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Title:	Evidence for a vector charmoniumlike state in $e^+e^- \rightarrow D^+sD^{*2}(2573)^- + c.c.$
Authors:	Bhardwaj, V. (/jspui/browse?type=author&value=Bhardwaj%2C+V.)
Keywords:	Measurement Luminosity Respectively
Issue Date:	2020
Publisher:	American Physical Society
Citation:	Physical Review D, 101(9).
Abstract:	We report the measurement of $e^+e^- \rightarrow D^+sD^{*2}(2573)^- + c.c.$ via initial-state radiation using a data sample of an integrated luminosity of 921.9 fb^{-1} collected with the Belle detector at the $Y(4S)$ and nearby. We find evidence for an enhancement with a 3.4σ significance in the invariant mass of $D^+sD^{*2}(2573)^- + c.c.$. The measured mass and width are $(4619.8 \pm 8.9 - 8.0 (\text{stat.}) \pm 2.3 (\text{syst.})) \text{ MeV}/c^2$ and $(47.0 \pm 31.3 - 14.8 (\text{stat.}) \pm 4.6 (\text{syst.})) \text{ MeV}$, respectively. The mass, width, and quantum numbers of this enhancement are consistent with the charmoniumlike state at $4626 \text{ MeV}/c^2$ recently reported by Belle in $e^+e^- \rightarrow D^+sD^{*1}(2536)^- + c.c.$. The product of the $e^+e^- \rightarrow D^+sD^{*2}(2573)^- + c.c.$ cross section and the branching fraction of $D^{*2}(2573)^- \rightarrow D^0K^-$ is measured from $D^+sD^{*2}(2573)^- \rightarrow D^0K^-$ threshold to 5.6 GeV .
Description:	Only IISERM authors are available in the record.
URI:	https://journals.aps.org/prd/abstract/10.1103/PhysRevD.101.091101 (https://journals.aps.org/prd/abstract/10.1103/PhysRevD.101.091101) http://hdl.handle.net/123456789/3299 (http://hdl.handle.net/123456789/3299)
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