

RIBF ULIC Symposium/mini-WS Report

* English only

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Title	[RIBF-ULIC-miniWS-006] Nuclear Matter in Neutron Stars
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	<i>[Breakdown]</i> travel expenses for 6 participants (~150,000 yen)
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Summary of discussions and its (expected) results:

The present status and future plans are discussed on studies of nuclear matter in neutron stars. It was recognized that the experimental and theoretical studies on neutron-rich nuclei at RIKEN, such as collisions of neutron rich nuclei, structure and collective motions on neutron-rich nuclei, etc., and those on strangeness nuclear physics at J-PARC, such as Λ , $\Lambda\Lambda$, and Ξ hypernuclei and Σ -p scattering, are both essential to create the equation of state (EoS) of nuclear matter with wide range of density and neutron/proton ratio as well as hyperon fraction and to understand the properties of neutron star matter. The study of cold atoms also plays an important role to understand low density neutron matter in the outer part of neutron stars. It was also stressed that the astronomical observation by X-ray satellite observatory giving information on the radius and mass of neutron stars will provide stringent restriction on the EoS. Combined activities on these experimental, observational and theoretical studies should be organized toward understanding of the nuclear matter in neutron stars and their whole structure.

Participants list (Name, Affiliation):

T. Hatsuda (U.Tokyo/RIKEN), T. Takahashi (KEK), K. Nakazawa (Gifu U.), H. Tamura (Tohoku U.), K. Miwa (Tohoku U.), T. Harada (Osaka EC U.), T. Murakami (Kyoto U.), T. Isobe (RIKEN), A. Ono (Tohoku U.), T. Nakamura (Tokyo Inst. Tech.), S. Horikoshi (Tokyo U.), T. Takatsuka (Iwate U.), K. Oyamatsu (Aichi Shukutoku U.), K. Iida (Kochi U.), T. Dotani (JAXA), T. Takahashi (JAXA), K. Sumiyoshi (Numazu++), A. Ohnishi (Kyoto U.), etc. (75 participants in total)

Please attach other documents as needed.