Abstract Submitted
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The BX-U linear trap applied to test two-fluid plasma effect by using lithium and electron fluids[1] HARUHIKO HIMURA, Kyoto Institute of Technology, THE BX-U TEAM — The BX-U linear trap, a modified version of the PenningMalmberg trap was developed wherein both positive and negative harmonic potential wells were created by using multi-ring electrodes (H. Himura, Nucl. Inst. Methods Phys. Res., Sect. A, **811**, 100 (2016).). In the machine, pure lithium and electron plasmas are not only produced independently but also trapped simultaneously. Confinement properties of those non-neutral plasmas were investigated recently (S. Kawai, H. Himura *et al.*, Phys. Plasmas **23**, 022113 (2016).) Data were obtained by a micro-channel plate followed by a phosphor screen (H. Himura *et al.*, Rev. Sci. Instrum. **87**, 063306 (2016); S. Yamada and H. Himura, Rev. Sci. Instrum. **87**, 036109 (2016).). In this meeting, we present our recent results along with detailed description of the BX-U. Also, we explain our method of testing two-fluid effects by using the pure lithium and electron plasmas.

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