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Spectroscopics database for warm Xenon and Iron in Astrophysics and Laboratory Astrophysics conditions MICHEL BUSQUET, MARCEL KLAPISCH, AVI BAR-SHALOM, JOSSE OREG, ARTEP, inc — The main contribution to spectral properties of astrophysics mixtures come often from Iron. On the other hand, in the so-called domain of "Laboratory Astrophysics," where astrophysics phenomena are scaled down to the laboratory, Xenon (and Argon) are commonly used gases. At so called "warm" temperatures (T=5-50eV), L-shell Iron and M-shell Xenon present a very large number of spectral lines, originating from billions of levels. More often than not, Local Thermodynamical Equilibrium is assumed, leading to noticeable simplification of the computation. Nevertheless, complex and powerful atomic structure codes are required. We take benefit of powerful statistics and numerics, included in our atomic structure codes, STA[1] and HULLAC[2], to generate the required spectra. Recent improvements in both fields (statistics, numerics and convergence control) allow obtaining large databases (ro x T grid of $>$ 200x200 points, and $>$ 10000 frequencies) for temperature down to a few eV. We plan to port these improvements in the NLTE code SCROLL[3]. [1] A.Bar-Shalom, et al, Phys. Rev. A 40, 3183 (1989) [2] M.Busquet,et al, J.Phys. IV France 133, 973-975 (2006); A.Bar-Shalom, M.Klapisch, J.Oreg, J.Oreg, JQSRT 71, 169, (2001) [3] A.Bar-Shalom, et al, Phys. Rev. E 56, R70 (1997)

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