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Inversions of the V-line and conical Radon transforms with a fixed opening angle.

We present exact inversion formulas for two related generalized Radon transforms. The first one, called V-line Radon transform, integrates a 2D function along V-shaped piecewise linear trajectories with a fixed angle between two rays. The second one, called a conical Radon transform, integrates a 3D function over circular cones with a fixed opening angle. Such transforms appear in various mathematical models in medical imaging, nuclear industry and homeland security. (Received January 25, 2014)