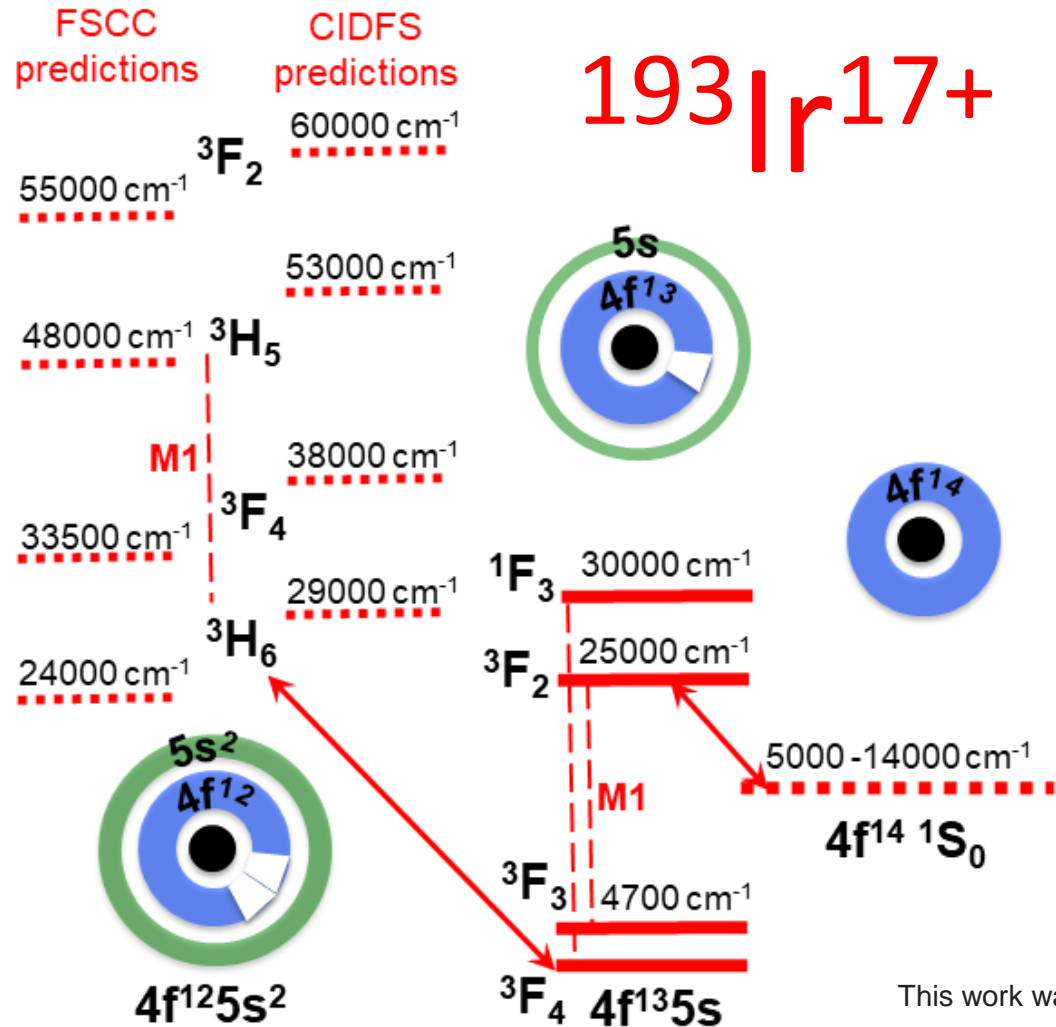


# P4813: ACCURATE PREDICTION OF CLOCK TRANSITIONS IN A HIGHLY CHARGED ION WITH COMPLEX ELECTRONIC STRUCTURE

Charles Cheung<sup>1</sup>, Marianna Safronova<sup>1</sup>, Sergey Porsev<sup>1,2</sup>, Mikhail Kozlov<sup>2,3</sup>, Ilya Tupitsyn<sup>4,5</sup>, and Andrey Bondarev<sup>2,5</sup>

<sup>1</sup>University of Delaware, USA; <sup>2</sup>Petersburg Nuclear Physics Institute, Russia; <sup>3</sup>Petersburg Nuclear Physics Institute, Russia; <sup>4</sup>St. Petersburg Electrotechnical University, Russia;

<sup>5</sup>St. Petersburg Polytechnic University, Russia; <sup>6</sup>Center for Advanced Studies, Peter the Great St. Petersburg Polytechnic University, Russia



Clock transitions???

E1 transitions???

Previous predictions (FAC):

E1 Transition	Rate (s <sup>-1</sup> )
$4f^{12} 5s^2 3F_4 - 4f^{13} 5s 3F_4^o$	<del>71</del> <b>0.03</b>
$4f^{12} 5s^2 3F_4 - 4f^{13} 5s 3F_3^o$	<del>48</del> <b>2.2</b>
$4f^{12} 5s^2 3F_2 - 4f^{13} 5s 1F_3^o$	<del>163</del> <b>1</b>

Hendrik Bekker, FAC calculations, private communication **vs. new results**