



Figure 3: Tomographic view through the SPEM images of Fig. 2. Cross sections in the x-z plane composed from x-line scans at constant y-positions.

A series of SPEM images (Fig. 2) shows the x,y dependence of the pyroelectric response on prismatic faces thinned down in steps to reach the middle section of the needle-like crystal. Red blocks represent a positive current, whereas blue blocks indicate a negative signal. According to Fig. 1, the current direction is directly related to the direction of the average polarisation within the heated volume. The colour intensity is hence a measure of the local polarisation strength. White spots represent regions of vanishing net polarisation. Obviously,  $p_3(x,y,z)$  is varying in all three directions. Fig. 2 features (i) two main areas of opposite