Cut	Count	Efficiency (%)
No cut	2181	
E_{EM} cut	2127	$97.52^{+0.35}_{-0.38}$
E_{HAD} cut	2129	$97.62^{+0.31}_{-0.37}$
COT hits cut	2180	$99.95^{+0.04}_{-0.10}$
d_0 cut	2173	$99.63^{+0.13}_{-0.18}$
Isolation cut	2080	$95.37^{+0.46}_{-0.47}$
Δx_{CMU} cut	2174	$99.68^{+0.12}_{-0.17}$
Δx_{CMP} cut	2140	$98.12^{+0.29}_{-0.34}$
All above cuts	1937	$88.81^{+0.69}_{-0.68}$
All cuts excl. isol.	2027	$92.94^{+0.57}_{-0.61}$
Sliding isol. cut	2107	$96.61^{+0.39}_{-0.44}$
All cuts (sliding isol.)	1959	$89.82^{+0.66}_{-0.71}$
χ^2 cut	2181	$100.00^{+0.00}_{-0.08}$
All cuts (χ^2)	1937	$88.81^{+0.69}_{-0.68}$
All track cuts	1980	$90.78^{+0.67}_{-0.70}$
All trk cuts excl. isol.	2072	$95.00^{+0.48}_{-0.50}$

TABLE I: Dataset bhmummP26: Muon ID efficiencies for CMUP

Cut	Count	Efficiency (%)
No cut	1523	
E_{EM} cut	1473	$96.72^{+0.48}_{-0.50}$
E_{HAD} cut	1490	$97.83^{+0.38}_{-0.45}$
COT hits cut	1522	$99.93^{+0.06}_{-0.15}$
d_0 cut	1519	$99.74^{+0.13}_{-0.21}$
Isolation cut	1449	$95.14^{+0.51}_{-0.66}$
Δx_{CMX} cut	1516	$99.54^{+0.18}_{-0.24}$
All above cuts	1361	$89.36^{+0.82}_{-0.84}$
All cuts excl. isol.	1432	$94.02^{+0.65}_{-0.71}$
Sliding isol. cut	1469	$96.45^{+0.49}_{-0.53}$
All cuts (sliding isol.)	1380	$90.61^{+0.75}_{-0.82}$
χ^2 cut	1523	$100.00^{+0.00}_{-0.12}$
All cuts (χ^2)	1361	$89.36^{+0.82}_{-0.84}$
All track cuts	1367	$89.76^{+0.82}_{-0.84}$
All trk cuts excl. isol.	1438	$94.42^{+0.55}_{-0.62}$

TABLE II: Dataset bhmummP26: Muon ID efficiencies for CMX

Cut	Count	Efficiency (%)
No cut	1241	
E_{EM} cut	1200	$96.70^{+0.52}_{-0.58}$
E_{HAD} cut	1213	$97.74^{+0.43}_{-0.50}$
COT hits cut	1240	$99.92^{+0.06}_{-0.18}$
d_0 cut	1238	$99.76^{+0.13}_{-0.23}$
Isolation cut	1178	$94.92^{+0.63}_{-0.73}$
Δx_{CMX} cut	1235	$99.52^{+0.20}_{-0.29}$
All above cuts	1106	$89.12^{+0.87}_{-0.99}$
All cuts excl. isol.	1166	$93.96^{+0.72}_{-0.74}$
Sliding isol. cut	1195	$96.29^{+0.53}_{-0.64}$
All cuts (sliding isol.)	1122	$90.41^{+0.85}_{-0.91}$
χ^2 cut	1241	$100.00^{+0.00}_{-0.15}$
All cuts (χ^2)	1106	$89.12^{+0.87}_{-0.99}$
All track cuts	1111	$89.52^{+0.86}_{-0.90}$
All trk cuts excl. isol.	1171	$94.36^{+0.61}_{-0.76}$

TABLE III: Dataset bhmummP26: Muon ID efficiencies for CMX Arches

Cut	Count	Efficiency (%)
No cut	222	
E_{EM} cut	216	$97.30^{+1.04}_{-1.50}$
E_{HAD} cut	218	$98.20^{+0.87}_{-1.37}$
COT hits cut	222	$100.00^{+0.00}_{-0.83}$
d_0 cut	221	$99.55^{+0.38}_{-1.04}$
Isolation cut	215	$96.85^{+1.10}_{-1.63}$
Δx_{CMX} cut	221	$99.55^{+0.38}_{-1.04}$
All above cuts	203	$91.44^{+1.82}_{-2.28}$
All cuts excl. isol.	210	$94.59^{+1.60}_{-1.92}$
Sliding isol. cut	215	$96.85^{+1.10}_{-1.63}$
All cuts (sliding isol.)	203	$91.44^{+1.82}_{-2.28}$
χ^2 cut	222	$100.00^{+0.00}_{-0.83}$
All cuts (χ^2)	203	$91.44^{+1.82}_{-2.28}$
All track cuts	204	$91.89^{+1.76}_{-2.34}$
All trk cuts excl. isol.	211	$95.05^{+1.54}_{-1.98}$

TABLE IV: Dataset bhmummP26: Muon ID efficiencies for CMX Miniskirt

Cut	Count	Efficiency (%)
No cut	60	
E_{EM} cut	57	$95.00^{+2.85}_{-4.57}$
E_{HAD} cut	59	$98.33^{+1.37}_{-3.70}$
COT hits cut	60	$100.00^{+0.00}_{-3.02}$
d_0 cut	60	$100.00^{+0.00}_{-3.02}$
Isolation cut	56	$93.33^{+3.35}_{-4.86}$
Δx_{CMX} cut	60	$100.00^{+0.00}_{-3.02}$
All above cuts	52	$86.67^{+4.35}_{-6.00}$
All cuts excl. isol.	56	$93.33^{+3.35}_{-4.86}$
Sliding isol. cut	59	$98.33^{+1.37}_{-3.70}$
All cuts (sliding isol.)	55	$91.67^{+3.45}_{-5.14}$
χ^2 cut	60	$100.00^{+0.00}_{-3.02}$
All cuts (χ^2)	52	$86.67^{+4.35}_{-6.00}$
All track cuts	52	$86.67^{+4.35}_{-6.00}$
All trk cuts excl. isol.	56	$93.33^{+3.35}_{-4.86}$

TABLE V: Dataset bhmummP26: Muon ID efficiencies for CMX Keystone

Cut	Count	Efficiency (%)
No cut	282	
E_{EM} cut	273	$96.81^{+0.95}_{-1.40}$
E_{HAD} cut	277	$98.23^{+0.75}_{-1.21}$
COT hits cut	282	$100.00^{+0.00}_{-0.65}$
d_0 cut	281	$99.65^{+0.28}_{-0.79}$
Isolation cut	271	$96.10^{+1.07}_{-1.47}$
Δx_{CMX} cut	281	$99.65^{+0.28}_{-0.79}$
All above cuts	255	$90.43^{+1.86}_{-2.05}$
All cuts excl. isol.	266	$94.33^{+1.47}_{-1.65}$
Sliding isol. cut	274	$97.16^{+0.93}_{-1.41}$
All cuts (sliding isol.)	258	$91.49^{+1.77}_{-1.94}$
χ^2 cut	282	$100.00^{+0.00}_{-0.65}$
All cuts (χ^2)	255	$90.43^{+1.86}_{-2.05}$
All track cuts	256	$90.78^{+1.70}_{-2.01}$
All trk cuts excl. isol.	267	$94.68^{+1.32}_{-1.61}$

TABLE VI: Dataset bhmummP26: Muon ID efficiencies for MiniKey

Cut	Count	Efficiency (%)
No cut	554	
E_{EM} cut	537	$96.93^{+0.77}_{-0.89}$
E_{HAD} cut	541	$97.65^{+0.64}_{-0.83}$
COT hits cut	554	$100.00^{+0.00}_{-0.33}$
d_0 cut	551	$99.46^{+0.27}_{-0.51}$
Isolation cut	535	$96.57^{+0.74}_{-0.92}$
Δx_{CMU} cut	553	$99.82^{+0.14}_{-0.42}$
All above cuts	506	$91.34^{+1.14}_{-1.39}$
All cuts excl. isol.	521	$94.04^{+1.03}_{-1.22}$
Sliding isol. cut	543	$98.01^{+0.57}_{-0.80}$
All cuts (sliding isol.)	513	$92.60^{+1.05}_{-1.29}$
χ^2 cut	554	$100.00^{+0.00}_{-0.33}$
All cuts (χ^2)	506	$91.34^{+1.14}_{-1.39}$
All track cuts	507	$91.52^{+1.16}_{-1.38}$
All trk cuts excl. isol.	522	$94.22^{+1.04}_{-1.21}$

TABLE VII: Dataset bhmummP26: Muon ID efficiencies for CMU-only

Cut	Count	Efficiency (%)
No cut	625	
E_{EM} cut	609	$97.44^{+0.66}_{-0.81}$
E_{HAD} cut	615	$98.40^{+0.48}_{-0.69}$
COT hits cut	624	$99.84^{+0.12}_{-0.36}$
d_0 cut	620	$99.20^{+0.34}_{-0.54}$
Isolation cut	594	$95.04^{+0.91}_{-1.05}$
Δx_{CMP} cut	615	$98.40^{+0.48}_{-0.69}$
All above cuts	559	$89.44^{+1.28}_{-1.45}$
All cuts excl. isol.	584	$93.44^{+1.04}_{-1.11}$
Sliding isol. cut	607	$97.12^{+0.68}_{-0.88}$
All cuts (sliding isol.)	570	$91.20^{+1.09}_{-1.26}$
χ^2 cut	625	$100.00^{+0.00}_{-0.29}$
All cuts (χ^2)	559	$89.44^{+1.28}_{-1.45}$
All track cuts	568	$90.88^{+1.21}_{-1.33}$
All trk cuts excl. isol.	593	$94.88^{+0.87}_{-1.08}$

TABLE VIII: Dataset bhmummP26: Muon ID efficiencies for CMP-only

Cut	Count	Efficiency (%)
No cut	594	
E_{EM} cut	571	$96.13^{+0.80}_{-0.96}$
E_{HAD} cut	577	$97.14^{+0.66}_{-0.90}$
COT hits cut	591	$99.49^{+0.29}_{-0.50}$
d_0 cut	588	$98.99^{+0.40}_{-0.58}$
Isolation cut	554	$93.27^{+1.02}_{-1.22}$
Min E cut	583	$98.15^{+0.53}_{-0.74}$
All above cuts	513	$86.36^{+1.43}_{-1.50}$
All cuts excl. isol.	542	$91.25^{+1.23}_{-1.30}$
Sliding isol. cut	560	$94.28^{+0.99}_{-1.16}$
All cuts (sliding isol.)	519	$87.37^{+1.40}_{-1.53}$
χ^2 cut	594	$100.00^{+0.00}_{-0.31}$
All cuts (χ^2)	513	$86.36^{+1.43}_{-1.50}$

TABLE IX: Dataset bhmummP26: Muon ID efficiencies for CMIO

Cut	Count	Efficiency (%)
No cut	421	
E_{EM} cut	405	$96.20^{+0.92}_{-1.13}$
E_{HAD} cut	403	$95.72^{+1.00}_{-1.24}$
COT hits cut	418	$99.29^{+0.40}_{-0.68}$
d_0 cut	415	$98.57^{+0.60}_{-0.87}$
Isolation cut	400	$95.01^{+0.98}_{-1.36}$
Min E cut	420	$99.76^{+0.20}_{-0.56}$
All above cuts	376	$89.31^{+1.61}_{-1.71}$
All cuts excl. isol.	387	$91.92^{+1.34}_{-1.59}$
Sliding isol. cut	406	$96.44^{+0.88}_{-1.17}$
All cuts (sliding isol.)	381	$90.50^{+1.40}_{-1.73}$
χ^2 cut	421	$100.00^{+0.00}_{-0.44}$
All cuts (χ^2)	376	$89.31^{+1.61}_{-1.71}$

TABLE X: Dataset bhmummP26: Muon ID efficiencies for SCMIO

Category	Fiducial	w/ Stub	Efficiency (%)
CMUP	2432	2118	$87.09^{+0.66}_{-0.71}$
CMX	1551	1480	$95.42^{+0.52}_{-0.55}$
CMX Arches	1233	1206	$97.81^{+0.41}_{-0.52}$
CMX Miniskirt	254	216	$85.04^{+2.36}_{-2.52}$
CMX Keystone	64	58	$90.62^{+3.71}_{-5.27}$
CMU-only	620	535	$86.29^{+1.31}_{-1.43}$
CMP-only	687	613	$89.23^{+1.10}_{-1.24}$
CMX MiniKey	318	274	$86.16^{+2.02}_{-2.28}$

TABLE XI: Dataset bhmummP26: Muon reconstruction efficiencies

1st leg	2nd leg	1st passes	both pass	Efficiency (%)
CMUP	CMUP	722	624	-
CMX	CMUP	846	789	$92.95^{+0.60}_{-0.57}$
CMUP	CMX	931	789	-
CMX	CMX	345	276	$86.56^{+0.95}_{-0.92}$
CMUP	ARCH	742	669	-
CMUP	MK	189	120	-
ARCH	ARCH	259	220	-
ARCH	MK	65	43	-
MK	ARCH	47	43	$90.81^{+0.91}_{-0.81}$
MK	MK	17	13	$74.17^{+2.86}_{-2.57}$

TABLE XII: Dataset bhmummP26: Muon L1 trigger efficiencies

Category	Events Passing	Efficiency (%)
Pass L1	789	-
CMUP	690	$97.71^{+0.58}_{-0.79}$
CMX	656	$92.90^{+1.00}_{-1.15}$
CMUP-CMX	641	-
CMUPA	577	-
CMUPMK	113	-
CMUPARCH	535	$92.72^{+1.13}_{-1.22}$
CMUP-MK	106	$93.81^{+2.09}_{-2.98}$

TABLE XIII: Dataset bhmummP26: Muon L2 trigger efficiencies

Category	Events Passing	Efficiency (%)
Pass L1	789	-
CMUP-CMUP$_S$	648	-
CMX-CMX$_S$	619	-
CMUP-CMX-CMUP$_S$	601	$91.62^{+1.06}_{-1.28}$
CMUP-CMX-CMX$_S$	607	$87.97^{+1.19}_{-1.35}$
CMUP-CMX-CMX$_S$-A	506	$87.69^{+1.47}_{-1.46}$
CMUP-CMX-CMX$_S$-MK	101	$89.38^{+3.00}_{-3.64}$

TABLE XIV: Dataset bhmummP26: Muon L2 SLAM trigger efficiencies

Category	Efficiency (%)
CMUP	$90.68^{+0.80}_{-0.98}$
CMX	$80.29^{+1.24}_{-1.35}$
ARCH	$84.04^{+1.33}_{-1.38}$
MK	$69.57^{+3.10}_{-3.49}$
CMUP$_S$	$85.02^{+1.13}_{-1.34}$
CMX$_S$	$76.03^{+1.33}_{-1.45}$
ARCH$_S$	$79.49^{+1.55}_{-1.54}$
MK$_S$	$66.29^{+3.39}_{-3.72}$

TABLE XVI: Dataset bhmummP26: Muon combined trigger efficiencies

Category	Events Passing	Efficiency (%)
Pass L2	641	-
CMUP	640	$99.84^{+0.12}_{-0.37}$
CMX	640	$99.84^{+0.12}_{-0.37}$
CMUP-CMX	639	-
CMUPA	535	-
CMUPMK	105	-
CMUPARCH	534	$99.81^{+0.15}_{-0.44}$
CMUP-MK	105	$100.00^{+0.00}_{-1.74}$

TABLE XV: Dataset bhmummP26: Muon L3 trigger efficiencies