


Proceedings of the Calorimeter Workshop

May, 1975

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PREFACE

Calorimetry has played an increasingly important role in recent years as higher energy accelerators have become available. About thirty per cent of the electronic detector experiments at Fermilab have utilized calorimeters.

A workshop on calorimetry was held at Fermilab on May 9 and 10 to disseminate the experience gained by experimental groups working at this Laboratory, as well as groups working at other laboratories. It provided individuals planning to construct calorimeters with a chance to gain information and exchange ideas. The workshop was sponsored by the Research Services Department, Research Division, Fermilab, and was organized by M. Atac, M. Awschalom, B. Brown, D. Buchholz, and P. Limon. Over 82 scientists, representing 26 institutions, attended the workshop. Some new methods and techniques resulting from recent experiments and Monte Carlo calculation results were discussed during the conference. Good progress has been made in calorimetry, although some physical and technical problems are not clearly understood as yet. Among the most important problems are physics limitations on calorimetry and radial dependence of the hadronic and electromagnetic cascade distributions. It appears that the Monte Carlo calculations have followed the experimental results quite closely up to 50 GeV/c. Development work on hadron calorimeters with good energy resolution has recently produced some exciting results. Among them are liquid-argon calorimeters using uranium plates (W. J. Willis) and high density thin plate-liquid scintillator calorimeters (H. Hilscher).

To speed up the distribution of this book, it includes invited papers and contributed papers in their original forms. We apologize for any error which may have escaped the author's and/or our attention.

M. Atac
July 1, 1975

TABLE OF CONTENTS

Author(s)	Title	Page Number
C. W. Fabjan W. J. Willis	Physics Limitations on Calorimetry	1
T. A. Gabriel	A Calculational Approach to Ionization Spectrometer Design	13
A. Van Ginneken	Monte Carlo Simulations of Calorimeter Response	29
W. V. Jones	Simulation of Nuclear-Electromagnetic Cascades in Ionization Calorimeters	41
J. A. Appel	Electromagnetic Shower Detector-Calorimeters	49
F. J. Sciulli	Photon-Collecting Hadron Calorimeters	79
B. C. Brown	Dreams and Schemes---or---Hadron Calorimeters in Design	119
C. R. Kerns	Gain Stability Measurement Techniques for Calorimeter Phototubes	143
L. R. Sulak	The Tricks and Trivia of Liquid Scintillator Hadron Calorimetry	155
A. Roberts et al.	Note on Proportional Counter Operation at Liquid Argon Temperature	191
J. F. Ormes J. F. Arens	Calorimeters for Cosmic Rays	193
G. B. Yodh et al.	Particle Albedo from Hadrons of 100 to 1000 GeV Interacting in a Calorimeter	201
J. Knauer et al.	Some Photon and Neutron Calorimeters for FNAL Experiment 87	215
A. Bodek et al.	Calibration of a Sampling Total Absorption Detector Designed for Neutrino Experiments	229
H. Haggerty	Multiparticle Spectrometer Calorimeters	251
W. V. Jones et al.	Response of a Tungsten Calorimeter to FNAL Proton Beams	263
W. Selove et al.	Some Early Results from a Segmented Calorimeter	271
H. Hilscher et al.	Design and Performance of a Liquid Scintillator/Iron Sandwich Calorimeter Used at the ISR	295
A. Baroncelli	Study of the Use of Hadron Calorimeters for the Measurement of the Transverse Momentum of Hadron Showers	325
D. Buchholz	Bibliography	338
	Calorimeter Workshop Attendees	339

