Fotoproduksi pion pada energi rendah sampai 600 Mev

Kurniawan, author

Abstrak

Ketidaksesuaian hasil eksperimen di Mainz [61], Saskatoon [66] dan hasil perhitungan teoritis ChPT [60] [18] dan Pascalutsa [39] tentang amplitudo dipol listrik E0+(yp -> °p) dengan prediksi Teorema Energi Rendah klasik [8] [9] telah menjadi diskusi yang menarik. Kami mempergunakan model hamburan N Gross-Surya yang relativistik, kovarian, unitari dan invarian tera [21] yang diperluas pada kanal elektromagnetik yaitu reaksi fotoproduksi pion. Reaksi fotoproduksi pion netral pada proton ini dihitung sampai energi Ey C 600 MeV. Ternyata hasil yang kami peroleh bersesuaian dengan perhitungan eksperimen dan teoritik yang terbaru.

.....

The disagreement between the recent experimental results at Mainz [61], Saskatoon [66] also the theoretical calculation of Ey+(yp --> °p) amplitudes based on ChPT [60] [18], Pascalutsa works [39] with the classical Low Energy Theorem's prediction [8] [9] have been an interesting discussion nowadays. We extend the Gross-Surya model which is relativistic, covariant, and unitary and gauge invariant [21] to electromagnetic channel, the pion photo production. We calculate the amplitudes especially near the threshold from the low energy region up to 600 MeV. Our result surprisingly is close to the recent experimental and theoretical results than the classical one.