

fine structure. The elimination of Doppler broadening was achieved by the method of saturation spectroscopy in which a laser beam is split into two unequal beams that cross in opposite directions the cell containing the atoms. Saturation spectroscopy itself was known from the pre-laser experiments of Purcell and Pound as early as 1948 and first achieved with a laser by Bennett, Lamb and MacFarlane. The strong beam 'bleaches' the absorption, which is detected via the intensity variations in the weak probe beam when the laser is tuned close to the atomic frequency, both light waves interacting with the same atoms, i.e. those with vanishing axial velocity. In Schawlow's work a narrow band laser whose frequency can be tuned *continuously* across the spectral region of interest was employed. Dye lasers pumped by a nitrogen laser were brought to a high technical standard and first used to observe the hyperfine splitting of the $3^2S_{1/2}$ and $3^2P_{1/2}$ states of sodium. Hydrogen, however, has always attracted attention because its simplicity allows accurate comparison with theory. Thus despite the large Doppler broadening — 6 GHz at room temperature — resolution of the red Balmer line H_{α} has been much sought after. Using the wide capability of the tunable dye laser, Schawlow and his group succeeded in resolving this structure and directly measuring the Lamb shift. Such measurements are the basis for precision determination of the Rydberg constant, one of the cornerstones of the evaluation of fundamental constants in physics.

These are just some examples of the outstanding work of two popular Nobel Prizemen of 1981 who will be honoured by the European Physical Society Quantum Electronics Division at a special reception at the 12th International Quantum Electronics Conference in Munich on 24 June 1982.

Teaching Abroad

Dr. Bengt Sandell of the University of Linköping has been invited by the Faculty of Arts and Sciences of Bogaziçi University, Istanbul to spend the spring semester as a Visiting Lecturer under the auspices of the Teaching Abroad Scheme of the European Physical Society. Sandell will be demonstrating his own particular skills in devising new experiments for teaching purposes and will be participating in the general work of the Faculty. This is the first result of the efforts that have been made by the Physics Education Committee of EPS to encourage the movement of teaching staff (as against research staff) at the university level.

22-25 March 1982

Manchester, UK

2nd General Conference of the Condensed Matter Division of the European Physical Society

This conference will be a continuation of the general CMD Conferences started in 1980 in Antwerp. The sessions will cover the whole field of condensed matter physics with contributed papers and a large number of invited talks. Sixty invited speakers, many of them grouped into symposia, will cover the whole spectrum of solid state physics.

Chairman: Prof. V. Heine (Cambridge)

The Board of Governors of Eindhoven University of Technology announces an opening in the Telecommunications Division of the DEPARTMENT OF ELECTRICAL ENGINEERING for a

professor (part-time) of optical-fibre communications, (male/female) in particular, glass-fibre technology and integrated optics.

Field

The Telecommunications Division gives lectures and conducts research on electromagnetic communication channels and systems, notably for satellite communications and optical-fibre communications. The present activities in the latter field concentrate on optical transmission, detection, and system design.

Duties

The successful candidate is expected to give a lecture series dealing with the technology of optical fibres (including manufacturing, characterization and control, integration, and splicing of cables) and integrated optics (including the development of novel or improved components and their measurement). In addition, the professor is expected to assume responsibility for research in this area, and give direction to graduate students and to any postgraduate investigators pursuing a Ph.D. degree in one of these subjects.

Applicants should have adequate experience in the field and have an ability for teaching to which they should be prepared to devote one day per week. The appointment will be for three years, with possibility of renewal.

Applications or suggestions for suitable candidates are invited in confidence to the

Board of the Department of Electrical Engineering,
Eindhoven University of Technology,
P. O. Box 513, 5600 MB Eindhoven, the Netherlands.

These should arrive before 1 April 1982.

Further information may be obtained from
prof.ir. J. van der Plaats, Tel. (40) 47 34 51.

