

# Computer Programme Library at Ispra: Service to IAEA Member States

In 1964, in view of the increasingly important role of computers in atomic energy, the Nuclear Energy Agency of the Organization for Economic Co-operation and Development established a Computer Programme Library (CPL) at Ispra, Italy. The original purpose of this Library, then consisting chiefly of programmes for reactor calculations, was to improve communication between the originators of the computer programmes and the scientists and engineers in Member States of the OECD who used them, thus furthering the efficient and economic use of the many large and expensive computers in the countries concerned.

During the first few years of the Library's operation, a growing interest in its activities became evident in countries which were not members of the OECD. The Director General of the International Atomic Energy Agency, aware that such countries which were Member States of the IAEA could benefit from the Library's services, concluded an agreement with the Nuclear Energy Agency in 1967 to the effect that these services would be extended to all IAEA Member States.

In March 1968, the Director General announced by circular letter that these services were available, and requested the governments of Member States that were not members of OECD to nominate establishments to participate in the activities of the Computer Programme Library. By August 1973, 32 such establishments were regularly using the services of the CPL.

## ACTIVITIES OF THE CPL

The Computer Programme Library is a centralized exchange service for computer programmes which can make available to an organization, free of charge, computer programmes it may need for its calculations.

The CPL is organized by the OECD Nuclear Energy Agency and has a staff of 13, including a representative of the International Atomic Energy Agency, seconded from Vienna. It is supervised by a committee comprised of members from each of the 14 contributing countries. Each committee member nominates "participating establishments", which appoint "Liaison Officers" through whom all communication between an establishment and the Library are channelled. The Officer-in-Charge of the CPL is Mr. Luis Garcia de Viedma.

The Library receives copies of computer programmes from the participating establishments, complete with adequate documentation and a sample test problem. Each programme package received is tested by the Library on the host Centre's IBM 370/165 or another suitable computer to ensure that it is complete.

The CPL continuously updates its collection, discarding old versions of programmes and adopting newer and more efficient codes. There are 640 tested programmes in the present collection. Copies of programmes, together with the necessary documentation and a test problem, are distributed **free of charge** in response to

requests from participating establishments, of which there are currently 250, including those in IAEA Member States which are not members of the OECD.

Further, the users of the service are kept informed of the activities of the Library through a series of publications: NEA Programme Abstracts; USCC/RSIC Programme Abstracts; Computing Facilities; KWIC Index of Nuclear Programmes; List of Programmes (bi-monthly); CPL Newsletter. The users are also informed of the existence and suitability of programmes for performing calculations in which they are interested, and advice on the programmes sent to participating establishments is given, when requested, to the extent possible.

To improve the exchange of programmes and information and to increase the effectiveness of the IAEA-NEA CPL Service, scientific visitors from non-OECD countries are welcomed at the Library. The CPL helps them become acquainted with its work and with the programmes in its collection. Visitors are also able to implement at the CPL programmes developed at their establishments and which have been offered to the CPL.

The NEA/IAEA Computer Programme Service at the CPL can provide programmes in the following fields:

Cross-Section and Resonance Integral Calculation	Deformation and Stress Distribution Computation, Core Configuration Studies and Composite Structure Analysis
Spectrum Calculation, Generation of Group Constants, Lattice and Cell Problems	Gamma Heating and Shield Design
Static Design Studies	Data Preparation
Depletion, Fuel Management, Cost Analysis, Reactor Economics	Data Management
Space Independent Kinetics	Experimental Data Processing
Space Time Kinetics, Coupled Neutronics- Hydrodynamics-Thermodynamics, Excursion Simulation	General Mathematical and Computing System Routines
Radiological Safety, Hazard and Accident Analysis	Nuclear Data
Steady State and Transient Heat Transfer	Nuclear Models

Those from IAEA Member States which are not members of the OECD who are interested in having more detailed information on the NEA/IAEA Computer Programme Library should write to Dr. E. Sartori, IAEA Officer at the NEA CPL, Casella Postale N.15, 21027 - ISPRA (VA), Italy, or to Dr. Zh. Turkov, Officer-in-Charge, INIS Section, International Atomic Energy Agency, Kärntner Ring 11, P.O.Box 590, A-1011 Vienna, Austria. Those from countries which are members of the OECD should write directly to Mr. L. Garcia de Viedma at the NEA CPL.