# FIRST RESULTS WITH BURLE 85011 MCP

Andrej Gorišek

University of Ljubljana & Institute Jožef Stefan

Testbeam revue, Tsukuba, 2004/03/09

- ❖ MCP geometry and readout
- ❖ first combined rings with MCP+RICH2
- ❖ Cherenkov angle, N_{phot}
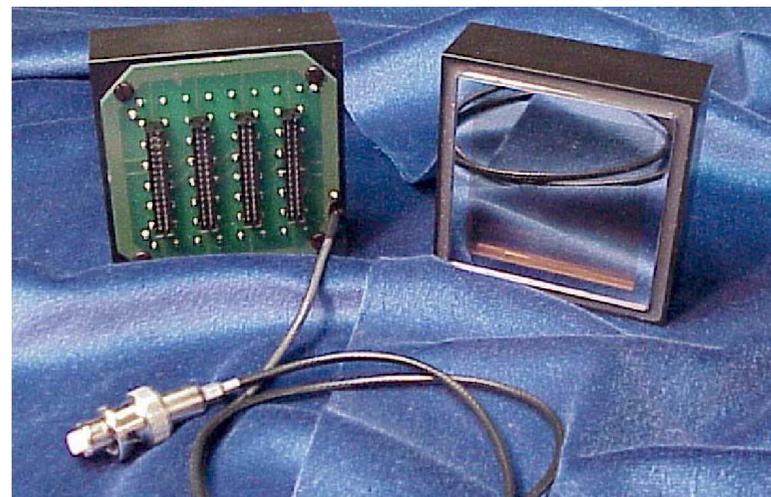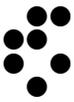
MCP geometry

❖ mapping

❖ 64 channels
❖ 8x8 geometry
❖ active area size: 48 mm × 48 mm
❖ pad size: 6 mm × 6 mm

Y								
85	1	2	17	18	33	34	49	50
80	3	4	19	20	35	36	51	52
75	5	6	21	22	37	38	53	54
70	7	8	23	24	39	40	55	56
65	9	10	25	26	41	42	57	58
60	11	12	27	28	43	44	59	60
55	13	14	29	30	45	46	61	62
50	15	16	31	32	47	48	63	64
45/40	-20	-15	-10	-5	0	5	10	15	20

X

9 March 2004
Testbeam   revue,
Tsukuba

First results with BURLE 85011 MCP (page 2)

A.Gorišek
Uni.Ljubljana, J.Stefan
Institute
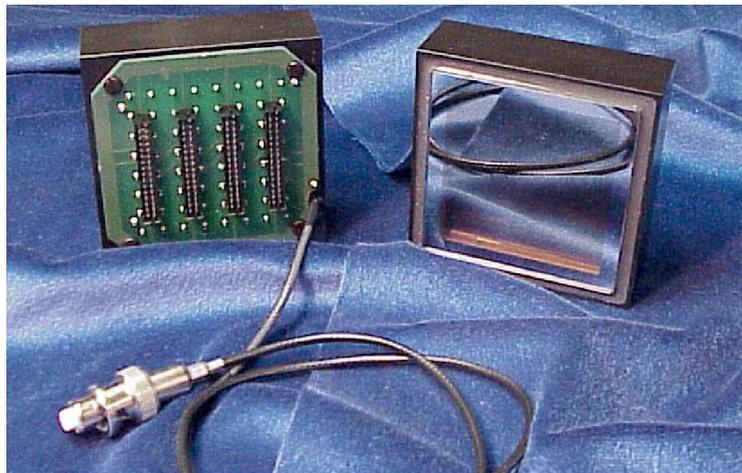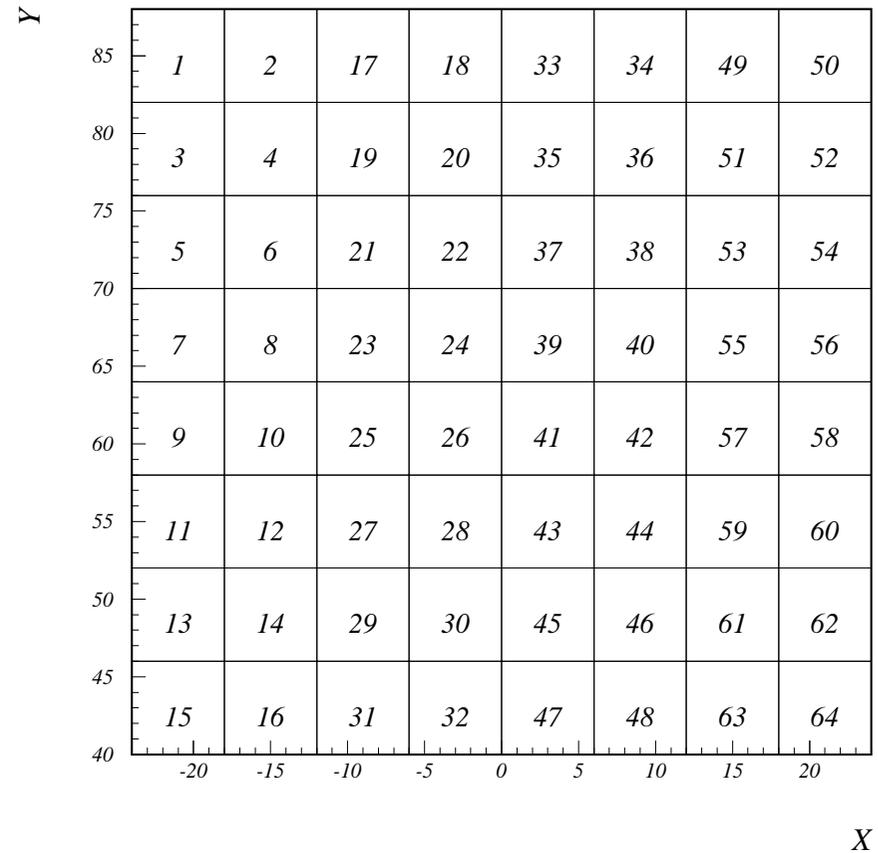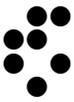
MCP readout

❖ signals readout with ASD boards (HERA-*B* OTR)
    ASD8 chips - amplifier, shaper, discriminator
    digital output realized as a current source

❖ AMPDISSH boards used for ASD8 output signal to ECL conversion

❖ signals readout with ASD boards (HERA-*B* OTR)
    ASD8 chips - amplifier, shaper, discriminator
    digital output realized as a current source

❖ AMPDISSH boards used for ASD8 output signal to ECL conversion
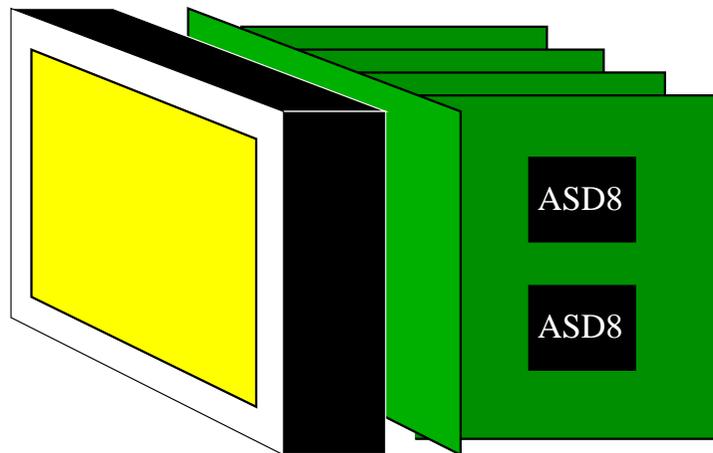
BURLE 85011

ASD8 boards

AMPDISSH

LeCroy 2277 TDC

Sparc VME board

ASD8

ASD8

A.Gorišek
Uni.Ljubljana, J.Stefan
Institute
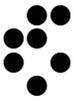
First combined rings MCP+RICH2

run 119

ring on PMT plane
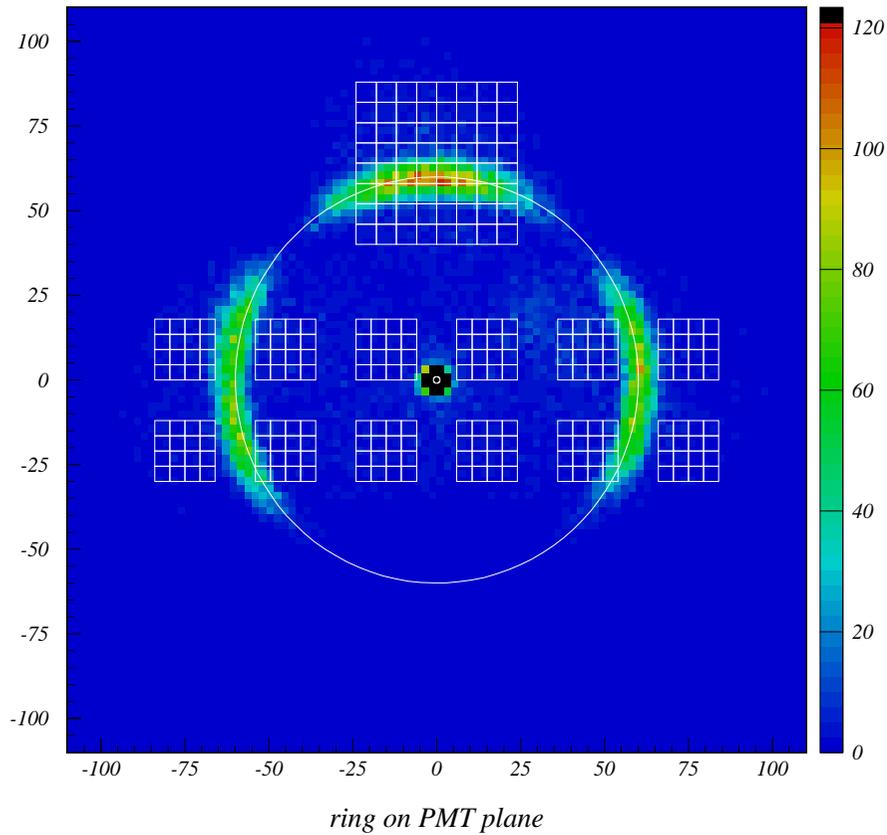
9 March 2004
Testbeam   revue,
Tsukuba

First results with BURLE 85011 MCP (page 4)

A.Gorišek
Uni.Ljubljana, J.Stefan
Institute
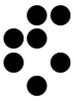
Cherenkov angle, N_{phot}

run 119

dθ=-0.00592509 θ_c(rad)

χ^2/ndf	220.6 / 107	
P1	544.5 $\pm$	7.765
P2	0.3016 $\pm$	0.1896E-03
P3	0.1584E-01 $\pm$	0.1639E-03
P4	-12.95 $\pm$	0.7522
P5	112.5 $\pm$	4.353

theta cerenkov

θ_c(rad)

r0000119 RICH3

ID	30301
Entries	6714
Mean	1.379
RMS	0.8915
UDFLW	0.000
OVFLW	0.000
ALLCHAN	6714.

nf= 1.29

nb= 0.10

np= 1.80

NHIT, thc in 3 sigma
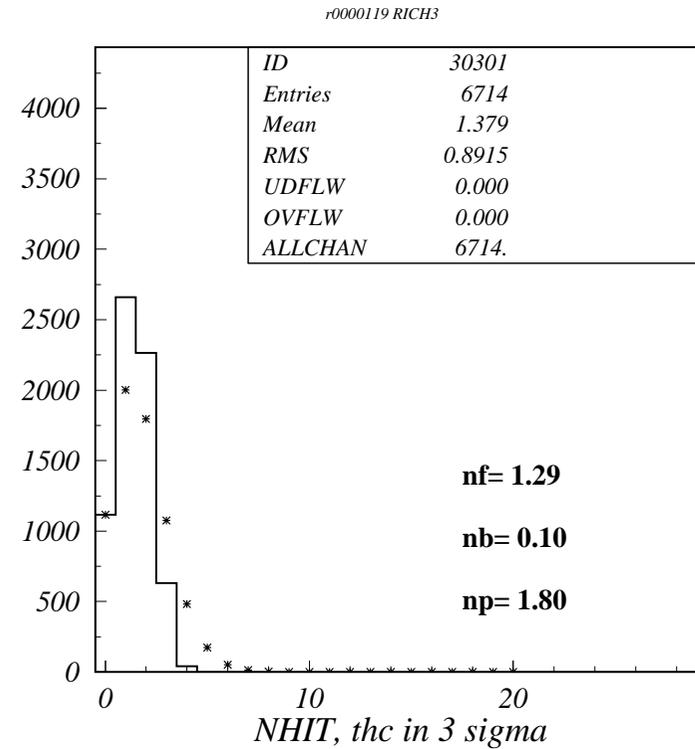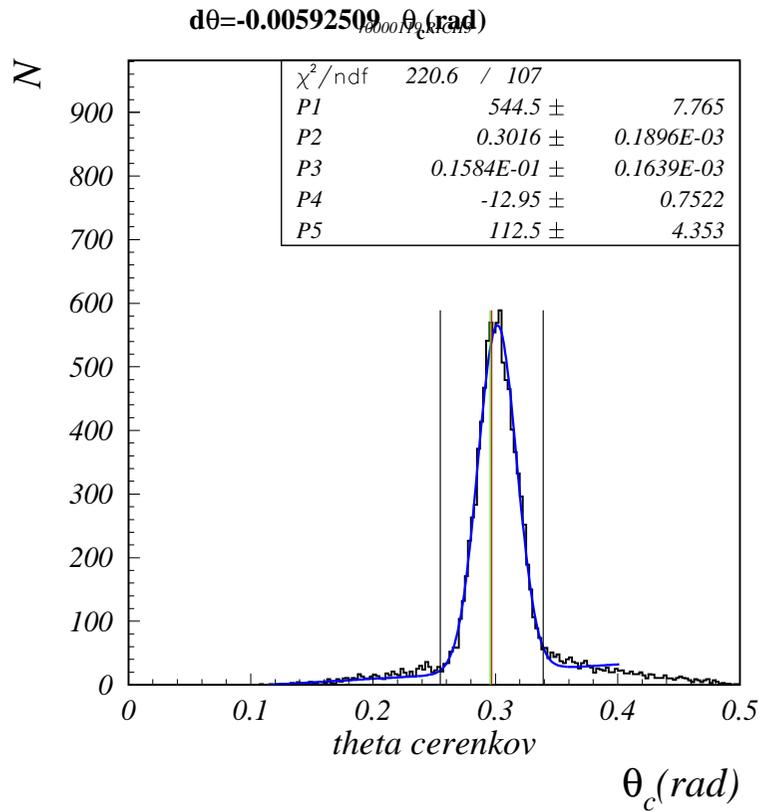
❖ width ≈ 15.8 mrad (run 119, RICH2 14.3 mrad)

❖ $N_p hot = 1.29$ (run 119, RICH2 2.19)

9 March 2004
Testbeam   revue,
Tsukuba

First results with BURLE 85011 MCP (page 5)

A.Gorišek
Uni.Ljubljana, J.Stefan
Institute