A snapshot of rainfall across the planet is now possible every few hours using multiple satellites. The top image shows the Atlantic Ocean and adjacent continents, while the middle image is a close-up of Hurricane Isabel. New, advanced satellites also allow for detailed analysis of storm rainfall structure through the use of space-borne radar, including this cross-section of Hurricane Isabel’s eye and the surrounding towers of convection. (Top: from TRMM Multi-satellite Precipitation Analysis for 2100 UTC on September 10, 2003; middle: from the PR and TMI instruments on the TRMM satellite; bottom right, from the PR instrument on the TRMM satellite.)