CONTENTS

C. S. Wu , A Dedication	V
P. Franzini	
PREFACE D. B. Cline	vii
OVERVIEW OF FLAVOR-CHANGING NEUTRAL CURREN	NTS
Flavor Changing Neutral Currents an Overview L. Wolfenstein	3
Flavor Changing Neutral Currents: A Perspective W. Marcianol	7
Effects of Flavor Neutral Currents on SUSY Dark Matter Search R. Arnowitt and P. Nath	19
Could Neutral Currents Have Been Discovered in the 1960s? — The Role of Flavor-Changing Neutral Current (FCNC) D. B. Cline	25
Recent LEP 2 Results on Searches for New Phenomena Y. Pan	31
Exotics and High-Q ² at HERA C. M. Ginsburg, for the ZEUS and H1 Collaborations	39
QUARK-CHANGING FCNC Charm	
Flavor Changing Neutral Currents in Charm Sector [as signal for new physics] S. Pakvasa	49
FCNC and LFV D^0 Decays K. Lau, for the E771 Collaboration	59
An Overview of $D^0\overline{D}^0$ Mixing Search Techniques T. Liu	63

$D^0\overline{D}^0$ Mixing Searches at Fermilab E791 Tripathi, FERMILAB E791 Collaboration	71
A New Method to Search for $D^0 - \overline{D}^{\prime}$ Mixing J-K. Woo and D.B. Cline	75
	81
for the $BTeV$ Collaboration	
Beauty	
The LHC-B Experiment and Its Potential for FCNC Investigation G. Corti	89
FCNC Search in Z^0 Hadronic Decays V. Kostioukhine and Yu. Khokhlov	93
Тор	
Search for Flavor-Changing Neutral Current Decays of the Top Quark in $p\bar{p}$ Collisions at $\sqrt{s}=1.8$ TeV T . LeCompte, for the CDF Collaboration	97
RAFE KI FCNC	
Search for $K_L \to \pi^0 \nu \bar{\nu}$ at FNAL KTeV T. Nakaya, for the KTeV Collaboration	105
A Plan for the Experimental Study on the $K_L^0 \to \pi^0 \nu \bar{\nu}$ Decay at KEK T. Inagaki	109
A New Experiment to Measure the CP Violating Decay $K_L^0 \to \pi^0 \nu \bar{\nu}$ at the AGS D. Bryman, for the E926 Collaboration	113
LEPTONIC FCNC	
Possibility of Search for $\mu^+ \to e^+ \gamma$ with Polarized Muons Y. Kuno	121
Search for $\mu + N \rightarrow e + X$ in Deep Inelastic Scattering W. Kröger	125

	131
	137
MEGA: $\mu \rightarrow e \gamma$ S. So.	143
New Hig Neutral Z. Parsa l	147
THEOR Gen	
Signals R. Barbieri,	157
Simultan Ul C	167
CP Viol G. H	171
Perspective on FCNC: From Rare to Well Done G. W-S. Hou	179
New Physics Models for <i>CP</i> Violation with Flavor Changing Neutral Currents D. Silverman	185
SUSY and FCNC Supersymmetry and BR $(b \to s\gamma)$	191
Next-to-Leading Logarithmic Results in $B \to X_s \gamma$ C. Greub and T . Hurth	195
CP Violation and FCNC in the Third Family from Effective Supersymmetry A. E. Nelson	201

FCNC and the Top Quark	
Flavor Changing Transitions and the Top Quark in a Two Higgs Doublets Model S. Bar-Shalom	207
Flavor Mixing and Flavor Changing Neutral Currents S. Rajpoot	213
Supersymmetric Lepton Flavor Violation at the NLC <i>H-C</i> . Cheng	219
The $K_L \to \pi^0 \nu \bar{\nu}$ Decay Beyond the Standard Model Y. Grossman	223
Quark and Lepton Generations as Fundamental Group Representations in Osp(1/10) Supergravity J. Towe	227
Nonperturbative Effects in Inclusive $\overline{B} \to X_s \gamma$ Z. Ligeti	231
NEUTRINO MIXING AND FCNC Solar Neutrinos	
Solar Neutrinos: Where We Are J. Bahcall	237
³ He Transport and the Question of Nonstandard Solar Models W. C. Haxton	251
FCNC Solutions to the Solar Neutrino Problem P. I. Krastev and J. N. Bahcall	259
Atmospheric Neutrinos	
Atmospheric Neutrino Results from Super-Kamiokande C. McGrew, for Y. Fukuda Y. Totsuka (spokesperson) et al.	265
Short Baseline Experiments	
LSND Neutrino Oscillation Results D. H. White, for the LSND Collaboration	271
First Results from the NOMAD Experiment F. F. Wilson, for the NOMAD Collaboration	281

		٠	٠	٠
•	f	ı	1	ı

The CHORUS Neutrino Detector — Status, First Results and Outlook D. Bonekämper, for the CHORUS Collaboration	285
Three Neutrino Flavors are Enough A. N. Acker	291
Astrophysical Constraints	
Constraints/Evidence for Neutrino Mass from Heavy Element Nucleosynthesis G. M. Fuller	297
The Specific Properties of Unstable Neutrino Mixing L. A. Khalfin	303
CP AND CPT VIOLATION AND FCNC Present and Future Search for CPT Violation in FCNC Processes	
CPT Violation from Planck Scale Physics P. Huet	313
Vacuum Fluctuations and Decoherence in Mesoscopic and Microscopic Systems J. Ellis, N. E. Mavromatos, and D. Nanopoulos	321
Testing CPT Symmetry V. A. Kostelecky	337
Testing of CPT Invariance at a &Factory P. Franzini	345
Results on CP, T, CPT Symmetries with Tagged K^0 and K by CPLEAR P. Kokkas, for the CPLEAR Collaboration	353
CP Violation Update — Present and Future	
CP Violation in the <i>B</i> Meson System M. <i>Gronau</i>	357
Status of the KTeV Experiment at Fermilab A. Lath, for the KTeV Collaboration	371

AGENDA	375
LIST OF ATTENDEES	377