

Kuwait Muon Hodoscope Kuwait Muon Multi-Directional Telescope

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Basic informations:

Geographic latitude	29.24° N
Geographic longitude	47.97° E
Altitude	50 m above sea level
Standard pressure, mbar [hPa]	1013
Vertical geomagnetic cutoff rigidity	GV
Detector type	30×4 proportional counter tub (ø0.1x5 m ³)
X×Y×H, m	3.0×3.0×1.7
Площадь детектора, m ²	9
In continuous operation since	2007
Time resolution	1 min



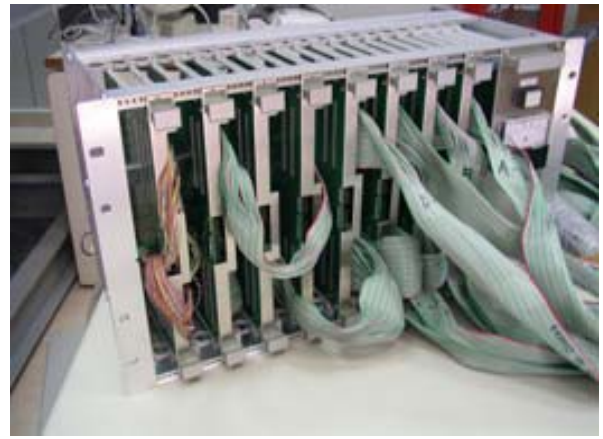
Observatory in KU campus



Amplifier
attached to
Counter



3m×3m muon Hodoscope

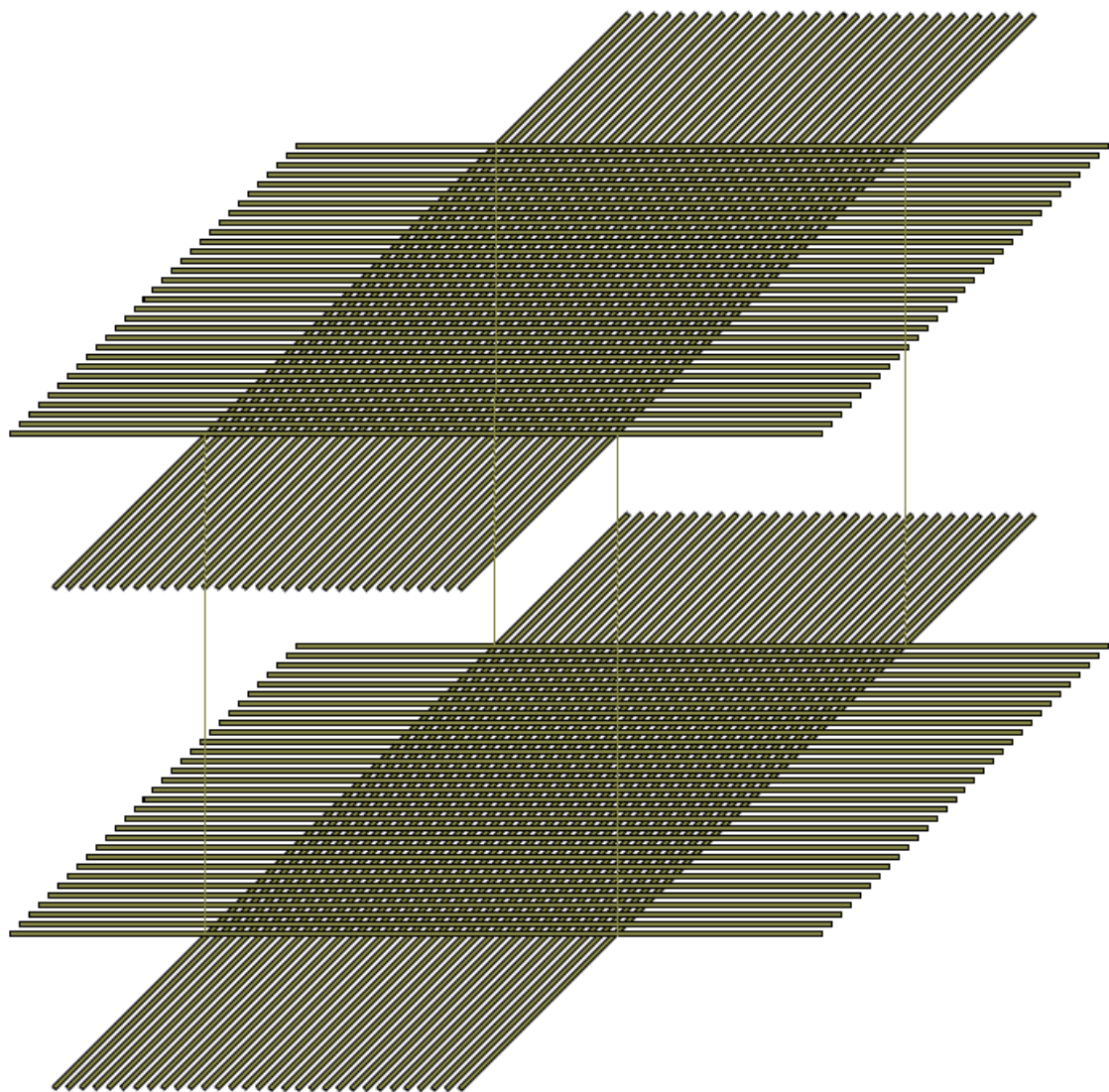


FPGA recorder



The recording system to the right and four horizontal layers with 30 proportional counter tubes in each layer for telescope $3 \times 3 \text{ m}^2$ to the left. Operational Since March 2006. Plan Expansion to $5 \times 5 \text{ m}^2$.





В верхней U и нижней L плоскости по $k_x=30$ и $k_y=30$ детекторов по каждой координате. Каждая плоскость содержит $k_x \times k_y$ детекторов, между которыми организовано $m=(k_x \times k_y)^2=810000$ независимых двукратных совпадений. С помощью этих телескопов можно выделить $n=(2k_x-1) \times (2k_y-1)=3481$ независимых направления прихода частиц.

Kuwait

Telescope Name	Directional Telescope	Number of sub-telescopes	Count (imp/sec)	Count error (%/hour)	P _m (GV)	β (%/hPa)	Viewing Lat °N lon °E	
v0			239	0.10	62.33	-0.13	24.4	77.2
n1			60.8	0.19	67.75	-0.13	61.1	76.3
s1			60.2	0.19	69.42	-0.14	-11.0	90.1
e1			59.4	0.20	73.45	-0.12	18.8	121.1
w1			61.1	0.19	65.95	-0.14	12.8	36.4
ne2			17.8	0.35	78.21	-0.12	44.7	127.9
nw2			18.0	0.34	72.86	-0.13	45.2	18.8
se2			18.0	0.35	82.32	-0.12	-5.9	119.7
sw2			18.9	0.34	73.38	-0.15	-17.3	56.1
n3			7.78	0.47	97.93	-0.12	81.4	58.9
s3			7.78	0.47	102.2	-0.12	-26.0	95.8
e3			7.22	0.49	109.8	-0.12	15.0	135.9
w3			7.78	0.47	97.0	-0.14	0.79	15.7
Up carpet	2π							
Dn carpet	2π							

<http://physics.ku.edu.kw/DerivedRemoteSensingFacilities.aspx>