

Abstract Submitted
for the DAMOP19 Meeting of
The American Physical Society

Identification of New Transitions in Fifth Spectrum of Cerium

ABDUL WAJID, S. JABEEN, Aligarh Muslim University — The spectrum of four-times ionized Cerium has been observed with 3-m normal incident vacuum spectrograph in the 300-2000 angstrom wavelength region with triggered spark source. The Ab-initio pseudo relativistic CI calculations carried out for $5p^6$, $5p^5(4f + 6p)$ and $5p^5(5d + 6s + 6d)$ configurations for even and odd system respectively, with the inclusion of interacting configurations using Cowans code. We have re-investigated previously determined levels of the $5p^6$, $5p^54f$, $5p^55d$, $5p^56s$, $5p^56p$ and $5p^56d$ configuration. In the present analysis, we have identified 40 transitions, which are used to establish new energy levels belonging to $5p^5(5f + 7s + 8s)$ configuration.

Abdul Wajid
Aligarh Muslim University

Date submitted: 07 Jan 2019

Electronic form version 1.4