**Substitution of Manganese by Iron or Gallium in Electron-doped Managnites**

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We investigate the temperature-dependant evolution of the magnetic moments in electron-doped manganites ($Y_{0.1}Ca_{0.9}MnO_3$, $Y_{0.15}Ca_{0.85}MnO_3$) $Y_{0.1}Ca_{0.9}MnO_3$ shows mainly G-type antiferromagnetic ordering with a Néel temperature of 110K and a minority ferromagnetic phase with an identical ordering temperature. For higher Yttrium concentrations as in $Y_{0.125}Ca_{0.875}MnO_3$ and $Y_{0.15}Ca_{0.85}MnO_3$ an additional phase develops with monoclinic nuclear space group $P2_1/m$ and C-type magnetic ordering, leading to a phase separated state below a magnetic phase transition temperature of approximately 160K.

The substitution of Manganese by other trivalent ions influences the temperature-dependant behaviour of this phases. For $Y_{0.1}Ca_{0.9}MnO_3$, Ga reduces the phase transition temperatures, while Fe reduces the Ferromagnetic intensities. Fe retains this behavoir for higher concentrations of Yttrium while Ga changes additionally the phase fractions of the G- and C-type phases.

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