Abstract Submitted
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**Two band superconductivity in optimal doped $Ca_{10}(Pt_3As_8)(Fe_2As_2)_5$ superconductors revealed by anisotropic $H_{c2}$ measurement up to 65T** NI NI[1], EUNDEOK MUN, Los Alamos National laboratory, Los Alamos, NM, 87544, USA, SHAN JIANG, Department of physics and Astronomy, University of California, Los Angeles, CA, 90095, USA, VIVIEN ZAPF, Los Alamos National laboratory, Los Alamos, NM, 87544, USA, ROBERT J. CAVA, Department of Chemistry, Princeton University, NJ, 08544, USA, ERIC D. BAUER, FILIP RONNING, Los Alamos National laboratory, Los Alamos, NM, 87544, USA, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS, NM, 87544, USA TEAM, DEPARTMENT OF CHEMISTRY, PRINCETON UNIVERSITY, NJ, 08544, USA TEAM, DEPARTMENT OF PHYSICS AND ASTRONOMY, UNIVERSITY OF CALIFORNIA, LOS ANGELES, CA, 90095, USA TEAM — Anisotropic upper critical field, $H_{c2}$(T), has been determined using radio-frequency contactless penetration depth method in pulsed magnetic fields up to 65T for optimal Pt doped and La-doped $Ca_{10}(Pt_3As_8)(Fe_2As_2)_5$ single crystals with magnetic field applied parallel and perpendicular to *ab* planes. For both compounds, with decreasing temperature, $H_{c2}^{//ab}$(T) shows a downward curvature while $H_{c2}^{\perp ab}$(T) shows an upward curvature, indicating their multiband superconductivity nature.

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