

REFERENCES

- Achammer, T., and A. Denoth. "Snow Dielectric Properties: From DC to Microwave X Band." Annals of Glaciology. 19 (1994): 92-96.
- Alonso, Marcelo, and Edward J. Finn. Fundamental University Physics Volume 3: Fields and Waves. Massachusetts: Addison-Wesley Publishing Company, 1967.
- Akitaya, Eizi. "A Calorimeter for Measuring Free Water Content of Wet Snow." Annals of Glaciology. 6 (1985): 246-247.
- Avery, Thomas E., and Graydon L. Berlin. Fundamentals of Remote Sensing and Airphoto Interpretation. 5th ed. New York: Macmillan Publishing Company, 1992, pp 162-190.
- Benson, C. S. "Stratigraphic Studies in the Snow and Firn of the Greenland Ice Sheet." US Army Cold Regions Research and Engineering Laboratory RR 70. 1962.
- Bindschadler, Robert, A., K.C. Jezek, and J. Crawford. "Glaciological Investigations Using the Synthetic Aperture Radar Imaging System." Annals of Glaciology. 9(1987): 11-19.
- Bindschadler, Robert, A. "Monitoring Ice Sheet Behavior From Space." Reviews of Geophysics. 36 (1998): 79-104.
- Blom, R. G., R. E. Crippen, and C. Elachi. "Detection of Subsurface Features in Seasat Radar Images of Means Valley, Mojave Desert, California." Geology. 12(1984): 346-349.
- Budd, W. F., D. Jenssen, E. Mavrakakis, and B. Coutts. "Modeling the Antarctic Ice-Sheet Changes Through Time." Annals of Glaciology. 20(1994): 291-297.
- Campbell, James B. Introduction to Remote Sensing. New York, NY: Guilford Press, 1996, pp157-237.
- Clow, Gary, D., C. McKay, G. Simmons, Jr., and R. Wharton, Jr. "Climatological

Observations and Predicted Sublimation Rates at Lake Hoare, Antarctica.” Journal of Climate. July 1988: 715-728.

Conovitz, Peter A., Diane M. McKnight, Lee H. McDonald, Andrew G. Fountain, and Harold R. House. “Hydrologic Processes Influencing Streamflow Variation in Fryxell Basin, Antarctica.” In Priscu, John C., ed., Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica, Vol 72. Washington, D.C.: American Geophysical Union, 1998, pp 93-108.

Crowley, Thomas J. “Causes of Climate Change Over the Past 1000 Years.” Science. 289(2000): 270-277.

Domik, Gitta, Franz Leberl and JoBea Cimino. "Multiple Incidence Angle SIR-B Experiment over Argentina: Generation of Secondary Image Products." IEEE Transactions on Geoscience and Remote Sensing. GE-24, 4(1986): 492-497.

Doran, Peter T., Gayle L. Dana, Jordan T. Hastings, and Robert A Wharton, Jr. “McMurdo LTER: LTER automatic weather network (LAWN).” Antarctic Journal of the United States. 1995.

Duda, R. O., and P. E. Hart. Pattern Classification and Scene Analysis. New York: Wiley, 1973.

Escher, M. C. Sky and Water 1. Haags Gemeentemuseum, The Hague, Netherlands, 1938.

Fahnestock, Mark, A., Robert A. Bindschadler, Ron Kwok, and Ken Jezek. “Greenland Ice Sheet Surface Properties and Ice Dynamics from ERS-1 SAR Imagery.” Science. 262 (1993): 1530-1534.

Fastook, James, L., and M. Prentice. “A Finite-Element Model of Antarctica: Sensitivity Test for Meteorological Mass-Balance Relationship.” Journal of Glaciology. 40, 134(1994): 167-175.

Forster, Richard, R., Curt H. Davis, Timothy W. Rand, and Richard K. Moore. "Snow-Stratification Investigation on an Antarctic Ice Stream with an X Band Radar System." Journal of Glaciology. 37, 127(1991): 323-325.

Forster, Richard, R., Bryan L. Isacks, and Sarah B. Das. “Shuttle Imaging Radar (SIRC/X-SAR) Reveals Near-Surface Properties of the South Patagonian Icefield.” Journal of Geophysical Research. 101, E10(1996): 23,169-23,180.

Fountain, Andrew, G., Gayle L. Dana, Karen J. Lewis, Bruce H. Vaughn, and Diane M. McKnight. “Glaciers of the McMurdo Dry Valleys, Southern

- Victoria Land, Antarctica." In Priscu, John C., ed., Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica, Vol 72. Washington, D.C.: American Geophysical Union, 1998, pp 65-76.
- Fountain, Andrew, G., Berry Lyons, Melody B. Burkins, Gayle L. Dana, Peter T. Doran, Karen J. Lewis, Diane M. McKnight, Daryl L. Moorhead, Andrew N. Parsons, John C. Priscu, Dana H. Wall, Robert A. Wharton Jr., and Ross A. Virginia. "Physical Controls on the Taylor Valley Ecosystem, Antarctica." Bioscience. Vol. 49, 22(1999): 961-971.
- Fritsen, Christian, H., Edward E. Adams, Christopher P. McKay, and John C. Priscu. "Permanent Ice Covers of the McMurdo Dry Valleys Lakes, Antarctica: Liquid Water Contents." In Priscu, John C., ed., Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica, Vol 72. Washington, D.C.: American Geophysical Union, 1998, pp 65-76.
- Fuller, J. E., and E. S. Wampler. "The Lunar Laser Reflector." Scientific American. 222, 3(1970): 42.
- Glen, J. W., and J. G. Paren. "The Electrical Properties of Snow and Ice." Journal of Glaciology. 15, 73(1975): 15-38.
- Hall, Dorothy, K., Richard Williams, Jr., and Oddur Sigurdsson. "Glaciological Observations of Brúarjökull, Iceland, Using Synthetic Aperture Radar and Thematic Mapper Satellite Data." Annals of Glaciology. 21(1995): 271-276.
- Hall, Dorothy, K. "Remote Sensing of Snow and Ice Using Imaging Radar." In Floyd M. Henderson, and Anthony J. Lewis, eds., Principles and Applications of Imaging Radar, Manual of Remote Sensing, Vol 2. New York: John Wiley, 1998, pp 677-703.
- Harris, Colin M. "Science and Environmental Management in the McMurdo Dry Valleys, Southern Victoria Land, Antarctica." In Priscu, John C., ed., Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica, Vol 72. Washington, D.C.: American Geophysical Union, 1998, pp 337-350.
- Jezek, K. C., M. Drinkwater, J. Crawford, R. Bindshadler, and R. Kwok. "Analysis of Synthetic Aperture Radar Data Collected Over the Southwestern Greenland Ice Sheet." Journal of Glaciology. 39(1993): 119-131.
- Keys, J. R. Air Temperature, Wind, Precipitation and Atmospheric Humidity in the McMurdo Region. Publication 17. Wellington, New Zealand: Victoria

University of Wellington, 1980.

- Krinner, Gerhard, and Christophe Genthon. "The Antarctic Surface Mass Balance in a Stretched Grid General Circulation Model." Annals of Glaciology. 25(1997): 73-78.
- Lewis, K.J., Fountain, A.G., and Dana, G.L. "McMurdo LTER: The surface-energy balance of the Canada Glacier, Taylor Valley." Antarctic Journal of the United States. 1995.
- Lide, David R., ed. CRC Handbook of Chemistry and Physics, 80th ed. Washington D.C.: CRC Press, 1999.
- Lillesand, Thomas M., and Ralph W. Kiefer. Remote Sensing and Image Interpretation. 3rd ed. New York: John Wiley and Sons, Inc., 1994, pp 660-662.
- Liston, Glen, E., Jan-Gunnar Winther, Oddbjørn Bruland, Hallgeir Elvehøy, and Kunt Sand. "Below-Surface Ice Melt on the Costal Antarctic Ice Sheet." Journal of Glaciology. 45(1999): 273-285.
- Lucchitta, B.K., C.E. Rosanova, and K.F. Mullins. "Velocities of Pine Island Glacier, West Antarctica, From ERS-1 SAR Images." Annals of Glaciology. 21(1995): 277-282.
- Marsiat, I. "Ice Sheets' Surface Mass-Balance Evaluation in the UGAMP GCM: the Climate of Antarctica." Annals of Glaciology. 23(1996): 167-173.
- Mätzler, C., and Erwin Schanda. "Snow Mapping with Active Microwave Sensors." International Journal of Remote Sensing. 5, 2(1984): 409-422.
- Mätzler, C. "Applications of the Interaction of Microwaves with the Natural Snow Cover." Remote Sensing Review. 2(1987): 259-387.
- McCauley, J. F., G. G. Schaber, C. S. Breed, M. J. Grolier, C. V. Haynes, B. Issawi, C. Elachi, and R. Blom. "Subsurface Valleys and Geoarchaeology of the Eastern Sahara Revealed by Shuttle Radar." Science. 218(1982): 1004-1019.
- Moorhead, Daryl L., and John C. Prisco. "The McMurdo Dry Valley Ecosystem: Organization, Controls, and Linkages." In Prisco, John C., ed., Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica, Vol 72. Washington, D.C.: American Geophysical Union, 1998, pp 351-364.
- Muhleman, Duane, O., Arie W. Grossman, and Bryan J. Butler. "Radar

- Investigations of Mars, Mercury, and Titan." *In* Wetherill, George W., Arden L. Albee, and Kevin C. Burke, eds., Annual Review of Earth and Planetary Sciences Volume 23. Palo Alto: Annual Reviews Inc., 1995, pp 337-374.
- Müller, Fritz. "Zonation in the Accumulation Area of the Glaciers of Axel Heiberg Island, N.W.T., Canada." Journal of Glaciology. 4(1962): 302-313.
- Naraghi, Manouher, William Stromberg, and Mike Daily. "Geometric Rectification of Radar Imagery Using Digital Elevation Models." Photogrammetric Engineering and Remote Sensing. 49,2(1983): 195-199.
- Oerlemans, Johannes, and Alfred Wegener. "A Projection of Future Sea Level." Climatic Change. 15(1989): 151-174.
- Oerlemans, Johannes, and J. P. F. Fortuin. "Sensitivity of Glaciers and Small Ice Caps to Greenhouse Warming." Science. 258(1992): 115-117.
- O'Farrell, Siobhan, P., J. McGregor, L. Rotsteyn, W. Budd, C. Zweck, and R. Warner. "Impact of Transient Increases in Atmospheric CO₂ on the Accumulation and Mass Balance of the Antarctic Ice Sheet." Annals of Glaciology. 25(1997): 137-144.
- Ohmura, Atsumu, Martin Wild, and Lennart Bengtsson. "Present and Future Mass Balance of the Ice Sheets Simulated With GCM." Annals of Glaciology. 23(1996): 187-193.
- Olmsted, Coert. Alaska SAR Facility Scientific SAR User's Guide. Available at: <http://www.alaska.edu> (accessed 2/1/00). ASF-SD-003(1993).
- Patterson, W. S. B. The Physics of Glaciers. 3rd ed. Trowbridge, Great Britain: Redwood Books, 1994.
- Parish, Thomas R., and David H. Bromwich. "The Surface Windfields Over the Antarctic Ice Sheets." Nature. 328(1987) 51-54.
- Partington, K. C. "Discrimination of glacier facies using multi-temporal SAR data." Journal of Glaciology. 44(1998): 42-53.
- Raney, Keith R. "Radar Fundamentals: Technical Perspective." *In* Henderson, Floyd M., and Anthony J. Lewis, ed., Manual of Remote Sensing 3rd Edition: Principles and Applications of Imaging Radar, Vol 2. New York: American Society for Photogrammetry and Remote Sensing, 1998, pp 9-130.

- Rott, Helmut, and C. Mätzler. "Possibilities and Limits of Synthetic Aperture Radar for Snow and Glacier Surveying." Annals of Glaciology. 9 (1987): 195-199.
- Rott, Helmut, Klaus Strum, and Heinz Miller. "Active and Passive Microwave Signatures of Antarctic Firn by Means of Field Measurements and Satellite Data." Annals of Glaciology. 17(1993): 337-342.
- Rott, Helmut, and Robert E. Davis. "Multifrequency and Polarimetric SAR Observations on Alpine Glaciers." Annals of Glaciology. 17(1993): 98-104.
- Sarachik, Edward S., McGraw-Hill Encyclopedia of Science and Technology #5 8th Edition. New York: McGraw-Hill, 1997.
- Schlatter, Thomas W. "The local Surface Energy Balance and Subsurface Temperature Regime in Antarctica." Journal of Applied Meteorology. 11 (1972): 1048-1062.
- Short, Nicholas M., and Robert W. Blair, Jr., ed. Geomorphology From Space. Washington: NASA Scientific and Technical Branch, 1986.
- Shi, Jiancheng, and Jeff Dozier. "Measurements of Snow and Glacier-Covered Area With Single Polarization Synthetic Aperture Radar." Annals of Glaciology. 17 (1993): 72-76.
- Smith, Laurence, C., Richard R. Forster, Bryan L. Isacks, and Dorothy K. Hall. "Seasonal Climatic Forcing of Alpine Glaciers Revealed With Orbital Synthetic Aperture Radar." Journal of Glaciology. 43(1997): 480-488.
- Trevett, J. W. Imaging Radar for Resource Surveys. Cambridge, Massachusetts: Chapman and Hall, 1986.
- Tsang, Leung, Jin A. Kong, and Robert T. Shin. Theory of Microwave Remote Sensing. New York: John Wiley and Sons, 1985.
- Tzeng, Ren-Yow, David H. Bromwich, and Thomas R. Parish. "Present-Day Antarctic Climatology of the NCAR Community Climate Model Version 1." Journal of Climate 6(1993): 205-226.
- Ulaby, Fawwaz, T., Richard K. Moore, and Adrian K. Fung. Microwave Remote Sensing: Active and Passive Volumes 1-3. Reading, Massachusetts: Addison-Westley Publishing Co., 1981.
- Van De Wal, R. S. W. "Mass-Balance Modelling of the Greenland Ice Sheet: a Comparison of an Energy-Balance and a Degree-Day Model." Annals of Glaciology. 23(1996): 36-45.

Verbitsky, Mikhail, and Barry Saltzman. "Behavior of the East Antarctic Ice Sheet as Deduced From a Coupled GCM/Ice-Sheet Model." Geophysical Research Letters. 22, 21(1995): 2913-2916.

Watson, Robert T., M. C. Zinyowera, R. H. Moss, R. A. Moreno, et al. "Technical Summary: Impacts, Adaptations, and Mitigation Options. In Watson, Robert T., Marufu C. Zinyowera, Richard H. Moss, David J. Dokken (project administrator), eds., Climate Change, 1995: Impacts, Adaptations and Mitigation of Climate Change: Scientific-Technical Analyses: Contribution of Working Group II to the 2nd Assessment Report of the Intergovernmental Panel on Climate Change. NY: Cambridge University Press, 1996, pp 19-53.

Wharton, Robert A. Jr., Christopher P. McKay, George M. Simmons Jr., and Bruce C. Parker. "Cryoconite Holes on Glaciers." Bioscience 35,8(1985): 499-503.

Websites

Canadian Space Agency (RADARSAT), available at <http://radarsat.space.gc.ca/>; Internet; accessed January 27, 2000.

European Space Agency (ERS-1 & 2), available at <http://www.esrin.esa.it/>; Internet; accessed 6 October 1998.

Japanese Space Agency (JERS-1), http://yyy.tksc.nasda.go.jp/Home/This/This_e/jers_e.html; Internet; accessed 24 October 1998.

Jet Propulsion Laboratory (JPL) Imaging Radar, <http://southport.jpl.nasa.gov/>; accessed 30 January 2000.

Alaska SAR Facility (ASF), <http://www.asf.alaska.edu>; accessed 5 October 2000.

McMurdo Dry Valleys Long-Term Ecological Research,
<http://www.nsf.gov/od/opp/antarct/ajus/nsf9828/9828html/h1.htm>; accessed 5 October 2000.

INSTAAR MCM Long-Term Ecological Research
<http://huey.colorado.edu/LTER/>; accessed 10 November 2000.