

## Spectroscopy at $e^+e^-$ machines in the JLab 22 era

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In the last 20 years, multiple exotic hadron candidates were discovered in experiments around the world. Electron-positron annihilation experiments have played a big role in those discoveries, starting from the initial discovery of the  $X(3872)$ , and covering the charged bottom- and charmonium-like  $Z_b$  and  $Z_c$  states, and exotic vector meson candidates in both charmonium and bottomonium. Today, with BESIII and Belle II there are two running experiments in the charmonium and bottomonium regions, with a potential Super Tau-Charm Factory discussed as a successor experiment to BESIII. Here, I will review some recent results on XYZ-states from  $e^+e^-$  experiments, discuss the open issues that can be addressed with  $e^+e^-$  machines in the future, and why some of these open issues will benefit from an independent production process at JLab.

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