4 **WA70_Norm**

3 **Norm_NA10-286**

2 **Norm_NA10-194**

1 **Luminosity_E615**

Dataset	GRV	GRV norms free	GRV all params free
E615-6	17 / 11	15 / 11	12 / 11
NA10-194-6	37 / 9	47 / 9	27 / 9
WA70-4	4.6 / 10	4.7 / 10	6.1 / 10
NA10-286-8	29 / 8	23 / 8	17 / 8
E615-4	15 / 11	12 / 11	11 / 11
WA70plus-2	1.1 / 5	1.1 / 5	1.7 / 5
NA10-286-1	12 / 5	3.6 / 5	4.7 / 5
NA10-194-4	5.8 / 8	8.3 / 8	3.4 / 8
WA70-2	1.7 / 10	1.8 / 10	3.8 / 10
E615-2	25 / 11	23 / 11	18 / 11
NA10-194-2	13 / 7	21 / 7	8.6 / 7
WA70-0	2.2 / 10	2.2 / 10	6.7 / 10
E615-16	12 / 6	12 / 6	8.2 / 6
NA10-286-3	3.1 / 6	2.3 / 6	1.6 / 6
E615-0	17 / 7	16 / 7	8.4 / 7
NA10-194-0	12 / 6	7.9 / 6	2.3 / 6
E615-14	27 / 7	27 / 7	18 / 7
WA70plus-0	2.5 / 5	2.3 / 5	2.1 / 5
WA70plus-5	1.6 / 3	1.6 / 3	5.7 / 3
NA10-286-5	22 / 8	26 / 8	16 / 8
E615-9	25 / 10	27 / 10	19 / 10
E615-7	24 / 11	26 / 11	17 / 11
NA10-286-7	9.6 / 9	8.4 / 9	6.0 / 9
NA10-194-7	54 / 8	62 / 8	37 / 8
WA70-5	8.0 / 10	8.0 / 10	7.7 / 10
WA70plus-3	2.1 / 5	2.2 / 5	4.1 / 5
NA10-286-0	53 / 4	21 / 4	11 / 4
E615-5	14 / 11	11 / 11	9.9 / 11
NA10-194-5	12 / 8	15 / 8	7.9 / 8
WA70-3	4.2 / 10	4.5 / 10	7.2 / 10
E615-3	20 / 12	19 / 12	12 / 12
NA10-286-9	19 / 9	14 / 9	10 / 9
E615-17	23 / 6	23 / 6	15 / 6
NA10-194-3	5.8 / 7	5.4 / 7	3.2 / 7
WA70-1	2.6 / 10	2.8 / 10	5.3 / 10
NA10-286-2	6.5 / 5	7.1 / 5	4.9 / 5
WA70plus-1	3.4 / 5	3.2 / 5	3.2 / 5
E615-1	11 / 10	17 / 10	8.5 / 10
NA10-194-1	6.7 / 6	14 / 6	7.2 / 6
E615-15	4.7 / 8	4.8 / 8	3.1 / 8
WA70plus-6	1.6 / 3	1.6 / 3	3.1 / 3
NA10-286-10	18 / 4	18 / 4	12 / 4
NA10-286-4	8.7 / 7	10.0 / 7	4.7 / 7
E615-13	48 / 8	48 / 8	33 / 8
WA70plus-4	0.29 / 5	0.26 / 5	5.5 / 5
NA10-286-6	14 / 8	13 / 8	9.4 / 8
E615-8	23 / 11	24 / 11	17 / 11
NA10-194-8	14 / 8	15 / 8	9.1 / 8
WA70-6	1.3 / 8	1.4 / 8	1.2 / 8
Correlated χ^2	140	101	5.0
Log penalty χ^2	-154.19	-146.46	-52.20
Total χ^2 / dof	682 / 379	638 / 378	430 / 362
χ^2 p-value	0.00	0.00	0.01

Parameter	GRV	GRV norms free	GRV all params free
'Ag'	0.9020	1.0000	1.0000
'As'	0.9097	6.91 ± 0.98	1.11872 ± 0.00039
'Av'	1.0000	1.0000	1.0000
'Bg'	−2.361	−2.361	−2.13910 ± 0.00061
'Bs'	−5.528	−5.528	−2.61765 ± 0.00022
'Bv'	0.02827	0.02827	0.2753 ± 0.0022
'Cg'	1.720	1.720	1.30374 ± 0.00055
'Cs'	2.787	2.787	2.79600 ± 0.00018
'Cv'	0.8410	0.8410	0.82572 ± 0.00083
'Dg'	1.292	1.292	0.06826 ± 0.00043
'Ds'	3.359	3.359	2.3588 ± 0.0010
'Dv'	0.4763	0.4763	0.52558 ± 0.00027
'Eg'	−1.006	−1.006	−1.00083 ± 0.00057
'Es'	−0.7480	−0.7480	−0.89593 ± 0.00080
'Fg'	0.09158	0.09158	0.08063 ± 0.00061
'Fs'	1.100	1.100	2.2319 ± 0.0015
'Gg'	0.7949	0.7949	0.9350 ± 0.0019
'Gs'	1.896	1.896	1.7837 ± 0.0017
'Hg'	1.276	1.276	−0.21897 ± 0.00051
'Ng'	1.0000	0.9020	1.0000
'Ns'	1.0000	1.0000	-
'Nv'	0.6627	0.6627	-
Fit status	not-a-fit	converged	not-a-fit
Uncertainties	not-a-fit	undefined	not-a-fit