南海掘削Exp．348で採取されたコア試料に対する三軸剪断試験結果：Geomechanics解析への応用
Result of triaxial shear test on core sample taken in NanTroSEIZE Exp. 348: Implications for geomechanics analysis.

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In order to determine shear failure parameters of the Nankai accretionary prism sediments, triaxial shear test was conducted for core sample taken in the IODP Expedition 348. Core sample for the test was taken at 2183 mbsf in Hole C0002P and ~30 cm whole-round core sample was dedicated to the test. 5 plugs (~25 mm diameter and ~50 mm length) were sampled from the whole-round core. One plug (3R1-0) was used for test experiment to set up triaxial apparatus and 4 plugs (3R1-1, 3R1-2, 3R1-3 and 3R1-4) were applied to triaxial tests under different confining pressures. The triaxial test was conducted by using a triaxial test apparatus installed in Core Lab of OYO Corp. Effective confining pressures were 1 MPa (3R1-1), 2 MPa (3R1-2), 4 MPa (3R1-3), and 7 MPa (3R1-4). As the result, rock strength parameters (Cohesion, Internal friction angle and Unconfined compressional strength (UCS)) were determined as follows:
Cohesion: 1.8 MPa, Internal friction angle: 32.08 deg., UCS: 6.5 MPa.
The obtained UCS is obviously lower than those of the Kumano Basin sediments and typical basin formations. This observation indicates that rock strength of the Nankai accretionary prism would be weakened by deformation during accretion process. In this presentation, UCS-log Vp curve of the Nankai accretionary prism are presented and discussed its implication to geomechanical analysis for future NanTroSEIZE expedition.

キーワード：南海掘削、三軸剪断試験、一軸圧縮強度、ジオメカニクス
Keywords: NanTroSEIZE, Triaxial shear test, Unconfined Compressional Strength, Geomechanics