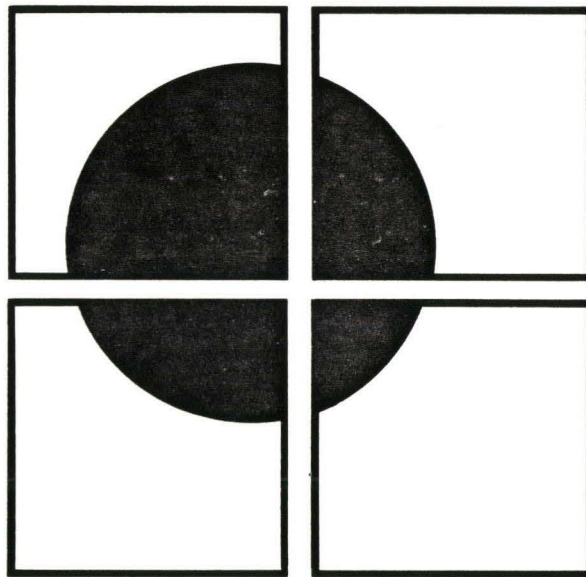


DEC 22 1982

GOLDEN, COLORADO 80401



Passive Solar Design

A Short Bibliographic Update

September 1979 (Draft)

Produced by
Passive Technology Program of



Solar Energy Research Institute

A Division of Midwest Research Institute

1536 Cole Boulevard
Golden, Colorado 80401

Prepared for the
Department of Energy
Contract No. EG-77-C-01-4042

SERI/SP-69-400
c.2

Table of Contents

Introduction.....	iii
 Subject	
Costs, Economics, Politics.....	1
(Tax; Installed Costs; Philosophy; (Law))	
Design Concepts.....	2
(Design aids; Computer: Simulation and Analysis; Geometry; Calculations; Systems Testing: Criteria, Instrumentation, Numerical Analysis)	
Design Examples.....	4
(Whole Cases; Concept Assessment; Instrumented Results; General Case Descriptions)	
Weather, Climate, Insolation.....	7
(Solar Gain Availability; Microclimate; Optimum Gain Angles; Siting for Option Gain; Atmosphere Effects: Sky Properties)	
Human Comfort.....	8
(Zones of Comfort (Temperature, Humidity); Clothing; Humidity; Modes of Operation)	
Greenhouses.....	9
(Detached; Greenhouse-House Combinations)	
Agriculture.....	10
(Barns and Sheds; Crop Drying)	
Glazing.....	10
(Assemblies; Material Properties; Skylights, Clerestories; Daylighting; General Aspects of Fenestration; Direct Gain Sealants)	
Storage.....	11
(Direct; Indirect, Heat Conduction and Retention; Phase Change; Thermal Mass and Lag; Solar Ponds; Roof Ponds; Underground Housing)	
Insulation.....	13
(Movable; Shading; Drapes; Landscape)	
Hybrids.....	13
(Heat Pumps; Thermic Diodes; Heat Exchangers; Controls)	
Liquid Thermosyphon Systems.....	14
(Domestic Hot Water Preheat Systems; Space Heat; Heat Transfer)	
General Cooling.....	15
(Convection; Dehumidifyhic)	
Ventilation.....	16
(Cooling Towers)	
Convection.....	16
(Natural with Respect to Collection; Heat Transfer)	
Evaporation.....	16
(Roof Ponds; Water Spray)	

NOV 17 1982 DISTSERI

Evaporation/Condensation.....	16
(Heat Pipes; Freon Transfer)	
Radiation.....	17
(Sky; Radiation)	
Re-Radiation.....	17
(Deep Sky)	
Reflectivity.....	17
(Reflectors)	
Conference Proceedings.....	17
Future Publications.....	18

Introduction

This bibliography is in draft form. The final edition is in the process of being expanded and further refined and will be available from SERI in the near future.

Intended as a basic core of information, neither this draft nor its final version is an exhaustive list of publications on passive solar design. Rather, it is a sampling of quality materials, available now or in the near future, that address the state-of-the-art of passive solar. The publications listed herein are information seeds that will lead to additional sources.

Costs, Economics, Politics

(Tax; Installed Costs; Philosophy; Law)

- Fraker, Harrison, Jr., and William L. Glennie. "A Computer Simulated Performance and Capital Cost Comparison of 'Active vs. Passive' Solar Heating Systems." Passive Solar Heating and Cooling Conference and Workshop, Albuquerque, NM, May 18-19, 1976. Proceedings. Washington, D.C.: U.S. Government Printing Office, 1977, p. 254-269. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 355 p. \$10.50 (paper)
- Hay, Harold R. "Passive Thermal Control Systems: Philosophy and Reality." Abstract in International Solar Energy Society Congress and Exposition, University of California, Los Angeles, July 28 - August 1, 1979. Solar Use Now - A Resource for People. International Solar Energy Society, c/o Smithsonian Radiation Biology Laboratory, 12441 Parklawn Drive, Rockville, MD 20852, 1975, p. 48-49. \$15.00 (paper) Complete paper available from author, c/o Skytherm Processes and Engineering, 2424 Wilshire Boulevard, Los Angeles, CA 90057.
- International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc., P.O. Box 1416, Killeen, TX 76541. \$60.00 (paper) Partial contents:
- Abrash, M., P. Sullivan, and R. Wirtshafter. "The Economic Tradeoffs between Active and Passive Solar Heating and Energy Conservation on Residential Buildings." v. 2, p. 543-548.
- Roach, Fred, Scott Noll, and Shaul Ben-David. "The Comparative Economics of Passive and Active Systems: Residential Space Heating Applications." v. 2, p. 537-542.
- National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper) Partial contents:
- Cook, Jeffrey. "Passive Education for Active Professionals." v. 3, p. 716-719.
- Davidoff, Peter, et al. "Preliminary Economic Evaluation of Generic Passive Solar Energy System/Building Applications." v. 3, p. 699-703.
- Goodnight, Jill A. "Survey of State Solar Incentive Legislation." v. 3, p. 727-731.
- Knowles, Ralph L. "Solar Ethics: Urban Form." v. 3, p. 840-849.
- Nichols, Wayne. "Marketing the Passive Solar Home." v. 3, p. 704-709.
- State Solar Legislation. National Solar Heating and Cooling Information Center, P. O. Box 1607, Rockville, MD 20850, 1977, 2 p.

Design Concepts

(Design aids; Computer: Simulation and Analysis; Geometry; Calculations; Systems Testing; Criteria, Instrumentation, Numerical Analysis)

- AIA Research Corporation. Solar Dwelling Design Concepts. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, 1978. 146 p.
- Baer, Steven. Sunspots: Collected Facts and Fiction. Zomeworks Corporation, P.O. Box 712, Albuquerque, NM 87103, 1977. \$4.00 (paper)
- Bennett, Robert. Sun Angles for Design. Available from Robert Bennett, 6 Snowden Rd., Bala Cynwyd, PA 19004.
- Cinquemani, V., Owenby, J.R., and Baldwin, R.G. Input Data for Solar Systems. Washington, D. C. U.S. Government Printing Office.
- Daniels, Farrington. Direct Use of the Sun's Energy. Ballantine Books, Inc., Westminster MD 21157. 1974, 271, p., \$1.95 (paper) Yale University Press, 92A Yale Station, New Haven, CT 06520, 1964, 374 p., \$15.00 (hard)
- Design Considerations, Theoretical Predictions, and Performances of an Attached Solar Greenhouse Used to Heat a Dwelling, Taff, D.C.; Holdridge R. B.; Wolfe, John. Garden Way Labs, VT Presented at ISES-AS Annual Conf, Orlando, June 6-19, 77, Vi, p33-1 (5).
- Duffie, John A., and William A. Beckman. Solar Energy Thermal Processes. John Wiley & Sons Inc., 605 Third Avenue, New York, N.Y. 10016, 1974, 386 p., \$19.00 (hard)
- Eccli, Eugene, editor. Low-Cost, Energy-Efficient Shelter for the Owner and Builder. Rodale Press, Inc., 33 East Minor Street, Emmaus, PA 18049, 1976, 408 p., \$10.95 (hard), \$5.95 (paper)
- Energy: AIA Energy Notebook; an Information Service on Energy and the Built Environment. Publications Fulfillment, American Institute of Architects, 1935 New York Avenue, N. W., Washington, D. C. 20006, 1975 - (#5-PEN) 12-month service, \$120.00; renewal, \$90.00 (#5-PER) (looseleaf)
- Fanger, P.O. Thermal Comfort. McGraw-Hill, N.Y., N.Y. 1972. 244 p.
- Holtz, Michael, Place, Wayne and Kammerud, Ronald. A Classification Scheme for Common Passive and Hybrid Heating and Cooling Systems. Denver, CO: U.S. Government Printing Office. Available from Document Distribution Service, Solar Energy Research Institute.
- International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc., P.O. Box 1416, Killeen, TX 76541. \$60.00 (paper) Partial contents:
- Balcomb, J. Douglas, and R. D. McFarland. "A Simple Technique for Estimating the Performance of Passive Solar Heating Systems." v. 2, p. 89-96.

Palmiter, Larry, Bill Caswell and Bob Corbet. "Measured and Modeled Passive Performance in Montana." v. 2, p. 59-63.

Knowles, Ralph L. Energy and Form; an Ecological Approach to Urban Growth. The MIT Press, 28 Carleton Street, Cambridge, MA 02142, 1974, 198 p., \$27.50 (hard)

Leckie, Jim, et al. Other Homes and Garbage; Designs for Self-Sufficient Living. San Francisco: Sierra Club Books, 1975. Available from Charles Scribner's Sons, Book Warehouse, Vreeland Avenue, Totowa, NJ 07512. 302 p., \$9.95 (paper)

Kreith, Frank. Principles of Heat Transfer. Harper and Row, 10 E. 53rd St., N.Y., N.Y. 10022, 1973. 656 p.

Michal, Charles J. "Desk Calculators Simplify Solar", Solar Age. April 1979, V4, N4, p 36.

Modeling Passive Solar Buildings with Hand Calculations. 1979 SPE International Symposium on Oilfield and Geothermal Chemistry, Houston, TX, USA, 22 Jan 1979.

National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper) Partial contents:

Balcomb, J. Douglas. "State of the Art in Passive Solar Heating and Cooling." v 1, p. 5-12.

Balcomb, J. Douglas, et al. "A Simple Empirical Method for Estimating the Performance of a Passive Solar Heated Building of Thermal Storage Wall Type." v. 2, p. 377-389.

Calthorpe, Peter. "The Farallones Institute Study of Five Passive and Hybrid Space Heating Systems." v. 2, p. 298-304.

Holton, John K. "Critical Performance Standards for Passive Solar Buildings." v. 2, p. 294-297.

Mazria, Edward. "Predicting the Performance of Passive Solar Heated Buildings: A Two Year Study." v. 2, p. 393-397.

Michal, Charles. "Simplified Simulation Techniques." v. 2, p. 291-293.

Niles, Philip. "A Simple Direct Gain Passive House Performance Prediction Model." v. 2, p. 534-538.

Taff, D. C., et al. "Active vs. Passive Systems: A Design Rationale for the Selection of Passive Systems Based on a Comparative Study of Efficiency, Capacity, Economics and Thermal Network Analysis." v. 3, p. 828-835.

Watson, Donald. "Beyond Passive Design: Toward an Integrative Conservation Technology." v. 1, p. 30-34.

Olgay, Aldar. "Design Criteria for Solar Heated Houses." United Nations Conference on New Sources of Energy: Solar Energy, Wind Power and Geothermal Energy, Rome, 21-31 August 1961. Proceedings. v. 5, Solar Energy II. p. 199-205. New York: United Nations, 1964, 1974 reprint available from United Nations Publications Sales Section, Room A-3315, New York, NY 10017 (#E/F.63.1.39) \$16.00 (paper)

Olgay, Aladar and Olgay, Victor. Solar Control and Shading Devices. Princeton University Press, Princeton, NJ 1957. 201 p.

Rogers, Benjamin T. "Using Nature to Heat and Cool." Building Systems Design. v. 70, no. 7, October/November 1973, p. 11-15.

Simulation of the Ghost Ranch Greenhouse-Residence. Jones, R.W., McFarland, R.D. Los Alamos Scientific Lab., NM Department of Energy. 1979. 6 p.

Solar Energy Research Institute. "Analysis Methods for Solar Heating and Cooling Applications." Denver, CO: U.S. Government Printing Office, 1979. 16 p. Available from Document Distribution Service, Solar Energy Research Institute.

Watson, Donald. Designing and Building a Solar House: Your Place in the Sun. Garden Way Publishing, Charlotte, VT 05445, 1977, 281 p., \$8.95 (paper)

Design Examples

(Whole Cases; Concept Assessment; Instrumented Results; General Case Description)

"Active or passive?" (Solar Heating). Chase, Victor D. Science Digest, v 85, p. 62 (5) April 1979.

AIA Research Corporation. Reginal Guidelines for Building Passive Energy Conserving Homes. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, 1978. 312 p.

AIA Research Corporation. A Survey of Monitored Passive Solar Buildings. Washington, DC: U.S. Government Printing Office. Available from Superintendent of Documents, Washington, DC 20402.

AIA Research Corporation. A Survey of Passive Solar Buildings. Washington, DC : U. S. Government Printing Office. Available from AIA Publications Fulfillment, 1735 New York Ave., Washington, DC 20006.

AIA Research Corporation. A Survey of Passive Solar Buildings. Washington, DC : 1978. Available from Publications Fulfillment, American Institute of Architects, 1735 New York Ave., N.W., Washington, DC 20006. \$12.75 (paper)

Arizona. State University. College of Architecture. Solar-Oriented Architecture. Washington, DC : AIA Research Corporation, 1975, 142 p. Available from: Publications Fulfillment, American Institute of Architects, 1735, New York Avenue, N.W., Washington, DC 20006. (#3-RC204) \$12.50 (paper)

Barkmann, H. B. Whole House as Collector. Paper given at conference of American Section, International Solar Energy Society, August, 1974,

Fort Collins, CO, 8 p. Available from Interlibrary Loan, Arizona State University, Tempe, AZ 85281 (ASUSI #3A28)

Determination of Energy Savings for Passive Solar Buildings. Anderson, B., Kammerud, R. California Univer., Berkeley. Lawrence Berkeley Lab. Department of Energy. Sept. 78. 45 p.

"Feds Should Push "Passive" Solar More." (Solar Energy Systems) Science News v 115, p. 6. Jan. 6, 1979.

Fitch, James Marston, and Daniel P. Branch. "Primitive Architecture and Climate." Scientific American. v. 203, no. 6, December, 1960, p. 133-144.

Franklin Research Center. The First Passive Solar Homes Awards. Washington, DC : U. S. Government Printing Office, 1979. 226 p. Available from Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.

National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper)
Partial contents:

Michel, Jacques J. P. "Introduction of Solar Energy in Architecture and Urbanism." v. 1, p. 20-22.

Schiff, Marc. "House at Crooked Creek." v. 1, p. 38-42.

Passive Solar Design. Anderson, Bruce N., Michal, Charles J. Total Environ Action, Inc. Harrisville, NH. Annu Rev of Energy, v. 3 Publ by Annu Rev, Palo Alto: CA, 1978 p. 57-100.

Passive Solar Heating and Cooling Conference and Workshop, Albuquerque, NM, May 18-19, 1976. Proceedings. Washington, DC : U. S. Government Printing Office, 1977. Available from National Technical Information Service, U.S. Dept. of Commerce, Springfield, VA 22161. 355 p. \$10.50 (paper). Partial contents:

Hay, Harold R. "Atascadero Residence." p. 101-107.

Shore, Ronald. "Pitkin County's Airport Terminal...or...Where Did All the Natural Gas Go?" p. 129-131.

Wellesley-Miller, Sean. "Weather Responsive Building Skins: Concepts and Configurations." v. 2, p. 493-500.

Wilson, Thomas C. "Two Recently Completed Trombe Wall Retrofits." v. 1, p. 76-80.

"Passive Solar Housing: In Cody, Wyoming." Shindelar, CarolAnn. Better Homes and Gardens, v. 57. p. 40(4) Aug. 1979.

"Passive Solar Housing: In Santa Cruz, California." Shindelar, CarolAnn. Better Homes and Gardens, v. 57. p. 44(3) Aug. 1979.

"Passive Solar Housing: It Works." Hauptert, David. Better Homes and Gardens, v. 57. p. 37(5) Aug. 1979.

"Passive Solar: Yesterday is Tomorrow." (home echoes Cliff Palace, Mesa Verdi) Sunset, v. 162. p. 76(8) Feb. 1979.

Paul, J. K. Passive Solar Energy Design and Materials. Noyes Data Corporation, Park Ridge, NJ 07656. 386 p.

Price, Travis. "Low Technology Solar Homes That Work with Nature." Popular Science. v. 209, December 1976, p. 95-98+.

Sandia Laboratories. Passive Solar Buildings. Washington, DC: U.S. Government Printing Office. Available from National Technical Information Service, U. S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161.

"In Search of the Better Sun Trap: Passive Solar Homes for Northern Climates," Lees, David. Harrowsmith, Mar 79, VIII :6, N18, p. 27.

Shurcliff, William A. Solar Heated Buildings: A Brief Survey. 13th and final edition. 19 Appleton Street, Cambridge, MA 02138, 1977, 306 p., \$12.00 prepaid (paper)

Skurka, Norma, and Jon Naar. Design for a Limited Planet: Living with Natural Energy. Ballantine Books, Inc., Westminster, MD 21157, 1976, 215 p., \$5.95 (paper)

Stromberg, R. P., and S.O. Woodall. Passive Solar Buildings: A Compilation of Data and Results. Albuquerque, NM: Sandia Laboratories, 1977. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 71 p., \$5.25 (paper)

Sunset Books. Sunset Homeowner's Guide to Solar Heating. Lane Publishing Company, Menlo Park, CA, 1978. 96 p.

Transparent Heat Mirrors for Passive Solar Heating Applications. Selkowitz, S. California Univ., Berkeley. Lawrence Berkeley Lab. Department of Energy, Mar 78. 26 p.

Trombe Wall vs Direct Gain: A Comparative Analysis of Passive Solar Heating Systems. National Passive Solar Conference, San Jose, CA, USA, 11 Jan 1979. 8 p.

Trombe Walls and Direct Gain: Patterns of Nationwide Applicability National Passive Solar Conference, San Jose, CA USA, 11 Jan 1979. 1979 9 p.

Underground Space Center, University of Minnesota. Earth Sheltered Housing Design. Van Nostrand Reinhold Company, 135 W. 50th St., N.Y. N.Y., 10020. 318 p.

Watson, Donald, Energy Conservation through Building Design. McGraw Hill, N.Y., N.Y., 1979. 305 p.

Weather, Climate, Insolation

(Solar Gain Availability; Microclimate; Optimum Gain Angles; Siting for Optimum Gain; Atmosphere Effects; Sky Properties)

- AIA Research Corporation. Climate Comfort and Your Building; Regional Guidelines for Building Passive Energy Conserving Homes. Washington, DC : U. S. Government Printing Office, November 1978 (Price and order number not set)
- Buyco, Edgar H., and David Namkoong. Correlation of Total, Diffuse and Direct Solar Radiation. Washington, DC : U. S. National Aeronautics and Space Administration, 1977. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 25 p., \$3.50 (paper)
- Coulson, K. L. "On the Solar Radiation Field in a Polluted Atmosphere." Journal of Quantitative Spectroscopy and Radiative Transfer. v. 11, no. 6, June 1971, p. 739-755.
- Geiger, Rudolf. The Climate near the Ground. 4th edition. Harvard University Press, 79 Garden Street, Cambridge, MA 02138, 1965, 611 p., \$18.00 (hard)
- Heat Gain Calculator. Libbey-Owens-Ford Company, 811 Madison Avenue, Toledo, OH 43695, 1975, \$.35.
- Heywood, H. A General Equation for Calculating Total Radiation on Inclined Surfaces. Paper given at International Solar Energy Society Conference, Melbourne, Australia, March 2-6, 1970. 8 p. Available from Technology Application Center, University of New Mexico, Albuquerque, NM 87131 (#ST77 37035) \$4.20.
- Kusuda, Tamami, and K. Ishii. Hourly Solar Radiation Data for Vertical and Horizontal Surfaces on Average Days in the United States and Canada. Washington, DC : U. S. Government Printing Office, 1977. (National Bureau of Standards Building Science Series, no. 96) Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 412 p., \$4.65 (paper)
- Moore, G. L. Sizing of Solar Energy Storage Systems Using Local Weather Records. New York: American Society of Mechanical Engineers, 1974. (Miscellaneous Paper 74-WA/HT-20) Available from Engineering Societies Library, 345 East 47th Street, New York, NY 10017. \$4.80 plus postage.
- Olgay, Victor. Design with Climate: Bioclimatic Approach to Architectural Regionalism. Princeton University Press, 41 William Street, Princeton, NJ 08540, 1973, 190 p., \$28.50 (hard)
- Passive Solar Heating and Cooling Conference and Workshop, Albuquerque, NM, May 18-19, 1976. Proceedings. Washington, DC : U. S. Government Printing Office, 1977. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 355 p. \$10.50 (paper). Partial contents:
- Holtz, Michael J. "Climate and Site: Influence on Passive Solar Building Design." p. 17-22.

- Yellott, John I. "Solar Radiation and the Atmosphere." p. 7-16.
- Place, Wayne. "The Solar Resource: Motion and Amplitude." National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper). v. 3, p. 769-772.
- Sun Angle Calculator. Libbey-Owens-Ford Company, 811 Madison Avenue, Toledo, OH 43695, 1975, \$5.00.
- Sun Position, Heat Gain and Shading Data Calculator. Koolshade Corporation, 3645 San Fernando Road, Glendale, CA 91204.
- Wallis, Alva L., Jr. Comparative Climatic Data through 1977. National Climatic Center, Federal Building, Asheville, NC 28801, 1978, \$2.00 (paper)
- U. S. Department of Commerce, Environmental Services Administration. Climatic Atlas of the United States. National Climatic Center, Asheville, N.C. 28801, Attn: Publications. \$6.00

Human Comfort

(Zones of Comfort (Temperature, Humidity); Clothing; Humidity; Modes of Operation)

- Balcomb, Sarah. "The Solar Consumer: Living in a Glass House." National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper) v. 3, p. 778-780.
- Eagen, M. David. Concepts in Thermal Comfort. Englewood Cliffs, NJ: Prentice-Hall, 1975. Available from Publications Fulfillment, American Institute of Architects, 1735 New York Avenue, N.W., Washington, DC 20006. 224 p., \$11.95 (hard)
- Everetts, John, Jr. "A History of ASHRAE Comfort Research." ASHRAE Journal. v. 17, no. 10, October, 1975, p. 55.
- International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc., P. O. Box 1416, Killeen, TX 76541. \$60.00 (paper) Partial contents:
- Cook, Jeffrey. "Indigenous Solutions to Arid Climates." v. 2, p. 259-262.
- Haggard, Keith, and Barbara Francis. "People in Buildings." v. 2, p. 263-266.
- Kranz, P. "Calculating Human Comfort." ASHRAE Journal. v. 6, no. 9, September 1964, p. 68-77.
- McNall, Preston E., Jr., et al. "Thermal Comfort (Thermally Neutral) Conditions for Three Levels of Activity." ASHRAE Transactions. v. 73, pt. 1, 1967, paper 2014, p. 1.3.1-1.3.14.

Nevins, Ralph G. Energy Conservation, Comfort, Acceptability and Health. Paper given at the Federal Conference of the Australian Institute of Refrigeration, Air Conditioning and Heating, Brisbane, Queensland, April 29-May 3, 1974. Available from Technology Application Center, University of New Mexico, Albuquerque, NM 87131 (#ST76 50087)

Nevins, Ralph G., and A. Pharo Gagge. "The ASHRAE Comfort Chart." ASHRAE Journal. v. 14, no. 5, May 1972, p. 41-43.

Greenhouses

(Detached; Greenhouse-House Combinations)

Conference on Solar Energy for Heating Greenhouses and Greenhouse-Residential Combinations, Cleveland, OH, March 20-23, 1977. Proceedings. Washington, DC : US. S. Dept. of Energy, 1977. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 344 p., \$12.00 (paper)

Duncan, G. A., O. J. Loewer, Jr., and D. G. Colliver. Simulation of Solar Energy Availability, Utilization, and Storage in Greenhouses. Paper given at Annual Meeting of American Society of Agricultural Engineers, 1976. Available from American Society of Agricultural Engineers, 2950 Niles Road, P. O. Box 410, St. Joseph, MI 49085. 1976, 43 p., no. 76-4010, \$3.50.

Fisher, Rich, and Bill Yanda. The Food and Heat Producing Solar Greenhouse. Santa Fe, NM: John Muir Publications, 1976, 161 p. Available from Book People, 2940 Seventh Street, Berkeley CA 94710. \$6.00

Maes, Reed E. "A Large Scale Northern Climate Solar Garden." International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc., P. O. Box 1416, Killeen, TX 76541. \$60.00 (paper v. 1, p. 10-16)

National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper)
Partial contents:

Kolstand, Charles. "Economics of Attached Solar Greenhouse for Home Heating - A Preliminary Assessment." v. 3, p. 822-826.

Mazria, Edward, and Steven Baker. "Noti Solar Greenhouse: Performance and Evaluation." v. 1, p. 190-196.

Stevens, G. A. "'Desert Cloud' Applied to Bioclimate Plant Housing." v. 2, p. 519.

Smith, J., et al. Greenhouse as a Solar Collector. Paper given at Annual Meeting of American Society of Agricultural Engineers, 1976. Available from American Society of Agricultural Engineers, 2950 Niles Road, P. O. Box 410, St. Joseph, MI 49085. 1976, 10 p., no. 764-052, \$3.50.

Agriculture

(Barns and Sheds; Crop Drying)

DeKorne, James B. The Survival Greenhouse: An Ecosystem Approach to Home Food Production. 2nd edition. Peace Press, 3828 Willat, Culver City, CA 90230. 1978, 165 p., \$7.95 (paper)

"The Solar Energy Society Survey of Research on Applications of Solar Energy to Agriculture, Horticulture, Animal Husbandry, and Forest Products." Solar Energy. v. 9, no. 2, April/June 1965, p. 87-94.

A Survey of Solar Agricultural Driers. Brace Research Institute, Macdonald College, Ste. Anne de Bellevue, Quebec, Canada 80A 1C0, 1976, 144 p., \$9.00 (paper)

Glazing

(Assemblies; Material Properties; Skylights, Clerestories; Daylighting; General Aspects of Fenestration; Direct Gain Sealants)

Gul'Karov, E. S. "Theoretical Calculation of the Total Heat Entering Through a Window with a Shading System." Applied Solar Energy (USSR) v. 6, no. 4, 1970. p. 82-86.

Holton, John K. Daylighting of Buildings: A Compendium and Study of Its Introduction and Control. Washington, DC : U. S. National Bureau of Standards, 1976. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 38 p., \$4.00 (paper)

International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc., P. O. Box 1416, Killeen, TX 76541. \$60.00 (paper) Partial contents:

Peck, John F., et al. "Passive Forms of the Clearview Solar Collector." v. 2, p. 180-186.

Stenhouse, Douglas S., and Cecile H. Wolfe. "Daylighting Design for the Energy Efficient Office Building Competition." v. 2, p. 128-133.

National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art, 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper) Partial contents:

Beitin, Karl. "Alternative Solar Systems." v. 3, p. 857-869.

Hastings, S. Robert. "A Comprehensive Approach to Window Design for Energy Conservation." v. 2, p. 321-325.

Selkowitz, Stephen. "Transparent Heat Mirrors for Passive Solar Heating Applications." v. 2, p. 329-334.

Skylight Energy Performance; an Evaluation of the Effect of Skylights on Building Energy Requirements. Center for Industrial and Institutional Development, University of New Hampshire, Durham, NH 03824, 1975, 13 p., \$5.00 (paper)

Stephenson, D. G. "Equations for Solar Heat Gain through Windows." Solar Energy. v. 9, no. 2, April/June 1965, p. 81-86.

U. S. Department of Commerce, National Bureau of Standards. Window Design Strategies to Conserve Energy. Washington, DC : U. S. Government Printing Office 1977. Available from National Technical Information Service, U. S. Department of Commerce, Springfield, VA 22161.

Storage

(Direct; Indirect, Heat Conduction and Retention; Phase Change; Thermal Mass and Lag; Solar Ponds; Roof Ponds; Underground Housing)

Aho, Arnold J. Designing with Natural Energies: Sun, Air, Soil, Wind, Humidity, Temperature; the Role of Brick Masonry in Energy Conservation Design. The Concept: Brick Ribbed Space Wall. Brick Institute of America, 1750 Old Meadow Road, McLean, VA 22101, 1974, 13 p., free.

Arumi, Francisco N. A Manual Method to Calculate the Dynamic Energy Performance of Walls (appendix to Thermal Inertia in Architectural Walls) National Concrete Masonry Association, 6845 Elm Street, McLean, VA 22101, 1978, 80 p., \$5.00 (paper)

Arumi, Francisco N. Thermal Inertia in Architectural Walls. National Concrete Masonry Association, 6845 Elm Street, McLean, VA 22101, 1978, c 1977, 26 p., \$1.95 (paper)

Barkmann, Herman G., and Francis C. Wessling. "Use of Building Structural Components for Thermal Storage." Workshop on Solar Energy Storage Subsystems for the Heating and Cooling of Buildings, Charlottesville, VA, April 16-18, 1975. Proceedings. New York: ASHRAE, 1975, p. 136-140. Available from Engineering Societies Library, 345 East 47th Street, New York, NY 10017. (#NSF-RA-N-75-041) \$4.50 plus postage.

Buffington, Dennis E. "Heat Gain by Conduction through Exterior Walls and Roofs: Transmission Matrix Method." ASHRAE Transactions. v. 81, pt. 2, 1975 paper 2364, p. 89-101.

International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc., P.O. Bo 1416, Killeen, TX 76541. \$60.00 (paper) Partial contents:

Hourmanesh, Mo, Ray Hourmanesh, and Donald B. Elmer. "Earth-Air Heat Exchanger." v. 2, p. 16-21.

Shippee, Paul. "The Sun-Earth House." v. 2, p. 235-237.

Lorsch, Harold G. Latent Heat and Sensible Heat Storage for Solar Heating Systems. Philadelphia: University of Pennsylvania, 1974. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161, 33 p., \$3.75 (paper)

- Lorsch, Harold G., Kenneth W. Kauffman, and Jesse C. Denton. "Thermal Energy Storage for Solar Heating and Off-Peak Air Conditioning." Energy Conversion. v. 15, no. 1/2, 1975, p. 1-8.
- Minnesota. University. Earth Sheltered Housing Design. Minneapolis: The Underground Space Center, 1978, 310 p. Available from American Underground Space Association, Department of Civil and Mineral Engineering, University of Minnesota, Minneapolis, MN 55455. \$10.00 (paper)
- National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper)
Partial contents:
- Hammond, Jonathan. "Design Innovations: The Suncatcher and the Cool Pool." v. 1, p. 137-140.
- Maloney, Tim. "Four Generations of Water Wall Design." v. 2, P. 489-492.
- Telkes, Maria. "Trombe Wall with Phase Change Storage Material." v. 2, p. 283-287.
- Passive Solar Heating and Cooling Conference and Workshop, Albuquerque, NM, May 18-19, 1976. Proceedings. Washington, DC : U. S. Government Printing Office, 1977. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 355 p. \$10.50 (paper) Partial contents:
- Haggard, Kenneth. "An Investigation of Architectural Adaptations of Thermal Ponds and Movable Insulation." p. 307-309.
- Wessling, Francis C., et al. "Temperature Response of a Sunlit Floor and Its Surrounding Soil." p. 73-78.
- Solar Ponds (Citations From the NTIS Data Base), Hundemann, Audrey, S. (Ed.) NTIS, Springfield, VA NTISearch NTIS/PS-78/0836/3ENS, Search Period Covered 1976-June 1978. Publ by NTIS, Springfield, VA, August 1978. Available from Eng. Index, New York, NY, or NTIS 27 p.
- Van der Meer, Wybe J. Effective "U" Values - A New Method for Predicting Average Energy Consumption for Heating Buildings. Albuquerque, NM: New Mexico Energy Institute, 1978. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 54 p. (paper)
- Wilson, Alex, Thermal Storage Wall Design Manual. Modern Press, Albuquerque, NM 1979. 40 p. Available from New Mexico Solar Energy Association, P.O. Box 2004, Santa Fe, NM 87501.

Insulation

(Movable; Shading; Drapes; Landscape)

Baer, Steven C. "Movable Insulation." Passive Solar Heating and Cooling Conference and Workshop, Albuquerque, NM, May 18-19, 1976. Proceedings. Washington, DC : U. S. Government Printing office, 1977. p. 70-72. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 355 p. \$10.50 (paper)

Levine, Richard S. "Sundow and Windows." International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc. P. O. Box 1416, Killeen, TX 76541. \$60.00 (paper)

Meckler, M. "Analyzing Sunhood Configurations for Sun Control." Air Conditioning, Heating & Ventilating. v. 64, no. 2, February 1967, p. 41-44.

National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146 \$20.00 (paper)

Charhroudi, Day. "Variable Transmission Solar Membrane." v. 2, p. 343-348.

Schnelby, John, et al. "The Window Quilt Insulating Shade." v. 2, p. 314-316.

Shore, Ronald. "A Self-Inflating Movable Insulation System." v. 2, p. 305-309.

Olgyay, Aladar, and Victor Olgyay. Solar Control and Shading Devices. Princeton University Press. 41 William Street, Princeton, NJ 08540, 1976, c1957, \$7.50 (paper)

Yellott, John I. Drapery Fabrics and Their Effectiveness in Solar Heat Control. Paper given at ASHRAE semi-annual meeting, Chicago, January 1965. Available from Interlibrary Loan, Arizona State University, Tempe, AZ 85281 (ASUSI #4D139)

Hybrids

(Heat Pumps; Thermic Diodes; Heat Exchangers; Controls)

Buckley, Shawn. "Thermic Diode Solar Panels: Passive and Modular." Passive Solar Heating and Cooling Conference and Workshops, Albuquerque, NM, May 18-19, 1976. Proceedings. Washington, DC : U. S. Government Printing Office, 1977, p. 293-299. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 355 p. \$10.50 (paper)

A Hybrid Passive/Active Solar House. Hunn, Bruce. US Los Alamos Scientific Lab. NM, Presented at ISES-AS Annual Conf, Orlando, June 6-19, 77 Vi, p. 11-16 (5)

Hybrid Passive/Active Solar System: Performance and Cost. Hunn, Bruce D.
Univ. of Calif, Los Alamos Sci Lab, NM Ashrae, J. v21 n 4 Apr 1979.
p. 25-30.

Impact of Active and Passive Solar Building Designs on Utility Peak Loads.
Feldman, S.L., Wirtshafter, R.M., Abrash, M., Carter, C., Anderson, B.
Clark Univ., Worcester, MA. Total Environmental Action, Inc., Harrisville,
NH. Department of Energy. 30 Sept 78. 78 p.

National Passive Solar Conference, 2nd, University of Pennsylvania,
Philadelphia, March 16-18, 1978. Passive Solar: State of the Art.
3 vols. Available from Mid-Atlantic Solar Energy Association, 2233
Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper) Partial
contents:

Hunn, Bruce D. "A Hybrid Passive/Active Solar House: First Year
Performance of the Hunn Residence." v. 1, p. 247-251.

Kachadorian, James, and Alvin O. Converse. "Green Mountain Homes
Hybrid Systems." v. 1, p. 261-265.

Pfister, Peter John. "The Lindberg Residence:- A DOE-Funded Hybrid
House." v. 1, p. 122-127.

Marzano, Juan, Hassan Khandani and Shawn Buckley. "Other Aspects of
Thermic Diode Solar Panels: Cooling and Temperature Control."
v. 2, p. 271-275.

The National Program Plan for Passive/Hybrid Solar Heating and Cooling.
Morse, Frederick, H., Maybaum, Michael W. DOE. Presented at DOE/ISES-
AS 2nd Natl Passive Solar Conf. Univ. of Pennsylvania, Mar 16-18, V3,
P 900 (4).

Liquid Thermosyphon Systems

(Domestic Hot Water Preheat Systems; Space Heat; Heat Transfer)

Close, D. J. "Performance of Solar Water Heaters with Natural Circulation."
Solar Energy. v. 6, no. 1, January/March 1962, p. 33-40.

Gupta, C. L., and H. P. Garg. "System Design in Solar Water Heaters
with Natural Circulation." Solar Energy. v. 12, no. 2, December
1968, p. 163-182.

International Solar Energy Society, American Section, Annual Meeting,
Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available
from American Section, International Solar Energy Society, Inc.,
P. O. Box 1416, Killeen, TX 76541. \$60.00 (paper) Partial contents:

Baughn, James W., and Karen Crowther. "An Experimental Study of
Storage Elevation in a Thermosyphon Hot Water System." v. 2,
p. 32-35.

Manasse, Fred K., and John A. O'Leary. "HeliophaseTM Solar Hot Water
Heating System." v. 2, p. 36-40.

McFarland, Michael. Design of Long-Loop Convective Heat Transfer Systems for Solar Heaters. New York: American Society of Mechanical Engineers, 1972, 5 p. (Miscellaneous Paper 72/WA/Sol-9) Available from Engineering Societies Library, 345 East 47th Street, New York, NY 10017 \$4.50 plus postage.

National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146. \$20.00 (paper) Partial contents:

Golubov, James W., and John Leffler. "The Thing: A Direct Gain Solar Hot Water Heater for NYC." v. 2, p. 642-646.

Sparr, Gary, and Bruce Melzer. "An Evaluation of Two Bread Boxes." v. 2, p. 627-631.

Phillips, W. F., and R. D. Cook. Natural Circulation from a Flat Plate Collector to a Hot Liquid Storage Tank. New York: American Society of Mechanical Engineers, 1975, 5 p. (Miscellaneous Paper N75-HT-53) Available from Engineering Societies Library, 345 East 47th Street, New York, NY 10017. \$4.50 plus postage.

Simson, D.A., and T. Hoad. How to Build a Solar Water Heater. revised edition. Brace Research Institute, Macdonald College, St. Ann de Bellevue, Quebec, Canada 80A 1C0, 1973, 10 p., \$15.00.

General Cooling

(Convection; Dehumidifyhic)

Bahadori, Medhdi N. "Passive Cooling Systems in Iranian Architecture." Scientific American. v. 238, no. 2, February 1978, p. 144-150+.

Bainbridge, David A. "Natural Cooling in California." International Solar Energy Society, American Section, Annual Meeting, Denver, CO, August 28-31, 1978. Proceedings. 2 vols. Available from American Section, International Solar Energy Society, Inc., P.O. Box 1416, Killeen, TX 76541. \$60.00 (paper) v. 1, p. 475-487.

Hansen, David G., and John I. Yellott. "A Study of Natural Cooling Processes in a Hot, Arid Region." National Passive Solar Conference, 2nd, University of Pennsylvania, Philadelphia, March 16-18, 1978. Passive Solar: State of the Art. 3 vols. Available from Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Avenue, Philadelphia, PA 19146 \$20.00 (paper) v. 2, p. 653-657.

Scully, Daniel V. "Climate Based Solar House Design: Hot and Humid Charleston, S. C." Sharing the Sun! Solar Technology in the Seventies; A Joint Conference 1976 of the American Section of the International Solar Energy Society and the Solar Energy Society of Canada, Inc., August 15-30, Winnipeg. v. 4; Solar Systems, Simulation, Design, p. 23-26, Available from Pergamon Press, Inc., Maxwell House, Fairview Park, Elmsford, NY 10523. \$38.00.

Seigel, L. G., and W. L. Bryan. "Natural Convection Cooling and Dehumidifying." ASHVE Transactions. v. 64, 1958, p. 151-162. Heating, Piping & Air Conditioning. v. 29, no. 12, December 1957, p. 129-134.

Ventilation

(Cooling Towers)

White, Robert F. "Landscape Development and Natural Ventilation; Effect of Moving Air on Buildings and Adjacent Areas." Landscape Architect. v. 45, January 1955, p. 72-81. Reprint October 1976, available from Department of Landscape Architecture, Texas A & M University, College Station, TX 77843, free.

Convection

(Natural with Respect to Collection; Heat Transfer)

Macedo, I. C. "An Approximate Analysis of Natural Convection Solar Air Heaters." Cobem 75, Brazilian Congress on Mechanical Engineering, 3rd, Rio de Janeiro, Brazil, December 9-11, 1975, p. 23-31; also in Annales, Universidade Federal, Rio de Janeiro, v. B503, 1976, p. 503-512. Available from Technology Application Center, University of New Mexico, Albuquerque, NM 87131 (#ST77 21022) \$4.50.

McFarland, Michael. Design of Long-Loop Convective Heat Transfer Systems for Solar Heaters. New York: American Society of Mechanical Engineers, 1972, 5 p. (Miscellaneous Paper 72/WA/Sol-9) Available from Engineering Societies Library, 345 East 47th Street, New York, NY 10017. \$4.50 plus postage.

Rogers, Buck. "Solar Air Heater." Alternative Sources of Energy. no. 14, May 1974, p. 26.

Evaporation

(Roof Ponds; Water Spray)

Smith, William T. "Evaporative Cooling - A Symposium." Heating, Piping & Air Conditioning. v. 27, no. 8, August 1955, p. 141-147.

Evaporation/Condensation

(Heat Pipes; Freon Transfer)

Baer, Steven C. "Freon Actuated Controls." Passive Solar Heating and Cooling Conference and Workshop, Albuquerque, NM, May 18-19, 1976. Proceedings. Washington, DC : U. S. Government Printing Office, 1977, p. 282. Available from National Technical Information Service, U. S. Dept. of Commerce, Springfield, VA 22161. 355 p. \$10.50 (paper)

Biener, Walter B., Donald S. Trimmer and David A. Wolf. "Application of Heat Pipes to Solar Collectors." Intersociety Energy Conversion Engineering Conference, 10th, Newark, DE, 1975. Energy 10. New York: Institute of Electrical and Electronics Engineers, 1975 p. 1533-1539. Available from Engineering Societies Library, 345 East 47th Street, New York, NY 10017. \$6.10 plus postage.

Theoretical Analysis of a Passive Heat Pipe Heating and Cooling System. Sponsored in part by New Mexico Energy and Minerals Dept., Santa Fe, May 1979. 46 p.

Radiation

(Sky Radiation)

Yellott, John I. "Utilization of Sun and Sky Radiation for Heating and Cooling of Buildings." ASHRAE Journal. v. 15, no. 12, December 1973, p. 31-42.

Re-Radiation

(Deep Sky)

Hay, Harold R., and John I. Yellott. "Natural Air Conditioning with Roof Ponds and Movable Insulation." ASHRAE Transactions. v. 75, pt, 1, 1969, paper 2102, p. 165-177.

Trombe, F., and C. Henry La Blanchetais. "Principles of Air-Conditioning in Countries with a Clear Sky." United Nations Conference on New Sources of Energy: Solar Energy, Wind Power and Geothermal Energy, Rome, 21-31 August, 1961. Proceedings. v. 6: Solar Energy, III. p. 123-135. New York: United Nations, 1964. 1974 reprint available from United Nations Publications, Sales Section, Room A-3315, New York, NY 10017 (#E/F.63.1.40) \$16.00.

Reflectivity

(Reflectors)

McDaniels, D. K., Douglas H. Lowndes and H. D. Kaehn. "Geometrical Analysis of Reflector-Solar Thermal Collector Combinations." Abstract in International Solar Energy Society Congress and Exposition, University of California, Los Angeles, July 28 - August 1, 1975. Solar Use Now - A Resource for People. International Solar Energy Society, c/o Smithsonian Radiation Biology Laboratory, 12441 Parklawn Drive, Rockville, MD 20852, 1975, p. 258-259, \$15.00 (paper) Complete paper available from authors c/o Dept. of Physics, University of Oregon, Eugene, OR 97403.

Conference Proceedings

Community Renewable Energy Systems Conference, Boulder, CO, Aug. 20-21, 1979. Proceedings. Available from Document Distribution Service, Solar Energy Research Institute, 1536 Cole Blvd., Golden, CO 80401

Franta, G. and Glenn, B. Humanistic Energy Choices: Proceedings of Aspen Energy Forum 1978. Solar Energy Research Institute, Golden, CO, 1979.

Franta, G. and Olson, K. Solar Architecture: Proceedings of Aspen Energy Forum 1977. Ann Arbor Science Publishers, Inc., Ann Arbor, MI, 1978. 331 p.

International Solar Energy Society, International Congress, Atlanta, GA, May 28-June 1, 1979. Proceedings. Available from the American Section of International Solar Energy Society, P. O. Box 1416, Killeen, TX 76541.

National Passive Solar Conference, 3rd, San Jose, California, January 11-13, 1979. Proceedings. 3 vols. Available from American Section, International Solar Energy Society, Inc., P. O. Box 1416, Killeen, TX 76541.

National Passive Solar Conference, 4th, Kansas City, Missouri, October 3-5, 1979. Proceedings. Available from American Section, ISES, P. O. Box 1416, Killeen, TX 76541.

Solar Heating and Cooling Systems Operational Results Conference, Colorado Springs, CO, November 1978. Proceedings. Available from Document Distribution Service, Solar Energy Research Institute, 1536 Cole Blvd., Golden, CO 80401.

Future Publications

American Institute of Arch. Architectural Graphics Standards, 7th Edition. Available May 1980.

Balcomb, J. D. and Anderson, Bruce. Passive Solar Design Handbook. Washington, DC : U. S. Government Printing Office. Available January 1980.

Mazria, Edward. Passive Solar Handbook. Lawrence-Berkeley Laboratories. Available Fall 1979.

Niles, Phil and Haggard, Kenneth. Passive Solar Handbook. California Energy Commission. Availability unknown.

Solar Energy Research Institute. Low Cost Performance Evaluation of Passive Solar Buildings. Available late 1979.



National Renewable
Energy Laboratory



02LIB092549