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Hadron spectroscopy and exotics (experiment and theory)

Experiment: -

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# A joint analysis of the S-wave in the $\pi^+\pi^-$ and $\pi^0\pi^0$ data

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## Abstract

We use our former results on  $\pi^+\pi^-$  S-wave obtained in a nearly assumption-free way from the 17.2 GeV/c data to predict the  $\pi^0\pi^0$  S-wave. The predictions are compared with the recent results of the E852 experiment at 18.3 GeV/c. A good agreement is found for only one (the :down-flat:) solution while the second one (the :up-flat:) is excluded by the  $\pi^0\pi^0$  data. Thus the long-standing :up-down: ambiguity has been finally resolved in favour of the S-wave intensity which stays large and nearly constant up to the  $KK\text{-bar}$  threshold. A joint analysis of both sets of data leads to a reduction of errors for this solution.

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