

## **Possible isotope effect on the resonance peak formation in high-T<sub>c</sub> cuprates**

Eremin I., Kamaev O., Eremin M.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### **Abstract**

Within effective t-J Hamiltonian we analyze the influence of electronic correlations and electron-phonon interaction on the dynamical spin susceptibility in layered cuprates. We find an isotope effect on the resonance peak in the magnetic spin susceptibility  $\text{Im } \chi(q, \omega)$ , seen by inelastic neutron scattering. It results from both the electron-phonon coupling and the electronic correlation effects taken into account beyond random-phase approximation scheme. We find at optimal doping the isotope coefficient  $\alpha_{\text{res}} \approx 0.4$  which can be further tested experimentally.

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