

# Data

4009 - 4230

Sample	Year	Run range	Luminosity ( $\text{pb}^{-1}$ )	$E_{cm}$ (MeV)
4009	2012	23463-23505 23509-24141	$482.0 \pm 0.1 \pm 4.7$	$4007.62 \pm 0.05 \pm 0.66$
4130	2019	59163-59573	401.5	$4128.48 \pm 0.44$
4160	2019	59574-59896	408.7	$4157.44 \pm 0.44$
4180	2016	43716-45105 45418-47066	$3189.0 \pm 0.2 \pm 31.9$	4178.00 on average
4190	2017	47543-48170	$526.7 \pm 0.1 \pm 2.2$	$4188.99 \pm 0.06 \pm 0.41$
	2012	30372-30437	$43.33 \pm 0.03 \pm 0.29$	$4188.59 \pm 0.15 \pm 0.68$
4200	2017	48172-48173	$526.0 \pm 0.1 \pm 2.1$	$4199.03 \pm 0.05 \pm 0.41$
4210	2017	48714-49239	$517.1 \pm 0.1 \pm 1.8$	$4209.25 \pm 0.06 \pm 0.42$
	2013	31983-32045	$54.95 \pm 0.03 \pm 0.36$	$4207.73 \pm 0.14 \pm 0.61$
4220	2017	49270-49787	$514.6 \pm 0.1 \pm 1.8$	$4218.84 \pm 0.05 \pm 0.40$
	2013	32046-32140	$54.60 \pm 0.03 \pm 0.36$	$4217.13 \pm 0.14 \pm 0.67$
4230	2012-2013	32239-32849	$1047.34 \pm 0.14 \pm 10.16$ $44.54 \pm 0.03 \pm 0.29$	$4320.34 - 2.87 \times 10^{-3} \times N_{run} \pm 0.05 \pm 0.60$
		32850-33484		$4225.54 \pm 0.05 \pm 0.65$
		30438-30491		$4226.26 \pm 0.04 \pm 0.65$

# Inclusive MC

	4009	4130	4160	4180	4190	4200	4210	4220	4230
Components	Cross section (pb)								
$D^0 D^0$	76	259	167	179	159	148	139	133	130
$D^+ D^-$	135	200	200	197	197	196	195	193	192
$D^{*0} D^0$	3320	1446	1252	1211	1187	1175	1159	1144	1133
$D^{*+} D^-$	3300	1589	1376	1296	1270	1257	1241	1225	1212
$D^{*0} D^{*0}$	-	2226	2566	2173	2112	1855	1491	1096	879
$D^{*+} D^{*-}$	-	2150	2479	2145	2085	1831	1472	1082	868
$D_s^+ D_s^-$	269	13	15	34	42.7	38.5	32.3	22.4	18.4
$D_s^{*+} D_s^-$	-	549	916	961	925	921	853	750	629
$D_s^{*+} D_s^{*-}$	-	-	-	-	-	-	-	-	22
$DD^* \pi^+$	-	330	389	383	395	406	415	421	427
$DD^* \pi^0$	-	166	195	192	198	204	208	211	214
$DD \pi^+$	-	36	42	50	53	55	56	58	57
$DD \pi^0$	-	18	21	25	27	27	28	29	29