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**Title:** Search for CP Violation and Measurement of the Branching Fraction in the Decay  $D^0 \rightarrow K^0 K^0 S$

**Authors:** Bhardwaj, V. (/jspui/browse?type=author&value=Bhardwaj%2C+V.)

**Keywords:** CP Violation  
 $D^0 \rightarrow K^0 K^0 S$   
KEKB asymmetric energy

**Issue Date:** 2017

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**Citation:** Physical Review Letters, 119 (17)

**Abstract:** We report a study of the decay  $D^0 \rightarrow K^0 K^0 S$  using 921 fb<sup>-1</sup> of data collected at or near the  $\Upsilon(4S)$  and  $\Upsilon(5S)$  resonances with the Belle detector at the KEBK asymmetric energy e<sup>+</sup>e<sup>-</sup> collider. The measured time-integrated CP asymmetry is  $ACP(D^0 \rightarrow K^0 K^0 S) = (-0.02 \pm 1.53 \pm 0.02 \pm 0.17)\%$ , and the branching fraction is  $B(D^0 \rightarrow K^0 K^0 S) = (1.321 \pm 0.023 \pm 0.036 \pm 0.044) \times 10^{-4}$ , where the first uncertainty is statistical, the second is systematic, and the third is due to the normalization mode ( $D^0 \rightarrow K^0 S \pi^0$ ). These results are significantly more precise than previous measurements available for this mode. The ACP measurement is consistent with the standard model expectation.

**Description:** Only IISERM authors are available in the record.

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