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Lifetimes of excited states in neutron rich ^{22}F SANGJIN LEE, S.L. TABOR, A. AGUILAR, P.C. BENDER, T.A. HINNERS, C.R. HOFFMANN, M. PERRY, VANDANA TRIPATHI, Florida State University — ^{22}F was populated from the ^{9}Be(^{14}C,p) reaction at $E_{\rm lab}$ = 22 MeV at the the Florida State University Superconducting Accelerator Laboratory. An 1848 μg/cm^2 thick ^{9}Be target stopped both the recoiling ^{22}F nuclei and the ^{14}C beam without slowing the protons from the reaction very much. These protons were detected and identified with a segmented ΔE-E Si particle telescope. γ rays were measured using Compton-suppressed high-purity germanium detectors at angles of 35°,90°, and 145° relative to the beam. Proton-γ and proton-γ-γ coincidences were used to analyze the data. Eight previously known γ-ray transitions were confirmed and three new γ-ray transitions were found. Lifetimes of 7 excited states in ^{22}F were measured using the Doppler-shift Attenuation Method (DSAM). This work was supported in part by the National Science Foundation.

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