

ICEPP Joint Research Program in FY2023

Research Project Title	Representative and Project Organization
Studies on the control system of large-scale electronics using a System-On-a-Chip (SoC) towards the High-Luminosity LHC era	Masaya Ishino (ICEPP) and 6 researchers (Nagoya University, KEK, ICEPP)
Exploring the performance improvement of the muon trigger system for the LHC Run-3	Junpei Maeda (Kobe University) and 12 researchers (KEK, Kobe University, Kyoto University, ICEPP)
Establishment of research facility for remote collaboration for LHC-ATLAS muon trigger development	Yasuyuki Okumura (ICEPP) and 13 researchers (KEK, ICEPP, Kobe University, Nagoya University, Kyoto University)
Measurements of the differential cross-section of the Higgs boson in the vector boson fusion process	Yasuyuki Horii (Nagoya University) and 5 researchers (ICEPP, Tsukuba University, Nagoya University)
Development of triggers for new particle searches for the LHC-ATLAS experiment and general research for triggers with hardware accelerator chips	Kunihiro Nagano (KEK) and 6 researchers (ICEPP, KEK, Kyoto University)
Studies for extension of the grid computing system towards High-Luminosity LHC program	Tomoe Kishimoto (KEK) and 6 researchers (KEK, ICEPP)
Research on quantum computers for application to High Energy Physics	Kohei Yorita (Waseda University) and 7 researchers (Waseda University, ICEPP)
R&D for new data-processing and data-analysis system using machine learning	Masako Iwasaki (Osaka Metropolitan University) and 8 researchers (Osaka Metropolitan University, ICEPP, Kyushu University)
Research on the background and sensitivity of the MEG experiment	Wataru Ootani (ICEPP) and 10 researchers (KEK, Kobe University, INFN-Pisa, INFN-Rome, ICEPP)
Studies to improve the performance of the Liquid Xenon detector for the MEG experiment	Satoshi Mihara (KEK) and 5 researchers (ICEPP, Kyushu University, University of California, Irvine)
Experimental studies for long-term operation of the cryogenic and purification system for the liquid Xenon detector of the MEG experiment	Yasuhiro Makita (KEK) and 8 researchers (ICEPP, KEK, PSI)
Studies to improve the performance of the electron spectrometer for the MEG experiment	Hajime Nishiguchi (KEK) and 6 researchers (KEK, ICEPP, INFN-Rome)
R&D for next generation $\mu \rightarrow e \gamma$ search experiment	Wataru Ootani (ICEPP) and 10 researchers (Kobe University, KEK, PSI, INFN-Rome, ICEPP)
Development of event reconstruction using deep learning for ILC	Taikan Suehara (Kyushu University) and 7 researchers (Kyushu University, Osaka Metropolitan University, ICEPP, KEK)
Development of the fine-grained electro-magnetic calorimeter for the ILC experiment	Tohru Takeshita (Shinshu University) and 5 researchers (ICEPP, Kyushu University)
Electroweak Precision Measurements with Radiative Return Events at the ILC	Aleksander Filip Zarniecki (University of Warsaw/DESY) and 4 researchers (University of Warsaw, DESY, ICEPP, KEK)