

DST format for HPS

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Table 1: Header bank with general event specific information, single row

	#	Variable	Comment
Header	1	Nrun	Run number
	2	Nevent	Event number
	3	Type	Event type (sim/data)
	4	Trig	Trigger type (trigger bit information)
	5	BC	Beam charge
	6	BCg	Beam charge gated by DAQ
	7	Tg	Time gated (MHz clock)
	8	EvST	Event start time (from ECal probably)
	9	RF1	RF time 1 (standard from accelerator)
	10	RF2	RF time 2 (just a backup)
	11	NclNtr	Number of clusters and tracks, can be bit-packed
	12	Evstat	Event status as reconstructed
	13	Con1	Scalers from ECal for example
	14	Con2	Scalers

Table 2: Tracking bank, the number of row is the number fitted tracks

	#	Variable	Comment
Tracking	1	x	x, y, z-coordinates at the vertex
	2	y	
	3	z	
	4	px	px, py, pz components of the momentum vector at "vertex"
	5	py	
	6	pz	
	7	xc	x, y, z positions at the ECal front face
	8	yc	
	9	zc	
	10	cx	direction cosines at the ECal front face
	11	cy	
	12	cz	
	13	q	Charge
	14	sl	Stereo layer hits
	15	al	Axial layer hits
	16	chi2	Chi2 for track fit
	17	C11	Covariance matrix: (Cij) may be not needed
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Table 3: Calorimeter bank, the number of row is the number of reconstructed clusters

	#	Variable	Comment
Calorimeter	1	Etot	Total energy of the hit, corrected for sampling fraction
	2	Time	Time of the hit
	3	x	
	4	y	x, y -coordinates at the face of the calorimeter
	5	z	z-coordinate corrected for the shower depth
	6	M2	Second moment of the hit pattern
	7	M3	Third moment of the hit pattern
	8	Eclast	Reconstructed cluster energy
	9	Ecmax	Highest energy in the cluster
	10	xmax	x-coordinate of highest energy module
	11	ymax	y-coordinate of highest energy module
	12	nmod	Number of modules in the cluster
	13	dT	Average time dispersion between modules