

Comment on the Physics submissions to the RAE

- 1 The panel was generally impressed by the overall quality of the submissions received. It considered that Institutions' choice of "research active staff" in Physics had been made with considerable care. It also noted that 10 institutions that had submitted in 1996 no longer wished to be assessed by the Physics Panel.
- 2 It seemed clear to the panel that there had been generous support from Institutions to those Physics Departments, which had continued in existence post-1996 in terms of both new staff and core funding. In addition, externally funded research fellows have benefited the staff renewal programme characteristic of many of the departments we assessed.
- 3 Unsurprisingly in the light of 1 above, the panel did not find any submission that failed to satisfy the minimum requirement for the award of Grade 3a.
- 4 The panel found the following internationally competitive:
 - (a) Theoretical Physics, particularly but not exclusively in the areas of Condensed Matter, Surfaces, Liquids and Soft matter, Astronomy and Astrophysics, Particle Physics, Quantum Physics and Cosmology.
 - (b) Observational Astronomy, both Ground and Space based
 - (c) Experimental Particle Physics
 - (d) Neutron and X-Ray scattering, particularly in respect of magnetic effects
 - (e) Quantum Optics, both experimental and theoretical.
- 5 The panel was impressed with the way Nuclear Physics survived the elimination of national facilities and had developed a strategy for excellence.
- 6 Although there were pockets of excellence in departmentally based *experimental* research, the panel noted that in general this was of lower quality than those activities described in 4 above. The panel found, for example, that the quality of Soft Matter research was uneven, the best being outstanding, the rest of much lower quality. A similar conclusion was reached in respect of Solid State and Atomic Physics.
- 7 The panel concluded that research which did not make heavy demands on local infra structure (broadly those listed in 4) was outstanding and this in large part, together with the increased selectivity already noted, led to the improvement, over 1996, in the grades awarded.
- 8 However, the panel was concerned that locally based experimental research might require enhanced support, particularly in respect of infra structure, if the UK is to retain a competitive position internationally. It is our view that the long-term health of Physics in the UK will, in the future, require the sort of coherent investment strategy that has gone into the development of central facilities. Nanoscience was a case in point where the panel felt that a more co-ordinated approach such as has happened in Germany might lead to an increase in quality, provided that the interfaces between the individual supporting agencies are subject to scrutiny and monitoring.