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The structure of light baryons and tetraquarks

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I will review results for the light baryon spectrum, obtained from solving the genuine three-body equation as well as its quark-diquark simplification. The basic ingredients are QCD's n -point functions which are solved self-consistently. This allows for a combined description of baryons, light and heavy mesons, tetraquarks and other observables from the same underlying building blocks. The three-body and quark-diquark calculations yield similar results, which underlines the role of diquark correlations within baryons. The resulting baryons carry a rich structure with relativistically induced orbital angular momentum that would be forbidden in the non-relativistic quark model. In the second part I will give a status report on the light scalar mesons as tetraquarks. We have solved the four-body equation as well as its two-body (meson-meson / diquark-antidiquark) simplification. Also in this case we obtain similar results in both approaches, which suggest a meson-molecule nature of the light scalar mesons. I will conclude with a survey of current efforts towards treating tetraquarks as genuine resonances.

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