

Low Temperature Physics Division

The establishment of a Low Temperature Physics Division was first proposed and endorsed at a meeting of the European participants at the International Low Temperature Physics Conference, LT 12, at St. Andrews, Scotland. It was argued that regular contact among scientists working in various branches of low temperature physics would be very beneficial particularly on a regional scale, such as Western or Central Europe or possibly Europe as a whole. It was also argued that, although the name 'LTP Group' might be preferable to 'LTP Division' in order to emphasize the close relations of low temperature physicists with other branches of physics (solid state physics, fluids etc.), there are many reasons for the existence of a separate group or division.

One reason is that two of the main subjects of low temperature physics, namely superconductivity and helium, are usually not given much attention in international conferences, such as the triennial magnetism conferences. This is due to the fact that, particularly in solid state physics, there are already so many areas of interest, such as semiconductors, metals, lasers, polymers, crystallography and neutron diffraction and so forth, that low temperature phenomena such as nuclear orientation, de Haas-van-Alphen effects, properties of liquid and solid helium, etc. are largely neglected. Furthermore, the macroscopic quantum-interference aspects of superconductivity and liquid helium are so intimately related, that it is very useful for experts on superfluidity in liquid helium and on superconductivity to hold combined meetings and become personally acquainted. Technical know-how utilized in low temperature experiments can be exchanged rather effectively in meetings that are not too large and, hence, explicitly intended for low temperature physicists. These arguments are particularly relevant to young physicists who may not be able to attend large international conferences at far-away places and who

seldom have opportunities to visit other laboratories. It is, however, of paramount importance for young physicists to become acquainted with colleagues from other countries and their work. The European Physical Society should provide a useful meeting ground for young physicists, which will lead to mutual visits to each other's laboratories and institutes. Clearly, such a sequel will often lack in worldwide international conferences on very broad areas of physics.

The LTP Division will also cooperate with other divisions to promote the organization of Europhysics Conferences which are intended to be analogous to Gordon conferences; they will usually be aimed at the level of experts in a specialized subject, and held on the basis of invitation only for a restricted number of participants. Europhysics Conferences may be quite important for the exchange of new ideas and the LTP Division is fortunate that N. Kurti, one of the LTP Committee members, has taken responsibility for organizing such meetings.

The LTP Division has also planned to organize summerschools on particular subjects in the domains of helium, superconductivity etc., in which the teaching aspect is given priority. To provide the required impetus, the LTP Division started by organizing a summerschool in a rather broad area of mutual interest, namely on superfluidity in helium, superconductivity, and cooling methods. This summerschool held at the Technological University of Twente in the eastern Netherlands from 22 June to 4 July 1970, was attended by about 80 physicists from 14 countries in Western Europe, the average age of the participants being 28 years (with a mean deviation of less than three years).

Finally, the LTP Division hopes to be able to promote exchange visits of scientists to each other's laboratories, which would greatly assist in achieving the above aims. This would be easier to realize if the mutual relations between laboratories and

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physicists in Europe had increased to the extent already existent between high energy physicists.

The LTP Division was formed through a committee to which representatives of various national physical societies have been appointed. To set up formal rules for the election of committee members is premature but will, inevitably, become necessary as LTP Division activities grow.

At present LTP Division membership is open, free of charge, to all Individual Ordinary Members of the EPS who express their interest in the Division. The LTP Division Committee so far has met three times and has proposed to organize a Low Temperature Physics Conference in the Federal Republic of Germany at Freudenstadt (Schwarzwald) in April 1972, and a summerschool in June-July 1971, in Grenoble, France, on the subject of magnetic impurities in superconductors.

It is hoped that the future activities of the LTP Division will attract members and thus contribute to the ultimate goal of the EPS, the mutual cooperation of scientists in Europe.

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