

Magnetic properties of  $\text{RCo}_2$  compounds have been studied since the second half of the last century. However, there was recently observed new magnetic state, so-called paramagnetism. The aim of this thesis was to find the real behavior of  $\text{TmCo}_2$ , which exhibits many discrepancies in the published results, by means of preparation of high-quality single-crystals, its characterization around the ordering temperature and to study paramagnetic behavior. Obtained results showed differences between the samples, which should be caused by the instability of Co and Tm magnetism. It might be the reason of discrepancies in the literature. The results however show the same structure of measured curves with two present phase transition. We suggest two possible interpretations: a) magnetic reorientation of Tm magnetic moments below the ordering temperature of the Tm sub-lattice or b) consequent ordering of the rare-earth sub-lattice followed by ordering of the Co sub-lattice at lower temperature, which seems to be more realistic. We observed paramagnetic anomalies at 38 K, 80 K, 168 K only in the case of single-crystals containing small amount of impurity phase, which probably affects the formation of magnetic clusters.