Quiz

- Why do we want to measure dileptons in HICs?
- What are the peaks in the following figure of $R_{e^+e^- \rightarrow \text{hadrons}}$?
- Can you explain the horizontal lines (values: 2, 3.333, 3.667)?
Quiz

- What are the “fundamental” and “accidental” symmetries of QCD?
- What’s chiral symmetry?
- Why is it (intuitively) only true for massless quarks?
- What’s the main consequence of spontaneous symmetry breaking?
- What are anomalies? Are they always “bad” for models?
- What’s the main meaning of the McLerran-Toimela formula?
- Can one decide from first principles, whether $\chi_{SR}$ is caused by “dropping hadron masses” or “resonance melting”? 
Quiz

1. Why do we need effective hadronic models to theoretically study electromagnetic probes in HICs?
2. How do we constrain effective hadronic models theoretically?
3. How do we determine all the parameters (couplings, masses, form factors) of the models?
4. What is left to be predicted from such models?
5. What are the most important processes leading to medium modifications of the vector mesons’ spectral functions?
6. What are the different dilepton sources that are important in URHICs?
7. Which interesting information can be gained from investigating also $\ell^+\ell^- - p_T$ spectra in addition to $M$ spectra?
8. What fundamental properties about the hot and dense medium produced in HICs have we inferred from $\ell^+\ell^-$ data so far?