

## SPECTRAL WIDTHS AND LINESHAPES OF AUTOIONIZATION RESONANCES IN THE NEON ISOELECTRONIC SEQUENCE

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Studies of Highly Charged Ions are of great interest in astrophysics (Beyer and Shevelko 2016, Bernitt et al. 2012). Their spectra are complex, and often anomalous, and hence challenging to interpret. Recently, our group reported a study of the  $2s \rightarrow np$  resonances for a number of members of the Neon isoelectronic sequence (Nrisimhamurty et al. 2015) using the relativistic random phase approximation (RRPA) (Johnson and Lin 1979) and the relativistic multichannel quantum defect theory (RMQDT) (Lee and W. R. Johnson 1980). Asymptotic quantum defects and widths were obtained for a number of members of the Neon isoelectronic sequence and Fano-shape analysis had been employed to analyze the character of the autoionization resonances across the sequence. In the present work, we discuss the spectral widths and line shapes and examine how these are influenced by autoionization and the radiative decay processes.

### References

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