correlations. Certainly one of the many questions to explore is the relation between the behavior of electrons in the low-lying states to that in the states near the threshold for ionization. —BGL

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Crystal Ball to move from SLAC to DESY

The German Electron Synchrotron laboratory (DESY, Hamburg) and SLAC have agreed to a unique intercontinental transfer of a major high-energy-physics detector facility. After more than three years of fruitful operation at SPEAR, the older of the two electron–positron storage rings at SLAC, the "crystal-ball" particle detector will be moved in June to DORIS, SPEAR's opposite number at DESY. The 730 sodium-iodide crystals that make up the seven-foot-diameter hollow crystal ball provide extra-ordinary energy resolution for high-energy photons (PHYSICS TODAY, July 1981, page 21).

DORIS and SPEAR began life in the early 1970s as colliding-beam e^+e^- accelerators of very similar capability, with maximum collision energies of about 8 GeV. But DORIS has been moving to higher energies. Having been pushed beyond 10 GeV two years ago, DORIS is now being upgraded again. By April it is expected to be capable of e^+e^- collisions at center-of-mass energies above 10.55 GeV, the effective threshold for the production of "bare-bottomed" B mesons, which carry the fifth (bottom) quark flavor (PHYSICS TODAY, October 1980, page 19). Until now, CESR at Cornell has been the only e^+e^- machine capable of operating efficiently in this particularly interesting energy region.

Hence the motivation for so prodigious a moving job. At the upgraded DORIS, the crystal-ball detector system will be operated by a consortium of 15 American and European high-energy groups, looking primarily at B mesons and bound states of the bottom quark and its antiquark (the upsilon mesons). PEP, the newer e^+e^- storage ring at SLAC, has more than enough energy to produce these exotic new mesons. But with a design energy of 36 GeV, PEP can operate in the B-upsilon region only with much reduced luminosity.

Moving the $2.5-million crystal-ball detector facility from California to Germany will not be easy. Great care must be taken to prevent exposure to atmospheric moisture, which would dissolve the sodium-iodide crystals. The current plan is to move the detector aboard a C54 aircraft.

Among the important accomplishments of the crystal ball during its three years at SPEAR have been the discovery of the η_c (the charmed analog of the eta meson) and a possible excited η'_c state, and evidence for the production of two gluonium states (quarkless bounds states of gluons) in the radiative decay of the J/ψ. The conjecture that the $KK\pi$ resonance at 1420 MeV is indeed a "glueball" (PHYSICS TODAY, July 1981, page 20) has recently been strengthened by the conclusion, from additional crystal-ball data, that it is a spin-zero object of negative parity. —BMS

Financial pinch kills British RFX pinch

The British Atomic Energy Authority has cancelled the Reversed Field Experiment. The £20-million RFX magnetic-confinement-fusion facility, planned for the Culham Laboratory in Oxfordshire, was to have been the world's most ambitious reversed-field-pinch machine to date. With its cancellation, for budgetary reasons, American plans for full participation in the RFX have come to a sudden and disappointing end (PHYSICS TODAY, September 1981, page 20).

The toroidal RFX was to have had a plasma-current capacity of 2 megamps, almost four times that of the Los Alamos ZT-40, the largest American reversed-field-pinch machine. With no prospect of a US machine on this scale in the foreseeable future, the Los Alamos group had been participating for three years in design studies for the RFX. Last July, a DOE technical review panel recommended full US participation in the RFX project.

The decision that Britain could not afford the RFX comes despite the fact that the US, Italy and the European Economic Community had agreed to finance 60% of the facility's cost between them. The RFX fell victim to the needs of JET, the £180-million Joint European Tokamak, under construction at Culham. The Atomic Energy Authority was forced to kill the RFX when the UK Department of Energy refused to provide £10 million to upgrade JET to a deuterium–tritium experiment. The necessary funds would have come from the Authority's own fusion budget, leaving nothing for the RFX. "It is now clear that as a result of the government's public expenditure cuts . . . , we must reluctantly conclude that there is little prospect of . . . provision for the RFX in our program," the Atomic Energy Authority told its prospective American and European partners.

Edwin Kintner, who heads the US magnetic-fusion program at DOE, views the cancellation of the RFX with concern that goes beyond the needs of any specific experimental program. "It repeats the unfortunate precedent set by the German cancellation of Zephyr," he told us. After several years of active American participation, this compact tokamak planned for Garching was abruptly cut out of the Federal Republic's budget last spring (PHYSICS TODAY, May 1981, page 18). "I am concerned that we in the West do not seem to be able to muster the resources for the fusion experiments that need to be done—even when we share the cost." The implications for INTOR, the big international tokamak under discussion for the 1990s, are discouraging, he suggests. "You'd have to stay in such a marriage for 20 or 30 years, to get any use out of it." —BMS

in brief

Donald N. B. Hall has become the deputy director of the Space Telescope Science Institute. Hall had been Astronomer with Tenure and the head of the Next Generation Telescope and Gratings Laboratory at Kitt Peak National Observatory, where he had worked since 1970.

The Smithsonian Institution's observatory at Mt. Hopkins, Arizona, which was dedicated in May 1979, has been named after Fred Lawrence Whipple in recognition of "his great scientific achievements and outstanding leadership of the Smithsonian Astrophysical Observatory." Whipple, who selected the site and led the construction and development of the observatory, is professor emeritus at Harvard University.

Harwood Academic Publishers is publishing a new journal, *Soviet Journal of Remote Sensing*, a cover-to-cover translation of *Issledovania Zemli iz Kosmosa*, edited by Alexander V. Sidorenko. A year's subscription of bimonthly issues is available for $350 from Harwood, P. O. Box 786 Cooper Station, New York, N. Y. 10276.

A new quarterly journal, *Mass Spectroscopy Reviews*, will begin publication next Spring. Published by John Wiley & Sons, its coverage will be interdisciplinary. The editors are George Waller and Otis Dermer, both at Oklahoma State University. Subscriptions are $100 per year. □