Convergence of Rational Rays in Hyperbolic Components

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We are interested in entire transcendental maps with two singular values, one of which is a fixed critical value, and the other is a free asymptotic value, with only one finite preimage. The family of such maps can be parametrized as:

$$f_a(z) = a(e^z(z-1)+1)$$

where the critical value is fixed at $z = 0$, and the asymptotic value is at $z = a$, with finite preimage at $z = 1$.

In this talk, we illustrate in this family, proof of a landing theorem of rational rays in hyperbolic components by means of Carathéodory Convergence Theory, and discuss further results in parameter spaces.