



Contribution ID: 45

Type: **Parallel-Hadron Structure**

The Pole Counting Rule and X, Y, Z States

The pole counting rule, is a powerful and model-independent method to distinguish a confining state from a hadronic molecule. It has been applied to the explorations of $X(6900)$, $X_1(2900)$ as well as $Z_c(3900)$, $X(3872)$, $X(4660)$, etc. For $X(6900)$, both a confining state and a molecular state are possible, because lacking of enough data. For $X_1(2900)$, the analysis shows that it should be a $\bar{D}_1 K$ molecule, with $J^P = 1^-$ and an iso-singlet interpretation is much more favorable. Finally, it is noted that almost all X, Y, Z particles with exotic quantum numbers can be interpreted as hadronic molecules. The $X(3872)$ is, however, more like a charmonium, since it has a $\bar{c}c$ quantum number.

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