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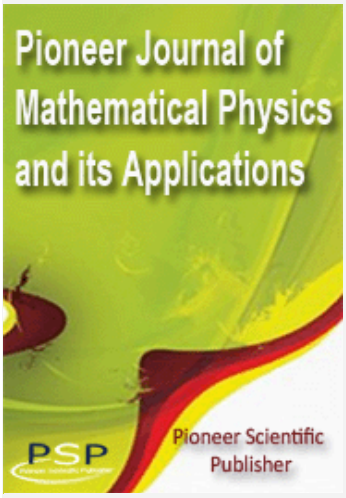

REGGE SYMMETRY OF 6-j OR SUPER 6-j^S SYMBOLS: A RE-ANALYSIS WITH PARTITION PROPERTIES

Lionel Bréhamet

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Abstract

It is shown that the five Regge transformations act as a spectrometric splitter on any 6-j symbol. Four unknown partitions are brought out: $S_4(0)$, $S_4(1)$, $S_4(2)$ and $S_4(5)$. They are stable subsets, with well defined parameters depending only on triangles and quadrangles. These findings are easily generalized to super 6-j^S symbols, properly labelled by their own parity alpha, beta, gamma. Super Regge symmetry is reduced only for beta where $S_4(2)$, $S_4(5)$ vanish. In addition, all tools for computing exact values of any 6-j^S are provided.

Keywords and phrases: angular momentum in quantum mechanics, 6-j symbols, Regge symmetry.