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A NOTE ON THE SPECTRA OF A 3×3 OPERATOR MATRIX AND APPLICATION

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ABSTRACT. In this paper, we investigate the essential approximate point spectrum and the essential defect spectrum of a 3×3 block operator matrix with unbounded entries and with domain consisting of vectors which satisfy certain relations between their components by means of the Browder resolvent set. Furthermore, we apply the obtained results to three-Group transport operators in the Banach space $L_p([-a, a] \times [-1, 1])$ where $a > 0$ and $1 \leq p < +\infty$.

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