

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

New Results on Kochen-Specker Setups¹ MLADEN PAVICIC, University of Zagreb — The Kochen-Specker (KS) theorem has recently been given renewed attention due to developments of both experimental and computational techniques as well as new theoretical results (more than 10 papers in Phys. Rev. Lett. in the last 10 years). We show that all possible KS setups for four-dimensional systems with 18 through 23 vectors and at least almost all with 24 vectors with component values from $\{-1,0,1\}$ can be obtained by peeling vectors off a single system provided, in effect, by Asher Peres 20 years ago. We show that for 18 through 23 vectors there are no other such systems. We also show that there is number of systems with 18 through 24 vectors with component values that are not from $\{-1,0,1\}$. We present algorithms and computer programs that we used to generate all the aforementioned KS setups and we give their analytical, graphical, and statistical representation.

¹Supported by the Ministry of Science, Education, and Sport of Croatia through the project No. 082-0982562-3160.

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Date submitted: 28 Jan 2010

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