

B. Kalin

VOLUME 31 / NUMBER 1 / 1989

# Radiocarbon

An International Journal of Cosmogenic Isotope Research

---



**Editor**  
AUSTIN LONG

**Managing Editor**  
RENEE S KRA

4717 East Ft Lowell Road  
Department of Geosciences  
The University of Arizona  
Tucson, Arizona 85712

ISSN: 0033-8222

## RADIOCARBON

An International Journal of Cosmogenic Isotope Research

Editor: AUSTIN LONG

Managing Editor: RENEE S KRA

Published by

Department of Geosciences

The University of Arizona

Published three times a year at The University of Arizona, Tucson, AZ 85712. © 1989 by the Department of Geosciences, The University of Arizona.

Subscription rate \$90.00 (for institutions), \$60.00 (for individuals), available only in whole volumes. The Proceedings of the Thirteenth International Radiocarbon Conference, Vol 31, No. 3, 1989 are \$60.00. The Proceedings of the Twelfth International Radiocarbon Conference, Vol 28, Nos. 2A and 2B, 1986 are \$60.00. No. 2B, the Special Calibration Issue, is available separately for \$30.00. The full subscription for 1986 which includes the Proceedings is \$80.00 (institutions) and \$60.00 (individuals). The Proceedings of the Eleventh International Radiocarbon Conference, Vol 25, No. 2, 1983 are \$50.00, and the Proceedings of the Tenth International Radiocarbon Conference, Vol 22, Nos. 2 and 3, 1980 are \$60.00.

*Back issues* and price lists may be obtained from the office of *RADIOCARBON*.

All correspondence and manuscripts should be addressed to the Managing Editor, *RADIOCARBON*, 4717 East Ft Lowell Road, Department of Geosciences, University of Arizona, Tucson, AZ 85712. Tel: (602) 881-0857; BITNET:C@ARIZRVAX

*Offprints.* The minimum reprint order for each article will be 100 copies without cover. *No reprints will be furnished free of charge unless page charges are paid.* The cost of additional copies will, of course, be greater if the article is accompanied by plates involving unusual expense. Copies will be furnished with a printed cover giving the title, author, volume, page, and year, when specially ordered.

*Page charges.* Each institution sponsoring research reported in a technical paper or a date list, will be asked to pay a charge of \$80.00 per printed page. Institutions or authors paying such charges will be entitled to 100 free reprints without covers. *No charges will be made if the author indicates that his institution is unable to pay them, and payment of page charges on an article will not in any case be a condition for its acceptance.*

*Missing issues* will be replaced without charge only if claim is made within three months (six months for India and Australia) after the publication date. Claim for missing issues will not be honored if absence results from failure by the subscriber to notify the Journal of an address change.

*Illustrations* should include explanation of symbols used. Copy that cannot be reproduced cannot be accepted. Whenever possible, reduce figures for direct publication. Line drawings should be in black India ink on white drawing board, tracing cloth, or coordinate paper printed in blue and should be accompanied by clear ozalids or reduced photographs for use by the reviewers. Photographs should be positive prints. *Figures* (photographs and line drawings) should be numbered consecutively through each article, using arabic numerals. **All measurements should be given in SI (metric units).** Tables may be accepted as camera-ready copy.

*Citations.* A number of radiocarbon dates appear in publications without laboratory citation or reference to published date lists. We ask that laboratories remind submitters and users of radiocarbon dates to include proper citation (laboratory number and date-list citation) in all publications in which radiocarbon dates appear.

*Radiocarbon Measurements: Comprehensive Index, 1950-1965.* This index covers all published <sup>14</sup>C measurements through Volume 7 of *RADIOCARBON*, and incorporates revisions made by all laboratories. It is available to all subscribers to *RADIOCARBON* at \$20.00 US per copy.

*List of laboratories.* The comprehensive list of laboratories at the end of each volume appears in the third number of each volume. Accelerator laboratories have been added to the list. Changes in names or addresses, additions, or deletions should be reported to the Managing Editor by May 1. *Electronic mail addresses* may be obtained from the office of *RADIOCARBON*.

## CONTENTS

	Radiocarbon Data Base: Q & A—An Artificial Intelligence Database File Management Program <i>Robert M Kalin and Austin Long</i> .....	1
	A Radiocarbon Sequence from the Toaga Site, Ofu Island, American Samoa <i>PV Kirch, TL Hunt and Jason Tyler</i> .....	7
DATE LISTS		
BM	<i>Janet Ambers, Keith Matthews and Sheridan Bowman</i> British Museum Natural Radiocarbon Measurements XXI.....	15
KR	<i>Tadeusz Kuc, Boguslawa Lewandowska and Marek Krapiec</i> Krakow Radiocarbon Measurements I .....	33
Riga	<i>VS Veksler</i> Radiocarbon Dates of Riga I .....	37
Riga	<i>VS Veksler</i> Radiocarbon Dates of Riga II .....	47
UCLA	<i>Rainer Berger and Reiner Protsch</i> UCLA Radiocarbon Dates XI.....	55
USGS	<i>Deborah A Trimble and Stephen W Robinson</i> US Geological Survey, Menlo Park, California Radiocarbon Measurements IV .....	69
Z	<i>Dušan Srdoč, Bogomil Obelić, Nada Horvatinić and Ines Krajcar Bronić</i> Rudjer Boskovic Institute Radiocarbon Measurements XI.....	85
NOTES AND COMMENTS		
	A Letter to the Radiocarbon Community <i>Willem G Mook</i> .....	99
	Book Review: Chronologies in the Near East, edited by Olivier Aurenche, Jacques Evin and Francis Hours <i>James Weinstein</i> .....	101
	ANNOUNCEMENTS	105