

The following paragraphs describe the methods that were used on the different version(s) of the Human Atlas.

Human Atlas

Human Cryo Dataset

76 year old normal female human cadaver. The specimen was prepared for sectioning by perfusing with 8% formalin, cryoprotecting with 10% glycerol, freezing in isopentane and dry ice and blocking in green tempera paint and 3% sucrose solution. The brain was cryosectioned at -20 °C through the horizontal plane in 100 µm increments on a heavy duty cryomacrotome (PMV Stockholm, Sweden). The cryomacrotome was equipped with a high resolution camera for digital image capture of serial images (1024, 24-bit) collected from the cryoplaned specimen blockface at every 600 µm. The actual image size was measured at 18.5 cm. Data were assigned real value coordinate values in micrometers for width, height, and depth and reconstructed to a single 3D data volume. In order to place the brain into the Talairach system, different amounts of scaling were imposed on 12 rectangular regions of brain defined by vectors from the AC-PC line and the extrema.

Human MRI Dataset

Whole brain MRI was performed on a 1.5 Tesla Phillips ACSIII Scanner. The sequence was T1 spoiled grass (SPGR) with a slice thickness of 1mm (TR=18 ms, TE=10 ms). Images were acquired in the sagittal plane.