NUCLEAR DATA FOR APPLIED PURPOSES AMD THE IASA NUCLEAR DATA SECTION ACTIVITIES. Review paper contains analysis of nuclear data state, data requirements and coordination of data generation for following application: fusion reactor technology, analyzing and predicting radiation damage of nuclear materials, nuclear particle therapy, medical radioisotope production, applied nuclear geophysics, safeguards applications. The IAEA Nuclear Data Section activities in organization of international technical co-operating were described.

DOUBLE DIFFERENTIAL SCATTERING CROSS-SECTIONS OF SLOW NEUTRONS FOR LIGHT .WATER IN WODE INTERVAL OF,THE TEMPERATURES AND PRESSURE
The absolute double differential scattering cross-sections of Light water are measured for some incident neutron energies- (8, 25, 256 MeV) in the temperature interval of 300-623 K. The experimental curves are compared with calculations based on original fenomenological model of molecular dynamics of water,

THE EXCITATIONN FUNCTIONS OF NEUTRON INELASTIC SCATTERING FOR 52Cr, 53Cr and 27Al. The neutron excitation functions of 52,53Cr and 27Al 5 MeV Van de Graaf was used as proton source, T(p,n)-reaction was used neutron source. The incident neutron flux was measured by fission chamber. The associated gamma-rays was registrated by Ge(LI)-detector with 4 keV resolution. The samples of chromium and metallic aluminium were cylinders with diameters 32 and 30 mm accordingly, powdered Cr2O3 were in thin-walled cylinders. The excitation functions were found not smooth.

EVALUATED NEUTRON DATA F0R 242Cm. The experimental data on fission, capture, inelastic scattering, (n, 2n), (n, 3n) and other cross sections are scarce or completely unavailable.
As a consequence theoretical models and various parameter systematics are extensively used. The data obtained are compared with previous evaluations. Severe differences are found.

THE ENERGY DEPENDENCE STATISTICAL CHARACTERISTICS OFTOTAL NEUTRON CROSS-SECTIONS FROM TRANSMISSION DATA. New approach to the processing data on neutron transmission experiments in the energy region of unresolved resonances is described.The efficiency and reliability of the method is demonstrated for several
cases by determination of the total cross-sections moments the same as the lowest and highest their values at the energy interval covered by neutron beam. The comparison with other known
approaches to the problem is carried out.

AVERAGE CROSS-SECTIONS IN R-MATRIX THEORY. The analytical method for resoпaпce cross-section averaging is proposed. In frames of R-matrix formalism and using our statistical model of resonance cross-section the general formula for average capture cross-section is constructed exactly.

ANALYSIS OF THE DELAYED NEUTRON INTENSITY DECAY CURVES BY INCIDENTAL DECONVOLUTION. To evaluate the cumulative yields of the main precursors of delayed neutrons incremental de-convolution method was suggested for analysis of the experimental data of the delayed neutrons intensity decay curves. The possibilities of this approach were shown for 233U and 235U thermal neutrons fission.

MEASUREMENTS AND ANALYSIS OF THE DISTRIBUTIONS OF THE URANIUM NUCLEUS FISSION RATES IN LEAD AND URANIUM TARGETS UNDER 1.3 AND 4.3 GEV PROTONS. The fission rates are measured by the solid-state track detectors. The experimental distributions are compared with the Monte Carlo simulation results. The agreement of the measurements with the calculations is satisfactory for 1.3 GeV protons. An appreciable difference between experiments and calculations is observed at the 4.3 GeV beam energy.

ASSIGNMENT PROBLEM ALGORITHM IN APPLYING TO NUCLEAR SPECTROSCOPY.
Assignment Problem Algorithm have been applied to find gamma-quanta disposition with the greatest probability. 234u (n, γ } reaction is considered as Algorithm application example.

TESTING OF 238U CROSS-SECTION STRUCTURE TEMPERATURE DEPENDENCE IN
UNRESOLVED RESONANCE REGION IN TRANSMISSION EXPERIMENTS. The calcu-
lated values transmission and self-indication functions and their temperature dependence for 238U in unresolved resonance region are compared with experimental data to test the resonance structure parameters. The average resonance parameters from FOND and ENDF/B-4 libraries and subgroup parameters from multi-group constant system MULTIC are used.
ON THE EVAIUATION OF GROUP-TO-GROUP TRANSFER CROSS-SECTION ANGULAR
DEPENDENCE. The method to retrieve the group-to-group transfer cross-sections depending on a scattering angle cosine is proposed. The method allows to take into account the fact that for sufficiently fine group structure the cross-section is not equal to zero in only a part of the [-1,1] interval. The retrieved angular dependence may be used for evaluation of additional Legandre coefficients.

ON A CONTRADICTION BETWEEN THE MEASURED MEAN CROSS-SECTIONS FOR NEUTRON ABSORPTION IN A FAST REACTOR CORE AND THE MICROSCOPIC
DATA FOR 238U NUCLEI. There is a contradiction between a measured integral cross-section for neutron absorption averaged over a fast neutron reactor spectrum and a corresponding calculated one with use the evaluated microscopic cross-sections and a theoretical neutron
spectrum. A systematical error of a correction factor for taking into account a multipole scattering of resonance neutrons in samples used in microscopic absorption cross-section measurements is
discussed in the present work. This error may be one of the main reasons of the contradiction mentioned above concerning an absorption neutron cross-section for 236U.