Eur. Phys. J. C (2009) 62: 451–452
DOI 10.1140/epjc/s10052-009-1032-0

THE EUROPEAN PHYSICAL JOURNAL C

Erratum

Study of moments of event shapes and a determination of α_S using e^+e^- annihilation data from JADE

C. Pahl[1,2,a], **S. Bethke**[1], **S. Kluth**[1], **J. Schieck**[1], **The JADE Collaboration**[b]

[1]Max-Planck-Institut für Physik, Föhringer Ring 6, 80805, Munich, Germany
[2]Excellence Cluster Universe, Technische Universität München, Boltzmannstr. 2, 85748, Garching, Germany

Received: 5 March 2009 / Published online: 8 May 2009

Erratum to: Eur. Phys. J. C (2009) 60: 181–196
DOI 10.1140/epjc/s10052-009-0930-5

After online publication of the article, an error was found in Table 5.3. The correct table reads as follows.

Table 5.3 Measurements of $\alpha_S(M_{Z^0})$ from event shape moments over the full analysed range of PETRA c.m. energies, 14–44 GeV. The hadronisation uncertainty is taken to be the larger of the deviations observed using HERWIG and ARIADNE

	$\langle(1-T)^1\rangle$	$\langle C^1\rangle$	$\langle B_T^1\rangle$	$\langle B_W^1\rangle$	$\langle(y_{23}^D)^1\rangle$	
$\alpha_S(M_{Z^0})$	0.1276	0.1241	0.1157	0.1308	0.1346	
Statistical error	0.0004	0.0003	0.0002	0.0004	0.0009	
Experimental syst.	0.0013	0.0010	0.0006	0.0014	0.0016	
HERWIG hadr. corr.	−0.0017	−0.0017	−0.0003	−0.0007	+0.0011	
ARIADNE hadr. corr.	+0.0002	+0.0000	+0.0009	−0.0042	−0.0051	
Hadronisation error	0.0017	0.0017	0.0009	0.0042	0.0051	
x_μ variation:						
$x_\mu = 2.0$	+0.0084	+0.0076	+0.0055	+0.0097	+0.0079	
$x_\mu = 0.5$	−0.0068	−0.0061	−0.0043	−0.0005	−0.0059	
χ^2/d.o.f.	14.9/5	16.7/5	48.8/5	98.8/5	40.0/5	
	$\langle(1-T)^2\rangle$	$\langle C^2\rangle$	$\langle B_T^2\rangle$	$\langle B_W^2\rangle$	$\langle(y_{23}^D)^2\rangle$	$\langle M_H^2\rangle$
$\alpha_S(M_{Z^0})$	0.1447	0.1417	0.1333	0.1327	0.1369	0.1294
Statistical error	0.0008	0.0005	0.0004	0.0006	0.0019	0.0004
Experimental syst.	0.0019	0.0017	0.0011	0.0021	0.0016	0.0011
HERWIG hadr. corr.	+0.0009	−0.0001	+0.0006	−0.0006	+0.0026	+0.0051
ARIADNE hadr. corr.	+0.0009	+0.0007	+0.0011	−0.0048	−0.0043	−0.0024
Hadronisation error	0.0009	0.0007	0.0011	0.0048	0.0043	0.0051

The online version of the original article can be found under doi:10.1140/epjc/s10052-009-0930-5.

[a] e-mail: pahl@mppmu.mpg.de

[b] See [1] for the full list of authors.

Table 5.3 (*Continued*)

x_μ variation:						
$x_\mu = 2.0$	+0.0141	+0.0134	+0.0125	+0.0074	+0.0088	+0.0062
$x_\mu = 0.5$	−0.0113	−0.0109	−0.0103	−0.0055	−0.0067	−0.0043
χ^2/d.o.f.	13.5/5	16.3/5	33.7/5	64.7/5	13.7/5	92.7/5
	$\langle(1-T)^3\rangle$	$\langle C^3\rangle$	$\langle B_{\mathrm{T}}^3\rangle$	$\langle B_{\mathrm{W}}^3\rangle$	$\langle(y_{23}^{\mathrm{D}})^3\rangle$	$\langle M_{\mathrm{H}}^3\rangle$
$\alpha_{\mathrm{S}}(M_{\mathrm{Z}^0})$	0.1514	0.1497	0.1434	0.1376	0.1352	0.1364
Statistical error	0.0013	0.0007	0.0007	0.0011	0.0030	0.0007
Experimental syst.	0.0022	0.0021	0.0014	0.0032	0.0027	0.0012
HERWIG hadr. corr.	+0.0033	+0.0016	+0.0018	−0.0006	+0.0033	+0.0069
ARIADNE hadr. corr.	+0.0016	+0.0015	+0.0012	−0.0059	−0.0039	−0.0030
Hadronisation error	0.0033	0.0016	0.0018	0.0059	0.0039	0.0069
x_μ variation:						
$x_\mu = 2.0$	+0.0166	+0.0164	+0.0162	+0.0084	+0.0084	+0.0087
$x_\mu = 0.5$	−0.0132	−0.0131	−0.0130	−0.0063	−0.0064	−0.0067
χ^2/d.o.f.	12.1/5	16.5/5	23.8/5	43.8/5	6.0/5	66.9/5
	$\langle(1-T)^4\rangle$	$\langle C^4\rangle$	$\langle B_{\mathrm{T}}^4\rangle$	$\langle B_{\mathrm{W}}^4\rangle$	$\langle(y_{23}^{\mathrm{D}})^4\rangle$	$\langle M_{\mathrm{H}}^4\rangle$
$\alpha_{\mathrm{S}}(M_{\mathrm{Z}^0})$	0.1553	0.1546	0.1489	0.1392	0.1333	0.1399
Statistical error	0.0018	0.0009	0.0010	0.0019	0.0045	0.0010
Experimental syst.	0.0024	0.0024	0.0017	0.0042	0.0045	0.0013
HERWIG hadr. corr.	+0.0051	+0.0031	+0.0030	−0.0009	+0.0034	+0.0083
ARIADNE hadr. corr.	+0.0022	+0.0022	+0.0013	−0.0068	−0.0039	−0.0036
Hadronisation error	0.0051	0.0031	0.0030	0.0068	0.0039	0.0083
x_μ variation:						
$x_\mu = 2.0$	+0.0183	+0.0185	+0.0187	+0.0083	+0.0079	+0.0094
$x_\mu = 0.5$	−0.0145	−0.0146	−0.0148	−0.0060	−0.0060	−0.0073
χ^2/d.o.f.	10.9/5	17.3/5	17.3/5	24.4/5	3.2/5	47.0/5
	$\langle(1-T)^5\rangle$	$\langle C^5\rangle$	$\langle B_{\mathrm{T}}^5\rangle$	$\langle B_{\mathrm{W}}^5\rangle$	$\langle(y_{23}^{\mathrm{D}})^5\rangle$	$\langle M_{\mathrm{H}}^5\rangle$
$\alpha_{\mathrm{S}}(M_{\mathrm{Z}^0})$	0.1580	0.1586	0.1525	0.1397	0.1314	0.1411
Statistical error	0.0027	0.0011	0.0015	0.0035	0.0070	0.0013
Experimental syst.	0.0029	0.0025	0.0020	0.0052	0.0061	0.0017
HERWIG hadr. corr.	+0.0066	+0.0044	+0.0040	−0.0013	+0.0031	+0.0094
ARIADNE hadr. corr.	+0.0027	+0.0029	+0.0012	−0.0077	−0.0043	−0.0040
Hadronisation error	0.0066	0.0044	0.0040	0.0077	0.0043	0.0094
x_μ variation:						
$x_\mu = 2.0$	+0.0198	+0.0204	+0.0206	+0.0078	+0.0075	+0.0096
$x_\mu = 0.5$	−0.0155	−0.0159	−0.0161	−0.0055	−0.0057	−0.0073
χ^2/d.o.f.	9.6/5	18.4/5	11.9/5	10.5/5	17.3/5	32.4/5

References

1. B. Naroska, Phys. Rep. **148**, 67 (1987)