

## On the univalence of an integral on subclasses of meromorphic functions

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### Abstract

We study the integral operator  $P_\lambda[f](\zeta) = \int_0^{\zeta} \zeta_0 \zeta(f(t))^\lambda dt$ ,  $|\zeta| > 1$ , acting on the class  $\Sigma$  of functions meromorphic and univalent in the exterior of the unit disk. We refine the ranges of the parameter  $\lambda$  for which the operator preserves univalence either on  $\Sigma$  or on its subclasses consisting of convex functions. As a consequence, a two-sided estimate is deduced for the separating constant in the sufficient condition for the univalent solvability of exterior inverse boundary-value problems. ©2001 Plenum Publishing Corporation.

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### Keywords

Meromorphic function, Sufficient condition for univalence, Univalence of an integral