



77th IUVESTA Workshop
Surface Processes, Gas Dynamics, and Vacuum
Technology of Cryogenic Vacuum Systems
Fuefuki, Japan August 17-21, 2016



1st Circular

November 19, 2015

In the various modern applications of vacuum technology, the presence of a low temperature surface in a vacuum system is very common. The behaviour of such a system is often determined by the physical process at the cold surface. At this workshop, the physical basis of gas-surface processes at the cold surface and related phenomena will be discussed.

This is a workshop which is intended to provide a forum for intense debate and discussion between a small number of experts in the field of science and technology of cryogenic vacuum systems. The workshop will be organized as follows: Oral presentations will be given by invited speakers, 50 min in length including discussion. Posters will be presented by the other participants and will be displayed during the workshop for discussion. The number of posters will be 25 at the most. Poster presentations are selected by the program committee on the basis of their expertise on the topics. All delegates will stay at the same hotel together.

VENUE: Kasugai View Hotel
Fuefuki-city, Yamanashi-pref., 406-0015, Japan
(<http://www.k-view.jp/language/english/index.html>)

DATES: August 17-21, 2016
IVC-20 is held at Busan, Korea, August 21-26, 2016.
(<http://www.ivc20.com>)

PRINCIPAL THEMES/TOPICS:

- 1) Technological problems of cryogenic vacuum systems
Cryopumps, cold-bore accelerators, gravitational wave detectors
- 2) Gas-surface dynamics in cryogenic vacuum systems
Adsorption, desorption, accommodation coefficient, sticking probability,
mean residence time
- 3) Desorption at cold surfaces
Thermal desorption, desorption induced by electronic transitions,

4) Electronic process on cold surfaces

Secondary electron yield, photo-electron yield, discharge

5) Physical and chemical processes on cold surfaces

Dynamics induced by electronic transitions,
chemistry on interstellar particles

INVITED SPEAKERS AND PROVISIONAL TITLES

Marton Ady : "Monte Carlo simulations of time-dependent and non-isothermal vacuum systems"

Vincent Baglin : "CERN Cryogenic Beam vacuum Systems : studies, design, operation and upgrades"

Christian Day : "Cryogenic pumping - Technology development and gas dynamics modeling"

Francois Dulieu : "Physical and chemical processes at the surface of cold interstellar dust grains"

Shinji Furuya :

Takato Hirayama : "Electronic excitations and decay processes in condensed rare gases studied by low-energy electron, photon, and ion impact"

Hsiao-chaun Hseuh : "The migration of helium and hydrogen in RHIC cold vacuum systems and its implication to SRF Linac vacuum such as FRIB"

Gao-Yu Hsiung : "Outgassing and photon stimulated desorption in the synchrotron light source"

Eiji Kako : "Technologies in Superconducting RF Cavities for Particle Accelerators"

Ivan Khyzhniy : "Super-strong low-temperature "post-desorption" from preirradiated solidified gases"

Jerome Lasne : "Laboratory studies of spontaneously electrical solids: Astrophysical implications"

Yulin Li : "Analysis of gas evolution and desorption from superconducting RF cavities in CESR and the Implications to their Long-term Operational Stability"

Oleg Malyshev : "Discovery of secondary photon stimulated desorption and its implication to cryogenic vacuum systems design of particle accelerators"

Yoshio Saito :

Marcy Stutzman :

Mauro Taborelli : "Secondary electron yield at cold surfaces"

Tsuyoshi Tajima :

INTERNATIONAL ORGANIZING COMMITTEE

Ichiro Arakawa (Gakushuin Univ., Tokyo)
Paolo Chiggiato (CERN, Geneva)
Katsuyuki Fukutani (Univ. Tokyo, Tokyo)
Joe Herbert (STFC, Daresbury)

PROGRAM COMMITTEE

Ichiro Arakawa (Gakushuin Univ., Tokyo)
Katsuyuki Fukutani (Univ. Tokyo, Tokyo)
Shinichiro Michizono (KEK, Tsukuba)

LOCAL ORGANIZING COMMITTEE

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Kyo Shibata (KEK, Tsukuba)
Yusuke Suetsugu (KEK, Tsukuba)
Yoichi Yamada (Univ. Tsukuba, Tsukuba)

IMPORTANT DATES

January 8 2nd circular and an application form for the poster presentation
April 8 Deadline for application for the poster presentation
May 6 Notice of acceptance
June 10 Deadline for abstract of invited talks and posters

If you need further information, please contact:

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