

Short Range Structure of QCD



One Gluon Exchange

- + related to QCD
 - + mesons and baryons are unified
 - + only a single exchange quantum (simple)
 - + no form factors needed
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- 'There is no real evidence for tensor or spin orbit splitting in the spectrum. However, tensor mixing appears to be important in explaining certain decay amplitudes (notably $S_{11}(1535) \rightarrow N\eta$)'

One Gluon Exchange

- rCQM is not covariant
- decuplet splittings are difficult to obtain with relativistic kinetic energy operator.
- spin-orbit remains a problem
- negative parity states are too light by 50 MeV; positive parity states are too heavy by 50 MeV