
The influence of external pressure on the intrinsic term in Hg,Re-1223 superconductor

Orlando, M. T. D.¹, Garcia, F.², E. J. Carvalho², Azevedo, G. de M.², Martinez, L. G.³, Corrêa, H. P. S.⁴, Passos, CAC¹, J.L.Passamai Jr¹, and Rossi, J. L.³

¹ Universidade Federal do Espírito Santo - Vitória ES Brazil

² Laboratório Nacional de Luz Síncrotron - Campinas SP Brazil

³ Instituto de Pesquisas Energéticas e Nucleares - São Paulo SP Brazil

⁴ Universidade Federal do Mato Grosso do Sul - Campo Grande MS Brazil

XANES study of Hg,Re-1223 ceramic superconductor was developed using a DAC cell pressure in the DXAS beam line - LNLS. The investigation was focused in the L_{III} edge from the ReO_6 octahedron. The influence of the external pressure on XANES region is associated with the intrinsic term, which appear on the equation that have been used to described the behavior of the T_c as a function of the external pressure. We have identified changes in the overlap between two gaussians that it is used to fit the XANES region. These gaussians are related with the T_{2g} and E_g energy split from the ReO_6 distorted octahedron present in the Hg,Re-1223 superconductor.

Acknowledgements: The Laboratory National of Light Sincrotron - LNLS - Campinas - Brasil, CNPq 504578/04-9 and CNPq 471536/04-0.