Light Baryons Spectroscopy in the Field Correlator Method R. YA. KEZERASHVILI, Physics Department, New York City College of Technology, CUNY, USA, I.M. NARODETSKII, Physics Department, New York City College of Technology, CUNY, USA and Institute of Theoretical and Experimental Physics, Russia, A.I. VESELOV, Institute of Theoretical and Experimental Physics, Russia — The ground and P-wave excited states of nnn, nns and ssn baryons are studied in the framework of the Field Correlator Method using the running strong coupling constant in the Coulomb- like part of the three-quark potential. The running coupling is calculated up to two loops in the background perturbation theory. The three-quark problem has been solved using the hyperspherical functions method. The masses of the S- and $P-$ wave baryons are presented. Our approach reproduces and improves the previous results for the baryon masses obtained for the freezing value of the coupling constant. The string correction for the confinement potential of the orbitally excited baryons, which is the leading contribution of the proper inertia of the rotating strings, is estimated. This correction gives a negative contribution of about 50 - 60 MeV to the masses of P-wave states, leaving the S-wave states intact.

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