Molecular dynamics representations of two low-temperature amorphous states of water, which are characterized by different, incompatible short-range orderings of the molecules. The white spheres represent hydrogen and the red spheres oxygen. Polymorphism, important in biopolymers, is one of the most recently recognized features of the glassy state. See page 1989. Amorphous materials and glasses are the focus of a special section on Materials Science, which begins on page 1918. [Images: P. H. Poole, Dalhousie University, Halifax, Nova Scotia]