Abstract Submitted
for the DPP08 Meeting of
The American Physical Society

Benchmarking statistical averaging of spectra with HULLAC[1]
MARCEL KLAPISCH, ARTEP, Inc., Ellicott City, MD., MICHEL BUSQUET[2], Observatoire de Paris, France — Knowledge of radiative properties of hot plasmas is important for ICF, astrophysics, etc When mid-Z or high-Z elements are present, the spectra are so complex that one commonly uses statistically averaged description of atomic systems [1]. In a recent experiment on Fe[2], performed under controlled conditions, high resolution transmission spectra were obtained. The new version of HULLAC [3] allows the use of the same model with different levels of details/averaging. We will take advantage of this feature to check the effect of averaging with comparison with experiment. [1] A Bar-Shalom, J Oreg, and M Klapisch, *J. Quant. Spectros. Rad. Transf.* **65**, 43 (2000). [2] J. E. Bailey, G. A. Rochau, C. A. Iglesias et al., *Phys. Rev. Lett.* **99**, 265002-4 (2007). [3]. M. Klapisch, M. Busquet, and A. Bar-Shalom, *AIP Conference Proceedings* **926**, 206-15 (2007).

[1]Work supported by USDOE through a contract with Laser Plasma Branch, NRL, Washington, DC.
[2]also at ARTEP, Inc.

Marcel Klapisch
ARTEP, Inc.

Date submitted: 16 Jul 2008 Electronic form version 1.4