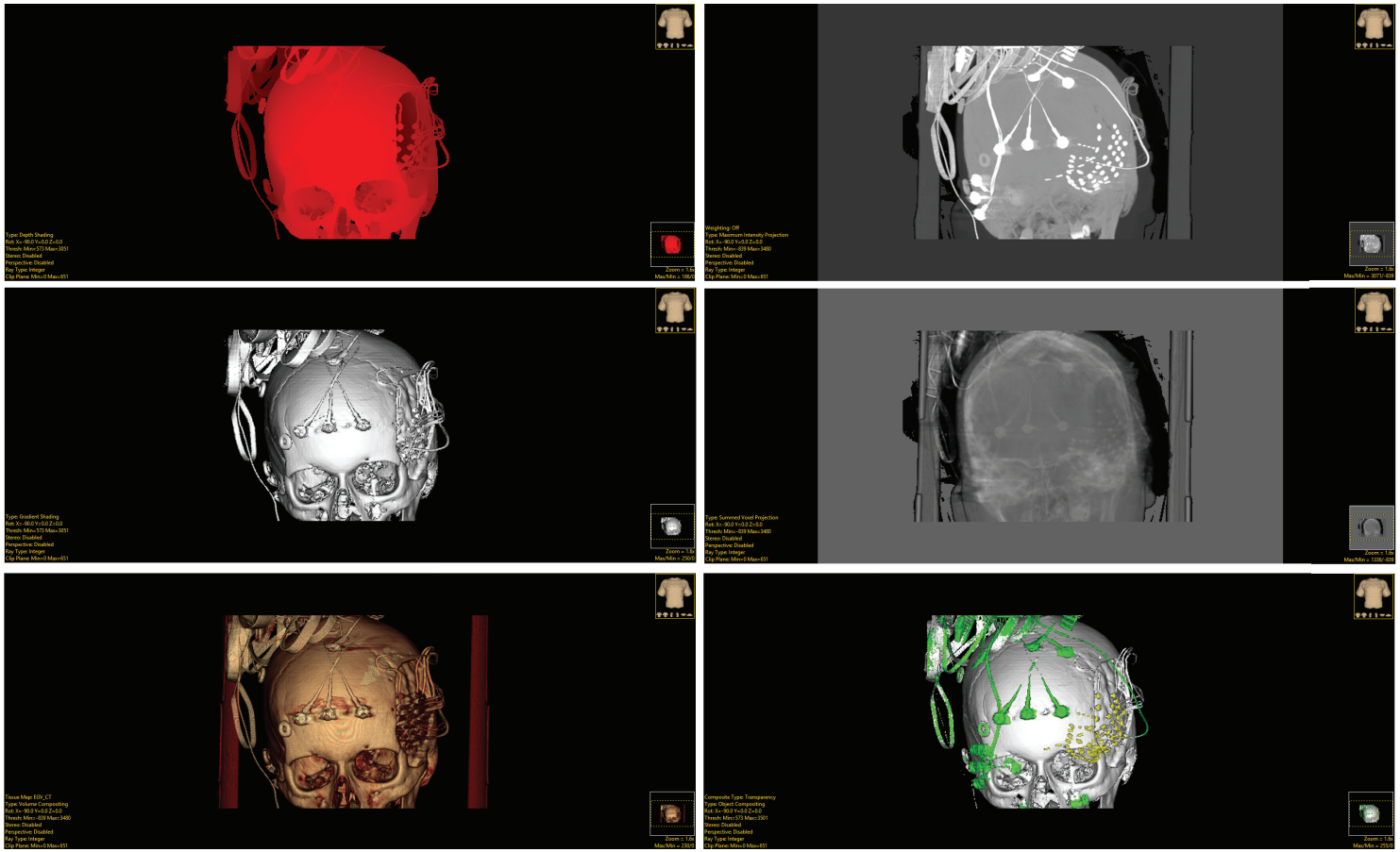
Additional Rendering Controls

The additional rendering controls provide access to tools and rendering options only accessible from the Display module:

Type: Allows users to select which type of rendering algorithm to use to create the 3D rendering of the image data. The following Render Type options are available: Depth Shading, Gradient Shading, Volume Compositing, Maximum Intensity Projection, Summed Voxel Projection, Surface Projection, and Object Compositing. Each type is displayed below and summarized in the table that follows.



Display Rendering Types

Render Type	Description
Depth Shading	The value of each output pixel is a function of depth only. The depth of the first renderable voxel found along the ray path is used to determine the brightness of that voxel. Closer voxels will appear brighter than more distant voxels.
Gradient Shading (Default)	The grayscale gradient vector is computed using a 3D neighborhood about the surface voxel. The value projected at each output location is the dot product of the gradient vector and an independently specified light source vector. This simulates the appearance of a reflective surface under uniform-field illumination.
Volume Compositing	Volumetric compositing integrates the gradient-shaded value of all voxels along the ray path. The contribution of each gradient-shaded voxel value is weighted by color and opacity values. The color and opacity information for each intensity is specified using the Alpha map window.
Maximum Intensity Projection	The maximum voxel intensity along the ray path is used.
Summed Voxel Projection	The average of all voxels along the ray path is used.
Surface Projection	The algorithm searches down the ray for a voxel that is within the current threshold range. Then, it skips the first S voxels along the ray, where S is specified by the Surface Skip value. Last, it returns the average of the next T values, where T is specified by the Surface Thickness. The surface projection rendering can be limited to enabled objects if an object map is loaded.
Object Compositing	Available only when an object map is loaded with the data set. Produces 24-bit color renderings where the voxel mapping along each ray path is controlled by the Composite Type yellow text.