## 7th International Conference on New Frontiers in Physics (ICNFP2018)



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## On vacuum angle (in)dependence in the Higgs regime

Saturday, 7 July 2018 09:30 (30 minutes)

We revisit the issue of the vacuum angle  $\theta$  dependence in the weakly coupled (Higgsed) Yang-Mills theories. Anselm and Johansen noted that the vacuum angle  $\theta_{\rm EW}$  associated with the electroweak SU(2) of the Standard Model is unobservable although all fermions get masses through Higgsing and there is no axion. We generalize this idea to a broad class of Higgsed Yang-Mills theories. We also consider the issue in frameworks of Grand Unification where situation turns out to be different.

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