



The distributions of  $D_{0-}$ ,  $D_{CP}$ ,  $D_{0h+}$ ,  $D_{\Lambda 1}$ , and  $D_{\Lambda 1}^{Z\gamma}$  in the VBF category. In these figures, all four decay channels,  $\tau_h \tau_h$ ,  $\mu \tau_h$ ,  $e \tau_h$ ,  $e \mu$  are summed. The BSM hypothesis depends on the variable shown: it corresponds to  $f_{a3} \cos \phi_{a3} = 1$  for the  $D_{0-}$  (top left) distributions, the maximal mixing ("BSM mix") in VBF production for the  $D_{CP}$  distribution (top right),  $f_{a2} \cos \phi_{a2} = 1$  for the  $D_{0h+}$  distribution (center left),  $f_{\Lambda 1} \cos \phi_{\Lambda 1} = 1$  for the  $D_{\Lambda 1}$  distribution (center right), and  $f_{\Lambda 1}^{Z\gamma} \cos \phi_{\Lambda 1}^{Z\gamma} = 1$  for the  $D_{\Lambda 1}^{Z\gamma}$  distribution (bottom).