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FIGURE CAPTIONS

FIG. 1. (a) The cohesive energy of cesium metal as a function of primitive unit cell volume for the bcc and fcc lattices.

(b) The pressure required to compress cesium to the indicated unit cell volume, as determined from the non-equilibrium virial theorem.

In both (a) and (b) the circles and squares represent, respectively, the calculated values for the fcc and bcc structures. The dashed and solid curves are drawn to connect the calculated points.

FIG. 2. The enthalpy calculated for fcc Cs for pressures near those of the computed isomorphic transition. The circles are the calculated points, which have simply been connected by straight line segments.

FIG. 3. Components of the Cs valence charge inside the APW spheres corresponding to the $\ell = 0$, 1, and 2 spherical harmonics, and the component outside the spheres. The $\ell = 2$ (d-like) component is found to be closely related to the isomorphic transition, the compression, and the topological changes which occur in the Fermi surface.

FIG. 4. Computed magnetic moment of vanadium metal as a function of its lattice parameter, showing the abrupt transition from non-magnetic to magnetic behavior. The dashed and solid curves bracket the behavior near the