Walking through the maze of complex atomic spectra with Jean-François Wyart

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Abstract

Finding unknown energy levels of an atomic system from experimental emission spectral lines is a challenging exercise involving good wavelength measurements and reliable theoretical predictions. The results and their interpretation provide valuable data for modelling astrophysical and laboratory plasmas. Jean-François Wyart was an expert in making his way through complex spectra, guided by parametric calculations. In this talk, I will describe his enlightened approach, which is widely appreciated in the community of atomic spectroscopists. I will recall some steps of our collaboration, which lasted over thirty-five years, working on high-resolution vacuum ultraviolet spectra of atomic ions recorded on the 10meter spectrograph of Meudon.