July 24, 1964

Recommendation for Mr. David Katz

My familiarity with Mr. Katz's work in the Department of Physics, University of Pennsylvania is limited to the repair of instruments which he has done for the Radiocarbon and ASCA laboratories.

These instruments include Tektronix and other oscilloscopes, and an X - Y recorder. He has repaired these instruments to our complete satisfaction with a minimum of delay.

Elizabeth K. Ralph

EKR/lr

[EDWARD KEARNS]
1601 Brownlea Drive
Greenville, N.C.
27834
September 5, 1977

Dear Ms. Ralph,

I have been impressed by your successful archaeometric career at the University Museum and MASCA. I have read that you have degrees in physics and chemistry, & I wondered if you might be willing to offer advice about archaeometry to one hoping to enter it with a background perhaps like yours.

I was trained as a physical chemist at Yale (Ph.D, 1965). After 12 fruitful years as a research scientist with du Pont, I am looking for a different kind of career. I would like to exercise in my work some aspect of my long interest in history & archaeology, plus scientific analysis.

I have been studying the literature in archaeometry in hopes that I might find problems that I could help solve. I have already identified a few areas, but more research will be needed to confirm that potential. Perhaps you would be willing to advise what centers, if any, are most likely to be receptive to work in archaeometry by persons trained in other disciplines.

I can contribute skills in problem-solving, a dedication to scientific research in depth, an ability to learn new fields rapidly, plus talents in a variety of areas such as statistics, optical microscopy, instrumentation analysis, & computer programming. I am not asking you for a job, but for advice as to where, if anywhere, I might look for a congenial match of interests.

Thank you for any comments or suggestions you might be willing to make.

Sincerely,
Edward R. Kearns

Dr. Edward R. Kearns,
1601 Brownlea Drive,
Greenville, N.C. 27834.

5 September 1977.

Dear Dr. Kearns,

It is gratifying to learn that you are interested in applying your "know-how" in the physical sciences to archaeometric techniques and problems. MASCA is probably the most diversified of all the centers although we do not attempt to perform all of the possible analyses, dating techniques, etc..

I have enclosed a copy of Curt W. Beck's "Archaeometric Clearinghouse" (J. of Field Archaeology, Vol. 2, no. 1/2, 1975; published by Boston University). Since it contains only the names of those who responded to a questionaire, it is not comprehensive.

If you should come to Philadelphia, we have an information center in MASCA, and we should be glad to guide you to other sources.

Sincerely yours,

Elizabeth K. Ralph.

Kraus

1601 Brownlea Drive
Greenville, NC
27834
December 4, 1977

Dr. Elizabeth K. Ralph
Associate Director
Museum Applied Science Center
for Archaeology
The University Museum
University of Pennsylvania
33rd and Spruce Streets
Philadelphia, Pa.
19104

Dear Dr. Ralph,

Thank you for your cordial letter of 5 September, and your help in telling me of various archaeometric centers.

I am interested in trying out some applied statistical analyses for thermoluminescence data. I know that you and Mark Han have done a good deal of important work in this area. In earlier papers, you indicated a belief that attempts to make TL-dating absolute are a waste of time. Therefore, presumably you do not run "2nd glow" curves in TL-dating

experiments, and perhaps do not not run complete "1st glow" curves as well. However, if you have run complete glow curves, I'd appreciate an opportunity to analyze raw data for some curves by statistical methods.

Sincerely yours,
Edward Kearns

Mr. Edward Kearns,
1601 Brownlea Drive,
Greenville, NC 27834.

7 December 1977.

Dear Mr. Kearns,

In reply to your questions of December 4th, we do run 1st, 2nd, and all kinds of glow curves.

Unfortunately, we do not release our raw data unless they are essential for a particular publication. At the moment we have none in preparation.

Sincerely yours,

Elizabeth K. Ralph.

UNIVERSITY of PENNSYLVANIA
PHILADELPHIA 19104

Department of Geology

January 19, 1968

Dr. Alfred Kelleher
Grants Program
Research Corporation
405 Lexington Avenue
New York, New York 10017

Dear Dr. Kelleher:

The Radiocarbon Laboratory of the University of Pennsylvania is now operated jointly by the University Museum and the Department of Physics. The two counter units now in operation are used for archaeological samples and for physics research projects considering the decay rate of Carbon-14. As part of the redevelopment of the geology program at the University of Pennsylvania, the Laboratory would like to purchase a third counter unit to be used for the dating of geological samples. We would like to submit a proposal to the Research Corporation requesting support of half the cost of the new geological counter unit.

The first counter is financed by the University of Pennsylvania for the specific purpose of dating archeological samples submitted by members of the staff of the University Museum. The Museum supports 15 to 20 expeditions per year and as a result, the excavators submit so many samples that the present counting capacity is completely filled. We now have, and have had for the past ten years, a backlog of at least two years of counting with our present equipment. The second counter was constructed with funds from the National Science Foundation, and is presently supported for C-14 measurements on samples of known age, and experiments with thermoluminescence and electron spin resonance for C-14 detection. We are presently dating long series of bristlecone pine samples which have been tree-ring dated back to 5200 B. C.

There is no question of the importance of radiocarbon dating for the establishment of geological chronologies. The existing sample processing facilities (combustion and purification train, etc.) are adequate to supply three counters. Adequate personnel for operating this apparatus is also available. It is clear that a new program of geological radiocarbon dating could be initiated here with a minimum of new investment.

The new program would offer close collaboration between laboratory personnel and the geologists who collect the samples. Even though not all of the samples to be submitted by the Department of Geology would have been collected by them, all would be of vital interest to them and come from projects in many parts of the world in which they are directly or indirectly involved. Furthermore, the dating of geological features has become a matter of increasing importance to the archeologists. The most obvious situation is that in which no datable archeological materials are available from a site, but associated geological strata can provide materials suitable for the indirect dating of the occupation. Last, the establishment of a geological dating program at the University of Pennsylvania will lead to new collaborations and the exchange of new ideas among geologists and archeologists.

The purely geological projects now being contemplated involve a study of the rising land mass of Finland as a result of the melting of glaciers. Samples from Lake Saimaa are being collected with the assistance of Professor Donner from the University of Helsinki. The project involves far-reaching geophysical interpretations.

Another project is the dating of samples cooperative with geological-paleontological projects with Southern Methodist University. Here we are essentially concerned with the radiocarbon dating of sedimentary features, also dated by invertebrate paleontology. Interesting discrepancies have come from this work which lead to important paleontological conclusions.

We would like to ask the Research Corporation for a Frederick Gardner Cottrell Project Grant to cover one-half the costs of the new counter unit for geological samples. The costs are detailed in the enclosed budget. The total is $18,950.

I would much appreciate your advising me whether a proposal would be in order.

Sincerely yours,

Elizabeth K. Ralph

Elizabeth K. Ralph
Research Associate
Department of Physics

EKR/mf

UNIVERSITY OF PENNSYLVANIA
RADIOCARBON LABORATORY

3rd COUNTER ESTIMATED COST

Equipment

1	Model GEC-12 Electronic Console, Johnston Labs.		$ 9,975.00
1	CO_2 Counter		1,000.00
20	G-M Counters - anti-coincidence, made by Le Materiel Telephonique, Paris, France		3,600.00
9	tons - steel shield		2,000.00
	1 ton cold-drawn blocks	$ 367	
	8 tons hrs plates	1,571	
	+ I beam		
	Transformers, circuit breakers, etc.		200.00
	Valves and Cu tubing - filling line		200.00
	Temperature Indicator		500.00
	10 Steel CO_2 storage cycls.		600.00
	Vacuum pump incl. Hg diff. pump and Hg		475.00
	Pirani gauge		400.00
	Equipment total		$18,950.00

UNIVERSITY of PENNSYLVANIA

PHILADELPHIA 4

Department of Geology

Ralph

January 19, 1968

Dr. Alfred Kelleher
Research Corporation
405 Lexington Avenue
New York, N. Y. 10017

Dear Mr. Kelleher:

The first inquiry regarding a possibility of a proposal to the Research Corporation from the University of Pennsylvania in connection with the new geology program will come to you from Miss Elizabeth Ralph, who is a research associate in the Department of Physics. Let me explain the apparent contradiction.

The Radiocarbon Laboratory of the University of Pennsylvania is presently operated jointly by the University Museum and the Department of Physics. Needless to say, there is much common ground with geology and several avenues of collaboration are now being explored. One of the stumbling blocks is the necessity of expanding the fixed equipment of the Laboratory in order to accommodate the additional flow of geologic samples.

As you probably know, the Carbon-14 Laboratory in the University of Pennsylvania has a very high reputation. Since its establishment in 1959, it has continued to maintain a level of care and precission which places it among the very best radiocarbon laboratories in the world. For example, in their dating program on samples of known age, their uncertainty in counting is now only $\pm$ 0.3 percent, as compared with $\pm$ 0.5 to $\pm$ 1.0 percent reported by most other labs. The unusual quality of our Radiocarbon Laboratory accounts for the flood of samples from archeologists. All of the particularly important and especially significant samples invariably end up there. It could be a great boon to the geology program to have such an excellent facility right at our elbow, so to speak.

Therefore, we fully endorse the proposal by Miss Ralph to begin a program of geological sample dating.

Sincerely,

Henry Faul
(Chairman)

mf
cc: E. Ralph

P. S. I have just received word that Dr. Robert Giegengack has accepted a position as Assistant Professor in our department. He is now finishing his doctoral work under Richard Foster Flint at Yale University, and his specialty is Pleistocene Geology. He shall make extensive use of the Carbon-14 facilities.

H. F.

ISABEL KELLY
16 DE SEPTIEMBRE Nos. 29 y 48
TEPEPAN (Z. 23) D. F. MEXICO

Copy

6.23.75

Dr Elizabeth K Ralph
Dept of Physics
University of Pennsylvania
Philadelphia Pa 19174

Dear Dr Ralph:

Thank you for your letter of 4.23.75. I shall have to ask you to bear with me. Some years ago, under federal permit, I shipped a number of sherd lots to the States, and those not used were stored with the Stirlings. Accordingly, when your letter came, I wrote Marion Stirling, to ask if it would be possible to locate the box and to ship.

Word has just come from her. She remembers that they were storing some sherds but thinks the box may have been stacked with Matt's wine; it will take a bit of looking. I've written her not to go to too much trouble, for she has had a very rough time the past two years, what with her father's prolonged illness, followed by that of Matt. She leaves shortly on a brief trip to Africa, and the chances are that not until her return will she start looking for the box.

Meanwhile, to my utter confusion, I am working more or less concurrently on three short papers and hope to liquidate these before I settle down to another long siege with sherds.

Cordially,

Isabel Kelly

Isabel Kelly

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL
CHAIRMAN OF THE BOARD

R. W. McFALL
PRESIDENT

SYMBOLS
DL = Day Letter
NL = Night Letter
LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

PA051

(13).

P KMA064 NL PD=CHALFONT PENN 20=
DR RANIE , CURATOR UNIVERSITY MUSEUM UNIVERSITY OF PENNA =
33 AND SPRUCE STS PHILA=

1967 MAR 20 PM 1 38

THOROUGH INVESTIGATION AT LOW TIDE SHOWS YOU WERE CORRECT. OBJECTS ARE OYSTER BEDS REGRET INCONVENIENCE CAUSED YOU BY MY MISINTERPRETATION. NEVERTHLESS IN SPITE OF MY ERRONEOUS INTERPRETATION INFRARED SHOULD PROVE VALUABLE TO ARCHEOLOGICAL EXPLORATION.=
BARRON KEMP==

Technique ?

REPLY MESSAGE

TO

Mrs. Vittoria Gwinn
University Museum
University of Penna.
Phila., Pa. 19104

RAYMOND & WHITCOMB CO.
1519 WALNUT ST., PHILA. 19102
LOcust 4-5700
CABLE — RAYCOMB

SUBJECT Chintogue Island

DATE 3/17/67

FOLD

MESSAGE

Dear Vittoria:

This will confirm our telephone conversations - we are pleased to confirm a large twin and bath and a superior single and bath at:

Channel Bass Hotel, Chintogue Island (phone 1 - 703 - 336 6148
March 24 for three nights, rates $10 twin and $7 single daily

We have advised you are driving down - one other hotel in town about a block away has a bar. Trusting you will have an enjoyable stay.

cc/Mr. Bradford Peterson, Owner
Channel Bass Hotel

SIGNED J. P. Sims, Jr.

Frances C.

TO

DATE

REPLY

FOLD

SIGNED _____

RECIPIENT

July 28, 1961

Mr. Henry M. Kennedy, C.L.U.
The Prudential Insurance Company of America
Prudential Plaza
Newark, New Jersey

Dear Ty:

In regard to your friend's interest in C-14 dating, the following miscellaneous data are included:

1) U. of Pa. sample size requirements.
2) Isotopes, Inc. information sheet.
3) U. of Pa. Date List III with South American dates on pp. 53 ff.
4) "New Radiocarbon Dates and the Maya Correlation Problem", with dates for samples from Tikal, Guatemala.

Isotopes Inc. is a commercial laboratory that does reliable dating. The facilities of most of the university laboratories are tied up with their own particular research projects.

I was amused by Mr. Fleetwood's comment that a laboratory in one of the Southwestern universities would be appropriate, for there are supposedly a number of them. However, very few are actually operating, mostly because of frequent personnel changes and things of that sort. Two in this category are as follows:

1) Geochronology Laboratories (Prof. Paul E. Damon) University of Arizona, Tucson.
2) Radiocarbon Dating Laboratory, Department of Anthropology (Dr. E. Mott Davis), University of Texas, Austin 12.

There are also some operated by oil companies, namely --

1) Humble Oil and Refining Co. (Dr. M. Williams) P. O. Box 2180, Houston 1, Texas.
2) Socony Mobil Oil Co., Field Research Laboratory (Mr. E. E. Bray), P. O. Box 900, Dallas 21, Texas.
3) Shell Development Co. (Dr. J. T. Smith), P. O. Box 481, Houston 1, Texas.

In respect to expenses, the cost of the initial installation for the pure carbon dioxide method here in 1956 was approximately $13,000. Our annual budget is as follows:

Salaries These include myself, one research assistant and one part-time student assistant.	$16,800
Current Expenses These are most expendable supplies such as liquidair, dry ice, chemicals, glassware, etc.	3,500
Equipment Replacements	2,500
	$22,800

A year, at least, is usually required for ordering, assembling, eliminating bugs, etc. before reliable dating work can begin.

I happened to have lunch today with Dr. Satterthwaite and Dr. William Coe (Curator and Assistant Curator respectively, of the American Section of the University Museum), and Dr. Coe mentioned that he had corresponded with Mr. Fleetwood on various occasions. Both suggested that he let us know when he plans to visit Tikal to make sure that he meets the members of the staff and so forth.

I think that Mr. Fleetwood's interest in setting up a C-14 laboratory is fine. None of us presently in operation seem to catch up with the backlog of requests for C-14 dates.

Mother is weaker and sleeps most of the time, but continues to be comfortable.

With love to you and Mary,

Beth

EKR:gm

December 16, 1965

Miss K. M. Kenyon
British School of Archaeology in Jerusalem
2 Hinde Street, Manchester Square
London, W.1, England

Dear Miss Kenyon:

As part of the program of our Applied Science Center for Archaeology, we have been experimenting with the thermoluminescent technique of dating pottery. We are now obtaining reasonably good age correspondence with sherds of known age.

In order to verify the technique as far back in time as possible, we should like to obtain sherds from sites such as yours at Jericho. Could you possibly send us a few sherds from your earliest levels, preferably from those for which we obtained C-14 dates? We need 10 grams for one measurement and would prefer to have two or three sherds from each of the early levels.

We shall appreciate it very much if you will consider our request.

Sincerely yours,

Elizabeth K. Ralph

EKR/mhr

March 6, 1961

Mr. Mike Kernan
615 Club Circle
Tyler, Texas

Dear Mr. Kernan:

Your letter of inquiry about background count for this area has been directed to me. It is difficult to give you a direct answer whithout knowing what particles, etc. that you want to know about. A rough emtimate of total external gamma radiation, total body dose at sea level out-of-doors is 100 millirem per year (This is equivalent to 100 milliroentgen exposure dose).

Exposure doses of various particles in numerous locations within the United States are reported in the follow ing:

"Hearings before the Subcommittee on Radiation of the Joint Committee on Atomic Energy," held by the Congress of the United States from May 24 to June 3, 1960. A summary of these has also been published in Washington, but I do not the exact title of it. Perhaps, you can order it from the Supt. of Documents.

In measureing backgrounds, as we do here in our C-14 laboratory, the counting rate is dependent upon the size of the counter and the amount of shielding surrounding it. The largest part of this natural background is from cosmic rays.

Sincerely yours,

Elizabeth K. Ralph
C-14 Laboratory

Dr. Spence
Miss Rudolph

615 Club Circle
Tyler Texas
February 24, 1961

Pennsylania University
Philadphia, Pennsylania
Science Dept.

Dear Sir,

I am studing Radiation Fallout for my science project. Would you please send me your background count for your area. Could you also send any other information you might have? Thank You.

Yours,
Mike Kernon

Teacher: Mrs. Sue A. Hubb

Hearings before the Subcomm on Rad. of the J.C.O.A.E. (joint com.) on Rad. Protection Criteria & Std's; their Basis & Use.
Ref.
Congress of U.S.
Held by H.M. Parker, P. 7
May/June 3rd
Est. bkg. radiations
Total ext-γ, sea level, outdoors - total body dose ≈ 100 millirem/yr.
≈ 100 millir exposure dose.

TELEPHONE : 50306
TELEGRAMS : PAKOLOGY, ARCHAEOLOGY

No.22D/2/63-Arch.

DIRECTOR OF ARCHAEOLOGY
IN PAKISTAN

Karachi, the 13th July, 1963.

Dear Miss Ralph,

Perhaps you remember that 4 soil samples from our prehistoric site KOT DIJI were sent for testing in your C-14 Dating Laboratory in 1958. A report was duly sent vide your letter dated September 4, 1958. Though it contained all necessary information, the half life value used in your laboratory as a basis for arriving at the dates detailed in the report was not indicated. I shall therefore be obliged if you could kindly let me know at your earliest convenience the exact figure that your laboratory has used as the half life value in your calculation of dates of our samples.

Thanking you. With kindest regards,

Yours sincerely,

F.A.K.

(F.A. Khan)

12.7.63

Miss Elizabeth K. Ralph,
C-14 Dating Laboratory,
University of Pennsylvania,
Philadelphia - 4,
U.S.A.

T.H.

July 24, 1963

Dr. F. A. Khan, Director
Department of Archaeology
Karachi
Pakistan

Dear Dr. Kahn:

In response to your letter of July 13th in regard to the dating of your samples from KOT DIJI, I have enclosed a reprint of our Date List III. The half-life (5568) information is given on p. 46.

If you wish to recalculate the dates with the new half-life value of C-14 (5730 years), add 3% to the B. P. (Before Present) age of each sample. I have noted this possible correction on page 51.

Sincerely yours,

Elizabeth K. Ralph

EKR/ek

Enclosure

KHATRI ✓

January 26, 1970

Miss Dolores Gregory
Office of International Programs
National Science Foundation
Washington, D.C. 20550

Dear Miss Gregory:

As Miss Ralph is still recuperating from recent surgery, I am answering your letter to her.

Given reasonable prior notice of Dr. Khatri's visit we will be more than glad to show him the Radiocarbon and Thermo-luminescence Laboratories, as well as any other phases of the University Museum that he might be interested in seeing.

Sincerely yours,

Mrs. Stuart Lawn
Radiocarbon Laboratory

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

Office of International Programs

January 21, 1970

Miss Elizabeth Ralph
Department of Physics
Radiocarbon Laboratory
209 S. 33rd Street
Philadelphia, Pennsylvania 19104

Dear Miss Ralph:

Dr. A. P. Khatri of the Indian Council for Scientific and Industrial Research in New Delhi has been selected to visit this country under the United States-India Exchange of Scientists and Engineers Program. Enclosed for your information are brochures which describe the Exchange Program and a copy of Dr. Khatri's bio-sketch.

The purpose of Dr. Khatri's visit is to learn about recent developments related to radio-isotope dating techniques and to become personally acquainted with colleagues in the field of pre-history and human paleontology. In this connection, he would like very much to meet you and your colleagues and we would appreciate knowing whether the Radiocarbon Laboratory would be included in his program.

As soon as we know the exact dates of his trip we will get in touch with you again. In the meantime, we should like to know whether the proposed visit would be convenient from your point of view.

The National Science Foundation would appreciate any assistance you can give to help make Dr. Khatri's visit to this country a beneficial and an enjoyable one. If there are any questions, please call me on (202) 632-5796.

Sincerely yours,

Dolores Gregory

(Miss) Dolores Gregory
Assistant Program Director
U.S.-India Exchange Program

Enclosure

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

Office of International Programs

January 21, 1970

Miss Elizabeth Ralph
Department of Physics
Radiocarbon Laboratory
209 S. 33rd Street
Philadelphia, Pennsylvania 19104

Dear Miss Ralph:

Dr. A. P. Khatri of the Indian Council for Scientific and Industrial Research in New Delhi has been selected to visit this country under the United States-India Exchange of Scientists and Engineers Program. Enclosed for your information are brochures which describe the Exchange Program and a copy of Dr. Khatri's bio-sketch.

The purpose of Dr. Khatri's visit is to learn about recent developments related to radio-isotope dating techniques and to become personally acquainted with colleagues in the field of pre-history and human paleontology. In this connection, he would like very much to meet you and your colleagues and we would appreciate knowing whether the Radiocarbon Laboratory would be included in his program.

As soon as we know the exact dates of his trip we will get in touch with you again. In the meantime, we should like to know whether the proposed visit would be convenient from your point of view.

The National Science Foundation would appreciate any assistance you can give to help make Dr. Khatri's visit to this country a beneficial and an enjoyable one. If there are any questions, please call me on (202) 632-5796.

Sincerely yours,

Dolores Gregory

(Miss) Dolores Gregory
Assistant Program Director
U.S.-India Exchange Program

Enclosure

INDIA - UNITED STATES EXCHANGE OF SCIENTISTS

Personnel Data Sheet

Name : Dr. A. P. Khatri Age : 37 Date : April 8, 1932

Address : 12/8, West Patel Nagar, New Delhi -8

Degrees (with dates) : B.Sc. (Hons) 1953; M.Sc.- 1955; Ph.D. - 1958.

Present position or occupation : Research Scientist Council for Scientific and Industrial Research, Rafi Marg, New Delhi

Specialized Subject : Pre-history and Human Paleontology

Experience : (1) One year Postgraduate teaching (M.Sc. level) in University of Gauhati, Assam.

(2) Fourteen years experience in carrying out expedition and exploration work in Shiwalin foot-hills of the Himalayas, in Highlands of Central India and in the Narmada, Godavari and Chambal Valleys of Indian Peninsula.

Duration of visit : 6 months From To

Purpose and programme of visit : To learn latest dating techniques like Radio Carbon
(1) Potassium-Argon, Fluorine test, Obsedian dating etc.
(2) Geochronological Studies
(3) To establish contact with the leading men in Prehistoric Archaeology, Preimate Studies & Fossil Man Studies.

Knowledge of any foreign language French and German

Previous visits to USA/India : none

Non-Professional interests (if any) : Flowers, Food, Lyrical music and long solitary walks.

Scientific importance to India and U. S. : Much work is being done by American scientists on the Origin of Man in Africa. India is comparable to Africa in providing clues regarding the riddle of human ancestry. The present visit will help in comparing the notes and end the isolation in which two sets of workers are working in different areas of the world.

Economic importance to India and U.S. : fundamental research

Date : 1/19/69

Signature A.P. Khatri

Location of Work

The Indian institutions which might be visited under the Exchange Program include the Council for Scientific and Industrial Research and its national laboratories, other government or nongovernment science institutions, and universities. The final itinerary is arranged with the CSIR through the National Science Foundation and must be acceptable to both agencies.

Information regarding the CSIR laboratories and other Indian institutions may be obtained by writing or telephoning the Office of International Science Activities at the National Science Foundation (202) 343-7845.

Application and Award Dates

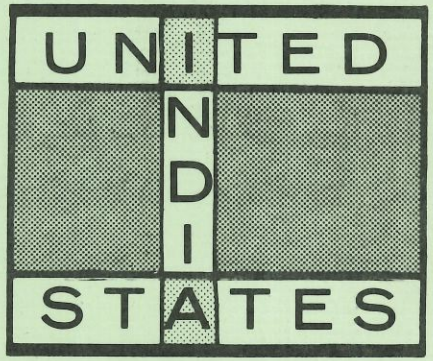
Applications will be evaluated periodically during the year by the National Science Foundation. Generally a period of about two to three months is needed to review an application and to obtain CSIR approval of nominated visitors. Interested scientists are urged to submit applications several months before the proposed visit to allow adequate time for NSF selection and CSIR concurrence, and for planning the trip, including scheduling appointments and arranging the travel.

For Further Information Write To:

Office of International
Science Activities
National Science Foundation
Washington, D. C. 20550

Telephone (202) - 343-7845

Exchange of
SCIENTISTS AND ENGINEERS



NATIONAL SCIENCE FOUNDATION

The Governments of India and the United States have established a program for increasing the exchange of scientists and engineers between the two countries. In an agreement signed February 14, 1967, the two nations recognized the value of exchange visits by senior level scientists and engineers as one of the more effective means of increasing communication and collaboration between the scientific communities of these countries.

The responsible national agencies for administering the exchange program are the National Science Foundation (NSF) in Washington and the Council for Scientific and Industrial Research (CSIR) in New Delhi. The role of each national agency is to select its country's participants in the exchange program and to be the host to the visitors from the other country.

Selection of Participants

American participants in the exchange program are selected by the National Science Foundation with the concurrence of the Indian Council for Scientific and Industrial Research. The participants will be individuals whose fields of specialization are in the mathematical, physical, medical, biological, engineering, social sciences, and the history and philosophy of science. Also included are inter-disciplinary areas, for example, geochemistry, meteorology and oceanography. Selections will be made on the basis of the potential benefits of the exchange visit to the individual's research activity and the prospects for increased scientific and technical cooperation between the two countries.

Exchange Visit Activities

The activities which are appropriate under the Exchange Agreement include collaboration or consultation on specific projects, or planning programs of mutual interest to the United States participant and his Indian colleagues. Lecturing or attending scientific conferences may be included in the visit but should be part of a broader program.

Tenure

The exchange visits may be for periods ranging from two weeks to a few months. According to the Agreement, the total man-days per year shall not exceed 800 for each country.

Allowances

The National Science Foundation pays for the travel of American participants between the United States & India. The travel allowance includes transportation via jet-economy class flights, and a small amount for incidental expenses connected with the trip. The Council for Scientific and Industrial Research pays the visitor a subsistence allowance and travel expenses within India. No stipends or other fees are available under the program.

Application Procedures

American scientists wishing to participate in the program are invited to write to:

U.S.-India Exchange Program
Office of International
Science Activities
National Science Foundation
Washington, D. C. 20550

In addition to the letter, applicants should submit the information requested below.

1. Name
2. Mailing Address
3. Telephone number (home and office)
4. Age
5. Place of birth
6. Present position or occupation
7. Publications
8. Specialized subject
9. Academic Degrees (with dates and institutions)
10. Experience
11. Language proficiency other than English
12. Nonprofessional interests (if relevant)
13. Previous visits to India
14. Duration of proposed visit (From month/year To month/year)
15. Purpose and program of visit
16. Scientific and economic importance to India and U.S.
17. Date
18. Signature

OPTIONAL FORM NO. 10
5010-103

UNITED STATES GOVERNMENT

Memorandum

TO : Hosts of Dr. A. P. Khatri DATE: March 27, 1970

FROM : Office of International Programs

SUBJECT: Dr. A. P. Khatri's Visit

The attached program and travel schedule are for your information. Your assistance in arranging for his accomodations and taking the time to see him is well appreciated by all of us who are concerned with these visits.

Please indicate on the enclosed card the name, address and telephone number of the hotel booked for Dr. Khatri. It also would be helpful if you could add directions for reaching the hotel from the airport.

LO 8-7103.

AR.- 4-1-70 FR. New York

DR. A. P. KHATRI

DEPARTURE			VIA		ARRIVAL		
Place	Time	Date	Carrier	Flight or Train No.	Place	Time	Date
Philadelphia	2:30pm	4-4-70	Alleghany	372 (A)	New Haven	3:16pm	4-4-70
New Haven	2:25p.m.	4-11-70	Pilgrim	328 (A)	Hartford	2:45p.m.	4-11-70
Hartford	3:25pm	4-11-70	Mohawk	190 (R)	Boston	3:56pm	4-11-70
Boston	12:55pm	4-18-70	American	469 (Y)	Detroit	2:38pm	4-18-70
Detroit	4:25pm	4-25-70	American	513 (Y)	Chicago	4:29pm	4-25-70
Chicago	12:00am	5-2-70	American	625 (Y)	Dallas	2:08pm	5-2-70
Dallas	8:45am	5-9-70	Braniff	180 (Y)	Portland	11:56am	5-9-70
Portland	3:00pm	5-9-70	Air West	626 (A)	Pullman	5:31pm	5-9-70
Pullman	11:32am	5-16-70	Air West	173 (A)	Spokane	11:56am	5-16-70
Spokane	4:00p m.	5-16-70	United	873 (Y)	San Francisco	6:07pm	5-16-70
San Francisco	7:30pm	5-16-70	Helicopter	503 (A)	Berkeley	7:40pm	5-16-70
Berkeley	11:57am	6-3-70	Helicopter	454 (A)	San Francisco	12:07pm	6-3-70
San Francisco	1:15pm	6-3-70	United	517 (K)	Los Angeles	2:19pm	6-3-70
Los Angeles	10:00am	6-10-70	United	6	New York	6:05pm	6-10-70

INDIA - UNITED STATES EXCHANGE OF SCIENTISTS

Personnel Data Sheet

Name : Dr. A. P. Khatri Age : 37 Date : April 8, 1932

Address : 12/8, West Patel Nagar, New Delhi -8

Degrees (with dates) : B.Sc. (Hons) 1953; M.Sc.- 1955; Ph.D. - 1958.

Present position or occupation : Research Scientist Council for Scientific and Industrial Research, Rafi Marg, New Delhi

Specialized Subject : Pre-history and Human Paleontology

Experience : (1) One year Postgraduate teaching (M.Sc. level) in University of Gauhati, Assam.

(2) Fourteen years experience in carrying out expedition and exploration work in Shiwalin foot-hills of the Himalayas, in Highlands of Central India and in the Narmada, Godavari and Chambal Valleys of Indian Peninsula.

Duration of visit : 6 months From To

Purpose and programme of visit : To learn latest dating techniques like Radio Carbon
(1) Potassium-Argon, Fluorine test, Obsedian dating etc.
(2) Geochronological Studies
(3) To establish contact with the leading men in Prehistoric Archaeology, Preimate Studies & Fossil Man Studies.

Knowledge of any foreign language French and German

Previous visits to USA/India : none

Non-Professional interests (if any) : Flowers, Food, Lyrical music and long solitary walks.

Scientific importance to India and U. S. : Much work is being done by American scientists on the Origin of Man in Africa. India is comparable to Africa in providing clues regarding the riddle of human ancestry. The present visit will help in comparing the notes and end the isolation in which two sets of workers are working in different areas of the world.

Economic importance to India and U.S. : fundamental research

Date : 1/19/69

Signature A.P. Khatri

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

UNITED STATES - INDIA EXCHANGE OF SCIENTISTS AND ENGINEERS

PROGRAM FOR A. P. KHATRI

PLACE	CONTACT	DATES
WASHINGTON	National Science Foundation	March 17-18
WASHINGTON	Smithsonian Institution American Society of Physical Anthropologists Meeting March 22-25	March 22-25
PHILADELPHIA	Dr. Frollick Rainey Director University Museum University of Pennsylvania Philadelphia, Pennsylvania 19104 Telephone (215) 594-5000	April 1
	Miss Elizabeth Ralph Department of Physics Radiocarbon Laboratory 209 S. 33rd Street Philadelphia, Pennsylvania 19104 Telephone (215) 594-5000	2--3

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

UNITED STATES - INDIA EXCHANGE OF SCIENTISTS AND ENGINEERS

PROGRAM FOR A. P. KHATRI

PLACE	CONTACT	DATES
NEW HAVEN	Dr. Brian J. Skinner Chairman Department of Geological and Geophysics Yale University New Haven, Connecticut 06520 Telephone (203) 787-3131	April 6--10
BOSTON	Dr. Stephen William Director Peabody Museum Harvard University Cambridge, Massachusetts 02138 Telephone (617) 868-7600	April 13--19
ANN ARBOR	Dr. James B. Griffin Department of Anthropology University of Michigan Ann Arbor, Michigan Telephone (313) 764-1817	April 20--24
CHICAGO	Dr. Clark Howell Department of Anthropology University of Chicago Chicago, Illinois 60637 Telephone (312) 643-6800	April 27 - May 1

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

UNITED STATES - INDIA EXCHANGE OF SCIENTISTS AND ENGINEERS

PROGRAM FOR A. P. KHATRI

PLACE	CONTACT	DATES
DALLAS	Dr. Fred Wendorf Chairman and Professor of Anthropology Department of Anthropology Southern Methodist University Dallas, Texas 75222 Telephone (214) 363-5611	May 4--8
PULLMAN	Dr. Willis Sibley Department of Anthropology Washington State University Pullman, Washington 99163 Telephone (509) 335-3564	May 11--15
BERKELEY	Dr. J. Desmond Clark Department of Anthropology University of California Berkeley, California 94704 Telephone (415) 642-6000	May 18--20
	Dr. R. F. Heizer Department of Anthropology University of California Berkeley, California 94704 Telephone (415) 642-6000	May 21--25

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

UNITED STATES - INDIA EXCHANGE OF SCIENTISTS AND ENGINEERS

PROGRAM FOR A. P. KHATRI

PLACE	CONTACT	DATES
BERKELEY (con't)	Dr. Isadore Perlman Lawrence Radiation Laboratory University of California Berkeley, California 94704 Telephone (415) 642-6000	May 26
	Dr. Garniss Curtis Department of Geology University of California Berkeley, California 94704 Telephone (415) 642-6000	May 27--29
	Dr. S. L. Washburn Department of Anthropology University of California Berkeley, California 94704 Telephone (415) 642-2897	June 1--2
LOS ANGELES	Dr. Rainer Berger Associate Professor of History University of California Los Angeles, California 90024 Telephone (213) 272-8911	June 3--9

SUBJECT OR AREA: DR. A. P. KHATRI MONTH: MARCH 19 70

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
[1]	[2]	[3]	[4]	[5]	[6]	[7]
[8]	[9]	[10]	[11]	[12]	[13]	[14]
[15]	[16] ARRIVAL in WASHINGTON	[17] NSF	[18] NSF	[19]	[20]	[21]
[22] ATTEND THE AMERICAN ASSOCIATION OF PHYSICAL ANTHROPOLOGIST 22---25 SHOREHAM HOTEL, Washington, D.C.	[23]	[24]	[25]	[26]	[27]	[28]
[29] - EASTER	[30]	[31]	[ ]	[ ]	[ ]	[ ]

SUBJECT OR AREA: DR. A. P. KHATRI

MONTH: APRIL 19 70

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
[ ]	[ ]	[ ]	[1] UNIVERSITY OF PENNSYLVANIA 1----	[2] ----3 PHILADELPHIA, PENNSYLVANIA	[3]	[4] TRAVEL TO NEW HAVEN
[5]	[6] YALE UNIVERSITY---- 6--------10 NEW HAVEN, CONN----	[7] ----	[8] Yale University ----	[9] ----	[10] ----YALE UNIVRSITY 6--------10 ----NEW HAVEN, CONN.	[11] TRAVEL TO BOSTON
[12]	[13] HARVARD UNIVERSITY 13---------- BOSTON	[14] ----------	[15] HARVARD UNIVERSITY ----------	[16] ----------	[17] HARVARD UNIVERSITY ----------17 BOSTON	[18] TRAVEL TO ANN ARBOR
[19]	[20] Michigan-----U N 20---------- Ann Arbor, Michigan	[21] I V E R S I T Y ----------	[22] O F M I C H I G ----------	[23] A N---------- ----------	[24] ----------Michigan ----24 Ann Arbor, Michigan	[25] TRAVEL TO CHICAGO
[26]	[27] UNIVERSITY OF CHICAGO---------- 27---------- Chicago, Illinois	[28] ----------	[29] Univ. of Chicago ----------	[30] ----------UNIVERSITY OF CHICAGO ----May 1	[ ] Chicago, Illinois	[ ] TRAVEL TO DALLAS

SUBJECT OR AREA: A.P. KHATRI

MONTH: MAY 19 70

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
[ ]	[ ]	[ ]	[ ]	[ ]	[1] UNIVERSITY OF CHICAGO April 27---May 1	[2] TRAVEL TO DALLAS
[3]	[4] Southern Methodist University 4---Dallas Texas	[5]	[6] Southern Methodist University Dallas, Texas	[7]	[8] Southern Methodist ---8 Dallas, Texas	[9] TRAVEL TO PULIMAN
[10]	[11] WASHINGTON STATE UNIVERSITY 11---Pullman, Washington	[12]	[13] WASHINGTON STATE UNIVERSITY Pullman, Washington	[14]	[15] WASHINGTON STATE ---15 Pullman, Wash.	[16] TRAVEL TO BERKELEY
[17] 7	[18] University of California Dr. J. Desmond Clark Department of Anthropology 18----	[19] ----20	[20] University of California, Berkeley Dr. Clark Dept. of Anthro.	[21]	[22] Univ. of Cal.	[23]
[24]	[25] UNIVERSITY OF CALIFORNIA	[26] Dr. I. Perlman Lawrence Radiation Lab. -26-	[27] UNIVERSITY OF CALIFORNIA, BERKELEY Dr. Garniss Curtis Department of Anthropology 27----	[28]	[29] UNIV. OV CALIF. Dr. Curtis Dept. of Anthro. ----29	[30]

SUBJECT OR AREA: A. P. KHATRI

MONTH: JUNE 19 70

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
[ ]	[1] (BERKELEY) University of California Dr. S. L. Washburn Dept. of Anthro. 1----------2	[2] Dr. Washburn Dept. of Anthro	[3] (LOS ANGE) University of California TRAVEL TO LOS ANGELES	[4]	[5] LOS ANGELES U. C. L. A. 4----------9	[6]
[7]	[8] (LOS ANGELES) 4----------9	[9] UNIVERSITY OF CALIFORNIA	[10] T R A V E L TO H A W A I I	[11]	[12]	[13]
[14]	[15]	[16]	[17]	[18]	[19]	[20]
[21]	[22]	[23]	[24]	[25]	[26]	[27]
[28]	[29]	[30]	[ ]	[ ]	[ ]	[ ]

NSF Form 430, December 1968 PROGRAM PLANNER

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

SANTA BARBARA • SANTA CRUZ

KRESGE COLLEGE
SANTA CRUZ, CALIFORNIA 95064

July 15, 1978

Mrs. Elizabeth Ralph
The University Museum
33rd and Spruce Streets
Philadelphia, PA 19174

Dear Mrs. Ralph,

Jiri Frel, of the J. Paul Getty Museum, has written to the University Museum to request permission for me to examine ancient terracottas. My interests extend from archaic Greek exsmples through early Greco-Roman; I am looking for parallels for a catalogye almost finished.

My schedule for Philadelphia includes either the second or third week in August. If I may see the collection what days and hours would be most convenient for the museum?

Is there parking at or near the museum? May I bring with me my adult daughter to help and to expedite research?

Now, another question. Dorothy Burr Thompson has told me recently (for the second time) that years ago she inventoried a large group of terracottas in Philadelphia, including many Tarentine ones. They were stored in the basement of a Mechanics' Museum? Does this suggest any means of tracing them? If you have suggestions, I should be most grateful.

Sincerely,

Bonnie M. Kingsley

Bonnie M. Kingsley
Board of Studies in History
Kresge College

Dr. Bonnie M. Kingsley,
Board of Studies in History,
Kresge College,
Santa Cruz, California 95064.

26 July 1978.

Dear Dr. Kingsley,

In regard to your letter of July 15th, I have forwarded it to Professor G. Roger Edwards, who can answer your inquiries more specifically.

I should be glad to see you in the second or third week in August, but I do not have access to the storerooms.

If you do not mind paying $1.50 per day, there is a parking garage next to the Museum. Please bring your daughter.

We think that the terracottas from Taranto may be stored in the Commercial Museum, which happens to be very close to our Museum.

With best regards,

(Miss) Elizabeth K. Ralph.

SAINT LOUIS UNIVERSITY

INSTITUTE OF TECHNOLOGY
3507 LACLEDE AVENUE
SAINT LOUIS, MISSOURI 63103

DEPARTMENT OF GEOPHYSICS AND
GEOPHYSICAL ENGINEERING

MAILING ADDRESS:
P. O. BOX 8020 – COLLEGE STATION
SAINT LOUIS, MISSOURI 63156

January 11, 1966

Miss Elizabeth K. Ralph
University of Pennsylvania
33rd & Spruce Street
Philadelphia 4, Pennsylvania

Dear Miss Ralph:

We are contemplating the purchase of an Elsec Type 592 Proton Magnetometer from Littlemore Scientific Engineering Co., Oxford, England. I understand that you have one of their instruments and I am writing to ask your frank opinion of it. I am interested in the obvious factors of reliability, fieldworthiness, and quality of the components used. Any information you can provide will be appreciated.

Thank you.

Sincerely yours,

Carl Kisslinger

Carl Kisslinger
Chairman, Department of Geophysics
and Geophysical Engineering

CK:bd

January 12, 1966

Dr. Carl Kisslinger, Chairman
Department of Geophysics and
Geophysical Engineering
Saint Louis University
P.O. Box 8020 - College Station
Saint Louis, Missouri 63156

Dear Dr. Kisslinger:

In regard to the Elsec Proton Magnetometer manufactured by the Littlemore Scientific Engineering Company, I am writing to say that it is an extremely reliable and well-built instrument. We have used ours in the field for at least six months each year, since 1961, without serious breakdowns -- only minor difficulties with cables, connectors, etc. that are easy to fix.

For archaeological prospecting we are now experimenting with the new Varian Associates' Precision Portable Cesium Magnetometer, mostly because we need greater sensitivity, but also because it is more rapid to use and differential readings (with two sensors) may be taken directly. This new instrument is not yet in production and will cost very much more.

Therefore, if you don't need sensitivities greater than 1-2 gammas, in my opinion the Elsec is the best instrument available at this time.

I have enclosed two Newsletters in which some of our work is described.

Sincerely yours,

Elizabeth K. Ralph

EKR/mhr
enc.(2)

FRO

Dartmouth College HANOVER · NEW HAMPSHIRE · 03755

Department of Classics

22 October, 1974

Dr. Elizabeth K. Ralph
Director, MASCA
University Museum
33rd and Spruce Streets
Philadelphia, Pennsylvania 19104

Dear Dr. Ralph:

I am enclosing a proposal I am circulating at Dartmouth and elsewhere requesting scientific collaboration on the Museum's ISCHIA project.

I wonder if you would look it over and show it to any MASCA or Penn. people who might be interested? Naturally, I would welcome the help of any Museum personel.

The proposal is more or less self-explanatory, but anyone wishing more information should contact me here at Dartmouth.

Best regards.

Yours sincerely,

Jeffrey J. Klein

JJK/as
enc.

J. KLEIN

FRO

Dartmouth College HANOVER · NEW HAMPSHIRE · 03755

Department of Classics

October, 1974

Dear Dr. Ralph:

I am writing to ask if you or any of your departmental colleagues would like to participate in an interdisciplinary project I am organizing in connection with current archaeological investigations on the Island of ISCHIA in the Bay of Naples (Italy).

The University Museum of the University of Pennsylvania has been working on the island since 1965 in collaboration with the Italian Sopprintendenza alle Antichitá at the site of ancient Pithekoussai, the earliest Greek colony in Italy (founded ca. 750 B.C.). Dr. Giorgio Buchner of Naples is the overall head of the project, and I have been field director at one of the two principal archaeological sites since 1970.

The work up to now has proceeded along traditional lines, concentrating on the exposure of the earliest Greek settlement and its associated cemetery. In recent years, however, it has become evident to many archaeologists that much additional data could be recovered through the application of new methods of collecting and analysis which often fall within the expertise of scholars working in fields other than archaeology. Progress is being made annually in the understanding of ancient society, for example, through the examination of fossilized flora and faunal remains, topographic and geological studies, chemical or spectrographic analysis of artifacts, computer-based studies of pottery and other finds, as well as the systematic collection of information regarding the modern cultural and natural environment.

ISCHIA is especially promising in a number of these areas:

1) The island is a well-known volcanic formation and much of its history has been strongly influenced by catastrophic seismic events.

2) Archaeological investigations indicate that the Greek settlement prospered in early times as an industrial and commercial entrepôt. Current excavations are concentrating on the site of an extensive local metal industry (iron, copper, lead, tin, electrum), which was based on imported raw materials. A scientific study of the metallurgical evidence could go far toward elucidating the mechanism of this trade, as well as provide a significant contribution to the history of technology.

3) A local ceramic industry thrived from the 8th century B.C. through Roman times, but has not yet been investigated from a technical point of view. Abundant evidence is available, including ancient kilns, clay beds and virtually limitless pottery samples.

Fine vases were also imported during every period and much work could be done in determining their sources through spectrographic and minerological analysis.

4) The agricultural economy of the island is today based almost entirely on viticulture. We have as yet no study of the ancient evidence, although a large sample of animal bones and shell is available for the prehistoric, early colonial and later periods. Only a small amount of evidence for the plant economy has so far been collected, but we hope to recover pollen samples, carbonized seeds and fruit, etc. in future seasons.

5) Abundant human skeletal and dental material is available from more than one thousand excavated graves ranging in date over more than a millennium.

6) A preliminary geographical and social study of the island has been made (Niola, 1965) but important work remains to be done, particularly in comparing the present state of affairs with the

period before the intensive touristic development of recent years. The island provides a classic example of the rapid transformation of a relatively backward area since the end of World War II.

I have obviously provided only a few examples of the kind of research possible in connection with such a project. The list could be expanded considerably. I hope that anyone interested in such collaboration will contact me as soon as possible. An archaeological season on Ischia is being planned for the coming summer (June through August 1975), and it is conceivable that some of these areas of research could be initiated during the coming year.

You will find enclosed an up-to-date bibliography of works relating to ISCHIA as well as a list of works relating to the kind of interdisciplinary project I have in mind. I would be grateful if you would circulate this proposal among your colleagues and other interested scholars or students.

Thank you.

Yours sincerely,

Jeffrey Klein,
Instructor, Dept. of Classics
Hinman 6086, tel. 2493

(enc.)

JK/as

The following are two examples of relatively successful interdisciplinary archaeological research projects:

Frank Hole, Kent V. Flannery, James A. Neely, et al., Prehistory and Human Ecology of the Deh Luran Plain; An Early Village Sequence from Khuzistan, Iran, (=Memoires of the Museum of Anthropology, University or Michigan, No. 1), Ann Arbor, 1969.

William A. McDonald and George R. Rapp (eds), The Minnesota Messenia Expedition; Reconstructing a Bronze Age Regional Environment, Minneapolis: University of Minnesota Press, 1972.

Some other books of interest:

D. Brothwell and E. Higgs (eds.), Science in Archaeology, second ed., London, 1969.

David L. Clarke, Analytical Archaeology, London, 1968.

M.S. Tite, Methods of Physical Examination in Archaeology, London and New York: Seminar Press, 1972.

Jean-Claude Gardin (ed.), Archéologie et Calculateurs; Problèmes Sémiologiques et Mathématiques (Marseille, 7-12 avril 1969), Paris: CNRS, 1970.

F.R. Hodson, D.G. Kendall and P. Tăutu (eds.), Mathematics in the Archaeological and Historical Sciences, Edinburgh: the University Press, 1971.

and the journal:

Archaeometry, (Oxford, 1958-).

November 5th, 1974

Mr. Jeffrey J. Klein
Department of Classics
Dartmouth College
Hanover, New Hampshire 03755

Dear Mr. Klein,

Thank you for your letter and for the proposal.

We shall be glad to cooperate in the study of archaeological evidence from Ischia. However, unless there are funds available, we can do only what we are equipped to do - namely, C^{14} and TL dating. Perhaps, in collaboration with Dr. Maddin, metallurgical studies could be added.

I should appreciate it if you will send me a more specific list of your requirements.

Sincerely yours,

Elizabeth K. Ralph

Dartmouth College HANOVER · NEW HAMPSHIRE · 03755

Department of Classics

12 November 1974

Dr. Elizabeth K. Ralph
M.A.S.C.A.
The University Museum
Philadelphia, Penna 19174

Dear Beth (if you don't mind me calling you that...),

Thanks for your note. My letter and the proposal it contained was basically F.Y.I., since Ischia is a project supported by the Museum. I don't have any specific request from MASCA for the time being, but would appreciate your suggesting anyone who might be interested in collaborating in various of the technical areas I outlined. A geologist (especially one into volcanoes) and bone/plant specialists are still being sought. Maddin might do some metallurgy for us and Arthur Steinberg is very interested. There is also a student involved in ceramic technology at Texas who wants to join, and an analytical geographer from Dartmouth, etc, etc.

As for MASCA itself, radiocarbon dating from Ischia would not help us tremendously as the strata themselves are datable through the Greek pottery to about ±25 years, although some determinations could conceivably serve as a control (non-dendrochronological) for your purposes. Ditto for thermolumenescence: samples from Ischia in the range of ca. 750-650/600 might serve as useful callibration points. If you are interested in that, please let me know and I will bring home some samples from Ischia next fall.

We are planning a full season on Ischia for the coming summer, pending the Museum's decision about funding. Anyone interested in working with us should probably get in touch with me as soon as possible.

Thanks for your interest.

Yours,

JFK

Jeffrey Klein

UNIVERSITY of PENNSYLVANIA

PHILADELPHIA 19104

January 16, 1978

The Faculty of Arts and Sciences

DEPARTMENT OF PHYSICS

Radiocarbon Laboratory

Professor R. Hargraves
Dept. of Geology
Princeton University
Princeton, New Jersey

Re: measurement of permeability of grounding rod found at Valley Forge.

Dear Professor Hargraves,

Enclosed is the sample of grounding rod we discussed on Friday last by phone. I've cut the sample to roughly one inch in length.

As I mentioned, we're interested in measuring its magnetic permeability and also, if possible, its remanent magnetism. We discovered it while on a magnetic survey in Valley Forge Park. It produced a dipolar anamoly of about two thousand gamma separated by about six meters. From the contour maps we made during the survey, we've modeled the field and have calculated a value for the magnetic permability. We would like an independent determination with which to compare our calculated value. By nature of our surveying technique, measuring only every two meters, we well could have missed the absolute maxima of the field deviations and hence the value we calculate is likely to be a lower limit. Unfortunately, just at this moment I don't have the value we've calculated at hand, but if you would like to see it for the sake of comparison, I'll send it along later.

Let me thank you again for kindly agreeing to make these measurements for us. If we can be of service to you at any time, please let us know.

Yours,

Jeffrey Klein

Jeffrey Klein

:: sample; enclosed.

DEPARTMENT OF PHYSICS

August 4, 1981

Mr. Jeffrey Klein
Department of Physics
David Rittenhouse Laboratory

Dear Jeff:

As you know, your failure to finish off the last few requirements for the Ph.D. degree has been a source of continuing concern for many of us here. It has been my impression, from past occurrences of this nature (there have been, unfortunately, many of them), that the fault usually lies with the sloth of the student or the exploitation (usually not deliberately) of the student by his colleagues.

Since there is little evidence you are particularly lazy, I think it is not unreasonable to assume you are being unconsciously exploited. Accordingly, I am making the following arrangements to try to change this pattern, at least temporarily.

A. During August and September we will continue to pay you as a Research Fellow.

B. I understand you already have made some serious commitments during August to the Radiocarbon Laboratory and to the Tandem Laboratory. It is reasonable that you meet these commitments, but use whatever excess time you have (if any) to finish your thesis and the work on Physics 622.

C. During September you should work <u>exclusively</u> on your thesis and on Physics 622. You should not go near the Radiocarbon Laboratory or talk to anyone in the Tandem except Prof. Middleton, and then only about your thesis. You should not even help your colleagues fix cars. I trust that you will consult with Prof. Weldon about Physics 622 if necessary.

Although this is a relatively drastic step to take it appears to me to be the only mechanism at hand with any prospect of forcing covergence on your Ph.D. work. I have asked Prof. Middleton and Dr. Ralph for their cooperation. I hope this scheme is effective.

Good luck,

Walter D. Wales
Chairman

WDW/fh
cc: R. Middleton
E. Ralph ←

VAN DISHOECK · VAN HOLKEMA EN WARENDORF NV

Nieuwe 's-Gravelandseweg 19 • Postbus 17 • Postgiro 7134 • Telefoon 02959-30753*

Uw ref.:
Onze ref.: SH-O/1474/BEcl

Bussum, July 12th 1968

Mrs. Ellen L. Kohler
Archeological Museum of the
University of Pennsylvania
U.S.A.

Dear mrs. Kohler,

Some time ago I read about your experiments with thermoluminiscention. Is it perhaps possible, that You write an article on this method and its results for our magazine Spiegel Historiael, which intends to interest a greater public for archeology and history by good scientific butreadably articles.

I hope to receive within a short time a favourable answer.

With kinds regards,

This is one for you
+ Mark!

Yours sincerely,

drs. B.G.J. Elias
redaction-secretary

UNIVERSITY of PENNSYLVANIA

PHILADELPHIA 19104

The Faculty of Arts and Sciences

DEPARTMENT OF PHYSICS

June 8, 1978

Dr. John L. Kohl
Harvard-Smithsonian Center for Astrophysics
60 Garden Street
Cambridge, Mass. 02138

Dear Dr. Kohl:

Yes, I should very much like to have a copy of Center and Limb Solar Spectrum in High Spectral Resolution 225.2 nm to 319.6 nm.

My main interest is carbon-14 dating and hence the influence of solar fields on the atmospheric inventory of natural ^{14}C.

Sincerely yours,

Elizabeth K. Ralph

Elizabeth K. Ralph, Director
Radiocarbon Laboratory
Department of Physics, DRL/E1

EKR:emd

June 8, 1978

Mrs. Renée Kra
24 Pleasant Hill Road
Woodbridge, Connecticut 06525

Dear Mrs. Kra:

Froelich Rainey's address is as follows:

Oldhay Farm, Altarun
(nr. Launceton)
Cornwall, Great Britain

I think that his telephone number is Tiperspool 01-44-56686-430.

The galley proof for our Date List XX is in the mail.

With best regards,

Elizabeth K. Ralph

EKR:mbp

BRANDON BARRINGER
CHARTERED FINANCIAL ANALYST
2106 TWO GIRARD PLAZA
PHILADELPHIA, PA. 19102
(215) 561-3676

August 16, 1974

Dr. Grover Krantz
Department of Anthropology
Washington State University
Pullman, Washington 99163

Dear Dr. Krantz:

On my return from a second trip, I find your letter of August 5th and am sorry it wasn't answered more promptly.

It wasn't a Sasquatch skeleton I wrote Dr. Coon about, but two in the San Diego Museum. SCIENCE 17 May 1974 reports that SDM 16704, the more complete one, consisting of a skull, lower mandible, long bones and scapula fragments, was found eroding out of a sea cliff in 1929. They were in a lower midden, the upper dating from 3,000 to 5,500 B.C. There is no indication that they were particularly large.

They had twice the aspartic acid of the Laguna skull, carbon 14 age dated 17,150 ± 1,470 and nearly twice that of 29,700 ± 3,000 or 30,400 ± 2,500 old mammoth bones. Dr. Bada of the Scripps Institute and associates date it as 48,000 years old.

I don't know, world wide, of such an early date for homo sapiens and it occurred to me that it might be Neanderthaloid. Dr. Bada hasn't answered my letter asking that this be investigated.

I do hope you will be able to go to San Diego and examine it. Please let me know.

Sincerely yours,

BB:mcb

Brandon Barringer

cc: Dr. Carleton S. Coon
Dr. Don W. Dragoo
Dr. Elizabeth K. Ralph