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Announcement of:

**PTCOG Workshop on
Proton Gantry and Beam Delivery Systems
on Monday, May 7th, 1990
&
PTCOG XII meeting
On Tuesday, May 9th and Wednesday, May 10th, 1990
at
Loma Linda University, Loma Linda, CA**

A workshop on "Proton Gantry and Beam Delivery Systems" will be held at Loma Linda University, to be immediately followed by the XIIth regular meeting of PTCOG, on the dates indicated above. The workshop is intended to be a technical working meeting. All members are, of course, welcome to attend – but it is hoped that few enough will that it will be possible to keep the round-table discussion format.

Workshop

The workshop is being organized by Dr. William Chu of Lawrence Berkeley Laboratory. The focus of the workshop is on the design of effective and practical beam delivery systems. The agenda of the workshop will be adapted to the desires of the participants. At present we plan to devote a half a day to discussion of beam gantries and half a day to discussion of beam delivery systems, both passive and active. However, the two interact closely and we will not be doctrinaire about the distinction.

Anyone who would like to make a contribution, as well as anyone who would like to attend, is requested to notify Bill Chu, possibly by using the attached form. Contributions need not be formal presentations; you are welcome to request time to bring up an issue informally for discussion. Contributions of a clinical nature, such as discussions of the rationale for gantries, the alternative of fixed multiple beams, and the rationale for scanned beams are all welcome. Anyone who wishes to prepare a manuscript is welcome to do so, and we will circulate it to the PTCOG membership, but this is definitely not required.

PTCOG XII

A preliminary agenda is attached. At the time of the meeting it is expected that the Loma Linda accelerator and one gantry will be installed and in the process of being commissioned (tours of the facility will naturally be provided). Consequently, the regular PTCOG meeting will focus on experience with this new facility. Time has also been set aside for a general discussion of future directions for the proton community. On the second day there will be a session devoted to the discussion of clinical protocols and related matters. A meeting of the accelerator and facility working groups may be held in parallel to meet with the people who are commissioning the Loma Linda facility. As always, we will leave time for members' contributions. Please let your PTCOG secretary (address on letterhead)

know of any thoughts you might have concerning this agenda, any additional or alternative topics you would like considered, and any presentations you wish to make, or would like to encourage.

Meeting location

Both the workshop and the meeting will be held in the auditorium of the Randall Visitors Center at the Loma Linda University Medical Center. Buses will be provided to transport members back and fro between the hotel and conference location.

Hotel arrangements

A block of rooms has been held at the San Bernadino Hilton, 285 E. Hospitality Lane, San Bernadino, CA 92408 in the name of "LLU Proton Therapy Group". A card is enclosed for your convenience in making reservations. Alternatively, you may call the hotel at (714) 889-0133 to make reservations (rooms held to 6 pm only unless guaranteed using credit card). **The deadline for making reservations is April 22nd.**

Travel arrangements

If you are flying in, try to go to the Ontario airport. The Hilton has limousine service to this airport. If you do not see their van, call 899-0133 for a pick up. Transportation will be provided each day between the hotel and meeting. Plan not to drive your car to the Loma Linda Medical Center as parking there is harder than building a proton accelerator.

Registration

As usual, we will be providing food and beverage during breaks, lunches on Monday, Tuesday and Wednesday, and a splendid dinner on Tuesday evening. Your part in this is to be ready to pay (by cheque or cash in US funds) a modest registration fee of \$75. This fee should be paid at the registration desk at the time of the meeting. The same fee will be levied, regardless of whether you are attending the workshop, the meeting, or both. Of course, the registration fee does not cover all expenses and we are grateful to Dr. Slater and the Loma Linda Medical Center of their support of the meeting.

Dr Austin-Seymour has prepared a fine compendium of many of the clinical presentations at previous PTCOG meetings and this report, prepared in lively color, will be available at the registration desk for an additional \$25. This is available in a limited edition only, and if you wish to reserve a copy please so indicate on the pink form and one will be held at the registration desk in your name.

Local arrangements and establishing your intentions

The local arrangements are being coordinated by:

Ms. Brenda Holden,
Dept. of Radiation Sciences – room 2605
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11234 Anderson Street
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Phone: (714) 824-4502
Fax: (714) 824-4157

It would greatly help our planning if those of you who will be attending any part of the workshop and/or meeting would either fill in and send the attached pink form as soon as possible to Ms. Holden, or call in or fax the equivalent information to her. (This is in addition to Dr. Chu's form for workshop participants – we may have just passed some dangerous bureaucratic threshold.)



**PTCOG XII AGENDA
LOMA LINDA UNIVERSITY MEDICAL CENTER
May 6 – May 9, 1990**

All meetings held at the Randall Visitor's Center unless otherwise noted

ARRIVAL AND TOUR

Sunday, May 6

6:45pm	Buses leave hotel for LLUMC (meet in lobby)
7:00pm	Tour of LLUMC Proton Medical Facility for workshop participants

WORKSHOP ON PROTON GANTRIES AND BEAM DELIVERY SYSTEMS

Monday, May 7

8:00am – 9:00	Registration
9:00am – 9:05	Workshop organization – W. Chu
<i>Beam Delivery</i> <i>Chair – B. Gottschalk</i>	
9:05am – 9:25	The design of the Loma Linda beam delivery system B. Prichard
9:25am – 9:40	Present and future proton beam delivery systems of Tsukuba T. Inada
9:40am – 9:55	A comparison of dose distributions with divergent and parallel proton beams E. Grusell
9:55am – 10:10	Recent progress in double scattering system B. Gottschalk
10:10am – 10:30	Discussion

Break (20 min.)

<i>Beam Delivery systems (cont'd)</i> <i>Chair – W. Chu</i>	
10:50am – 12:45	Beam delivery systems (cont.)
10:50am – 11:05	Layour of the proposed medical beam line at GSI and computer simulation of raster and pixel scanning strategies G. Kraft
11:05am – 11:20	Status of ACCTEK's raster scanning system R. Martin
11:20am – 11:35	Controlling of scanner power supply M. Nyman
11:35am – 11:50	Results of the spot scanning test at PSI E. Pedroni
11:50am – 12:05	Line scanning tests at LBL – Preliminary results and design thoughts J. Alonso
12:05pm – 12:20	Clinical analysis of variable vs. fixed modulation in the pelvis M. Goitein
	Beam losses for energy degradation M. Rabin
12:20pm - 12:45	Discussion

Lunch – Campus Cafeteria – 12:45pm – 2:00

Gantries

Chair – M. Goitein

2:00pm – 2:15	A new concept in isocentric gantry	Y. Jongen
2:15pm – 2:30	Some thoughts on corkscrew gantries	H. Enge
2:30pm – 2:45	Beam tuning in the real world	T. Renner
2:45pm – 3:00	Other talks and discussions	

Break (20 min.)

3:50pm – 5:30	Gantries (cont.)	
3:50pm – 4:05	Status of the gantry design for PSI	E. Pedroni
4:05pm – 4:20	Vertical delivery system with vertical angle	R. Martin
4:20pm – 5:30	Other talks and discussions	

7:15pm - Buses leave hotel for LLUMC (meet in lobby)

7:30 pm Tour of LLUMC Proton Medical Facility (for those who did not take part on the previous day).
Buses return at end of tour.

PTCOG XXII MEETING

Tuesday, May 8

8:30am Registration – Randall Visitors Center

Review of the Loma Linda Facility

Chair – D. Miller

9:00am – 9:10	Introduction and Welcome	J. M. Slater
9:10am – 9:40	Accelerator	P. Young
9:40am – 9:55	Beam transport	M. Schulze
9:55am – 10:15	Gantry	R. Prechter
10:15am – 10:35	Nozzle	D. Miller, G. Coutrakon

Break (20 min.)

10:55am – 11:20	Control system	J. W. Slater
11:20am – 11:40	Positioning/Verification	J. D. Slater
11:40am – 12:05	Shielding measurements	D. Miller (cancelled)
12:05pm – 12:25	Commissioning	D. Miller
12:25pm – 1:00	Discussion	

Lunch – Randall Visitors Center – 1:00pm

PTCOG Members Presentations

Chair: M. Goitein

(Anyone who wishes to make a presentation but has been left off this agenda should contact the chair and time will be made available to them.)

2:15pm – 2:30	Medical accelerator projects at Michigan State University	H. Blosser
2:30pm – 2:45	Plans to develop a capability for proton therapy at the Indiana University Cyclotron Facility	V. Derenchuk
2:45pm – 3:00	Status and plans for the PSI proton therapy project	H. Blattmann
3:00pm – 3:15	Preliminary design of a reduced cost proton therapy facility using a compact, high-field, non-superconduction isochronous cyclotron	Y. Jongen

3:15pm – 3:30	Update on the proton therapy program at the National Accelerator Center in the Cape (South Africa)	B. J. Smit
3:30pm – 3:45	Proton radiography and computed tomography as an aid to therapy	R. Martin
3:45pm – 4:00	Positron emitting tissue activation by neutrons and heavy ions	J. H. Kleck

Break (20 mins.)

Radiobiological effectiveness of protons

Chair – H. D. Suit

4:20pm - 4:35	The radiobiology of protons	M. R. Raju
4:35pm – 4:55	Radiobiology at Loma Linda	J. Archambeau
4:55pm – 5:10	Determination of RBE for 72 MeV proton and 200 MeV alpha beams at the Gustaf Werner cyclotron	K. Russell
5:10pm – 5:20	Basis for the choice of RBE at KEK	T. Inada
5:20pm – 5:30	Basis for the choice of RBE at ITEP	G. B. Makarova (cancelled)
5:30pm – 5:45	Basis for the choice of RBE at MGH	H. D. Suit
5:45pm – 6:00	Discussion	

Dinner – 7:00pm – Inland Empire Hilton (same as San Bernadino Hilton)

Wednesday, May 9

7:00am Steering Committee breakfast meeting at La Poitiniere (Inland Empire Hilton)

Clinical Protocols for Proton Therapy

Chair – M. Austin-Seymour

9:00am – 9:20	Protocol/design and definitions	W. Saunders
9:20am – 9:40	Clinical trials support through the American College of Radiology grant	L. Davis
	Loma Linda clinical plans and protocols	
9:40am – 9:50	Overview	J. M. Slater
9:50am – 10:05	Pediatric supratentorial strocytoma	J. Archambeau
10:05am – 10:20	Cervix	J. D. Slater
10:20am – 10:35	Pituitary	R. Schulte

Break (15 min.)

10:50am – 11:20	MGH approved and ongoing protocols: chordomas and chondrosarcomas of the base of skull and cervical spine uveal melanoma glioblastoma multiforme prostate (stage T3 – T4) carcinoma benign meningioma	H. Suit, D. Cole
11:20am – 11:40	MGH protocols under consideration: carcinoma of the glottis (stage T3) sarcomas of the sacrum involving S1 – S2 rectal carcinoma	H. Suit, D. Cole
11:40am – 12:10	Helium ion protocols	J. Castro
12:10pm – 12:30	Discussion	
12:30pm	PTCOG Business Meeting	
1:30pm	Adjourn PTCOG XII	

Lunch in the Campus Cafeteria – 1:30

2:30pm – 5:30	Clinical Use of Heavy Ions (Session arranged by J. Castro)
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