\[ D_{s}^{*+} \rightarrow D_{s}^{+} e^{+} e^{-} \]

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• We start with a Ds*+ -> Ds+ gamma sample and reconstruct the Ds*+ through the Ds+.
• The Ds- on the other side is decaying generically.
• Plot fitted to a double-shouldered Crystal Ball function standing on an Argus function.
• The cut efficiency is found to be 19.2% as before. (My plot is an average of Ds*+ and Ds*- decays)
• We start with a MC sample where $D_s^* \rightarrow D_s \gamma$, where $D_s$ on both sides are allowed to decay generically.
• We reconstruct the $D_s^{*+}$ with the $D_s^-$ which we reconstruct from $K K pi^-$ and gamma. The $D_s^+$ decays generically, and we don't care about it.
• Plot fitted to a quasi-Boltzmann distribution of the form “$\exp(-((x-x_0)/x_1)^2) \cdot \text{pow}(((x-x_0)/x_1), x_2)$”, on top of which stands a double-shouldered CB for the main peak and a Gaussian for the second peak.
The data in pink is fitted to an Argus function on the bottom, a scaled version of the fit on Slide 3 and a scaled version of the CB from Slide 2 where the center of the peak is allowed to float a bit.

I infer $B(Ds^* \rightarrow Ds \ gamma) = 0.83 \pm 0.05$. The PDG value is $0.942 \pm 0.007$. 
A previous attempt with 10% of the data, fitted naively to a CB from Slide 2 on top of an Argus function gave us $B = 96.2\%$ which went to $\sim 100\%$ when I used all the data. When we used all the data, the discrepancy in the higher shoulder region became very marked… and lead us to discover the contribution from wrong-side reconstructions.