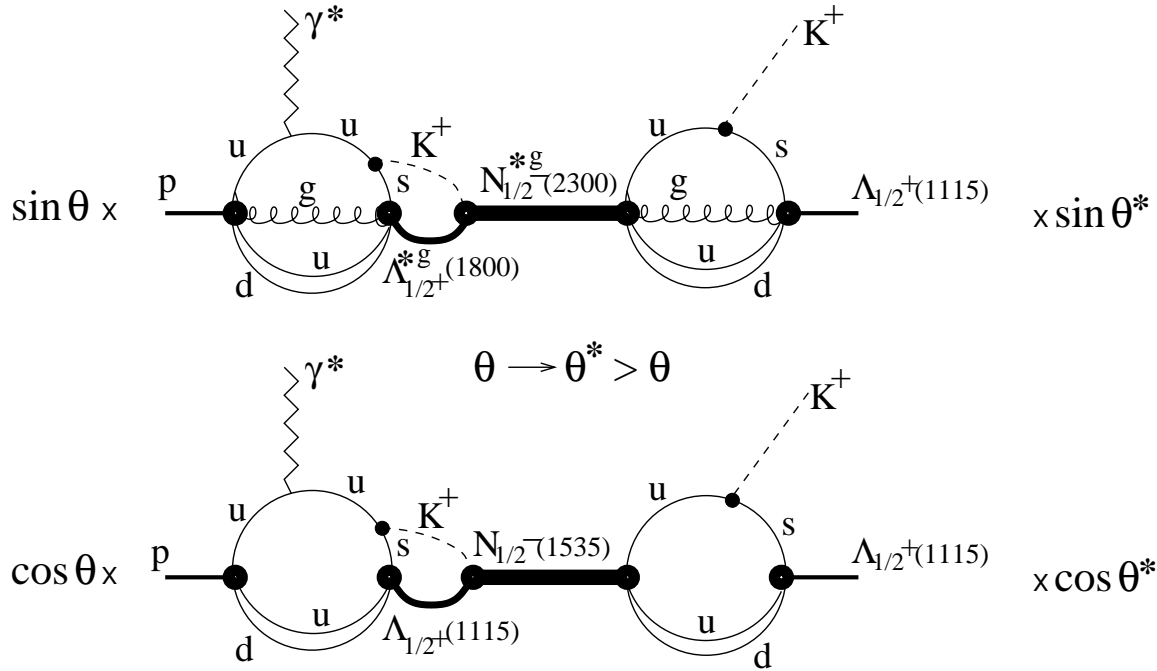


Dear Victor,

you are right, the Λ is decoupled from the proton, but K^+ is coupled. Hence, the electro-excitation of the $\Lambda + K^+$ resonance channel is allowed. We would like to give an additional comment on our proposal to make more clear the content.

In our proposal in Fig.1(b) we did not show the full content of the decay channel of a possible negative parity resonance $N_{1/2-}^{*g}$. The final state $\Lambda + K^+$ has been omitted since we only wanted to show nonstrange decays (as an alternative to Fig.1(a)). But now we see that you have new data on KY electroproduction in the region of $W \sim 2.3$ GeV, and hence the decay channel KY is very actual. Here we extend our proposal.

Firtst, we could add a discussion about possible values of masses for proposed $qqqg$ states. In particular, within MIT bag model (see C.E. Carlson, T.N. Hansson, Phys.Lett. 128B, 95) the mass of the ground state $\Lambda_{1/2+}^{*g}$ has been estimated at $m_{\Lambda^{*g}} = 1.8$ GeV. Starting from this we assume that the mass of $N_{1/2-}^{*g}$ is about $m_{\Lambda^{*g}} + m_K$, i.e. ~ 2.3 GeV. Below we denote these resonances as $\Lambda_{1/2+}^{*g}(1800)$ and $N_{1/2-}^{*g}(2300)$. Here we show the actual diagrams which were omitted previously in the text of our proposal:



In our model we propose that the electro-excitation of hybrid baryons occurs due to a presence of the gluon-three quark component in the proton. In particular, we suggest that the proton state is mixed state of $3q$ and $3q + g$ components

$$|p\rangle = \cos \theta |p_{qqq}\rangle + \sin \theta |p_{qqqg}\rangle,$$

where θ is the mixing angle, which could be evaluated in terms of a coupled channel model. In the intermediate (resonance) state

$$|R\rangle = \cos \theta |N_{1/2-}\rangle + \sin \theta^* |N_{1/2-}^{*g}\rangle$$

in the reaction $p + \gamma^* \rightarrow R$ the value of the mixing angle θ^* depends on the mass of system W , and in the region of $W \sim 2.3$ GeV it should be large $\theta^* \gg \theta$ (the strong interaction of colored qqq system and gluon leads to domination of the configuration $qqqg$ in this region), while in the region $W \sim 1.5$ GeV it should be small $\theta^* \sim \theta$.

Now we have a model that in principle allows evaluation of all couplings of baryons with its constituents (solid circles in figures), but there are no microscopical models which can in principle be used for coupled channels qqq and $qqqg$. Therefore, θ and θ^* are phenomenological parameters which could be experimentally measured.

We don't insist on inclusion of our formulations into the proposal or simulation of additional exclusive channels.

We plan to get first results only in autumn, since only at the end of April we gave us know that you can invite us for collaboration on hybrid baryon problems.

With best regards

Igor' and Valery.