

SPIN Absolute Aspects of the Lobachevsky-Poincar'e Programme in High Energy Particle Physics

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Conceptually new, noneuclidean spin aspects of the “Lobachevsky—Poincar'è Programme” (LPP) are considered. LPP itself is aimed for successive solving a fundamental Particle Scattering Inverse Problem (PSIP). LPP sources, basis and methods are briefly discussed, underlining its Absolute (i.e. irrespective of any reference frames) character as by form so as by content. This Absolute approach usage permits one to separate general PSIP into 1st and 2nd fundamental ones, getting their unique “joining knot” – Absolute so called “Poincar'è imaginary statistical bodies” (PISBs) for hadron excited states and their joins -- absolute Poincar'è -grammes (PGs) for different analyzed reactions. These PGs “super-joins” at all available energies are noneuclidean absolute Generalized Poincar'è -grammes (GPGs) of unknown hadrons' space-time internal structure (similar to known euclidean Roentgen-grammes of crystal structure, optical spectra for molecules and atoms and γ – spectra for nuclei). PISBs new special spin features are discussed which were revealed earlier by us (with coworkers) from the best world experimental data on spin density matrix t-dependence. They are first interpreted here in terms of Lobachevsky group of motions and symmetries in the known Lobachevsky velocity space (LVS). They lead one to introduce its two new invariants: a constant spin eigen pole governing PISBs' alignment in a measured transferred momentum hole range and a strictly conserved eigen helicity applied to this pole which refines a prior Wick helicity. Necessary conditions of these new physical quantities' experimental measurement are discussed to provide good PISBs' Probabilistic pattern recognition and GPG heuristic construction as necessary and sufficient input data to begin solving 2nd PSIP at not so far future. They include unavoidable passage to large 4π -geometry universal detectors of the known FELIX type and construction PISBs and GPGs by data being resaved with target and incident highly polarized particles.