All other polaritons, having suffered with a wave vector opposite to that scattering configuration, one observes observed and connected with Reso-

Thus the Resonant Brillouin Scattering efficiency indicates that re-absorption anti-resonant dip at the maximum of polariton absorption : the decrease of frequency indicates that re-absorption effects at exact resonance prevail over the probability enhancement.

(iv) Resonant increase and cooling of polariton fluorescence have been observed and connected with Resonant Brillouin Scattering. In a back-scattering configuration, one observes polariton escaping from the crystal with a wave vector opposite to that of the exciting light. Polaritons scat-
tered by one longitudinal acoustic phonon give rise to the well defined Resonant Brillouin Scattering peaks. All other polaritons, having suffered several successive processes are smoothly distributed and give rise to Resonant Polariton Fluorescence. Thus the Resonant Brillouin Scattering involves a memory of the initial state, whereas the Resonant Polariton Scat-
tering originates from a randomised distribution of more or less therma-
lized phonons.

The experiments carried out on CdS by Winterling and Koteles have de-
termined the dispersion of the exci-
tum are observed, only in disordered acoustic phonon scattering processes which the relevant resonant inter-

The observation of a new resonance phenomenon was also reported by M. Balkanski, C. Hirrlimann and J.F. Morhange: replicas of the first-order phonon spectrum 4). The first-order Raman spectrum of mixed III-V semi-

correspond to resonance states for-

can be even higher than that of the first order spectrum depending on the frequency of the incident beam. Such replicas are absent from the spectra of pure crystals.

Resonance occurs at a photon en-

close to the band gap. Replicas have been observed also for higher-

The different replica orders correspond to resonance states for-

It is obvious that the choice present-
ted here is personal and purposely limited to only very few of the many high-level, timely and important contrib-

References

References are to the Proceedings of the International Conference on Lattice Dynamics (Fimmarion Sciences, Paris), 1978.

New President of EPS, Antonino Zichichi

Antonino Zichichi, a founding mem-
ber of EPS, is a high energy physicist, presently engaged on a systematic study of the proton structure at the CERN machines ISR and SPS. Pro-
fessor of Advanced Physics at the University of Bologna (Italy) he was the Director of the Postdoctoral School of Physics at that University. Zichichi is well known in the interna-
tional physics community: the study of lepton pairs produced in hadron-
interacts, the search of heavy lep-
tons produced in e+e- annihilations, exemplify his pioneering contributions in two branches of sub-nuclear phys-
ics where a decade was to pass before the phenomena were under-

He is the founder and the Director of the "Ettore Majorana" Centre for Scientific Culture, established in 1962 and now consisting of 70 national and international Schools - the same Cen-
tre which has put a considerable number of places at the disposal of EPS and has offered advantageous terms to Divisions wishing to hold conferences there. In June 1977 Zichichi was elected President of the Italian Istituto Nazionale di Fisica Nu-

nuclear physics. More recently, at the plenary meeting of the European Committee for Future Accelerators, he was elected chairman of the working committee studying the project for a large electron-position colliding beam device (LEP) that ECFA consi-
ders is the European high energy machine for the 1980s.

LASER DEPARTMENT
INSTITUTE OF APPLIED PHYSICS, UNIVERSITY OF BERN

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Qualifications: Essential — Experience in Gas Laser Physics with preferably a knowledge of electronic transition lasers and related discharge techniques.

Desirable — Some knowledge of German.

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Prof. Dr. Heinz P. Weber
Institute of Applied Physics, University of Bern
Sidlerstrasse 5
CH-3012 Bern

The position will be open from 1 July, 1979.