

## Questions for Nuclear Lunch March 7th 2019

1. Why does only the  $s\text{-bar}\{s\}$  contribute to the sea quarks? What is the lifetime of a virtual  $s\text{-bar}\{s\}$  pair? (**Ibrahim**)
2. Is there any experimental technique, available now or in the near future, that can test this prediction of the different proton mass contribution terms? (**Cole**)
3. Why is there a factor of  $1/4$  for the trace anomaly in Eq. (1)? Also, what is the trace anomaly? (**Mahesh**)
4. What is changed in figure 1 to get the different points? Where do the error bounds in figure 3 come from? (**Irin**)
5. Why is the normalization sum rule generally not 1 in figure 2? (**Abinash**)
6. Does knowing these individual contributions to the proton mass influence other types of theoretical calculations or experimental fits? (**Doug**)