Abstract Submitted
for the DAMOP16 Meeting of
The American Physical Society

**Vortex lattices in strongly interacting Fermi gas with crossed-beam dipole trap**[1] YUPING WU, XINGCAN YAO, HAOZE CHEN, XIANGPEI LIU, XIAOQIONG WANG, Shanghai Branch, University of Science and Technology of China — We have built an experiment system to explore the dynamic and vortex in quantum degenerate Li6 gas. By using UV MOT and crossed-beam dipole trap, we obtained BEC of 2*10ˆ5 molecules. With a tightly focused 532nm laser beam as rotating bucket wall, We observed vortex formation in strongly interacting fermi superfluid. At suitable stirring frequency we produced the condensate of fermi pairs for which up to 10 vortices were simultaneously present. We produced vortex lattices in different magnetic fields (from BEC side to BCS side). Also we measured the lifetime of vortex lattices in different interaction region.

[1]This work was funded by CAS and USTC.

Wu Yuping
Univ of Sci
Tech of China

Date submitted: 07 Apr 2016 Electronic form version 1.4