

## Organizers – Sponsors

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**CEA CADARACHE**

Cadarache is one of the most important technological research and development centres for energy in Europe. Its activities, distributed throughout various research platforms, focus on nuclear fission, nuclear fusion, new energy technologies (hydrogen, solar, biomass) and fundamental research in the field of vegetal biology. Acting as backup to the centre, there is a whole range of services organised to ensure the safety of the site, the management of its nuclear waste and nuclear materials and its sanitary and environmental surveillance. Cadarache is one of the ten research centres of the French Atomic and Alternative Energies Commission (CEA). Half of the basic nuclear facilities existing within the entire CEA infrastructure are located on the Cadarache site.



**THE EUROPEAN WORKING GROUP ON REACTOR DOSIMETRY**

The European Working Group on Reactor Dosimetry (EWGRD) started around 1960, under the sponsorship of EURATOM, with members designated by the governments from each European Union (EU) laboratories working in the field of reactor physics and technology. The goal was to exchange directly experience and know-how in reactor dosimetry and connected programmes. The fields covered were the measurements of thermal and epithermal fluences and fluence rate, the measurement of fast neutron spectra and fluences of thermal and fast reactors, and later the measurement of fusion and spallation neutron spectra.

A major application of neutron dosimetry in fission reactors was and still is the monitoring of irradiation experiments. The knowledge of the neutron and gamma-ray fields and fluences as well as the temperature during irradiation, is necessary to understand and to assess the embrittlement of the structural materials.

Radiation damage units had to be introduced, i.e. dpa, flux  $> 1$  MeV, or flux  $> 0.5$  MeV, to correlate the life time of a material under radiation to the exposure dose.

Soon the need for normalisation was felt in order to guarantee that specific nuclear data was used, that measurements in different laboratories gave the same results (need for inter-calibration experiments and standards), and that results were expressed such that a comparison with results from other laboratories was possible. Specific topics were discussed in sub-groups resulting in final

recommendations. These final recommendations were then discussed in plenary meetings and accepted as recommendations for European use.



## THE AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM International, formerly known as the American Society for Testing and Materials (ASTM), is a globally recognized leader in the development and delivery of international voluntary consensus standards. Today, some 12,000 ASTM standards are used around the world to improve product quality, enhance safety, facilitate market access and trade, and build consumer confidence.

ASTM's leadership in international standards development is driven by the contributions of its members: more than 30,000 of the world's top technical experts and business professionals representing 150 countries. Working in an open and transparent process and using ASTM's advanced electronic infrastructure, ASTM members deliver the test methods, specifications, guides, and practices that support industries and governments worldwide.

ASTM Committee E10 on Nuclear Technology and Applications was founded in 1951. The Committee has a current membership of approximately 225, including representatives from over 20 countries. E10 has jurisdiction over 105 standards, published in the Annual Book of ASTM Standards, Vol. 12.02. These standards play a preeminent role in all aspects important to the nuclear industry. Committee E10 sponsors scientific and technical symposia such as ISRD and generates publications within the scope of the committee.

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