Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

Superdeformation in ^{35}S SHINTARO GO, CNS/University of Tennessee, EIJI IDEGUCHI, RCNP, RIN YOKOYAMA, MOTOKI KOBAYASHI, KEIICHI KISAMORI, SHINSUKE OTA, SHINICHIRO MICHIMASA, SUSUMU SHIMOURA, CNS, MEGUMI NIIKURA, University of Tokyo, AYUMI YAGI, HIROKI NISHIBATA, Osaka University, MASAHIKO SUGAWARA, Chiba Institute of Technologgy, MITSUO KOIZUMI, YOSUKE TOH, TOSHIYUKI SHIZUMA, ATSUSHI KIMURA, HIDEO HARADA, KAZUYOSHI FURUTAKA, SHOJI NAKAMURA, FUMITO KITATANI, YUICHI HATSUKAWA, JAEA, IOLANDA MATEA, DAISUKE SUZUKI, DAVID VERNEY, FAICAL AZAIEZ, IPNO — Recent investigations of superdeformed bands have focused on the A$\sim$40 region. It was suggested that the $f_{7/2}$ intruder orbital is the driving force behind the onset of superdeformation in A$\sim$40, although this was not con firmed experimentally. The high-spin states in ^{35}S were investigated using ^{26}Mg(^{18}O, 2 1n)^{35}S fusion evaporation reaction. A level scheme for ^{35}S was deduced. The half-life of the transition in the band was estimated by measuring the residual Doppler shift. The deduced half-life shows the large collectivity of the band. The result indicates that the superdeformed band in ^{35}S is associated with the excitations of nuclei to the $f_{7/2}$.

Shintaro Go
University of Tennessee

Date submitted: 30 Jun 2014 Electronic form version 1.4