

OPEN SYMPOSIUM

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European Strategy for Particle Physics, Krakow, Sept. 10–12

<http://indico.cern.ch/conferenceDisplay.py?confId=182232>

Status reports and future plans without setting priorities; those are the subject of a closed meeting of Strategy Group in January 2013

Nakada's Introduction: "Review the current scientific situation in particle physics: high energy frontier, flavor and symmetries, strong interactions, astroparticle, neutrino, theory, accelerator, detector, computing, general infrastructure"

"... Global perspective needed ...; collect opinions on the scientific priority in Europe by various communities, ... build up a common understanding among the different communities in particle physics"

Subsequent steps: (1) Briefing book summarizes the symposium's conclusions ⇒ (2) Strategy Group drafts Strategy (January 2013) ⇒ (3) CERN Council (March 2013) ⇒ (4) Formal adoption at special Council session (Brussels, May 2013)

Our Snowmass process (CPM2012, pre-meetings, CSS2013) aims at a crisp set of statements in stage (1) ⇒ P5 panel for priorities

SESSION DETAILS

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T. Nakada	Introduction	Scope of symposium
A. Masiero	Overview (theory)	SM and beyond
G. Dissertori	High energy frontier	QCD/EWK, Higgs, anoms., BSM
F. Teubert	Flavor & symms. (exp.)	CKM, FCNC, heavy quarks, CPV
G. Isidori	Charged lepton flavor	EDMs, FCNC, CPV, TeV scale
C. Grojean	Expt. \Rightarrow new physics?	Higgs coupling details; SUSY
T. Wyatt	Next step facilities	High energy; heavy flavor; upg.
P. Newman	Strong ints. & QCD	Facilities; PDFs; α_s ; spin; . . .
H. Appelshäuser	Heavy-ion collisions	LHC; RHIC; new facilities
C. Spiering	Euro astropart. phys.	Undergnd. dets.; DM; $(\beta\beta)_{0\nu}$; CR
P. Hernandez	ν osc. phenomenology	Status; mass hier.; CPV; anoms.
H. Robertson	ν mass measurements	Direct; $(\beta\beta)_{0\nu}$; prospects
M. Zito	Accel. ν projects	Long and short baseline
C. Hagner	Longer-term ν projects	Including reactors, PINGU
C. Biscari	Accel. – high energy	Hadron, lepton colls.; plasma accel.
M. Lindroos	Accel. – high intensity	Linacs, cyclotrons, rings
A. Cattai	Detector R & D	ICFA instrumentation panel exists
J. Virdee	Large scale projects	Experience with LHC
T. Boccali	Computing; data mgmt.	Needs in 10 years
L. Alvarez-Gaume	Role of theory	Coordination with expt.
A. Lankford	Physics status – Americas	Frontiers; US planning
M. Yamauchi	Physics status – Asia Pacific	Japan: half a 500 GeV LC
T. Nakada	Single-slide summaries	Can't do everything at once

SOME HIGHLIGHTS

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Counting on LHC after shutdown to uncover new physics

Europe is well-coordinated in many subfields of HEP

Neutrino plans (LBNO, LAGUNA) are under way, with CERN \Rightarrow Pyhäsalmi the front-runner; hard to tell status

Little mention of Project X except by Lankford, whose description of the US program was excellent

ILC status (Yamauchi): Japan would draw ILC funds (half to come from abroad) from a separate source (post-tsunami reconstruction) and hence could also accomplish the KEK-B Upgrade and Hyper-Kamiokande.

“Higgs factory” suggestions ranged from “LEP III” to an 80-km tunnel under the Salève, first for a 250-GeV e^+e^- collider but then for high-energy hadrons

Hope to do as well at Snowmass-on-the-Mississippi!