

$H \rightarrow \mu\mu$ Background study

$H_{\mu\mu}$ Analysis Meeting – 9th April 2019

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Zhou

Tested pdfs

Function	Expression	nPar
DYxEpoly1	$DY_{LS} \cdot \exp(a_1 m_{\mu\mu})$	1
DYxEpoly2	$DY_{LS} \cdot \exp(a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2)$	2
DYxEpoly3	$DY_{LS} \cdot \exp(a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2 + a_3 m_{\mu\mu}^3)$	3
DYxPoly1	$DY_{LS} \cdot (1 + a_1 m_{\mu\mu})$	1
DYxPoly2	$DY_{LS} \cdot (1 + a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2)$	2
DYxPoly3	$DY_{LS} \cdot (1 + a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2 + a_3 m_{\mu\mu}^3)$	3
DYxPowero	$DY_{LS} \cdot \text{pow}(m_{\mu\mu}, a_0)$	1
DYxPower1	$DY_{LS} \cdot \text{pow}(m_{\mu\mu}, a_0 + a_1 m_{\mu\mu})$	2
DYxPower2	$DY_{LS} \cdot \text{pow}(m_{\mu\mu}, a_0 + a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2)$	3
DYxPower3	$DY_{LS} \cdot \text{pow}(m_{\mu\mu}, a_0 + a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2 + a_3 m_{\mu\mu}^3)$	4
BWxEpoly1	$\frac{\exp(a_1 m_{\mu\mu})}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	1
BWxEpoly2	$\frac{\exp(a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2)}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	2
BWxEpoly3	$\frac{\exp(a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2 + a_3 m_{\mu\mu}^3)}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	3
BWxPoly1	$\frac{1 + a_1 m_{\mu\mu}}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	1
BWxPoly2	$\frac{1 + a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	2
BWxPoly3	$\frac{1 + a_1 m_{\mu\mu} + a_2 m_{\mu\mu}^2 + a_3 m_{\mu\mu}^3}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	3
BWxPowero	$\frac{\text{pow}(m_{\mu\mu}, a_1)}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	1
BWxPower1	$\frac{\text{pow}(m_{\mu\mu}, a_1 + a_2 m_{\mu\mu})}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	2
BWxPower2	$\frac{\text{pow}(m_{\mu\mu}, a_1 + a_2 m_{\mu\mu} + a_3 m_{\mu\mu}^2)}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	3
BWxPower3	$\frac{\text{pow}(m_{\mu\mu}, a_1 + a_2 m_{\mu\mu} + a_3 m_{\mu\mu}^2 + a_4 m_{\mu\mu}^3))}{(m_Z - m_{\mu\mu})^2 + (\Gamma_Z/2)^2}$	4

Selected pdfs: 110-160 GeV

Category	SelectedPdf	$(S/dS)_{max}$	$((S \pm 1\sigma)/dS)_{max}$	S_{max}	N_{par}	χ^2/dof	$P(\chi^2)$
BDT1	DYxPoly1	4.65	0.00	0.16	1	0.94	58.30
BDT2	DYxPoly1	12.20	7.32	0.88	1	1.20	16.10
BDT3	DYxPowero	1.78	0.00	0.12	1	0.88	71.60
BDT4	DYxPoly1	10.80	5.53	1.32	1	0.87	73.30
BDT5	DYxPoly1	8.42	2.16	1.29	1	0.61	98.60
BDT6	BWxPoly1	25.60	18.40	5.41	1	1.51	1.30
BDT7	DYxPowero	3.48	0.00	1.17	1	1.49	1.58
BDT8	DYxPoly1	-26.60	-18.30	-16.10	1	1.02	42.70
BDT9	DYxPoly1	-28.80	-19.90	-20.60	1	1.10	29.20
BDT10	DYxEpoly2	31.00	23.00	-31.00	2	1.20	16.00
BDT11	BWxPoly3	18.60	9.65	-26.20	3	1.55	0.98
BDT12	DYxPower1	18.80	6.55	21.00	2	0.91	64.20
BDT13	BWxEpoly2	13.80	1.61	28.70	2	1.67	0.27
BDT14	DYxEpoly2	27.30	15.90	58.20	2	1.04	39.80
BDT15	BWxEpoly2	-12.40	0.00	-32.40	2	1.05	37.50
BDT16	BWxPoly2	17.70	-5.43	56.20	2	1.26	11.10
BDT17	DYxEpoly2	-29.40	-16.60	-210.00	2	1.16	21.20
BDT18	BWxPower1	41.40	-26.20	-299.00	2	1.78	$7.8 \cdot 10^{-2}$
BDT19	DYxEpoly3	-36.60	-18.90	-265.00	3	1.59	0.65
BDT20	BWxPoly3	-34.50	-23.10	-300.00	3	1.45	2.51

Selected pdfs: 110-200 GeV

Category	SelectedPdf	$(S/dS)_{max}$	$((S \pm 1\sigma)/dS)_{max}$	S_{max}	N_{par}	χ^2/dof	$P(\chi^2)$
BDT1	DYxPoly1	4.93	0.14	0.17	1	1.14	16.60
BDT2	DYxPoly1	12.80	8.16	0.92	1	1.15	16.50
BDT3	DYxPoly1	-1.19	0.00	$-8.84 \cdot 10^{-2}$	1	0.74	96.90
BDT4	DYxPoly1	12.70	7.48	1.51	1	1.28	3.89
BDT5	DYxPoly1	12.60	6.22	1.86	1	0.75	96.40
BDT6	DYxPoly1	-24.30	-17.60	-7.05	1	1.22	7.57
BDT7	DYxPoly1	-20.50	-12.40	-5.99	1	1.20	10.10
BDT8	DYxPoly1	-26.10	-18.00	-15.80	1	1.17	13.40
BDT9	DYxPower1	21.00	11.90	-14.50	2	1.22	8.24
BDT10	DYxPower3	-32.30	-22.90	-31.70	4	1.25	6.03
BDT11	BWxEpoly3	-26.60	-16.10	-34.80	3	1.34	1.94
BDT12	DYxPoly2	20.90	9.57	24.50	2	1.02	41.60
BDT13	BWxEpoly3	-18.80	-6.76	-34.80	3	1.34	2.03
BDT14	BWxEpoly3	30.90	19.00	62.30	3	1.08	28.30
BDT15	BWxPower3	-21.00	-17.90	-64.30	4	1.00	46.80
BDT16	DYxPower1	34.70	21.80	95.10	2	2.26	$1.98 \cdot 10^{-8}$
BDT17	BWxPower3	-36.10	19.40	-206.00	4	1.36	1.56
BDT18	DYxPower1	40.50	-25.50	-193.00	2	1.78	$1.15 \cdot 10^{-3}$
BDT19	BWxPower1	-31.60	-14.80	-103.00	2	1.39	0.94
BDT20	DYxPower3	64.50	45.10	-300.00	4	1.56	$7.32 \cdot 10^{-2}$

Selected pdfs: 110-250 GeV

Category	SelectedPdf	$(S/dS)_{max}$	$((S \pm 1\sigma)/dS)_{max}$	S_{max}	N_{par}	χ^2/dof	$P(\chi^2)$
BDT1	DYxPoly1	6.80	2.06	0.24	1	1.25	2.35
BDT2	DYxPoly1	13.90	9.15	0.99	1	1.26	2.10
BDT3	DYxPoly1	2.49	0.00	0.17	1	0.96	63.10
BDT4	DYxPoly1	15.50	10.40	1.87	1	1.25	2.57
BDT5	DYxPoly1	15.80	9.46	2.32	1	1.09	21.70
BDT6	DYxPoly1	-16.70	-10.00	-4.81	1	1.17	8.73
BDT7	DYxPoly1	-14.90	-6.82	-4.34	1	1.22	3.92
BDT8	DYxPoly1	19.50	10.80	8.82	1	1.17	8.97
BDT9	BWxEpoly3	24.90	16.40	-14.30	3	1.21	4.90
BDT10	DYxPoly2	15.80	6.16	-12.70	2	1.75	$1.37 \cdot 10^{-5}$
BDT11	DYxPower2	30.30	19.70	28.80	3	1.40	0.14
BDT12	BWxPower2	20.50	8.85	-27.20	3	0.92	72.90
BDT13	BWxEpoly3	22.30	10.70	34.30	3	1.45	$4.88 \cdot 10^{-2}$
BDT14	BWxPower2	-37.60	-34.80	-91.00	3	1.11	18.70
BDT15	BWxEpoly3	-10.60	-9.40	-33.10	3	1.31	0.82
BDT16	DYxPower3	-37.40	-27.30	-124.00	4	2.04	$1.3 \cdot 10^{-9}$
BDT17	DYxPower3	-45.40	-27.90	-300.00	4	1.65	$3.22 \cdot 10^{-4}$
BDT18	BWxEpoly3	47.40	32.30	-290.00	3	1.17	9.02
BDT19	BWxPower3	-31.00	-16.40	115.00	4	1.26	2.10
BDT20	BWxEpoly1	76.00	54.00	229.00	1	3.01	$1.28 \cdot 10^{-27}$

Selected pdfs: 115-160 GeV

Category	SelectedPdf	$(S/dS)_{max}$	$((S \pm 1\sigma)/dS)_{max}$	S_{max}	N_{par}	χ^2/dof	$P(\chi^2)$
BDT1	DYxPoly1	6.69	1.99	0.26	1	0.96	54.80
BDT2	DYxEpoly1	10.30	6.11	0.86	1	1.38	5.01
BDT3	DYxPoly1	1.45	0.00	0.16	1	0.80	81.90
BDT4	DYxPoly1	8.87	4.32	1.30	1	0.81	80.90
BDT5	DYxPoly1	9.31	2.94	1.46	1	0.54	99.40
BDT6	DYxPoly1	-11.50	-6.67	-4.62	1	1.28	10.50
BDT7	DYxPoly1	-21.00	-12.90	-6.56	1	1.35	6.15
BDT8	DYxPoly1	-25.20	-19.30	-21.00	1	0.98	51.80
BDT9	DYxPoly1	21.50	12.30	-15.70	1	0.99	49.70
BDT10	DYxPower1	-25.20	-17.10	-30.10	2	1.08	32.80
BDT11	BWxPoly2	2.25	0.00	2.64	2	1.35	6.62
BDT12	DYxPower1	15.70	3.50	18.00	2	0.86	72.90
BDT13	BWxEpoly2	20.70	11.80	55.20	2	1.61	0.73
BDT14	BWxPower1	-14.90	-4.01	-33.80	2	0.80	81.50
BDT15	BWxEpoly2	-15.40	-3.69	-40.10	2	1.14	25.10
BDT16	BWxPower1	-5.84	0.00	-17.90	2	1.03	42.30
BDT17	DYxPoly2	-4.74	-4.02	-36.70	2	0.83	77.50
BDT18	BWxPoly3	33.30	22.90	-237.00	3	1.10	30.90
BDT19	DYxPowero	-32.40	-18.80	-135.00	1	2.04	$6.38 \cdot 10^{-3}$
BDT20	BWxEpoly1	-32.50	-9.46	-85.20	1	1.39	4.44

Selected pdfs: 115-200 GeV

Category	SelectedPdf	$(S/dS)_{max}$	$((S \pm 1\sigma)/dS)_{max}$	S_{max}	N_{par}	χ^2/dof	$P(\chi^2)$
BDT1	DYxPoly1	6.62	2.18	0.26	1	1.17	14.10
BDT2	DYxPower0	6.09	1.93	0.48	1	1.19	11.20
BDT3	DYxPoly1	1.03	0.00	$7.2 \cdot 10^{-2}$	1	0.71	98.00
BDT4	DYxPoly1	6.76	2.18	0.90	1	1.24	7.14
BDT5	DYxPoly1	11.80	5.63	1.83	1	0.72	97.40
BDT6	DYxPoly1	-12.00	-6.79	-4.23	1	1.15	16.30
BDT7	DYxPoly1	-21.00	-13.20	-6.53	1	1.21	9.30
BDT8	BWxPoly2	-23.40	-17.20	-18.00	2	0.91	70.90
BDT9	BWxPoly2	-8.40	-2.24	-8.22	2	1.13	19.70
BDT10	BWxPoly2	-26.20	-18.50	-31.90	2	1.07	30.80
BDT11	BWxPoly2	15.40	4.96	-17.00	2	1.16	15.40
BDT12	BWxPoly2	24.20	12.10	-29.20	2	0.94	63.00
BDT13	BWxEpoly3	-16.30	6.14	39.20	3	1.20	10.50
BDT14	BWxEpoly3	20.50	9.36	40.50	3	0.87	79.60
BDT15	BWxPower3	-25.50	-16.70	-65.70	4	0.94	62.70
BDT16	BWxEpoly3	-7.06	-5.15	-24.90	3	0.83	87.20
BDT17	BWxEpoly3	16.70	4.06	-67.30	3	1.12	21.50
BDT18	DYxPoly3	24.20	14.60	97.50	3	0.99	51.20
BDT19	BWxPower3	-37.00	-24.70	-196.00	4	1.27	5.47
BDT20	BWxEpoly1	-36.50	-15.60	-92.80	1	1.21	9.33

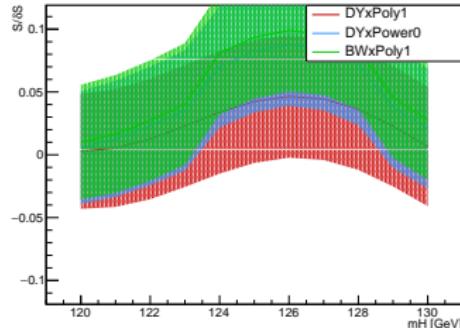
Selected pdfs: 115-250 GeV

Category	SelectedPdf	$(S/dS)_{max}$	$((S \pm 1\sigma)/dS)_{max}$	S_{max}	N_{par}	χ^2/dof	$P(\chi^2)$
BDT1	DYxPoly1	5.66	1.32	0.22	1	1.26	2.29
BDT2	DYxPoly1	7.80	3.72	0.61	1	1.21	4.73
BDT3	DYxPoly1	-1.62	0.00	-0.18	1	0.94	68.80
BDT4	DYxPoly1	7.62	3.06	1.00	1	1.18	7.43
BDT5	DYxPoly1	12.60	6.42	1.94	1	1.06	29.50
BDT6	DYxPoly1	12.30	-5.64	-3.67	1	1.11	18.20
BDT7	DYxPoly1	-18.40	-10.70	-5.71	1	1.20	5.77
BDT8	DYxPoly2	-9.69	-3.49	-7.15	2	0.97	59.80
BDT9	DYxPoly2	22.30	13.50	13.10	2	1.24	3.30
BDT10	BWxPower2	27.50	17.90	-27.60	3	1.04	36.80
BDT11	BWxPower2	18.40	7.79	18.30	3	0.97	59.00
BDT12	BWxPower2	21.10	8.96	23.90	3	0.88	83.90
BDT13	BWxPower2	-22.50	-11.80	-41.60	3	1.20	5.99
BDT14	BWxPower2	21.80	9.99	37.70	3	0.92	73.30
BDT15	BWxEpoly3	-22.80	-6.86	-87.20	3	1.32	0.78
BDT16	BWxPower2	-14.40	-9.86	-51.70	3	1.17	8.77
BDT17	BWxPower2	-11.20	$-3.42 \cdot 10^{-2}$	-73.50	3	0.96	61.40
BDT18	DYxPower3	-19.90	4.76	-151.00	4	0.90	79.70
BDT19	BWxPower1	-37.00	-33.80	-300.00	2	3.20	$3.78 \cdot 10^{-30}$
BDT20	BWxPower2	-41.70	-23.00	-115.00	3	1.14	13.70

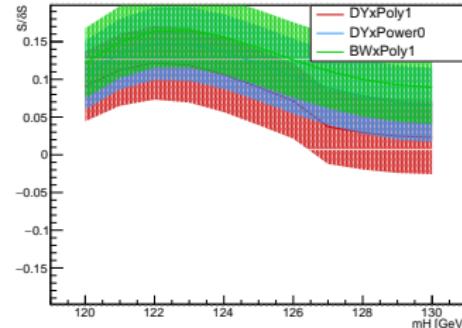


110-160 GeV

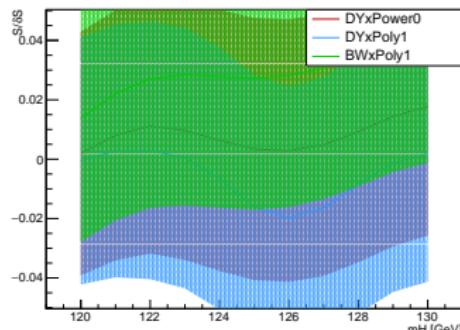
Spurious Signal relative uncertainties



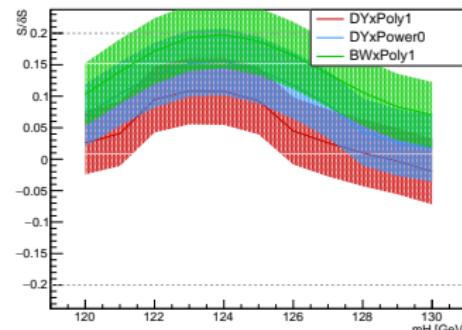
BDT1



BDT2

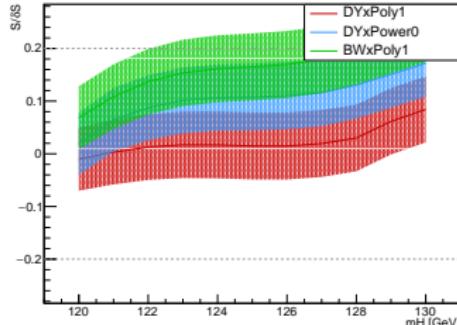


BDT3

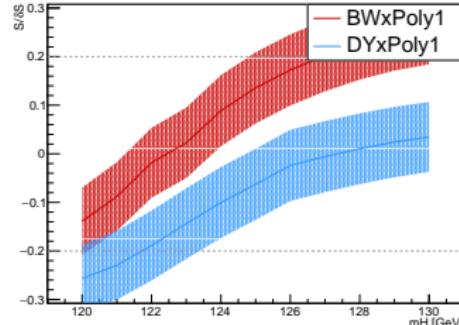


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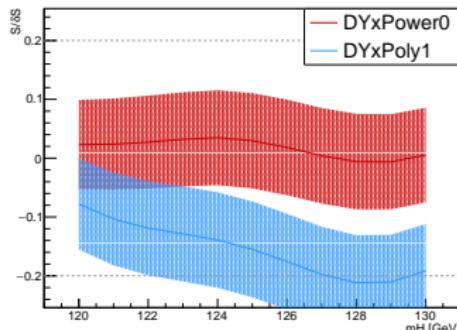
Spurious Signal relative uncertainties



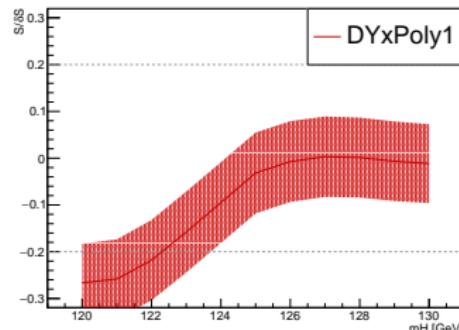
BDT5



BDT6

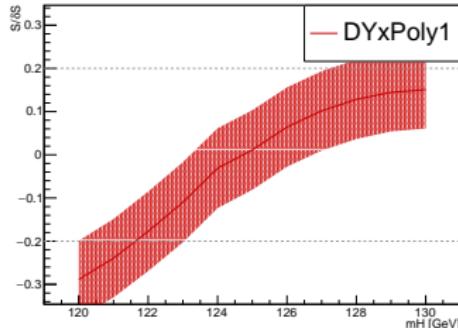


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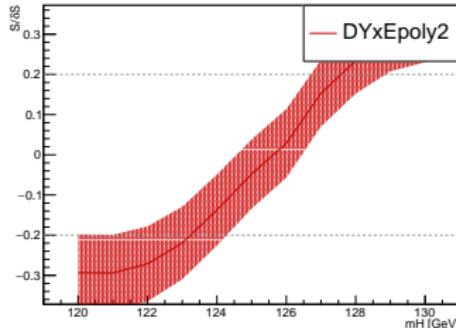


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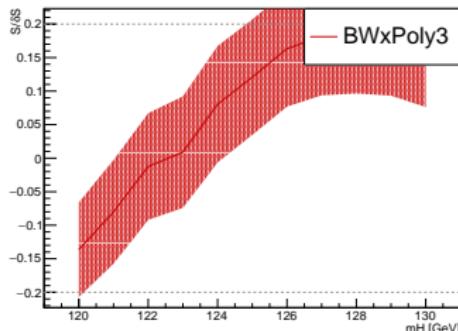
Spurious Signal relative uncertainties



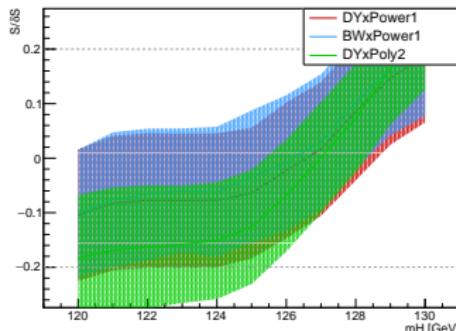
BDT9



BDT10

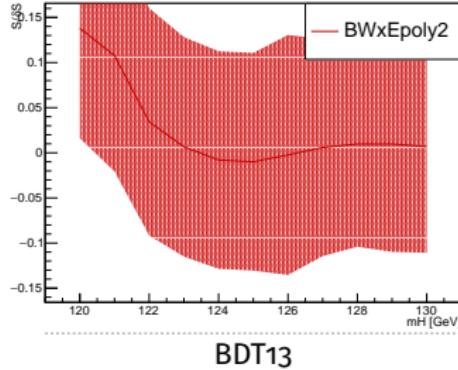


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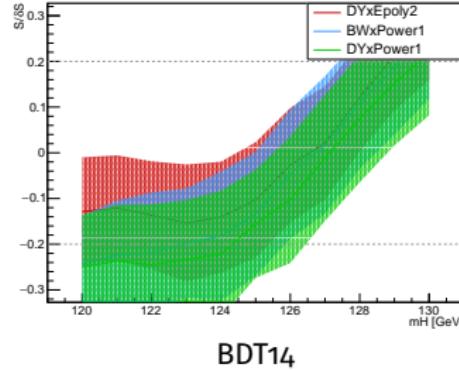


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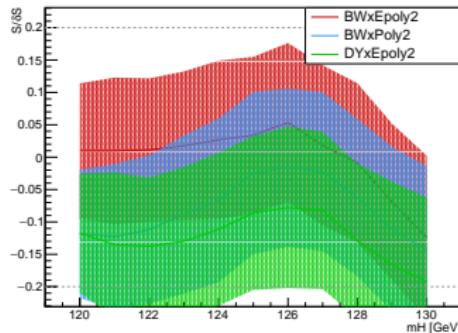
Spurious Signal relative uncertainties



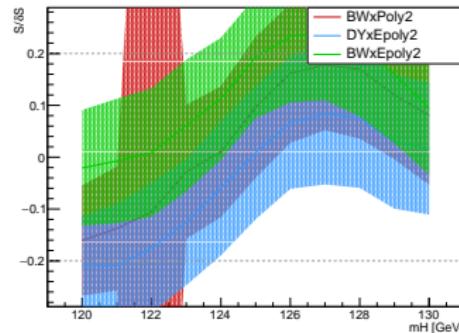
BDT13



BDT14

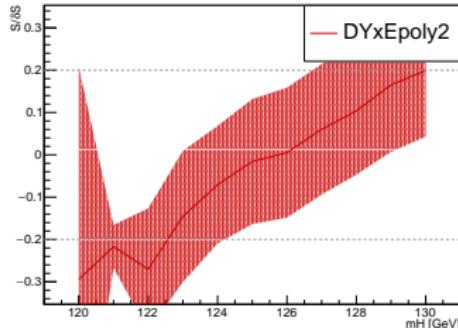


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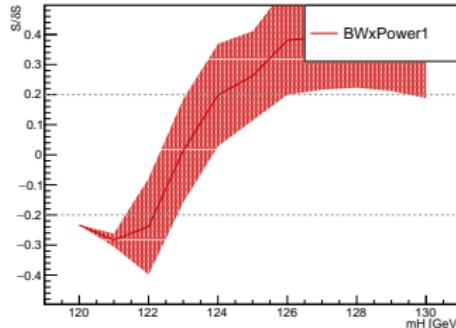


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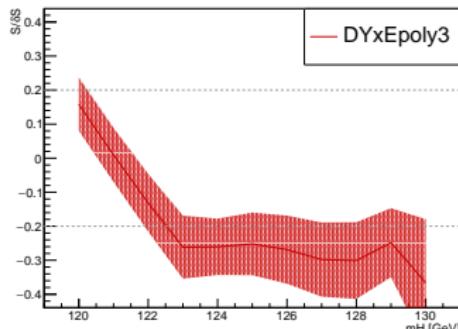
Spurious Signal relative uncertainties



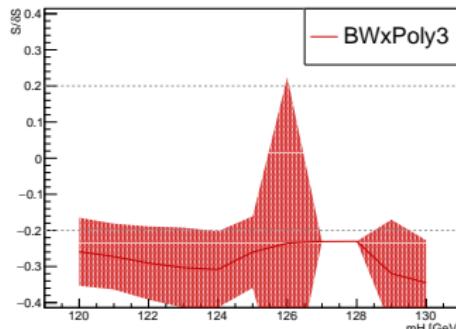
BDT17



BDT18

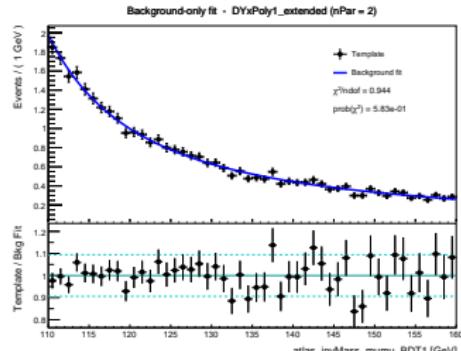


BDT19

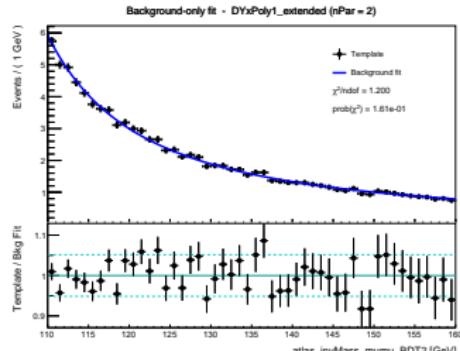


BDT20

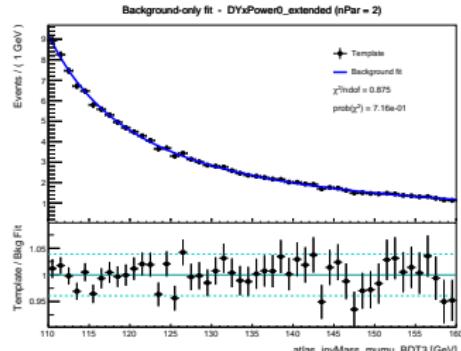
B-only fits



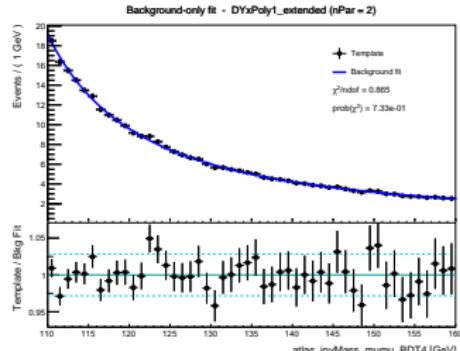
BDT1



BDT2

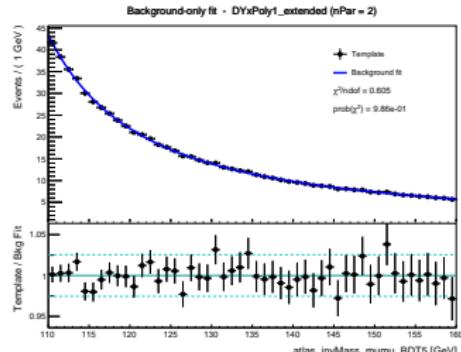


BDT3

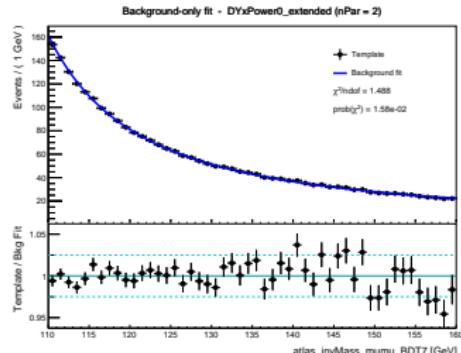


BDT4

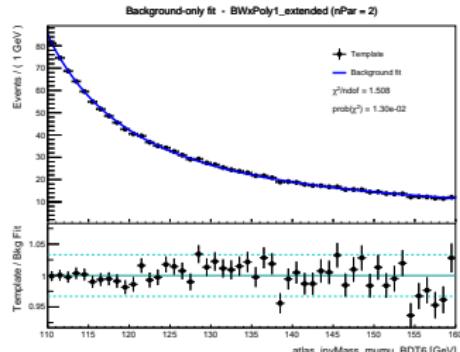
B-only fits



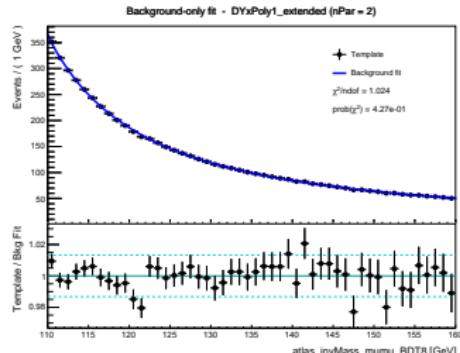
BDT5



BDT7

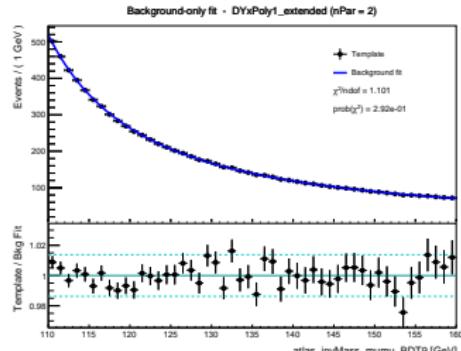


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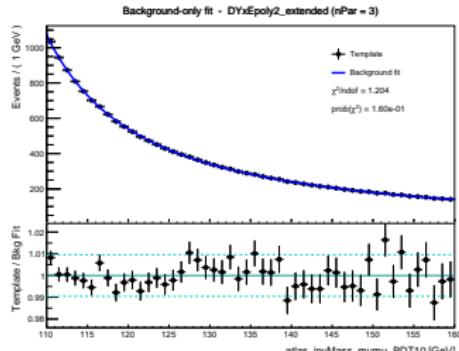


BDT8

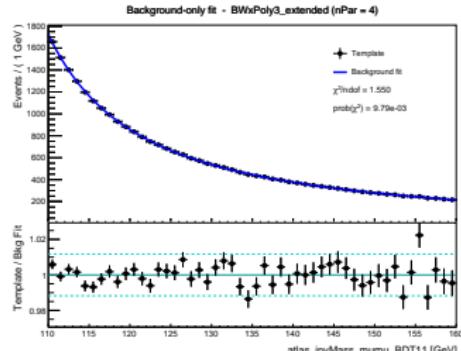
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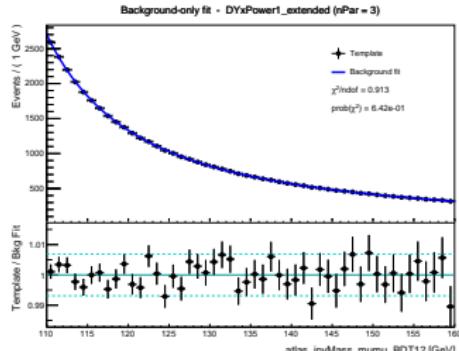
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BDT10

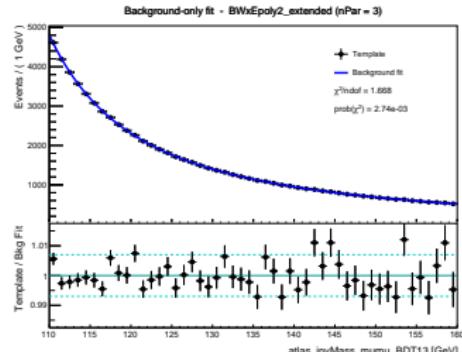


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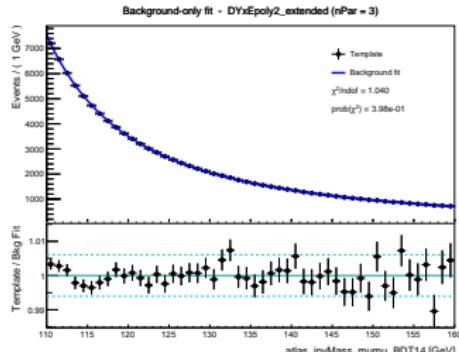


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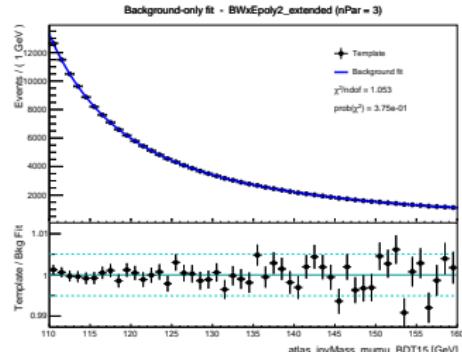
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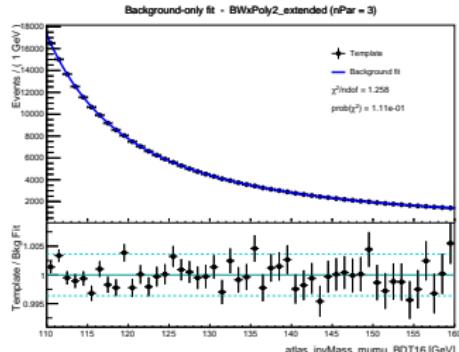
BDT13



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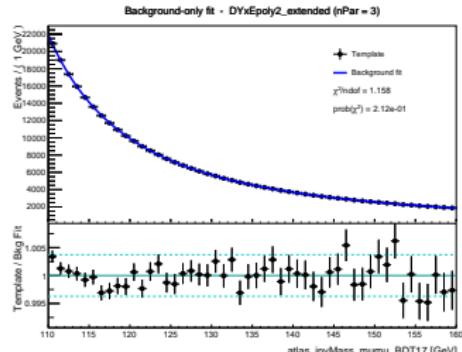


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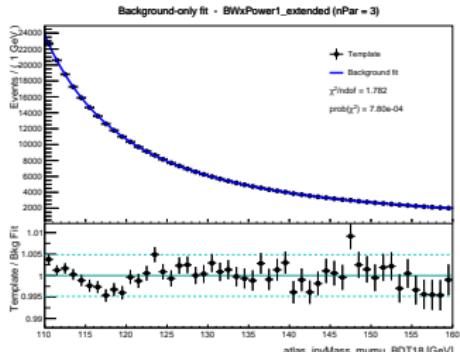


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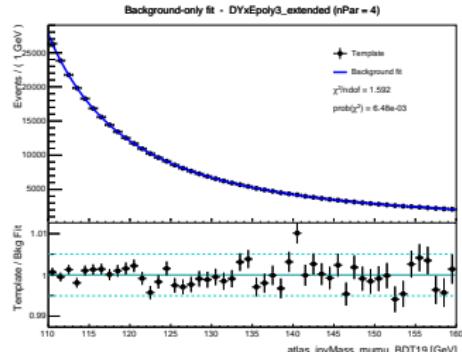
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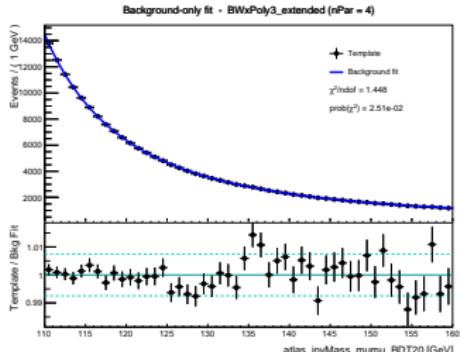
BDT17



BDT18



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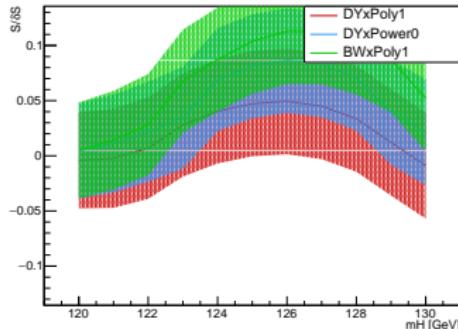


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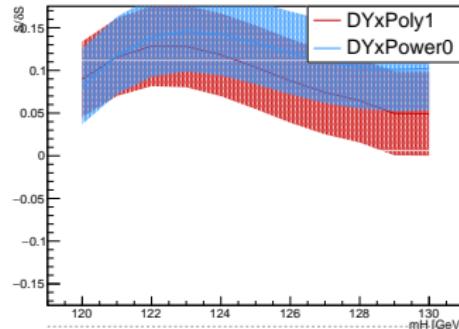


110-200 GeV

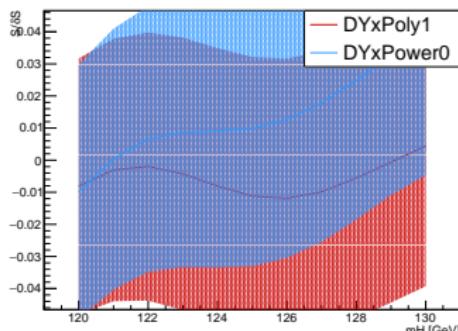
Spurious Signal relative uncertainties



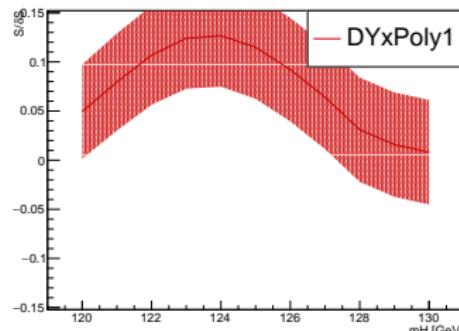
BDT1



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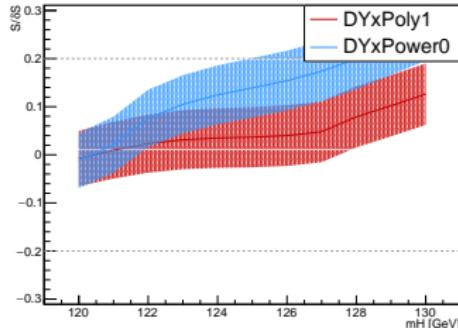


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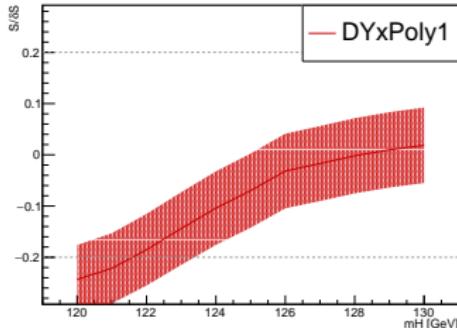


BDT4

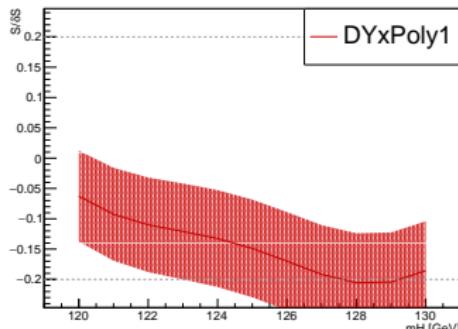
Spurious Signal relative uncertainties



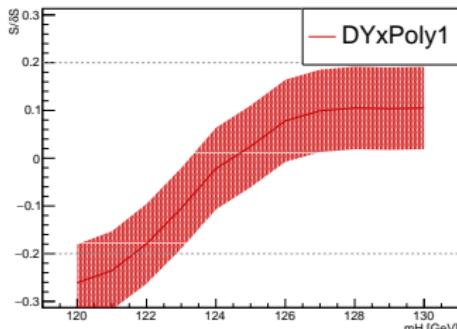
BDT5



BDT6

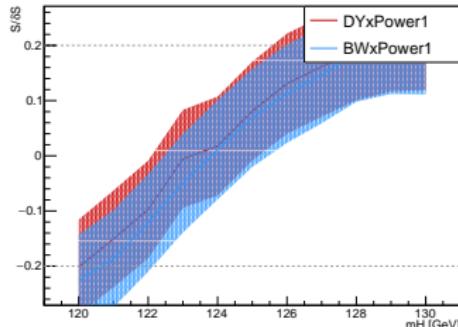


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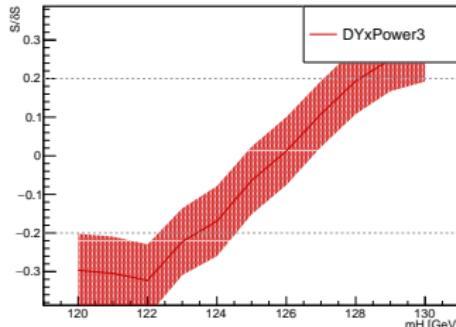


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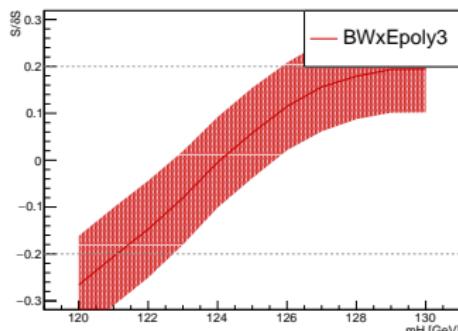
Spurious Signal relative uncertainties



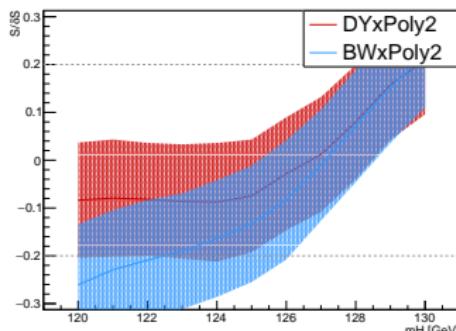
BDT9



BDT10

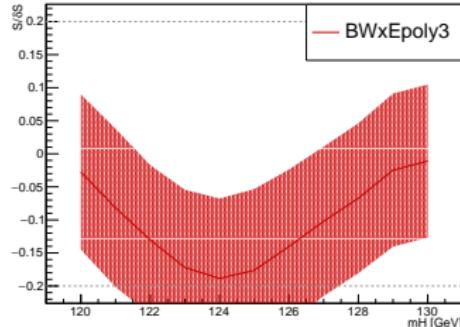


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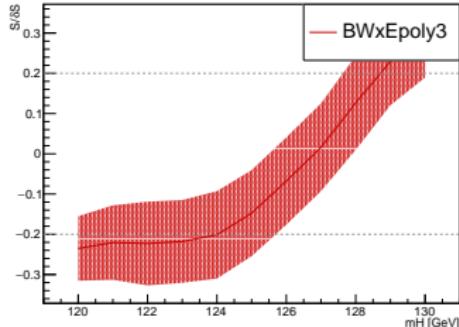


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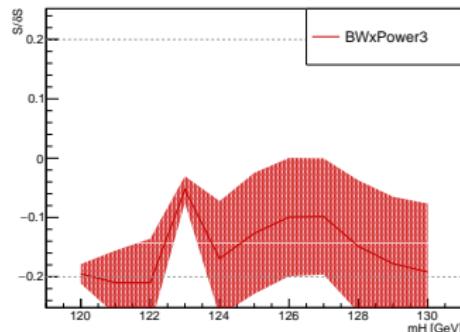
Spurious Signal relative uncertainties



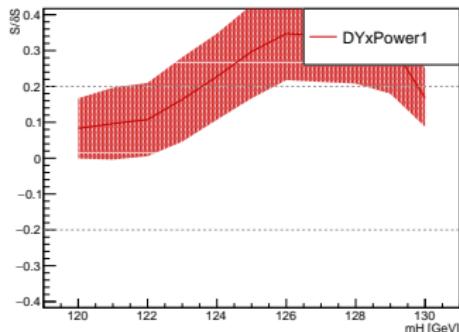
BDT13



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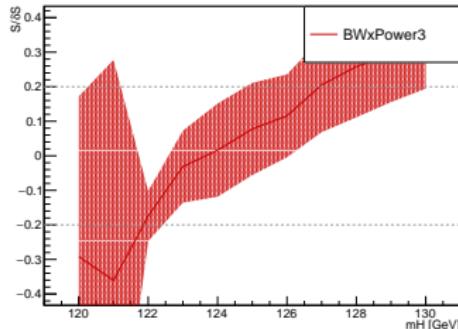


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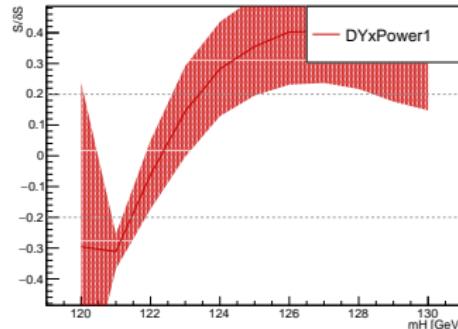


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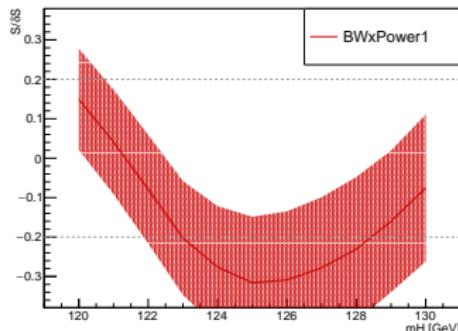
Spurious Signal relative uncertainties



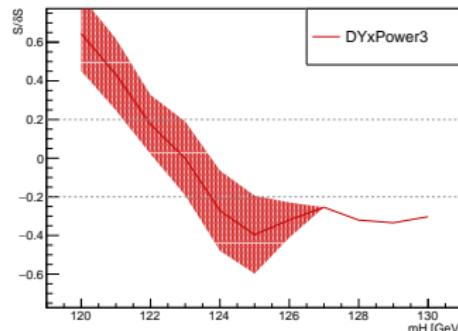
BDT17



BDT18

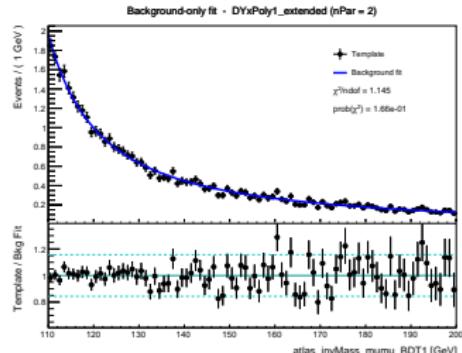


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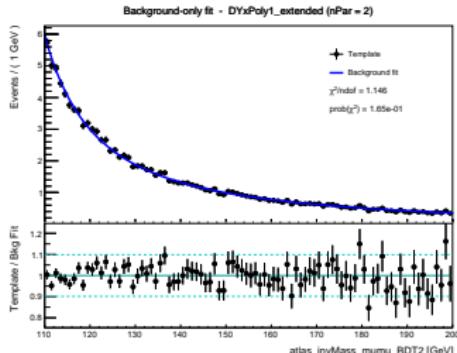


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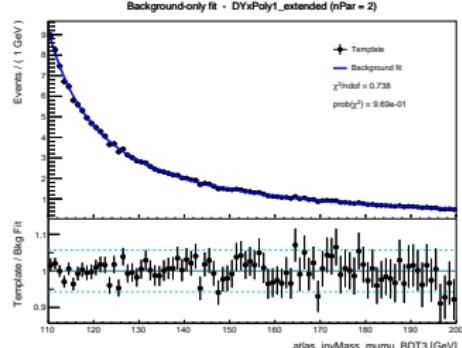
B-only fits



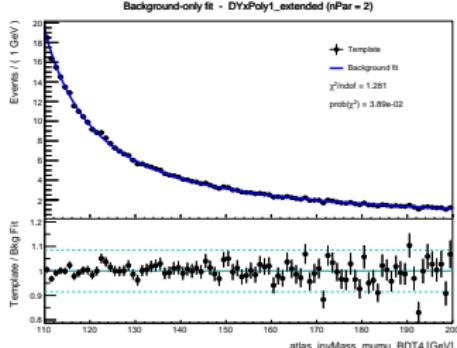
BDT1



BDT2

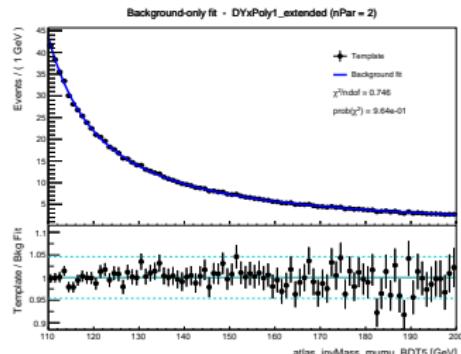


BDT3

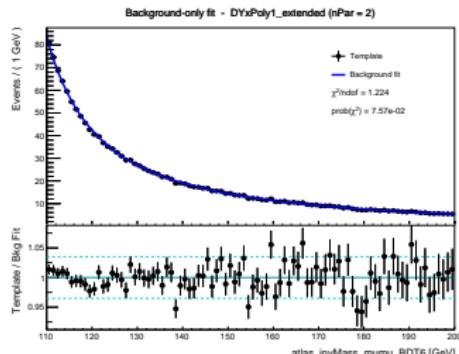


BDT4

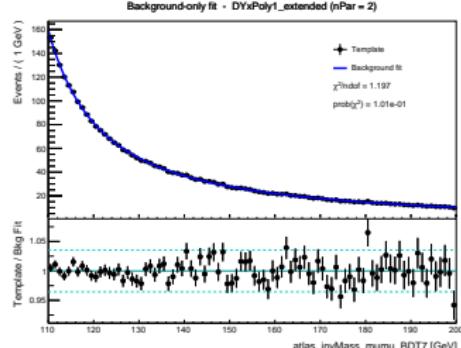
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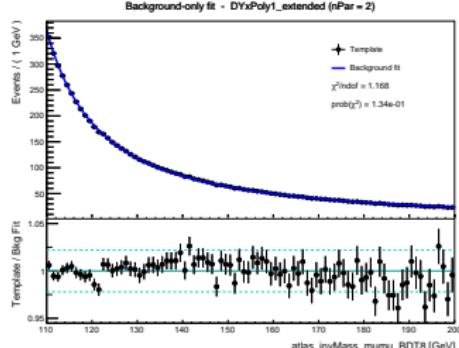
BDT5



BDT6

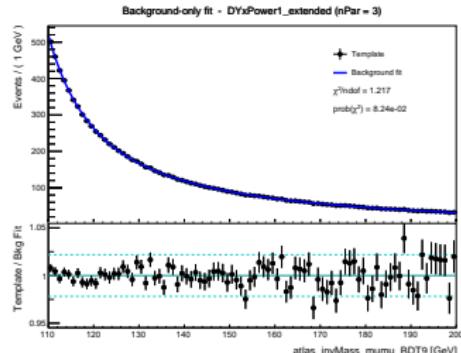


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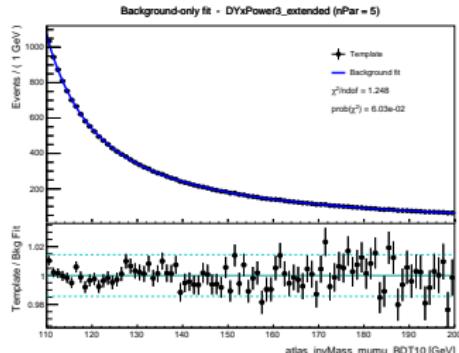


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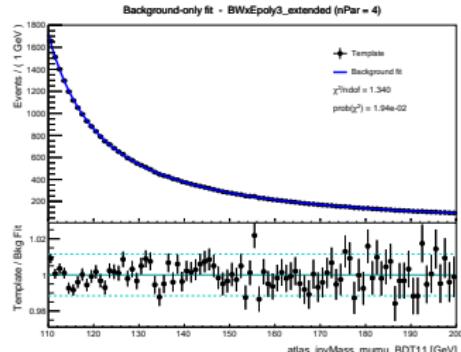
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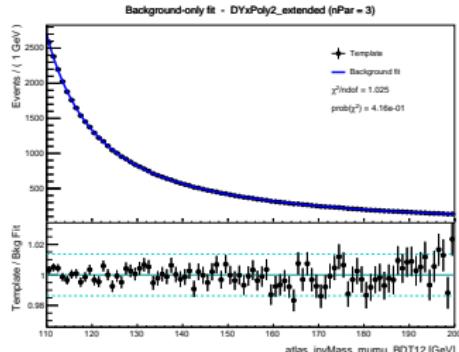
BDT9



BDT10

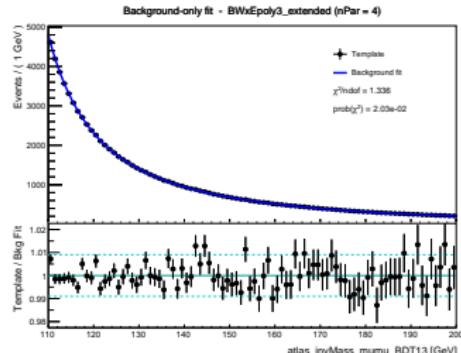


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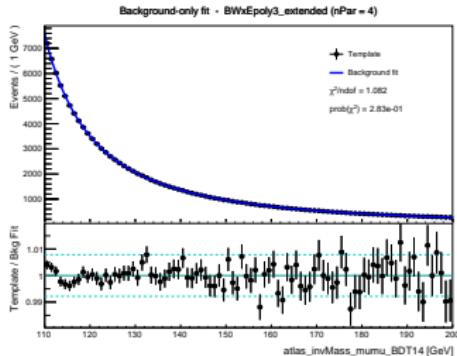


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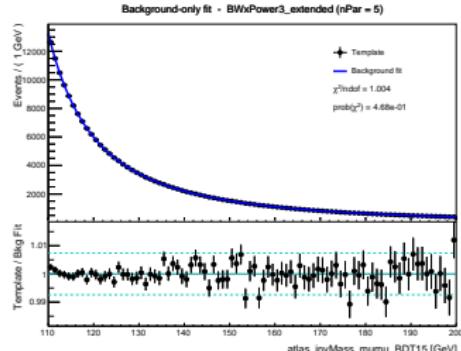
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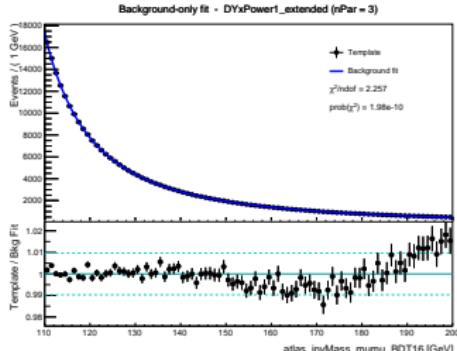
BDT13



BDT14

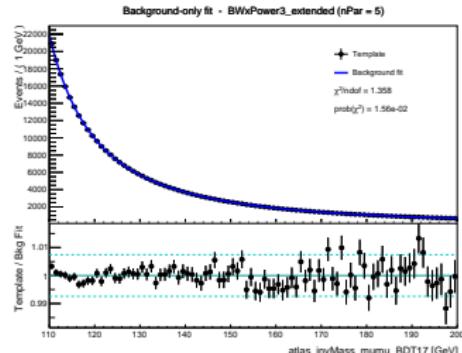


BDT15

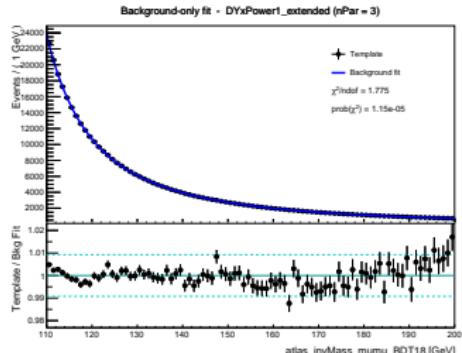


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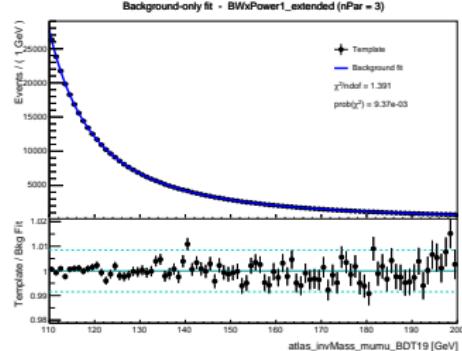
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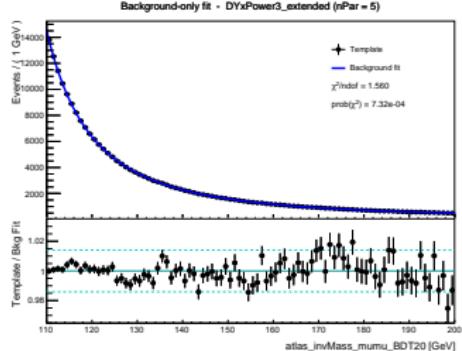
BDT17



BDT18



BDT19

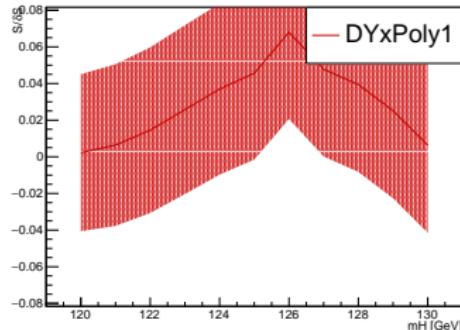


BDT20

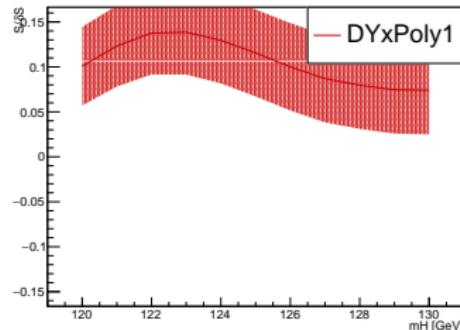


110-250 GeV

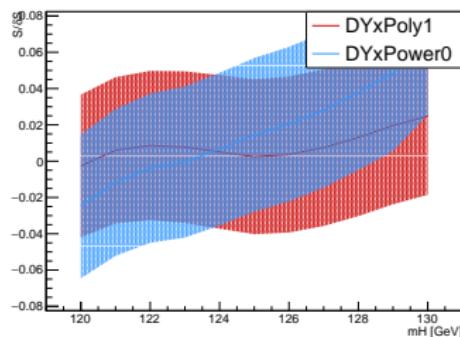
Spurious Signal relative uncertainties



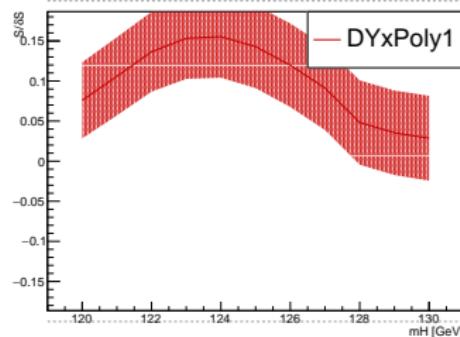
BDT1



BDT2

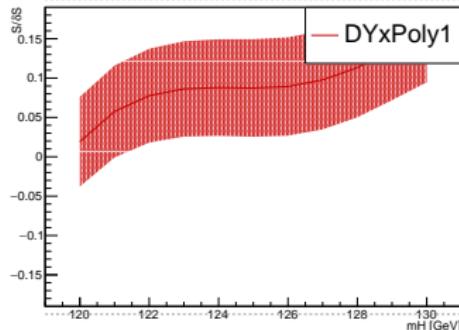


BDT3

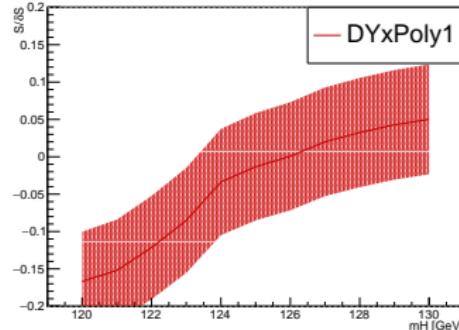


BDT4

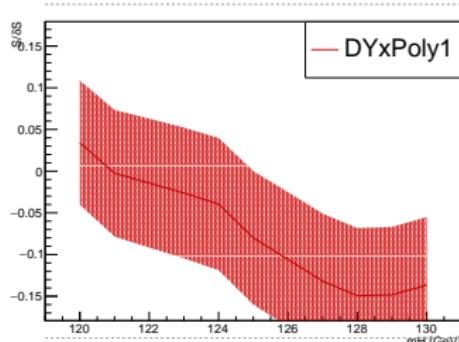
Spurious Signal relative uncertainties



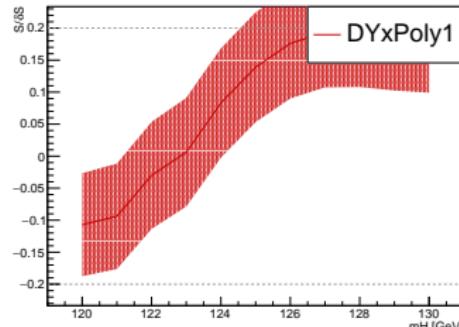
BDT5



BDT6

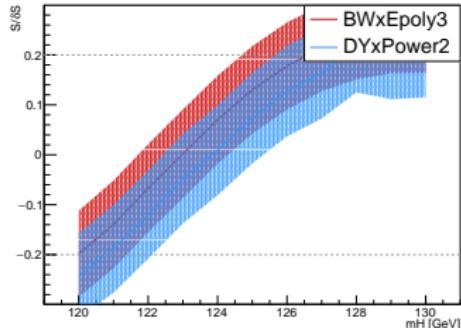


BDT7

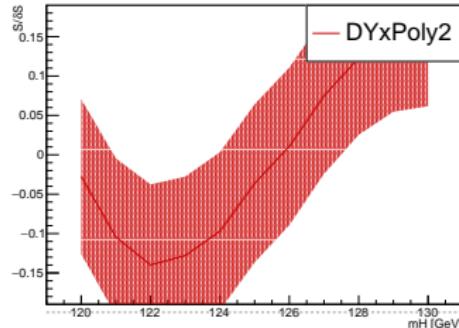


BDT8

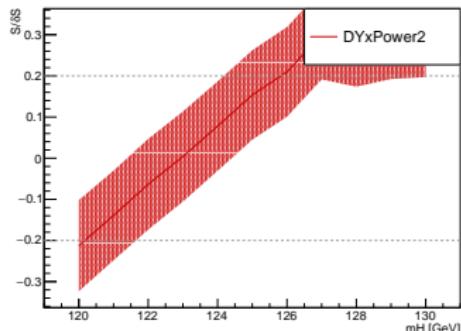
Spurious Signal relative uncertainties



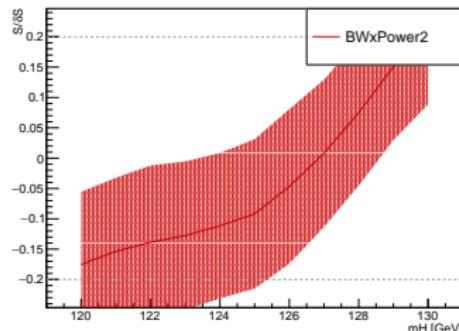
BDT9



BDT10

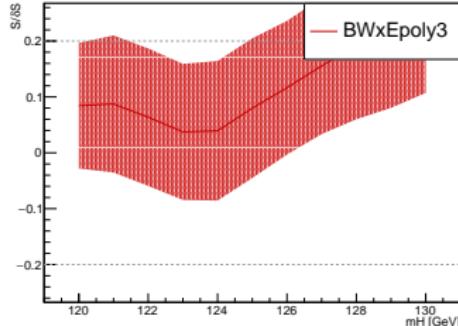


BDT11

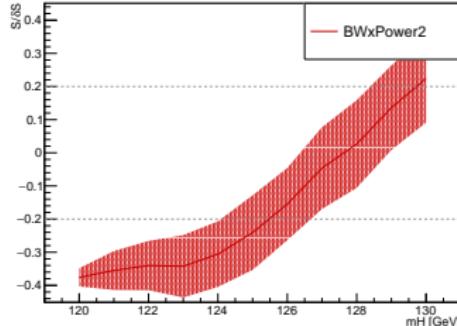


BDT12

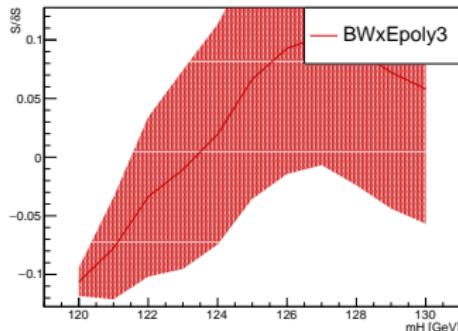
Spurious Signal relative uncertainties



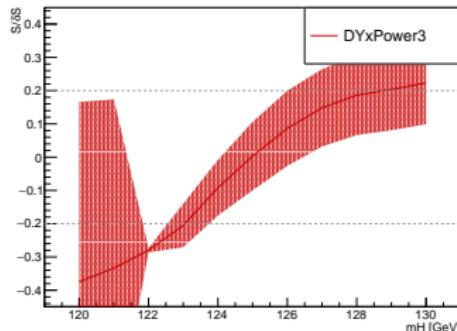
BDT13



BDT14

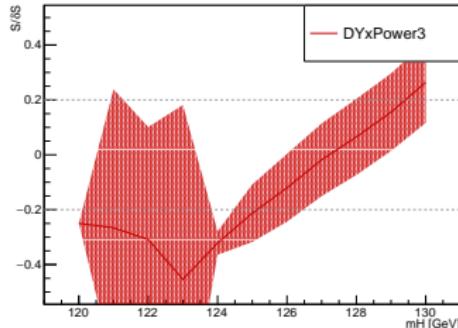


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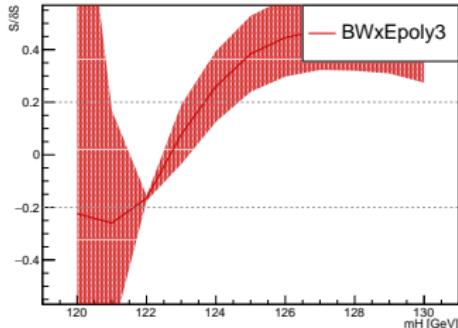


BDT16

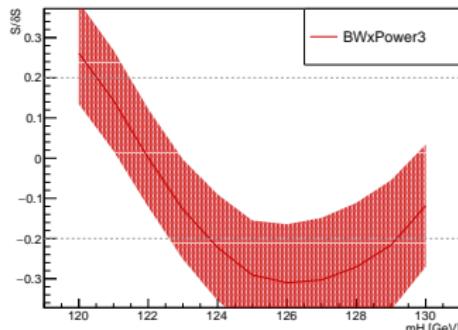
Spurious Signal relative uncertainties



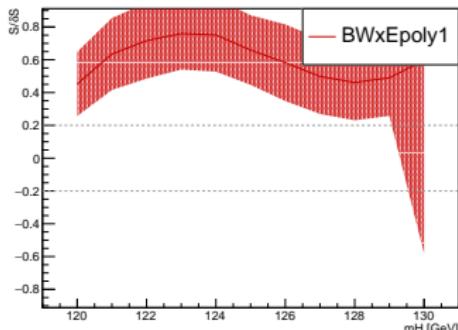
BDT17



BDT18

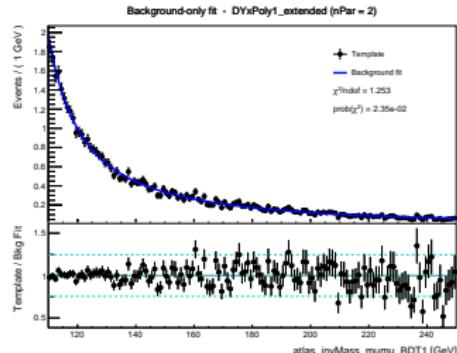


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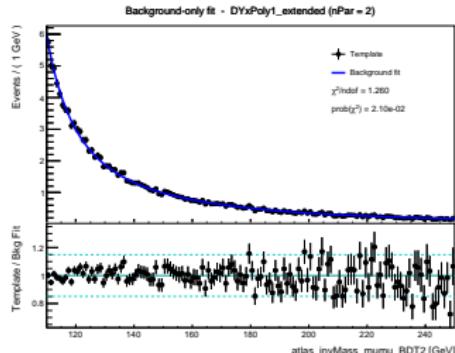


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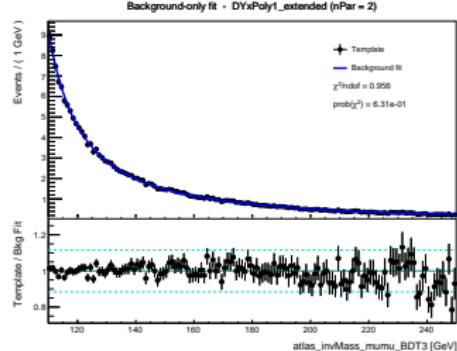
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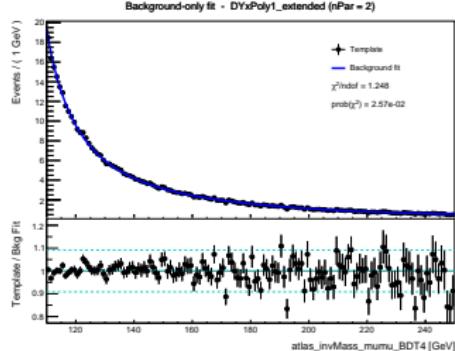
BDT1



BDT2

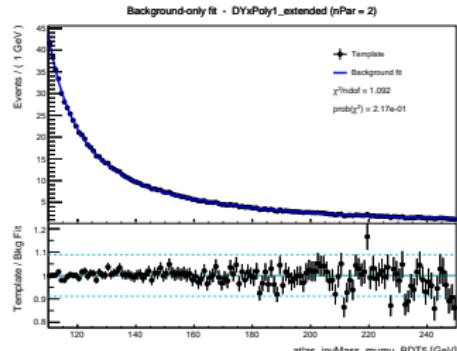


BDT3

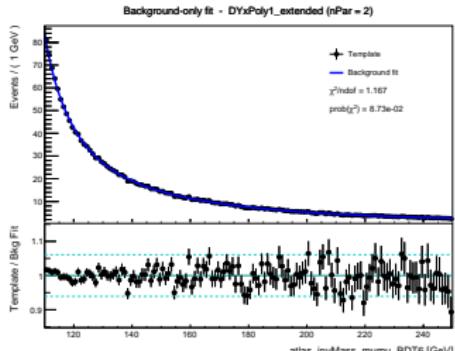


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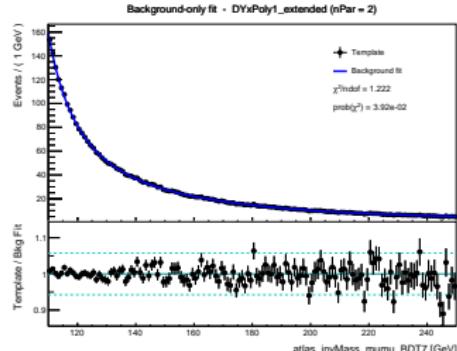
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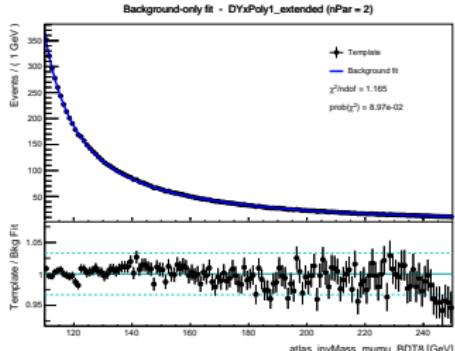
BDT5



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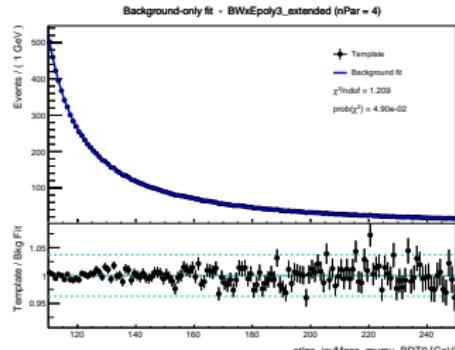


BDT7

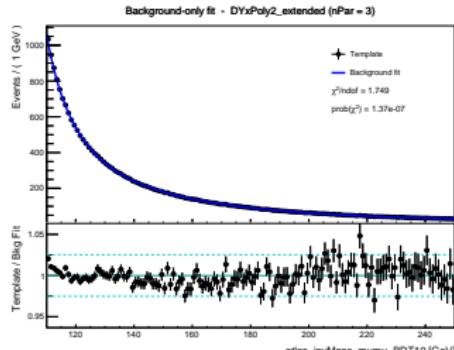


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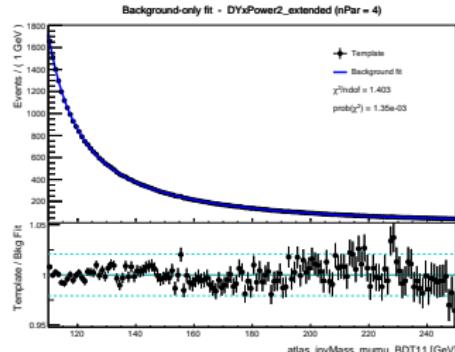
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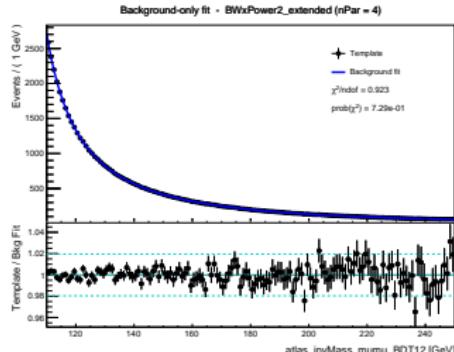
BDT9



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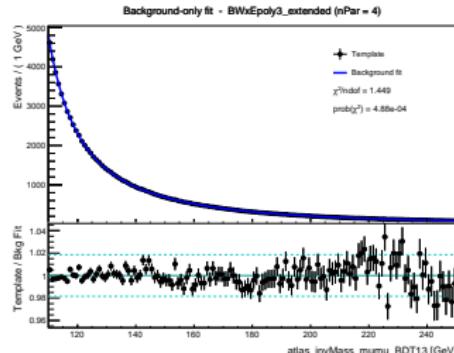


BDT11

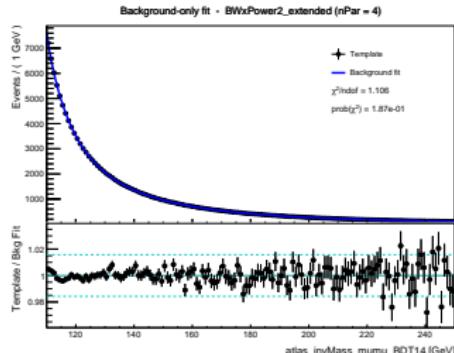


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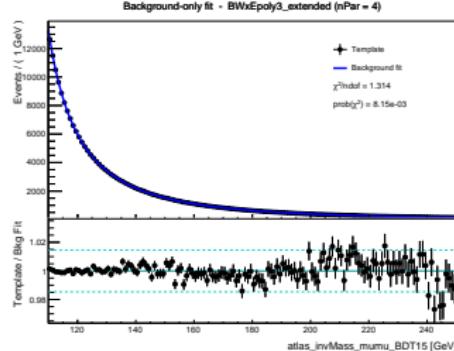
B-only fits



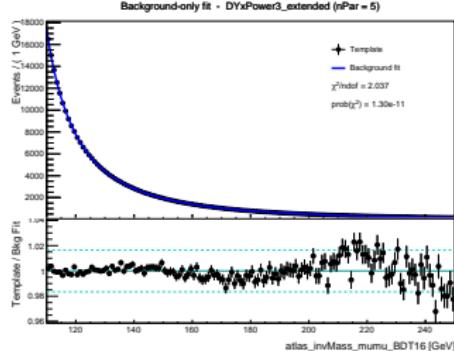
BDT13



BDT14

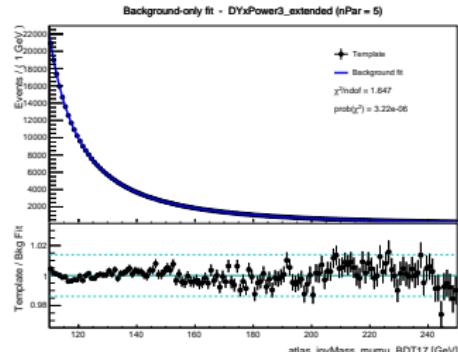


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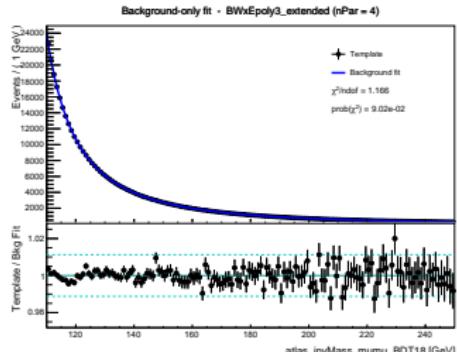


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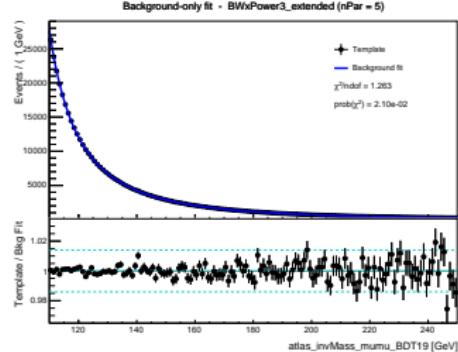
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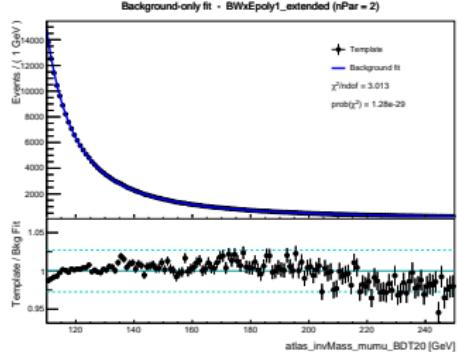
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BDT18



BDT19

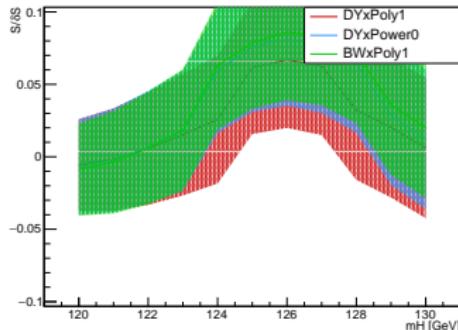


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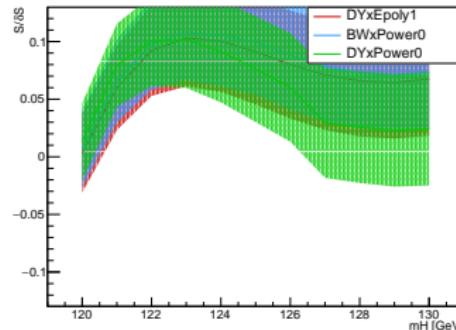


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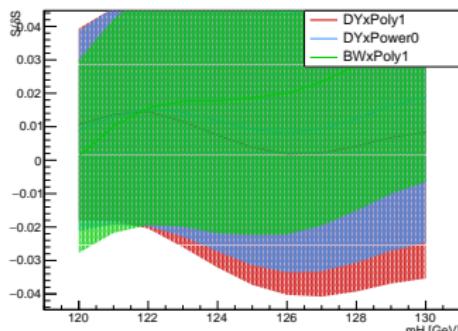
Spurious Signal relative uncertainties



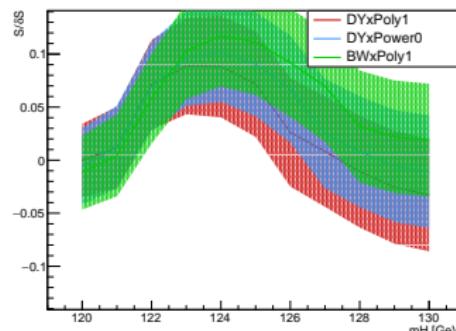
BDT1



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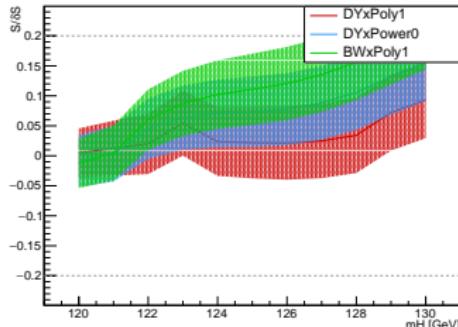


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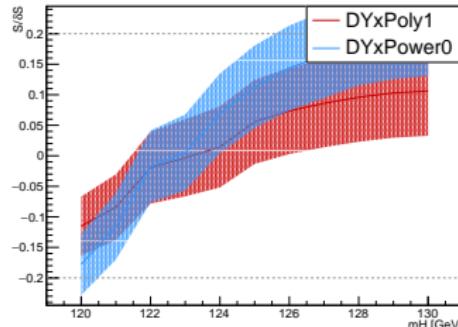


BDT4

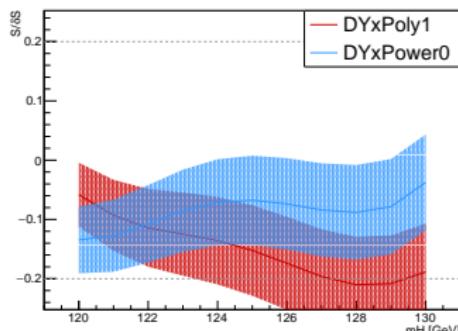
Spurious Signal relative uncertainties



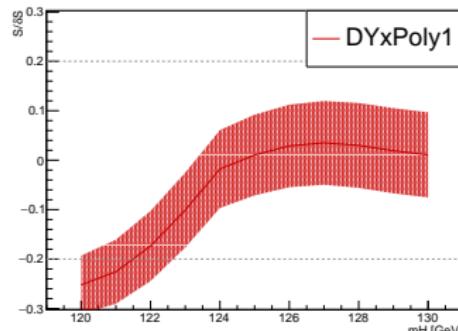
BDT5



BDT6

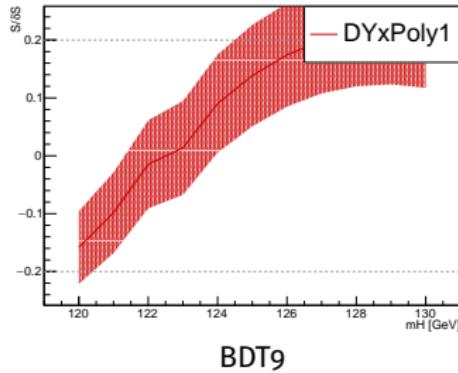


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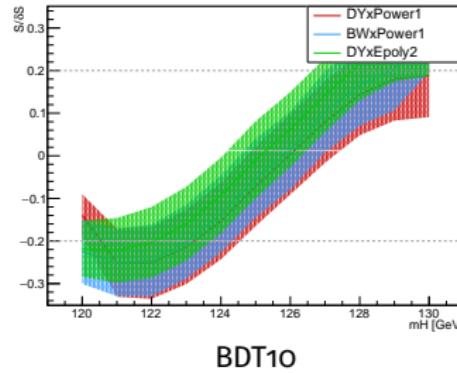


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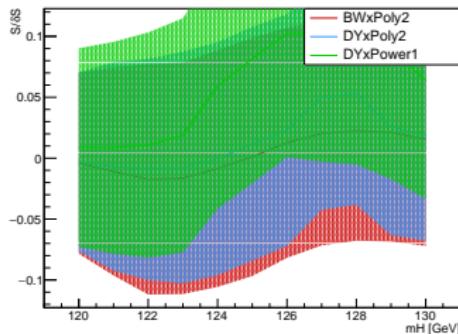
Spurious Signal relative uncertainties



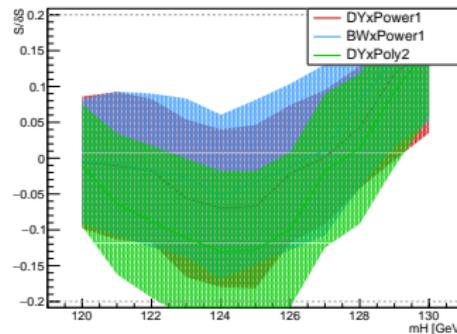
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BDT10

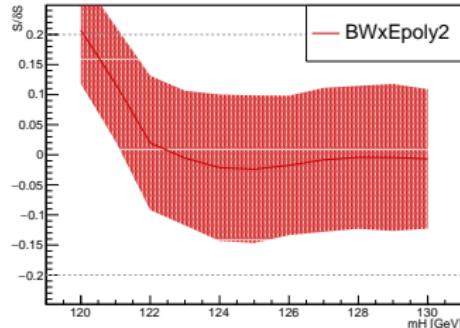


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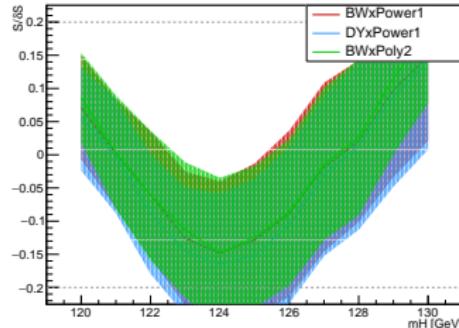


BDT12

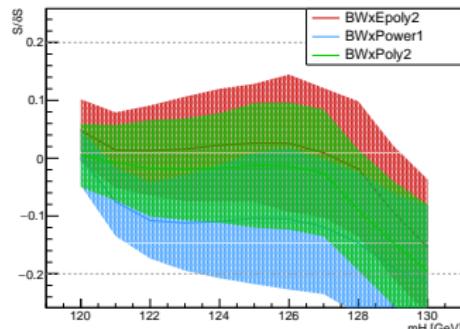
Spurious Signal relative uncertainties



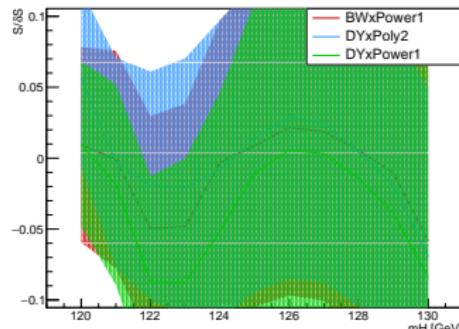
BDT13



BDT14

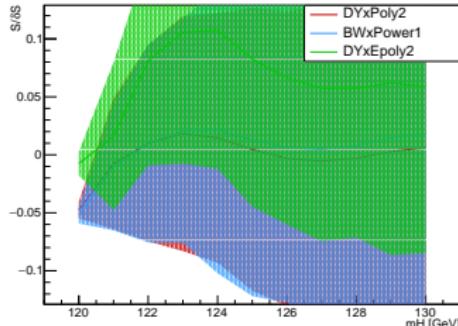


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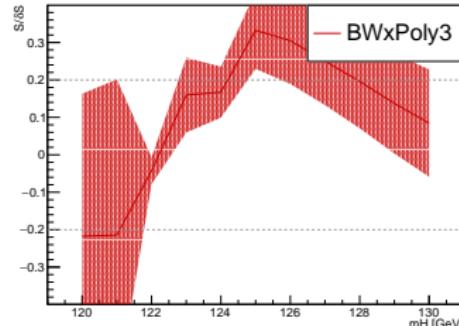


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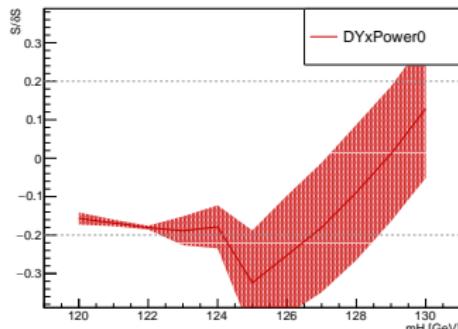
Spurious Signal relative uncertainties



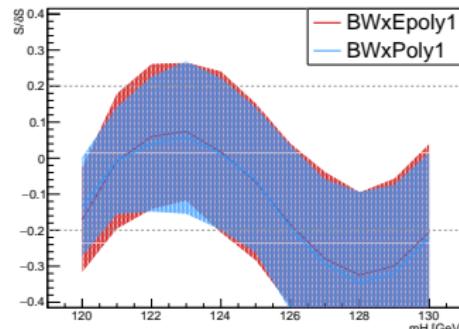
BDT17



BDT18

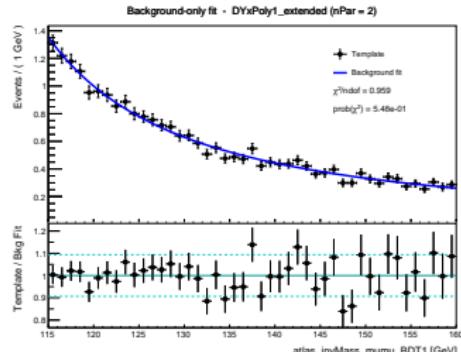


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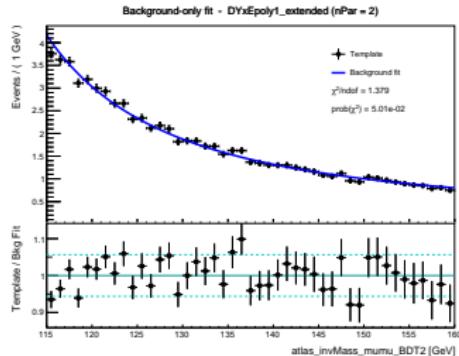


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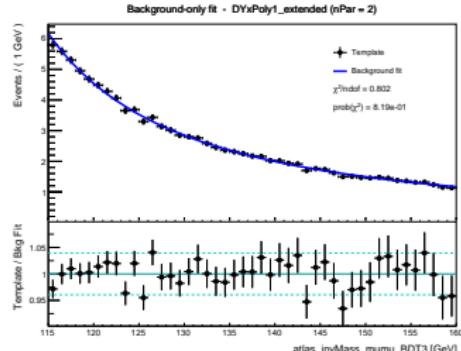
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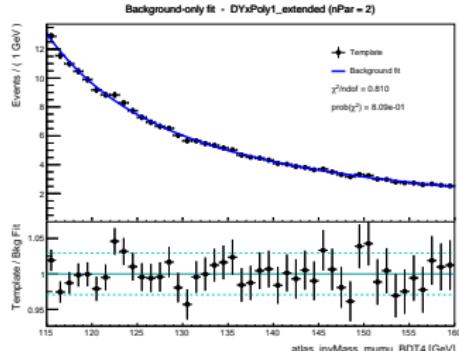
BDT1



BDT2

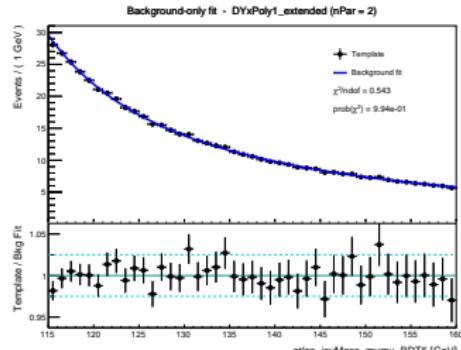


BDT3

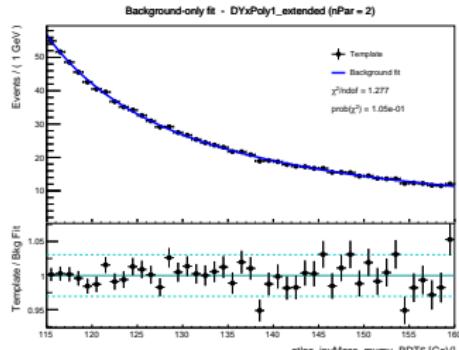


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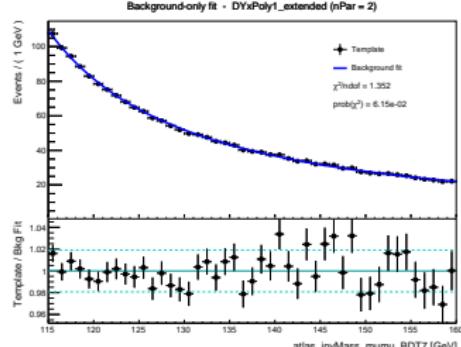
B-only fits



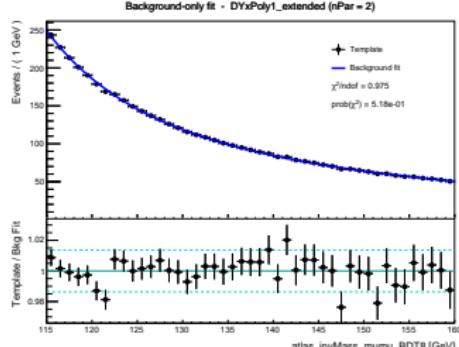
BDT5



BDT6

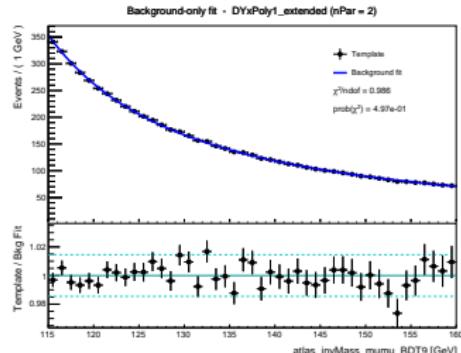


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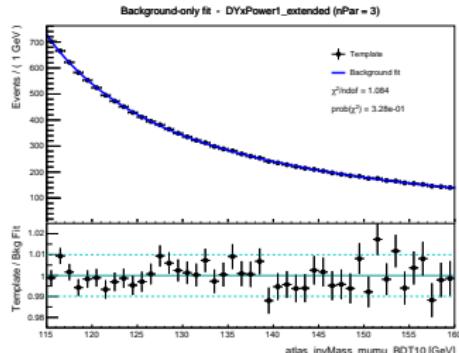


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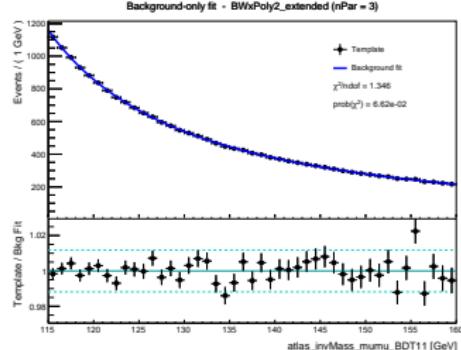
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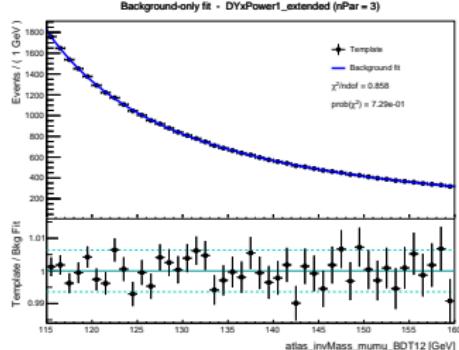
BDT9



BDT10

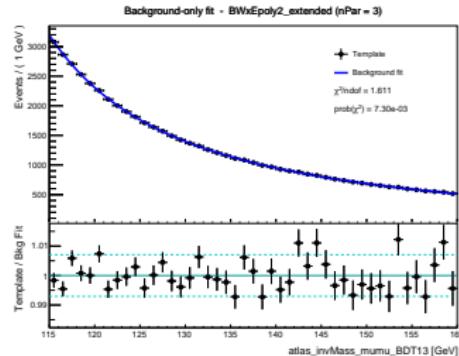


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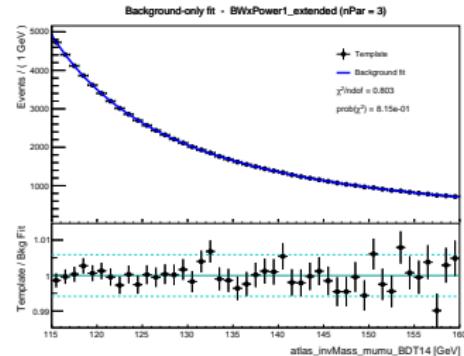


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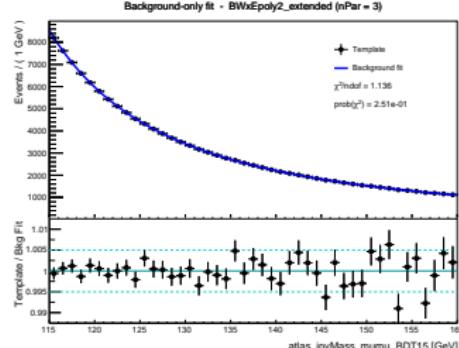
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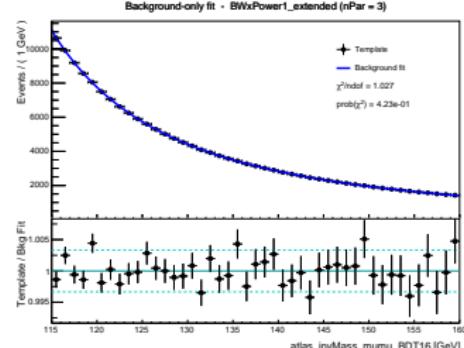
BDT13



BDT14

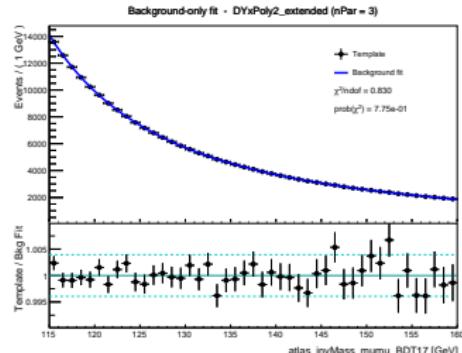


BDT15

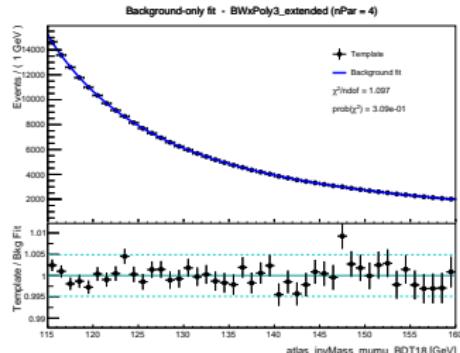


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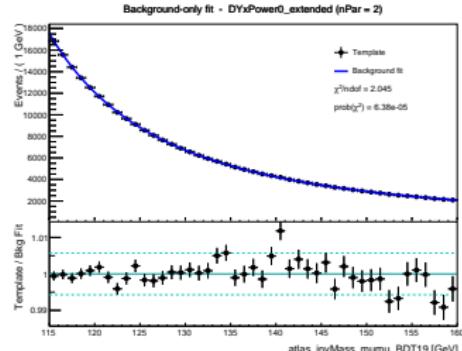
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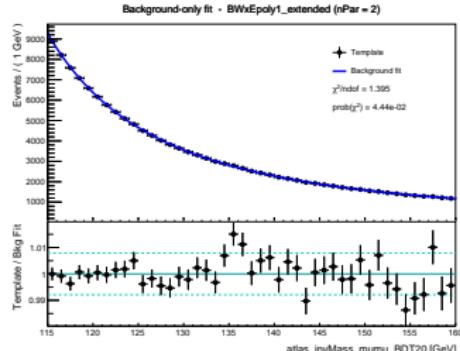
BDT17



BDT18



BDT19

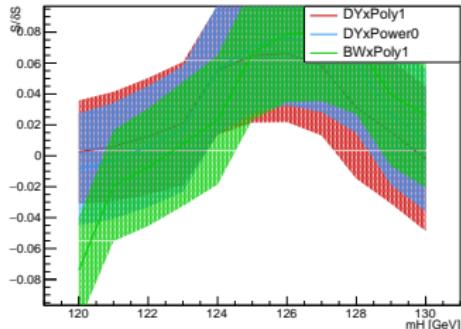


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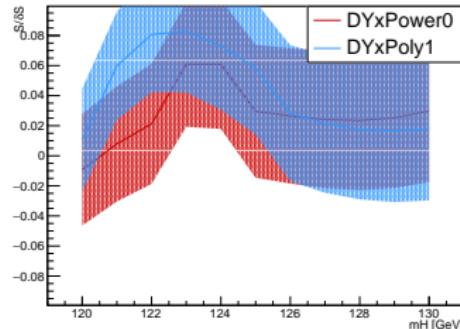


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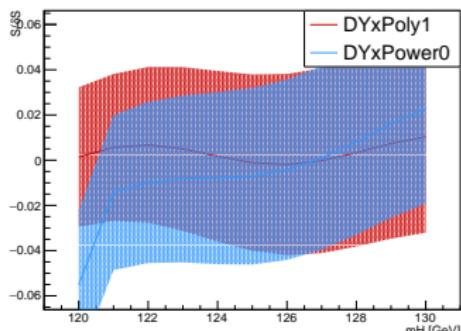
Spurious Signal relative uncertainties



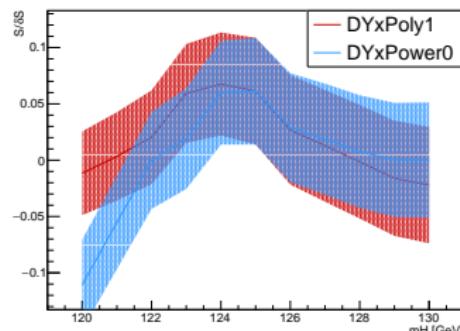
BDT1



BDT2

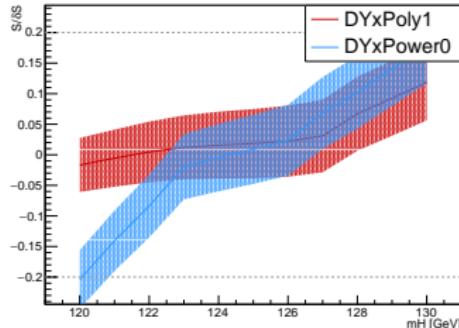


BDT3

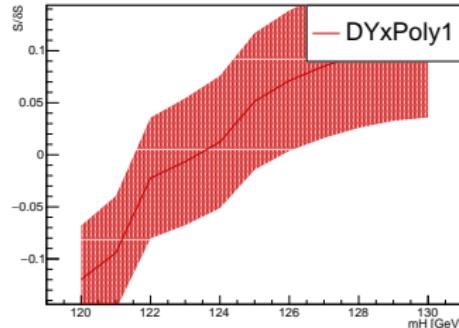


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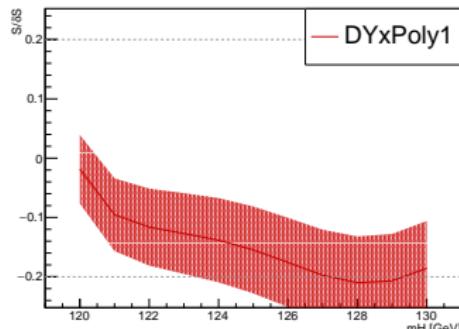
Spurious Signal relative uncertainties



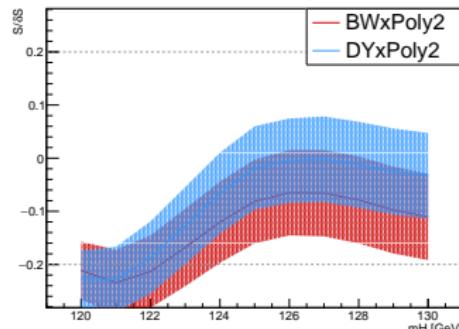
BDT5



BDT6

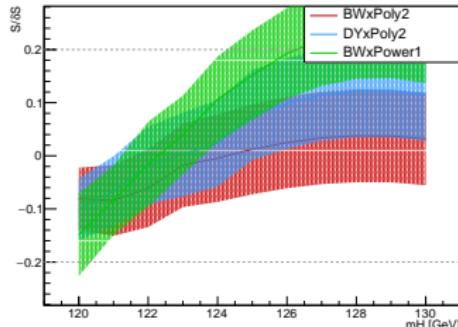


BDT7

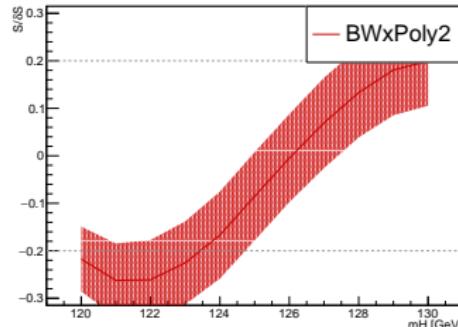


BDT8

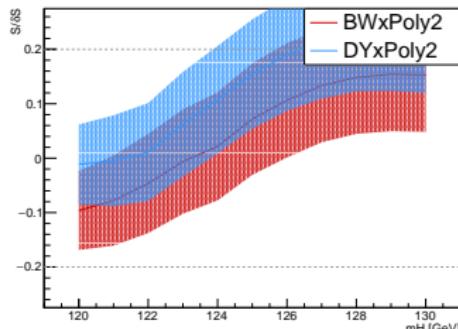
Spurious Signal relative uncertainties



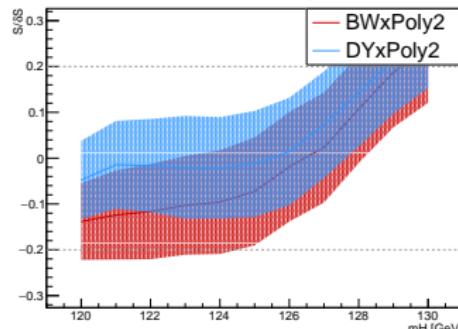
BDT9



BDT10

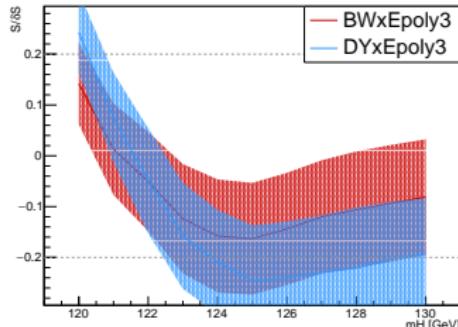


BDT11

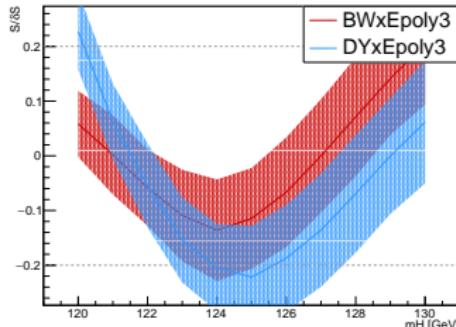


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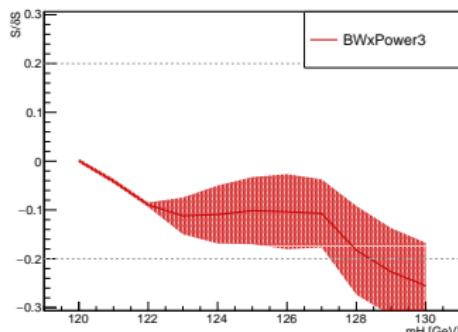
Spurious Signal relative uncertainties



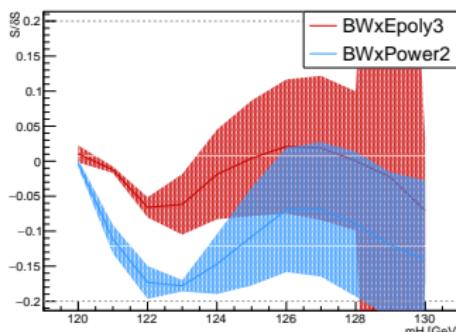
BDT13



BDT14

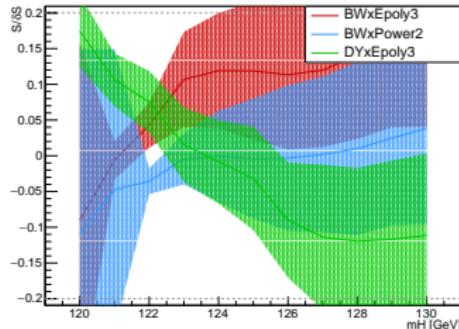


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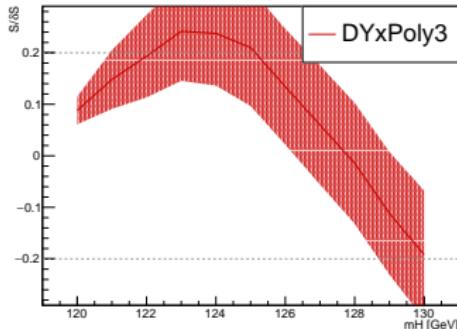


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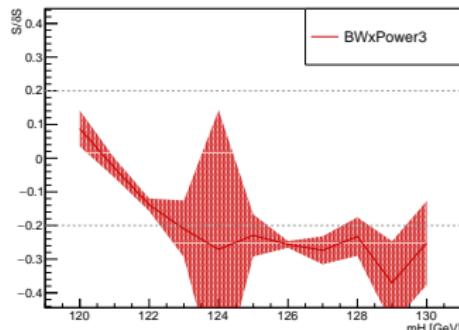
Spurious Signal relative uncertainties



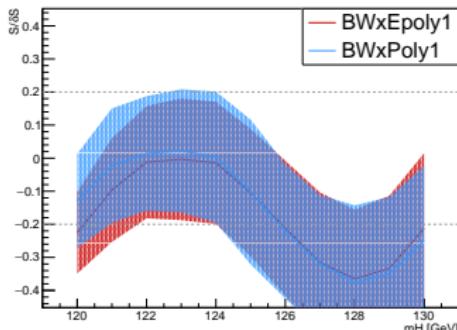
BDT17



BDT18

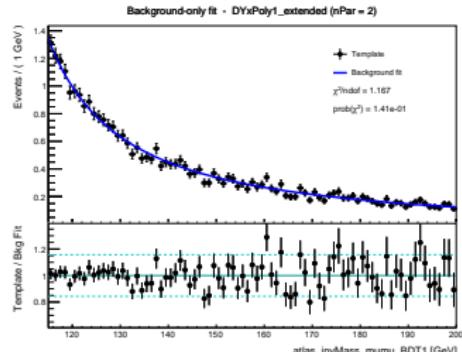


BDT19

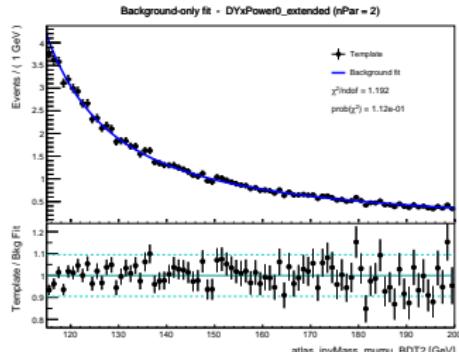


BDT20

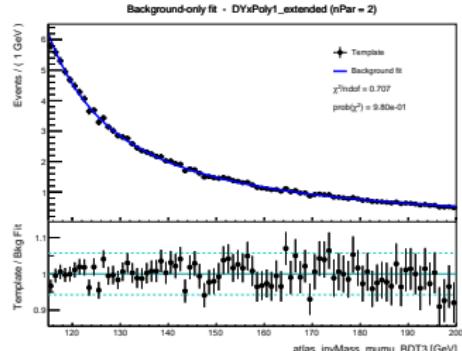
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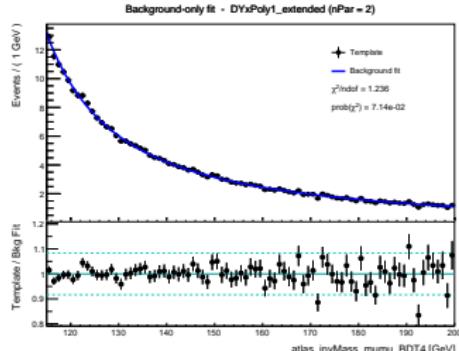
BDT1



BDT2

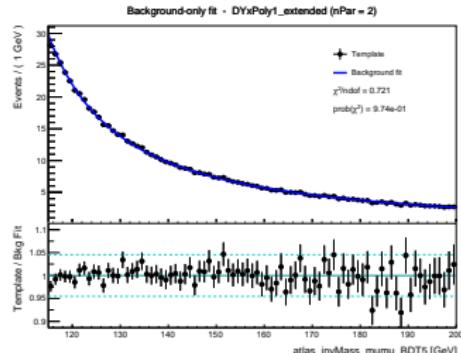


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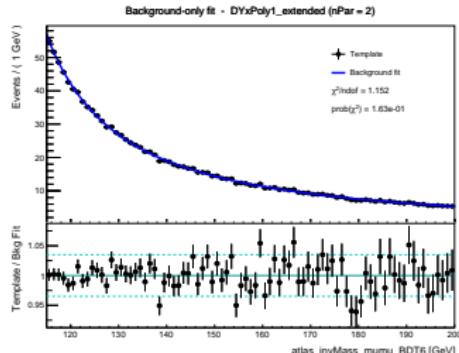


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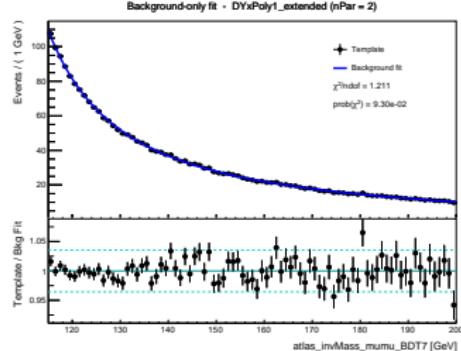
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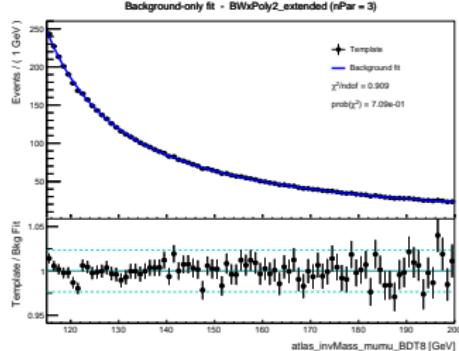
BDT5



BDT6

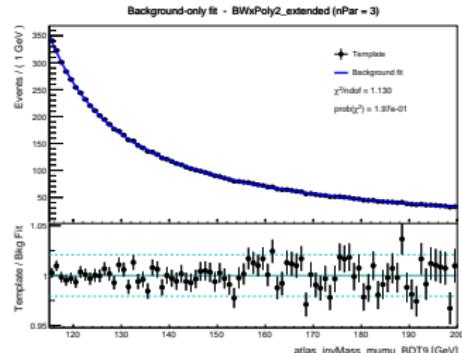


BDT7

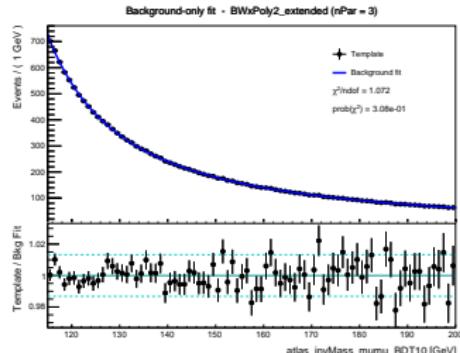


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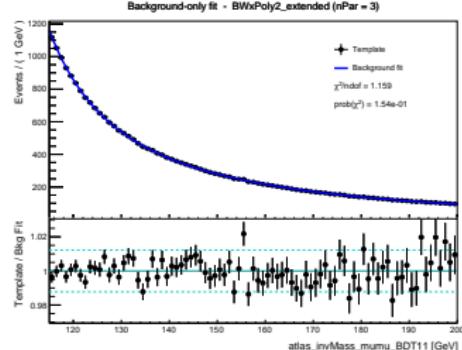
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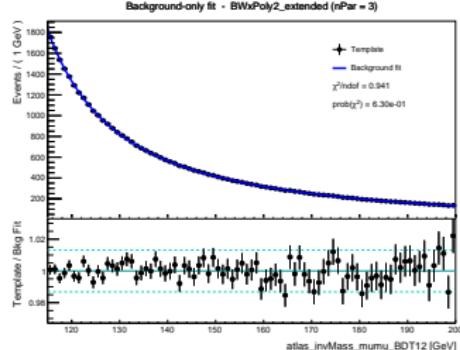
BDT9



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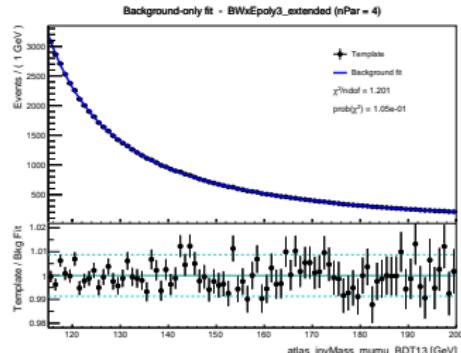


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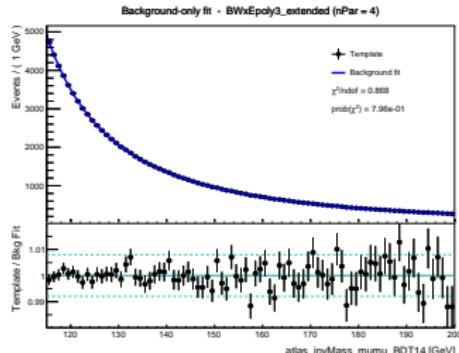


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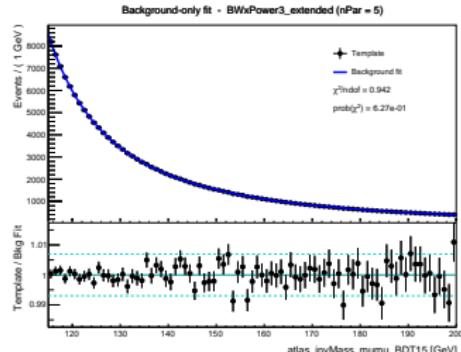
B-only fits



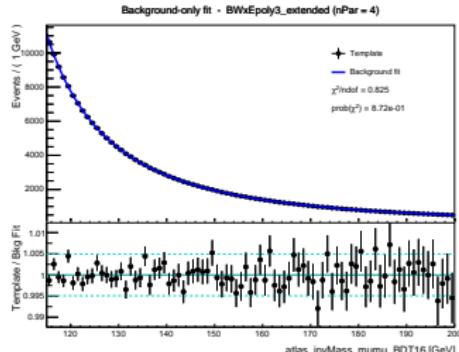
BDT13



BDT14

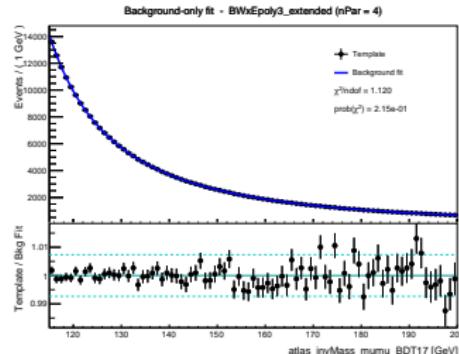


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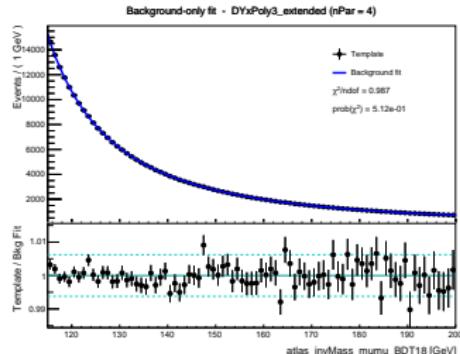


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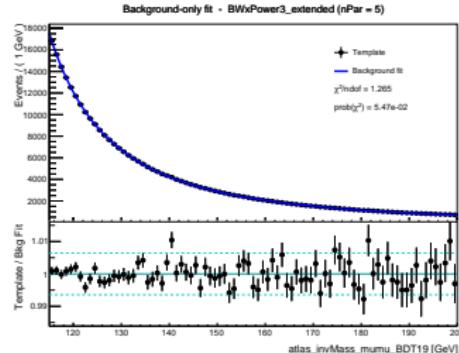
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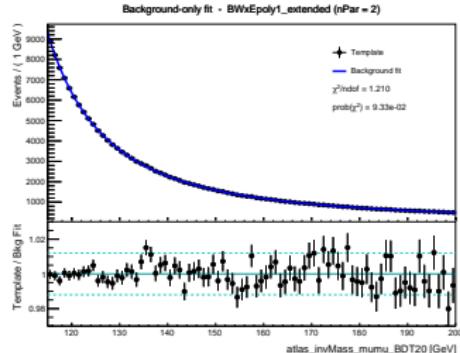
BDT17



BDT18



BDT19

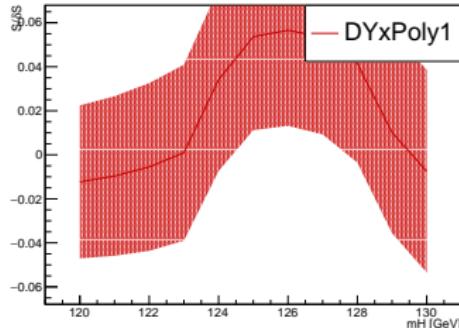


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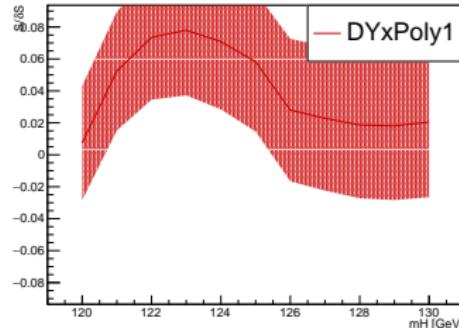


115-250 GeV

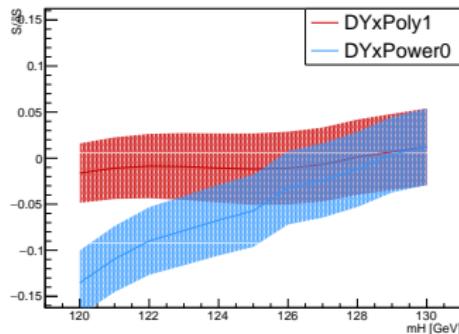
Spurious Signal relative uncertainties



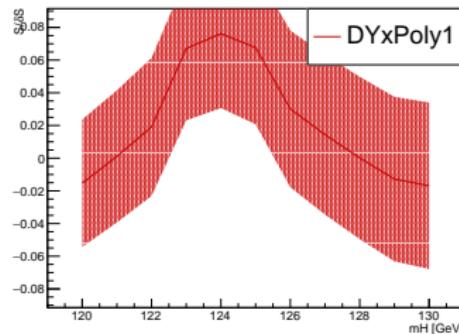
BDT1



BDT2

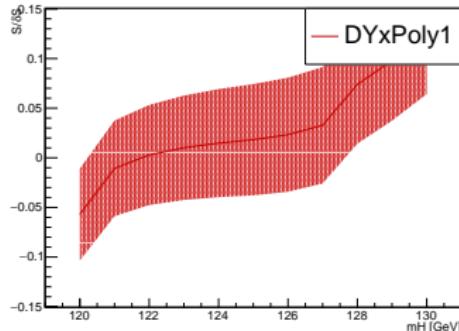


BDT3

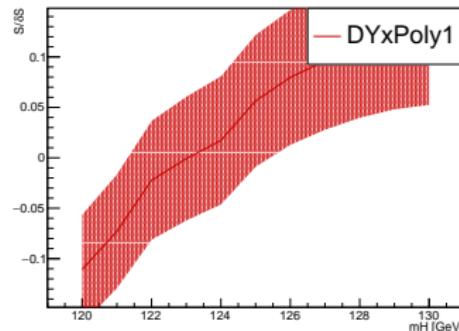


BDT4

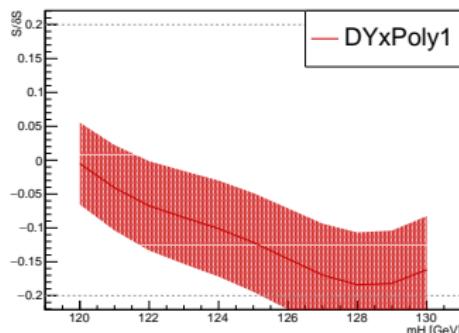
Spurious Signal relative uncertainties



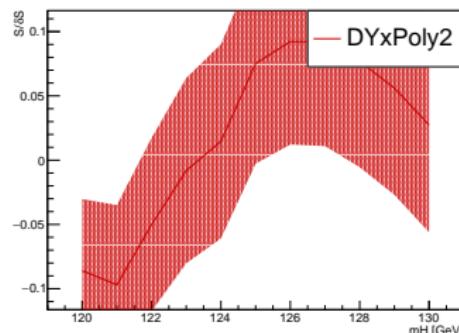
BDT5



BDT6

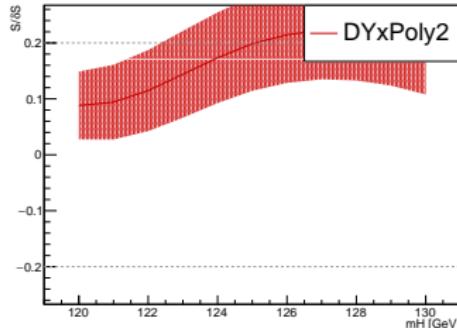


BDT7

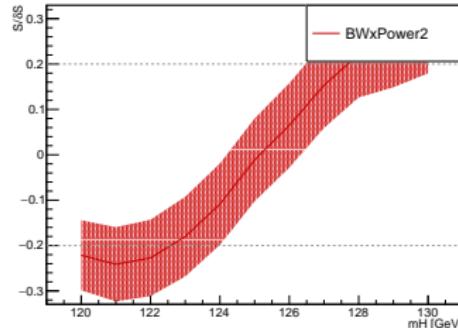


BDT8

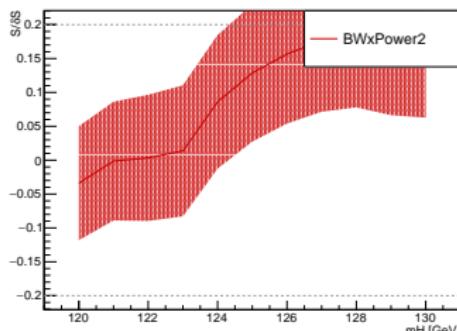
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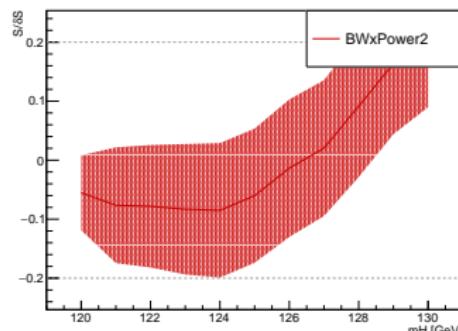
BDT9



BDT10

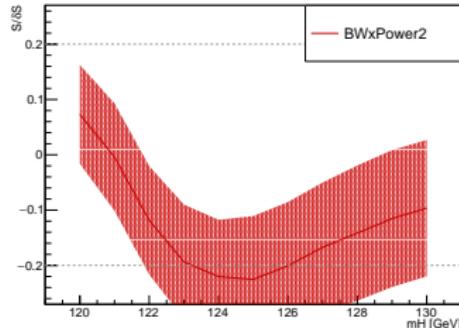


BDT11

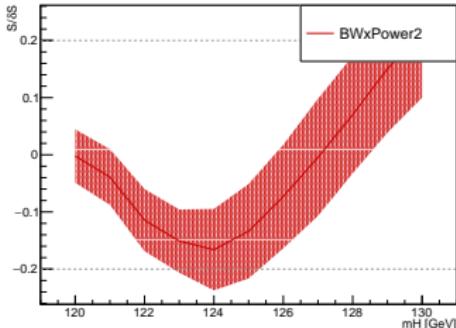


BDT12

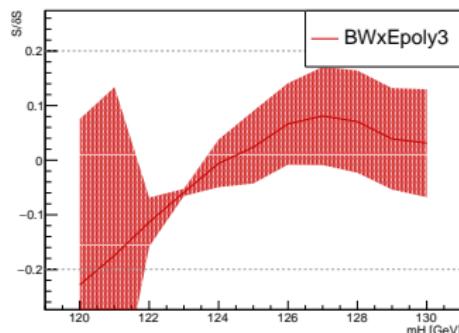
Spurious Signal relative uncertainties



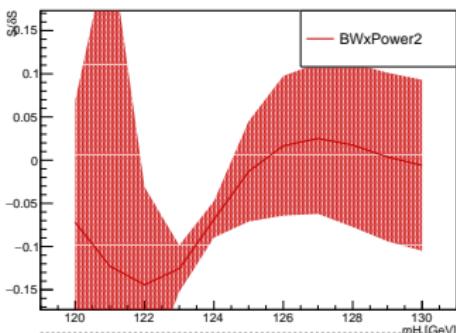
BDT13



BDT14

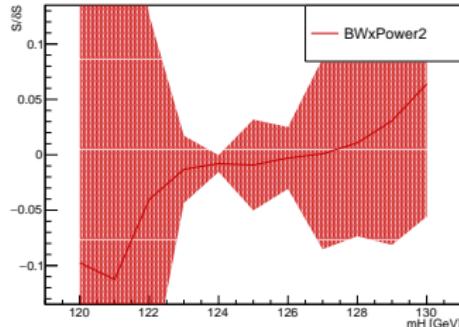


BDT15

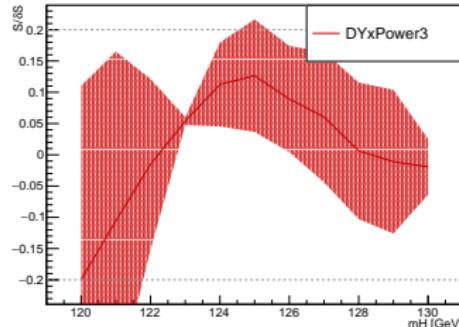


BDT16

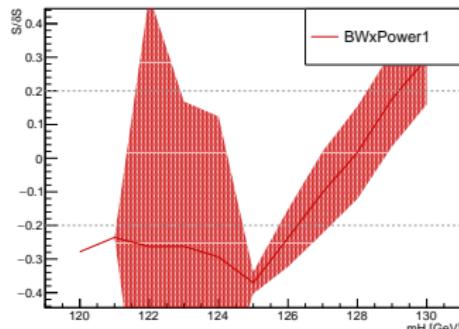
Spurious Signal relative uncertainties



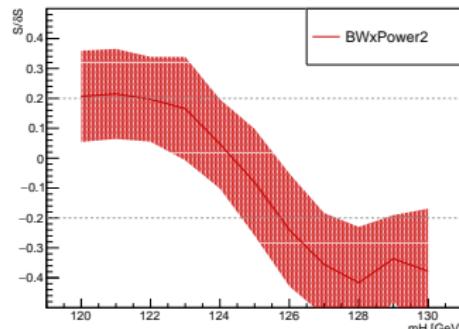
BDT17



BDT18

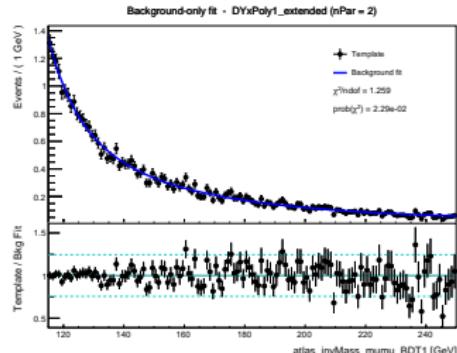


BDT19

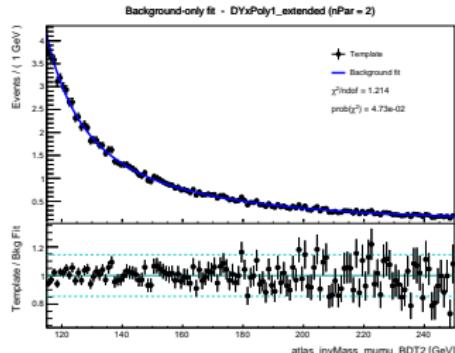


BDT20

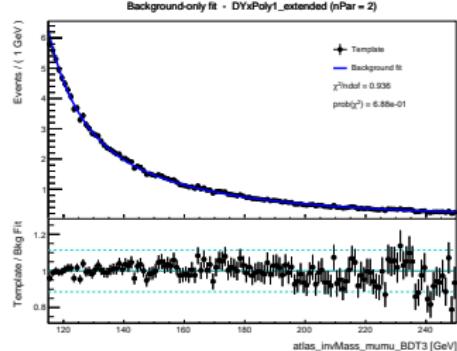
B-only fits



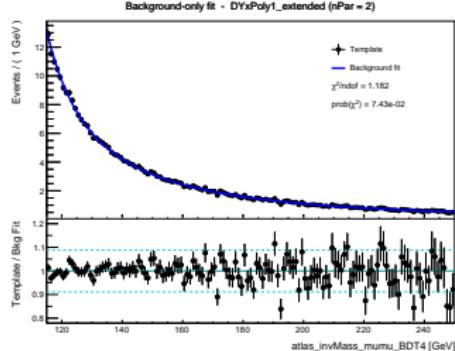
BDT1



BDT2

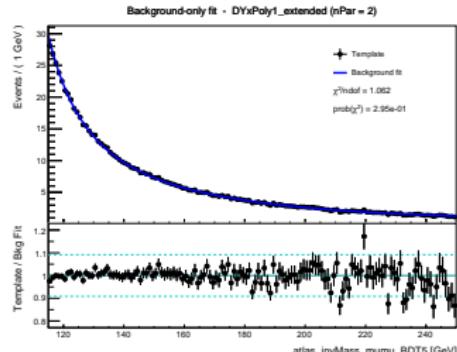


BDT3

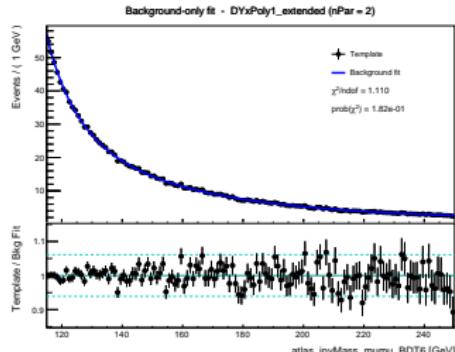


BDT4

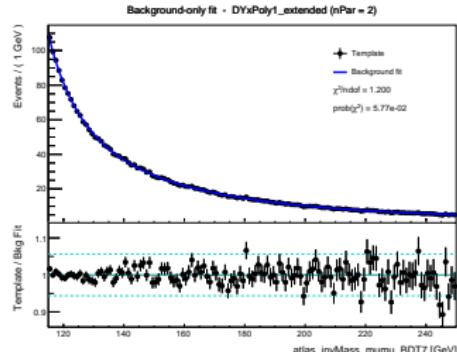
B-only fits



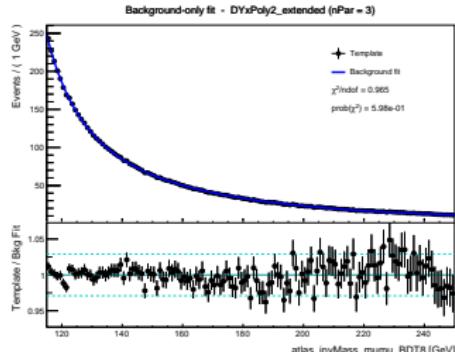
BDT5



BDT6

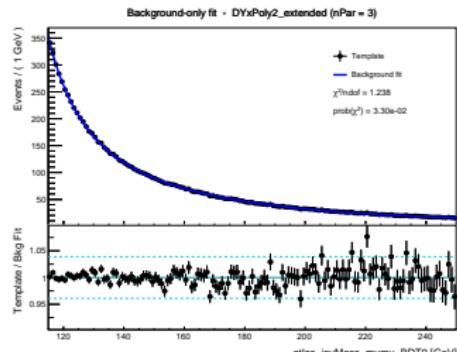


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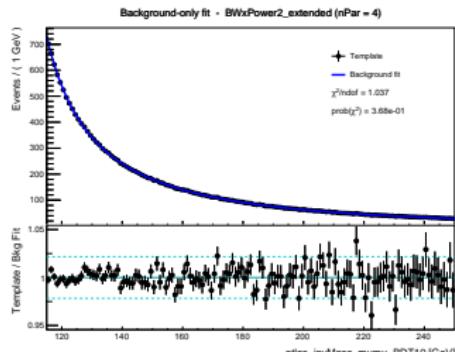


BDT8

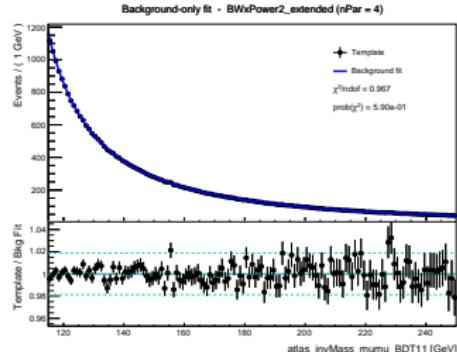
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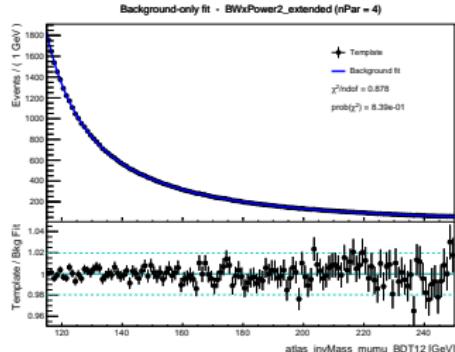
BDT9



BDT10

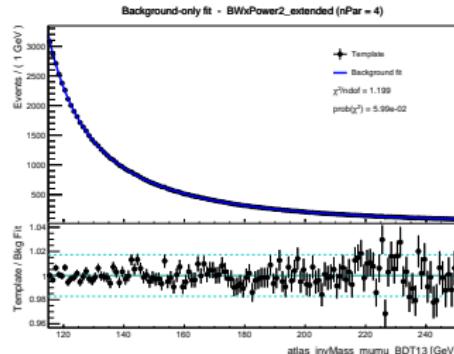


BDT11

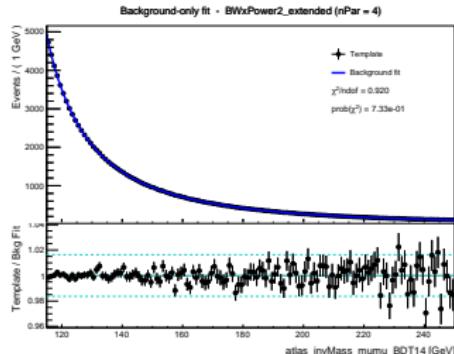


BDT12

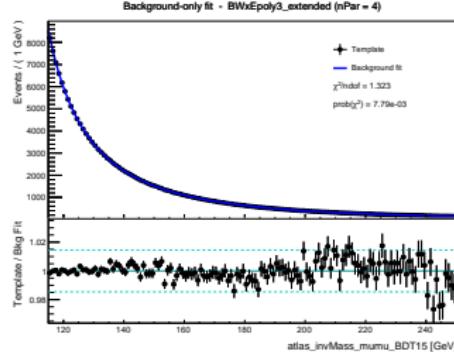
B-only fits



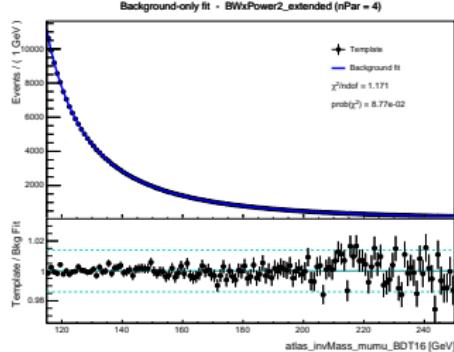
BDT13



BDT14

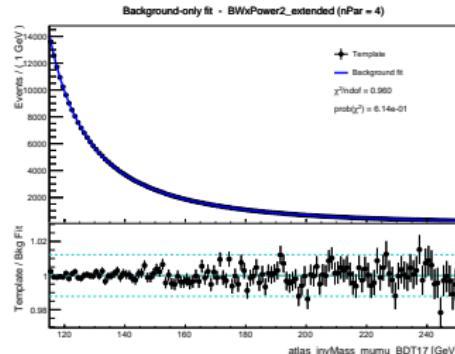


BDT15

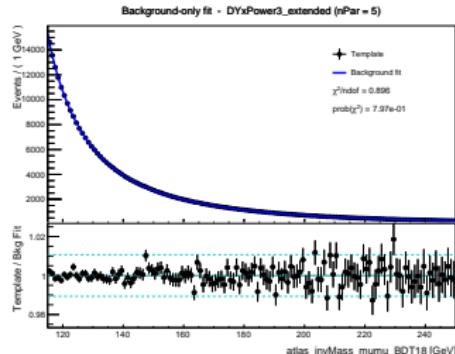


BDT16

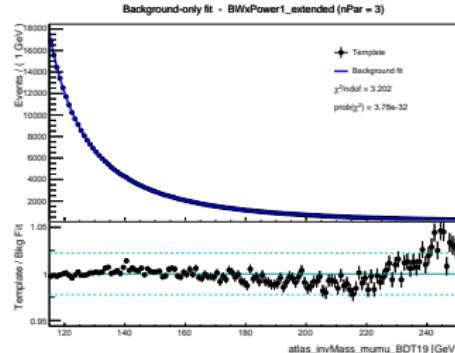
B-only fits



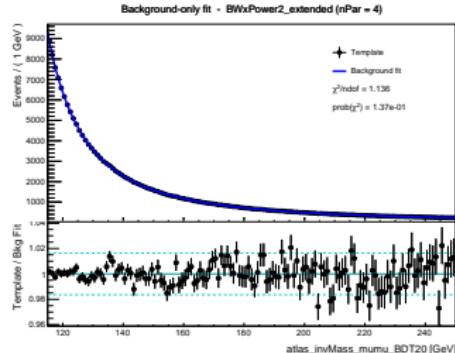
BDT17



BDT18



BDT19



BDT20