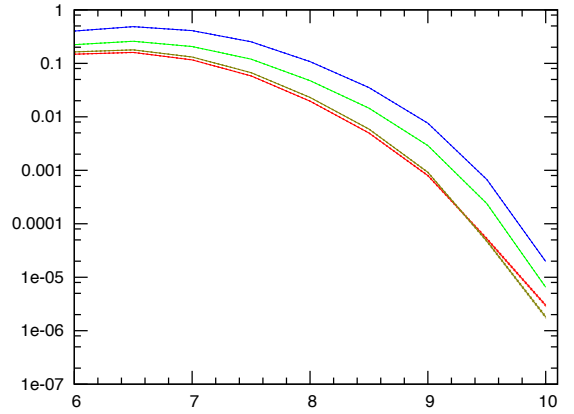
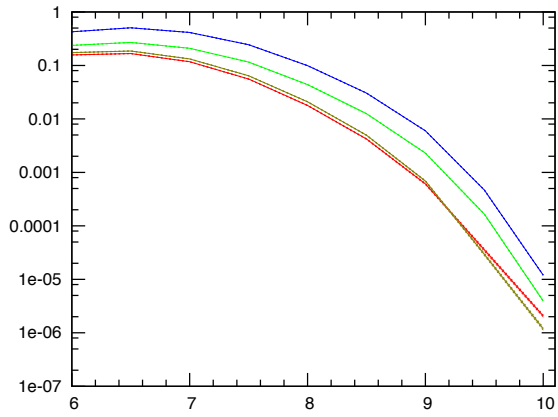


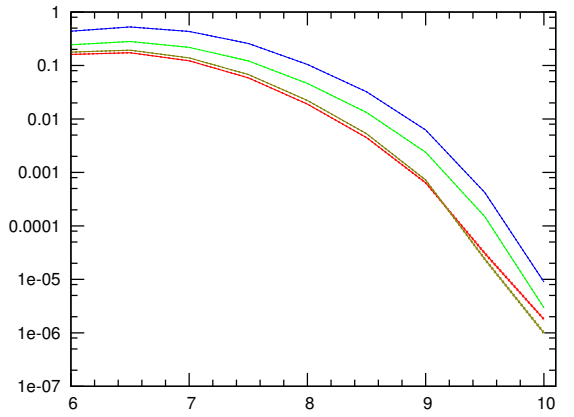
(a) MSTW08



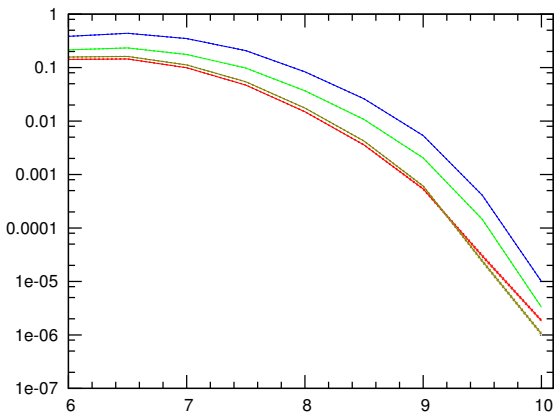
(b) CT10



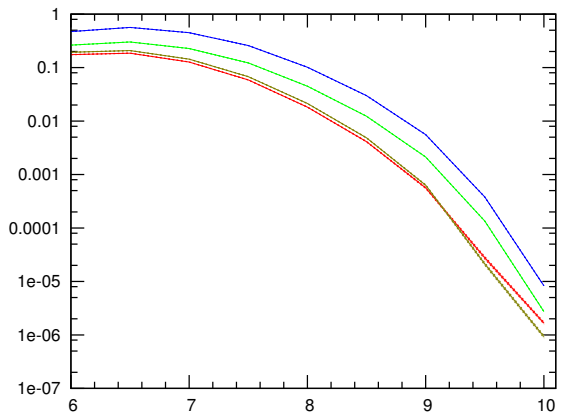
(c) NNPDF2.1



(d) HERAPDF1.5

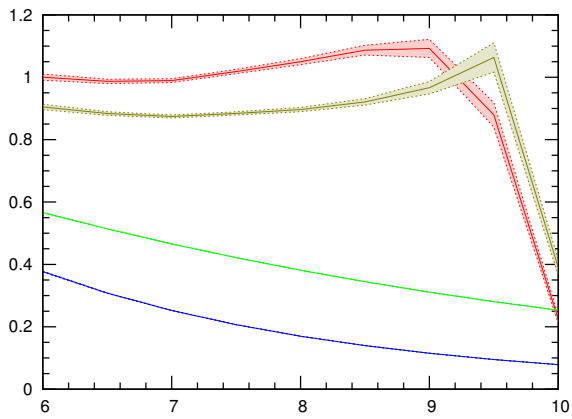


(e) ABKM09

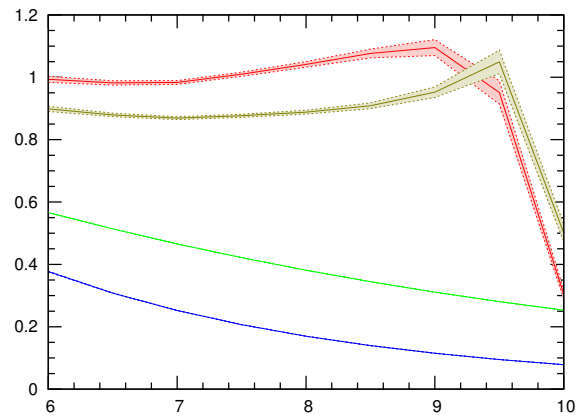


(f) JR09

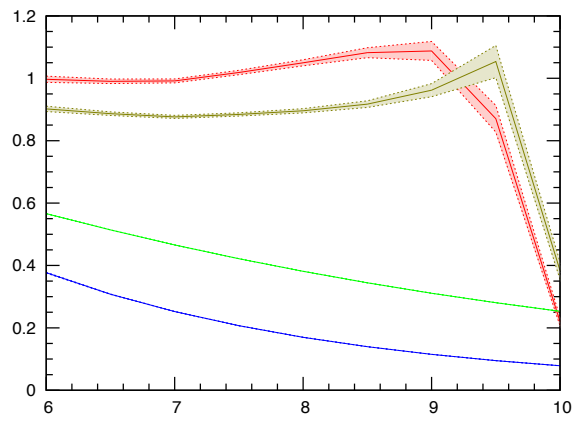
FIG. 1: PDF dependence for  $\sigma$  ( $\text{nb}/\text{GeV}^{-2}$ ),  $\sqrt{s} = 7 \text{ TeV}$  (blue : pure LL, green : LL vertices with collinear improved NLL Green's function, brown : pure NLL, red : full NLL vertices with the collinear improved NLL Green's function.)



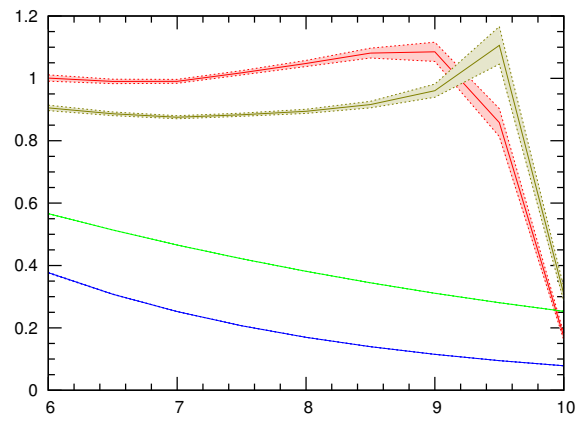
(a) MSTW08



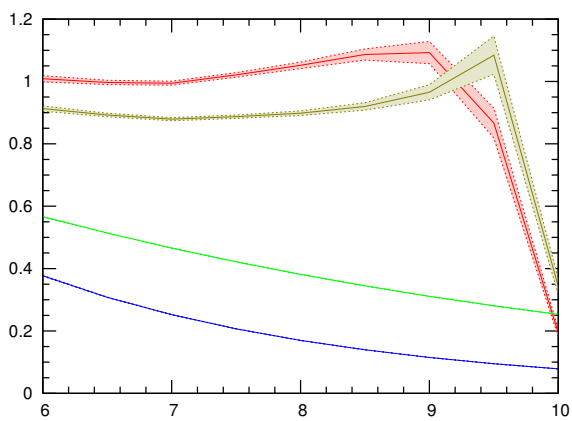
(b) CT10



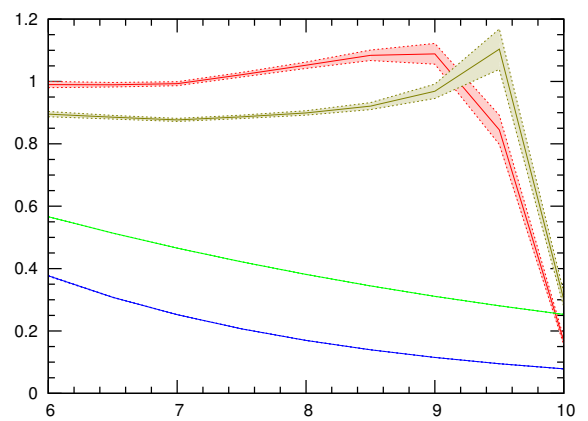
(c) NNPDF2.1



(d) HERAPDF1.5

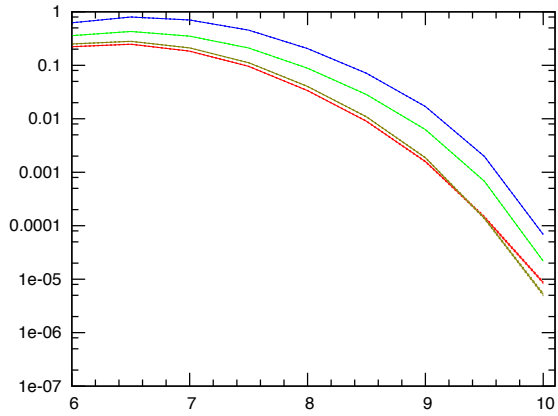


(e) ABKM09

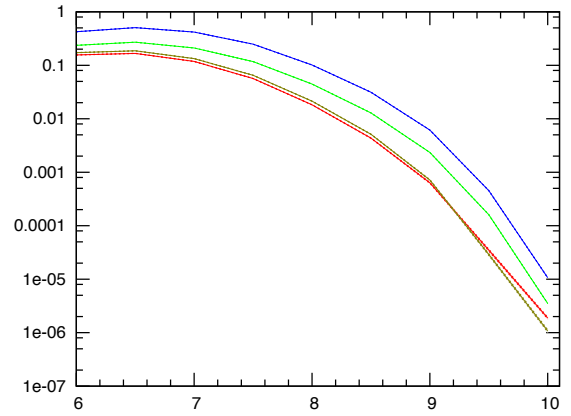


(f) JR09

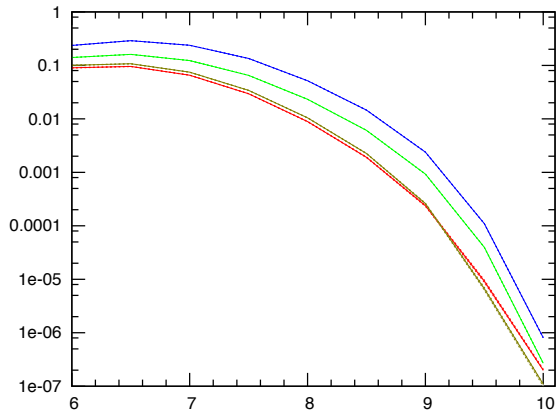
FIG. 2: PDF dependence for  $\langle \cos \varphi \rangle$ ,  $\sqrt{s} = 7$  TeV



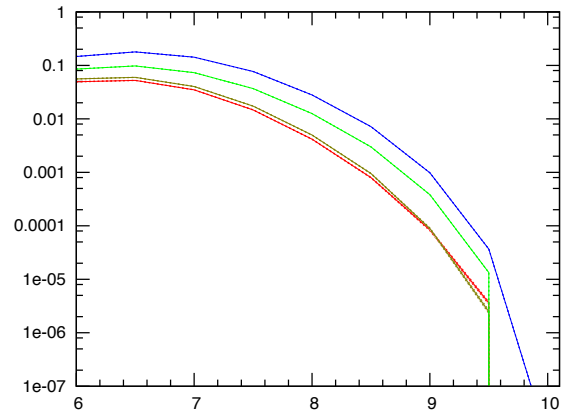
(a)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 30 \text{ GeV}$



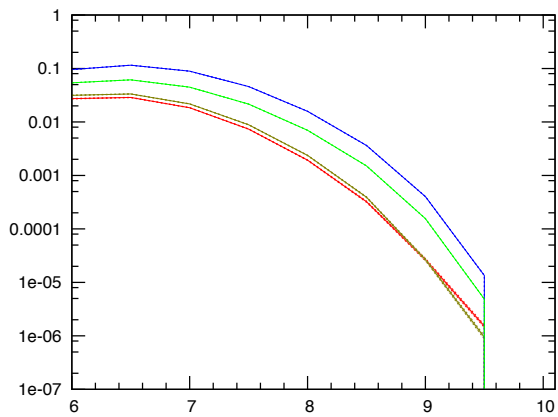
(b)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 35 \text{ GeV}$



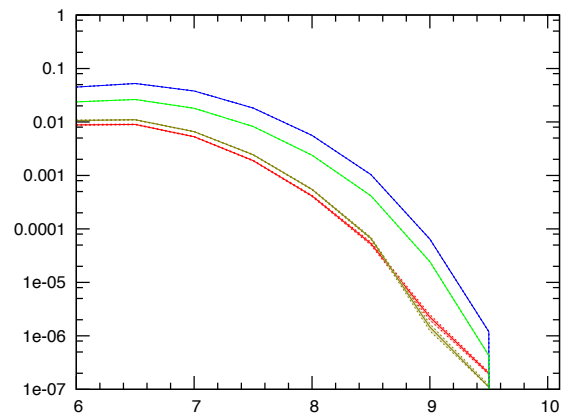
(c)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 40 \text{ GeV}$



(d)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 45 \text{ GeV}$

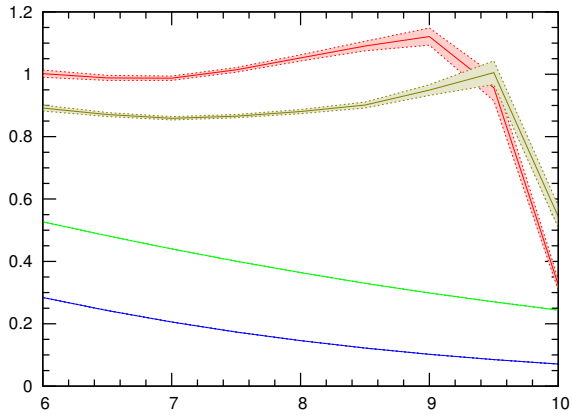


(e)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 50 \text{ GeV}$

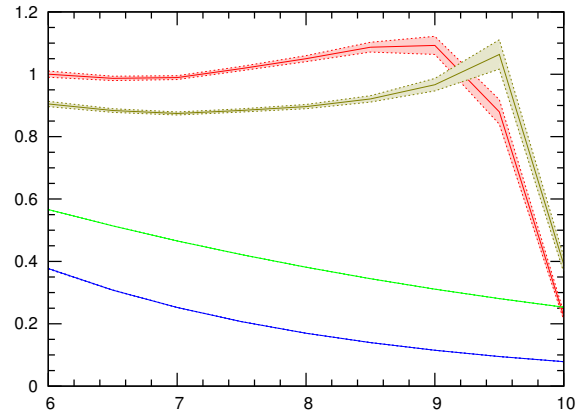


(f)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 60 \text{ GeV}$

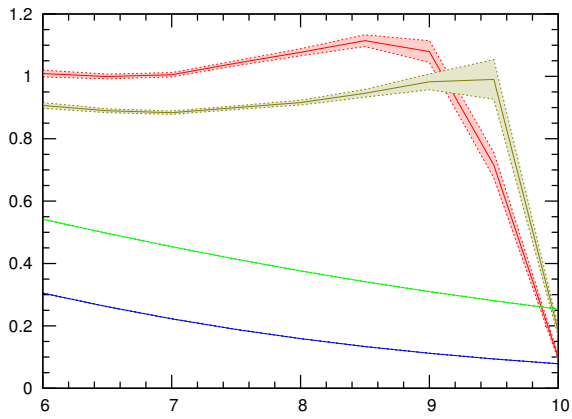
FIG. 3: Variation of  $\sigma$  ( $\text{nb}/\text{GeV}^{-2}$ ) with  $k_{J,2}$ ,  $\sqrt{s} = 7 \text{ TeV}$



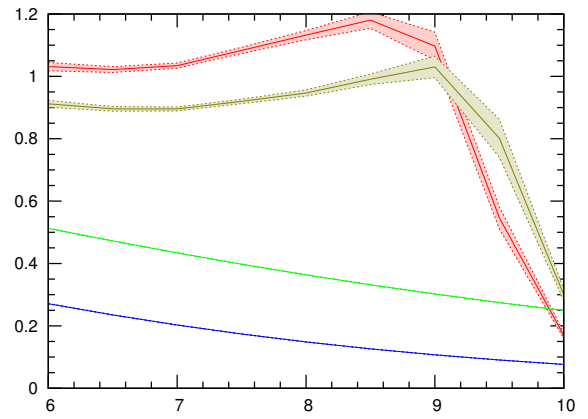
(a)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 30$  GeV



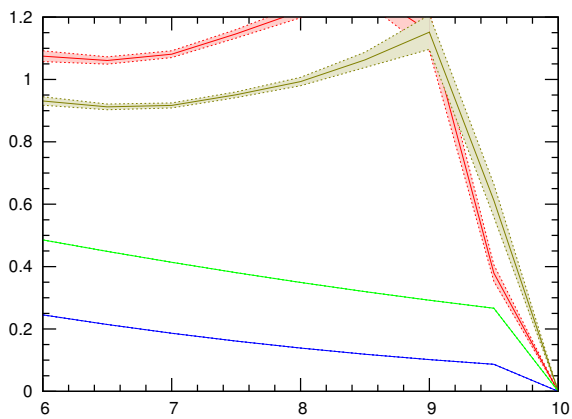
(b)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 35$  GeV



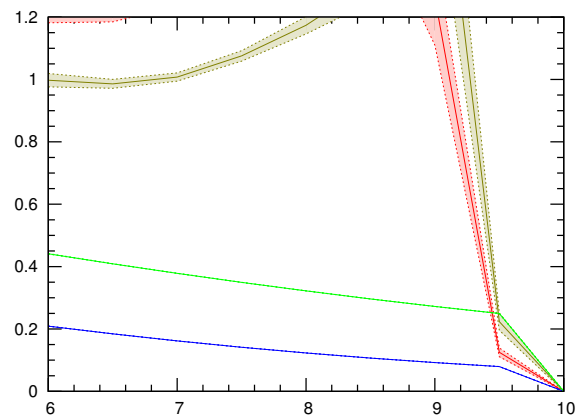
(c)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 40$  GeV



(d)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 45$  GeV

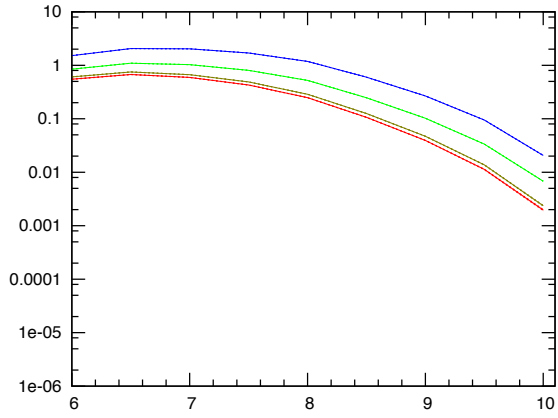


(e)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 50$  GeV

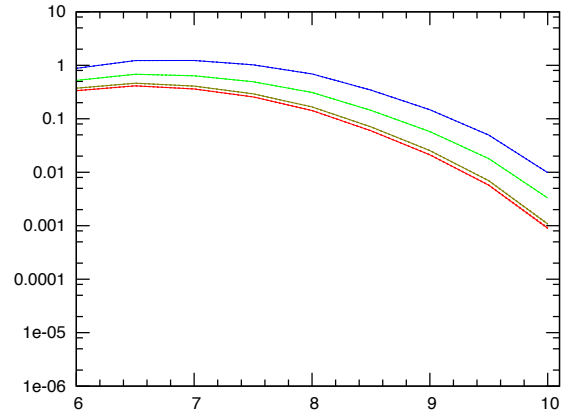


(f)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 60$  GeV

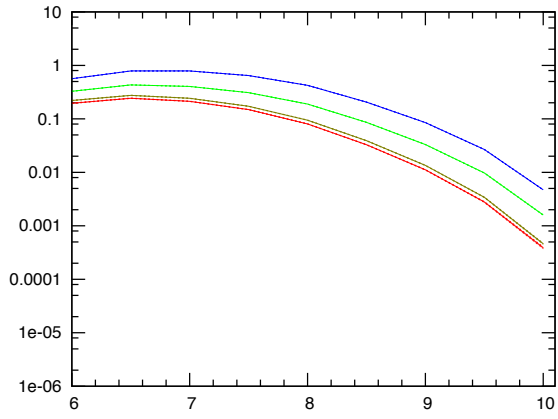
FIG. 4: Variation of  $\langle \cos \varphi \rangle$  with  $k_{J,2}$ ,  $\sqrt{s} = 7$  TeV



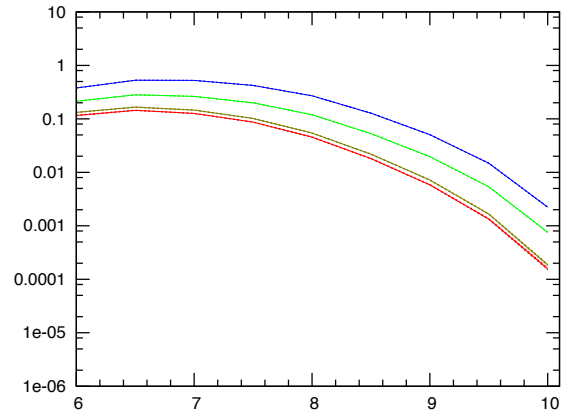
(a)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 35 \text{ GeV}$



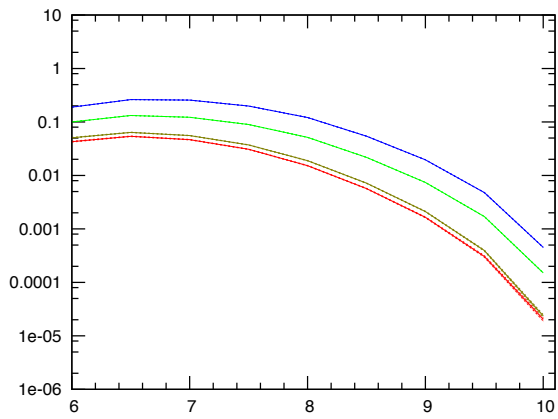
(b)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 40 \text{ GeV}$



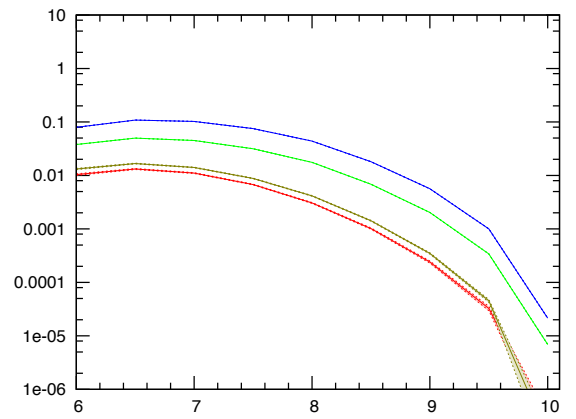
(c)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 45 \text{ GeV}$



(d)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 50 \text{ GeV}$

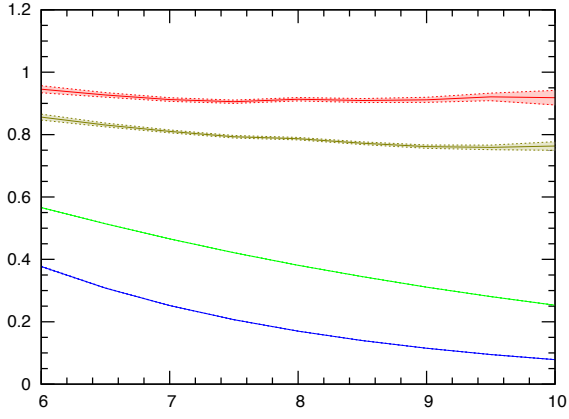


(e)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 60 \text{ GeV}$

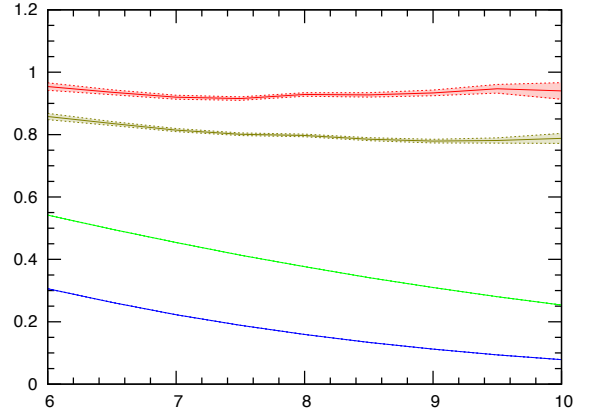


(f)  $k_{J,1} = 35 \text{ GeV}$ ,  $k_{J,2} = 75 \text{ GeV}$

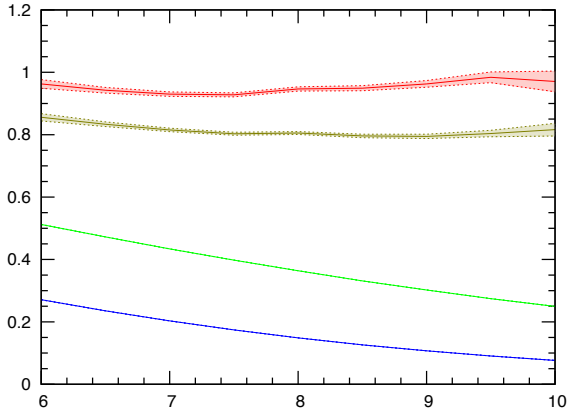
FIG. 5: Variation of  $\sigma$  ( $\text{nb}/\text{GeV}^{-2}$ ) with  $k_{J,2}$ ,  $\sqrt{s} = 14 \text{ TeV}$



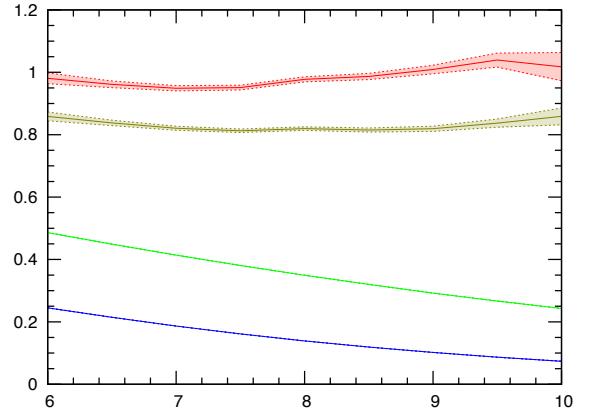
(a)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 35$  GeV



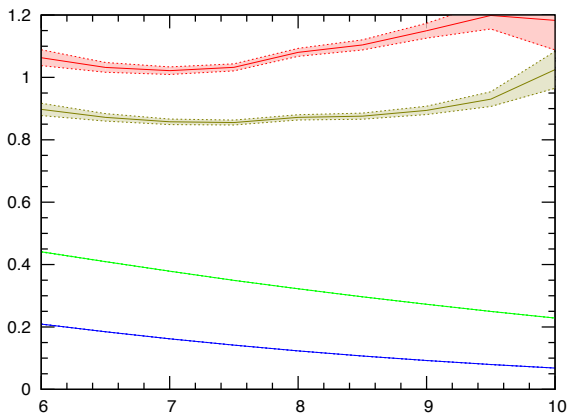
(b)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 40$  GeV



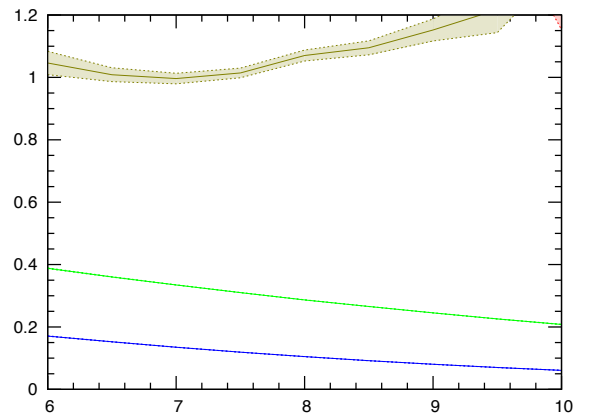
(c)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 45$  GeV



(d)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 50$  GeV



(e)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 60$  GeV



(f)  $k_{J,1} = 35$  GeV,  $k_{J,2} = 75$  GeV

FIG. 6: Variation of  $\langle \cos \varphi \rangle$  with  $k_{J,2}$ ,  $\sqrt{s} = 14$  TeV