High energy extreterrestrial neutrinos detection could provide evidences for the acceleration of charged hadrons in cosmic objects like Supernova Remnants, Microquasars, Active Galactic Nuclei or Gamma Ray Bursts. I will discuss the most recent AMANDA-II results on the search for fluxes of H.E. neutrinos, on the measurements of the atmospheric neutrino energy spectrum above 1 TeV, on the search for Supernova in our Galaxy and on the search for dark matter candidates in the form of MSSM neutralinos. AMANDA-II sensitivity is approaching the Waxman-Bahcall bound level, a further significant improvement is expected with IceCube, its km^3 successor.