Systematic error of Electron PID for ψ(3770) data @ simplePIDSvc

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2014.03.18

Outline

- Electron sample
- PID method
- results

Electron sample used

- Details could be found @2014-02-11 by M.G. Zhao
- The Radiative Bhabha sample has been divided into three sub-samples as following:

  (1) Learning Sample : which satisfies fmod(event,3) == 1
  (2) Verification Sample: which satisfies fmod(event,3) == 2
  (3) Test Sample : which satisfies fmod(event,3) == 0

- Sample files could be found @/besfs2/users/sunss/Radiative_Bhabha

PID method

- Software: *simplePIDSvc-00-00-11 by T. Ma*
- Requirement: iselectron(true)
- Details could be found in report @ 2014-03-04 by T. Ma

/ihepbatch/bes/zhaomg/share/Electron_PID/SimplePID/Efficiency_D_mom_vs_cost.dat

/ihepbatch/bes/zhaomg/share/Electron_PID/SimplePID/Efficiency_M_mom_vs_cost.dat

/ihepbatch/bes/zhaomg/share/Electron_PID/SimplePID/Systematic_mom_vs_cost.dat

PID (Data) [%]	(0.2,0.3)	(0.3,0.4)	(0.4,0.5)	(0.5,0.6)	(0.6,0.7)
(-0.93,-0.8)	80.42 ± 0.55	91.70 ± 0.09	96.00 ± 0.04	95.35 ± 0.03	94.80 ± 0.03
(-0.8,-0.7)	84.79 ± 0.98	98.71 ± 0.09	99.46 ± 0.03	99.04 ± 0.03	98.56 ± 0.04
(-0.7,-0.6)	94.47 ± 0.58	99.17 ± 0.06	99.42 ± 0.04	99.12 ± 0.04	98.90 ± 0.04
(-0.6,-0.5)	96.02 ± 0.40	99.08 ± 0.07	99.35 ± 0.05	99.13 ± 0.06	98.95 ± 0.06
(-0.5,-0.4)	97.54 ± 0.26	98.85 ± 0.09	99.37 ± 0.06	99.02 ± 0.07	99.02 ± 0.07
(-0.4,-0.3)	97.79 ± 0.25	98.81 ± 0.11	99.29 ± 0.08	99.04 ± 0.09	99.02 ± 0.08
(-0.3,-0.2)	98.11 ± 0.23	98.85 ± 0.12	99.18 ± 0.09	98.91 ± 0.10	98.80 ± 0.10
(-0.2,-0.1)	97.19 ± 0.29	98.44 ± 0.15	98.86 ± 0.12	98.85 ± 0.12	99.03 ± 0.10
(-0.1,0.0)	97.63 ± 0.27	97.57 ± 0.19	98.47 ± 0.14	98.22 ± 0.15	98.46 ± 0.13
(0.0,0.1)	97.52 ± 0.27	97.74 ± 0.19	98.10 ± 0.16	98.34 ± 0.15	98.34 ± 0.14
(0.1,0.2)	97.39 ± 0.28	98.30 ± 0.16	98.84 ± 0.12	98.78 ± 0.12	98.90 ± 0.11
(0.2,0.3)	97.94 ± 0.24	98.56 ± 0.13	99.27 ± 0.09	99.23 ± 0.09	99.13 ± 0.09
(0.3,0.4)	97.96 ± 0.23	98.46 ± 0.12	98.96 ± 0.09	98.86 ± 0.09	98.81 ± 0.09
(0.4,0.5)	97.31 ± 0.27	98.57 ± 0.10	99.27 ± 0.07	98.88 ± 0.08	98.86 ± 0.07
(0.5,0.6)	97.66 ± 0.30	98.79 ± 0.08	99.22 ± 0.06	98.95 ± 0.06	99.00 ± 0.06
(0.6,0.7)	94.48 ± 0.57	98.70 ± 0.07	99.29 ± 0.04	99.07 ± 0.04	98.90 ± 0.05
(0.7,0.8)	80.80 ± 1.04	98.49 ± 0.10	99.24 ± 0.03	98.91 ± 0.03	98.47 ± 0.04
(0.8,0.93)	77.09 ± 0.59	89.04 ± 0.10	95.29 ± 0.04	94.80 ± 0.04	93.02 ± 0.04

PID (Data) [%]	(0.7,0.8)	(0.8,0.9)	(0.9,1.0)	(1.0,1.1)	(1.1,1.2)
(-0.93,-0.8)	96.16 ± 0.03	97.66 ± 0.02	96.87 ± 0.02	95.73 ± 0.03	96.26 ± 0.02
(-0.8,-0.7)	99.16 ± 0.03	99.42 ± 0.02	99.48 ± 0.02	99.47 ± 0.02	99.48 ± 0.02
(-0.7,-0.6)	99.39 ± 0.03	99.45 ± 0.03	99.52 ± 0.02	99.46 ± 0.02	99.47 ± 0.02
(-0.6,-0.5)	99.30 ± 0.04	99.41 ± 0.04	99.49 ± 0.03	99.48 ± 0.03	99.52 ± 0.03
(-0.5,-0.4)	99.24 ± 0.06	99.35 ± 0.05	99.49 ± 0.04	99.45 ± 0.04	99.39 ± 0.04
(-0.4,-0.3)	99.33 ± 0.06	99.32 ± 0.06	99.46 ± 0.05	99.52 ± 0.05	99.43 ± 0.05
(-0.3,-0.2)	99.20 ± 0.08	99.27 ± 0.07	99.38 ± 0.06	99.41 ± 0.06	99.51 ± 0.05
(-0.2,-0.1)	99.22 ± 0.09	99.04 ± 0.09	99.32 ± 0.07	99.24 ± 0.07	99.26 ± 0.07
(-0.1,0.0)	98.61 ± 0.12	98.61 ± 0.11	98.75 ± 0.10	98.73 ± 0.10	98.61 ± 0.10
(0.0,0.1)	98.55 ± 0.12	98.75 ± 0.11	98.98 ± 0.09	98.70 ± 0.10	98.81 ± 0.09
(0.1,0.2)	99.02 ± 0.10	99.24 ± 0.08	99.36 ± 0.07	99.32 ± 0.07	99.28 ± 0.07
(0.2,0.3)	99.15 ± 0.08	99.33 ± 0.07	99.52 ± 0.06	99.40 ± 0.06	99.38 ± 0.06
(0.3,0.4)	99.22 ± 0.07	99.34 ± 0.06	99.43 ± 0.05	99.44 ± 0.05	99.42 ± 0.05
(0.4,0.5)	99.22 ± 0.06	99.31 ± 0.05	99.43 ± 0.04	99.40 ± 0.04	99.45 ± 0.04
(0.5,0.6)	99.20 ± 0.05	99.26 ± 0.04	99.42 ± 0.04	99.44 ± 0.03	99.45 ± 0.03
(0.6,0.7)	99.27 ± 0.03	99.37 ± 0.03	99.42 ± 0.03	99.40 ± 0.03	99.48 ± 0.02
(0.7,0.8)	99.00 ± 0.03	99.34 ± 0.02	99.39 ± 0.02	99.39 ± 0.02	99.41 ± 0.02
(0.8,0.93)	94.60 ± 0.03	97.07 ± 0.02	96.57 ± 0.02	94.58 ± 0.03	96.02 ± 0.02

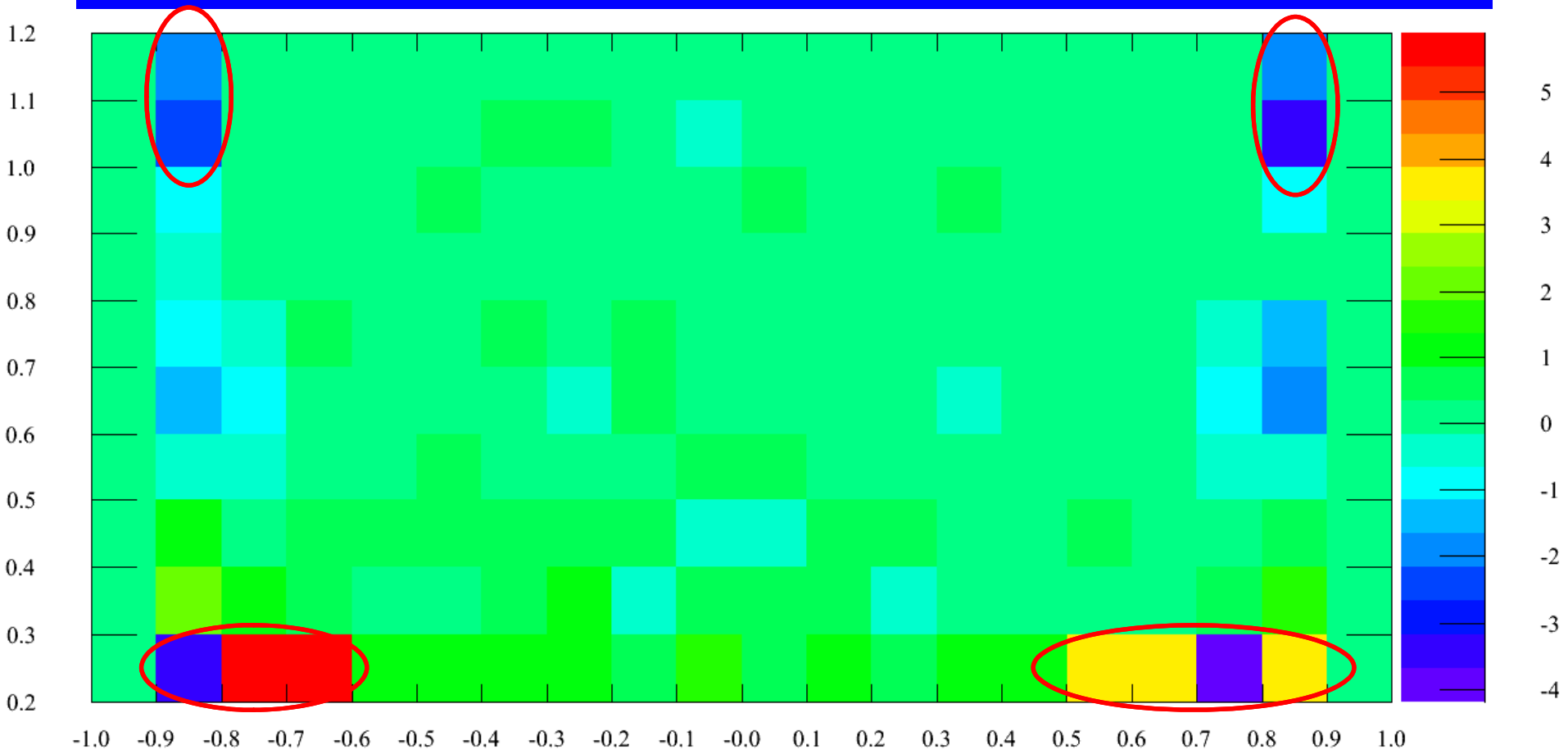
PID (MC) [%]	(0.2,0.3)	(0.3,0.4)	(0.4,0.5)	(0.5,0.6)	(0.6,0.7)
(-0.93,-0.8)	83.24 ± 1.04	89.65 ± 0.19	95.17 ± 0.08	95.85 ± 0.06	96.29 ± 0.06
(-0.8,-0.7)	80.22 ± 2.07	97.47 ± 0.23	99.14 ± 0.06	99.22 ± 0.05	99.24 ± 0.05
(-0.7,-0.6)	89.22 ± 1.20	98.50 ± 0.14	98.92 ± 0.09	98.91 ± 0.09	98.75 ± 0.09
(-0.6,-0.5)	95.14 ± 0.54	98.84 ± 0.13	98.86 ± 0.12	98.91 ± 0.11	98.96 ± 0.11
(-0.5,-0.4)	96.57 ± 0.39	98.63 ± 0.17	98.86 ± 0.15	98.32 ± 0.18	98.85 ± 0.14
(-0.4,-0.3)	96.54 ± 0.42	98.14 ± 0.23	98.82 ± 0.18	98.99 ± 0.16	98.84 ± 0.17
(-0.3,-0.2)	97.13 ± 0.40	97.89 ± 0.28	98.36 ± 0.23	98.92 ± 0.19	99.05 ± 0.17
(-0.2,-0.1)	96.60 ± 0.45	98.67 ± 0.24	98.41 ± 0.25	98.65 ± 0.22	98.64 ± 0.22
(-0.1,0.0)	96.07 ± 0.51	96.91 ± 0.38	98.67 ± 0.24	97.67 ± 0.31	98.35 ± 0.26
(0.0,0.1)	96.85 ± 0.45	97.40 ± 0.35	98.28 ± 0.28	97.99 ± 0.29	98.34 ± 0.25
(0.1,0.2)	96.30 ± 0.48	97.88 ± 0.30	98.37 ± 0.26	98.61 ± 0.23	99.05 ± 0.19
(0.2,0.3)	97.16 ± 0.39	98.92 ± 0.20	98.83 ± 0.20	98.94 ± 0.18	98.89 ± 0.18
(0.3,0.4)	97.01 ± 0.38	98.43 ± 0.21	98.75 ± 0.19	98.78 ± 0.18	98.97 ± 0.16
(0.4,0.5)	96.12 ± 0.40	98.26 ± 0.19	98.99 ± 0.14	98.78 ± 0.15	98.97 ± 0.13
(0.5,0.6)	94.44 ± 0.56	98.72 ± 0.14	98.77 ± 0.13	98.97 ± 0.11	98.94 ± 0.11
(0.6,0.7)	91.24 ± 1.06	98.38 ± 0.14	99.05 ± 0.09	98.76 ± 0.09	98.98 ± 0.08
(0.7,0.8)	84.32 ± 1.98	98.09 ± 0.20	99.17 ± 0.06	99.13 ± 0.05	99.13 ± 0.05
(0.8,0.93)	74.37 ± 1.17	87.50 ± 0.21	94.56 ± 0.09	95.20 ± 0.07	94.76 ± 0.07

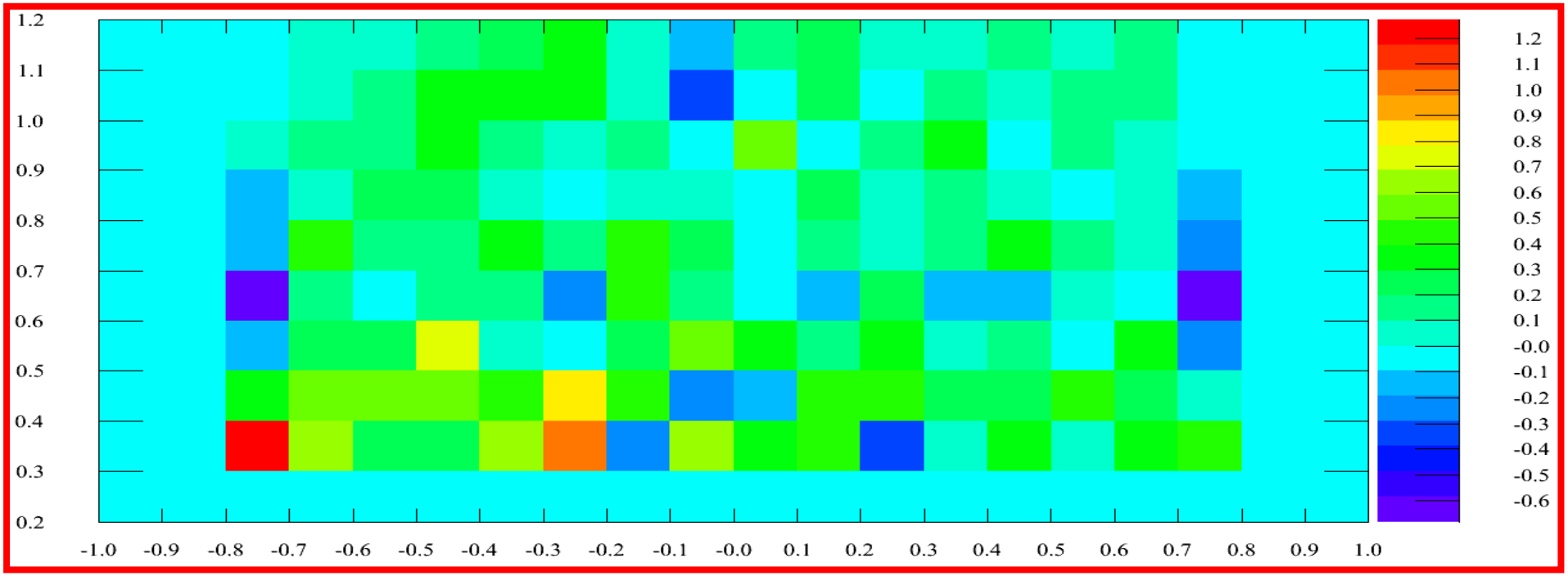
PID (MC) [%]	(0.7,0.8)	(0.8,0.9)	(0.9,1.0)	(1.0,1.1)	(1.1,1.2)
(-0.93,-0.8)	97.17 ± 0.05	97.92 ± 0.04	97.98 ± 0.04	97.90 ± 0.04	98.12 ± 0.03
(-0.8,-0.7)	99.33 ± 0.04	99.52 ± 0.03	99.46 ± 0.03	99.52 ± 0.03	99.54 ± 0.03
(-0.7,-0.6)	98.96 ± 0.08	99.43 ± 0.05	99.40 ± 0.05	99.41 ± 0.05	99.44 ± 0.04
(-0.6,-0.5)	99.14 ± 0.09	99.19 ± 0.09	99.38 ± 0.07	99.34 ± 0.07	99.43 ± 0.06
(-0.5,-0.4)	99.07 ± 0.12	99.08 ± 0.11	99.13 ± 0.10	99.15 ± 0.10	99.29 ± 0.08
(-0.4,-0.3)	98.94 ± 0.15	99.23 ± 0.12	99.30 ± 0.11	99.14 ± 0.11	99.18 ± 0.11
(-0.3,-0.2)	99.05 ± 0.17	99.27 ± 0.14	99.30 ± 0.13	99.07 ± 0.14	99.20 ± 0.12
(-0.2,-0.1)	98.82 ± 0.20	99.02 ± 0.17	99.17 ± 0.15	99.16 ± 0.14	99.18 ± 0.13
(-0.1,0.0)	98.36 ± 0.24	98.55 ± 0.21	98.82 ± 0.19	99.05 ± 0.16	98.74 ± 0.17
(0.0,0.1)	98.62 ± 0.22	98.77 ± 0.20	98.43 ± 0.21	98.71 ± 0.18	98.66 ± 0.18
(0.1,0.2)	98.89 ± 0.20	99.00 ± 0.17	99.43 ± 0.12	99.04 ± 0.15	99.07 ± 0.14
(0.2,0.3)	99.08 ± 0.16	99.32 ± 0.13	99.38 ± 0.12	99.44 ± 0.11	99.32 ± 0.11
(0.3,0.4)	99.10 ± 0.14	99.23 ± 0.12	99.07 ± 0.13	99.24 ± 0.11	99.35 ± 0.09
(0.4,0.5)	98.89 ± 0.13	99.23 ± 0.10	99.52 ± 0.08	99.39 ± 0.08	99.28 ± 0.08
(0.5,0.6)	99.08 ± 0.10	99.29 ± 0.08	99.30 ± 0.08	99.26 ± 0.07	99.38 ± 0.06
(0.6,0.7)	99.25 ± 0.07	99.36 ± 0.06	99.40 ± 0.05	99.30 ± 0.05	99.36 ± 0.05
(0.7,0.8)	99.27 ± 0.05	99.48 ± 0.04	99.41 ± 0.04	99.48 ± 0.03	99.48 ± 0.03
(0.8,0.93)	95.90 ± 0.06	96.94 ± 0.05	97.52 ± 0.04	97.72 ± 0.04	97.89 ± 0.03

Δ_{sys} [%]	(0.7,0.8)	(0.8,0.9)	(0.9,1.0)	(1.0,1.1)	(1.1,1.2)
(-0.93,-0.8)	-1.0437 ± 0.0006	-0.2581 ± 0.0001	-1.1377 ± 0.0005	-2.2226 ± 0.0010	-1.8985 ± 0.0008
(-0.8,-0.7)	-0.1654 ± 0.0001	-0.1017 ± 0.0000	0.0141 ± 0.0000	-0.0441 ± 0.0000	-0.0536 ± 0.0000
(-0.7,-0.6)	0.4350 ± 0.0004	0.0159 ± 0.0000	0.1179 ± 0.0001	0.0475 ± 0.0000	0.0335 ± 0.0000
(-0.6,-0.5)	0.1576 ± 0.0002	0.2213 ± 0.0002	0.1106 ± 0.0001	0.1406 ± 0.0001	0.0921 ± 0.0001
(-0.5,-0.4)	0.1734 ± 0.0002	0.2701 ± 0.0003	0.3602 ± 0.0004	0.3073 ± 0.0003	0.1034 ± 0.0001
(-0.4,-0.3)	0.3905 ± 0.0007	0.0949 ± 0.0001	0.1553 ± 0.0002	0.3764 ± 0.0005	0.2520 ± 0.0003
(-0.3,-0.2)	0.1525 ± 0.0003	-0.0044 ± 0.0000	0.0819 ± 0.0001	0.3439 ± 0.0005	0.3036 ± 0.0004
(-0.2,-0.1)	0.3967 ± 0.0009	0.0144 ± 0.0000	0.1440 ± 0.0002	0.0797 ± 0.0001	0.0782 ± 0.0001
(-0.1,0.0)	0.2584 ± 0.0007	0.0676 ± 0.0002	-0.0766 ± 0.0002	-0.3175 ± 0.0006	-0.1357 ± 0.0003
(0.0,0.1)	-0.0751 ± 0.0002	-0.0251 ± 0.0001	0.5589 ± 0.0013	-0.0110 ± 0.0000	0.1517 ± 0.0003
(0.1,0.2)	0.1299 ± 0.0003	0.2406 ± 0.0005	-0.0724 ± 0.0001	0.2834 ± 0.0005	0.2060 ± 0.0003
(0.2,0.3)	0.0662 ± 0.0001	0.0091 ± 0.0000	0.1393 ± 0.0002	-0.0392 ± 0.0000	0.0593 ± 0.0001
(0.3,0.4)	0.1224 ± 0.0002	0.1102 ± 0.0002	0.3646 ± 0.0005	0.1943 ± 0.0002	0.0685 ± 0.0001
(0.4,0.5)	0.3284 ± 0.0005	0.0827 ± 0.0001	-0.0900 ± 0.0001	0.0119 ± 0.0000	0.1752 ± 0.0002
(0.5,0.6)	0.1221 ± 0.0001	-0.0334 ± 0.0000	0.1182 ± 0.0001	0.1818 ± 0.0001	0.0718 ± 0.0000
(0.6,0.7)	0.0191 ± 0.0000	0.0088 ± 0.0000	0.0176 ± 0.0000	0.1001 ± 0.0001	0.1213 ± 0.0001
(0.7,0.8)	-0.2693 ± 0.0001	-0.1367 ± 0.0001	-0.0233 ± 0.0000	-0.0913 ± 0.0000	-0.0682 ± 0.0000
(0.8,0.93)	-1.3532 ± 0.0009	0.1304 ± 0.0001	-0.9755 ± 0.0005	-3.2074 ± 0.0016	-1.9122 ± 0.0008

Δ_{sys} [%]	(0.2,0.3)	(0.3,0.4)	(0.4,0.5)	(0.5,0.6)	(0.6,0.7)
(-0.93,-0.8)	-3.3869 ± 0.0483	2.2840 ± 0.0054	0.8798 ± 0.0008	-0.5180 ± 0.0004	-1.5533 ± 0.0011
(-0.8,-0.7)	5.6958 ± 0.1612	1.2710 ± 0.0032	0.3269 ± 0.0002	-0.1729 ± 0.0001	-0.6820 ± 0.0004
(-0.7,-0.6)	5.8819 ± 0.0869	0.6778 ± 0.0010	0.5042 ± 0.0005	0.2067 ± 0.0002	0.1605 ± 0.0002
(-0.6,-0.5)	0.9195 ± 0.0064	0.2400 ± 0.0004	0.4991 ± 0.0007	0.2263 ± 0.0003	-0.0080 ± 0.0000
(-0.5,-0.4)	1.0101 ± 0.0049	0.2272 ± 0.0004	0.5111 ± 0.0008	0.7083 ± 0.0014	0.1679 ± 0.0003
(-0.4,-0.3)	1.2946 ± 0.0065	0.6840 ± 0.0018	0.4723 ± 0.0009	0.0554 ± 0.0001	0.1824 ± 0.0003
(-0.3,-0.2)	1.0065 ± 0.0048	0.9874 ± 0.0030	0.8286 ± 0.0021	-0.0061 ± 0.0000	-0.2471 ± 0.0005
(-0.2,-0.1)	0.6151 ± 0.0034	-0.2368 ± 0.0007	0.4639 ± 0.0013	0.1992 ± 0.0005	0.3966 ± 0.0010
(-0.1,0.0)	1.6273 ± 0.0098	0.6740 ± 0.0030	-0.1950 ± 0.0006	0.5579 ± 0.0019	0.1130 ± 0.0003
(0.0,0.1)	0.6904 ± 0.0037	0.3492 ± 0.0014	-0.1852 ± 0.0006	0.3570 ± 0.0012	0.0003 ± 0.0000
(0.1,0.2)	1.1255 ± 0.0065	0.4307 ± 0.0015	0.4807 ± 0.0014	0.1723 ± 0.0005	-0.1464 ± 0.0003
(0.2,0.3)	0.8105 ± 0.0038	-0.3680 ± 0.0009	0.4467 ± 0.0010	0.2987 ± 0.0006	0.2461 ± 0.0005
(0.3,0.4)	0.9813 ± 0.0045	0.0323 ± 0.0001	0.2094 ± 0.0004	0.0769 ± 0.0002	-0.1607 ± 0.0003
(0.4,0.5)	1.2360 ± 0.0062	0.3191 ± 0.0007	0.2848 ± 0.0004	0.1024 ± 0.0002	-0.1107 ± 0.0002
(0.5,0.6)	3.4127 ± 0.0229	0.0700 ± 0.0001	0.4510 ± 0.0006	-0.0170 ± 0.0000	0.0539 ± 0.0001
(0.6,0.7)	3.5465 ± 0.0465	0.3307 ± 0.0005	0.2467 ± 0.0002	0.3117 ± 0.0003	-0.0725 ± 0.0001
(0.7,0.8)	-4.1787 ± 0.1118	0.4049 ± 0.0009	0.0703 ± 0.0000	-0.2152 ± 0.0001	-0.6669 ± 0.0004
(0.8,0.93)	3.6515 ± 0.0637	1.7552 ± 0.0047	0.7738 ± 0.0008	-0.4161 ± 0.0003	-1.8358 ± 0.0015

Systematic Uncertainty




1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
-1.0 -0.9 -0.8 -0.7 -0.6 -0.5 -0.4 -0.3 -0.2 -0.1 -0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0
1.2
1.1
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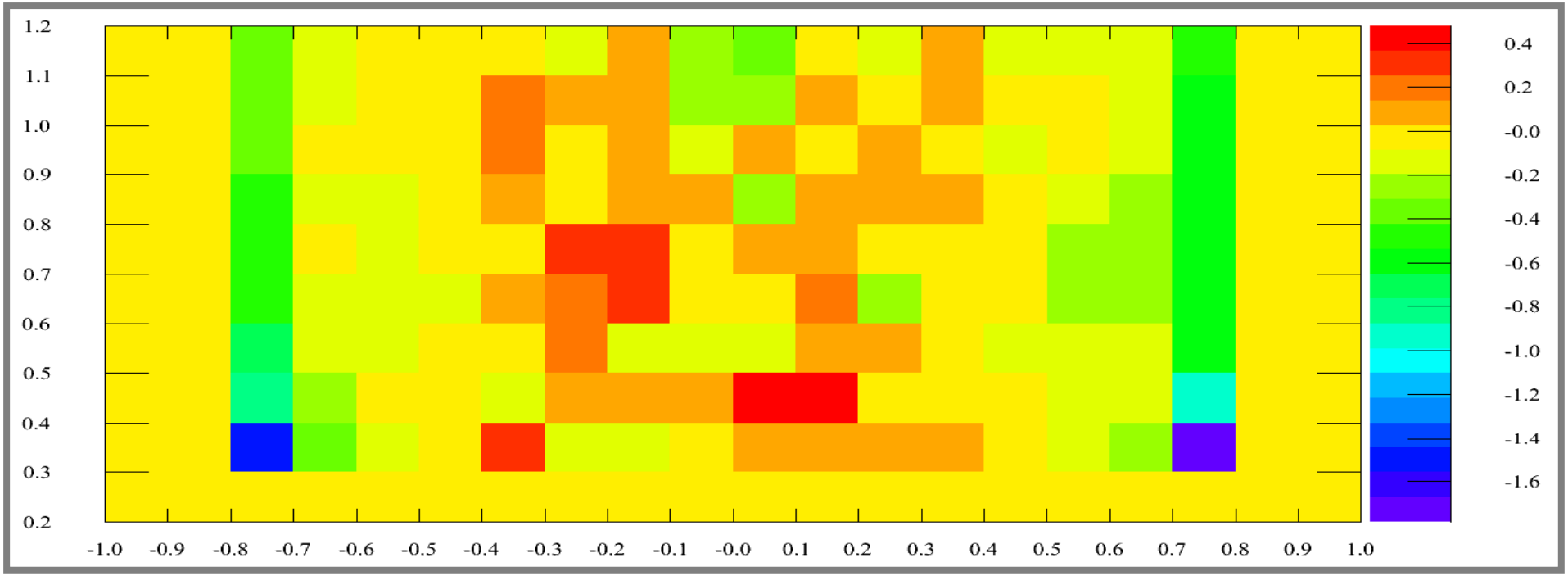
-0.0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6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0.4
0.2
-0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
-1.6

Thank you !

Systematic Uncertainty (#1)

/ihepbatch/bes/zhaomg/share/Electron_PID/ParticleID/Systematic1_mom_vs_cost.dat

PID #1 [%]	(0.2,0.3)	(0.3,0.4)	(0.4,0.5)	(0.5,0.6)	(0.6,0.7)	(0.7,0.8)	(0.8,0.9)	(0.9,1.0)	(1.0,1.1)	(1.1,1.2)
(-0.93,-0.8)	18.3847 ± 0.0534	17.2330 ± 0.0252	11.6633 ± 0.0122	0.9143 ± 0.0009	−2.9353 ± 0.0027	0.1706 ± 0.0001	1.8805 ± 0.0011	3.1377 ± 0.0015	3.2535 ± 0.0014	2.7642 ± 0.0010
(-0.8,-0.7)	−2.8442 ± 0.0045	−1.4732 ± 0.0010	−0.8168 ± 0.0004	−0.6616 ± 0.0003	−0.5194 ± 0.0002	−0.4993 ± 0.0002	−0.4360 ± 0.0001	−0.3711 ± 0.0001	−0.3784 ± 0.0001	−0.3554 ± 0.0001
(-0.7,-0.6)	−0.4729 ± 0.0003	−0.3998 ± 0.0002	−0.2009 ± 0.0001	−0.1329 ± 0.0001	−0.1155 ± 0.0000	−0.0529 ± 0.0000	−0.1589 ± 0.0001	−0.0869 ± 0.0000	−0.0964 ± 0.0000	−0.1439 ± 0.0000
(-0.6,-0.5)	−0.4701 ± 0.0003	−0.1129 ± 0.0001	−0.0173 ± 0.0000	−0.1695 ± 0.0001	−0.1643 ± 0.0001	−0.1249 ± 0.0001	−0.1752 ± 0.0001	−0.0601 ± 0.0000	0.0034 ± 0.0000	−0.0576 ± 0.0000
(-0.5,-0.4)	−0.3089 ± 0.0003	0.0113 ± 0.0000	−0.0521 ± 0.0000	−0.0166 ± 0.0000	−0.1374 ± 0.0001	0.0128 ± 0.0000	−0.0415 ± 0.0000	−0.0132 ± 0.0000	−0.0002 ± 0.0000	−0.0680 ± 0.0000
(-0.4,-0.3)	−0.3809 ± 0.0004	0.2673 ± 0.0003	−0.1336 ± 0.0001	−0.0489 ± 0.0000	0.0656 ± 0.0001	0.0049 ± 0.0000	0.1301 ± 0.0001	0.2226 ± 0.0002	0.1672 ± 0.0001	−0.0412 ± 0.0000
(-0.3,-0.2)	−0.1957 ± 0.0003	−0.1237 ± 0.0002	0.1110 ± 0.0001	0.2241 ± 0.0003	0.1861 ± 0.0002	0.2947 ± 0.0004	−0.0147 ± 0.0000	−0.0279 ± 0.0000	0.0502 ± 0.0001	−0.1000 ± 0.0001
(-0.2,-0.1)	−0.0896 ± 0.0001	−0.1677 ± 0.0003	0.0765 ± 0.0001	−0.1702 ± 0.0002	0.2982 ± 0.0004	0.2817 ± 0.0004	0.1388 ± 0.0002	0.0967 ± 0.0001	0.0648 ± 0.0001	0.0796 ± 0.0001
(-0.1,0.0)	−0.2011 ± 0.0004	0.0132 ± 0.0000	0.0883 ± 0.0002	−0.1281 ± 0.0002	0.0025 ± 0.0000	−0.0351 ± 0.0001	0.0601 ± 0.0001	−0.1967 ± 0.0003	−0.2493 ± 0.0004	−0.3081 ± 0.0004
(0.0,0.1)	−0.0490 ± 0.0001	0.1051 ± 0.0002	0.4791 ± 0.0010	−0.1317 ± 0.0002	−0.0817 ± 0.0001	0.1342 ± 0.0003	−0.2650 ± 0.0004	0.0555 ± 0.0001	−0.2803 ± 0.0005	−0.3511 ± 0.0005
(0.1,0.2)	−0.0682 ± 0.0001	0.1025 ± 0.0002	0.3727 ± 0.0006	0.1356 ± 0.0002	0.1568 ± 0.0002	0.0934 ± 0.0001	0.0410 ± 0.0001	−0.0857 ± 0.0001	0.0999 ± 0.0001	−0.0412 ± 0.0001
(0.2,0.3)	0.0328 ± 0.0000	0.0575 ± 0.0001	−0.0023 ± 0.0000	0.1230 ± 0.0001	−0.2869 ± 0.0003	−0.0669 ± 0.0001	0.0748 ± 0.0001	0.0857 ± 0.0001	−0.0043 ± 0.0000	−0.1381 ± 0.0001
(0.3,0.4)	−0.1375 ± 0.0002	0.1082 ± 0.0001	−0.0362 ± 0.0000	−0.0770 ± 0.0001	−0.0634 ± 0.0001	−0.0464 ± 0.0000	0.0466 ± 0.0000	0.0222 ± 0.0000	0.0456 ± 0.0000	0.0356 ± 0.0000
(0.4,0.5)	−0.0239 ± 0.0000	−0.0386 ± 0.0000	−0.0142 ± 0.0000	−0.1755 ± 0.0001	−0.0262 ± 0.0000	−0.0697 ± 0.0001	−0.0772 ± 0.0001	−0.1145 ± 0.0001	−0.0781 ± 0.0001	−0.1547 ± 0.0001
(0.5,0.6)	−0.2761 ± 0.0002	−0.1081 ± 0.0001	−0.1167 ± 0.0001	−0.1315 ± 0.0001	−0.2284 ± 0.0001	−0.2156 ± 0.0001	−0.1592 ± 0.0001	−0.0832 ± 0.0000	−0.0695 ± 0.0000	−0.1704 ± 0.0001
(0.6,0.7)	−0.4537 ± 0.0003	−0.2365 ± 0.0001	−0.1727 ± 0.0001	−0.1937 ± 0.0001	−0.2212 ± 0.0001	−0.2202 ± 0.0001	−0.2534 ± 0.0001	−0.1935 ± 0.0001	−0.1927 ± 0.0001	−0.1632 ± 0.0001
(0.7,0.8)	−3.8996 ± 0.0062	−1.7819 ± 0.0013	−0.9153 ± 0.0004	−0.6127 ± 0.0003	−0.6114 ± 0.0003	−0.6171 ± 0.0002	−0.5882 ± 0.0002	−0.5517 ± 0.0002	−0.5513 ± 0.0002	−0.5208 ± 0.0001
(0.8,0.93)	10.7167 ± 0.0317	15.5809 ± 0.0246	13.1799 ± 0.0148	4.2242 ± 0.0054	−3.2558 ± 0.0034	0.1651 ± 0.0001	3.2486 ± 0.0026	2.2263 ± 0.0012	3.4609 ± 0.0015	3.0639 ± 0.0011