

Jet Energy Corrections: reference sample for jet energy corrections and jet resolution for JERC group

This page allows you to check if your implementation of jet energy corrections heir propagation to the chsMET are correct. You'll find below a dump of 16 events for Data. For each event, information about the jets and the chsMET is given. Please, note that for JERC studies MET should be Type1 corrected with chsTypeI=L1FastJetL2L3-L1RC scheme.

Type1 Corrected PF MET is pfTypeI=L1FastJetL2L3-L1FastJet corrected PF MET.

You should run your code on the same input file and with the same conditions and check you obtain the same values for corrected jet and MET.

CMSSW 8.0.26

*Input files: /afs/cern.ch/user/t/tberger/public/pickeventsEG_BCD.root

/afs/cern.ch/user/t/tberger/public/pickeventsEG_EF.root

/afs/cern.ch/user/t/tberger/public/pickeventsEG_G.root

/afs/cern.ch/user/t/tberger/public/pickeventsEG_H.root

/afs/cern.ch/user/t/tberger/public/pickeventsMu_BCD.root

/afs/cern.ch/user/t/tberger/public/pickeventsMu_EF.root

/afs/cern.ch/user/t/tberger/public/pickeventsMu_G.root

/afs/cern.ch/user/t/tberger/public/pickeventsMu_H.root

*Global Tag used for JEC : 80X_dataRun2_2016SeptRepro_v7 (corresponds to Summer16_23Sep2016AllV4_DATA.db)

Reference table for data, chs MET with chsTypeI=L1FastJetL2L3-L1RC scheme

Event	Jet #	η	Uncorrected(Raw) p_T	Corrected p_T (using new JEC)	JEC uncertainty (%)
276544:60:110103622	#1	2.0521	38.329	45.1216	2.52221
	#2	0.170772	42.1028	43.2477	1.59963
	#3	0.914744	33.4026	35.2617	1.77646
Event		Raw chsMET p_T	Raw chsMET φ	Type1 Corrected chsMET p_T	Type1 Corrected PF MET p_T
276544:60:110103622		7.37312	0.487472	13.5462	12.0922

Event	Jet #	η	Uncorrected(Raw) p_T	Corrected p_T (using new JEC)	JEC uncertainty (%)
276544:61:111608372	#1	0.963133	59.9152	64.8725	1.23586
	#2	0.826812	47.8907	51.0689	1.40422
	#3	0.409886	43.4422	46.1184	1.63836
Event		Raw chsMET p_T	Raw chsMET φ	Type1 Corrected chsMET p_T	Type1 Corrected PF

					MET $\backslash(p_T)$
276544:61:111608372		10.0623	1.7161	15.1846	23.4524

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
278018:141:252248166	#1	-0.878128	129.655	139.087	0.850032
	#2	1.00501	108.852	117.649	1.1425
	#3	-0.738255	89.4577	95.0598	0.898721
	#4	1.21908	41.8962	46.4788	1.86263
	#5	1.40008	28.0422	31.6807	2.60771
	#6	-0.827898	18.5245	19.4719	2.37197
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
278018:141:252248166		55.8648	-2.39971	51.7334	43.0684

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
278239:501:844270609	#1	1.63952	73.1449	82.3448	2.01928
	#2	1.23928	64.7285	72.0933	1.49597
	#3	0.279688	40.8303	42.607	1.70786
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
278239:501:844270609		15.5575	2.05323	18.1418	32.1165

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
280330:153:287905726	#1	-0.210472	70.4459	69.3353	1.32665
	#2	0.754862	33.6374	31.9627	1.78713
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
280330:153:287905726		32.5147	0.153785	32.5147	33.1325

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
280330:290:551569668	#1	-0.602497	61.5851	62.6603	1.1234
	#2	-1.61447	45.7641	50.1804	2.56282
	#3	-0.783858	21.4977	21.5593	2.12017
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
280330:290:551569668		38.6298	-0.6688	33.8052	22.5214

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
284036:58:103579445	#1	0.517474	94.7385	96.1654	1.10223
	#2	1.92712	67.2517	77.1011	2.11228
	#3	1.0873	53.7213	55.7532	1.71229
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF

					MET $\backslash(p_T)$
284036:58:103579445		38.3432	-2.65734	41.352	73.562

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
284036:152:257512572	#1	0.0290268	64.9154	65.1021	1.28331
	#2	-0.219809	60.7534	60.6195	1.43243
	#3	-1.1648	27.5268	29.1396	2.30506
	#4	1.07034	16.7464	16.3025	2.89711
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
284036:152:257512572		13.2222	0.245298	20.462	27.7622

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
276542:329:493108405	#1	-0.0380419	86.3947	89.1938	1.06909
	#2	0.61337	70.4545	72.8544	1.02916
	#3	-0.491973	56.7061	58.4136	1.46115
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
276542:329:493108405		21.361	-1.23334	15.1168	6.03065

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
276542:358:551480331	#1	-0.473589	105.057	108.745	1.02197
	#2	0.652037	94.6506	97.6843	0.886473
	#3	1.55519	57.0434	63.5503	2.01477
	#4	2.87065	19.0022	20.7055	7.09068
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
276542:358:551480331		58.8246	-1.08312	44.874	43.5433

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
278315:113:85326313	#1	0.776919	114.78	118.645	0.806182
	#2	0.0136138	97.6402	98.1066	1.01436
	#3	0.543012	64.543	64.3913	1.38633
	#4	-1.26432	25.2297	24.7318	2.46435
	#5	-2.60144	19.1195	20.1235	7.12413
	#6	-0.171834	23.4384	20.0245	2.35028
	#7	-1.27088	20.4208	19.168	2.74103
	#8	-1.681	15.2291	15.2589	3.34759
Event		Raw chsMET $\backslash(p_T)$	Raw chsMET $\backslash(\varphi)$	Type1 Corrected chsMET $\backslash(p_T)$	Type1 Corrected PF MET $\backslash(p_T)$
278315:113:85326313		14.9025	1.24463	5.75855	17.5198

Event	Jet #	$\backslash(\eta)$	Uncorrected(Raw) $\backslash(p_T)$	Corrected $\backslash(p_T)$ (using new JEC)	JEC uncertainty (%)
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278315:218:275208727	#1	0.831973	76.6469	79.1361	1.10917
	#2	0.302519	71.7867	73.0618	1.28938
	#3	0.403403	69.1752	70.2554	1.31745
	#4	-4.0462	25.2847	22.6931	11.435
Event		Raw chsMET \(\(p_T\)	Raw chsMET \(\(\varphi\)	Type1 Corrected chsMET \(\(p_T\)	Type1 Corrected PF MET \(\(p_T\)
278315:218:275208727		29.0629	1.03553	36.0547	56.4582

Event	Jet #	\(\eta\)	Uncorrected(Raw) \(\(p_T\)	Corrected \(\(p_T\) (using new JEC)	JEC uncertainty (%)
280384:21:30938453	#1	0.133513	78.8304	78.9651	1.14035
	#2	0.562426	33.0566	32.3937	2.00957
	#3	-0.40997	30.5605	29.7328	2.09468
	#4	3.34913	19.6905	15.1627	7.96878
Event		Raw chsMET \(\(p_T\)	Raw chsMET \(\(\varphi\)	Type1 Corrected chsMET \(\(p_T\)	Type1 Corrected PF MET \(\(p_T\)
280384:21:30938453		39.5733	0.638315	40.4865	46.5253

Event	Jet #	\(\eta\)	Uncorrected(Raw) \(\(p_T\)	Corrected \(\(p_T\) (using new JEC)	JEC uncertainty (%)
280385:59:111319902	#1	1.2716	57.4274	61.1038	1.64406
	#2	2.17005	51.1062	58.3215	2.15252
	#3	0.117318	54.9174	53.0207	1.43306
	#4	-4.38852	17.2354	15.0438	11.9302
Event		Raw chsMET \(\(p_T\)	Raw chsMET \(\(\varphi\)	Type1 Corrected chsMET \(\(p_T\)	Type1 Corrected PF MET \(\(p_T\)
280385:59:111319902		5.86232	2.63945	11.2223	8.24646

Event	Jet #	\(\eta\)	Uncorrected(Raw) \(\(p_T\)	Corrected \(\(p_T\) (using new JEC)	JEC uncertainty (%)
284037:264:487770776	#1	0.0973497	89.9057	90.8781	1.05773
	#2	-1.22214	71.8991	79.5324	1.41537
	#3	0.384912	24.91	23.9825	2.24646
	#4	-1.49719	19.3375	19.9111	2.88767
Event		Raw chsMET \(\(p_T\)	Raw chsMET \(\(\varphi\)	Type1 Corrected chsMET \(\(p_T\)	Type1 Corrected PF MET \(\(p_T\)
284037:264:487770776		43.6755	-2.24435	50.959	47.8873

Event	Jet #	\(\eta\)	Uncorrected(Raw) \(\(p_T\)	Corrected \(\(p_T\) (using new JEC)	JEC uncertainty (%)
284038:44:81350837	#1	-0.860143	100.116	105.622	0.959524
	#2	1.02752	47.6474	49.7613	1.79792
	#3	-0.696693	26.3478	26.4407	1.93229
	#4	2.3519	11.9474	15.5161	3.75672
Event		Raw chsMET \(\(p_T\)	Raw chsMET \(\(\varphi\)	Type1 Corrected chsMET \(\(p_T\)	Type1 Corrected PF MET \(\(p_T\)
284038:44:81350837		19.1598	-0.279671	8.13393	11.4969

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