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Precision Measurement of the Exclusive $B^0 \to D^{*-}\ell^+\nu$ Branching Fraction PETER SONNEK, LUCIEN CREMALDI, University of Mississippi, ROMULUS GODANG, University of South Alabama, BABAR COLLABORATION — We report on a precision measurement of the exclusive $B^0 \to D^{*-}\ell^+\nu$ branching fraction using data collected with the BABAR detector at the PEP-II asymmetric-energy e^+e^- storage rings at SLAC running on the $\Upsilon(4S)$ resonance. Using a data sample of approximately 470 million $B\bar{B}$ pair events we isolate those with the prompt lepton and slow pions from the $D^{*-} \to D^0\pi_{slow}$ cascade decay. A partial reconstruction technique is used in which the D^* four- momentum is inferred from the slow pion, π_{slow}. This allows for a much higher statistical precision on this important branching fraction as well as an overall systematic error competitive with full reconstruction techniques.

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