

International Symposium
Crustal Dynamics 2016:
Unified Understanding of Geodynamic Processes
at Different Time and Length Scales

July 19-22, 2016, Takayama, Japan

July 19 (Tue.)

Field trip to the Atotsugawa Fault

July 20 (Wed.)

9:00		Opening
9:05	A01	Overview of the Crustal Dynamics Project Yoshihisa IIO*
9:30	A02	Strategy to Evaluate the Stress in the Crust Toru MATSUZAWA*
9:50	A03	Transient Deformation and Stress From Postseismic Deformation of Great Megathrust Earthquakes Roland BÜRGMANN*, Yan HU, Naoki UCHIDA
10:10	A04	Stress Orientations in Subduction Zones: Fault Strength and Seismic Coupling Jeanne HARDEBECK*
10:30		Break
10:45	A05	Precise focal mechanisms of the induced earthquake swarm by the 2011 Tohoku-Oki earthquake by a dense seismic observation Tomomi OKADA*, Takashi NAKAYAMA, Satoshi HIRAHARA, Shuichiro HORI, Toshiya SATO, Toru MATSUZAWA
11:05	A06	Stress and strength heterogeneities and its relationship with induced seismic activities associated with the Tohoku-Oki Earthquake Keisuke YOSHIDA*, Akira HASEGAWA, Toru MATSUZAWA
11:25	A07	Relationship Between Mainshock Rupture and Aftershock Sequence Based on Highly Resolved Hypocenter, Focal Mechanism Distributions Yohei YUKUTAKE*, Yoshihisa IIO
11:45	A08	Temporal Stress Changes at Mount Ontake Volcano Toshiko TERAOKA*
12:05	A09	Seismic Anisotropy From the Mantle through the Crust at a Transpressional Plate Boundary, Alpine Fault, New Zealand Martha Kane SAVAGE*, Carolin M. BOESE, Calum J. CHAMBERLAIN, John TOWNEND, Sapthala KARALLIYADDA, Daniel ZIETLOW, Anne SHEEHAN
12:25		Lunch
13:40	A10	Crustal Strain Rate Paradoxes of the Japan Islands : Their Resolution and Implications Takeshi SAGIYA*, Angela MENESES-GUTIERREZ

- 14:00 A11 Spatial-temporal heterogeneity for Quaternary evolution of crustal deformation along the eastern margin of the Japan Sea
Makoto OTSUBO*, Ayumu MIYAKAWA
- 14:20 A12 Earthquakes and Mountain Building in the Himalaya, Perspectives from the 2015, Mw 7.8 Gorkha Earthquake
Jean-Philippe AVOUAC*
- 14:50 A13 Thermochronological Contribution to the Crustal Dynamics Project
Takahiro TAGAMI*
- 15:10 Break
- 15:25 A14 What control the depth distribution of earthquakes in the Earth's crust?
Yuri FIALKO*, Erica MITCHELL, Kevin BROWN
- 15:55 A15 Stress accumulation process in and around the Atotsugawa fault, central Japan, estimated from focal mechanism analysis
Youichiro TAKADA*, Kei KATSUMATA, Hiroshi KATAO, Masahiro KOSUGA, Yoshihisa IIO, Takeshi SAGIYA,
The Japanese University Group of the Joint Seismic Observations at the Niigata-Kobe Tectonic Zone
- 16:15 A16 The Nature and Importance of Minor Faults Developed in the Niigata-Kobe Tectonic Zone
Kiyokazu OOHASHI*, Makoto OTSUBO, Ayumu MIYAKAWA, Masakazu NIWA, Tomonori TAMURA
- 16:35 Break
- 16:50 Poster session

July 21 (Thu.)

- 9:00 B17 Going Beyond Cataclasis: Insights into Seismogenic Slip
R. HOLDSWORTH, N. DE PAOLA, R. BULLOCK, C. COLLETTINI, C. VITI, S. NIELSEN
- 9:30 B18 Evolution of the Median Tectonic Line, Mie Prefecture, South-West Japan and Implication for Weakening in the Fault Zone: a Tentative Model
T. TAKESHITA, S. ARAI, B. V. DONG
- 9:50 B19 Evolution of the Median Tectonic Line fault zone during the exhumation
N. SHIGEMATSU, M. KAMETAKA, N. INADA, C. INAOI, J. KAMEDA, M. TAKAHASHI, K. FUJIMOTO, T. OHTANI, A. MIYAKAWA
- 10:10 B20 Development of Lower Crustal Shear Zones: Examples from Norway, Antarctica and Japan
T. OKUDAIRA, T. TOYOSHIMA
- 10:30 Break
- 10:45 B21 Multi-scale/signal Analyses of Structure and Earthquake Properties in the Southern California Plate-Boundary Region Around the San Jacinto Fault Zone
Yehuda BEN-ZION*

- 11:15 B22 One thousand Sites and a Sight of Crustal Strength – Dense Seismic Observation by 1000 Stations for Precisely Determining State of Stress around Source Fault hosting the 2000 Western Tottori EQ (M7.0) –
Satoshi MATSUMOTO*, Shinichi SAKAI, Aitaro KATO, Yoshihisa IIO
- 11:35 B23 High-resolution fault structures in normal faulting sequences induced by the 2011 M9.0 Tohoku-Oki earthquake
Aitaro KATO*, Kazushige OBARA, Shinichi SAKAI, Tetsuya TAKEDA, Takashi IIDAKA, and Takaya IWASAKI
- 11:55 B24 Tensile Overpressure Compartments on Low-Angle Thrust Faults
Richard SIBSON*
- 12:25 Lunch
- 13:40 B25 Rheological Constraints on the Strength of Subduction Zone Megathrusts
Ichiko SHIMIZU*, Tadamasu UEDA
- 14:00 B26 Transitional Grain-Size-Sensitive Creep of Hot-Pressed Quartz Aggregates
Junichi FUKUDA*, Caleb W. HOLYOKE III, Andreas K. KRONENBERG
- 14:20 B27 Rheological weakening of the mantle wedge induced by shear-enhanced hydration reactions
Ken-ichi HIRAUCHI*, Kumi FUKUSHIMA, Masanori KIDO, Jun MUTO, Atsushi OKAMOTO
- 14:40 B28 Influence of Fluid-Rock Interactions on Crustal Fault Friction, Slip Stability and Healing
Christopher J. SPIERS*
- 15:10 Break
- 15:25 B29 Low Frictional Strength of Alpine Fault Rocks of DFDP-1 at Elevated Temperature and low slip rate
A.R. NIEMEIJER*, C.J. BOULTON, V.G. TOY, J. TOWNEND and R. SUTHERLAND
- 15:55 B30 Strength, Stability, and Microstructure of Simulated Calcite Faults Sheared Under Laboratory Conditions Spanning the Brittle-Ductile Transition
Berend A. VERBERNE*, André R. NIEMEIJER, Christopher J. SPIERS, Johannes H. P. DE BRESSER, Gillian M. PENNOCK
- 16:15 B31 Supercritical Geothermal Energy: Geological Characteristics and Potential
Noriyoshi TSUCHIYA*
- 16:35 B32 Extreme hydrothermal conditions near an active plate-bounding fault, DFDP-2B borehole, Alpine Fault, New Zealand
Rupert SUTHERLAND*, John TOWNEND, Virginia TOY, Phaedra UPTON, and the DFDP-2 Science Team
- 16:55 Break
- 17:10 Poster session
- July 22 (Fri.)
- 9:00 C33 Hydrologic and elastic modeling for time-evolved digital rock models : Insight into rock and fault evolution process
Takeshi TSUJI*, Tatsunori IKEDA, Fei JIANG

- 9:20 C34 Seismic Velocities and Electrical Conductivity at Upper- and Mid-Crustal Depths
Tohru WATANABE*, Miho MAKIMURA, Guillaume DESBOIS, Akira YONEDA
- 9:40 C35 Fluids in the upper crust: elastic and transport properties
Yves GUEGUEN*
- 10:10 Break
- 10:25 C36 Multiscale Three-dimensional Fluid Distribution beneath Tohoku District and Co-, and Post-seismic Deformation Around the Focal Zone of Iwate-Miyagi Nairiku Earthquake
Atsushi SUZUKI, Yasuo OGAWA, Zenshiro SAITO, Masashi USHIODA, Hiroshi ICHIHARA, Masahiro ICHIKI*, Masaaki MISHINA
- 10:45 C37 Imaging the Plate Coupling at the Northern Hikurangi Subduction Margin, New Zealand
Wiebke HEISE*, T. Grant CALDWELL, Edward A. BERTRAND, Yasuo OGAWA and Stewart L. BENNIE
- 11:05 C38 Hydrological characteristics of the Kamishiro fault deduced from fluid discharge by 2014 North-Nagano earthquake
Hidemi TANAKA*, Kuo-Fong MA, Kazuaki FUJISAWA, Tsutomu SATO, Norio MATSUMOTO, Kohei KAZAHAYA, Fumiaki TSUNOMORI, Fumitake KUSUHARA, Kuniyo KAWABATA
- 11:25 C39 Investigation on fluid migration activity after earthquakes: case study for 1999 M7.6 Chi-Chi and 2016 M6.4 Meinong, Taiwan, earthquakes
Kuo-Fong MA*, and Hidemi TANAKA
- 11:55 Poster session
- 12:10 Lunch
- 13:25 C40 Modeling deformation processes of the island arc crust during the interseismic and postseismic period of the Tohoku-oki earthquake
Bunichiro SHIBAZAKI*, Takumi MATSUMOTO, Satoshi MIURA, Jun MUTO, Takeshi IINUMA, Takuya NISHIMURA, Mako OHZONO, Yasuo YABE
- 13:45 C41 Crustal Deformation and Stress Change Associated With the 2011 M=9 Tohoku-oki Earthquake
Kelvin WANG*
- 14:15 C42 Postseismic Deformation Associated With the 2011 Tohoku-oki Earthquake (M9.0) Based on 5 Years of Terrestrial and Seafloor Geodetic Observations
Takeshi IINUMA*, Fumiaki TOMITA, Motoyuki KIDO, Yusaku OHTA, Ryota HINO, Yukihito OSADA
- 14:35 C43 Block-fault Modeling of Southwest Japan : Identification of the San-in Shear Zone in a GNSS velocity field
Takuya NISHIMURA* and Youichiro TAKADA
- 14:55 Break
- 15:10 C44 Modeling Earthquake Source Processes Using Lab-Derived Friction Laws
Nadia LAPUSTA*
- 15:40 C45 Numerical and Experimental Studies on Fault Behavior Accounting for Brittle-Plastic Transition and Pore Pressure Effect
Hiroyuki NODA*, Miki TAKAHASHI

16:00	C46	Geometrical Fault Maturity and Dynamic Rupture Process: Case of the 2014 Northern Nagano Earthquake Ryosuke ANDO*, Kazutoshi IMANISHI
16:20		Discussion
16:55		Closing

Poster Session

July 20 (Wed.) Core time: 16:50 ~ 18:40

- AP01 Hydrological response to Canterbury earthquakes, New Zealand: unraveling the roles of dynamic versus static stress
Simon C. COX*, Caroline HOLDEN, Charles WILLIAMS
- AP02 Characterisation of faults bounding the Whataroa seismic gap, central Alpine Fault, New Zealand
Carolin BOESE*, Sandra BOURGUIGNON, Chris Rawles, Calum CHAMBERLAIN, John TOWNEND, Clifford THURBER
- AP03 Shear wave splitting in the source area of triggered seismicity near the Moriyoshi-zan volcano in the Akita Prefecture, northeastern Japan
Masahiro KOSUGA*
- AP04 S-wave anisotropy in the crust of East Japan before and after the 2011 Tohoku-oki Earthquake
Keisuke YOSHIDA*, Akira HASEGAWA, Tomomi OKADA, Junichi Nakajima, Group for aftershock observations of the 2011 Tohoku-Oki earthquake
- AP05 Spatial and temporal variation of stress state in east Japan during the 2011 Tohoku-oki earthquake from S-wave splitting analysis for ambient noise records
Tatsunori IKEDA*, Takeshi TSUJI
- AP06 Persistent Inelastic Deformation in Central Japan Before and After the Tohoku-Oki Earthquake and its Implications
Angela MENESES GUTIERREZ*, Takeshi SAGIYA
- AP07 Topographic Features of the Niigata–Kobe Tectonic Zone at the Northern Part of Central Japan
Tomonori TAMURA*, Kiyokazu OOHASHI
- AP08 Estimate of local strain rate of the San-in region by analyzing GNSS data
Tsukasa MITOGAWA*, Tetsuya KOGURE
- AP09 Clustering of GNSS Velocity Field in the Southwestern Part of Japanese Islands
Atsushi TAKAHASHI*, Manabu HASHIMOTO, Yukitoshi FUKAHATA
- AP10 Crustal deformation around the Kamishiro fault, northern Itoigawa-Shizuoka Tectonic Line and its relation to the 2014 Northern Nagano earthquake (Mw6.3)
Takeshi SAGIYA*, Naoko TERATANI, Nobuhisa MATTA, Takuya NISHIMURA, Hiroshi, YARAI, and Hisashi SUITO
- AP11 Post Middle Miocene Uplift and Denudation History of NE Japan Arc Mountains: Insights From (U–Th)/He Thermochronometry
Shigeru SUEOKA*, Takahiro TAGAMI, Barry P. KOHN, Shoma FUKUDA
- AP12 Estimation of Thermal Histories From Low-Temperature Thermochronometric Data in the NE Japan Arc: A Report of Apatite Fission-Track Ages by Using LA-ICP-MS
Shoma FUKUDA*, Shigeru SUEOKA, Takahiro TAGAMI
- AP13 Spatial Variation in Coda Q in the Northeastern Part of Niigata-Kobe Tectonic Zone
Masanobu DOJO*, Yoshihiro HIRAMATSU
- AP14 A Paradox of Brittle/Ductile Transition in Maxwell Viscoelastic Model
Mie ICHIHARA*
- AP15 Shear strain concentration mechanism in the lower crust below an intraplate strike slip fault based on rheological laws of rocks
Xuelei ZHANG*, Takeshi SAGIYA

- AP16 Heat Flow in and Around Japan, Revisited
Akiko TANAKA*
- AP17 Acceleration of Plate Subduction Beneath Kanto, Japan After the 2011 Tohoku-oki earthquake
Naoki UCHIDA*, Youichi ASANO, Akira HASEGAWA
- AP18 Imaging the high density material beneath capes along Nankai Trough on the basis of gravity anomaly
Ayumu MIYAKAWA*, Makoto OTSUBO
- AP19 Deformation of the Philippine Sea Slab and its Implication for Tectonics of Central and Western Japan
Yukitoshi FUKAHATA
- AP20 Plate Spin Motion and Its Implications for Strength of Plate Boundary
Hikaru IWAMORI*, Takeshi MATSUYAMA
- AP21 Strike Estimation for Anisotropic Layered Media in Magnetotellurics
Tomohisa OKAZAKI*, Naoto OSHIMAN, Ryohei YOSHIMURA
- AP22 Fluid distribution and its contribution to inland earthquakes in the Hidaka collision zone, Northern Japan based on magnetotelluric measurements
Hiroshi ICHIHARA*, Toru MOGI
- AP23 Three-Dimensional Geofluid Distribution of a Seismogenic Region, Northern Miyagi
Zenshiro SAITO*, Yasuo OGAWA, Masahiro ICHIKI, Atsushi SUZUKI, Yusuke KINOSHITA, Puwis AMATYAKUL
- AP24 Investigation of the Crustal Structures beneath the Marmara Sea by 3D Magnetotellurics
Tülay KAYA, Takafumi KASAYA, Yasuo OGAWA*, M. Kemal TUNÇER, S. Bülent TANK, Yoshimori HONKURA, Naoto OSHIMAN, Masaki MATSUSHIMA, Weerachai SIRIPUNVARAPORN
- AP25 Along strike electrical conductivity variations on the Alpine Fault, New Zealand
T. Grant CALDWELL*, Wiebke HEISE, Edward A. BERTRAND, Yasuo OGAWA, Stewart L. BENNIE, Hugh M. BIBBY and George R. Jiracek
- AP26 Can Multi-Scale Calibrations Allow MT-Derived Resistivities to be Used to Probe the Structure of the Deep Crust?
Virginia TOY*, Marco BILLIA, Nick TIMMS, Rob HART, Martina KIRILOVA, Emma KLUGE, John TOWNEND, Rupert SUTHERLAND ,DFDP-1 and DFDP-2 Science Teams
- AP27 Links Between Volcanic, Tectonic and Geothermal systems revealed with array MT data in the Taupo Volcanic Zone, New Zealand
Edward BERTRAND*, Grant CALDWELL, Wiebke HEISE, Stewart BENNIE, Neville PALMER and Garth ARCHIBALD
- AP28 Controlling mechanisms of reaction-induced stress and strain during hydration reactions: Experimental investigation in CaSO₄-H₂O system
Masaoki UNO*, Shuntaro MASUDA, Atsushi OKAMOTO, Noriyoshi TSUCHIYA
- AP29 Temporary Change of Gas Composition in Groundwater of Atotsugawa Observation Well, Japan
Fumiaki TSUNOMORI*, Hidemi TANAKA, Fumitake KUSUHARA
- AP30 Elastic wave velocity and electrical conductivity in a brine-saturated granitic rock
Miho MAKIMURA*, Tohru WATANABE, Guillaume DESBOIS, Akira YONEDA

- AP31 Simultaneous Measurements of V_p , V_s and V_p/V_s for Sedimentary Rocks From Southern Chichibu Belt and Shimanto Belt in the Kanto Mountains
Satoko HONDA*, Masahiro ISHIKAWA
- AP32 Simultaneous high P-T measurements of compressional and shear wave velocities in in Oki-Dogo xenoliths
Hirokazu TAKAHASHI*, Masahiro ISHIKAWA
- AP33 Sintering of Nano-sized Polycrystalline Diopside
Yumiko TSUBOKAWA*, Masahiro ISHIKAWA
- AP34 Contribution of slab-derived water in deep groundwater in Tohoku
Yoko S. TOGO*, Kohei KAZAHAYA, Tsutomu SATO, Masaaki TAKAHASHI,
Hiroshi A. TAKAHASHI, Noritoshi MORIKAWA, Yuki TOSAKI, Keika HORIGUCHI
- AP35 Several Researches to Estimate Flux of Slab-Derived Water
Norio MATSUMOTO*, Kohei KAZAHAYA, Fumiaki TSUNOMORI and
Hidemi TANAKA
- AP36 Anomalous continuous discharge of hot spring water over five years due to the 2011 Iwaki earthquake in Japan
Tsutomu SATO*, Kohei KAZAHAYA, Norio MATSUMOTO, Masaaki TAKAHASHI,
Hidemi TANAKA
- AP37 Fault zone mineralogy of the Median Tectonic Line (MTL) in the Eastern Kii Peninsula, SW Japan
Koichiro FUJIMOTO*, Nobuaki TANAKA, Norio SHIGEMATSU, Tamon ABE
- AP38 Fluid Flow in the Southern Termination of the Bolfin Fault of the Atacama Fault System, Northern Chile
Siori OKAMOTO, Rodorigo GOMILA and Kenichi HOSHINO*
- AP39 A Simple Fault Thermometer Based on Carbonaceous Matter Reflectance
Siori OKAMOTO and Kenichi HOSHINO*

July 21 (Thu.) Core time: 17:10 ~ 19:00

- BP40 Interparticle forces between smectite platelets from natural fault gouge
Jun KAMEDA*, Chisaki INAOI
- BP41 Paleo-fluid pressure analysis by a stochastic inversion method using tectonic veins in the damage zone of the Median Tectonic Line, western Shikoku, Japan
Satoshi TONAI*, Shunsuke HORIE
- BP42 Structural Development in Cataclasite Zones Associated With Faulting: an Example of the Median Tectonic Line
Shun ARAI*, Toru TAKESHITA, Ayumi S. OKAMOTO
- BP43 Deformation Processes along the Median Tectonic Line: An Example from the Awano-Tabiki Outcrop
Chisaki INAOI*, Jun KAMEDA, Norio SHIGEMATSU
- BP44 Generation of Pseudotachylite and Interseismic Plastic Deformation Under High-Temperature, Lower Crustal Conditions at Tonagh Island in the Napier Complex, East Antarctica
Tsuyoshi TOYOSHIMA*, Norio SHIGEMATSU, Yasuhito OSANAI,
Masaaki OWADA, Toshiaki TSUNOGAE, Tomokazu HOKADA
- BP45 Fault zone development in the aftershock area and the neighborhood of 2000 Tottori-ken Seibu earthquake, Japan
Kenta KOBAYASHI*, Hideki MUKOYOSHI, Tetsuro HIRONO

- BP46 Distribution and occurrence of fault system on micro earthquake swarm zone in central part of the Shimane Prefecture, southwest Japan
Hideki MUKOYOSHI*, Masayuki TAKESHIMA
- BP47 Inferring Parameters of Earthquake Slip Using an Integrated Field, Experiment and Material Analysis: A New Proxy Using Maturation of Carbonaceous Materials
Shunya KANEKI*, Tetsuro HIRONO
- BP48 Distribution of fault system around the epicenter area of the 2000 Western Tottori earthquake
Hideto UCHIDA*, Hideki MUKOYOSHI, Kenta KOBAYASHI, Tetsuro HIRONO
- BP49 Study of detailed analysis of the brittle zone formation process (As an example of the Byobuyama fault, Gifu prefecture, central Japan)
Takuma KATORI*, Kenta KOBAYASHI
- BP50 Mesoscale structures of the Ohawaki shear zone in the Mino Belt, central Japan: a basal décollement of imbricate thrust sheet composed of pelagic siliceous sediments
Asuka YAMAGUCHI*, Rina FUKUCHI, Mari HAMAHASHI, Mayuko SHIMIZU, Ryota HASEGAWA
- BP51 Combined analysis of vitirinite reflectance and U-Pb dating of detrital zircon on cuttings from the IODP Site C0002 in the Nankai Trough
Rina FUKUCHI*, Asuka YAMAGUCHI, Yuzuru YAMAMOTO, Hisatoshi ITO, Juichiro ASHI
- BP52 A stress-strain analysis of metacherts from the early Archaean greenstone belt in East Pilbara Terrane: the microboudin method
Tarojiro MATSUMURA*, Toshiaki MASUDA
- BP53 Measurement of Residual Stresses in Fault Rocks Formed During Earthquake-Generating Shear
Risa MATSUMURA, Virginia TOY, Vladmir LUZIN, Toru TAKESHITA, Yasuuchi KUBOTA and Shun ARAI
- BP54 Fluid-deposited Graphite In Pseudotachylytes : Implication For Fault Degassing And Graphite Precipitation
Yoshihiro NAKAMURA*, Madhusoodhan SATISH-KUMAR, Tsuyoshi TOYOSHIMA
- BP55 Petrophysical, Structural, and Hydrogeological Characteristics of the Alpine Fault Hanging Wall Based on DFDP-2 Wireline Logging, Temperature, and Hydraulic Measurements
John TOWNEND*, Rupert SUTHERLAND, Mai-Linh DOAN, Cecile MASSIOT, Bernard CELERIER, Lucie CAPOVA, Jamie COUSSENS, Tamara JEPPSON, Lea REMAUD, Doug SCHMITT, Virginia TOY, and the DFDP-2 Science Team
- BP56 Towards 3D Imaging of the Alpine Fault: Joint Surface and Vertical Seismic Profiling in the Whataroa Valley, South Westland, New Zealand
Jennifer ECCLES*, John TOWNEND, Richard KELLETT, Alexis CONSTANTINOU, Douglas SCHMITT, Don LAWTON, Malcolm BERTRAM, Kevin HALL, Randolf KOFMAN, Martha SAVAGE, Stefan BUSKE, Vera LAY, Andrew GORMAN and the DFDP Whataroa 2016 Science Team
- BP57 Paleostress Estimates in the Sanbagawa Metamorphic Belt, Shikoku Island, Japan: Extension of Piezometric Relations to Natural Conditions
Tadamasa UEDA*, Ichiko SHIMIZU
- BP58 Rheology of Water-infiltrated Polycrystalline Anorthite Under the Conditions of Lower Crust
Masanori KIDO*, Jun MUTO, Sanae KOIZUMI, Hiroyuki NAGAHAMA
- BP59 Ductility Enhancement of K-feldspar in Lower Continental Crust due to Retrograde Exsolution
Bhathiya ATHURUPANA*, Jun-ichi FUKUDA, Jun MUTO, Hiroyuki NAGAHAMA

- BP60 Ductile deformation in the lower crust : numerical model of Zener-pining and grain nucleation effect on strain localization
Benoit BEVILLARD*, Guillaume RICHARD and Hugues RAIMBOURG
- BP61 Stick-slip behavior of halite gouge in the brittle and semi-brittle regimes: Implications for generation mechanisms of slow earthquakes
Ken-ichi HIRAUCHI*, Yoshiaki YOSHIDA, Yasuo YABE, Jun MUTO
- BP62 Energetic Analysis of Critical Slip Displacement on Slip Instability
Momoko HIRATA*, Jun MUTO, Hiroyuki NAGAHAMA
- BP63 Frictional Behavior of Mafic Metamorphic Gouges Implies the Nucleation of Slow Earthquakes at High Pore Pressure Ratio in a Subducting Oceanic Crust
Ayumi S. OKAMOTO*, André R. NIEMEIJER, Christopher J. SPIERS, Toru TAKESHITA
- BP64 Frictional Characteristics of Mica and Swelling Clay Minerals: Effects of the Orientation
Hiroshi SAKUMA*, Kenji KAWAI, Ikuo KATAYAMA
- BP65 Frictional properties of the Median Tectonic Line fault zone
Miki TAKAHASHI*, Chisaki INAOI, Jun KAMEDA, Norio SHIGEMATSU
- BP66 Strength Profile of the Active Nankai Accretionary Prism: Inferences from Mechanical Property of Cuttings Collected During IODP Expedition 348
Takehiro HIROSE*, Manami KITAMURA, Hiroko KITAJIMA, Hiroki SONE
- BP67 Effects of pore pressure on frictional behavior of rocks
Michiyo SAWAI*, Miki TAKAHASHI
- BP68 Contact State of Microcracks Inferred by Elastic Wave Velocity Through Cracked Media
Eranga JAYAWICKRAMA*, Hayata TAMAI, Jun MUTO, Hiroyuki NAGAHAMA
- BP69 Correlations Between the Apparent Interlayer Spacings d_{002} and the Raman R2 Parameters of Carbonaceous Matters in Metamorphic Rocks
Ayaka SHIRAIISHI*, Kenichi HOSHINO
- BP71 Numerical Investigation of Asperity-Type Foreshock Sources Within Earthquake Nucleation on a Rate-and-State Fault
Natalie HIGGINS*, Nadia LAPUSTA
- BP72 The Onset of Stick-slip Motion: How the Energetics of Slow Rupture Govern Earthquake Nucleation
Yoshihiro KANEKO*, Stefan NIELSEN, Brett CARPENTER
- BP73 Characteristics of frictional properties' dependency on after-slip propagation speed
Keisuke ARIYOSHI*, Toru MATSUZAWA, Akira HASEGAWA, Ryota HINO
- BP74 Toward Constructing Unified Seismic Source Model
Suguru YABE*, Satoshi IDE
- BP75 The Slow Slip Event in the Tokai Region, Central Japan, Since 2013 as Seen From GPS Data
Hiromu SAKAUE*, Jun'ichi FUKUDA, Teruyuki KATO
- BP76 Characteristics of Postseismic Deformation Following the 2003 Tokachi-oki Earthquake and Estimation of the Viscoelastic Structure in Hokkaido, Northern Japan
Yuji ITOH* and Takuya NISHIMURA
- BP77 History of the Kanto Earthquake Inferred from Holocene Marine Terraces and the Physical Property of the Inter-plate fault along the Sagami Trough
Junki KOMORI*, Masanobu SHISHIKURA, Ryosuke ANDO

- BP78 Mapping Crustal Structure Change in Tohoku With Time-Varying P-to-S Receiver Functions
Robert PORRITT, Shoichi YOSHIOKA*
- BP79 Slab Dehydration, Interplate Hydrousness and Seismic Distribution in Modeling deformation, faulting, and mountain building in the island-arc crust of northeastern and central Japan considering heterogeneous thermal structure
Yingfeng JI*, Shoichi YOSHIOKA
- BP80 Testing Rheological Structures of NE Japan by Two-dimensional Analysis of Post-seismic Deformation of the Tohoku Oki Earthquake
Jun MUTO*, Bunichiro SHIBAZAKI, Takeshi IINUMA, Yusaku OHTA,
Satoshi MIURA, Yoshihiro ITO, Shun-suke HORIUCHI, Hikaru IWAMORI
- BP81 Modeling deformation, faulting, and mountain building in the island-arc crust of northeastern and central Japan considering heterogeneous thermal structure
Bunichiro SHIBAZAKI*, Jun MUTO, Takumi MATSUMOTO, Takeyoshi YOSHIDA

July 22 (Fri.) Core time: 11:55 ~ 12:10

- CP82 A Statistical Approach to Estimate a Spatial Stress Pattern From P-wave First Motion Polarity Data :
Its Development and a Numerical Simulation
Takaki IWATA*