

$\eta$	$A_{UT}$	$\sigma_{stat}$	$\sigma_{pid}$	$\sigma_{tb}$	$x$	$\sigma_x$	$z$	$\sigma_z$	$Q^2$ (GeV <sup>2</sup> )
-0.85	0.007	0.005	+0.001	-0.001	0.09	0.02	0.56	0.04	531
-0.57	0.003	0.004	+0.000	-0.000	0.07	0.02	0.61	0.04	447
-0.29	0.012	0.004	+0.002	-0.001	0.11	0.02	0.55	0.03	550
0.00	0.020	0.005	+0.003	-0.002	0.10	0.01	0.55	0.02	550
0.29	0.013	0.006	+0.002	-0.001	0.14	0.01	0.53	0.02	592
0.57	0.026	0.006	+0.004	-0.003	0.15	0.01	0.55	0.02	550
0.85	0.028	0.007	+0.004	-0.003	0.19	0.01	0.55	0.02	550

Table 1:  $A_{UT}$  as a function of  $\eta$  corresponding to the top panel of Fig. 3 and  $x$  and  $z$  (bottom panel), where  $\sigma_{stat}$  is the statistical uncertainty,  $\sigma_{pid}$  is the particle identification systematic uncertainty, and  $\sigma_{tb}$  is the trigger bias systematic uncertainty.  $Q^2$  corresponds with Fig. 1.

$M_{inv}$ (GeV/ $c^2$ )	$p_T$ (GeV/ $c$ )	$\eta$	$A_{UT}$	$\sigma_{stat}$	$\sigma_{pid}$	$\sigma_{tb}$
0.4	4.2	0.60	0.0041	0.0065	+0.0006	-0.0008
0.5	4.2	0.59	0.0057	0.0069	+0.0009	-0.0012
0.6	4.2	0.57	0.0055	0.0071	+0.0008	-0.0011
0.7	4.2	0.56	0.0045	0.0065	+0.0007	-0.0009
1.0	4.2	0.53	0.0073	0.0055	+0.0011	-0.0015
1.3	4.3	0.47	0.0126	0.0068	+0.0019	-0.0025
0.4	5.1	0.51	0.0047	0.0060	+0.0007	-0.0009
0.5	5.1	0.50	0.0009	0.0061	+0.0001	-0.0002
0.6	5.1	0.49	0.0140	0.0064	+0.0021	-0.0027
0.7	5.1	0.49	-0.0028	0.0057	+0.0004	-0.0005
0.9	5.1	0.47	0.0043	0.0049	+0.0007	-0.0008
1.3	5.1	0.44	0.0066	0.0061	+0.0010	-0.0013
1.7	5.2	0.41	0.0000	0.0113	+0.0000	-0.0000
0.4	6.3	0.49	0.0070	0.0063	+0.0010	-0.0013
0.5	6.3	0.49	0.0163	0.0062	+0.0024	-0.0029
0.6	6.3	0.48	0.0005	0.0064	+0.0001	-0.0001
0.7	6.3	0.48	0.0135	0.0057	+0.0020	-0.0024
0.9	6.3	0.46	0.0059	0.0049	+0.0009	-0.0011
1.3	6.3	0.44	-0.0086	0.0062	+0.0013	-0.0015
1.9	6.3	0.42	-0.0103	0.0081	+0.0015	-0.0019
0.4	8.0	0.48	-0.0038	0.0070	+0.0006	-0.0006
0.5	8.0	0.49	-0.0056	0.0065	+0.0008	0.0009
0.6	8.1	0.48	0.0107	0.0066	+0.0016	-0.0017
0.7	8.1	0.48	0.0055	0.0057	+0.0008	-0.0009
0.9	8.1	0.47	0.0204	0.0049	+0.0031	-0.0032
1.3	8.1	0.46	0.0068	0.0062	+0.0010	-0.0011
2.0	8.1	0.43	0.0039	0.0069	+0.0006	-0.0006
0.4	12.0	0.48	0.0023	0.0090	+0.0003	-0.0002
0.5	12.3	0.48	0.0269	0.0075	+0.0040	-0.0028
0.6	12.7	0.48	0.0207	0.0072	+0.0031	-0.0022
0.7	12.9	0.48	0.0249	0.0060	+0.0037	-0.0026
0.9	13.0	0.48	0.0298	0.0050	+0.0045	-0.0031
1.3	13.2	0.47	0.0196	0.0060	+0.0029	-0.0021
2.2	13.4	0.44	0.0104	0.0061	+0.0016	-0.0011

Table 2:  $A_{UT}$  as a function of  $M_{inv}$  for  $\eta > 0$  corresponding to Fig. 4, where  $\sigma_{stat}$  is the statistical uncertainty,  $\sigma_{pid}$  is the particle identification systematic uncertainty, and  $\sigma_{tb}$  is the trigger bias systematic uncertainty.

$M_{inv}$ (GeV/ $c^2$ )	$p_T$ (GeV/ $c$ )	$\eta$	$A_{UT}$	$\sigma_{stat}$	$\sigma_{pid}$	$\sigma_{tb}$
0.4	4.2	-0.60	0.0073	0.0065	+0.0011	-0.0015
0.5	4.2	-0.58	-0.0075	0.0069	+0.0011	-0.0015
0.6	4.2	-0.57	-0.0120	0.0071	+0.0018	-0.0024
0.7	4.2	-0.55	-0.0072	0.0065	+0.0011	-0.0015
1.0	4.2	-0.52	-0.0017	0.0054	+0.0003	-0.0004
1.3	4.3	-0.47	0.0015	0.0068	+0.0002	-0.0003
0.4	5.1	-0.51	0.0012	0.0059	+0.0002	-0.0002
0.5	5.1	-0.50	-0.0013	0.0061	+0.0002	-0.0002
0.6	5.1	-0.49	-0.0100	0.0064	+0.0015	-0.0019
0.7	5.1	-0.48	0.0034	0.0057	+0.0005	-0.0007
0.9	5.1	-0.47	0.0029	0.0049	+0.0004	-0.0006
1.3	5.1	-0.43	-0.0094	0.0061	+0.0014	-0.0018
1.7	5.2	-0.40	0.0146	0.0112	+0.0022	-0.0028
0.4	6.3	-0.49	0.0019	0.0063	+0.0003	-0.0003
0.5	6.3	-0.49	0.0069	0.0062	+0.0010	-0.0013
0.6	6.3	-0.48	0.0002	0.0065	+0.0000	-0.0000
0.7	6.3	-0.47	0.0058	0.0057	+0.0009	-0.0010
0.9	6.3	-0.46	0.0012	0.0049	+0.0002	-0.0002
1.3	6.3	-0.44	0.0051	0.0062	+0.0008	-0.0009
1.9	6.3	-0.41	-0.0103	0.0082	+0.0015	-0.0019
0.4	8.0	-0.48	0.0079	0.0070	+0.0012	-0.0013
0.5	8.0	-0.48	-0.0020	0.0064	+0.0003	-0.0003
0.6	8.1	-0.48	-0.0040	0.0066	+0.0006	-0.0006
0.7	8.1	-0.48	0.0105	0.0057	+0.0016	-0.0017
0.9	8.1	-0.47	0.0071	0.0049	+0.0011	-0.0011
1.3	8.1	-0.45	0.0007	0.0062	+0.0001	-0.0001
2.0	8.1	-0.43	0.0048	0.0069	+0.0007	-0.0008
0.4	12.0	-0.48	-0.0003	0.0090	+0.0000	-0.0000
0.5	12.3	-0.49	0.0106	0.0074	+0.0016	-0.0011
0.6	12.6	-0.48	0.0080	0.0072	+0.0012	-0.0008
0.7	12.9	-0.48	0.0025	0.0059	+0.0004	-0.0003
0.9	13.0	-0.47	0.0009	0.0048	+0.0001	-0.0001
1.3	13.2	-0.46	0.0060	0.0060	+0.0009	-0.0006
2.2	13.4	-0.44	-0.0007	0.0061	+0.0001	-0.0001

Table 3:  $A_{UT}$  as a function of  $M_{inv}$  for  $\eta < 0$ , where  $\sigma_{stat}$  is the statistical uncertainty,  $\sigma_{pid}$  is the particle identification systematic uncertainty, and  $\sigma_{tb}$  is the trigger bias systematic uncertainty.

$M_{inv}$ (GeV/ $c^2$ )	$p_T$ (GeV/ $c$ )	$\eta$	$A_{UT}$	$\sigma_{stat}$	$\sigma_{pid}$	$\sigma_{tb}$
0.4	4.2	0.48	0.0019	0.0071	+0.0003	-0.0004
0.5	4.2	0.48	-0.0001	0.0087	+0.0000	-0.0000
0.6	4.2	0.48	-0.0082	0.0089	+0.0012	-0.0017
0.7	4.2	0.48	0.0058	0.0086	+0.0009	-0.0012
1.0	4.2	0.47	-0.0222	0.0068	+0.0033	-0.0045
1.3	4.3	0.46	-0.0078	0.0078	+0.0012	-0.0016
0.4	5.1	0.48	-0.0028	0.0066	+0.0004	-0.0005
0.5	5.1	0.48	-0.0046	0.0079	+0.0007	-0.0009
0.6	5.1	0.48	0.0031	0.0081	+0.0005	-0.0006
0.7	5.1	0.48	0.0003	0.0078	+0.0000	-0.0001
0.9	5.1	0.47	-0.0058	0.0063	+0.0009	-0.0011
1.3	5.1	0.46	-0.0023	0.0072	+0.0004	-0.0004
1.7	5.2	0.44	0.0027	0.0126	+0.0004	-0.0005
0.4	6.3	0.48	0.0073	0.0071	+0.0011	-0.0013
0.5	6.3	0.48	0.0061	0.0081	+0.0009	-0.0011
0.6	6.3	0.48	0.0105	0.0083	+0.0016	-0.0019
0.7	6.3	0.48	0.0138	0.0080	+0.0021	-0.0025
0.9	6.3	0.47	-0.0021	0.0065	+0.0003	-0.0004
1.3	6.3	0.46	-0.0054	0.0076	+0.0008	-0.0010
1.9	6.3	0.44	-0.0017	0.0092	+0.0003	-0.0003
0.4	8.0	0.48	0.0153	0.0081	+0.0023	-0.0024
0.5	8.0	0.48	0.0011	0.0086	+0.0002	-0.0002
0.6	8.0	0.48	0.0119	0.0087	+0.0018	-0.0019
0.7	8.1	0.48	-0.0046	0.0083	+0.0007	-0.0007
0.9	8.1	0.47	0.0040	0.0066	+0.0006	-0.0006
1.3	8.1	0.46	0.0091	0.0080	+0.0014	-0.0014
2.0	8.1	0.44	-0.0086	0.0081	+0.0013	-0.0014
0.4	11.7	0.48	0.0317	0.0110	+0.0048	-0.0033
0.5	12.4	0.48	-0.0101	0.0098	+0.0015	-0.0011
0.6	12.6	0.48	0.0089	0.0097	+0.0013	-0.0009
0.7	12.7	0.48	0.0070	0.0091	+0.0010	-0.0007
0.9	12.9	0.47	0.0143	0.0071	+0.0021	-0.0015
1.3	13.0	0.46	-0.0010	0.0083	+0.0001	-0.0001
2.2	13.2	0.44	0.0054	0.0076	+0.0008	-0.0005

Table 4:  $A_{UT}$  for same-charge, momentum-ordered pion pairs as a function of  $M_{inv}$  for  $\eta > 0$  corresponding to Fig. 5, where  $\sigma_{stat}$  is the statistical uncertainty,  $\sigma_{pid}$  is the particle identification systematic uncertainty, and  $\sigma_{tb}$  is the trigger bias systematic uncertainty.

$M_{inv}$ (GeV/ $c^2$ )	$p_T$ (GeV/ $c$ )	$\eta$	$A_{UT}$	$\sigma_{stat}$	$\sigma_{pid}$	$\sigma_{tb}$
0.4	4.2	-0.48	0.0007	0.0071	+0.0001	-0.0001
0.5	4.2	-0.48	-0.0018	0.0087	+0.0003	-0.0004
0.6	4.2	-0.48	0.0081	0.0090	+0.0012	-0.0016
0.7	4.2	-0.48	0.0108	0.0086	+0.0016	-0.0022
1.0	4.2	-0.47	0.0131	0.0068	+0.0020	-0.0026
1.3	4.3	-0.46	-0.0035	0.0078	+0.0005	-0.0007
0.4	5.1	-0.48	0.0098	0.0066	+0.0015	-0.0019
0.5	5.1	-0.48	-0.0029	0.0079	+0.0004	-0.0006
0.6	5.1	-0.48	0.0036	0.0081	+0.0005	-0.0007
0.7	5.1	-0.48	-0.0103	0.0078	+0.0015	-0.0020
0.9	5.1	-0.47	0.0047	0.0063	+0.0007	-0.0009
1.3	5.1	-0.46	-0.0097	0.0072	+0.0015	-0.0019
1.7	5.2	-0.44	-0.0316	0.0126	+0.0047	-0.0060
0.4	6.3	-0.48	-0.0012	0.0071	+0.0002	-0.0002
0.5	6.3	-0.48	-0.0046	0.0081	+0.0007	-0.0008
0.6	6.3	-0.48	-0.0001	0.0083	+0.0000	-0.0000
0.7	6.3	-0.48	0.0044	0.0080	+0.0007	-0.0008
0.9	6.3	-0.47	0.0032	0.0065	+0.0005	-0.0006
1.3	6.3	-0.46	0.0050	0.0076	+0.0007	-0.0009
1.9	6.3	-0.44	-0.0016	0.0092	+0.0002	-0.0003
0.4	8.0	-0.48	0.0051	0.0081	+0.0008	-0.0008
0.5	8.0	-0.48	-0.0073	0.0085	+0.0011	-0.0012
0.6	8.0	-0.48	0.0119	0.0087	+0.0018	-0.0019
0.7	8.0	-0.48	-0.0072	0.0083	+0.0011	-0.0011
0.9	8.1	-0.47	0.0047	0.0067	+0.0007	-0.0007
1.3	8.1	-0.46	-0.0097	0.0080	+0.0015	-0.0015
2.0	8.1	-0.44	0.0057	0.0081	+0.0009	-0.0009
0.4	11.8	-0.48	0.0100	0.0110	+0.0015	-0.0011
0.5	12.4	-0.48	-0.0112	0.0098	+0.0017	-0.0012
0.6	12.6	-0.48	0.0020	0.0097	+0.0003	-0.0002
0.7	12.7	-0.48	0.0167	0.0091	+0.0025	-0.0018
0.9	12.8	-0.47	0.0016	0.0071	+0.0002	-0.0002
1.3	13.0	-0.46	0.0026	0.0083	+0.0004	-0.0003
2.2	13.1	-0.44	0.0113	0.0076	+0.0017	-0.0012

Table 5:  $A_{UT}$  for same-charge, momentum-ordered pion pairs as a function of  $M_{inv}$  for  $\eta < 0$  corresponding to Fig. 5, where  $\sigma_{stat}$  is the statistical uncertainty,  $\sigma_{pid}$  is the particle identification systematic uncertainty, and  $\sigma_{tb}$  is the trigger bias systematic uncertainty.