PS08.02.13 CHEMICAL AND STRUCTURAL VARIATIONS IN SERPENTINES FROM SOME METAULTRAMAFITES OF THE ROMANIAN CARPATHIANS (ROMANIA). Lucia Robu, Gabriela Stela, I.N. Robu, Geological Institute of Romania, 1, Caransebes str., 7834-4-Bucuresti-32, Romania

Serpentine mineral samples come from some metamafitic bodies included in the geological formations of the Romanian Carpathians.

For the most part of the samples mesh-structure are characteristic. Its one is determined due to the substituted processes of the olivine and pyroxene by chrysotile and/or lizardite in the marginal zones, and antigorite in the central ones. Sometimes, some small antigorite thalas are spread in the serpentine mass.

Crystalchemical data have been calculated according to the formulae of OH$_2$ general formula, where $M = Mg, Fe^{2+}, Ni, Fe^{3+}$, sometimes Cr and Na, Si, Al.

However, Si and Al contents show some evident substituted processes in the tetrahedral levels, between Si and Al. A lack of silica in these levels, in the calculated formula suggests a completion of these ones by Fe$^{3+}$ ions.

Mg, Ni, Fe$^{2+}$, Fe$^{3+}$ ions were identified as filling of the octahedral chains. The exchanges between Mg and other above mentioned cations are insignificantly, so that their sum varies among 0.267-0.617. Sometimes Al cations are presented in these structural levels.

IR absorption spectra confirm these substitutions processes, registering absorption bands at the characteristic frequencies (cm$^{-1}$).

However, the registered bands about 1630 cm$^{-1}$ vary directly proportional to the Mg substitution by Fe$^{2+}$, Cr, at the octahedral levels. Its intensity increases when Mg content is increasing. There is no possibility to evidence the proportion in which took place this substitution, but some possibility combination would be, Mg, MgMg, NiMgMg, FeFeMg, FeMgMg sometimes CrNiMg or CrFeMg.

Some of IR spectra present at the 665cm$^{-1}$ frequency a very low intensity peak, which could be assigned to NININININ IN crystal.

These high inhomogeneous and discontinuous substitutions exchange in the octahedral level have determined these variations of the IR absorption data.

At OH-stretching region, about the 3700 cm$^{-1}$ domain the allures of the curves are similar to these ones characteristics for low Ni content.