

# Electric Quadrupole Interaction at $^{181}\text{Ta}$ in Isostructural Orthorhombic $\text{Cu}_8\text{Hf}_3$ and $\text{Cu}_8\text{Zr}_3$ Compounds\*

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The quadrupole interaction of  $^{181}\text{Ta}$  probes in isostructural  $\text{Cu}_8\text{Hf}_3$  and  $\text{Cu}_8\text{Zr}_3$  intermetallic compounds was studied in the temperature range 24 K – 1100 K with the time-differential perturbed angular correlation technique. Two nonaxial electric field gradients corresponding to two nonequivalent hafnium or zirconium sites in the investigated structure were found. A linear decrease in the quadrupole interaction frequency with increase of temperature for the 8(d) sites was evidenced, while the  $\nu_Q(T)$  dependence for the 4(c) sites is weaker and has a  $T^{3/2}$  character.

*Key words:* Hyperfine Interactions; Perturbed Angular Correlations; EFG; Intermetallic Compounds; Cu-Hf and Cu-Zr Systems.

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