

INTERNATIONAL ACCELERATOR RADIOLOGICAL PROTECTION E-MAIL (IARPE) NEWSLETTER

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OFFICERS

President: [Steve Musolino, BNL {musolino@bnl.gov }](mailto:musolino@bnl.gov)
President-Elect: [Joe McDonald, PNNL {jc_mcdonald@ccmail.pnl.gov }](mailto:jc_mcdonald@ccmail.pnl.gov)
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Treasurer: [Gerry Fallon, MIT {fallon@bates.mit.edu }](mailto:fallon@bates.mit.edu)
Newsletter Editor: [Elaine Marshall, FNAL {emarshall@fnal.gov }](mailto:emarshall@fnal.gov)

Directors: [Wes Dunn, International Isotopes \(1999\) {Wdunn@intiso.com }](mailto:Wdunn@intiso.com)
[Henry Kahnhauser, BNL \(1999\) {kahnhaus@bnl.gov }](mailto:kahnhaus@bnl.gov)
[Bob May, Jefferson Labs \(2000\) {may@jlab.org }](mailto:may@jlab.org)
[Keith Welch, Jefferson Labs \(2000\) {welch@jlab.org }](mailto:welch@jlab.org)
[Mike Grissom, SLAC \(2001\) {mikeg@slac.stanford.edu }](mailto:mikeg@slac.stanford.edu)
[Marcia Torres, ANL-E \(2001\) {mtorres@anl.gov }](mailto:mtorres@anl.gov)

FROM THE PRESIDENT

HPS Strategic Plan

On February 4, I received the following memo from our HPS Board Liaison, George Anastas, requesting input from our section to the HPS Strategic Plan. Does anyone have comments as to what the position of the Section should be?

If so, let me know before March 15 so that I can forward an appropriate response.

From: George Anastas, HPS Board Liaison

Subject: Input to HPS Strategic Plan

Hello all. I need your assistance. It is important that the Society receive input from members, Sections and Committees regarding the formation of HPS 2010, the revision to the current HPS Strategic Plan.

Accordingly, I would appreciate it if members, Sections and Committees take a hard look at the Strategic Planning Committee Survey and send comments to Bob Cherry, Chair of the SPC.

On page 15 of the January 1999 Newsletter is a brief discussion and the Survey and the Survey itself. Please mention my request in your next newsletter and in discussions with members.

Thank you. If any questions, either contact me or Bob Cherry.

George Anastas

IRPA Delegation

The Accelerator Section petitioned the HPS Board of Directors to revise the procedures to the selection of delegates to the IRPA General Assembly several years ago. Formal action on our petition was taken at the Executive Committee meeting in October 1998. The November/December 1998 IARPE Newsletter summarizes the recommendation to the HPS Board. At the Board meeting held in January, the recommendation was approved, allowing for the nomination of candidates for the position of delegate by a Section or Chapter.

Section Treasury

In addition to the vote regarding how nominations for delegates to IRPA are made, the HPS Board also approved the petition to credit sections with interest on their accounts. We are still awaiting specific information as to the rate of interest and where the money has been deposited, but this is a step in the right direction.

Steve

FROM THE NEWSLETTER EDITOR

Over the last couple of months, I have noticed that it has been difficult soliciting contributions for this newsletter. It has me wondering whether the content of the newsletter is relevant or if a different publication schedule is in order. Right now the newsletter is issued bimonthly. Please send me emarshall@fnal.gov comments as to what you would like to see included in future issues and also your recommendation as the publication frequency (monthly, bimonthly, quarterly, etc.).

Elaine

NEWS FROM THE FERMI NATIONAL ACCELERATOR LABORATORY

The last few months has witnessed a feverish effort to commission the new Fermilab Main Injector. The Main Injector is a new separated-function, strong-focussing synchrotron constructed of conventional magnets designed to accelerate protons to energies up to 150 GeV. It replaces the venerable Main Ring as the injector for the superconducting Tevatron and as the source of the 120 GeV protons used to produce the antiprotons that are needed by the Tevatron collider program. Unlike the Main Ring, which was located approximately 60 cm beneath the Tevatron in the same tunnel, the Main Injector is housed in a separate tunnel. Thus, an unwanted source of radiation background for both the colliding beam experiments CDF and D0 and for the Tevatron itself has been eliminated.

Throughout the development of the Main Injector, environment, safety, and health considerations and especially radiation safety, have held a high priority. As the construction project developed, safety reviews were conducted at each stage. This was done in a collaborative partnership among the Fermilab Beams Division, the Fermilab Environment, Safety, and Health Section, and the U. S. Department of Energy that has continued over the last couple of years. To do this, the path chosen was to create a multi-disciplinary team of environment, safety, and health specialists in order to assure completion of all safety and environmental protection requirements. The construction and commissioning of the Main Injector has been a large project. In order to facilitate the review, its commissioning was divided into discrete steps that were studied in turn by members of the review team. The steps of the commissioning process were based upon both components of the accelerator that were to be brought on line and on stages of their operation. Examples of such stages are the injection of beam into the accelerator ring, the establishment of coasting beam, the extraction of beam, and the progression of beam delivery through increments of beam intensity. Before every

commissioning step, satisfactory completion of any "action items" identified by the review team, were documented. In particular, a complete shielding assessment of "every meter" of the circumference of the Main Injector and of its extraction and injection lines was performed. At Fermilab, this involves a standardized, formal process involving an independent review by radiation protection specialists in the Environment, Safety, and Health Section.

A number of the major commissioning hurdles have now been leaped. Much of the operational successes have come on weekends and "after hours" so that continuing installation progress could be made during the regular workweek. The radiation protection staff of the Beams Division has worked mightily to keep up with the ever-changing radiological conditions due to such an "on again/off again" schedule. The extensive planning and review has reaped a lot of benefits. To date, no radiological "surprises" have been identified and the radiation exposures to personnel who must work on the Main Injector after such weekend sessions have remained very low.

Don Cossairt

CERF EXPERIMENTAL RUNS

Dear colleagues,

The experimental runs scheduled in 1999 at the CERN-EC Reference field Facility (CERF) will take place in the following dates:

from Thursday 3 June at 14:00 to Wednesday 9 June at 9:00

and

from Thursday 29 July at 14:00 to Wednesday 4 August at 9:00.

As in the past few years, the beam will be 120 GeV/c positive particles. We would like to ask you to submit your request for beam time by 31 MARCH, so that we can prepare the schedule for the two runs and circulate it by the end of April.

In your request, please state what type of detector you wish to expose (active or passive), the irradiation position, the hours of beam time you need, the estimated integrated dose or dose rate you need and your preferred period (June or July). Please note that in the case of overcrowding of one period we may have to reschedule some of the requests to the other period.

Please remember that the irradiations can take place:

- on the top shielding, target under either 40 cm iron or 80 cm concrete;
- on the side shielding, target behind either 80 or 160 cm concrete.

There are 16 + 16 reference positions on the top and 8 + 8 on the side. According to the position, the maximum dose per PIC-count (with 1PIC-count equal to 2.2×10^4 primary particles incident on the copper target) and the range of dose rate available are the following:

40 cm iron: 1-2 nSv/PIC, dose rate 25 microSv/h - 1 mSv/h

80 cm concrete: 0.3 nSv/h, dose rate 5 - 600 microSv/h.

Please send your request by (preferably) e-mail to marco.silari@cern.ch or thomas.otto@cern.ch or by fax +41 22 7679360.

Best regards

Marco Silari and Thomas Otto

DOSIMETRY

Monitoring neutron radiation fields at a pulsed machine, as we know all too well, can be difficult. Instantaneous dose rates often saturate the detector. A dosimeter integrates the dose properly. However, corrections should be made to account for the energy spectrum of the field. Recent work at the Naval Surface Warfare Center summarizes a method by which the correct neutron DE response can be produced as well as the energy correction factor for the personnel dosimeter. The paper, entitled Dose Equivalent LiF TLD Area Monitor Corrects Personnel Dosimeter Neutron Energy Response, because of the figures, can not be reproduced in the ASCII version of this newsletter. However, it will be available as a PDF file on the web version which can be accessed through <http://www-esh.fnal.gov/IARPE/>.

Gordon Riel

EMPLOYMENT OPPORTUNITIES

At CERN

Senior Physicist or Engineer in the field of Radiation Protection

Reference: TIS-RP-99-14-FT

Date: 05.02.1999

Code: 206/200

Career Path: IX

Applications are invited for the vacancy in the Technical Inspection and Safety Commission, Radiation Protection (RP) Group as described below. Applications will be accepted for 10 weeks beginning February 5, 1999.

Functions: To work as Leader of the Radiation Protection Group in the Technical Inspection and Safety Commission. To be responsible for all aspects of radiation protection at CERN and represent the Organization in this matter towards the respective authorities in the Host States (France and Switzerland). To act as recognized CERN expert both inside and outside the Organization. The RP Group Leader supervises a team of specialized physicists and technicians working around CERN's high-energy particle accelerators and experiments. The position covers all fields of radiation protection like area, personal and environmental monitoring, radioactive waste management and new developments and projects. To keep abreast of all developments in radiation protection on an international scale. Special emphasis is given to quality assurance and related documentation in radiation protection. These tasks involve interaction and close collaboration with individuals from many different countries and demand a high level of management abilities. Communicate all aspects of radiation protection, orally and in written form, both inside and outside CERN.

Nationals from the Member States of CERN may apply for this vacancy: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland and United Kingdom.

Qualification Requirements:

Education: University degree, preferably a doctorate, or equivalent in radiation physics or related subjects with specialization in radiation protection.

Experience and Knowledge: At least 15 years' experience in practical radiation protection, comprising managerial

responsibilities and international recognition in the field. Good knowledge of relevant regulations and functions. Demonstrated leadership skills. Ability to represent the function in a convincing manner both inside and outside CERN. Initiative, drive and good judgement. Good communication skills. Very good knowledge of spoken and written English or French; knowledge of the other language. Speaking other European languages would be an advantage.

In line with its policy of Equal Opportunities, the Organization encourages both men and women with relevant qualifications to apply. The title and career path will be determined according to the level of functions performed.

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listserv@slac.stanford.edu

The body of your message should contain the following command:

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subscribe iarpe-l
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Please don't forget to update your e-mail address if you move, change jobs or just change your computing environment. The update consists in canceling the old by 'unsubscribe' and submitting a new subscription, as illustrated below:

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unsubscribe iarpe-l your_old_email_address  
subscribe iarpe-l  
end
```

If the body of your message, as in this example, contains more than a single line/command, it is good practice to finish with the 'end' command, especially if your mailer adds a signature. If you experience problems with subscribing/updating, please send me an e-mail to emarshall@fnal.gov and I will do it for you.