Neutrino physics and astrophysics with MACRO

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The final results of the MACRO experiment on atmospheric neutrino oscillations are presented and discussed. The data concern different event topologies with average neutrino energies of 4 and 50 GeV. Use was made of Multiple Coulomb Scattering to estimate the neutrino energies of the higher energy sample. The angular distributions, the absolute fluxes and the L/E distributions favour numu-->nutau oscillations with maximal mixing and $\Delta m^2=0.0025 eV^2$. Results are presented on the searchs for astrophysical sources of high energy muon neutrinos, for bursts of low energy electron antineutrinos from stellar gravitational collapses, and indirect searches fo dark matter WIMPs from the Earth and from the Sun.