Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Doping effects on charge density wave state in o-TaS_3 DAMIR DOMINKO, DAMIR STAREŠINIC, KATICA BILJAKOVIC, Institute of Physics, Zagreb, Croatia, PETER LUNKENHEIMER, ALOIS LOIDL, Experimental Physik V, Augsburg, Germany, JEAN CLAUDE LASJAUNIAS, Institut Neel, Grenoble, France — We present the effects of the isoelectronic supstitution of Ta by (0.2 and 0.5 %) Nb atoms on the charge density wave (CDW) properties in o-TaS_3. The characteristic, primary relaxation process which gives the maximum in the dielectric constant near 100 K disappears with slight doping. At the same time the minimum in threshold field in the same temperature range disappears as well, which is expected from well known relation between E_T and low frequency dielectric constant [1]. This implies that the primary process it mainly due to polarization on order of domain scale, which decreases by doping. The secondary process, on the other hand, as well as low energy excitation contribution to specific heat (C_{LEE}), seem to be unchanged. Only the amplitudes of the two are increased [1, 2], as both are due to the local excitations of the CDW phase in vicinity of defects described by two level system (TLS) model. [1] Starešinic et. al, Phys. Rev. B, **65**, 165109 (2002) [2] Biljakovic et. al, *Europhys. Lett.*, **62** (4), pp. 554–560 (2003)

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Date submitted: 30 Dec 2008 Electronic form version 1.4