

1154-11-1840 **Andrew Bridy*** (andrew.bridy@yale.edu), Yale University, PO Box 208301, New Haven, CT 06520. *The Arakelov-Zhang pairing and Julia sets.*

The Arakelov-Zhang pairing $\langle \psi, \phi \rangle$ is a measure of the dynamical distance between two rational maps ψ and ϕ over a number field K , defined in terms of local integrals on Berkovich space at each completion of K . We obtain a simple expression for the important case of the pairing with a power map, which may be interpreted as a limiting height of generic preimages. The expression is in terms of integrals over Julia sets; under certain disjointness conditions on Julia sets, it simplifies to a single canonical height term (in general, this term is a lower bound). This is joint work with Matt Larson. (Received September 16, 2019)