## Abstract Submitted for the MAR17 Meeting of The American Physical Society

Crossover in electronic states of fulleride superconductors revealed by electrical transport YUKI MATSUDA, Department of Physics, Tohoku University, SATOSHI HEGURI, WPI-AIMR, Tohoku University, KATSUMI TANIGAKI, WPI-AIMR, Tohoku University, Department of Physics, Tohoku University —  $Cs_3C_{60}$  fullerides with A15 structure found in 2008 [1] and fcc structure in 2010 [2] show superconducting transition at 38K and 35K under pressure, respectively. Both structural phases are Mott insulators in the entire temperature range at ambient pressure. High pressure drives them into metallic and superconducting states and the highest superconducting critical temperature was found at the boundary between unconventional superconducting and conventional BCS superconducting states [1-6]. Recently, we have successfully performed electrical transport measurements on fulleride superconductor families by using a specially designed pressure cell. We will comment on the details of the electronic crossover region of = alkali metal) fullerides on a basis of both magnetic [6] and electri- $A_{3}C_{60}$  (A) cal transport measurements. Our new finding by electrical transport can provide a further understanding for highly electron-correlated unconventional molecular superconductors. [1] A. Y. Ganin *et al.*, Nat. Mater. 7, 367 (2008). [2] A. Y. Ganin et al., Nature 466, 221 (2010). [3] Y. Takabayashi et al., Science, 323, 1585 (2009). [4] N. Iwahara, et al., Phys. Rev. Lett. 111, 056401 (2013). [5] N. Iwahara, et al., *Phys. Rev. B* **91**, 035109 (2015). [6] R. H. Zadik *et al.*, *Sci. Adv.* **1**, e1500059 (2015).

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