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Truncated bilateral hypergeometric summation theorems motivated by the work of Verma

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Abstract: In this paper some results on truncated bilateral hypergeometric series of positive unit argument are obtained by using series rearrangement technique and theory of polynomial equations, subject to certain conditions.
Keywords and Phrases: Pochhammer symbol; Unilateral, bilateral, truncated and non terminating series
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1. Introduction

Truncated Unilateral Generalized Hypergeometric Series

$$ {}_AF_B\left[\begin{array}{ll} a_1,\, a_2,\, \ldots,\, a_A & ; \\ & \\ b_1,\, b_2,\, \ldots,\, b_B & ; \end{array} \; z \right] \text{ to } (N+1) \text{ terms}$$

$$= {}_AF_B\left[\begin{array}{ll} a_1,\, a_2,\, \ldots,\, a_A & ; \\ & \\ b_1,\, b_2,\, \ldots,\, b_B & ; \end{array} \; z \right]_N = \sum_{k=0}^{N} \frac{\prod_{j=1}^{A} (a_j)_k \; z^k}{\prod_{j=1}^{B} (b_j)_k \; k!} \tag{1.1}$$

where numerator and denominator parameters are neither zero nor negative integers and $A,\ B$ are non-negative integers. When $N \to \infty$ then (1.1) reduces to non-terminating unilateral generalized hypergeometric series and Pochhammer's