Event selection

N(PV)	≥ 1
HLT-STA muon matching	yes
N(nearly parallel STA muons)	<4

Muon selection

	Muon type	
	STA	TMS
STA-to-TMS muon association	not matched to TMS μ	matched to STA μ
N(CSC+DT hits)	>12	—
- associated STA muon	—	>12
N(DT hits) for muons in barrel	>18	—
tracker muon	—	yes
N(matched muon segments)	—	>1
p_T	$>10\,\mathrm{GeV}$	$>10\,\mathrm{GeV}$
$\sigma_{p_\mathrm{T}}/p_\mathrm{T}$	<1.0	<1.0
$\chi^2_\mathrm{trk}/\mathrm{dof}$	<2.5	—
$I^\mathrm{rel}_\mathrm{trk}$	—	<0.075
$|\Delta t|$	$<12\,\mathrm{ns}$	—
muon direction	inside-out	—
d_0/σ_{d_0}	—	>6

Dimuon selection

	Dimuon category		
	STA-STA	STA-TMS	TMS-TMS
DCA	$<15\,\mathrm{cm}$	$<15\,\mathrm{cm}$	$<15\,\mathrm{cm}$
pairing criteria	best 1–2 ranked dimuons selected		
χ^2_vtx	<10	<20	<10
ΔN(pixel hits)	—	—	<3
N(hits before vertex)	—	<6	<3
N(tracker layers) + floor(L_xy [cm]/15)	—	>5	>5
$|\phi^\mathrm{TMS}_\mu|$	—	<2.9	—
$\cos\alpha$			
- 2016 data analysis	>-0.8	>-0.8	>-0.8
- 2018 data analysis	>-0.9	>-0.9	>-0.99
N(dimuon segments)	>4	—	—
if $|\Delta\eta_{\mu\mu}| < 0.1$			
- N(dimuon segments)	>5	—	—
- N(DT hits) for muons in barrel	>24	—	—
no back-to-back muon			
with $|\Delta t_\mathrm{b2b}| > 20\,\mathrm{ns}$	yes	—	—
$m_{\mu\mu}$	$>10\,\mathrm{GeV}$	$>10\,\mathrm{GeV}$	$>10\,\mathrm{GeV}$
p_T of the leading muon	—	—	$>25\,\mathrm{GeV}$
$L_\mathrm{xy}/\sigma_{L_\mathrm{xy}}$	>6	>3	>6
$|\Delta\Phi|$	$<\pi/4$	$<\pi/4$	$<\pi/4$
opposite-sign muons	yes	yes	yes