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**Coupled QCD sum rules for positive and negative-baryon resonances** YOSHIHIKO KONDO, Kokugakuin University, OSAMU MORIMATSU, Institute of Particle and Nuclear Studies, KEK, TETSUO NISHIKAWA, Dept. of Physics, Tokyo Institute of Technology, YOSHIKO KANADA-EN'YO, Institute for Theoretical Physics, Kyoto University — A new approach of the QCD sum rule is proposed in which positive and negative-parity baryons couple with each other. With positive and negative-parity states explicitly taken into account, sum rules are derived by means of the dispersion relation in energy. The method is applied to the nucleon channel and the parity splitting of the nucleon resonance states is studied. It is found that the obtained sum rules have a very good Borel stability. This suggests that the ansatz for the spectral function in the present sum rule approximates the physical spectrum better than the usual lowest pole plus continuum ansatz. The predicted masses of the positive and negative nucleons reproduce the experimental ones fairly well. Especially, the mass difference is extremely close to the experimental value. The other baryon channels are also studied.

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