

Comparison of MATHUSLA with other CR experiments in same E range

Observatory	Detector	Area (10 ⁴ m ²)	Energy range (PeV)	Full coverage	Spatial resolution	Angular resolution	Energy precision	Composition capabilities	Test of models
MATHUSLA 100	Particle tracking	1	(1, 50)	Yes	Very good	Very good	Very good	Limited by statistics	Very good
HAWC	Water Cherenkov	2.2	(10 ⁻² , 1)	62%	Good	Good	Good	In investigation	In investigation
KASCADE	Scintillators, muon tracking detector, calorimeter	4	(1, 10 ²)	1.55%, 0.64%, 0.76%	Good	Good	Good	Very good	Very good
IceTop	Ice Cherenkov	100	(1, 10 ³)	0.044%	Good	Good	Good	In investigation	Good
Tale (TA)	Scintillators, fluorescence telescopes	10 ³	(30, 10 ⁴)	Partial	Good	Good	Excellent	In investigation	Good