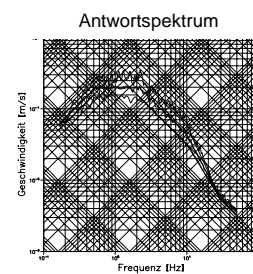
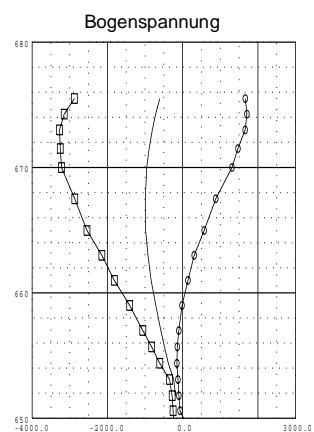
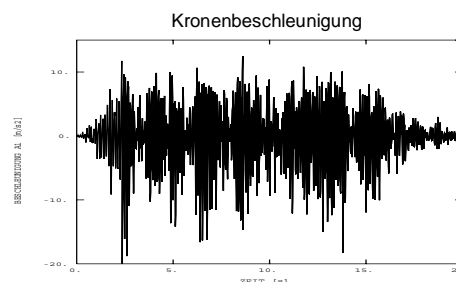
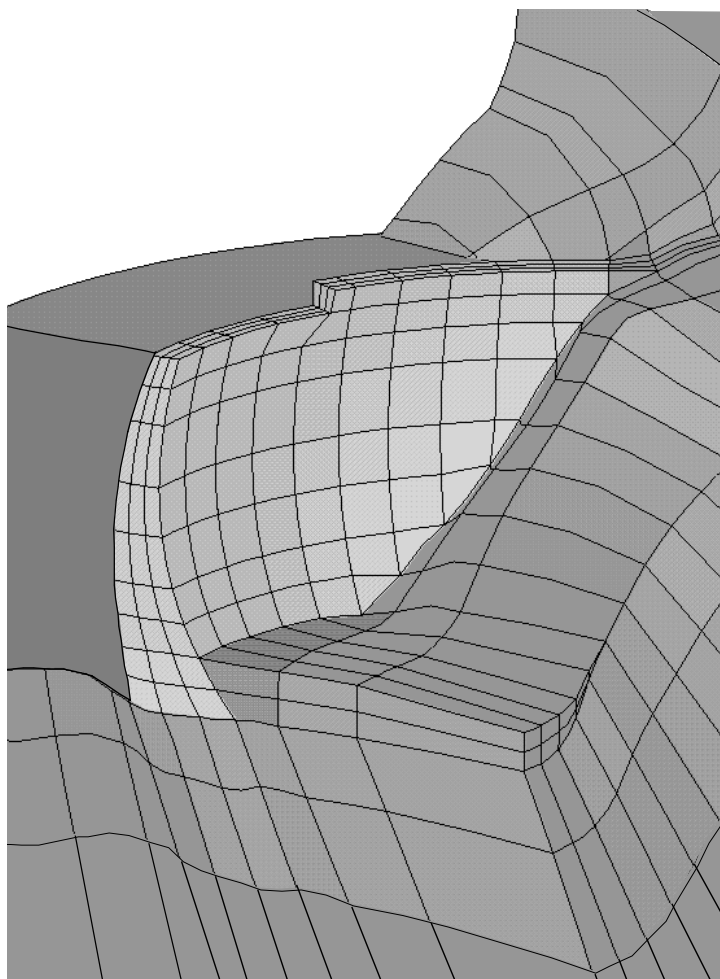


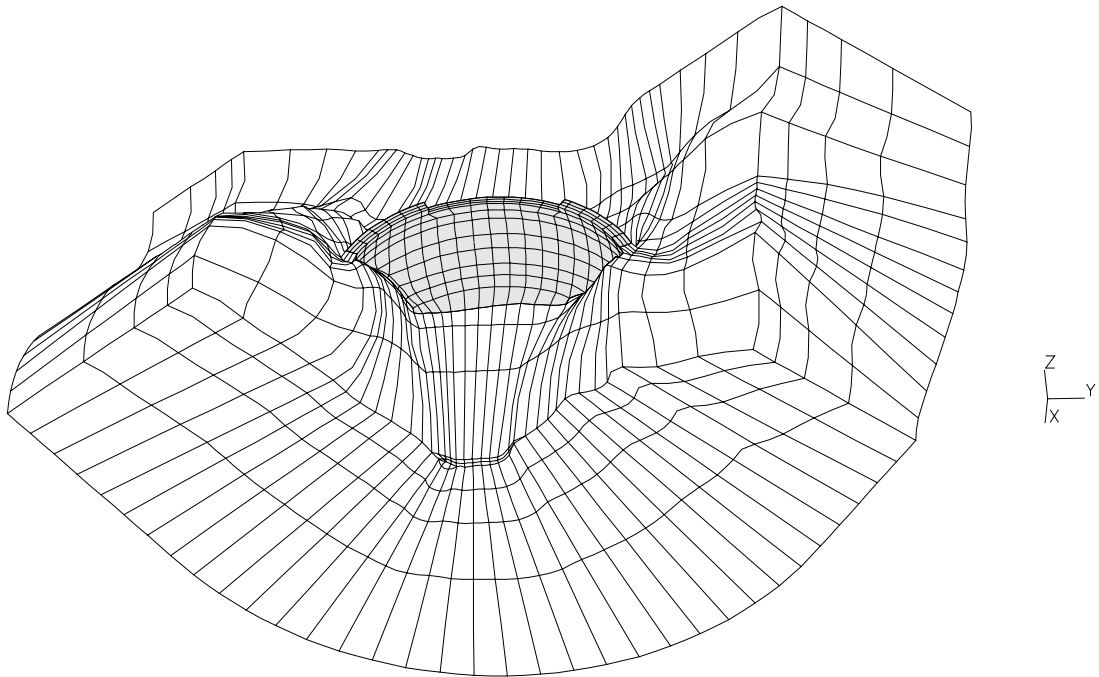
Nonlinear Earthquake Analysis of Wiederschwing Arch Dam



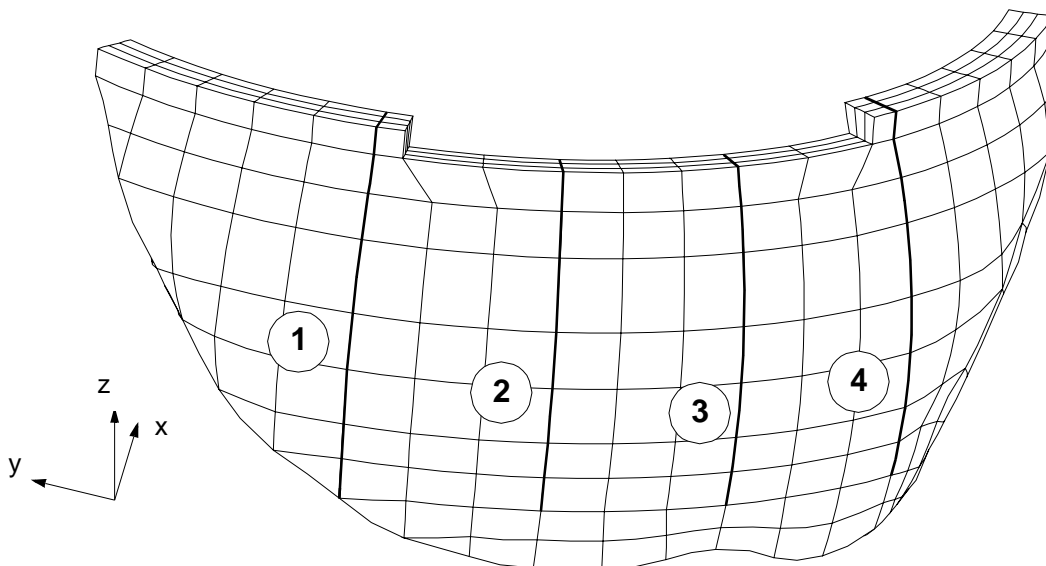
Gerald ZENZ, Ernst AIGNER & Franz PERNER

IACMAG'97 Wuhan, China

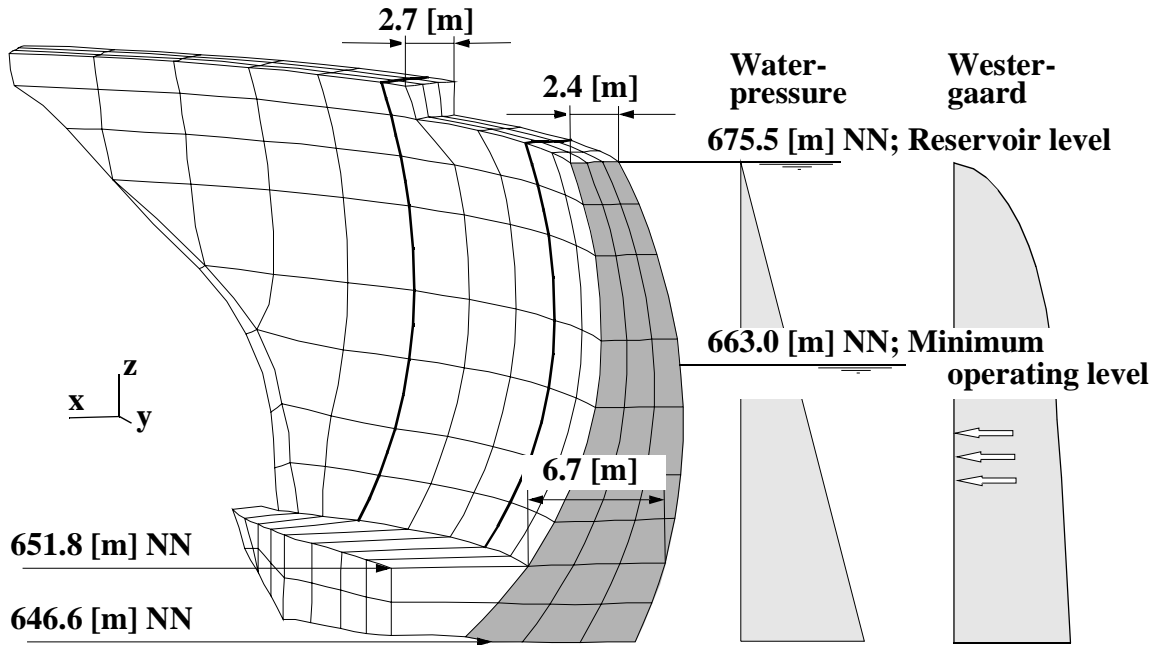
Ninth International Conference on Computer Methods and Advances in Geomechanics



Overview of considered finite element mesh



Arch dam elements - 4 block joints introduced



Cross section, geometry and load definition

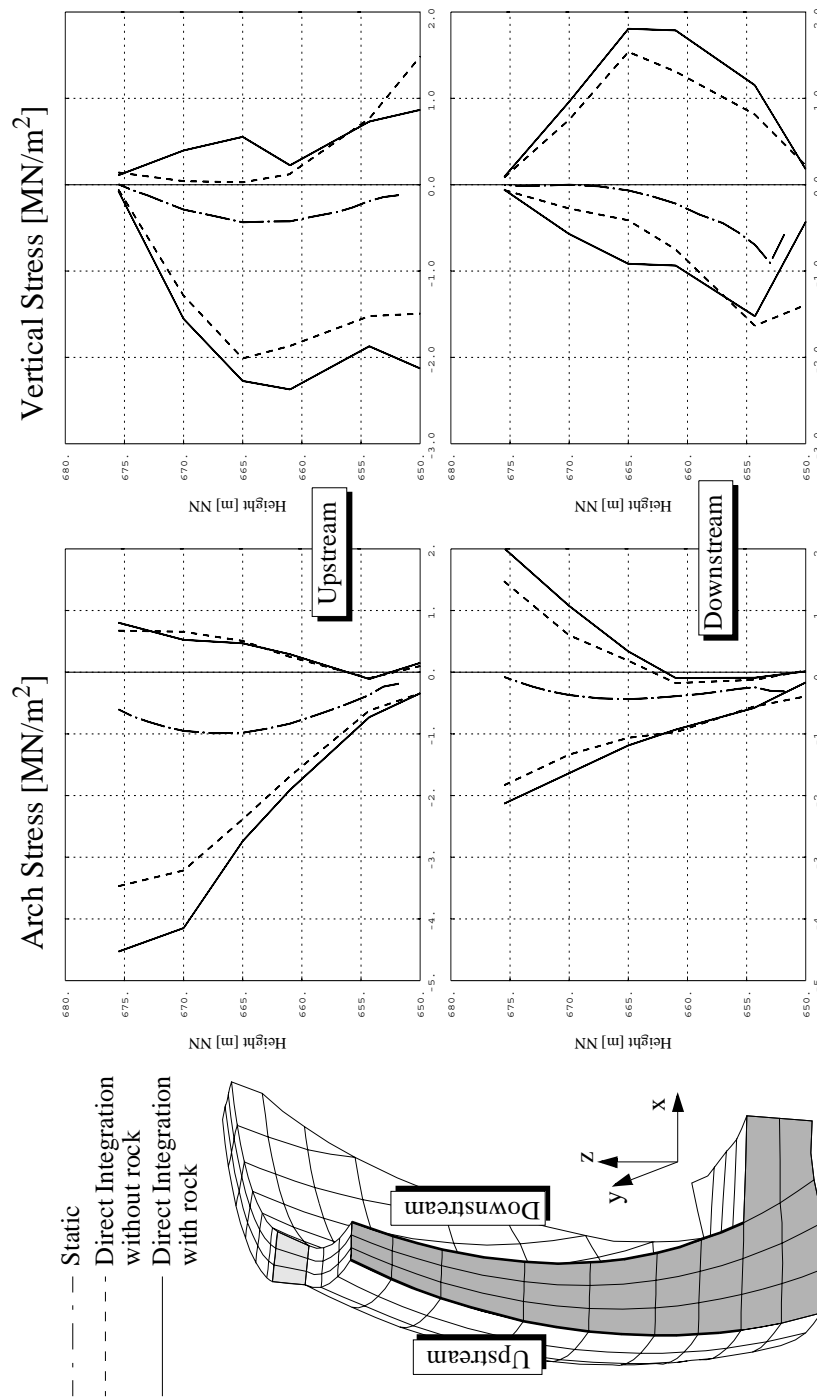


Figure 8: Vertical and Arch Stress for Up- & Downstream: Comparison Direct Integration

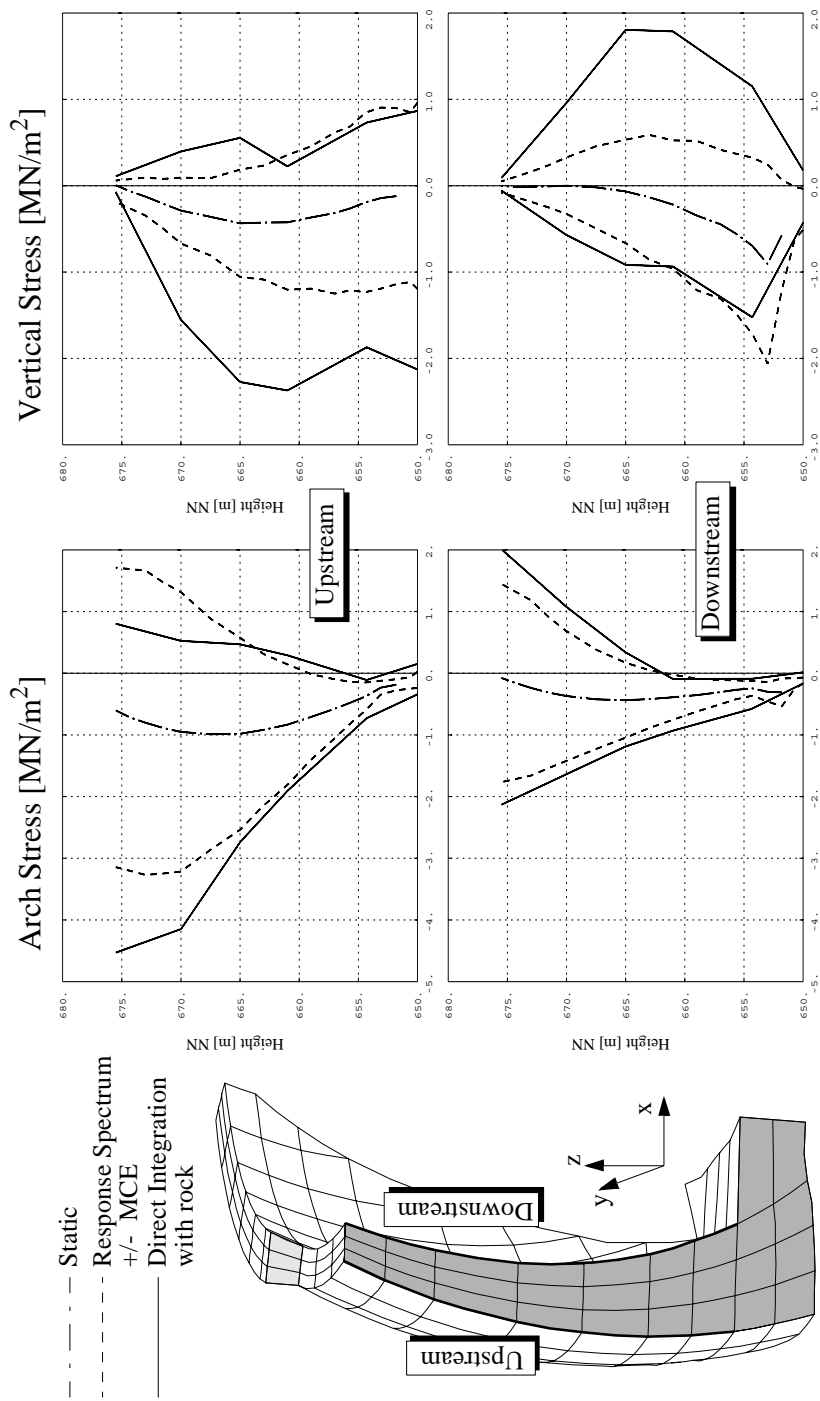


Figure 8: Vertical & Arch Stress for Up- and Downstream: Comparison - Response Spectrum and Direct Integration with Rock

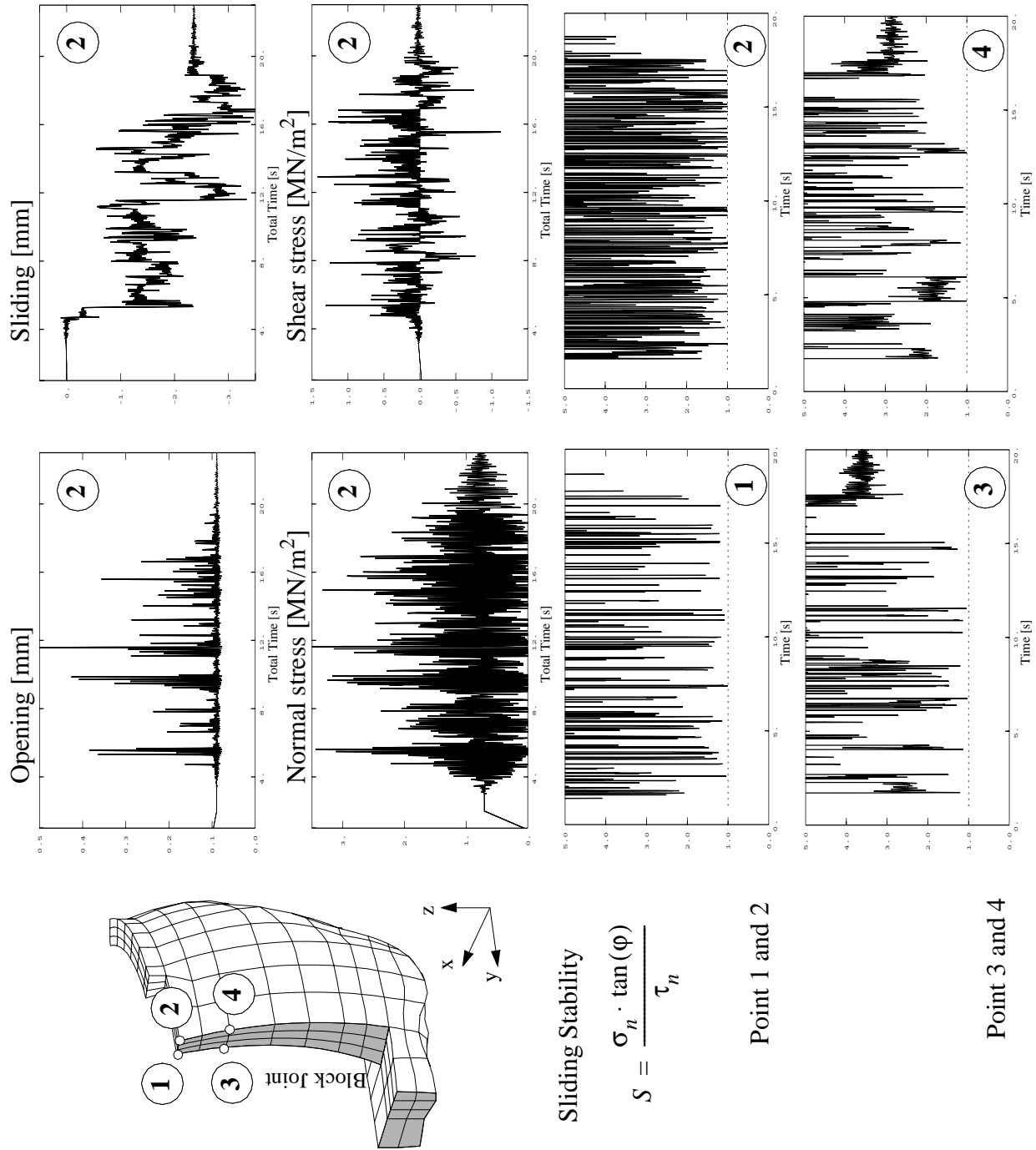
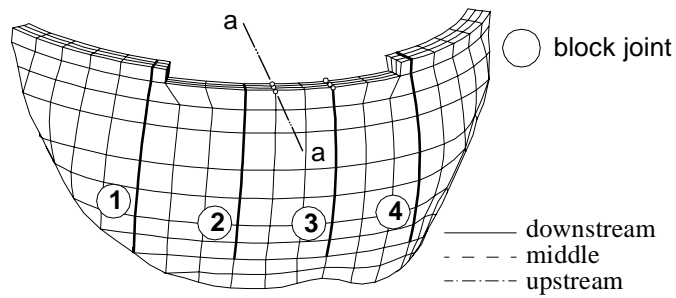
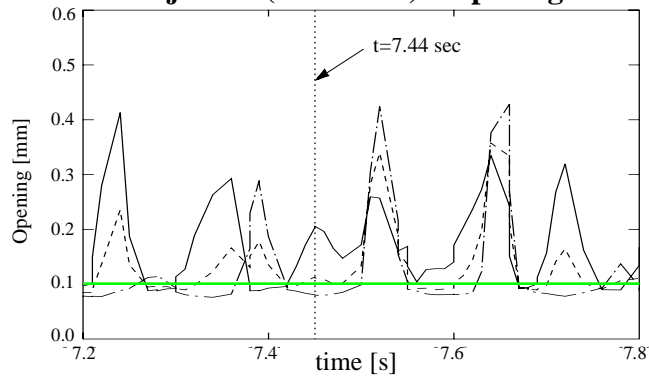


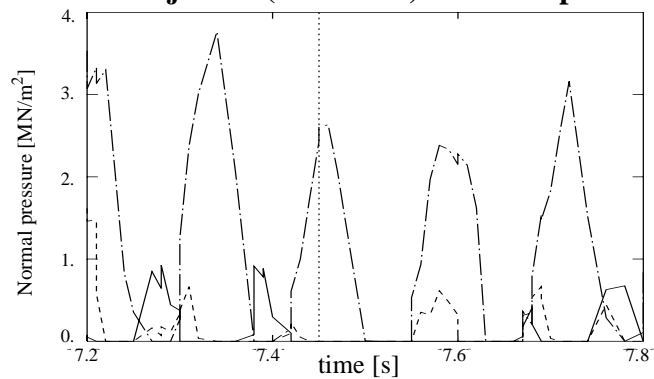
Figure 10: Opening, Sliding, Normal Pressure, Shear Stress and Sliding Stability without Rock



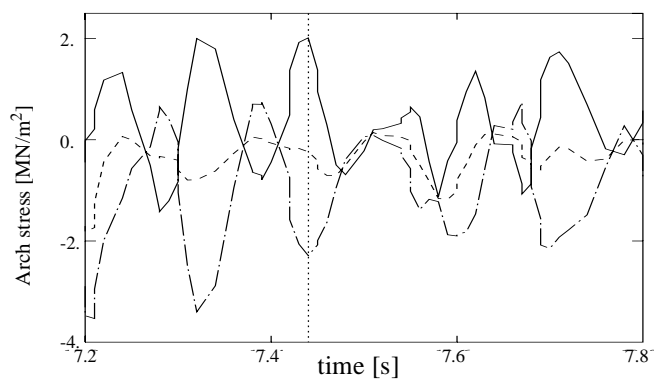
Block joint 3 (dam crest) - Opening



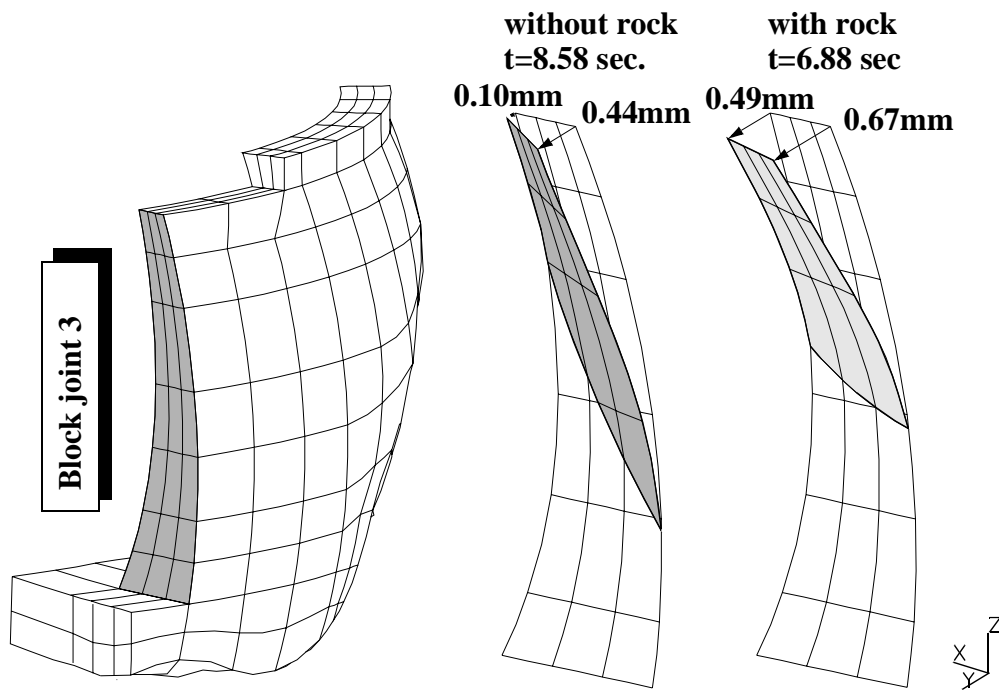
Block joint 3 (dam crest) - Normal pressure



Arch stress at line a-a



Explanation of bending stresses



Maximum joint opening [mm] - block joint 3