

Some Remarks

Konrad Elsener (CERN)

The early days of NBI workshops (and before that...)

Google for “Yamanoi KEK”

MINUTES OF E362 FRONT DETECTOR MEETING

Date: 16:00-17:00, **October 20, 1995**

Place: KEK meeting room (next to Library)

Present: Nishikawa (Chairman), Chikamatsu, Miyamoto (INS), Miyano(Niigata), Sakuda(KEK), Tamura(Okayama), Nishijima, Etou(Toukai), A.Suzuki, Kohama(Kobe)

(1) **Nishikawa summarizes the preceding Horn meeting** (Yamanoi, Ieiri, Yoshi-Suzuki, Miyamoto, Nishikawa, Kohama, A.Suzuki).

Yoshi-Suzuki(KEK) ordered a power supply for the Horn for ~1.2 Oku-yens. It will be delivered next April.

A public tender for the 2nd Horn will be held in mid-November. One problem with the horn is how to handle the thermal expansion of the structure, which is estimated to be about 3mm. They consider the structure whose one end is set free along the direction of the expansion.

Miyamoto/Yamanoi independently calculate the stress due to the magnetic force. They agree.

The Horn current (I) will be monitored by either the voltage ($=IR$), Hall probe or pickup coil.

(2) ...

...

First NBI workshop - 26-29 July 1999 at KEK



CERN participants:

Valeri Falaleev, K.E.

(NGS -> CNGS was not yet an approved project)

(Fermilab participants:

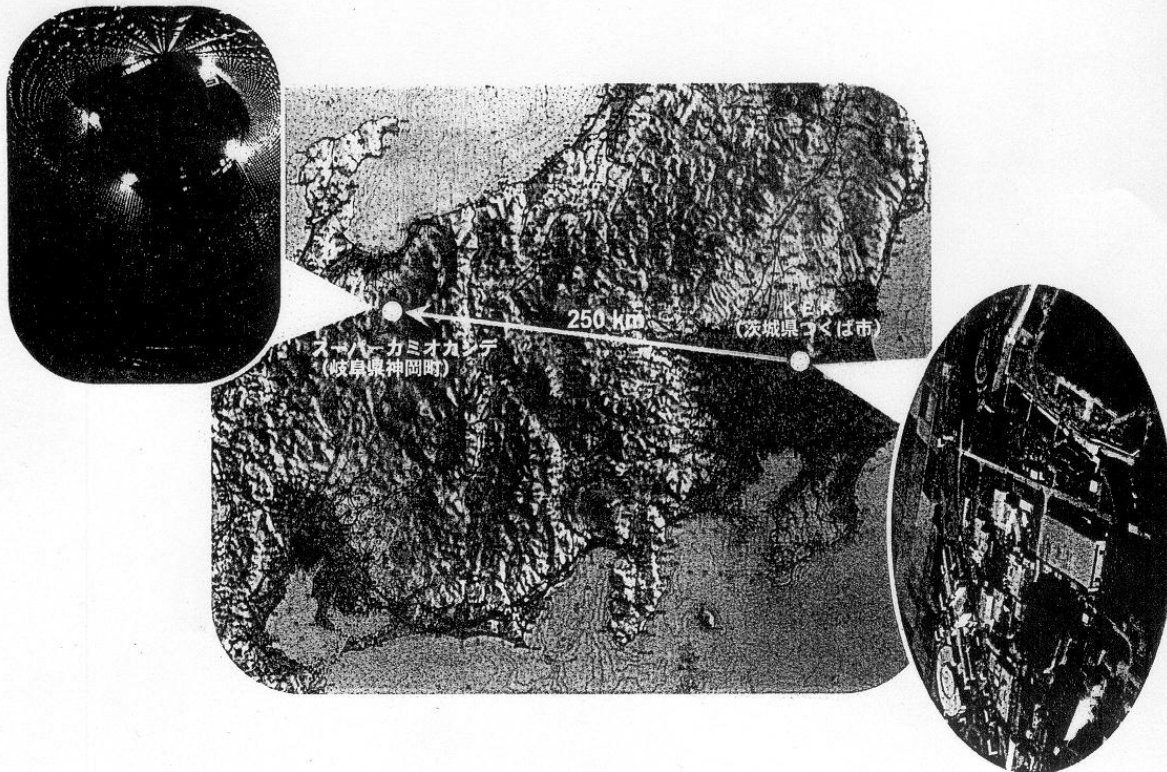
Jim Hylan and Jorge Morfin)

Long Baseline Neutrino Oscillation Experiment at KEK

Story of the Beam Instrumentation Side

Kazuhiro TANAKA
Beam Channel Group of the KEK-PS
Physics Department
Institute of Particle and Nuclear Studies

Apparatus for the Longest Shooting Game!

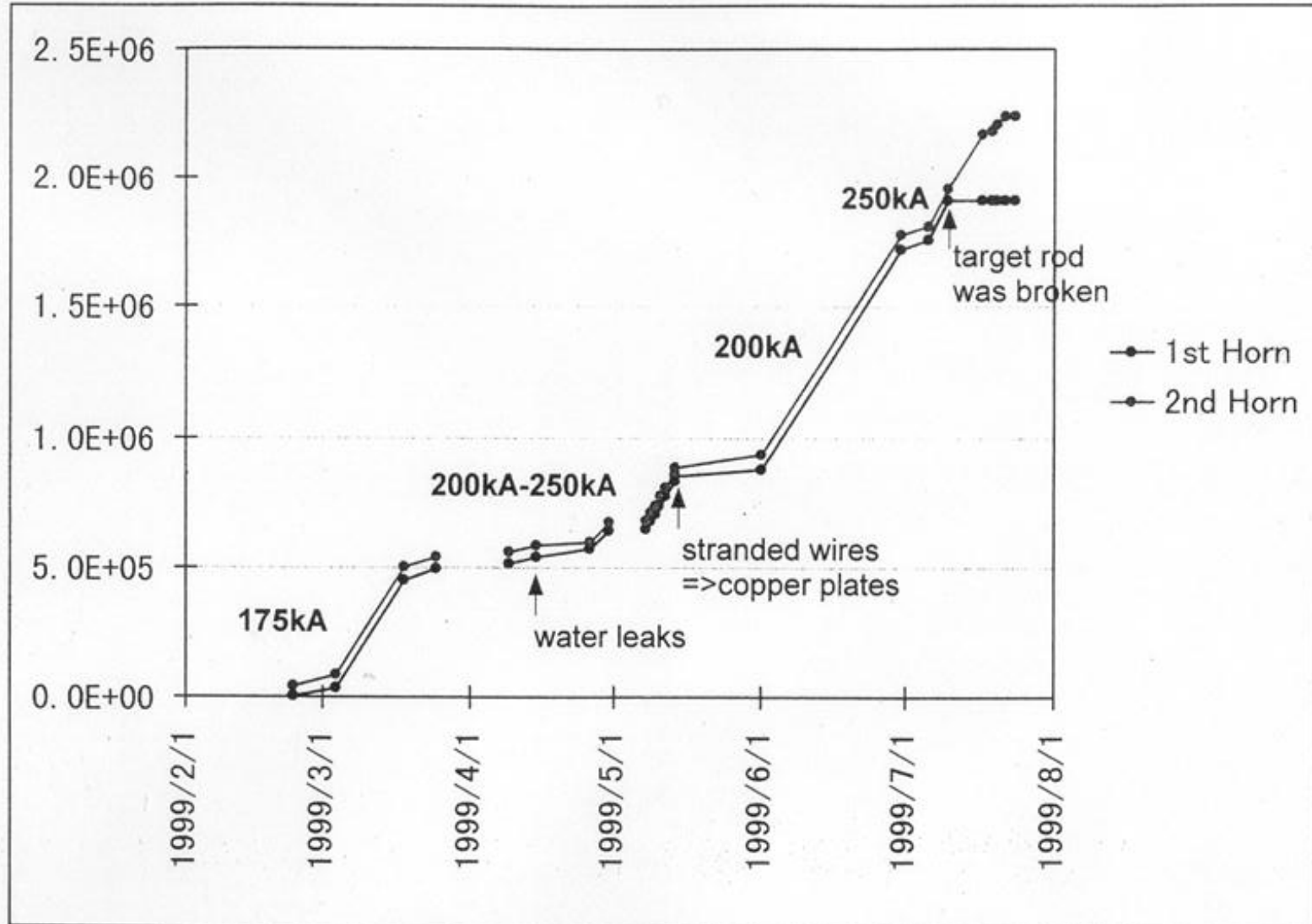


NBI 1999

“K2K”

NBI 1999

1999/7/24
yamanoi





NBI 1999 Proceedings

... we then moved on to ...

Fermilab (2000)

CERN (2002)

KEK (2003)

Fermilab (2005)

CERN (2006)

J-PARC (2010)

... to the web ...

... and to INDICO ...

NBI 2002



NBI 2003



NBI 2005

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NBI 2005



NBI 2006

NBI 2006

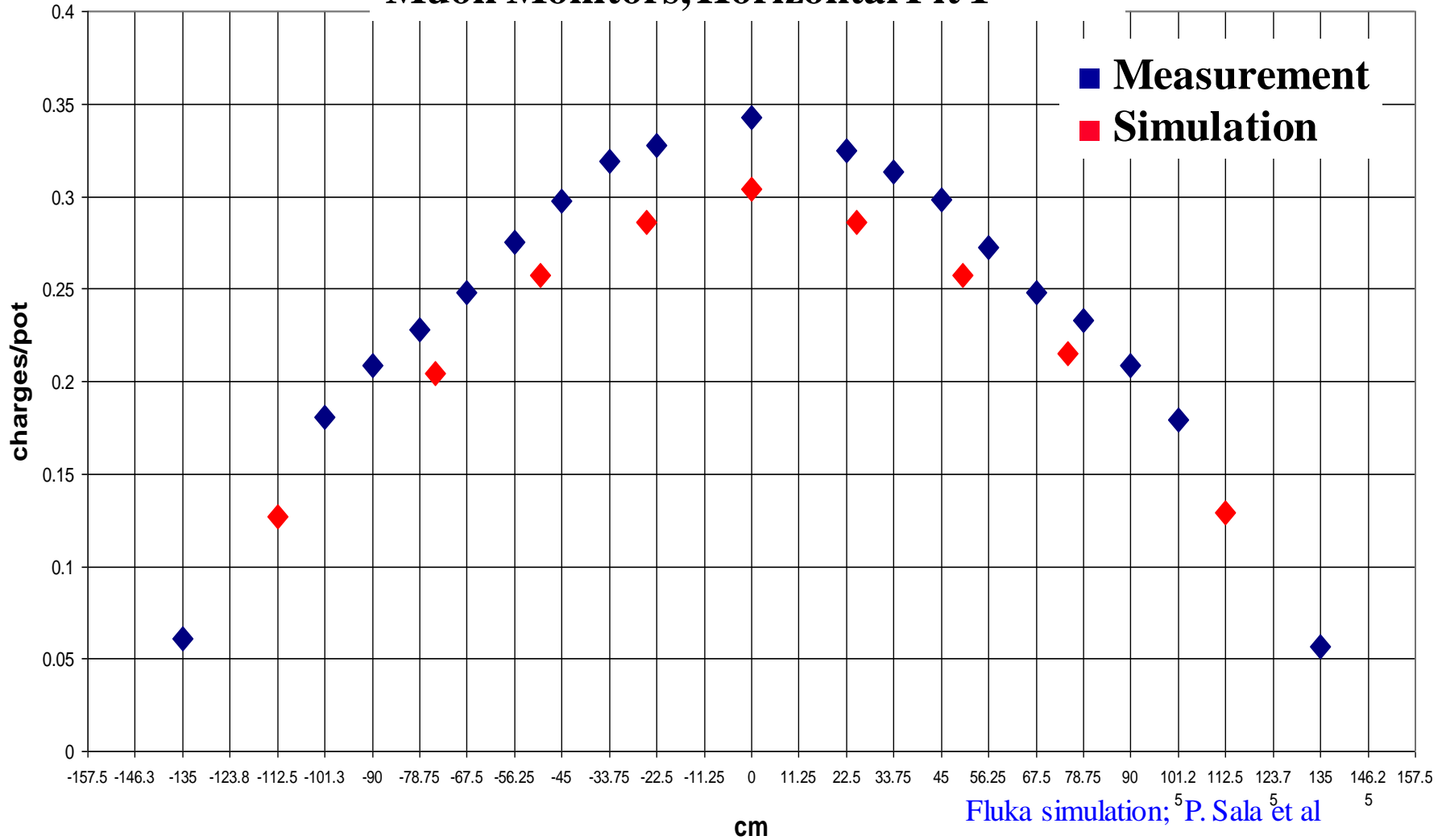




Comparison Meas.-Sim. I (Preliminary)



Muon Monitors, Horizontal Pit 1



What's special about the NBI workshops (why we like them...)

Final Horn Status of K2K

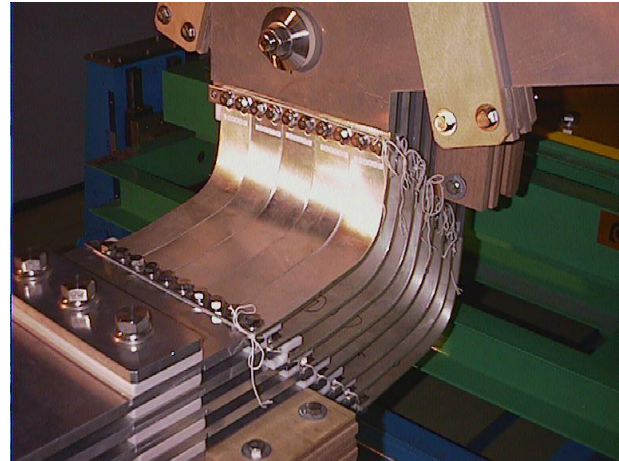
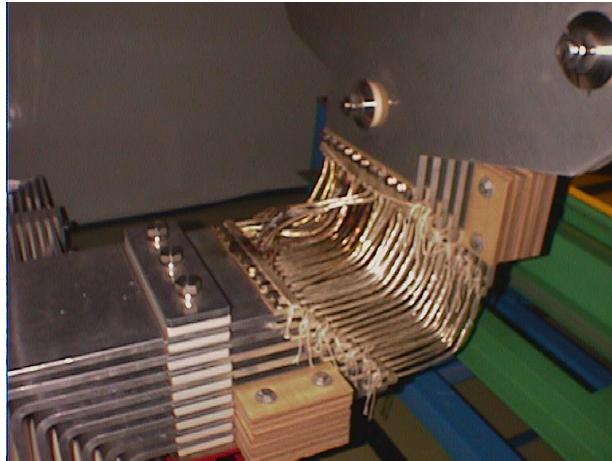
Kazuhiro TANAKA for
the KEK-PS Beam Channel Group,
& the K2K Beam Tuning Team



1st Horn Target Rod (20mm diameter) Break
(1.9×10^6 excitations)



Horn Flexible Feeder Trouble (8.5×10^5 excitations)



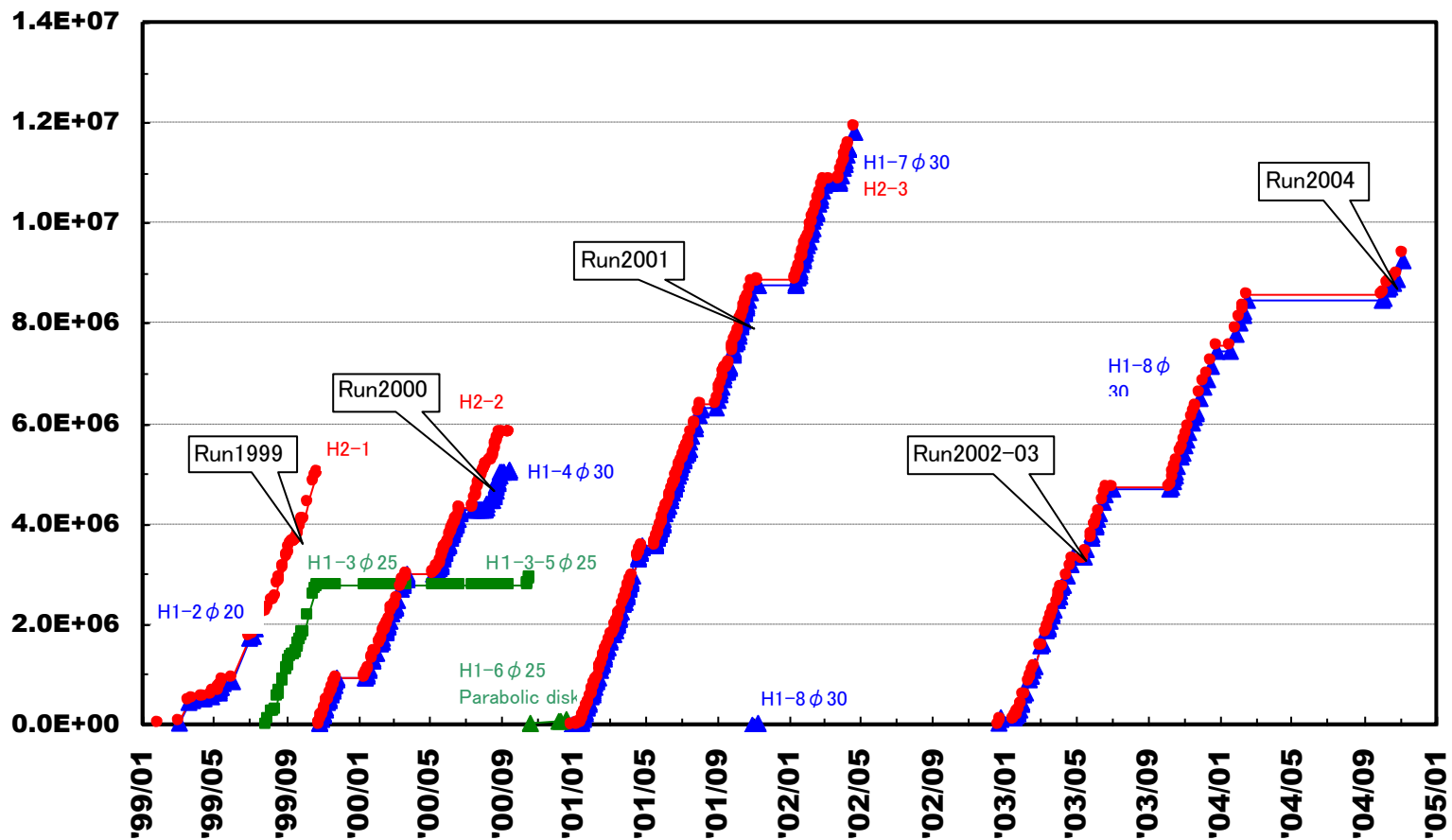
KEK Engineering Award 2003



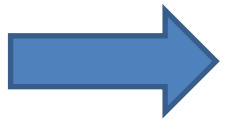
Suzuki and Yamanoi received 3rd KEK Engineering Award for their development of K2K horn system

from K. Tanaka

Operation History of K2K Horns



On horns, what we learned are...



(Presented at NBI2000)

- Horn can work as designed in both mechanically and electrically.
- We should pay attention more and more to peripherals, which can break as designed.
- Test excitation in the actual position should be as many as possible.
- Never compromise with Physicists.
- Sufficient time, money, manpower for R/D and for operation, maintenance.
- Believe yourself.

Conclusion

Have a great workshop !

(Apologies that I can only be around part-time)