

QUARKS AND LEPTONS

An Introductory Course in Modern Particle Physics

by **Francis Halzen**,
University of Wisconsin
and
Alan D. Martin,
University
of Durham, England

QUARKS AND LEPTONS offers a complete and self-contained treatment of modern particle physics. Written primarily as a text, students will discover the excitement felt in the scientific community over these recently discovered particles. A wide variety of exercises and a balanced approach that avoids unnecessary theoretical formalism will make Halzen/Martin the best choice for your course.

Contact: **Clayton Gordon**
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letters

The personal costs to an individual scientist in attempting to face this question are severe. An unwillingness to keep power for a select group is met with great loss by the scientist in that his voice in such matters is ignored. Intense pressure is brought to bear on such an individual. He is isolated and denied the freedom and support that is necessary for his work. His personal life is monitored and he is subjected to professional and economic loss.

After a lifetime of service to his country at the heart of the weapons establishment, both in time of war and peace, and at great personal cost, J. Robert Oppenheimer arrived at the following position:

An indispensable, perhaps the indispensable, element in giving meaning to the dignity of man, and in making possible the taking of decision on the basis of honest conviction, is the openness of men's minds, and the openness of whatever media there are for communion between men, free of restraint, free of repression, and free even of that most pervasive of all restraints, that of status and hierarchy.

The choice facing us is at once both fundamental and profound, the questions being the nature of a free and open society and its place in the world and, possibly, the survival of humanity. The freedom and independence of the scientific community is a necessary item of a free society. Ensuring this freedom and practicing accordingly are both necessary elements.

RICHARD A. MCCORKLE
South Salem, New York

12/83

A death exaggerated

The Mark III collaboration at SPEAR would like to report that the news of its death is greatly exaggerated (December, page 18).

Bertram Schwarzschild's article on the free electron laser included the remarkable statement that SPEAR would be "fully occupied as the synchrotron light source of the Stanford Synchrotron Radiation Laboratory," implying the discontinuance of its high-energy physics program.

The Mark III detector occupies the major interaction region at SPEAR. This collaborative effort of SLAC, the California Institute of Technology, the University of California at Santa Cruz, the University of Illinois, and the University of Washington is alive and well, with plans for studies of ψ decays, ψ' decays, charmed meson production, charmed strange meson production, charmed Baryon production and τ production.

We hypothesize that Schwarzschild has been tuned too closely to the wishful thinking of some of the synchrotron radiation users, with whom we unfortunately must share the use of this very productive storage ring.

ROBERT F. MOZLEY
FOR THE MARK III COLLABORATION
Stanford University
Stanford, California

12/83

Humphrey Bogart replied when told there was no spa in Casablanca: "I was misinformed." We've checked with the SLAC directorate. They expect that high-energy experimentation will continue at SPEAR at least the next four years.

—BMS

Pay for students

The reason for the crisis in physics (math, foreign languages, and so forth) education is that we expect children to do what no adult would do, namely work hard for no payment. We expect students to work hard in school for a future payoff (a successful career). If we want them to learn hard subjects, pay them! That is the capitalistic system and it works! We can call it the Physics Olympics (math, French, English and so on). For each class from third grade and higher, have a list of 100 (300, 500 and so on.) questions and answers appropriate to the grade level. Students would take annual (semianual) tests and the top 10% would get awards of \$100.00 (bicycles, trips and so on), the next 20%, \$50.00 and so on. The prizes are a tangible answer to the question, "What is in it for me?" The goal, of course, is that as students study the questions and answers a percentage of them will truly become interested in the subjects, while the others will get a broad background. Status awards can also be given, junior master of physics, intermediate master of physics, and so on, as in bridge and chess. Incentives work! Why not try them?

ALLEN ROTHWART
Drexel University
Philadelphia, Pennsylvania

1/84

Research on Mideast

The letter by Vladimir Tamari (October, page 117) contains many allegations. I have spent some time researching them. Unfortunately, Tamari did not do his homework. The editors of PHYSICS TODAY have a responsibility to verify all political accusations before publication; unfortunately, they did not do so in this case.

Mohammed spoke favorably of the Jews and the Christians only when he hoped to convert them to Islam. When he failed to do so, he became fiercely anti-Semitic and anti-Christian. In the year 627, Mohammed and his army attacked the Jews of Qurayza in Arabia