

**International Workshop on
Neutrino Nuclear Responses for Double Beta Decays
and Astro-Neutrino Interactions (NNR16)
Program**

September 29-30, 2016, RCNP, Osaka University

(The allocated time includes 5 min. for discussions.)

September 29th. (Thursday)

Registration 8:40~

Opening 9:00 – 9:05 T. Shima (RCNP, Co-chair)

Session 1. 9:05 – 10:35 Neutrino and astro particle physics

(Chair: K. Zuber (Dresden))

T. Kajino (NAOJ) (30min.)

“Impact of neutrino interactions and electron captures in supernova nucleosynthesis”

H. Kosmas (Ioannina) (30min.)

“Phenomenological description of standard and non-standard neutrino-nucleus interactions”

A. Tamii (RCNP) (30min.)

“Isovector and isoscalar spin isospin responses”

(----- Coffee Break -----)

Session II. 11:00 – 12:30 Neutrino nuclear responses for β and $\beta\beta$ decays

(Chair: H. Kosmas (Ioannina))

H. Ejiri (RCNP, Chair-person) (30min.)

“Spin dipole and higher multipole NMEs for double beta decays and astro neutrinos”

J. Suhonen (Jyvaskyla) (30min)

“Suppression of the pnQRPA NMEs for highly-forbidden transitions”

R. Dvornicky (Bratislava) (30min.)

“Forbidden beta decays”

(----- Lunch -----)

Session III. 14:00 – 15:30 Double beta decay experiments

(Chair: T. Kishimoto (Osaka))

J. Detwiler (UW) (30min.)

“Double beta decay experiments with ^{76}Ge ”

S. Yoshida (Osaka) (30min.)

“Double beta decay experiments with ^{136}Xe ”

M. Alanssari (Münster) (30min.)

“Single and double beta decay Q-values measurements for ^{96}Zr and implications”

(----- Coffee Break -----)

Session IV. 16:00 – 17:30 Spin dipole and higher multipole responses

(Chair: T. Kajino (NAOJ))

K. Zuber (Dresden) (30min.)

“New half-life results on very long-living nuclei”

L. Jokiniemi (Jyvaskyla) (30min.)

“Magnetic hexadecapole gamma transitions in the Microscopic Quasiparticle-Phonon Model (MQPM)”

K. Mishima (KEK) (30min.)

“High-precision study of weak interaction with pulsed neutrons”

(----- **Party** -----)

18:00 Departure from RCNP entrance

18:30 Asian dining [“Lei can ting”](#) Fee: 5000JPY

21:30 Arrival at RCNP entrance

September 30th. (Friday)

Session V. 9:00 – 10:30 Nulear spin isospin responses in electromagnetic interactions

(Chair: J. Detwiler (UW))

H. Utsunomiya (Konan) (30min.)

“Photonuclear reactions and astronuclear physics”

M. Katsuma (Osaka City U.) (30min.)

“Reaction mechanism in the stellar $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ reaction”

M. Sakuda (Okayama) (30min.)

“Study of γ -ray production from giant resonance of ^{12}C and ^{16}O in (p,p') reactions”

(----- Coffee Break -----)

Session VI 11:00 – 12:30 Neutrino responses for double beta decays

(Chair: J. Suhonen (Jyvaskyla))

T. Otsuka (U. Tokyo) (30min.)

“DBD NMEs and the modern shell model”

D. Frekers (Münster) (30min.)

“Nuclear physics of neutrinos: about double beta decay s and solar neutrinos”

J. Menendez (U. Tokyo) (30min.)

“New insights on double-beta decay matrix elements”

(----- Lunch -----)

Session VII 14:00 – 15:40 Double beta decays and charge exchange reactions

(Chair: T. Otsuka (U. Tokyo))

M. Dozono (CNS) (30min.)

“The parity-transfer (^{16}O ^{16}F) reaction for studies of spin-dipole excitations in nuclei”

H. Akimune (Konan) (30min.)

“Spin dipole NMEs by charge exchange reactions”

F. Cappuzzello (INFN-LNS Catania) (30min.)

“Recent results from heavy ion induced DCE reactions at the INFN-LNS”

K. Takahisa (RCNP) (10min.)

“Comments; DCE (^{11}B , ^{11}Li) at RCNP”

(----- Coffee Break -----)

Session VIII 16:00 – 17:40 Neutrino and EM nuclear response perspectives

(Chair: D. Frekers (Münster))

T. Shima (RCNP) (20min.)

“Double-beta decays in nucleosynthesis”

J. Isaak (RCNP) (20min.)

“Study of low-lying dipole strength in ($\gamma, \gamma'\gamma$) reactions using the Gamma³ setup”

C. Agodi (INFN-LNS Catania) (30min.)

“NUMEN project at Catania, status and perspectives”

M. Carpenter (ANL) (30min.)

“CAGRA – GR experiments”

Closing 17:40 – 17:45 A. Tamii (RCNP, Co-chair)