

Discussion Topics for Session 40

- 1) How do the new 4-quark and 5-quark states intermingle with the conventional quark-model spectrum of excited states (some have the same J^{PC} and might mix, some are clearly exotic)? Will hybrids need to be included as well?
- 2) There is mounting experimental evidence for compact multiquark states built from diquarks, while others seem to work much better as hadron molecules. How much do these structures mix?
- 3) Have we exercised, to full extent, the information on how hadron spectra evolve with the mass of valence quarks? What features of heavy-quark exotics persist for light-quark exotics?
- 4) Lattice QCD and phenomenological models have different ranges of applicability and make different assumptions. How can their respective results be combined in the best way to achieve the greatest utility?
- 5) Is the division in the US between “nuclear physics” and “particle physics” hampering progress in studies of exotic hadrons (collaborations, funding)? If so, what are the remedies?
- 6) Are there areas in which it would be beneficial to include lower-energy experimentalists or theorists to share expertise with particular high-energy experiments? What would be the mechanism?