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Tutorial de CMSSW

Vamos a realizar todos los pasos de simulación con CMSSW que serían:

RAW (Datos crudos) ---> RECO (Reconstrucción de datos) ---> PAT (Análisis de Reconstrucción)

PAT ---> PF2 (Otro análisis sobre reconstrucción) ---> Analyzer (Generamos los histogramas con las variables de nuestro interes)

RAW (Generación de datos crudos)

Trabajamos con CMSSW_3_1_4:

Para comenzar a trabajar por primera vez con una versión de CMSSW hacemos:

```
cmsrel CMSSW_3_1_4
```

Una vez hecho este comando en nuestra cuenta queda la carpeta CMSSW_3_1_4; que es donde vamos a trabajar. (Por eso solo hay que hacerlo una vez).

Otra opción para el comando anterior; solo que en este caso la carpeta quede con otro nombre es hacer:

```
scramv1 project -n mycmssw_x_y_z CMSSW CMSSW_3_1_4
```

La parte "mycmssw_x_y_z" la pueden cambiar por el nombre que quieran; es recomendable al final dejar el nombre de la versión de CMSSW que estan usando para que en el futuro sea más facil recordar que versión estaban usando; por ejemplo: "SimulacionCMSSW_3_1_4"

Continuemos:

```
cd CMSSW_3_1_4/src/  
cmsenv #prepara el mi cuenta con las variables de entorno para trabajar con CMSSW  
mkdir simulacion #donde vamos a trabajar  
cd simulacion
```

En esta carpeta vamos a guardar un archivo llamado LM0Raw_cfg.py; es un archivo en de configuración para generar los datos crudos (RAW); el texto que tiene que tener este archivo lo encuentran en la siguiente dirección:

https://twiki.cern.ch/twiki/pub/Sandbox/AlbertoOcamposusyrelated/LM0Raw_cfg.py.txt

Una vez lo hayan guardado deben de modificar el número de eventos que van a producir; eso se hace al modificar en el archivo anterior (LM0Raw_cfg.py) las siguientes líneas:

```
process.maxEvents = cms.untracked.PSet (  
    input = cms.untracked.int32(5)  
)
```

El 5 lo pueden cambiar por el número de eventos que quieran simular; como esto es una prueba; con 5 eventos esta bien. Ahora iniciamos la generación de los datos haciendo desde la carpeta simulación el siguiente comando:

```
cmsRun LM0Raw_cfg.py
```

Obtendremos algo así:

```

MSTU(12)          changed from          0 to          12345
1***** PYINIT: initialization of PYTHIA routines *****
==== PYTHIA WILL USE LHAPDF ====
*****
*          LHAPDF Version 5.6.0          *
*****

>>>>> PDF description: <<<<<<
CTEQ6L1 - LO with LO alpha_s
Reference:
J. Pumplin, D.R. Stump, J. Huston, H.L. Lai, P. Nadolsky,
W.K. Tung
hep-ph/0201195
>>>>>          <<<<<<

Parametrization: CTEQ6

=====
PDFset name /opt/exp_soft/CMS/slc4_ia32_gcc345/external/lhapdf/5.6.0-cms2/share/lhapdf/PDFse
with          1 members
==== initialized. =====
Strong coupling at Mz for PDF is: 0.12978
***** PYSLHA v1.12: SUSY/BSM SPECTRUM INTERFACE *****
* (PYSLHA:) Last Change 23 Jan 2009 - P.Z. Skands
* (PYSLHA:) Ignoring MASS entry for KF =          5 (SLHA read-in not allowed)
* (PYSLHA:) Reading DECAY table for KF =          6, t
* Warning: will use DECAY table (fixed-width, flat PS) for t
* (PYSLHA:) Reading DECAY table for KF = 1000021, ~g
* (PYSLHA:) Reading DECAY table for KF = 1000006, ~t_1
* (PYSLHA:) Reading DECAY table for KF = 2000006, ~t_2
* (PYSLHA:) Reading DECAY table for KF = 1000005, ~b_1
* (PYSLHA:) Reading DECAY table for KF = 2000005, ~b_2
* (PYSLHA:) Reading DECAY table for KF = 1000002, ~u_L
* (PYSLHA:) Reading DECAY table for KF = 2000002, ~u_R
* (PYSLHA:) Reading DECAY table for KF = 1000001, ~d_L
* (PYSLHA:) Reading DECAY table for KF = 2000001, ~d_R
* (PYSLHA:) Reading DECAY table for KF = 1000004, ~c_L
* (PYSLHA:) Reading DECAY table for KF = 2000004, ~c_R
* (PYSLHA:) Reading DECAY table for KF = 1000003, ~s_L
* (PYSLHA:) Reading DECAY table for KF = 2000003, ~s_R
* (PYSLHA:) Reading DECAY table for KF = 1000011, ~e_L-
* (PYSLHA:) Reading DECAY table for KF = 2000011, ~e_R-
* (PYSLHA:) Reading DECAY table for KF = 1000013, ~mu_L-
* (PYSLHA:) Reading DECAY table for KF = 2000013, ~mu_R-
* (PYSLHA:) Reading DECAY table for KF = 1000015, ~tau_1-
* (PYSLHA:) Reading DECAY table for KF = 2000015, ~tau_2-
* (PYSLHA:) Reading DECAY table for KF = 1000012, ~nu_eL
* (PYSLHA:) Reading DECAY table for KF = 1000014, ~nu_muL
* (PYSLHA:) Reading DECAY table for KF = 1000016, ~nu_tauL
* (PYSLHA:) Reading DECAY table for KF = 1000024, ~chi_1+
* (PYSLHA:) Reading DECAY table for KF = 1000037, ~chi_2+
* (PYSLHA:) Reading SLHA stable particle KF = 1000022, ~chi_10
* (PYSLHA:) Reading DECAY table for KF = 1000023, ~chi_20
* (PYSLHA:) Reading DECAY table for KF = 1000025, ~chi_30
* (PYSLHA:) Reading DECAY table for KF = 1000035, ~chi_40
* (PYSLHA:) Reading DECAY table for KF =          25, h0
* Note: the Pythia gg->h/H/A cross section is proportional to the h/H/A->gg width
* (PYSLHA:) Reading DECAY table for KF =          35, H0
* Note: the Pythia gg->h/H/A cross section is proportional to the h/H/A->gg width
* (PYSLHA:) Reading DECAY table for KF =          36, A0
* Note: the Pythia gg->h/H/A cross section is proportional to the h/H/A->gg width
* (PYSLHA:) Reading DECAY table for KF =          37, H+
* (PYSLHA:) Ignoring BLOCK DCINFO # Decay Program ... on line          41
* (PYSLHA:) Ignoring line          52:          1          1.27908953E+02 # alpha_
* (PYSLHA:) Ignoring line          53:          2          1.16639000E-05 # G_F [G

```

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```

* (PYSLHA:) Ignoring line 54: 3 1.17200000E-01 # alpha_
* (PYSLHA:) Ignoring line 56: 5 4.20000000E+00 # mb(mb)
* (PYSLHA:) Ignoring line 58: 7 1.77700000E+00 # mtau p
* (PYSLHA:) Ignoring MASS entry for KF = 5 (SLHA read-in not allowed)
* (PYSLHA:) Ignoring line 157: 2 9.82088559E+00 # tan
* (PYSLHA:) Ignoring line 158: 3 2.45715311E+02 # higgs
* (PYSLHA:) Ignoring line 159: 4 1.42679732E+05 # mA^2(Q
* (PYSLHA:) PYTHIA will not use BLOCK GAUGE Q= 2.90528802E+02 # T... on line 162
* (PYSLHA:) PYTHIA will not use BLOCK YU Q= 2.90528802E+02 # The ... on line 182
* (PYSLHA:) PYTHIA will not use BLOCK YD Q= 2.90528802E+02 # The ... on line 187
* (PYSLHA:) PYTHIA will not use BLOCK YE Q= 2.90528802E+02 # The ... on line 192
*
* (PYSLHA:) No spectrum inconsistencies were found.
*
* Spectrum Calculator was: SOFTSUSY version 2.0.17
* Read spectrum file on unit: 24
*
* Pole masses:
* ~d ~u ~s ~c ~b(12) ~t(12)
* L 422.41 414.92 422.41 414.92 356.48 206.87
* R 408.44 409.35 408.44 409.35 405.69 450.24
*
* ~e ~nu_e ~mu ~nu_mu ~tau(12) ~nu_tau
* L 231.42 217.39 231.42 217.39 200.49 214.98
* R 213.23 0.00 213.23 0.00 235.91 0.00
*
* ~g ~chi_10 ~chi_20 ~chi_30 ~chi_40 ~chi_1+ ~chi_2+
* 408.75 60.46 113.17 315.65 328.27 113.81 327.35
*
* h0 H0 A0 H+
* 109.68 367.82 368.48 377.17
*
* Mixing structure:
* | ~B | ~W_3 | ~H_1 | ~H_2 |
* ~chi_10 | 0.979 | -0.087 | 0.176 | -0.052 |
* ~chi_20 | 0.139 | 0.944 | -0.272 | 0.122 |
* ~chi_30 | -0.075 | 0.117 | 0.687 | 0.713 |
* ~chi_40 | -0.127 | 0.295 | 0.650 | -0.688 |
*
* L | ~W | ~H | R | ~W | ~H |
* ~chi_1+ | 0.915 | -0.402 | ~chi_1+ | 0.983 | -0.186 |
* ~chi_2+ | 0.402 | 0.915 | ~chi_2+ | 0.186 | 0.983 |
*
* | ~b_L | ~b_R | | ~t_L | ~t_R | | ~tau_L | ~tau_R |
* ~b_1 | 0.967 | 0.256 | ~t_1 | 0.579 | 0.815 | ~tau_1 | 0.451 | 0.892 |
* ~b_2 | -0.256 | 0.967 | ~t_2 | -0.815 | 0.579 | ~tau_2 | -0.892 | 0.451 |
*
* Couplings:
* A_b = -828.81 A_t = -446.25 A_tau = -492.31
* alpha = -0.11 tan(beta) = 10.00 mu = 305.60
*
***** END OF PYSLHA *****
* (PYSLHA:) Reading SLHA stable particle KF = 1000022, ~chi_10

=====
I I
I PYTHIA will be initialized for a p on p collider I
I at 10000.000 GeV center-of-mass energy I
I I
=====
Warning: requested subprocess 203 has vanishing cross-section.
Process switched off!
Warning: requested subprocess 206 has vanishing cross-section.
Process switched off!

***** PYMAXI: summary of differential cross-section maximum search *****

```

I	I	I	I	I
I	ISUB	Subprocess name	I	Maximum value
I			I	I
I			I	I
I	96	Semihard QCD 2 -> 2	I	1.1412E+04
I	201	f + fbar -> ~e_L + ~e_Lbar	I	1.3018E-10
I	202	f + fbar -> ~e_R + ~e_Rbar	I	7.6855E-11
I	204	f + fbar -> ~mu_L + ~mu_Lbar	I	1.3018E-10
I	205	f + fbar -> ~mu_R + ~mu_Rbar	I	7.6855E-11
I	207	f+fbar -> ~tau_1 + ~tau_1bar	I	8.9258E-11
I	208	f+fbar -> ~tau_2 + ~tau_2bar	I	8.8399E-11
I	209	f+fbar -> ~tau_1 + ~tau_2bar	I	2.4899E-11
I	210	q + qbar' -> ~l_L + ~nulbar	I	5.0998E-10
I	211	q+qbar'-> ~tau_1 + ~nutaubar	I	7.0227E-11
I	212	q+qbar'-> ~tau_2 + ~nutaubar	I	1.9940E-10
I	213	f + fbar -> ~nul + ~nulbar	I	3.1199E-10
I	214	f+fbar -> ~nutau + ~nutaubar	I	1.6318E-10
I	216	f + fbar -> ~chi1 + ~chi1	I	2.2780E-10
I	217	f + fbar -> ~chi2 + ~chi2	I	3.6972E-10
I	218	f + fbar -> ~chi3 + ~chi3	I	8.0998E-14
I	219	f + fbar -> ~chi4 + ~chi4	I	7.3676E-13
I	220	f + fbar -> ~chi1 + ~chi2	I	2.6340E-11
I	221	f + fbar -> ~chi1 + ~chi3	I	1.5191E-11
I	222	f + fbar -> ~chi1 + ~chi4	I	5.3379E-12
I	223	f + fbar -> ~chi2 + ~chi3	I	3.3721E-11
I	224	f + fbar -> ~chi2 + ~chi4	I	1.9228E-11
I	225	f + fbar -> ~chi3 + ~chi4	I	1.0696E-10
I	226	f+fbar -> ~chi+-1 + ~chi+-1	I	9.6111E-09
I	227	f+fbar -> ~chi+-2 + ~chi+-2	I	2.0701E-10
I	228	f+fbar -> ~chi+-1 + ~chi+-2	I	9.1499E-11
I	229	q + qbar' -> ~chi1 + ~chi+-1	I	7.9587E-10
I	230	q + qbar' -> ~chi2 + ~chi+-1	I	1.8629E-08
I	231	q + qbar' -> ~chi3 + ~chi+-1	I	7.1091E-11
I	232	q + qbar' -> ~chi4 + ~chi+-1	I	1.1150E-11
I	233	q + qbar' -> ~chi1 + ~chi+-2	I	3.7393E-11
I	234	q + qbar' -> ~chi2 + ~chi+-2	I	9.8707E-12
I	235	q + qbar' -> ~chi3 + ~chi+-2	I	1.9995E-10
I	236	q + qbar' -> ~chi4 + ~chi+-2	I	1.8163E-10
I	237	q + qbar -> ~chi1 + ~g	I	1.5867E-09
I	238	q + qbar -> ~chi2 + ~g	I	2.4385E-09
I	239	q + qbar -> ~chi3 + ~g	I	5.3156E-11
I	240	q + qbar -> ~chi4 + ~g	I	7.9704E-11
I	241	q + qbar' -> ~chi+-1 + ~g	I	4.8412E-09
I	242	q + qbar' -> ~chi+-2 + ~g	I	2.2316E-10
I	243	q + qbar -> ~g + ~g	I	7.9929E-09
I	244	g + g -> ~g + ~g	I	2.7496E-07
I	246	qj + g -> ~qj_L + ~chi1	I	2.0897E-10
I	247	qj + g -> ~qj_R + ~chi1	I	1.3344E-08
I	248	qj + g -> ~qj_L + ~chi2	I	1.6280E-08
I	249	qj + g -> ~qj_R + ~chi2	I	1.9010E-10
I	250	qj + g -> ~qj_L + ~chi3	I	8.5776E-11
I	251	qj + g -> ~qj_R + ~chi3	I	2.5600E-11
I	252	qj + g -> ~qj_L + ~chi4	I	5.6217E-10
I	253	qj + g -> ~qj_R + ~chi4	I	6.9778E-11
I	254	qj + g -> ~qk_L + ~chi+-1	I	2.6980E-08
I	256	qj + g -> ~qk_L + ~chi+-2	I	2.3341E-09
I	258	qj + g -> ~qj_L + ~g	I	4.9300E-07
I	259	qj + g -> ~qj_R + ~g	I	5.0961E-07
I	261	f + fbar -> ~t_1 + ~t_1bar	I	3.5444E-08
I	262	f + fbar -> ~t_2 + ~t_2bar	I	1.0730E-09
I	263	f + fbar -> ~t_1 + ~t_2bar	I	3.4476E-11
I	264	g + g -> ~t_1 + ~t_1bar	I	2.1400E-07
I	265	g + g -> ~t_2 + ~t_2bar	I	3.5181E-09
I	271	qi + qj -> ~qi_L + ~qj_L	I	2.4226E-07
I	272	qi + qj -> ~qi_R + ~qj_R	I	2.5483E-07

I	273	qi + qj -> ~qi_L + ~qj_R	I	2.3320E-07	I
I	274	qi+qjbar -> ~qi_L + ~qj_Lbar	I	6.2241E-08	I
I	275	qi+qjbar -> ~qi_R + ~qj_Rbar	I	6.5784E-08	I
I	276	qi+qjbar -> ~qi_L + ~qj_Rbar	I	1.0456E-07	I
I	277	f + fbar -> ~qi_L + ~qi_Lbar	I	2.8971E-09	I
I	278	f + fbar -> ~qi_R + ~qi_Rbar	I	3.1032E-09	I
I	279	g + g -> ~qi_L + ~qi_Lbar	I	2.2623E-08	I
I	280	g + g -> ~qi_R + ~qi_Rbar	I	2.4570E-08	I
I	281	b + qj -> ~b_1 + ~qj_L	I	5.2188E-09	I
I	282	b + qj -> ~b_2 + ~qj_R	I	3.9759E-09	I
I	283	b + qj -> ~b_1 + ~qj_R	I	5.4368E-09	I
I	284	b + qjbar -> ~b_1 + ~qj_Lbar	I	2.6370E-09	I
I	285	b + qjbar -> ~b_2 + ~qj_Rbar	I	2.1398E-09	I
I	286	b + qjbar -> ~b_1 + ~qj_Rbar	I	1.0840E-08	I
I	287	f + fbar -> ~b_1 + ~b_lbar	I	3.2641E-09	I
I	288	f + fbar -> ~b_2 + ~b_2bar	I	1.7661E-09	I
I	289	g + g -> ~b_1 + ~b_lbar	I	1.3222E-08	I
I	290	g + g -> ~b_2 + ~b_2bar	I	6.4683E-09	I
I	291	b + b -> ~b_1 + ~b_1	I	5.8668E-11	I
I	292	b + b -> ~b_2 + ~b_2	I	2.8599E-11	I
I	293	b + b -> ~b_1 + ~b_2	I	1.7593E-11	I
I	294	b + g -> ~b_1 + ~g	I	7.0745E-09	I
I	295	b + g -> ~b_2 + ~g	I	5.1398E-09	I
I	296	b + bbar -> ~b_1 + ~b_2bar	I	7.0038E-11	I
I	297	f + fbar' -> H+/- + h0	I	1.2243E-14	I
I	298	f + fbar -> H+/- + H0	I	1.5580E-11	I
I	299	f + fbar -> A0 + h0	I	7.0794E-15	I
I	300	f + fbar -> A0 + H0	I	8.4710E-12	I
I	301	f + fbar -> H+ + H-	I	1.6644E-11	I
I			I		I

***** PYMULT: initialization of multiple interactions for MSTP(82) = 4 *****
 pT0 = 2.39 GeV gives sigma(parton-parton) = 6.87E+02 mb: accepted

***** PYMIGN: initialization of multiple interactions for MSTP(82) = 4 *****
 pT0 = 2.39 GeV gives sigma(parton-parton) = 2.90E+02 mb: accepted

***** PYINIT: initialization completed *****
 Begin processing the 1st record. Run 1, Event 1, LumiSection 1 at 26-Mar-2010 11:34:15 COT
 Begin processing the 2nd record. Run 1, Event 2, LumiSection 1 at 26-Mar-2010 11:43:03 COT
 Begin processing the 3rd record. Run 1, Event 3, LumiSection 1 at 26-Mar-2010 11:46:44 COT
 Begin processing the 4th record. Run 1, Event 4, LumiSection 1 at 26-Mar-2010 11:51:51 COT
 Begin processing the 5th record. Run 1, Event 5, LumiSection 1 at 26-Mar-2010 11:55:48 COT
 1***** PYSTAT: Statistics on Number of Events and Cross-sections *****

I	Subprocess	I	Number of points	I	Sigma	I
I		I		I	(mb)	I
I	N:o	I	Type	I	Generated	I
I		I		I	Tried	I
I	0	I	All included subprocesses	I	5	I
I	201	I	f + fbar -> ~e_L + ~e_Lbar	I	0	I
I	202	I	f + fbar -> ~e_R + ~e_Rbar	I	0	I
I	204	I	f + fbar -> ~mu_L + ~mu_Lbar	I	0	I
I	205	I	f + fbar -> ~mu_R + ~mu_Rbar	I	0	I
I	207	I	f+fbar -> ~tau_1 + ~tau_1bar	I	0	I
I	208	I	f+fbar -> ~tau_2 + ~tau_2bar	I	0	I
I	209	I	f+fbar -> ~tau_1 + ~tau_2bar	I	0	I
I	210	I	q + qbar' -> ~l_L + ~nulbar	I	0	I
I	211	I	q+qbar'-> ~tau_1 + ~nutaubar	I	0	I
I	212	I	q+qbar'-> ~tau_2 + ~nutaubar	I	0	I

I 213	f + fbar -> ~nul + ~nulbar	I	0	0	I	0.000E+00	I
I 214	f+fbar -> ~nutau + ~nutaubar	I	0	0	I	0.000E+00	I
I 216	f + fbar -> ~chi1 + ~chi1	I	0	0	I	0.000E+00	I
I 217	f + fbar -> ~chi2 + ~chi2	I	0	0	I	0.000E+00	I
I 218	f + fbar -> ~chi3 + ~chi3	I	0	0	I	0.000E+00	I
I 219	f + fbar -> ~chi4 + ~chi4	I	0	0	I	0.000E+00	I
I 220	f + fbar -> ~chi1 + ~chi2	I	0	0	I	0.000E+00	I
I 221	f + fbar -> ~chi1 + ~chi3	I	0	0	I	0.000E+00	I
I 222	f + fbar -> ~chi1 + ~chi4	I	0	0	I	0.000E+00	I
I 223	f + fbar -> ~chi2 + ~chi3	I	0	0	I	0.000E+00	I
I 224	f + fbar -> ~chi2 + ~chi4	I	0	0	I	0.000E+00	I
I 225	f + fbar -> ~chi3 + ~chi4	I	0	0	I	0.000E+00	I
I 226	f+fbar -> ~chi+-1 + ~chi+-1	I	0	2	I	1.709E-10	I
I 227	f+fbar -> ~chi+-2 + ~chi+-2	I	0	0	I	0.000E+00	I
I 228	f+fbar -> ~chi+-1 + ~chi+-2	I	0	0	I	0.000E+00	I
I 229	q + qbar' -> ~chi1 + ~chi+-1	I	0	0	I	0.000E+00	I
I 230	q + qbar' -> ~chi2 + ~chi+-1	I	0	0	I	0.000E+00	I
I 231	q + qbar' -> ~chi3 + ~chi+-1	I	0	0	I	0.000E+00	I
I 232	q + qbar' -> ~chi4 + ~chi+-1	I	0	0	I	0.000E+00	I
I 233	q + qbar' -> ~chi1 + ~chi+-2	I	0	0	I	0.000E+00	I
I 234	q + qbar' -> ~chi2 + ~chi+-2	I	0	0	I	0.000E+00	I
I 235	q + qbar' -> ~chi3 + ~chi+-2	I	0	0	I	0.000E+00	I
I 236	q + qbar' -> ~chi4 + ~chi+-2	I	0	0	I	0.000E+00	I
I 237	q + qbar -> ~chi1 + ~g	I	0	0	I	0.000E+00	I
I 238	q + qbar -> ~chi2 + ~g	I	0	0	I	0.000E+00	I
I 239	q + qbar -> ~chi3 + ~g	I	0	0	I	0.000E+00	I
I 240	q + qbar -> ~chi4 + ~g	I	0	0	I	0.000E+00	I
I 241	q + qbar' -> ~chi+-1 + ~g	I	0	0	I	0.000E+00	I
I 242	q + qbar' -> ~chi+-2 + ~g	I	0	0	I	0.000E+00	I
I 243	q + qbar -> ~g + ~g	I	0	1	I	1.209E-13	I
I 244	g + g -> ~g + ~g	I	2	15	I	3.403E-08	I
I 246	qj + g -> ~qj_L + ~chi1	I	0	0	I	0.000E+00	I
I 247	qj + g -> ~qj_R + ~chi1	I	0	2	I	5.209E-13	I
I 248	qj + g -> ~qj_L + ~chi2	I	0	2	I	1.895E-16	I
I 249	qj + g -> ~qj_R + ~chi2	I	0	0	I	0.000E+00	I
I 250	qj + g -> ~qj_L + ~chi3	I	0	0	I	0.000E+00	I
I 251	qj + g -> ~qj_R + ~chi3	I	0	0	I	0.000E+00	I
I 252	qj + g -> ~qj_L + ~chi4	I	0	0	I	0.000E+00	I
I 253	qj + g -> ~qj_R + ~chi4	I	0	0	I	0.000E+00	I
I 254	qj + g -> ~qk_L + ~chi+-1	I	0	2	I	6.620E-09	I
I 256	qj + g -> ~qk_L + ~chi+-2	I	0	0	I	0.000E+00	I
I 258	qj + g -> ~qj_L + ~g	I	1	29	I	2.134E-08	I
I 259	qj + g -> ~qj_R + ~g	I	1	31	I	1.735E-08	I
I 261	f + fbar -> ~t_1 + ~t_1bar	I	1	3	I	6.166E-09	I
I 262	f + fbar -> ~t_2 + ~t_2bar	I	0	0	I	0.000E+00	I
I 263	f + fbar -> ~t_1 + ~t_2bar	I	0	0	I	0.000E+00	I
I 264	g + g -> ~t_1 + ~t_1bar	I	0	11	I	1.672E-08	I
I 265	g + g -> ~t_2 + ~t_2bar	I	0	1	I	1.029E-10	I
I 271	qi + qj -> ~qi_L + ~qj_L	I	0	16	I	8.858E-11	I
I 272	qi + qj -> ~qi_R + ~qj_R	I	0	15	I	4.242E-10	I
I 273	qi + qj -> ~qi_L + ~qj_R	I	0	14	I	1.695E-09	I
I 274	qi+qjbar -> ~qi_L + ~qj_Lbar	I	0	6	I	2.903E-09	I
I 275	qi+qjbar -> ~qi_R + ~qj_Rbar	I	0	5	I	1.202E-09	I
I 276	qi+qjbar -> ~qi_L + ~qj_Rbar	I	0	10	I	3.384E-09	I
I 277	f + fbar -> ~qi_L + ~qi_Lbar	I	0	0	I	0.000E+00	I
I 278	f + fbar -> ~qi_R + ~qi_Rbar	I	0	0	I	0.000E+00	I
I 279	g + g -> ~qi_L + ~qi_Lbar	I	0	2	I	2.488E-09	I
I 280	g + g -> ~qi_R + ~qi_Rbar	I	0	0	I	0.000E+00	I
I 281	b + qj -> ~b_1 + ~qj_L	I	0	0	I	0.000E+00	I
I 282	b + qj -> ~b_2 + ~qj_R	I	0	1	I	1.433E-31	I
I 283	b + qj -> ~b_1 + ~qj_R	I	0	0	I	0.000E+00	I
I 284	b + qjbar -> ~b_1 + ~qj_Lbar	I	0	0	I	0.000E+00	I
I 285	b + qjbar -> ~b_2 + ~qj_Rbar	I	0	1	I	5.363E-17	I
I 286	b + qjbar -> ~b_1 + ~qj_Rbar	I	0	1	I	4.078E-11	I
I 287	f + fbar -> ~b_1 + ~b_1bar	I	0	1	I	0.000E+00	I
I 288	f + fbar -> ~b_2 + ~b_2bar	I	0	1	I	2.012E-17	I
I 289	g + g -> ~b_1 + ~b_1bar	I	0	0	I	0.000E+00	I

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```
I 290 g + g -> ~b_2 + ~b_2bar      I          0          2 I 3.238E-14 I
I 291 b + b -> ~b_1 + ~b_1         I          0          0 I 0.000E+00 I
I 292 b + b -> ~b_2 + ~b_2         I          0          0 I 0.000E+00 I
I 293 b + b -> ~b_1 + ~b_2         I          0          0 I 0.000E+00 I
I 294 b + g -> ~b_1 + ~g           I          0          1 I 6.635E-10 I
I 295 b + g -> ~b_2 + ~g           I          0          0 I 0.000E+00 I
I 296 b + bbar -> ~b_1 + ~b_2bar   I          0          0 I 0.000E+00 I
I 297 f + fbar' -> H+/- + h0       I          0          0 I 0.000E+00 I
I 298 f + fbar -> H+/- + H0        I          0          0 I 0.000E+00 I
I 299 f + fbar -> A0 + h0          I          0          0 I 0.000E+00 I
I 300 f + fbar -> A0 + H0          I          0          0 I 0.000E+00 I
I 301 f + fbar -> H+ + H-          I          0          0 I 0.000E+00 I
I                                     I                                     I
```

```
***** Total number of errors, excluding junctions =          0 *****
***** Total number of errors, including junctions =          0 *****
***** Total number of warnings =                             0 *****
***** Fraction of events that fail fragmentation cuts = 0.00000 *****
```

MessageLogger Summary

Severity	# Occurrences	Total Occurrences
----------	---------------	-------------------

Finalizado el proceso en nuestra carpeta simulacion tendremos un archivo nuevo llamado:
LM0_Gen_8E29_RAW.root

Este archivo de 8 MB (aproximadamente) contiene los eventos generados con nuestro config file
"LM0Raw_cfg.py"

El siguiente paso es: Reconstrucción de Datos (RECO) -- AndresCabrera - 03-Jun-2010

This topic: Main > CmsswTutorial

Topic revision: r2 - 2010-06-07 - AndresCabrera



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