

Table 2 — Key parameters achieved in α -particle simulation experiments

Parameter	Heated ^3He in JET Achieved Values	Expected α -particle parameters in D-T	
		JET, $Q = 1$	Ignited ITER
$(n_\alpha/n_e)_0$	1.3×10^{-2}	10^{-3}	7×10^{-3}
$(\beta_\alpha)_0$	1%	0.6%	2%
$\bar{\varepsilon}_\alpha$ (MeV)	0.5-1.5	2	2
$(p_\perp/p_\parallel)_0$	10-50	1	1
P_α/P_{LOSS}	0.8	0.1	1

In this table n_α is the density of α -particles, β_α the ratio of α -particle pressure to magnetic pressure, $\bar{\varepsilon}_\alpha$ the mean energy, $(p_\perp/p_\parallel)_0$ the ratio of α -particle pressures perpendicular and parallel to the magnetic field, P_α/P_{LOSS} is the ratio of the power transferred to the plasma from α -particles to the total loss from the system, $()_0$ indicates central values in the plasma core.

- (4) Some aspects of α -particle physics have been simulated by the RF heating of ^3He minority ions. The behaviour is broadly as expected;
- (5) Full exploitation of the machine in its present form should give total Q values of 0.4–0.6 and corresponding α -power of a few MW;
- (6) Technical changes and additions now in preparation will give greater control of the density and current profiles, reduce the impurity content and permit final operation in a deuterium-tritium plasma;
- (7) Projected large experiments to study ignited, burning plasmas are under intense study both nationally and internationally around the world. JET is now and seems likely to continue to be a major source of experimental data and technical experience to underpin these projects.

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1989 Hewlett-Packard Europhysics Prize

The Hewlett-Packard Europhysics Prize for 1989 for outstanding achievements in solid state physics has been awarded jointly to:

Professor F. Steglich, Institut für Festkörperphysik, Technische Hochschule, Darmstadt

Dr. H.-R. Ott, Laboratorium für Festkörperphysik, ETH, Zurich

Dr. G.G. Lonzarich, Cavendish Laboratory, Cambridge

in recognition of their pioneering investigation of heavy-fermion metals. In 1975 the first indications of a new category of metallic compounds was given by the discovery that at low temperatures ($< 0.3\text{ K}$) the specific heat of CeAl_3 was proportional to the temperature, with a coefficient of proportionality about a thousand times that of Na for example. It was as if the electrons were more massive than normal by about that factor. It was however the discovery in 1979 of superconductivity in CeCu_2Si_2 — a discovery treated initially with great skepticism — that really broke open the new field of physics. Since then it has expanded rapidly and heavy fermions have become a major area of research.

The Hewlett-Packard Europhysics Prize is awarded annually by the European Physical Society for recent work in condensed matter physics particularly where there could be important applications in electronic, electrical or materials engineering. The award which includes a cash prize of Sw.Fr. 20 000.— (in total) will be presented during the 9th General Conference of the EPS Condensed Matter Division to be held in Nice, 6-9 March 1989.

Computational Physics Group

From 1 January 1989, following the elections held last year, the Board of the **Computational Physics Group** will comprise the members shown opposite.

The outgoing Chairman, R. Gruber of Lausanne, reports that most of the 437 members on the role at the time of the last Board meeting had expressed positive views on the work of the Group and looked forward to increased activity in the years to come. A highlight of the new programme will be the 2nd International Computational Physics Conference to be held in 1991 in Amsterdam immediately following the EPS 8th General Conference in September.

Chairman: Pekka Pyykkö, University, Helsinki

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THE UNIVERSITY OF GRONINGEN THE NETHERLANDS ANNOUNCES AN OPENING FOR A

full professor of theoretical condensed matter physics (f/m)

(vacancy number: 881219/2493)

The appointee is expected to play a leading role in setting up and supervising a research program in theoretical solid state physics and to provide theoretical support for research programs within the materials science center (MSC). The MSC is an interdisciplinary research institute with a broad spectrum of basic material oriented research like surface physics, non-linear optics, exotic materials, high T_C superconductors, thin films and multilayers, conducting polymers and magneto-optical materials.

The appointee is expected to play a leading role in a national effort to stimulate theoretical solid state physics. The appointee will also participate in teaching and policy-making activities.

Letters of application, including a curriculum vitae, a list of publications and the names and addresses of at least two referees should be sent within six weeks after publication of this advertisement to the Director of Personnel, University of Groningen, P. O. Box 72, 9700 AB Groningen, The Netherlands, quoting our reference number.

Further information can be obtained from the chairman of the appointment committee, G.A. Sawatzky (phone: 01031 50 63 49 74) or from the chairman of the Physics Department, N.M. Hugenholtz (phone: 01031 50 63 49 62).

Those wishing to recommend potential candidates are invited to send a letter to the Director of Personnel.