$|\sigma,0\rangle + |0,\sigma\rangle$  $|\sigma,2\rangle + |2,\sigma\rangle$  $|\sigma, 2\rangle + |2, \sigma\rangle$ irrelevance of V ESQPT at  $r_{c1}$  $\sqrt{V^2 + U^2}$  $|\sigma,0\rangle - |0,\sigma\rangle$  $|\sigma, 2\rangle - |2, \sigma\rangle$  $|\sigma,0\rangle$  $|\sigma,2\rangle$ degenerate delocdegenerate local alised states moment states

high energy delocalised states

 $|\sigma,0\rangle + |0,\sigma\rangle$