2-Body Einstein-Infeld-Hoffman Equations from
Boosted Schwarzschild Black Holes MICHAEL IAN VEGA, Department of
Physics, University of Florida — We present an elementary derivation of the 2-body
EIH equations, which are 1-PN accurate equations of motion for a sufficiently sep-
arated binary system of non-spinning black holes. The 3-acceleration of one black
hole is calculated by writing down the geodesic equation in the boosted geometry
of the other black hole up to the appropriate post-Newtonian order. Harmonic co-
dinates are used for the locally inertial frames around each of the black holes and
for the flat global background.