



Contribution ID: 67

Type: **Talk**

## **Eta - eta' mixing in Large-Nc ChPT: discussion, phenomenology, and prospects**

*Tuesday, 30 June 2015 15:40 (20 minutes)*

A detailed and systematic study of the  $\eta - \eta'$  mixing in Large-Nc ChPT will be presented [1], with special emphasis on the role of the next-to-next-to-leading order contributions in the combined  $p^2$  and  $N_c$  expansion. At such order, loop corrections as well as OZI-violating pieces are relevant for an appropriate and stable numerical result for the mixing angle. Pseudoscalar masses as well as pseudoscalar decay constants within this framework will be also presented. Comparison with recent phenomenological approaches [2] together with the impact of the mixing in  $\eta' \rightarrow \gamma\gamma$  and  $\eta' \rightarrow \pi\pi\gamma$  decays will also be discussed.

### References

1. P. Bickert, P. Masjuan, and S. Scherer, in preparation.
2. R. Escribano, P. Masjuan, and P. Sanchez-Puertas, Phys. Rev. D 89 (2014) 3, 034014 [arXiv:1307:2061 [hep-[h]]].

**Primary author:** MASJUAN, Pere (Johannes Gutenberg University, Mainz)

**Presenter:** MASJUAN, Pere (Johannes Gutenberg University, Mainz)

**Session Classification:** Parallel Session 3 - Goldstone Boson WG

**Track Classification:** Goldstone Boson Working Group