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**PROCEEDINGS
OF THE
SUMMER INSTITUTE ON PARTICLE PHYSICS**

July 13 - 24, 1992

The Third Family and the Physics of Flavor

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PREFACE

The XX SLAC Summer Institute on Particle Physics took place from July 13 to 24, 1992. Two hundred and thirty three physicists from 10 countries gathered to study "The Third Family and the Physics of Flavor." As in past years, the school portion of the Institute lasted seven days followed by a three-day topical conference which covered recent experimental and theoretical developments. The conference concluded with a dedication to Tau Physics and a celebration of Martin Perl's 65th birthday.

The third family was well-represented at the Summer School with lectures on the t and b quarks, and tau lepton and neutrino physics. Different manifestations of flavor physics covered models for quark and lepton masses; CP violation and current developments needed for further experimental progress were also presented. The topical conference was highlighted by reviews of new results in B physics, neutrino physics and cosmology. The final morning of the topical conference was devoted to recent tau physics results from BES, CLEO, Argus and LEP, as a prelude to the afternoon's Tau Symposium. The Symposium included presentations on early search for heavy leptons, the heavy lepton signature and Perl's discovery of the Tau at SLAC. The tribute included an inspired performance of "Happy Birthday" by an ensemble of Martin's former students and post-docs on bagpipes, piano, saxophone, tambourine, and triangle. The afternoon concluded with the presentation of a most anomalous, stuffed emu to Martin, and ample cake and champagne for everyone.

This year marked the 20th SLAC Summer Institute anniversary, and it is our pleasure to acknowledge former program directors Sid Drell, Dick Blankenbecler, Gary Feldman and Fred Gilman for their efforts to found, invigorate and nurture these schools over the years.

David Leith
David Burke
Lance Dixon

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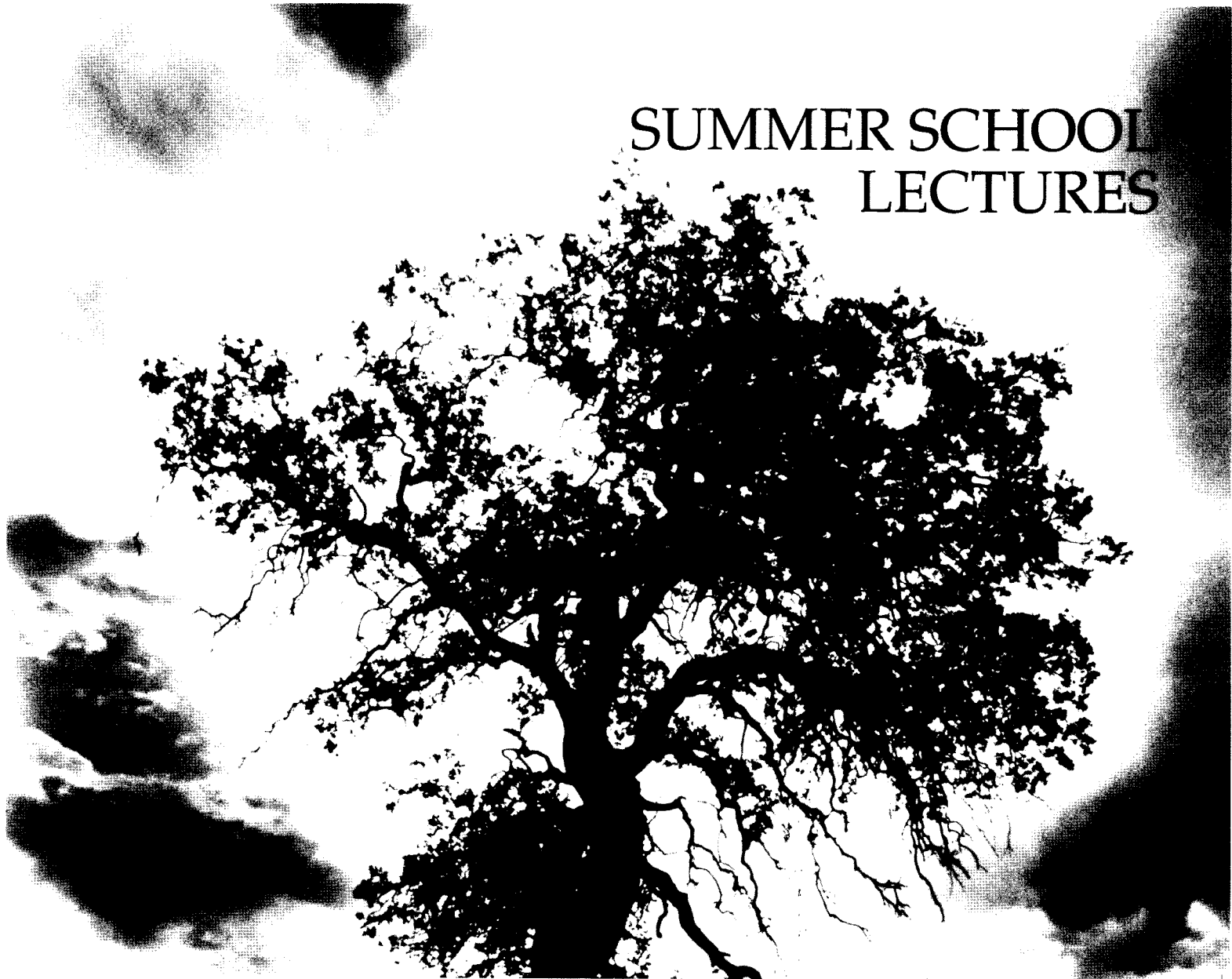
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SUMMER SCHOOL LECTURES



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