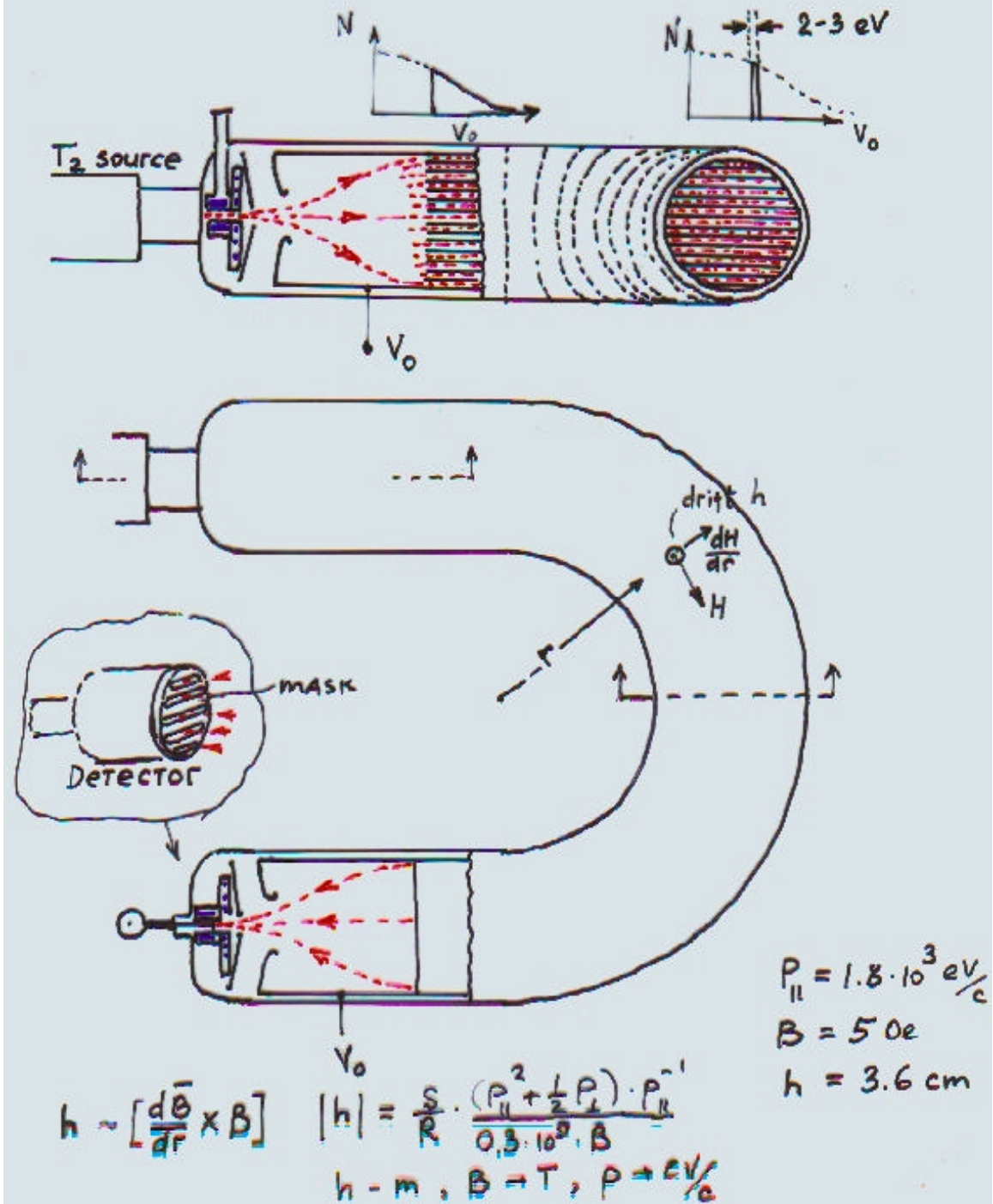
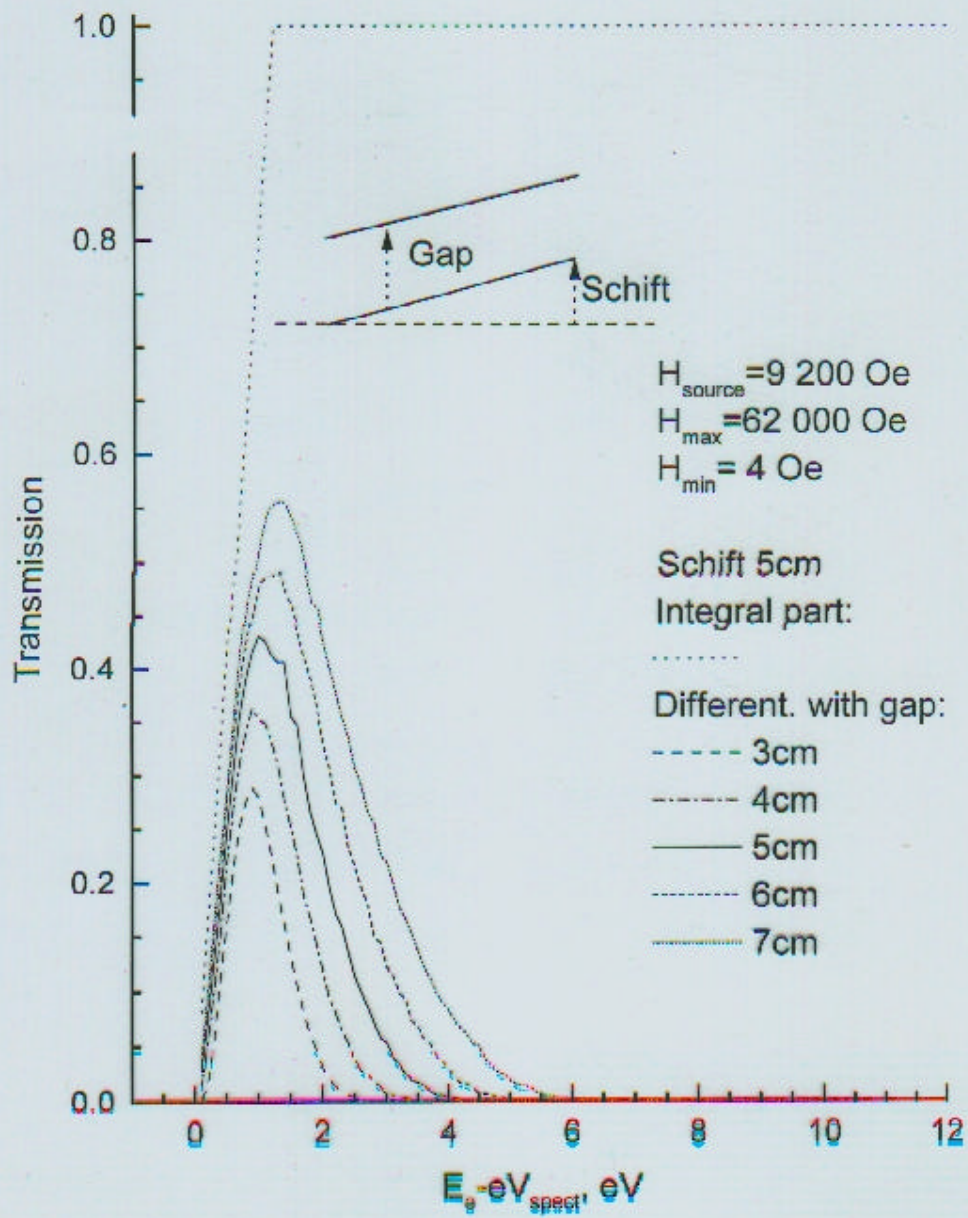


ADIABATIC DIFFERENTIAL SPECTROMETER.





SCIENTIFIC PROGRAMME of NANP-99

Monday, June 28

9:30 – 9:45 OPENING

Neutrino Physics

9:45 J.W.F. Valle (Valencia)
Neutrino mass and physics beyond the Standard Model: present status

10:35 – 11:00 Coffee

Chairman J.W.F. Valle

11:00 V.S. Berezinsky (LNGS)
Solar neutrino problem 1999

11:50 W. Gajewski (Irvine)
Evidence for neutrino oscillation from Super Kamiokande detector

12:30 – 14:00 Lunch

Chairman V.S. Berezinsky

14:00 V.N. Gavrin (INR, Moscow)
Solar neutrino results from SAGE

14:40 G.V. Domogatsky (INR, Moscow)
Baikal neutrino experiment

15:20 V.M. Lobashev (INR, Moscow)
Neutrino mass and anomaly in the tritium spectrum

15:50 Ch. Weinheimer (Mainz)
Newest results from the Mainz neutrino mass experiment

16:30 – 16:50 Coffee

Chairman G.V. Domogatsky

16:50 E. Ma (Riverside)
Nearly mass-degenerate majorana neutrinos, double beta decay, and neutrino oscillations

17:30 M.Yu. Khlopov (Moscow)
Cosmoarcheology — self-consistent cosmological tests of new physics in inflationary models with baryosynthesis and dark matter

18:10 H. Humaki (Padova)
The precious information from the Supernova LMC-87-A on the neutrino masses and mixing angles among the flavor-states and the mass-states

19:30 Welcome Reception

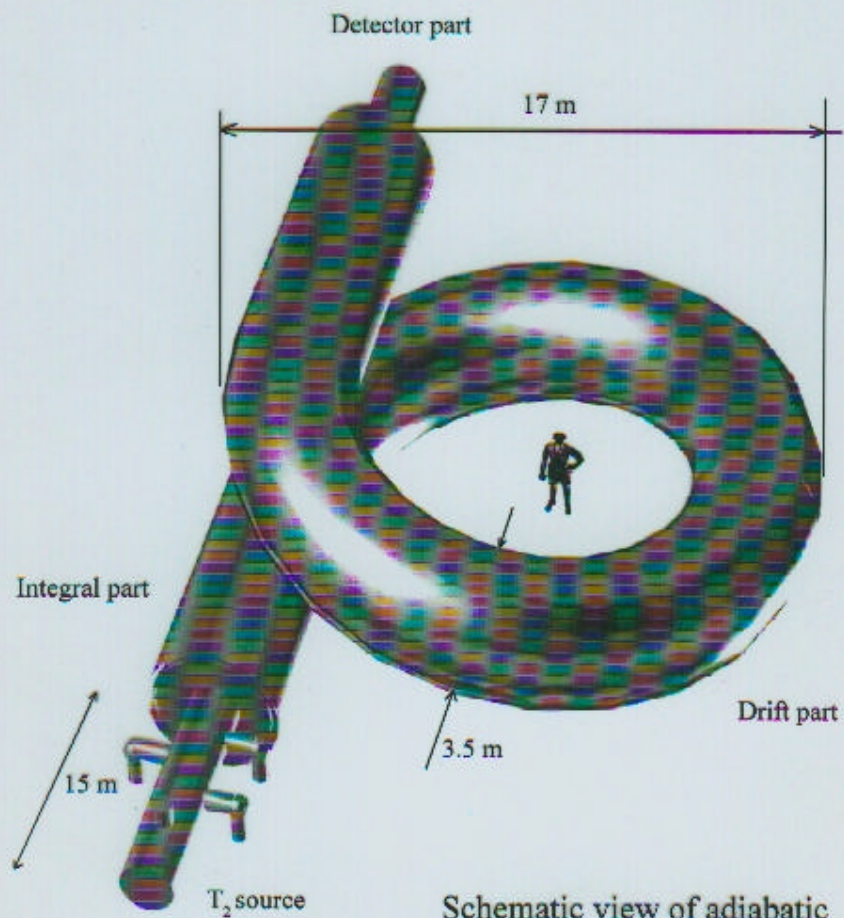
$$L = \frac{S}{4} \left(\frac{\Delta E}{E} \right) ; \quad \frac{\Delta E}{E} = \frac{H_{\min}}{H_{\max}}$$

At present Troitsk

$$L = 0.18 \text{ cm}^2$$

$$S = 0.4 \text{ m}^2 - \phi 2.8 \text{ m} (6 \text{ m}^2)$$

ΔE	H_{\min}	H_0	L
1.8 eV	50 e	5T	0.6 cm ²
2.7 eV	7.50 e	5T	2 cm ²



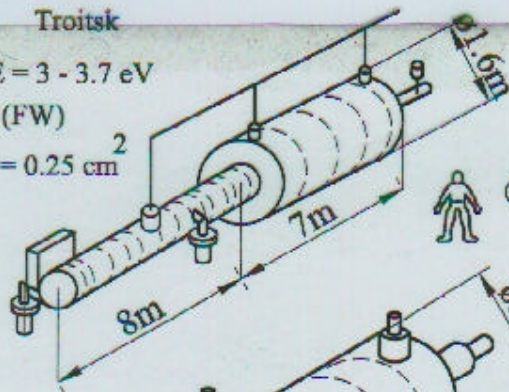
Schematic view of adiabatic differential spectrometer with 2π drift angle

Resolution 1.5 eV (FWHM)
Luminosity $\sim 0.5 \text{ cm}^2$

Integral spectrometer.

Troitsk

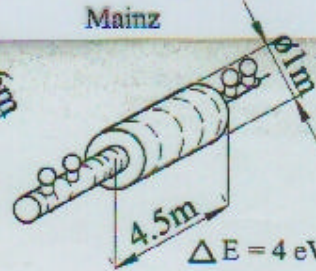
$\Delta E = 3 - 3.7 \text{ eV}$
(FW)
 $L = 0.25 \text{ cm}^2$



Integral spectr.

Mainz

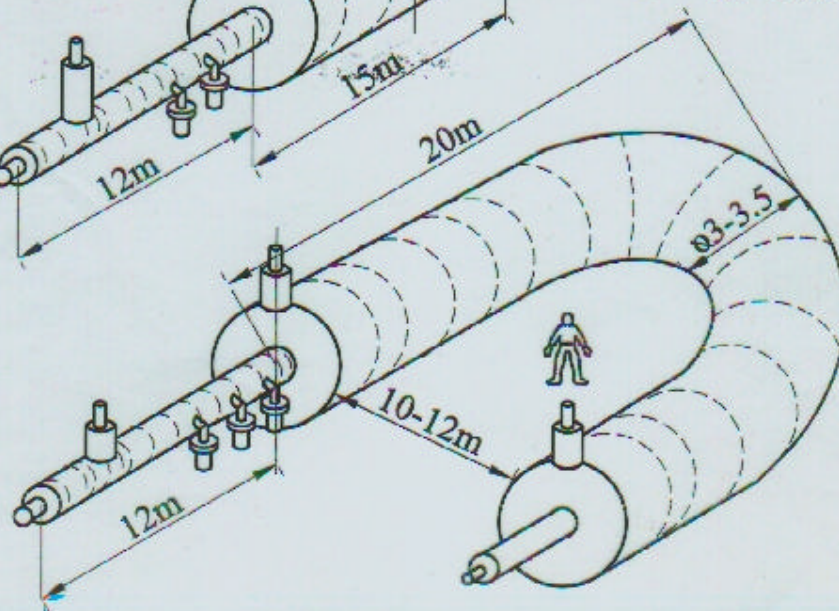
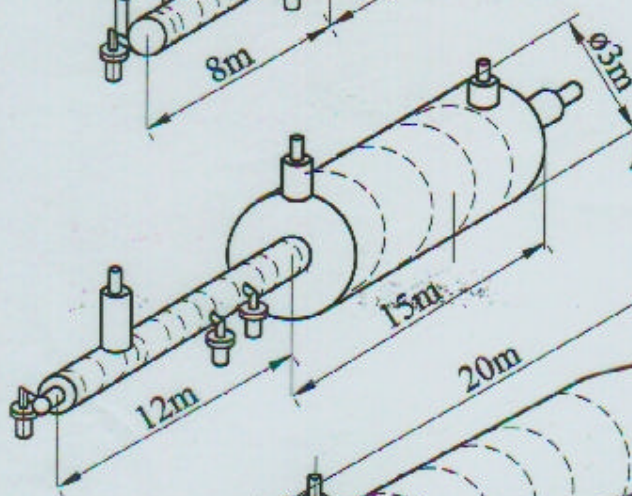
$\Delta E = 4 \text{ eV}$
(FW)



Future

Integral spectrometer

$\Delta E = 1 - 1.5 \text{ eV}$
 $L = \sim 0.7 - 1 \text{ cm}^2$



Differential adiabatic spectrometer

$\Delta E = 1.5 - 2 \text{ eV}$ (FWHM)

$L = \sim 0.6 - 1 \text{ cm}^2$