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Photoionization of the 4d subshell of the La isonuclear sequence SINDHU KALYADAN, HARI R. VARMA, Indian Institute of Technology Mandi, P.C. DESHMUKH, Indian Institute of Technology Mandi and University of Western Ontario, J.T. COSTELLO, P. HAYDEN, Dublin City University, S.T. MANSON, Georgia State University — Photoionization studies along isonuclear sequences provide the required systematic data which are useful in many practical applications and also for testing the accuracy of various theoretical models [1-5]. In the present work, we report on 4d subshell photoionization studies of some of the members of La (Z=57) isonuclear sequence  $(La^{3+}, La^{9+} and La^{11+})$  using relativistic random phase approximation (RRPA) [6]. Photoionization cross sections,  $\sigma$ , angular distribution asymmetry parameters,  $\beta$ , and the individual dipole matrix elements for  $4d_{3/2}$  and  $4d_{5/2}$  subshells are presented along with the 4d branching ratios of these ions. It is found that in La<sup>3+</sup>, the branching ratios show significant departure from the statistical value 1.5 due to the presence of Cooper minimum in the 4d  $\rightarrow$  f ionization channels. This departure is minor for the case of La<sup>9+</sup> and La<sup>11+</sup> since the Cooper minimum in these cases occur in the discrete part of the 4d spectrum.

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