

Abstract Submitted
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Relative Intensities of the Resonance to Intercombination Transitions for Neonlike Ions. DMYTRO PANCHENKO, PETER BEIERSDORFER, GREG BROWN, NATALIE HELL, Lawrence Livermore National Laboratory, VOLA ANDRIANARIJAONA, Pacific Union College — ¹ We report the measured relative intensities of $1s^2 2s^2 2p_{1/2}^5 3d_{3/2} \rightarrow 1s^2 2s^2 2p^6$ resonance to $1s^2 2s^2 2p_{3/2}^5 3d_{5/2} \rightarrow 1s^2 2s^2 2p^6$ intercombination lines for Ne-like Kr²⁶⁺ and Mo³²⁺. The measurements were taken using the EBIT-I electron beam ion trap at the Lawrence Livermore National Laboratory, also utilizing an x-ray microcalorimeter. The Mo³²⁺ experiment, which is the highest-Z measurement of this type to date, displays a four-times closer agreement with theoretical predictions, as compared to previously conducted experiments of lower-Z ions. This hints at the narrowing of the disagreement between theory and experiments for increasing Z, not observed in the earlier data, and that the said disagreement may be confined to the range of atomic numbers where the correlation effects are strongest. ¹This work was performed under the auspices of the U.S. DoE by LLNL, contract DE-AC52-07NA27344, and was supported in part by NASA's APRA program and by the ESA, contract 4000114313/15/NL/CB.

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