

RUSSELL SCOTT HARMON

CURRICULUM VITA

CONTACT INFORMATION

9108 Hometown Drive, Raleigh, NC 27615-3161
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EDUCATION

McMaster University (Canada)	PhD - Geology	1976
Pennsylvania State University	MS - Geochemistry	1973
University of Texas	BA - Geology (honors)	1969

PROFESSIONAL EXPERIENCE

Adjunct Associate Professor

Department of Marine, Earth, & Atmospheric Sciences, North Carolina State University, Raleigh, NC 27695; 1997-present (Co-instructor for *Junior Seminar on Professional Development*, 2019-20)

Director, US Army Corps of Engineers International Research Office

86-88 Blenheim Crescent, Ruislip, London, UK; 2011-2017

Program Manager for Terrestrial Sciences

USARL Army Research Office, Research Triangle Park, NC; 1993-2011

Head and Senior Scientist

NERC Isotope Geosciences Laboratory: British Geological Survey, Keyworth, UK; 1988-93

Associate Professor

Department of Geological Sciences, Southern Methodist University: Dallas, TX; 1982-88 (Instructor: *Oceanography, Mineralogy, Introduction to Geochemistry, Isotope Geochemistry*)

Lecturer and Head - Stable Isotope Laboratory

Scottish Universities Research and Reactor Centre: East Kilbride, Scotland, UK; 1977-82

Assistant Professor

Department of Geological Sciences, Michigan State University, East Lansing, MI; 1976-78 (Instructor: *Oceanography, Hydrogeology, Geochemistry, Aqueous Geochemistry, Isotope Geochemistry*)

Graduate Teaching Assistant

Geology Department, McMaster University: Hamilton, Canada; 1972-75

Staff Geochemist

Geochemistry Division, NASA, and Manned Spacecraft Center: Houston, TX; 1971

Graduate Research Assistant

Geochemistry Department, Pennsylvania State University: University Park, PA; 1970-71

Assistant Curator

Lunar Receiving Laboratory, NASA, Manned Spacecraft Center, Houston, TX; 1969-70.

Geological Technician

Lunar Receiving Laboratory, NASA, Manned Spacecraft Center, Houston, TX; 1968.

PROFESSIONAL ORGANIZATION MEMBERSHIPS

International Association of GeoChemistry (President, 2007-10)
Geological Society of America (elected Fellow, 1987)
National Speleological Society (elected Fellow, 1975)

SCHOLARSHIPS, FELLOWSHIPS, AWARDS & HONORS

1964

Appointment to U.S. Coast Guard Academy (honorable discharge 1967 due to visual acuity <20/30)

1969

Recipient, Honors Thesis Undergraduate Research Grant; University of Texas

1970

Recipient, Graduate Research Fellowship, Cave Research Foundation

1973

Recipient, National Speleological Society R. W. Stone Graduate Research Fellowship.

1975

Elected Fellow of the National Speleological Society

1976

National Speleological Society Certificate of Merit for outstanding scientific contributions to speleology

1977

Recipient, Bermuda Biological Station H. B. Wilkinson Fellowship for Research

Honorary Research Fellow, Harvard University

1984

Elected to membership in *Sigma Xi* - the Scientific Research Society

Recipient SMU Chapter of *Sigma Xi* Certificate of Recognition for outstanding achievements in research

1985

Recipient, Senior Research Fellowship from the Alexander von Humboldt Foundation, tenured at the
Geochemisches Institut, der Universität Göttingen, Germany (1985-86)

Recipient, SMU triennial research leave award (1985-86)

1987

Elected Fellow of the Geological Society of America

1992

Elected Council Member, International Association of Geochemistry & Cosmochemistry, 1992-2004

1993

Recipient, Senior Research Fellowship from the Alexander von Humboldt Foundation, tenured at the
Geochemisches Institut, der Universität Göttingen, Germany

1994

Department of the Army Certificate of Achievement Award

Department of the Army Official Commendation

1995

Department of the Army Official Commendation

1996

Department of the Army, Certificate of Achievement Award

U.S. Army Research Office, Exceptional Performance Award

1997

Department of the Army Official Commendation

U.S. Army Research Office, Exceptional Performance Award

Appointment as Adjunct Associate Professor in the Department of Marine, Earth, and Atmospheric
Sciences of North Carolina State University (1997-present)

1998

Geological Society of America, Certificate of Appreciation for Service

1999

Department of the Army Official Commendation

U.S. Army Research Office, Exceptional Performance Award

2000

Elected, Army Research Laboratory Fellow for exceptional technical accomplishment

2001

Strathmore Who's Who for 2001-2002

2002

Recipient, Army Research Laboratory Achievement Award for Technical Publication

Recipient, Army SBIR Program Phase II Quality Award for Technology Transfer from the Deputy Assistant Secretary of the Army for Research and Technology

2003

U.S. Army Research Office, Exceptional Performance Award

U.S. Army Research Laboratory Citation as a Team Member for the Development of the Broadband Field-Portable Laser Induced Breakdown Spectroscopy in the 2002 US Army Material Command Greatest Inventions Program

2008

Recipient, U.S. Army SBIR Achievement Award for 2008

2011

Recipient, U.S. Antarctic Service Medal

2011

Recipient, U.S. Army SBIR Achievement Award for 2011

2011

Recipient, U.S. Army Commander's Award for Civilian Service

2014

Recipient of Distinguished Service Award from the International Association of GeoChemistry

PROFESSIONAL ACTIVITIES & SERVICE

1976

Co-organizer, International U-Series Interlaboratory Comparison Project (1976-82)

1977

President, Speleochronology & Paleokarst Commission, International Speleological Union (1977-86)

1980

Appointed Member, Editorial Board, Quaternary Science Reviews (1980-90)

1982

Appointed Member, Student Awards Committee, Department of Geological Sciences, Southern Methodist University (1982-88)

1983

Elected Member, Technical Program Committee, Dallas Geological Society (1983-85)

Campus Representative at SMU for the Geological Society of America (1983-88)

Organizer and co-convenor, American Geophysical Union Symposium on *Chemical and Isotopic Constraints on Andean Magmatism*

1987

Elected Member, Geological Society of America Day Medal Committee (1987-90)

1988

Organizer and Co-convenor, Geological Society of America Special Thematic Symposium *Andean Magmatism and its Tectonic Setting*

Appointed Member, NERC Isotope Facilities Programme Committee (1988-93)

Appointed Member, NERC Scientific Services Senior Management Committee (1988-93)

1991

Co-convenor, NERC Isotope Geology Laboratory symposium on *Frontiers in Isotope Geosciences*

Invited External Panel Member, German Science Foundation Schwerpunkt-Programm (1991-93)

1992

Elected Council Member, International Association of Geochemistry and Cosmochemistry (1992-2000)

1993

Appointed Member, Army Environmental Sciences Scientific Planning Group (1993-present)

Appointed Member, Tri-Service Environmental Quality Planning Group (1993-96)

Chair, Technical Advisory Committee for DOD University Research Initiative Program research center on *Fluid Flow and Contaminant Transport in Heterogeneous Multiphase Systems* (1993-98)

1994

Ex-officio Member, National Science Foundation Hydrologic Sciences Panel (1994-2011)

Organizer and co-convenor, 19th Army Science Conference Theme Session on *Environment and Geosciences*

1995

Organizer and co-convenor, Geological Society of America Special Thematic Symposium *Simulation, Animation, and Data Visualization in Hydrogeology*

Organizing Committee, 3rd International Symposium on Environmental Geotechnology

Chair, Technical Advisory Council of the DOD University Research Initiative Program research center on *Nearshore Processes* (1994-97)

1996

Elected Member, Geological Society of America, Committee on Committees for 1997

Invited Plenary Session Panelist, 3rd International Symposium on Environmental Geotechnology

Invited Member, Peer Review Panel for Army In-House Laboratory Independent Research

Organizing Committee, 4th International Symposium on Spectral Sensing Research

Chair, Technical Advisory Council for the DOD Multidisciplinary University Research Initiative Program research center on *Rapid and Affordable Generation of Terrain and Urban Feature Data* (1996-2002)

Steering Committee, 4th International Conference on Case Histories in Geotechnical Engineering

1997

Invited Member, Board of Visitors for Office of Naval Research Ocean, Atmosphere, and Space Department Management Triennial Review

Chair, International Association of Geochemistry and Cosmochemistry Publications Committee (1997-2004)

Appointed Associate Editor of *Applied Geochemistry*, 1997-2011)

Elected Member, Geological Society of America Penrose Medal Committee (1997-2000)

Invited Member, Army Environmental Quality Technology Integrated Process Team (1997-2001)

1998

Invited Member, Conservation Program National Peer Review Panel, DOD Strategic Environmental Research and Development Conservation Program

Organizing Committee, 3rd International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics

Organizer and Co-Convenor, Geological Society of America Annual Meeting GSA Engineering Geology Division Symposium on *Military Applications of Engineering Geology*

Organizer and Co-Convenor, Geological Society of America Annual Meeting theme session on *Surficial Processes and Landscape Dynamics within Arid and Desert Environments*

Chair, International Association of Geochemistry and Cosmochemistry Publications Committee (1998-2004)

1999

Organizing Committee, 5th International Symposium on Spectral Sensing Research

Steering Committee and Publications Chair, 4th International Conference on GeoComputation

Organizer and Co-convenor, Geological Society of America Annual Meeting theme session on *Numerical Modeling of Erosion and Sedimentation*

Appointed Research Advisor for the National Academy of Sciences/National Research Council Post-Doctoral Associate Program at ARO

2000

Organizing Committee, *4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics*

2001

Co-chair, *SPIE 6th Annual International Aerospace/Defense Symposium Conference on Detection and Remediation Technologies for Mines and Minelike Targets*

Technical Program Committee for *LIBS 2002 - 2nd International Conference on Laser Induced Breakdown Spectroscopy*

2002

Co-chair, *SPIE 7th Annual International Aerospace/Defense Symposium Conference on Detection and Remediation Technologies for Mines and Minelike Targets*

Invited Member, White House Office of Science and Technology Task Force on Mine Detection Technology

Co-convenor of the 2002 GSA annual meeting special theme session on *Watershed Processes Within Tropical Montane Catchments*

Organizing Committee, *2003 International Military Geology and Geography Conference*

Technical Advisory Committee for the DOD University Research Initiative Program research center on *The Science of Land Spectral Sensing* (2002-2007)

Chair, Technical Advisory Committee for the DOD University Research Initiative Program research center on *Detection & Classification Algorithms for Multi-Modal Inverse Problems* (2002-07)

2003

Principle Organizer & Chair, Technical Program Committee for the *International Scientific Symposium: The Rio Chagres: A Multidisciplinary Profile of a Tropical Watershed*

Organizing Committee, *5th International Conference on Case Histories in Geotechnical Engineering*

Principal Co-chair, *SPIE 8th Annual International Aerospace/Defense Symposium Conference on Detection and Remediation Technologies for Mines and Minelike Targets*

Co-organizer and Convener, *Special Theme Session on Karst Geomorphology, Hydrology, & Geochemistry at the 2003 Geological Society of America Annual Meeting*

Technical Program Committee, *LIBS 2004 - 3rd International Conference on Laser Induced Breakdown Spectroscopy*

Invited Member, Army Countermine Integrated Performance Team (2003-08)

2004

Elected Vice-President, International Association of GeoChemistry (2004-08)

Invited Member, International Program Committee, *3rd International Conference on Laser-Induced Plasma Spectroscopy*

Organizing Committee, *5th International Conference on Case Histories in Geotechnical Engineering*

Principal Co-chair, *SPIE 9th Annual International Aerospace/Defense Symposium Conference on Detection and Remediation Technologies for Mines and Minelike Targets*

Technical Advisory Committee for the DOD University Research Initiative Program research center on *Exploitation of Coherent Structures in Riverine and Estuarine Flows for DOD Operations in Denied Areas* (2005-10)

Co-Organizer, *Workshop on Security Applications of LIBS at LIBS2004 – The 3rd International Symposium on Laser-Induced Breakdown Spectroscopy*

Scientific Program Committee, *6th International Military Geology and Geography Conference*

IAGC representative to Executive Committee of the *Elements* magazine (2004-07)

2005

Organizing Committee, *3rd International European-Mediterranean LIBS Symposium*

Principal Co-chair, *SPIE 10th Annual International Aerospace/Defense Symposium Conference on Detection and Remediation Technologies for Mines and Minelike Targets*

2006

Invited Member, International Program Committee, *4th International Conference on Laser-Induced Plasma Spectroscopy*

Co-chair, *SPIE 11th Annual International Aerospace/Defense Symposium Conference on Detection and Remediation Technologies for Mines and Minelike Targets*

Scientific Program Committee, *7th International Military Geology and Geography Conference*

Appointed Chair of the Corporate Review Panel for the ARL Director's Research Initiative (2006-09)

2007

Advisory Board, *8th International Conference on Military Geology & Geography*

Co-chair, *SPIE 12th Annual International Aerospace/Defense Symposium Conference on Detection of Mines, Explosive Objects, and Obscured Targets*

Scientific Advisory Board, *1st North American LIBS Symposium*

Army Superior Unit Award for 2007

Appointed, Interim President, International Association of GeoChemistry (2007-08)

2008

Elected President, International Association of GeoChemistry (2008-10)

Elected 2nd Vice President, Geological Society of America Division of Mineralogy, Geochemistry, & Volcanology

Co-chair, *SPIE 13th Annual International Aerospace/Defense Symposium Conference on Detection of Mines, Explosive Objects, and Obscured Targets*

2009

Principal Co-chair, *SPIE 14th Annual International Aerospace/Defense Symposium Conference on Detection of Mines, Explosive Objects, and Obscured Targets*

Elected 2nd Vice President, Geological Society of America Division of Mineralogy, Geochemistry, & Volcanology

Scientific Advisory Board, *2nd North American LIBS Symposium*

2010

Past President, Association of GeoChemistry (2010-12)

Co-chair, *SPIE 15th Annual International Aerospace/Defense Symposium Conference on Detection of Mines, Explosive Objects, and Obscured Targets*

Elected 1st Vice President, Geological Society of America Division of Mineralogy, Geochemistry, & Volcanology

Scientific Advisory Board, *3rd North American LIBS Symposium*

Advisory Board, *9th International Conference on Military Geology & Geography*

International Program Committee, *5th International Conference on Laser-Induced Plasma Spectroscopy*

Invited Reviewer for the U.S. Department of Energy's Office of Nonproliferation and Verification Research and Development program "Rapid Nuclear Forensics Detection".

2011

Co-chair, *SPIE 16th Annual International Aerospace/Defense Symposium Conference on Detection of Mines, Explosive Objects, and Obscured Targets*

Technical program Committee for 6th Euro-Mediterranean Symposium on Laser-Induced Breakdown Spectroscopy

Organizer & co-convenor for Geological Society of America Pardee Keynote Symposium "Honoring British Geologist Arthur Holmes (1890-1965) for Contributions to Geochronology, Plate Tectonics, and the Origin of Granite"

Elected President, Geological Society of America Division of Mineralogy, Geochemistry, & Volcanology

2016

Co-editor, *Advances in Military Geoscience Series*, Springer-Verlag

2017

Chair, Advisory Council for the NGO 'Geology in the Public Interest'

2018

Editor, Applied Geology Section for 2nd Edition of the *Encyclopedia of Geology*, Elsevier (2018-2020)

2019

Co-organizer session on Emerging Laser Ablation-Based Trends in Solid Sample Chemical Analysis for the *2019 Goldschmidt International Conference*

2020

Elected Fellow of the International Association of GeoChemistry.

PROFESSIONAL TRAINING

1986

Geological Society of America Short Course: *Stable Isotopes in High-Temperature Processes*

1992

Management Training Courses: *Building a High-Performance Team & Total Quality Management*

1993

Geological Society of America Short Course: *Contaminant Hydrogeology*

1994

Management Training Courses: *Fundamentals of Systems Acquisition Management & Systems Engineering Management*

1995

Geological Society of America Short Course: *Cosmogenic Isotopes*

Management Training Course: *Intermediate Systems Acquisition Management*

1996

Short course: *Terrain Visualization*

2007

Composite Risk Management Training

2010

Training Course: *Geochemist's Workbench* for Geochemical & Biogeochemical Reaction Modeling

RESEARCH GRANTS & CONTRACTS

1970

1. with P.R. Brett, P. Butler, C. Meyer, H.H. Schmidt, A.M. Reid and R. Williams, A Determination of the Identity, Composition, Texture and Internal Structure of Opaque Minerals and their Paragenetic Relation to Non-Opaque Minerals: National Aeronautics and Space Administration.

1976

2. $^{230}\text{Th}/^{238}\text{U}$ Isotope Systematics of Basaltic Rocks from Hawaii: National Science Foundation (\$21,935).

3. Speleochronology of Alpine Cave Deposits: Michigan State University Alumni Foundation (\$2,000).

4. Geochronology and Sea level History of Bermuda: National Science Foundation (\$17,948).

5. Isotopic Paleoclimate Investigations of Cave Deposits: National Science Foundation (\$21,190).

1978

6. with L.S. Land and H.P. Schwarcz, Geochronology of Bermuda: National Science Foundation (\$1,886).

7. with T.C. Atkinson, P.L. Smart and A.C. Waltham, Reconstruction of Pleistocene Climates from the Geomorphology of Caves and the Stratigraphy, Geochronology and Isotopic Geochemistry of Speleothems: Natural Environment Research Council of Great Britain (5213 UK Pounds).

1980

8. Uranium-Series Geochronology of Pleistocene Terrestrial and Marine Deposits: Natural Environment Research Council of Great Britain (6889 UK Pounds).

1982

9. with C.M. Graham, Experimental Determination of H-isotope Fractionation in Hydrous Mineral-Water Systems: North Atlantic Treaty Organization (\$6,703).

1983

10. Stable Isotope Studies of the Behavior of Water in Subduction Related Processes and the Origin of Water in Igneous Rocks: National Science Foundation (\$50,505).

11. Equipment Funds for a Stable Isotope Facility at Southern Methodist University to be set up on a Cost Center Basis: National Science Foundation (\$19,000).

1984

12. with N.J. McMillan and M.A. Dungan, Collaborative Petrological, Geochemical, and Isotopic Investigation of Late Cenozoic Volcanism in the Andes of Chile: National Science Foundation (\$173,819).

13. with M.A. Dungan and S. Moorbath, Geochemical Evaluation of Crustal and Mantle Contributions to Continental Volcanism: North Atlantic Treaty Organization (240,000 Belgian Francs).

14. Acquisition of Equipment to Establish a Facility for U-Series Disequilibrium Archaeometry: National Science Foundation (\$30,895).

1986

15. with P. Vidal, R.W. Nesbitt, and B. Auvray, Petrology-Geochemistry of Boninites and Other High-Magnesian Silicate Liquids: North Atlantic Treaty Organization (250,000 Belgian Francs).

1987

16. Stable Isotope Systematics of Mantle Peridotites in the Context of their Tectonic History: National Science Foundation (\$70,000).

1991

17. Gold in Western Iberia: European Community Raw Materials Programme (£27,859 UK).

2000

18. Spatial Environmental Modeling with GIS: US Army Research Office Staff Research Grant with North Carolina State University (\$17,974).

2004

19. GIS Analysis and Simulation of Natural and Anthropogenic Terrain Change Impacts on Water and Sediment Transport: US Army Research Office Staff Research Grant with North Carolina State University (\$118,212).

2008

20. Terrain/Landscape Monitoring, Dynamics, and Sustainability: US Army Research Office Staff Research Grant with North Carolina State University (\$143,000).

2018

21. with J.R. Plumer and Richard Hark (JRPlumer Associates LLC), Integrated Multimodal Sensor Technology for the Rapid, In-situ Chemical Analysis of Soil and Materials of Military Interest Under Ambient Conditions in the Field : US Army Engineer Research & Development Center (\$999,964)

GRADUATE STUDENT AND POST-DOCTORAL FELLOW MENTORING

1. Baranowski, J., $^{238}\text{U}/^{230}\text{Th}$ Isotope Systematics of Rhyolites from Long Valley, California: MS Thesis, Michigan State University (1977).

2. Lively, R.S., Uranium-Series Disequilibrium Investigations of Three Surficial Uranium Deposits: MS Thesis, Michigan State University (1978).

3. Ikin, N.P., The Mafic and Ultramafic Rocks of the Highland Border, Arran to Kirriemuir: PhD Dissertation, University of Wales (1980).

4. Viglino, J.A., Hydrogen Isotope Exchange Between Aluminous Chlorite and Water: MS Thesis, Southern Methodist University (1985).

5. Davidson, J.P., SMU post-doctoral fellow (1985-1987).

6. Johnson, K.A., Isotope Geochemistry of Augustine Volcano, Alaska: MS Thesis, Southern Methodist University (1986).

7. Dugan, J.P., Guanidine Hydrochloride Method for Determination of Water Oxygen Isotope Ratios and the Oxygen-18 Fractionation Between Carbon Dioxide and Water at 25°C: MS Thesis, Southern Methodist University (1987).
8. Kinsel, S.M., Oxygen and Hydrogen Isotope Study of the Ballachulish Igneous Complex and Metamorphic Aureole, Southwest Grampian Highlands, Scotland: MS Thesis, Southern Methodist University (1987).
9. Briot, D., NERC Isotope Geosciences Laboratory, British Council post-doctoral fellow (1990-1991).
10. Woodhead, J., NERC Isotope Geosciences Laboratory post-doctoral fellow (1991).
11. Massey, J.A., Metamorphism, Melting, and Fluids in the High Himalayan Crystallines, Lantang Valley, Nepal: PhD Dissertation, Open University, UK (1992-1994).
12. McNinch, J., ARO National Academy of Sciences/National Research Council post-doctoral research fellow at USACE Field Research Facility (1999-2000).
13. Mitsova, H., ARO National Academy of Sciences/National Research Council senior post-doctoral research fellow at North Carolina State University, 2001-2003, ARO staff research grant-supported post-doctoral research fellow (2003-2007).
14. Starek, M., ARO National Academy of Sciences/National Research Council post-doctoral research fellow at North Carolina State University (2009-2011).

COMMUNITY ACTIVITIES AND PERSONAL INTERESTS

Basketball (Coach, Scottish National League Division I Bearsden Bears, 1980-82)

Boy Scouts of America (Eagle Scout - Troop 214 in Biloxi, MS, 1961; Summer Camp Councillor, 1961-63; Assistant Scoutmaster, Troop 334/332 in Raleigh, NC, 1996-2006)

Soccer (US Soccer Federation Referee, 1997-2008);

Softball (Member, Hudson Memorial Presbyterian Church Men's Softball League Team, 1994-2008)

Hobbies & Interests: Spelunking, Hillwalking, Contract Bridge, Philately, and Photography

RUSSELL SCOTT HARMON

PUBLICATIONS 1970 – 2019; H-index = 69, publication citations >16,200

PEER-REVIEWED PAPERS

1970

1. Lunar Sample Preliminary Examination Team, 1970, Preliminary examinations of lunar samples from Apollo 12: *Science*, 167:1325-1339.
2. Harmon, R.S., 1970, The chemical evolution of some carbonate cave waters, *Inner Space Cavern, Texas: Caves and Karst*, 12:1-8.
3. Reid, A.M., Meyer, C., Harmon, R.S., and Brett, P.R., 1970, Metal in Apollo 12 igneous rocks: *Earth and Planetary Science Letters*, 9: 1-5.

1971

4. Harmon, R.S., 1971, Preliminary results in the ground water geochemistry of the Sierra de El Abra region, north-central Mexico: *National Speleological Society Bulletin*, 33: 73-85.

1972

5. Harmon, R.S., 1972, The application of stable carbon isotopic studies in karst research, Part I. Background and Theory: *Caves and Karst*, 13: 17-28.
6. Harmon, R.S., 1972, The application of stable carbon isotope studies in karst research. Part II. An example from central Pennsylvania: *Caves and Karst* 13: 29-35.
7. Harmon, R.S., Hess, J.W., Jacobson, R.L., Shuster, E.T., Haygood, C., and White, W.B., 1972, Chemistry of carbonate denudation in North America: *Transactions of the Cave Research Group of Great Britain*, 14: 96-103.
8. Jakes, P., Ridley, W.I., Warner, J.L., Reid, A.M., Harmon, R.S., Brett, P.W. and Brown, R.W., 1972, Petrology of a portion of the Fecundatis regolith: *Earth and Planetary Science Letters*, 13: 257-271.
9. Reid, A.M., Ridley, W.I., Harmon, R.S., Warner, J.L., Brett, P.R., Jakes, P., and Brown, R.W., 1972, Highly aluminous glasses in the lunar soils and the nature of the lunar highlands: *Geochimica Cosmochimica Acta*, 36: 903-912.
10. Reid, A.M., Ridley, W.I., Harmon, R.S., Warner, J.L., Brett, P.R., Jakes, P., and Brown, R.W., 1972, The major element composition of lunar rocks as inferred from glass compositions in lunar soils *Geochimica Cosmochimica Acta Supplement* 3, 1: 363-378.

1973

11. Drake, J.J. and Harmon, R.S., 1973, Hydrochemical environments of carbonate terrains: *Water Resources Research*, 9: 949-957.
12. Reid, A.M., Ridley, W.I., Harmon, R.S., and Jakes, P., 1973, Major element chemistry of glasses in Apollo 14 soil 14156: *Geochimica Cosmochimica Acta*, 37: 695-699.

1974

13. Deines, P., Langmuir, D. and Harmon, R.S., 1974, Stable carbon isotope ratios and the existence of a gas phase in the evolution of carbonate ground waters: *Geochimica Cosmochimica Acta*, 38: 1147-1164.

1975

14. Harmon, R.S., White, W.B., Drake J.J., and Hess, J.W., 1975, Regional hydrochemistry of North American carbonate terrains: *Water Resources Research*, 11: 963-972.
15. Harmon, R.S., Thompson, P., Schwarcz, H.P., and Ford, D.C., 1975, Uranium-series dating of speleothems: *National Speleological Society Bulletin*, 37: 21-23.
16. Ford, D.C., Harmon, R.S., Schwarcz, H.P., Wigley T.M.L., and Thompson, P., 1975, Geohydrologic and thermometric observations in the vicinity of the Columbia Icefields, Alberta-British Columbia, Canada: *Journal of Glaciology*, 17: 219-230.

17. Shaw, D.M. and Harmon, R.S., 1975, Factor analysis of elemental abundances in chondritic and achondritic meteorites: *Meteoritics*, 10: 253-282.
- 1976
18. Schwarcz, H.P., Harmon, R.S., Thompson, P., and Ford, D.C., 1976, Stable isotope studies of fluid inclusions in speleothems and their paleoclimate significance: *Geochimica Cosmochimica Acta*, 40: 657-665.
- 1977
19. Harmon, R.S., 1977, Late Pleistocene glacial chronology of the South Nahanni River region, Northwest Territories, Canada: *Michigan Academician*, 9: 14-157.
20. Harmon, R.S., Ford, D.C., and Schwarcz, H.P., 1977, Interglacial chronology of the Rocky and Mackenzie Mountains between latitudes 40° and 62°N based upon $^{230}\text{Th}/^{234}\text{U}$ dating of calcite speleothems: *Canadian Journal of Earth Sciences*, 14: 2543-2552.
- 1978
21. Atkinson, T.C., Harmon, R.S., Smart, P.L., and Waltham, A.C., 1978, Paleoclimate and geomorphic implications of $^{230}\text{Th}/^{234}\text{U}$ dates on speleothems from Britain: *Nature*, 272: 24-28.
22. Goede, A., Murray P., and Harmon, R.S., 1978, Pleistocene man and mega-fauna in Tasmania, dated evidence from cave sites: *Artifact*, 3: 139-49.
23. Harmon, R.S. and Curl, R.L., 1978, Preliminary results on growth rate and paleoclimate studies of a stalagmite from Ogle Cave, New Mexico: *National Speleological Society Bulletin*, 40: 25-26.
24. Harmon, R.S., Schwarcz, H.P., and Ford, D.C., 1978, Late Pleistocene sea level history of Bermuda: *Quaternary Research*, 9: 205-218.
25. Harmon, R.S., Schwarcz H.P., and Ford, D.C., 1978, Stable isotope geochemistry of speleothems and cave waters from the Flint Ridge-Mammoth Cave System, Kentucky: *Journal of Geology*, 86: 373-384.
26. Harmon, R.S., Thompson, P., Schwarcz, H.P., and Ford, D.C., 1978, Pleistocene paleoclimates of North America as inferred from stable isotope studies of speleothems: *Quaternary Research*, 9: 50-74.
- 1979
27. Harmon, R.S., Ku, T.-L., Matthews, R.K., and Smart, P.L., 1979, The limits of U-series analysis, Phase I results of the 'Uranium-Series Intercomparison Project': *Geology*, 7: 405-409.
28. Harmon, R.S., 1979, U-series dating of speleothems and a glacial chronology for western North America: *National Speleological Society Bulletin*, 41: 102-104.
29. Harmon, R.S., Schwarcz, H.P., Ford, D.C., and Koch, D.L., 1979, An isotopic paleotemperature record of the Late Wisconsinan in northeast Iowa: *Geology*, 7:430-433, and 1980, Reply to Comment by J. Moran and R. Stieglitz: *Geology*, 8: 263-265.
30. Harmon, R.S., Schwarcz, H.P., and O'Neil, J.R., 1979, D/H ratios in speleothem fluid inclusions - A guide to variations in the isotopic composition of meteoric precipitation: *Earth and Planetary Science Letters*, 42: 254-266.
31. Harmon, R.S., 1979, An isotopic study of groundwater seepage in the Central Kentucky Karst: *Water Resources Research*, 15: 476-480.
32. Lively, R.S., Harmon, R.S., Levinson, A.A., and Bland, C., 1979, Disequilibrium in the ^{238}U series in samples from Yeelirrie, Western Australia: *Journal of Geochemical Exploration*, 12: 57-65.
33. Goede, A., Harmon, R.S., and Kiernan, K., 1979, Sea Caves of King Island: *Helictite* 17:51-64
- 1980
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