

Spontaneous symmetry breaking in three-Higgs-doublet S3-symmetric models

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The talk will summarise work done by the author and collaborators consisting of a detailed study of the possible vacua in models with three Higgs doublets with S3 symmetry and without explicit CP violation. Different vacua require special regions of the parameter space which were analysed in our work. We establish the possibility of spontaneous CP violation in this framework and we also show which complex vacua conserve CP. In our work we discussed constraints from vacuum stability. The results are relevant for model building.

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