Round Table Discussion

Alan Watson

Warmest Thanks to:-

Karl-Heinz Kampert (Wuppertal)

Julian Rautenberg (Wuppertal)

Bryan Pattison (CERN)

Fatima Najeh (CERN)

1960s and for a long time afterwards, regard in which Cosmic Rays was held by Particle Physics Community EXTREMELY LOW

High p_t Free Quark Monopole

“Everything has been discovered in cosmic rays”

Overheard

“I never thought cosmic rays were of use to anyone”

Told!

Now very different!

We are here

Auger Observatory is a Recognised CERN Experiment (R3)

Talks from CERN physicists who came to teach AND to learn

CMS using Cosmic Ray models for some aspects of their work!

This meeting has been a significant success

Beautiful Talks – but I don't feel we have ever been driven by theorists to where we are now!
Only solid prediction is of GZK – and that gave only a shape
Shape is now found but is it GZK?

Working Groups – great success

Must continue and should include JEM-EUSO:
we are not in Competition

Compare SPS and LEP

Young people working together and getting to know each other is necessary for any future World Observatory

Liked Paul Sommers suggestion

Astrophysics *(Masaki Fukushima will comment more)*

Auger is at least one-order of magnitude to small

Future instrument must be able to measure MASS as well as arrival directions and energy

How can a giant Observatory be created?

How will it complement JEM-EUSO?

How can we take this concept forward?

Small working groups or groups in 6 – 8 months?

Time scale is surely 8 – 10 years (longer for more money)

Hadronic Physics *(Paolo Lipari will comment more)*

What ambitions do we have?

The Muon Problem?

Cross-section at higher energy?

Energy discrepancy?

What improvements need to be made to existing Observatories (TA and Auger)?

What are the crucial measurements for hadronic interactions?