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Scalar Hint from the Diboson Excess?

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The diboson resonant excesses reported by both ATLAS and CMS Collaborations in Run 1, can be interpreted a new weak singlet pseudoscalar particle $\eta_{-}WZ$ which may decay into two weak bosons while being produced in gluon fusion at the LHC. The couplings to the gauge bosons can arise from a Wess-Zumino-Witten anomaly term and thus we study an effective model based on the anomaly term as a well motivated phenomenological model. In models where the pseudoscalar particle arises as a composite state, the coefficients of the anomalous couplings can be related to the fermion components of the underlying dynamics. We provide an example to test the feasibility of the idea.

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