Contribution ID: **1950** Contribution code: **THPM108** Type: **Poster Presentation**

Generation and NRF application of Flat-Laser Compton Scattering gamma-ray beam in UVSOR

Thursday, 11 May 2023 16:30 (2 hours)

Laser Compton Scattering Gamma-ray beam (F-LCS), which has a flat distribution in the energy spectrum and the special distribution, has been developed to study an isotope selective CT Imaging application in the beamline BL1U in UVSOR. *The generation of F-LCS beam has been demonstrated by using the Apple-II undulator installed in BL1U in UVSOR**. The principle of F-LCS generation, EGS5 simulation which takes into account the distribution of the laser-electron interaction region and detailed measurement results will be presented at the conference. In addition, the application of F-LCS beam to Nuclear Resonance Fluorescence (NRF) experiment has been performed in UVSOR and the result will be discussed.

Funding Agency

This work is supported by JSPS KAKENHI Grant Number 21H01859. Apart of this work was performed at the BL1U of UVSOR, IMS, Okazaki (IMS program 21-603, 22IMS6605).

Footnotes

- Khaled Ali et al.,"Fusion Visualization Technique to Improve a Three-Dimensional Isotope-Selective CT Image Based on Nuclear Resonance Fluorescence with a Gamma-CT Image", Appl. Sci. 2021, 11, 11866. https://doi.org/10.3390/app112411866. ** H. Ohgaki et al., "Generation of Flat-Laser Compton Scattering Gamma-ray Beam in UVSOR", IPAC2022, THPOMS046 (2022).

I have read and accept the Privacy Policy Statement

Yes

Primary author: OHGAKI, Hideaki (Kyoto University)

Co-authors: ALI, Khaled (Kyoto University); HAYAKAWA, Takehito (Japan Atomic Energy Agency); KII, Toshiteru (Kyoto University); SHIZUMA, Toshiyuki (Japan Atomic Energy Agency); TAIRA, Yoshitaka (UVSOR Facility); ZEN, Heishun (Kyoto University)

Presenter: ZEN, Heishun (Kyoto University)

Session Classification: Thursday Poster Session

Track Classification: MC8: Applications of Accelerators, Technology Transfer and Industrial Relations and Outreach: MC8.U04: Security