Lattice parameters obtained at these temperatures were excluded from Fig. 1 and from the least squares fits of the data.

The first run with $LaRu_2$ indicated that at about 300°C the lattice constant changed very little with temperature. In order to check this behavior a second run was made. The data from the second run, however, indicated no abnormal behavior at that temperature. This accounts for the high concentration of points shown near 300°C for $LaRu_2$ in Fig. 1.

The fits of the lattice constant *versus* temperature data are summarized in Table I. From these constants the instantaneous linear thermal coefficients were calculated by using eqn. (5). The resulting α_t values are shown in Fig. 2 as a function of temperature.

TABLE I

SUMMARY OF X-RAY THERMAL EXPANSION DATA

Compound	*Temp. range (°C)*	*No. of points*	$a = A + Bt + Ct^2$			*Stand. dev. of fit* $\sigma \times 10^4$ *(Å)*	$\bar{\alpha} \times 10^{-6}$/°C *20° to* t_{max}
			A	$B \times 10^5$	$C \times 10^8$		
$LaRu_2$	16°–800°	38[a]	7.7025	7.021	1.75	±11.01	10.98
$CeRu_2$	19°–900°	26[b]	7.5354	5.700	3.31	7.72	11.59
$PrRu_2$	19°–650°	23[b]	7.6210	6.923	0.711	6.01	9.713

[a] Data obtained from Unicam cameras 1 and 2 and CRL camera.
[b] Data obtained from one of the Unicam cameras and the CRL camera.

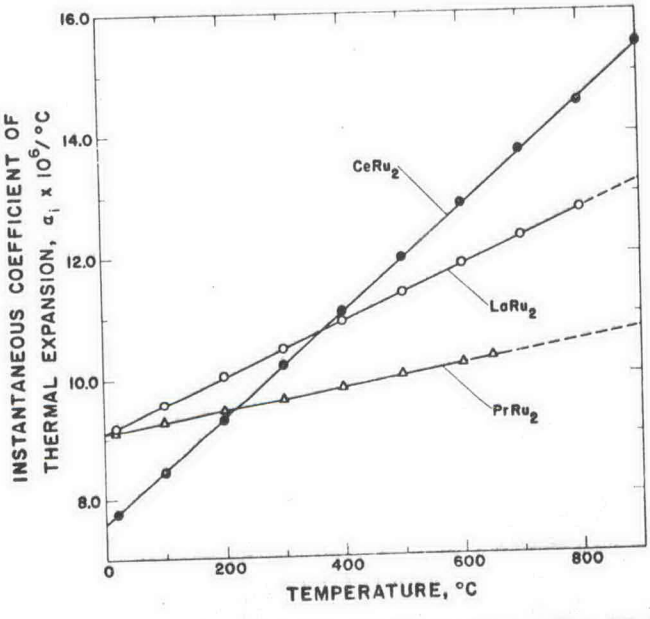

Fig. 2. The instantaneous coefficient of thermal expansion of $LaRu_2$, $CeRu_2$ and $PrRu_2$ as a function of temperature.