24). (***Invited***).

Midwestern Glaciologists Meeting, Columbus, Ohio (April 22-23).

1993 Fifth International Symposium on Antarctic Glaciology (VISAG), Cambridge, England (September 5-10). (Poster).

*EISMINT workshop on "Model Intercomparison", Brussels, Belgium (June 16-18). (***Invited***).

1992 *Symposium on Remote Sensing of Snow and Ice, Boulder, Colorado (May 17-22).

1990 *AGU Fall Meeting, San Francisco, California (December 3-6).

*Sea Level Workshop, Woods Hole, Massachussetts (May 2-4). (***Invited***).

1989 *Alfred-Wegener-Institut für Polarforschung, Bremerhaven, Germany (July 27).

1988 *AGU spring meeting, Baltimore, Maryland (May 20).

1987 *World Lab-Archimede Project. First workshop: "Interaction of the solid planet with the atmosphere and climate", Erice, Italy (November 18-December 5). (***Invited***).

*Glaciology and Geophysical Institute, University of Copenhagen, Copenhagen, Denmark (September 15-16).

*Fourth International Symposium on Antarctic Glaciology, Bremerhaven, West Germany (September 7-12).

1986 *Department of Geophysical Sciences, University of Chicago, Chicago, Illinois (November 21).

*Geology Department, University of Illinois at Chicago, Chicago, Illinois (November 20).

1985/86 Institute of Polar Studies, The Ohio State University, Columbus, Ohio (October 16, 1985-March 4, 1986, including fieldwork in Antarctica).

1985 Workshop on "Hydraulic effects at the glacier bed", Interlaken, Switzerland (September 16-21).

*Workshop on "Dynamics of the West Antarctic Ice Sheet", Utrecht, the Netherlands (May 6-8).

NATO Advanced Study Institute course on "Large-scale transports in the atmosphere and ocean", Les Houches, France (February 11-22).

1984 University of East Anglia, Norwich, England (August 17).

Scott Polar Research Institute, Cambridge, England (August 14).

British Antarctic Survey, Cambridge, England (August 14).

*10th Annual Meeting of the European Geophysical Society, Louvain-La-Neuve, Belgium (July 30-August 3).

*Glaciology and Geophysical Institute, University of Copenhagen, Copenhagen, Denmark (May 7-8).

Alfred-Wegener-Institut für Polarforschung, Bremerhaven, Federal Republic of Germany (May 4).

1983 Department of Geological Sciences, Northwestern University, Evanston, Illinois (December 16).

Geophysical and Polar Research Center, University of Wisconsin, Madison, Wisconsin (December 13-15).

Meeting of north-western glaciologists, University of Washington, Seattle, Washington (December 1-2).

*Department of Geophysics and Astronomy, University of British Columbia, Vancouver, Canada (November 30).

*CIRES/University of Colorado, Boulder, Colorado (November 23-24).

Department of Geophysics, University of Arizona, Tempe, Arizona (November 21).

NASA Headquarters, Washington, D. C. (November 14).

Institute for Quaternary Research, University of Maine, Orono, Maine (November 9-12).

*Institute of Polar Studies, The Ohio State University, Columbus, Ohio (September 13-November 8).

1982 Second School on climatology: CO_2 and climate changes, Erice, Sicily, Italy (July 16-26).