

PTCOG LOGO

Second Announcement of

LBL LOGO

**Vth PTCOG Meeting
&
International Workshop on Biomedical Accelerators**

Lawrence Berkeley Laboratory
University of California, Berkeley, California
December 1 and 2 1986

The Vth meeting of PTCOG and the International Workshop on Biomedical Accelerators will be held at the Lawrence Berkeley Laboratory (LBL), University of California, Berkeley, California on 1st and 2nd (Monday and Tuesday) of December 1986. The workshop is jointly sponsored by PTCOG* and LBL**. The workshop will be open to all PTCOG members and other scientists and clinicians interested in protons and light-ion accelerators for biomedical research.

The interest expressed for the meeting following the first announcement has been very enthusiastic. In addition to PTCOG members, several speakers from this country as well as from outside the U.S. have agreed to present interesting talks at the workshop. A copy of the tentative agenda is enclosed for your review. There is still time to send in your suggestions for the workshop. Please communicate your ideas to the secretary of the workshop.

If you have not registered yet, please return the enclosed registration sheet, as it will greatly help in organizing the meeting, especially in planning for the banquet.

Climate. December in California is the rainy season, and you should be prepared for the downpours. The temperature in Berkeley will be 60F (15C) daytime and cooler in the evenings.

Local transportation from airports to Berkeley. Both the San Francisco airport (SFO) and the Oakland airport (OAK) are served by a private shuttle service, Airport Connection. Please make your reservation at least 24 hours in advance by calling 415/842-0150 within California, or 800/AIR-PORT from outside California. The cost of the shuttle from SFO to Berkeley (or Claremont Hotel) is \$13, and the doorkside service from OAK to Berkeley is \$22.

For those utilizing BART (Bay Area Rapid Transit) trains: the nearest station to LBL is Berkeley (on the Richmond Line), and that to the Claremont Hotel is Rockridge (on the Concord Line).

For those staying at the Claremont Hotel: The hotel provides free transportation from OAK to the hotel. A limousine leaves from the door near the luggage claim area at half past every hour. Please let the hotel know one week in advance of your arrival time and the flight number. (Write to the Claremont Hotel, c/o Guest Services, P.O. Box 23363, Oakland, CA 94623, or call 415/843-3000, ext. 133).

During the workshop, LBL will provide transportation between the hotel and the LBL conference site at appropriate times. The first shuttle bus will depart from the hotel at 7:40 am Monday (December 1) to arrive at the conference site before the 8:00 o'clock registration. Other shuttle bus schedule will be announced at the meeting.

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sponsored by
*Proton Therapy Cooperative Group
Chair, Herman D. Suit, M.D.
Secretary, Michael Goitein, Ph.D.

**Lawrence Berkeley Laboratory
Klaus H. Berkner, Ph.D. Division of Accelerator & Fusion Research
Paul H. Silverman, Ph.D. Division of Biology & Medicine
Local Committee:
Jose R. Alonso, Ph.D. (accelerator), Joseph R. Castro, M.D. (medicine)
Cornelius A. Tobias, Ph.D. (physics & biology)
William T. Chu, Ph.D. (secretary)

Tentative agenda for
Vth PTCOG meeting
&
International Workshop on Biomedical Accelerators
Lawrence Berkeley Laboratory
University of California, Berkeley, California
December 1 and 2, 1986

December 1, 1986, Monday, 8:00 am to noon.

8:00 Registration, Auditorium, Building 50B, LBL.

Opening session

Chair: C. A. Tobias, (LBL)

Welcome by Director David A. Shirley of LBL.

Introductory remarks by

Paul H. Silverman, Acting Associate Director, Division of Biology and Medicine, LBL, and
Klaus H. Berkner, Associate Director, Division of Accelerator and Fusion Research, LBL.

Session I. Biomedical Aspects of Therapy Delivery.

Radiobiology and radiation therapy:

Chair: Sandra R. Zink, NCI.

The progress of the proton therapy in Sweden,

Boerje Nilsson and Sten Graffman, Uppsala University Hospital.

Rationale for the light-ion accelerator for medical research and treatment,

Jack F. Fowler, Gray Laboratory, England.

Properties and some biological effects of light ions,

Eleanor A. Blakely and C. A. Tobias, LBL.

Optimization of therapy planning:

Chair: Joseph R. Castro, LBL

What is needed to plan therapy?

Michael Goitein, MGH

Therapy planning optimization

John T. Lyman, LBL.

December 1, Monday, noon – 2:00 pm.

Lunch and PTCOG working group meetings.

Optional visit to the Bevelac Biomed Facility and to the Research Medicine Building.

December 1, Monday, 2:00 – 5:30 pm.

Session II: New Biomedical Accelerators.

Chair: Klaus H. Berkner, LBL

Design and use of the Loma Linda proton synchrotron,

Lee C. Teng, Fermilab.

The 230 MeV AVF cyclotron dedicated to proton therapy at Tsukuba,

Noriyuki Takahashi, Sumitomo Heavy Industries, Japan.

Current heavy particle medical accelerator programs in Japan,

Kiyomitsu Kawachi, National Institute of Radiological Sciences, Chiba.

The European light-ion medical accelerator (EULIMA) project,

Pierre Mandrillon, PS Division, CERN.

The light-ion biomedical research accelerator (LIBRA),

Richard A. Gough, LBL.

(Tentative agenda, page 2)

December 1, 1986, Monday 6:30 – 9:30 pm.

Banquet at the Faculty Club.

6:30 Social Hour, no-host cocktail

7:30 Dinner

December 2, Tuesday, 8:30 – noon.

Session III. Facilities

Chair: James M. Slater, Loma Linda

Loma Linda University proton accelerator facility (LLUPAF)

The plan for LLUPAF, James M. Slater, Loma Linda.

Modern proton therapy facility, Miguel Awschalom, Fermilab.

Shielding calculations for LLUPAF, Daniel W. Miller, Loma Linda.

Justification for LLUPAF shielding calculations, Miguel Awschalom, Fermilab.

Corkscrew gantry, Andreas K. Koehler, Harvard Cyclotron Laboratory.

Gantry Design for LLUPAF, Daniel W. Miller, Loma Linda.

Capabilities of passive beam-spreading techniques, Bernard Gottschalk, HCL.

Quantitative limitations of dynamic beam delivery, William T. Chu, LBL.

Performance of LBL wobbler, Tim R. Renner, LBL.

December 2, Tuesday, noon – 2 pm.

Lunch and PTCOG working-group meetings.

Optional visit to the Bevalac Biomed Facility and to Research Medicine Building.

December 2, Tuesday, 2:00 – 5:30 pm.

Imaging in relation to beam localization

Chair: Thomas F. Budinger, LBL.

NMR and PET imaging in charged particle therapy,

Peter E. Valk, LBL.

Correlating NMR and PET images for therapy planning,

Marc L. Kessler, LBL.

Diagnostic applications of radioactive beams,

Aloke Chatterjee, LBL.

Status reports and contributed papers.

Chair: Michael Goitein, MGH.

Proton therapy cyclotron studies at MSU,

Henry G. Blosser, Michigan State University.

Report on Leningrad proton therapy meeting.

(Speaker to be announced).

(Title to be announced)

M. R. Raju, Los Alamos National Laboratory.

(Other titles and speakers to be announced.)

Summary Session.

Chair: Herman D. Suit, Harvard.

Reports by PTCOG working groups.

Clinical Applications Working Group:

John O. Archambeau, Loma Linda.

Accelerator Design Working Group:

Stanley O. Schriber, Los Alamos.

Facility Design Working Group:

Richard Wilson, Harvard.

Summary of the workshop,

Herman D. Suit, Harvar

5:30 Adjourn.