

Abstract Submitted  
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USB Dept. of Physics and Astronomy

Sorting Category:

**Quantum Chromo-Dynamics** ZHENGWEN ZHANG,  
Stony Brook University, Stony Brook, NY — Quantum Chromo-  
dynamics (QCD) opens the path for the study of strong interaction.  
QCD is a gauge theory with  $SU(3)$  gauge symmetry. And the gluon  
is introduced as the massless and spin-1 gauge boson because of the  
gauge invariance. Gluon mediates strong interaction among quarks.  
In higher energy scale, perturbative QCD can predict short-time and  
short-distance physics of strong interaction, which is verified by the ex-  
periments, for example, the proton-antiproton collision experiment. Jet  
production in D-Zero experiment and CDF collaboration is still testify-  
ing the built QCD theory and searching for new physics.

- Prefer Oral Session  
 Prefer Poster Session

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