

KASCADE_SmallDataSample_nA_runs_0877-7417_HDF5

every 400th event from the database is taken into account for this selection

general information

Set name	KASCADE_SmallDataSample_nA_runs_0877-7417_HDF5		
Data selection	OCEANUS_1s		
Data format	HDF5		
Number of events	general	1,080,295	
	array	986,577	
	calorimeter	250,981	
	grande	88,259	
	lopes	8	
Zip-file name / size	KASCADE_SmallDataSample_nA_HDF5.zip / 74 MB		
Data file names / sizes	events.h5	/ 74 MB	
Creation date	5.2.2020		
Application	Quick tests of data samples and cuts to optimize requests		

KASCADE quantities selected

Quantity	Description	Range	Cut
E	Estimated primary energy	10^{13} - 10^{19} eV	1/400th
Xc	X-core position	-91 - +91 m	1/400th
Yc	Y-core position	-91 - +91 m	1/400th
Ze	Zenith angle	0° - 60°	1/400th
Az	Azimuth angle	0° - 360°	1/400th
Ne	Number of e/ γ particles	100 - 500,000,000	1/400th
Nmu	Number of Muons	100 - 50,000,000	1/400th
Age	Shower age	0.1 – 1.48	1/400th

CALORIMETER quantities selected

Quantity	Description	Range	Cut
Nhad	Number of Hadrons	0 – 511	1/400th
Ehad	Energy sum of Nhad Hadrons	0, $10^{10} - 10^{16}$ eV	1/400th

GRANDE quantities selected

Quantity	Description	Range	Cut
Xc	X-core position Grande	-500 - +100 m	1/400th
Yc	Y-core position Grande	-600 - + 100 m	1/400th
Ze	Zenith angle Grande	0° - 40°	1/400th
Az	Azimuth angle Grande	0° - 360°	1/400th
Nch	Number of charged particles Grande	11111 - 1,000,000,000	1/400th
Nmu	Number of Muons Grande	1500 - 100,000,000	1/400th
Age	Shower age Grande	-0.385 – +1.488	1/400th

GENERAL quantities selected

Quantity	Description	Range	Cut
T	Air temperature	-20 ° - +50°	1/400th
P	Air pressure	960 -1040 hPa	1/400th
Gt	Global time (sec's since 1.1.1970)	894,638,100 – 1,358,239,243	1/400th
Mt	Micro time	0 – 999,999,999	1/400th
DateTime	Date & Time	8.5.1998–15.1.2013	1/400th
R	Run number	887 - 7417	1/400th
Ev	Event number	1 – 4,100,000	1/400th
UUID	Universal Unique Identifier		1/400th

LOPES quantities selected

Quantity	Description	Range	Cut
EfieldMaxAbs	maximum atmospheric electric field	0 - 50,000 V/m	1/400th
Azimuth EW & NS	azimuth of LOPES CC beam; EW & NS	0 – 360°	1/400th
Elevation EW & NS	elevation of CC beam; EW & NS	0 – 360°	1/400th
CC Height EW & NS	amplitude of CC beam; EW & NS	0 – 20 $\mu\text{V/m/MHz}$	1/400th
XHeight EW & NS	amplitude of X-beam; EW & NS	0 – 20 $\mu\text{V/m/MHz}$	1/400th
ConeAngle EW & NS	cone angle of wavefront; EW & NS	0 – 0,1 rad	1/400th
NCCBeanAnt EW & NS	nr of antennas contributing; EW & NS	0 – 30	1/400th
Eta EW & NS	slope parameter of LDF; EW & NS	-0.04 - 0.11 /m	1/400th
Eps EW & NS	ampl parameter of LDF; EW & NS	-0.04 - 0.11 $\mu\text{V/m/MHz}$	1/400th
Geomag_Angle	angle between geomagnetic field and KASCADE shower axis	0 – 120 °	1/400th
Geomag_AngleG	angle between geomagnetic field and GRANDE shower axis	0 – 120 °	1/400th
Reconstruction	angle between geomagnetic field and GRANDE shower axis	65 or 71	1/400th
LOPES Comp ID	LOPES identifier	0 or 1	1/400th