

# Oral Presentation

MONDAY, DECEMBER 2, 2019

16:00 Registration

Ice Breaker

TUESDAY, DECEMBER 3, 2019

8:40 Registration

## Pre-session

Chair: T. Nakamura

- 9:40 **PRE-01** Progress in AMS and Opportunities for Applications with long-lived Radionuclides H.-A. Synal
- 10:00 **PRE-02** Latest results of the MILEA system - a new 300 kV multi-isotope AMS facility A.M. Müller, S. Maxeiner, M. Christl, P. Gautschi, H.-A. Synal, C. Vockenhuber, and L. Wacker
- 10:20 **PRE-03** New Developments for the MC-SNICS Ion Sources at NEC M. Sundquist, R. Kitchen, T. Hauser, E. Alderson, A. Gajeski, K. Kearney, S. McNamer, A. O'Conner, A. O'Dwyer, M. Sandlin, and M. Stodola
- 10:40 **PRE-04** Recent Progress in Positive Ion Mass Spectrometry (PIMS) for Radiocarbon Measurements M. Sundquist, S.P.H.T. Freeman, R. Shanks, C. McIntyre, P. Salou, K. Kearney, R. Kitchen, T. Hauser, R. Bosch, and E.C. Alderson
- 11:00 **PRE-05** Low energy  $^{14}\text{C}$  and multi-element HVE AMS systems G. Scognamiglio, M. Klein, N. Podaru, and D. Mous
- 11:20 **PRE-06** Performance of the HVE 1 MV AMS system for the analysis of actinides and beryllium G. Scognamiglio, M. Klein, N. Podaru, G. Domínguez, D. Mous, Q. Liu, and X.L. Zhao

11:40 Lunch at Universal Club

13:00 **Opening** T. Nakamura

Welcome talk K. Kusano

## Session 1: Space and earth environmental science I

Chair: D. Fink

- 13:20 **O-01** Evidence for solar-flare and other cosmic-ray events in the  $^{14}\text{C}$  record in tree rings and in other records A.J.T. Jull, F. Miyake, and I. Panyushkina  
*Keynote*
- 14:00 **O-02** Simulation of  $\Delta^{14}\text{C}$  peak in AD 775 using MCNPX and Estimation of the occurrence time of the  $^{14}\text{C}$  peak in AD 775  $\Delta^{14}\text{C}$  values in sub-annual tree rings J. Park, J.-W. Seo, W. Hong, G. Park, K. Sung, Y.J. Park, and Y.-J. Kim  
*Invited*
- 14:20 **O-03** Variation of cosmogenic  $^{10}\text{Be}$  for cosmic ray event in  $\sim 5480$  BC from Antarctic Dome Fuji ice core K. Kanzawa, F. Miyake, Y. Tada, K. Horiuchi, K. Ohtani, K. Sasa, Y. Motizuki, K. Takahashi, Y. Nakai, H. Motoyama, and H. Matsuzaki
- 14:40 **O-04** Variations of Beryllium-10 and Chlorine-36 deposition flux at Tsukuba, Japan Y. Ochiai, K. Sasa, Y. Tosaki, T. Takahashi, M. Matsumura, and K. Sueki
- 15:00 **O-05** Distribution of atmospheric concentrations of  $^7\text{Be}$  and  $^{10}\text{Be}$  in the marine boundary layer T. Yamagata, H. Nagai, and H. Matsuzaki

15:20 Coffee and tea

## Session 2: Space and earth environmental science II

Chair: H.-C. Li

- 15:40 **O-06** Study on the natural iodine isotope system: a consideration from iodine geochemical cycle H. Matsuzaki
- 16:00 **O-07** Screening for Radionuclide Contamination from the Fukushima Accident by Iodine-129 Measurement in Corals from Baler S.J. Limlingan, A.T. Bautista VII, A.M. Jagonoy, J.M. Racho, B.J. Arcilla, M.M. Bauyon, J.D. Valdez, H. Kusuno, E. Dumalagan Jr., F.P. Siringan, and H. Matsuzaki
- 16:20 **O-08** Radiocarbon Releases from the Fukushima Dai-ichi Nuclear Power Plant S. Xu, B. Chen, Y. Lang, G. Cook, S. Freeman, and P. Naysmith
- 16:40 **O-09** Atmospheric  $^{14}\text{CO}_2$  time series from Point Barrow, Alaska: ending of the "Bomb Radiocarbon Period" in the Northern Hemisphere X. Xu, J.C. Walker, S. Newman, and S.E. Trumbore
- 17:00 **O-31** A long time-scale record of East Asian monsoon rainfall from Chinese loess  $^{10}\text{Be}$  W. Zhou, W.J. Beck, X. Kong, and F. Xian  
*Keynote*

17:40 **Poster session**

**WEDNESDAY, DECEMBER 4, 2019****Session 3: New facility and status report I**

Chair: H. Matsuzaki

- 9:00 **O-10** The status report of AMS at CIAE  
*Keynote* M. He, Q. Zhao, Y. Bao, Q. You, S. Su, S. Jiang, Y. Hu, Y. Pang, Y. Zhang, K. Li, X. Wang, S. Wu, F. Wang, and Q. Meng
- 9:40 **O-11** Present status and application studies in GXNU-AMS Lab  
*Invited* H. Shen, Z. Zhao, Z. Li, M. Liu, M. Qi, S. Wei, Y. Bao, M. He, K. Sasa, and S. Jiang
- 10:00 **O-12** Progress report and some applications of the NTUAMS Lab during  
*Invited* 2017-2019 H.-C. Li, S.-C. Kang, C.-Y. Chou, and T. Chang
- 10:20 **Coffee and tea**

**Session 4: New facility and status report II**

Chair: H. Shen

- 10:40 **O-13** Status Report of Current Performance of KIGAM AMS Laboratory  
*Invited* W. Hong, J. Park, G. Park, Y. Park, and K. Sung
- 11:00 **O-14** Current status of 6MV AMS Research at KIST  
*Invited* G.-H. Lee, M.-S. Oh, S.E. Song, J.H. Song, J.A. Eliades, J. Kim, J.Y. Kim, S.R. Seo, and B.-Y. Yu
- 11:20 **O-15** Status of KOMAC-AMS Y.-S. Cho, K. Choe, Y.S. Ha, and K.-R. Kim
- 11:40 **O-16** AMS for New drug development support at KRICP in KIRAMS J. Song, S. Dueker, C. Yeo, S. Bae, J.B. Park, and J. Shim
- 12:00 **Lunch at Universal Club**

**Session 5: New facility and status report III**

Chair: J.-K. Kim

- 13:20 **O-17** Status of the MALT-AMS system and analysis of environmental  
nuclides produced by the human nuclear activity H. Matsuzaki, H. Tokuyama, T. Yamagata, Y.S. Tsuchiya, H. Kusuno, M. Toya, M. Kawamoto, T. Tani, Y. Miyake, K. Nakashoji, and A.T. Bautista VII
- 13:40 **O-18** Progress of Ultrasensitive Detection Techniques for the 6 MV multi-  
nuclide AMS System at the University of Tsukuba K. Sasa, T. Takahashi, M. Matsumura, Y. Ochiai, T. Matsunaka, A. Sakaguchi, H. Shen, and K. Sueki
- 14:00 **O-19** Present status of JAEA-AMS-TONO in 2019 N. Fujita, A. Matsubara, M. Miyake, T. Watanabe, Y. Saito-Kokubu, M. Kato, N. Okabe, N. Isozaki, C. Ishizaka, T. Nishio, A. Nishizawa, A. Shimada, and N. Ogata
- 14:20 **O-20** A status report on a Single Stage Accelerator Mass Spectrometry at  
the Atmosphere and Ocean Research Institute, The University of  
Tokyo Y. Yokoyama, T. Aze, Y. Miyairi, C. Sawada, Y. Ando, S. Izawa, and Y. Ueno
- 14:40 **O-21** Radiocarbon dating at The University of Tokyo M. Yoneda, H. Ozaki, and T. Omori
- 15:00 **O-22** Present status and application studies with HVE <sup>14</sup>C AMS system at  
Nagoya University (2017/18/19) T. Nakamura, M. Minami, H. Oda, A. Ikeda, M. Yamane, M. Nishida, Y. Wakasugi, R. Sato, H. Sawada, and H. Kitagawa
- 15:20 **Coffee and tea**

**Session 6: AMS development / Technical development / Heavy nuclides**

Chair: W. Hong

- 15:40 **O-23** Research on Miniaturized AMS Measurement of <sup>129</sup>I Q. Zhao, M. He, Y. Pang, J. Gong, Y. Bao, Q. You, K. Li, S. Su, and Y. Hu
- 16:00 **O-24** Low Energy AMS for <sup>10</sup>Be and <sup>26</sup>Al at Tianjin University K. Dong, S. Xu, and Y. Lang
- 16:20 **O-25** Limits of sensitivity in Actinides AMS M.A.C. Hotchkis, D.P. Child, M. Froehlich, D. Koll, A. Wallner, and M. Williams
- 16:40 **O-26** Cryogenic trapping of CO<sub>2</sub> in the presence of other gases B. Yang, R. Kazemi, and A.M. Smith
- 17:00 **O-27** The sample preparation and the ICP-MS and AMS measurement of  
uranium at MALT L. Zheng, H. Matsuzaki, M. Toya, T. Yamagata, H. Tokuyama, and Q. Yang

**17:20 Poster session**

## THURSDAY, DECEMBER 5, 2019

8:20 Mid-Conference One-day Trip

18:00 Gala Dinner at THE KAWABUN NAGOYA

## FRIDAY, DECEMBER 6, 2019

### Session 7: General AMS application / Carbon-14 age calibration and archaeological application

Chair: H. Kitagawa

- 9:00 **O-28**      Constraining the age of Aboriginal rock art using cosmogenic Be-10 and Al-26 dating of rock shelter collapse in the Kimberley region, Australia  
*Keynote*
- 9:40 **O-29**      Expansion and demise of the Angkorian Khmer Empire  
*Invited*
- 10:00 **O-30**      Radiocarbon dating Ancient Loulan City
- 10:20 Coffee and tea

D. Fink, G. Cazes, R.H. Fülöp, and A.T. Codilean

Q. Hua, M. Hendrickson, D. Penny, D. Cook, and T. Hall

B. Xu, and Z. Gu

### Session 8: Space and earth environmental science III

Chair: Q. Hua

- 10:40 **O-32**      A high-resolution radiocarbon dating sand-loess sequence at Yulin, north-central China and East Asian winter monsoon variations
- 11:00 **O-33**      Determining diurnal fossil fuel CO<sub>2</sub> and biological CO<sub>2</sub> by  $\Delta^{14}\text{CO}_2$  observation on certain summer and winter days at Chinese background sites
- 11:20 **O-34**      Chemometric Analysis of <sup>14</sup>C and Fourier Transform Infrared Spectra to improve the chronology of Lake Biwa sediment core

Y. Gu, H. Lu, H. Zhang, C. Liang, and J. Wu

Z. Niu, and W. Zhou

H. Kitagawa, W. Hong, A. Hayashida, and K. Takemura

- 11:40 Business meeting  
Closing

# Poster Presentation

Tuesday, December 3, 17:00 - 18:40

Wednesday, December 4, 17:20 - 18:40

## New facility and status report

- P-01** A new compact radiocarbon AMS (MIni CArbon DAting System) recently installed at Nanjing University  
Z. Hongyan, G. Yao, L. Chenghong, and L. Huayu
- P-02** Research and performance with YU-AMS system  
T. Moriya, M. Takeyama, H. Sakurai, H. Miyahara, M. Ohyama, H. Saitoh, Y. Okada, and F. Tokanai
- P-03** Status report of the compact AMS facility at GIG, CAS  
S. Zhu, Z. Cheng, P. Ding, N. Wang, Y. Sun, G. Zhang, and C. Shen
- P-04** MALT Accelerator Report 2019  
H. Tokuyama, H. Matsuzaki, Y. Tsuchiya, H. Kusuno, M. Toya, T. Yamagata, M. Kawamoto, L. Zhen, Y. Qi, L. Wang, T. Tani, Q. Yang, Y. Miyata, N. Miyauchi, A. Horiuchi, and K. Yoshida
- P-05** A New Accelerator Mass Spectrometry Facility in Qingdao National Laboratory for Marine Science and Technology, China  
X. Wang, S. Sun, Y. Xue, and H. Song
- P-06** Status of the QNLM-AMS facility and the process blank assessment of small sized samples for  $^{14}\text{C}$  analysis  
S. Sun, L. Xu, Y. Xue, H. Song, and X. Wang
- P-07** Current status of the compact-AMS system at Paleo Labo Co., Ltd.  
S. Itoh, M. Sato, M. Hirota, Z. Lomtadidze, H. Yamagata, and K. Nakamura
- P-08** Performance of a newly installed MICADAS at the Ocean University of China  
Z. Wang, H. Zhang, X. Ning, X. Xu, H. Li, and M. Zhao
- P-09** OUC-CAMS: An introduction of the MICADAS installed at the Ocean University of China  
H. Zhang, X. Ning, Z. Wang, X. Xu, H. Li, and M. Zhao
- P-10** AMS program in Tianjin University  
Y. Lang, L. Cui, K. Dong, M. Zhang, J. Zhong, and S. Xu
- P-11** A new capability for  $^{41}\text{Ca}$  analysis using  $\text{CaF}_3^-$  at the Xi'an-AMS  
Y.-C. Fu, W.-J. Zhou, P. Cheng, and L. Zhang

## Technical development

- P-12** A Study of Surface Stripper for the AMS System with a Footprint below  $2\text{ m} \times 2\text{ m}$   
A. Matsubara, N. Fujita, and K. Kimura
- P-13** Ion Source development at the compact AMS at PKU  
X.F. Ding, D.P. Fu, L.P. Zhou, and K.X. Liu
- P-14** A performance report of the automatic pressing machine developed at the Atmosphere and Ocean Research Institute, The University of Tokyo  
C. Sawada, Y. Yokoyama, Y. Miyairi, and T. Aze
- P-15** Development of an automated system for conventional ABA treatment  
K. Sung, W. Hong, G. Sung, Y. Park, J. Park, and G. Park
- P-16** New procedure of  $\text{CO}_2$  extraction for radiocarbon analysis of DIC in water samples at Nagoya University and Geological Survey of Japan  
H.A. Takahashi, H. Handa, M. Minami, R. Sato, and T. Nakamura

## Space and earth environmental science

- P-17** Halogen isotopes analysis in Greenland SE dome ice core  
M. Toya, H. Matsuzaki, K. Horiuchi, Y. Iizuka, A.T. Bautista VII, L. Wang, and W. Xiao
- P-18** Interpreting  $^{10}\text{Be}$  records in sediments with a chemometric analysis of optical properties  
M. Yamane, Y. Yokoyama, H. Matsuzaki, K. Takemura, and H. Kitagawa
- P-19** Tracing study and source analysis of atmospheric fossil fuel  $\text{CO}_2$  by radiocarbon and air pollutants in Xi'an, China  
Y. Hou, W. Zhou, P. Cheng, and X. Xiong

## Carbon-14 age calibration and archaeological application

- P-20** Potential  $^{14}\text{C}$  excursions in the available radiocarbon calibration curve data J. Pawlyta, and A. Rakowski
- P-21** Applications of Miyake effect in construction of absolute dendrochronological scale A. Rakowski, M. Krąpiec, J. Pawlyta, and D. Wiktorowski
- P-22** 775 and 994  $^{14}\text{C}$  event in the tree-rings of northern Japanese trees M. Hakozaiki, F. Miyake, and T. Nakamura
- P-23** Radiocarbon dating of a shrine pavilion and offerings at Abushina shrine in Gifu prefecture, Japan Y. Saito-Kokubu, T. Nisio, N. Fujita, and A. Matsubara
- P-24** AMS  $^{14}\text{C}$  dating on Collagen, TOC and carbonate of bone and tooth samples at the NTUAMS Lab C.-Y. Chou, H.-C. Li, S.-C. Kang, and T. Chang
- P-25** The spatial distribution of shell  $^{14}\text{C}$  ages in China. P. Cheng, and J. Dong
- P-26** Radiocarbon dating and diet analysis of cremated bones excavated from archaeological sites in Japan M. Minami, S. Wakaki, H. Mukumoto, and T. Nakamura

## General AMS application

- P-27** A plan on accurate radiocarbon dating of ivory products in Japan and estimation of the original areas for providing ivory for legal international trading of ivory products T. Nakamura, H. Koike, M. Minami, and S. Nishida
- P-28** Radiocarbon ages of organic carbon in sediments, suspended particles, and benthic invertebrates in Otsuchi Bay, northeastern Japan N. Satoh, H. Fukuda, M. Hirose, Y. Miyairi, Y. Yokoyama, and T. Nagata
- P-29** Radiocarbon ages of POC, DOC, and DIC in ground ice in Siberian permafrost R. Sato, M. Minami, G. Iwahana, and T. Hiyama
- P-30** A  $^{129}\text{I}/^{127}\text{I}$  data collection of marine biota H. Kusuno, H. Matsuzaki, M. Toya, and H. Tokuyama
- P-31** Preliminary test for  $^{129}\text{I}$  measurement of  $\text{CaCO}_3$  samples in JAEA-AMS-TONO T. Mitsuguchi, N. Okabe, M. Miyake, A. Matsubara, N. Fujita, T. Watanabe, and Y. Saito-Kokubu
- P-32** Iodine-129 time series records from coastal Taiwan G.S. Burr, H. Matsuzaki, B.-S. Wang, H. Kusuno, H. Tokuyama, and Y. Takeyasu
- P-33** Holocene activity of the Sagiriko fault detected from sediment cores and a ground penetrating radar profiling, Izu Peninsula, central Japan H. Kimura, T. Nakanishi, M. Yukawa, T. Hosoya, S. Ki-Suck, and W. Hong
- P-34** Radiocarbon age offsets of plants and shells in the Holocene sediments from the Lake Harutori, Pacific coast of Hokkaido, northeast Japan T. Nakanishi, W. Hong, K. Shigeno, and F. Nanayama
- P-35** Marine reservoir effects in transgressive sediments from the Miyazaki Plain, southeast coast of Kyushu, Japan T. Nakanishi, M. Niwa, N. Okabe, M. Kato, A. Matsubara, and N. Fujita
- P-36** Bomb  $\Delta^{14}\text{C}$  record of a *Tridacna gigas* from South China Sea: chronology and paleoceanography studies C.Y. Lin, and H.C. Li
- P-37** Small sample graphitization for  $^{14}\text{C}$  dating using EA-AGE3 at JAEA-AMS-TONO T. Watanabe, Y. Saito-Kokubu, N. Fujita, C. Ishizaka, T. Nishio, A. Matsubara, M. Miyake, N. Isozaki, and A. Nishizawa
- P-38** 1.2-MV Carbon AMS Experiment in KOMAC-AMS K.-R. Kim, Y.S. Ha, K. Choe, and Y.-S. Cho
- P-39** AMS Pretreatment Method for Biosample Analysis in KRICP C.S. Yeo, J.H. Song, S. Dueker, and J.H. Shim
- P-40** Assessing problems of AMS  $^{14}\text{C}$  dating on peat samples by dating *Carex* species S. Kashyap, H.-C. Li, H.-L. Zhang, Z.-C. Wang, and X.-Y. Ning
- P-41** Chronology construction of a stalagmite from southwest China by  $^{14}\text{C}$ ,  $^{230}\text{Th}/\text{U}$  and  $^{210}\text{Pb}$  dating methods M.-Q. Liang, H.-C. Li, H.-S. Mii, and Z.-B. Ma
- P-42** Using  $^{14}\text{C}$  dated stalagmite records to reconstruct paleoclimate change in South Siberia Y.-S. Chen, H.-C. Li, J.-J. Yin, H.-S. Mii, T. Blyakharchuk, and C.-C. Shen