

Shielding Design on the "TESLA" Accelerator Installation in The Institute of Nuclear Sciences "VINCA", R. PAVLOVIC, S. PAVLOVIC, The Institute of Nuclear Sciences "VINCA" - The TESLA Accelerator Installation is planned to be an ion accelerator facility consisting of an isochronous cyclotron - the VINCY Cyclotron, a heavy ion source - the mVINIS, a D^- and H^- ion source - the pVINIS, three low energy experimental channels, and five high energy experimental channels. The VINCY Cyclotron will be able to deliver approximately 1 mA of 36 MeV per nucleon O^{8+} ions, approximately 100 nA of 23 MeV per nucleon Ar^{16+} ions, and approximately 700 nA of 7 MeV per nucleon Xe^{28+} ions. It will be able to deliver also heavy ions of lower energies - above approximately 3 MeV per nucleon. This machine will be able to give approximately 20 mA of 73 MeV deuterons, and approximately 2 mA of 66 MeV protons. Shielding design of such multipurpose accelerator installation requires a number of nuclear data inputs including the energy and angular distribution of the neutron - gamma source term, the neutron attenuation lengths, dose equivalent attenuation characteristics. Substantial lack of these data, especially for protons and deuterons in the mentioned energy range caused some problems in the shielding calculations. Shielding design for this specific installation will be presented in this paper.