Abstract Submitted
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Predicted broad resonant absorption feature in the continuum spectrum of Ho II[1] WERNER EISSNER, Stuttgart University, SULTANA NAHAR, Ohio State Univ - Columbus — Ho II lines are being observed in metal poor stars. Excess of Ho II lines relative to Fe-peak elements in these stars indicate enhanced neutron-capture or the rapid or r-process in contrast to typical stars. However due to high line blending, spectroscopic identification of the observed lines have been difficult. We have carried out atomic structure calculations from bound-bound and bound-free transitions in Ho II (Z=67) in relativistic Breit-Pauli approximation using the program SUPERSTRUCTURE. However, the objective is to study the features in the continuum, particularly due to strong 4d-4f transitions in $4s^2 4p^6 4d^{10} 5s^2 5p^6 6s 4f^{11}$). We find that there are extensive number, a total of 6712, 4d-4f allowed E1 transitions which form an enhanced broad resonant structure in the energy region of 150 - 200 eV. The feature is expected to be observable in the absorption spectrum of Ho II.

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