

foil elements were parallel and 1.2 cm apart. Both foils were monitored in the same way but no external current was sent through the passive foil. The passive foils exhibited a signal of about 2 millivolts on shock arrival. This compares to more than 70 millivolts from active foils carrying 150 amperes of external current. The 2-millivolt signal is attributed to inductive coupling. The passive foil was coupled to the high current in the other foil via eddy currents in the moving metal impactor. At any rate, we can conclude that the signal observed on shock arrival at the foil in ensuing experiments is due to current in that foil. By using Ohm's law we can with confidence attribute the signal to the resistance change in the foil.

Table II presents the results of shot data analysis according to Fig. 4. The experimental resistance ratio (column 1) $R/R_0 = E/E_0$ is converted to resistivity (column 2) by

$$\frac{\rho}{\rho_0} = \frac{R}{R_0} \frac{V}{V_0} \quad (\text{Sec. II.A.5}).$$

The shock temperature rise ΔT_H in column 3 is calculated as described in Sec. III.E.1, and columns 4 and 5 give the resistivity change due to temperature rise and isothermal shock resistivity calculated from the results of Sec. III.A.4. The last column gives the resistivity deviation between isothermal shock resistivity and calculated hydrostatic resistivity (Sec. IV.D).

TABLE II. Results of data analysis.

Shot No.	Resistance Ratio $\frac{R}{R_0}$	Resistivity Ratio $\left(\frac{\rho}{\rho_0}\right)_{\text{Expt.}}$	Temperature Rise ΔT_H ($^{\circ}\text{C}$)	Thermal Resistivity Change $\frac{\Delta\rho_T}{\rho_0}$	Isothermal Resistivity Ratio $\frac{\rho(V, T_0)}{\rho(V_0, T_0)}$	Defect Resistivity $\frac{\Delta\rho_D}{\rho_0}$
72-065	1.051	0.992	~51	0.16	0.83	--
72-068	1.170	1.086	~74	0.21	0.88	--
72-069	1.073	0.995	71.6	0.190	0.797	0.072
73-009	1.049	0.982	58.6	0.160	0.813	0.058
73-010	1.058	0.990	58.9	0.161	0.820	0.066
73-011	1.022	0.974	39.3	0.113	0.853	0.039
73-013	1.000	0.977	17.6	0.052	0.917	0.013
73-027	1.120	1.031	81.8	0.211	0.810	0.106
73-028	1.035	0.995	31.3	0.094	0.895	0.052
73-029	1.032	0.990	33.4	0.099	0.884	0.049
73-034	1.087	1.014	63.1	0.170	0.834	0.090
73-036	1.122	1.050	59.4	0.162	0.879	0.126
73-040	1.037	0.987	40.8	0.117	0.862	0.053
73-044	1.111	1.039	59.9	0.170	0.870	0.120
73-047	1.149 ± .013	1.071	63.7	0.178	0.894	0.152
73-050	1.185	1.09	82.5	0.220	0.872	0.170
73-059	1.139	1.045	84.0	0.219	0.821	0.122