

Japanese Association of Radiation Safety Management
The 9th Annual Meeting
Hiroshima, 2010

Overview

Scientific Meeting

Date December 1-3, 2010
Place Hiroshima University Higashi-Hiroshima Campus
1-2-2, Kagamiyama, Higashi-Hiroshima 739-8526, Japan

Reception

Date December 2, 2010 (18:50-20:50)
Place Saijo HAKUWA Hotel
6-5-45, Shitami, Higashi-Hiroshima 739-0047, Japan

Sponsor and Co-Sponsors

Japanese Association of Radiation Safety Management (JRSM)
Japan Health Physics Society (JHPS)
Hiroshima University Natural Science Center for Basic Research and
Development (Hiroshima Univ. N-BARD)

Organizing Committee

Chair Satoru NAKASHIMA (Hiroshima University)
Office Natural Science Center for Basic Research and Development
Hiroshima University
1-4-2, Kagamiyama, Higashi-Hiroshima 739-8526, Japan
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Schedule of Events

Day-1 12/1/2010

- 13:00 Opening address
- 13:10 Distinguished Scientist Lecture on "Measurement of Uranium, Radium and Radon Concentration in Ground Water Sampled over Hiroshima Prefecture"
by Prof. Kiyoshi SHIZUMA (Hiroshima University)
- 14:00 Lecture on "Current Activity on Radiation Regulation"
by Takao NAKAYA (the Ministry of Education, Culture, Sports, Science and Technology)
- 15:00 Young scientist session
organized by the Organizing Committee
- 17:10 Oral presentations

Day-2 12/2/2010

- 09:00 General meeting
- 09:40 Oral presentations
- 11:40 Poster presentations
- 13:10 Invited Lecture on " Progress in Silicon Microdosimetry "
by Prof. Anatoly ROSENFELD (University of Wollongong, Australia)
- 14:00 Invited Lecture on " Thermally and Optically Stimulated Luminescence and its Application in Radiation Dosimetry "
by Prof. Stephen W. S. McKEEVER (Oklahoma State University, USA)
- 15:00 Education session organized by the Planning Committee
- 17:10 Oral presentations
- 17:55 Poster presentations
- 18:50 Reception

Day-3 12/3/2010

- 09:00 Organized session "Molecular Imaging" by the Organizing Committee
- 10:35 Oral presentations
- 13:05 Proposal of Science Council of Japan on "Unified Control of Occupational Dose of Radiation Workers"
by Prof. Kazuyoshi MASUMOTO (Chair of JRSM)

- 13:40 Distinguished Scientist Lecture on "Health Effects by Low Dose Radiation and Possibility of its Applications to Medical Care / Health Promotion "
by Prof. Kiyonori YAMAOKA (Okayama University)
- 14:20 JRSM Award session
- 15:05 Closing events

Program

Day-1 12/1/2009

Hall A (Satake Memorial Hall)

<p>13:00 Opening address</p>	<p>Shielding design Chair: H. Miyoshi</p>
<p>13:10 Distinguished scientist lecture Measurement of uranium, radium and radon concentration in ground water sampled over Hiroshima prefecture Kiyoshi Shizuma (Hiroshima-U) Chair: S. Nakashima</p>	<p>1A1-1 Radiation control for farm animal radiography A. Kawabe, A. Sakoda, K. Hanamoto, T. Kataoka, K. Yamada, H. Sato, K. Yamaoka (Okayama-U, Obihiro-U, Ibaraki Pref.-U of Health Sci.)</p>
<p>15:00 Lecture Current activity on radiation regulation Takao Nakaya (MEXT) Chair: K. Masumoto</p>	<p>1A1-2 Optimum Shielding Design for Electron Linac Oncology Facilities Incorporating Seismic Base-Isolation Structure K. Oishi, K. Kosako, Y. Kobayashi, T. Nakamura (Shimizu Co., Giken Kogyo Co.)</p>
<p>16:00 Young Scientist session Chair: S. Nakashima</p>	<p>1A1-3 Measurement of Leaked X-ray from Potable X-ray Fluorescence Instrument T. OHKUBO, S. IIO, N. KOSAKA, S. HIGAK, N. NOGAWA, K. NOMURA (U-Tokyo)</p>
<p>YS-1 Development of software for radiation safety management and improvement of radiation safety education Syuichi Sakaguti (Yamaguchi-U)</p>	<p>1A1-4 Exposure dose estimation at activity calibration of I-125 seed for brachytherapy Y. Kinoshita, T. Saze, S. Nakayama, K. Kuwahara, K. Fushimi, Y. Kawaguchi, Y. Kurosaki, S. Furutani, H. Miyoshi, Y. Shinohara (U-Tokushima, HAT, NDIC)</p>
<p>YS-2 Activities for development of scientifically reasonable radiation safety systems and its future Haruyuki Ogino (CRIEPI)</p>	<p>18:10 Session 1A2 Reduction of radiation exposure Dose evaluation Waste management Effective use of radiation Chair: S. Ito</p>
<p>YS-3 Liquid effluent monitoring, internal exposure monitoring, activities about Health Physics and the perspective in the future Takahiko Kono (JAEA)</p>	<p>1A2-1 The Development of systematic analysis of Pu, Am in bioassay samples T. KONO, H. FUJITA, H. WATANABE, S. SUMIYA (JAEA)</p>
<p>YS-4 Perception and evaluation of radiation health risk - An approach from social science and biology - Miwa Miura (Nagasaki-U)</p>	<p>1A2-2 Low-Activation concrete for PET Cyclotron Facilities K. KIMURA, M. KINNO</p>
<p>YS-5 Environmental radiation in Higashi-Hiroshima Campus Akihito Matsushima (Hiroshima-U)</p>	
<p>YS-6 Advantage of safety management system in small-scale radiation facilities and development in the future Makoto Kita (Tottori-U)</p>	
<p>17:10 Session 1A1 Reduction of radiation exposure Dose evaluation</p>	

(Fujita Co.)
 1A2-3 **Development of alpha particle gun for cell radiation**
 Y. TSUNOYAMA, T. KAWAMOTO, J. MURAKAMI, S. Ohsako, M. TOSAKI, Y.

ISOZUMI
 (Kyoto-U, IsoShield. JP)

Day-1 12/1/2009		Hall B (Reception Hall)	
17:10	Session 1B1 Measurement of radiation Chair: A. Uritani	18:10	Session 1B2 Measurement of radiation Chair: T. Saito
1B1-1	Research of radiation fields in medical accelerator facilities (1) Ambient dose H. NAKAMURA, K. TAKAHASHI, A. TOYODA, K. IIJIMA, A. Takahashi, K. MASUMOTO, F. NOBUHARA, M. KUROYANAGI, K. KOSAKO, K. OISHI (KEK, TNS, SHIMIZU Co.)	1B2-1	Measurement of the leakage dose from some Crookes tubes I. Kobayashi, H. Inoue, H. Kato, S. Obara, T. Fujibuchi, M. Hosoda (Nagase Landauer, Chiba-U, Ibaraki Pref.-U of Health Sci., NIRS)
1B1-2	Research of radiation fields in medical accelerator facilities (2) Simulation of radiation fields F. NOBUHARA, M. KUROYANAGI, H. NAKAMURA, A. TOYODA, K. TAKAHASHI, K. IIJIMA, A. TAKAHASHI, K. MASUMOTO (TNS, KEK)	1B2-2	Research of radiation fields in medical accelerator facilities (3) Activation of air K. TAKAHASHI, H. NAKAMURA, A. TOYODA, K. IIJIMA, A. TAKAHASHI, K. MASUMOTO, F. NOBUHARA, M. KUROYANAGI, K. KOSAKO, K. OISHI (KEK, TNS, SHIMIZU Co.)
1B1-3	Irradiation Dose Measurement of Ultra-Low Intensity Linac Electron Beams with IP H. SHIMOMURA, R. TANIGUCHI, S. OKUDA, T. KOJIMA (Osaka Pref.-U)	1B2-3	Research of radiation fields in medical accelerator facilities (4) Activation of water and accelerator A. TOYODA, H. NAKAMURA, K. TAKAHASHI, K. IIJIMA, A. TAKAHASHI, K. MASUMOTO, F. NOBUHARA, M. KUROYANAGI, K. KOSAKO, K. OISHI (KEK, TNS, SHIMIZU Co.)
1B1-4	Development of a compact X-ray source using a pyroelectric crystal -effect of pressure on X-ray emission- K. HANAMOTO, A. KAWABE, A. SAKODA, T. KATAOKA, M. OKADA, K. YAMAOKA (Okayama-U)		

Day-2 12/2/2010		Hall A (Satake Memorial Hall)	
9:00	General Meeting	Safety management of radiation sources	
9:30	Ceremony for JRSM Award Winners	Chair: N. Matsuda	
9:40	Session 2A1	2A1-1	Feasibility of macromolecule for

- collecting radioactive iodine**
S. HIGAKI, M. HIROTA, N. NOGAWA, K. NISHIZAWA, S. ITO (U-Tokyo, RESC, Kumamoto-U)
- 2A1-2 **Feasibility of macromolecule for retaining radioactive iodine**
M. HIROTA, S. HIGAKI, N. NOGAWA, K. NISHIZAWA, S. ITO (U-Tokyo, RESC, Kumamoto-U)
- 2A1-3 **Questionnaire Survey on Measurement of Radioactivity in Working Environment of Radioisotopes Facility -Summary of three-year activity-**
T. Kawano, K. Nomura (NIFS, U-Tokyo)
- 2A1-4 **Application of supervised area in research accelerator facility ~ Case study in CERN ~**
T. OGAWA, T. IIMOTO, T. KOSAKO (U-Tokyo)
- 10:40 Session 2A2
Exhaust and drainage
Chair: K. Kimura
- 2A2-1 **On-site filter performance test for the iodine adsorb filter**
T. UTSUSHIKAWA, S. MURAYAMA, M. MOGI, N. NOGAWA (JER, U-Tokyo)
- 2A2-2 **Knowledge obtained by radiation control at the operation of the High-Temperature engineering Test Reactor (HTR).**
K. SANPEI, K. SATO, T. KAWASAKI, H. YABUTA (JAEA)
- 2A2-3 **Radioactivity and safety management of the cooling system (water, air, He-gas) in J-PARC Neutrino Facility**
A. TAKAHASHI, M. HAGIWARA, K. TAKAHASHI, T. MIURA, Y. YAMADA, Y. OYAMA, F. KOUNO (J-PARC, TNS)
- 2A2-4 **Removal method of radioactive iodine in urine excreted by thyroid treatment patient**
S. Ito, M. Hirota, S. Higaki, T. Saze, N. Katsuda, K. Nishizawa (Kumamoto-U, U-Tokyo, U-Tokushima, RESC)
- 11:40 Poster presentations
- 12:20 Lunch
- 13:10 Invited Lecture
Progress in Silicon Microdosimetry
Anatoly ROSENFELD (U-Wollongong)
Chair: T. Yamamoto
- 14:00 Invited Lecture
Thermally and Optically Stimulated Luminescence and its Application in Radiation Dosimetry
Stephen W.S. McKeever (Oklahoma-S-U)
Chair: T. Yamamoto
- 15:00 Education session
Chair: T. Kawamoto
- ES-1 **Outline of New Course of Study**
Masahiro KAMATA (Tokyo Gakugei-U)
- ES-2 **Radiation Education for Elementary School Students -Practice Activities Using Misasa Spring Water-**
Mariko NAKAMURA (Tottori-U)
- ES-3 **The radiation education for the junior high school student**
Tadanori HARADA (EBA J-High School)
- ES-4 **Education of Ionizing Radiation for High School Students**
Kiyoshi Nomura (U-Tokyo)
- ES-5 **Radiation education for students of college in Aomori Prefecture**
Toshiharu MIYAKAWA, Manabu SATOU, Katsunori ABE (JNFL, Hachinohe I-T)
- ES-6 **Discussion**
- 17:10 Session 2A3
Education
Chair: Y. Fukutoku
- 2A3-1 **Radiation education in the junior high school**
S. NAGAI, M. SAKATA, T. MIYAKAWA, T. KAYAMORI, M. DENPOU, Y. TAKAKURA, H. KUDO, Y. TAKIZAWA, H. NAKANO (JNFL, Tohoku RSC)
- 2A3-2 **Development and Availability of "Radiation Safety - Reference Manual" by Radiation Safety Council of Universities in Japan**

S. HIGAKI, Y. KOIKE, K. IJIRI, H. SAJI, M. SHIBATA, S. NAKASHIMA, N. MATSUDA (U-Tokyo, Kyoto-U, Nagoya-U, Hiroshima-U, Nagasaki-U)

H. TANABE, T. KON (JNFL)

17:10 Poster presentations

2A3-3 **Radiation Trial School for Teachers**

Day-2 12/2/2010

Hall B (Reception Hall)

9:40 Session 2B1 (Reception Hall)

Measurement of radiation

Chair: K. Saneyoshi

2B1-1 **The intercomparison experiment of passive integrating dosimeter for personal monitoring**

Y. KOGUCHI, A. OHTA, Y. NAGASHIMA, W. SHINOZAKI, N. JUTO, T. YAMAMOTO, M. RANOGAJEC-KOMOR (Chiyoda Technol Co., Ruder Bošković-I)

2B1-2 **Adaptability to the environmental radiation dosimetry standard of the OSL dosimeter**

I. Kobayashi, T. Okazaki, C. Yajima, H. Yashida (Nagase Landauer, NIRS)

2B1-3 **Detection characteristics of a commercial alpha/beta survey meter in high count**

N. IJIMA, Y. SANADA, M. SAKUYAMA, T. YAMANO, T. MOMOSE (JAEA-NCL, IDC Ltd., Aloka Co.)

2B1-4 **Design of the long counter detector with flat response**

J. OHTSUKA, A. URITANI, K. WATANABE, A. YAMAZAKI (Nagoya-U)

10:40 Session 2B1 (Reception Hall)

Measurement of radiation

Chair: T. Kawano

2B2-1 **ESR Evaluation of Absorbed Dose on Irradiated Materials contained in Spice**

M. OHTA, H. TAKAHASHI, H. OKAMURA, R. Yamaaki (Niigata-U, Osaka-U of Pharm. Sci.)

2B2-2 **The advancement of *in vivo* measurements for internal dose**

assessment

K. TANI, O. KURIHARA, T. SHIMADA, Y. KOIKE, T. KOSAKO (U-Tokyo, JAEA)

2B2-3 **Feasibility of thyroid scintigraphy using a portable compact X-ray camera**

T. SAZE, D. ARAKAWA, S. NAKAYAMA, Y. KUWAHARA, Y. KINOSHITA, Y. HOSOKAWA, H. MIYOSHI, Y. SHINOHARA (U-Tokushima, X-ray Precision)

2B2-4 **Measurement of Leakage X-ray from X-ray Box**

K. SANEYOSHI, S. TOMITA (TIT)

11:40 Poster Presentations

17:10 Session 2B3

Software IT

Chair: S. Sakaguti

2B3-1 **Development of Estimation Soft for Radioisotope Concentration of Radiation Facilities**

Y. ISOZUMI, M. TOSAKI (IsoShield.JP, Kyoto-U)

2B3-2 **Development of web site on risk communication of medical radiation**

I. Yamaguchi, M. Nishizawa (NIPH, Litera Japan Co.)

2B3-3 **Introduction of Personal Management System for Radiation handler(PMSR) on WWW**

Y. ISOBE, J. UEMURA (Kumamoto-U)

17:10 Poster presentations

Day-3 12/3/2010

Hall A (Satake Memorial Hall)

- 9:00 Organized Session
Molecular Imaging
 Chair: T. Ono
- MI-1 **An outline of the Division of Molecular Imaging, Okayama Medical Innovation Center**
 T. ONO, T. HANAFUSA (Okayama-U)
- MI-2 **Introduction and the management of a SPECT/CT device for small animals in Tokyo Medical and Dental University**
 A. NOTO, H. YOKOTA, S. WATABE, M. HARA (Tokyo Medical and Dental U, Yamaguchi-U)
- MI-3 **Radiation safety management for animal experiments using molecular imaging modality and linear accelerator**
 Y. NOYA, S. KASAHARA, K. SEKI, Y. KUGE (Hokkaido-U)
- MI-4 **Molecular imaging using animal PET: Evaluation of tumor malignancy and response to therapy**
 Y. KUGE, S. ZHAO, K. NISHIJIMA, N. TAMAKI (Hokkaido-U)
- MI-5 **Molecular imaging for small animals using a super-high resolution semiconductor PET (FINE-PET)**
 H. YAMAZAKI, Y. FUNAKI, K. ISHII, Y. KIKUCHI, Y. NAKAI, J. HATAZAWA, Y. WATANABE, T. KODAMA, M. YAMAMOTO, M. YOKOYAMA (Tohoku-U, Osaka-U)
- 10:35 Session 3A1
Image Analysis
 Chair: Y. Kuge
- 3A1-1 **Lower detection limit of ⁹⁰Y bremsstrahlung emission computed tomography (⁹⁰Y BECT)**
 S. Inoue, S. Ito (Kumamoto-U)
- 3A1-2 **Determination of input function for automatic noninvasive cerebral blood flow quantification program**
 S. Inoue, A. Takaki, S. Teraoka, S. Ito (Kumamoto-U, FFRI)
- 3A1-3 **Development of noninvasive automatic quantification program for cerebral blood flow**
 S. Ito, S. Inoue, A. Takaki, S. Teraoka (Kumamoto-U, FFRI)
- 11:20 Session 3A2
Environmental Radiation
 Chair: M. Yanaga
- 3A2-1 **Application of Neutron Monitor Data to the Management of Cosmic Radiation Exposure in Aviation**
 H. YASUDA, K. YAJIMA, T. MATSUZAWA (NIRS)
- 3A2-2 **Study on Effects on Thoron and Thermal Treatment for Aging-related Diseases**
 Y. Aoyama, T. Kataoka, S. Nakagawa, A. Sakoda, Y. Ishimori, F. Mitsunobu, K. Yamaoka (Okayama-U, The Sakakibara Heart Inst., JAEA)
- 3A2-3 **Background radiation and individual dosimetry in the costal area of Tamil Nadu, India**
 N. MATSUDA, G.M. BRAHMANANDHAN, M. YOSHIDA, N. TAKAMURA, A. SUYAMA, Y. KOGUCHI, N. JUTO, Y.K. RAJ, G. WINSLEY, S. SELVASEKARAPANDIAN (Nagasaki-U, RERF Nagasaki, Chiyoda Technol Co., Scott Christian College, Kalasalingham-U)
- 12:05 Lunch
- 13:05 Organized
Proposal of Science Council of Japan on "Unified Control of Occupational Dose of Radiation Workers"
 Kazuyoshi Masumoto (KEK, Chair of JRSM)
 Chair: M. Baba
- 13:40 Distinguished scientist lecture
Health Effects by Low Dose Radiation and Possibility of its Applications to Medical Care/Health Promotion

Kiyonori Yamaoka (Okayama-U)
Chair: E. Furuta

10:30 JRSM Award Session
Chair: K. Masumoto

Research Encouragement

**Response of a
Radiophotoluminescence Glass
Dosimeter to Low Energy X-rays
Necessary for Mammography**

Daisuke Maki (Osaka-U)

Technology

**Effectiveness Examination of
Requirements Shown in Interim Report**

**about Clearance of Solid Waste
Contaminated by Only Short Half-life
Nuclide**

Satoru Tomita (TIT)

**Preventative Maintenance of Drainpipes
in Radioisotope Facility Using Flexible
Hose**

Tomoko Hiroi (St. Marianna-U)

15:05 Closing Events
Presentation ceremony for award
winners
Introducing JRSM2011 Tokyo

Day-3 12/3/2010

Hall B (Reception)

10:35 Session 3B1

**Safety management of radiation
sources**

Chair: K. Nomura

3B1-1 **SMEAR METHOD USING SMEAR-KUN**
K. Mori, Y. Kataoka, Z. Meng, H. Kikuti, H.
Sato, K. Nakazato (ING Co., Keio-U)

3B1-2 **Analysis on Removal Factor of Smear
Method under Various Conditions**
M. SHOJI, T. KONDO, A. KIJIMA, Y.
SHIBAO, K. YAMADA
(U-Toyama, ALOKA Co.)

3B1-3 **A Method of Dead Time Measurement
Utilizing Swipe Sample Inside Hot Cell**
A. IWASA, Masaru GOMIBUCHI, Naoto
NAKAYAMA, S. MIKAMI, K. EGUCHI, H.
TAKASHIMA, J. HITOMI
(JAEA, Inspection Development Co.)

11:20 Session 3B2

Contamination survey

Control of entrance

Chair: T. Saze

3B2-1 **Decontamination of radioactivity by the
cellulose fibers-based squeezed sponge
- 2**

T. TAKEMOTO, M. MIURA, H. TAKAO, M.
YOSHIDA, K. OHSAWA, N. MATSUDA
(Nagasaki-U)

3B2-2 **A new smear method for identification of
radionuclides**

E. FURUTA, Y. WATANABE, S. YOKOTA
(Ochanomizu-U, Daido-U, Tokai-U)

3B2-3 **Application of an imaging plate for
removing fixed surface contamination**

M. HIROTA, R. SATO, K. KIMURA, Y.
KURIHARA, Y. KOIKE, T. IIMOTO, S.
TANAKA
(U-Tokyo, Meiji-U)

List of Poster Presentations

- P01 **Effect of the Individual Difference in the Window Thickness of a GM tube on the Counting Valve**
T. ABE, I. KAWADU, T. UMATA, T. NORIMURA (U.O.E.H.)
- P02 **Measurement of Environmental Radiation Dose for The Inside of Office Room by Glass Dosimeter**
M. HISAJIMA (Tokyo Med-U)
- P03 **A preliminary study on the determination of the radiocarbon level by filter absorption method**
T. NAGAMATSU, T. TOYOTA, T. HANAFUSA, T. ONO (Okayama-U)
- P04 **Development and evaluation of photostimulable phosphor where Spark Plasma Sintering was used.**
H. KOBAYASHI, T. ONO, Y. TAKEI, K. ENDO, H. NANTO (Kanazawa I-T)
- P05 **Scintillator for neutron detection that uses Exciton-Luminescence of ZnO**
T. KUMAKURA, H. KOBAYASHI, Y. TAKEI, K. ENDO, H. NANTO, T. NAKAMURA, M. KATAGIRI (Kanazawa I-T, JAEA)
- P06 **Measurement of Radon Radioactivity in Atmosphere by CR-39 Track Detectors together with High Voltage**
J. DATEMACHI, J. YOSHIOKA, H. SUGIMOTO, I. MURATA, T. IIDA (Osaka-U)
- P07 **Feasibility study of a portable radiation imaging device using a compact X-ray camera**
D. ARAKAWA, T. SAZE, S. NAKAYAMA, K. KUWAHARA, Y. KINOSHITA, K. HUSIMI, Y. HOSOKAWA, H. MIYOSHI, Y. SHINOHARA (U-Tokushima, X-ray Precision Inc.)
- P08 **X-ray beam irradiation for single cell target**
S. TANAKA, Y. TOYOTA, H. TAKAHASHI, F. SATO, K. SHIMIZU, Y. KATO, T. IIDA (Osaka-U)
- P09 **Dosimetry for single cell irradiation with glass dosimeter**
Y. TOYOTA, S. TANAKA, H. TAKAHASHI, D. MAKI, F. SATO, K. SHIMIZU, Y. KATO, T. YAMAMOTO, T. IIDA (Osaka-U, Chiyoda Technol Co.)
- P10 **Development of Radiation Management Systems by Using a Ionization Area Monitor**
T. IKEDA, K. BABA (Osaka-U)
- P11 **Development of a new reader for thin glass dosimeters**
T. Ishii, D. Maki, T. Nagai, F. Sato, Y. Kato, T. Iida, T. Yamamoto (Osaka-U, Chiyoda Technol Co.)
- P12 **Visualization of neutron generated from clinical accelerator**
T. KOBAYASHI, T. SAZE, S. OKAMOTO, Y. KUWAHARA, Y. INOSHITA, H. MIYOSHI, H. MAEZAWA, Y. SHINOHARA (U-Tokushima)
- P13 **Improvement for clinical application of automatic radioactivity measurement system for I-125 seed**
S. OKAMOTO, T. SAZE, T. KOBAYASHI, Y. KINOSHITA, Y. KUWAHARA, E. MATSUMOTO, T. YAMADA, H. MIYOSHI, H. MAEZAWA, Y. SHINOHARA (U-Tokushima, HORIBA, DAIRYU Precision Machine Co.)
- P14 **Comparison of some OSL readers**
I. Kobayashi, H. Sekiguchi, J. K. Sangau (Nagase Landauer, Malaysian Nuclear Agency)
- P15 **Development of an integrated measurement system of radioactivities, elemental concentration and isotope ratios in environmental samples**
M. SAKAMA, T. SAZE, T. KITADE, O. SHIKINO (U-Tokushima, M&S Instru. Inc., PerkinElmer Japan Co.)
- P16 **Dosimetry of inhaled radon gas**
A. SAKODA, Y. ISHIMORI, T. KATAOKA, A. KAWABE, K. HANAMOTO, K. YAMAOKA (Okayama-U, JAEA)
- P17 **Radon concentrations in hot spring water used for radon therapy and its ambient air in Okayama University Hospital (Misasa)**
Y. NISHIYAMA, A. SAKODA, Y. ISHIMORI, T. KATAOKA, F. MITSUNOBU, K. YAMAOKA (Okayama-U, JAEA)
- P18 **Altitude and Latitude Dependence of**

- Energy Spectra of High Energy Cosmic-Ray Neutrons**
K. YAJIMA, H. YASUDA (NIRS)
- P19 **Atmospheric tritium measurement with separation of chemical forms for safety management in fusion test facility**
T. Uda, M. Tanaka, N. Momoshima (NIFS, Kyushu-U)
- P20 **The measurement of the atmospheric radon concentrations in homes and the radiation institution**
T. SHIMASAKI, Y. SHIRAISHI, O. KAWAHARA, K. GOTOH, A. KOJIMA, S. OKADA (Kumamoto-U)
- P21 **Spatial variation of ¹⁵²Eu specific activity induced by the Hiroshima atomic bomb**
K. Kato, K. Honjyo (Pref. U-Hiroshima, Nagoya-U)
- P22 **Environmental radiation in Higashi-Hiroshima Campus**
A. MATSUSHIMA, R. KOBAYASHI, K. INADA, H. TERAMOTO, S. NAKASHIMA (Hiroshima-U)
- P23 **Fundamental study on dosimetry of the radiations based on the yield of DNA strand breaks**
Y. MATUO, Y. IZUMI, K. SHIMIZU (U-Fukui, Osaka-U)
- P24 **A study on the distribution profiles of specific metals in *Clethrax* leaves and racemes, and their seasonal changes**
S. KASAHARA, K. SEKI, Y. NOYA, K. AITA, Y. KUGE (Hokkaido-U)
- P25 **Lessons learned from preventative maintenance of ventilation system of controlled area**
T. HIROI, S. TATSUNAMI, R. KUWABARA, Y. INOUE, H. KOUYAMA, H. MATSUI (St. Marianna-U)
- P26 **Radioactivity and safety management of the mercury target system in J-PARC Materials & Life Science Facility**
T. Nakazawa, K. Sato, K. Takahashi, Y. Miyamoto, H. Nakashima, T. Miura, Y. Kasugai, T. Kai, M. Ooi (J-PARC)
- P27 **The measurement of radiation dose in the sample chamber of GAMMACELL by glass dosimeter**
S. SASATANI, S. SUGA, T. TSUJIMURA, D. IIZUKA, S. MATSUURA (Hiroshima-U)
- P28 **INFLUENCE AND COUNTERMEASURE OF INTRODUCTION OF SURFACE CONTAMINATION EVALUATION METHOD BASED ON JIS**
K. ISHIDA, S. MIKAMI, A. IWASA, M. HAMASAKI, T. USUI, H. TAKASHIMA, J. HITOMI (JAEA)
- P29 **Feasibility of contamination checking using a grained plastic scintillator**
N. Irikura, T. Saze, H. Miyoshi, Y. Kuwahara, Y. Shinohara (U-Tokushima)
- P30 **A new smear method for identification of radionuclides (II)**
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