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T-UTES-135	Homuth, S., Hornich, W., Bär, K.	Down-the-hole water powered hammer drilling for medium deep geothermal energy systems

T-UTES-41	Hahn, F., Bussmann, G., Ignacy, R., Bracke, R.	HT-MTES: Seasonal heat storage in abandoned coal mines
T-UTES-140	Kujbus, A.	Underground Thermal Energy Storage Opportunities in the Pannonian Basin
T-UTES-144	Tordrup, K. W., Poulsen, S. E., Bjørn,H.	Calibration of a finite element model of a borehole thermal energy storage in FEFLOW: model and numerical considerations
T-UTES-102	Rostampour, V.Bloemendal, M., Jaxa-Rozen, M., Keviczky, T.	A Control-Oriented Model For Combined Building Climate Comfort and Aquifer Thermal Energy Storage System
T-UTES-231	Veldkamp, H., Pluymaekers M., Vandeweijer, V., van Wees, J-D.	High Temperature Storage in the Dutch subsurface – critical factors and economic feasibility

4. Science

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S-GC-349	Akin, T., Kargi, H., Guney, A.	Geochemical calculation workflow to estimate fluid chemistry of water dominated geothermal reservoir
S-GC-111	Boch, R., Szanyi, J., Leis,A., Mindszenty, A., Deák, J., Kluge, T., Hippler, D., Demény, A., Dietzel, M.	Geothermal Carbonate Scaling: Forensic Studies Applying High-Resolution Geochemical Methods
S-GC-137	Degering, D., Dietrich, N., Krüger, F., Scheiber, J., Wolfgramm, M., Köhler, M.	Radium isotope concentrations in deep geothermal fluids as finger prints of the aquifer rocks
S-GC-161	Nitschke, F., Held, S., Villalon, I., Mundhenk, N., Kohl, T., Neumann, T.	Geochemical Reservoir Exploration and Temperature Determination at the Mt. Villarrica Geothermal System, Chile.
S-GC-192	Kling, T.	Quartz-driven fracture healing and its impact on fluid flow
S-GC-359	Kmiecik, E., Korzec, K., Mika, A.	Metasilicic acid in thermal water from Banska PGP-1 well, Podhale
S-GC-44	Koc, K., Simsek, S., Yilmaz T., Elif	Hydrogeochemical Investigation of Hot and Mineral Waters of Karaada (Bodrum)
S-GC-345	Kong, X-Z., Leal, A.M.M., Saar, M. O.	Implications of hydrothermal flow-through experiments on deep geothermal energy utilization
S-GC-98	Kraml, M., Jodocy, M., Reinecker, J., Leible, D., Freundt, F., Al Najem, S., Schmidt, G., Aeschbach, W., Isenbeck-Schroeter, M.	TRACE: Detection of Permeable Deep-Reaching Fault Zone Sections in the Upper Rhine Graben, Germany, During Low-Budget Isotope-Geochemical Surface Exploration
S-GC-334	Kong, X-Z., Leal, A.M.M., Saar, M. O.	Fluid-rock interactions in geothermal processes: their importance and their computational modeling
S-GC-173	Lucas, Y.	A coupled thermo-hydro-geochemical modelling approach of the evolution of mineralogy in the EGS geothermal system at Soultz-sous-Forêts (France)
S-GC-20	Ozulukale, S., Simsek, S.	Hydrogeochemical and Environmental Isotopic Survey in Saraykent (Yozgat) Geothermal Field, Central Anatolia, Turkey

S-GC-156	Pollet-Villard, M., Daval D.	Kinetic feedback effects induced by dissolution/precipitation processes in a geothermal context
S-GC-238	Schmidt, R. B., Bucher, K., Stober, I.	Alteration products of reservoir rocks from the Upper Rhine Graben under geothermal conditions
S-GC-283	Wasch, L.	Scaling potential during (CO2) degassing in geothermal installations
S-GC-45	Yilmaz Turali, E., Simsek, S., Koc, K.	Hydrogeochemical Investigation of Yerköy (Yozgat-Turkey) Geothermal Waters
S-GC-357	Nusiaputra, Y.	Modeling the properties of two-phase, multicomponent geothermal fluids for use in wellbore simulation
S-GC-11	Cansu, Y	Isotopic Evaluation of Savcili-Buyukoba (Kirsehir-Kaman) Geothermal Area

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S-GE-205	Alçiçek, H., Bülbül, A., Alçiçek, M. C., Yavuzer, I.	Hydrogeochemistry of the thermal waters from the Pamukkale and Karahay?t Geothermal Fields (Denizli Basin, Southwestern Anatolia, Turkey)
S-GE-118	Auxietre, J-L., Bellanger, M., Auxietre, M., Ars, J-M.	Exploration for EGS fields: innovative approach in deep geothermal contexts and R&D strategy
S-GE-415	Beauchamps, G.	Hydrothermal alteration: marker of paleo-hydrothermal fluid circulation. Towards a better understanding of Vieux-Habitants geothermal area (Basse-Terre, Guadeloupe).
S-GE-133	Auxietre, J-L., Bellanger, M., Ars J-M., Hautot, S., Tarits, P.	The Key role of first-order geological paradigm in deep geothermal exploration.
S-GE-372	Bonté, D., Busby, J., Beamish, D., van Wees, J-D.	Thermal structure of the Cornwall Batholith

S-GE-371	Bonté, D., Limberger, J., Lispey, L., Cloetingh, S., van Wees, J-D.	Data assimilation for the investigation for temperature variations in the Paris Basin and the Netherlands
S-GE-117	Bianco, C., Brogi, A., Dini, A., Friðleifsson, G. Ó., Helgadóttir, H. M., Liotta, D., Montegrossi, G., Rimondi, V., Ruggieri, G., Zucchi, M., Ciacci, M.	Understanding of magmatic geothermal systems from studies of exhumed systems in continental and oceanic settings
S-GE-346	Darajat, F. I., Maris, E. E. P., Akib, A. A., Guswinanda, H., Saepuloh, A.	Analyses of Landsat 8 Imageries for Preliminary Assessment to Determine Geothermal Potential Area under Torrid Zones
S-GE-211	Dezayes, C., Baltassat, J-M., Famin, V., Bes de Berc, S.	Potential interest areas for the development of geothermal energy in La Reunion Island
S-GE-302	Eggertsson, G., Lavallée, Y., Kendrick, J., Lamur, A., Markusson, S.	Enhancing permeability by multiple fractures in the Krafla geothermal reservoir, Iceland
S-GE-352	Giordano, G.	Multidisciplinary approach for the exploration of remote geothermal fields: The Tocomar Geothermal System case study (Puna plateau, Argentina).
S-GE-270	Grimmer, J. C., Drueppel, K., Stober, I.	Origin of lithium in deep brines of SW-Germany – first results
S-GE-35	Hajto, M.	A brief glossary of Polish and the UNFC-2009 classifications and nomenclature of geothermal resources assessment
S-GE-76	Hehn, R., Genter, A., Vidal, J., Baujard, C.,	Stress field rotation in the EGS well GRT-1
S-GE-389	Hjuler, M. L., Olivarius, M., Kristensen, L., Boldreel, L. O., Mathiesen, A., Nielsen, C. M., Nielsen, L. S.	Detailed assessment of geothermal potential by integration of a wide range of geological data: Preliminary results of a case study from a Lower Triassic low-enthalpy reservoir in the Tønder area in southern Denmark
S-GE-362	Nunes, J. C., Carvalho, J. M., do Rosário Carvalho, M.	New geologic insights for the Pico Alto Geothermal Field (Terceira Island, Azores, Portugal) as a key tool for its conceptual modelling
S-GE-203	Limberger, J., van Wees, J-D., Pluymaekers, M., Tesauro, M., Cloetingh, S.	Assimilation of subsurface temperature data to improve the thermal model of the European lithosphere
S-GE-257	Bertrand L.	A model of permeability and porosity in the different type of basement of the Upper

		Rhine Graben inferred from outcropping analogues rocks.
S-GE-155	Lipsey, L., Van Wees, J-D., Pluymaekers, M., Cloetingh, S.	Numerical modelling of thermal convection related to fracture permeability in Dinantian carbonate platform, Luttelgeest, the Netherlands
S-GE-33	Meller, C., Sahara, D. P., Kohl, T.	Implication of petrography and structure of a rock mass for geomechanical processes associated with EGS projects
S-GE-228	Navelot, V., Géraud, Y., Diraison, M.	Physical properties of fresh or hydrothermalized volcanic rocks from the west coast of Basse-Terre and Terre-de-Haut (Guadeloupe archipelago)
S-GE-240	Niederau, J., Büsing, H., Clauser, C., Jusri, T., Dini, I., Bertani, R.	Impact of an uncertain structural model on geothermal reservoir simulations
S-GE-58	Papachristou, M., Fytikas, M., Andritsos, N., Nikolaidou, E., Kolios, P.	New thermometric data from shallow aquifers in Santorini: possibilities for geothermal exploitation
S-GE-236	Siratovich, P., Villeneuve, M., Heap, M., Kennedy, B.	Deformation, Strength, and Failure Mode of Deep Geothermal Reservoir Rocks
S-GE-176	Rasmussen, P.	3D modelling of borehole heat exchangers at hydrogeological conditions typical of the north European lowlands, sensitivity studies from Denmark
S-GE-119	Prieto, A. M.	Rock typing in geothermal reservoirs: application of textural descriptors
S-GE-311	Rusillon, E., Clerc, N., Brentini, M., Moscariello, A.	Rock typing, structural characterization and stratigraphy harmonization in support of geothermal exploration in the Greater Geneva Basin (Switzerland)
S-GE-221	Seithel, R.	Slip Tendency Analysis & Fricitonal Strength of Reservoir Rocks in south Germany
S-GE-165	Sowizdzal, A.	The most prospective areas for geothermal energy utilization for heating and power generation in Poland
S-GE-108	Stober, I.	Hydraulic and hydrochemical properties of the deep carbonate aquifers in SW-Germany
S-GE-243	Ter Heege, J.	Fault permeability models for geothermal doublet designs
S-GE-65	Vidal, J., Genter, A., Chopin, F., Dalmais, E.	Natural fractures and permeability at the geothermal site Rittershoffen, France

S-GE-367	Ziabakhshganji, Z., Donselaar, M. E., Bruhn, D. F., Hamid, M. N.	Thermally-enhanced oil recovery from stranded fields: Synergy potential for geothermal and oil exploitation

4.C. Science – Geophysics (S-GP)

S-GP-149	Bertermann, D.,	GeoSurf - The development of a new measuring tool for an efficient planning of shallow geothermal systems
S-GP-154	Heap, M., Baud, P., Kushnir, A., Reuschlé, T., Dauny, F., Farquharson, J., Griffiths, L., Schmittbuhl, J.	The new HPHT triaxial apparatus at IPG Strasbourg (France)
S-GP-146	Heap,M., Siratovich, P., Kennedy, B.	Permeability of tensile fractures in andesites
S-GP-281	Jousset, P.	Seismic Tomography in Reykjanes, SW Iceland
S-GP-368	Piasentin, A.	The triple porosity model as a microsystem constraint to the joint petrophysical and seismic reservoir characterization of carbonate formations
S-GP-97	Abdelfettah, Y., Calvo, M., Hinderer, J., Dalmais, E., Maurer, V.	Using gravity in geothermal exploration: the case study of Wissembourg area, northern Alsace (France)
S-GP-100	Abdelfettah, Y., Sailhac, P., Girard, J-F., Dalmais, E., Maurer, V.	Magnetotelluric profile crossing the GRT1-2 geothermal doublet of the Rittershoffen EGS project, northern Alsace
S-GP-101	Abdelfettah, Y., Sailhac, P., Schill, E., Larnier, H., Matthey, P-D.	Continuous and time-lapse geothermal monitoring at Rittershoffen EGS project, northern Alsace, using magnetotellurics
S-GP-347	Armadillo, E., Rizzello, D., Stimac, J., Zemedkun, M., Kebede, S.	The ARGeo geophysical model of the Tendaho geothermal field, Ethiopia
S-GP-206	Ars, J-M., Tarits, P., Hautot, S., Bellanger, M., Maïa, M., Coutant, O., Auxietre, J-L.	Geophysical joint inversion applied to deep geothermal exploration
S-GP-303	Balling, N., Poulsen, S. E., Fuchs, S., Mathiesen, A., Bording, T. S., Nielsen, S. B., Nielsen, L. H.	Development of a numerical 3D geothermal model for Denmark

S-GP-39	Baud, P., Zhu, W., Farquharson, J., Wong, T-F., Heap, M., Vinciguerra, S.	Dilatancy, failure, and fluid flow in basalt: Implications for geothermal reservoirs
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S-GP-74	Carpentier, S., Steeghs, P., Boxem, T.	Seismic reprocessing and attributes for geothermal exploration: a case study in Friesland, Netherlands
S-GP-413	Coppo, N., Darnet, M., Harcouët-Menou, V., Wawrzyniak, P., Manzella, A., Bretaudeau, F., Romano, G., Lagrou, D., Girard, J-F.	Characterization of Deep Geothermal Energy Resources in Low enthalpy sedimentary basins in Belgium using Electro-Magnetic Methods – CSEM and MT results
S-GP-167	Farina, B., Poletto, F., Carcione, J. M.	Seismic wave simulation in poro-viscoelastic hot rocks
S-GP-131	Ferhat, G.	Surface deformation monitoring at geothermal exploitation: a review and case study of Soultz-sous-Forêts and Rittershoffen sites in the Rhine Graben, France
S-GP-17	Gaucher, E., Gesret, A., Noble, M., Kohl, T.	New Bayesian formulation to integrate body-wave polarization in non-linear earthquake location
S-GP-107	Girard, J-F.	Passive electrical monitoring of a geothermal doublet: Rittershoffen EGS project, northern Alsace
S-GP-106	Griffiths, L., Heap, M., Baud, P., Schmittbuhl, J.	A new setup for studying thermal microcracking through acoustic emission monitoring
S-GP-89	Griffiths, L., Heap, M., Wang, F. Daval, D., Gilg, H. A., Baud, P., Genter, A., Schmittbuhl, J.	Barite precipitation: consequences on fracture permeability and injectivity at the geothermal sites of the Upper Rhine Graben
S-GP-64	Heimlich, C.	Geodetic analysis of surface deformation at the power plant of Landau (Germany) related to the 2013-2014 event
S-GP-30	Hinderer, J.	Hybrid gravity monitoring of a geothermal reservoir
S-GP-71	Jupe, A., Francis, D., Gehrmann, M.	Probabilistic approaches in EGS seismic hazard assessment
S-GP-265	Ramirez Loaiza, K., Yépez, S., Pasquali, R., Rath, V., Muller, M.	Integrated interpretation and modelling of Tellus Aeromagnetic, Gravity, Radiometric and Multispectral Analysis of the Satellite Imagery datasets for the exploration and

		identification of deep geothermal target areas in the Midlands Valley Terrane
S-GP-258	Kinnaert, X.	Modelling seismic event location errors at the reservoir scale: application to the geothermal site of Soultz-sous-Forêts (Alsace, France)
S-GP-88	Kinnaert, X.,Gaucher, E., Kohl, T., Achauer, U.	Modelling focal mechanism errors of seismicity induced at Rittershoffen geothermal field (Alsace, France)
S-GP-380	Kittilä, A., Deuber, C., Mikutis, G., Evans, K., Puddu, M., Grass, R. N., Stark, W. J., Saar, M. O.	Comparison of novel synthetic DNA nano-colloid tracer and classic solute tracer behaviour
S-GP-18	Köpke, R., Gaucher, E., Meixner, J., Kohl, T.	A method to interpret induced seismicity clouds as a fracture network
S-GP-208	Kristjansdottir, S., Gudmundsson, O., Agustsson, K., Tryggvason, A., Lund, B., Fehler, M.	Induced Seismicity during Reinjection of Wastewater in Hellisheidi Geothermal Field, Southwest Iceland
S-GP-69	Labeau, Y., Jean-Louis, C.C.	Numerical model as a decision-making tool for drills in the low enthalpy geothermal context of Martinique
S-GP-315	Le Chenadec A., Lehujeur M., Schmittbuhl J., Vergne, J.	Monitoring deep geothermal reservoirs with ambient seismic noise: a case study at Rittershoffen, France
S-GP-195	Le Chenadec A., Lehujeur M., Schmittbuhl J. Vergne, J.	Ambient seismic noise tomography using the dense array "EstOf" for deep geothermal exploration, Alsace, France
S-GP-90	Lengliné, O.	Seismicity related to the hydraulic stimulation of GRT1, Rittershoffen, Alsace, France
S-GP-50	Maurer, V., Grunberg, M., Cuenot, N., Richard, A.	Towards calibrating an automatic detection system to monitor micro-seismic activity induced by geothermal projects in the Upper Rhine Graben
S-GP-51	Maurer, V., Grunberg, M., Richard, A., Doubre, C., Baujard, C ., Lehujeur, M.	On-going seismic monitoring of the Rittershoffen EGS project (Alsace, France)
S-GP-52	Maurer, V., Perrinel, N., Dalmais, E., Richard, A., Plévy, L., Genter, A.	Towards a 3D velocity model deduced from 2D seismic processing and interpretation in Northern Alsace (France)
S-GP-48	Maurer, V., Vergne, J., Richard, A., Doubre, C., Grunberg, M., Baujard, C., Wodling, H..	Towards the installation of a micro-seismic and a geodetic monitoring network for a geothermal project in urban context: the example of Illkirch-Graffenstaden (Alsace, France)

S-GP-261	Møller, I., Balling, N., Rasmussen, P., Ditlefsen, C.,	Regional shallow heat flow in Denmark from borehole temperatures and thermal conductivities of main lithologies
S-GP-233	Prol-Ledesma, R.M.	Integration of heat flow measurements and estimations in the construction of Mexico's heat flow map
S-GP-141	Reinsch, T., Jousset, P., Henninges, J., Blanck, H.,	Distributed Acoustic Sensing Technology in Magmatic Geothermal Areas – First Results from a Survey in Iceland
S-GP-130	Richard, A., Maurer, V., Edel, J-B., Genter, A., Baujard, C., Dalmais, E.,	Towards targeting geothermal reservoir: exploration program for a new EGS project in urban context in Alsace
S-GP-351	Rizzello, D., Armadillo, E., Verdoya, M., Pasqua, C., Kebede, S., Mengiste, A., Abera, N.,	Integrated geophysical imaging of the Alalobeda geothermal field (Ethiopia)
S-GP-267	Rybach, L.	Influence factors in the depth domain of borehole heat exchangers - global warming and urban heating
S-GP-363	Sahara, D., Kohl, T.	Inferring stress heterogeneities in fractured crystalline reservoir from an analysis of borehole breakout
S-GP-364	Sahara, D., Kohl, T.	Characterization of the geomechanical properties of deep EGS reservoir rock from borehole and hydraulic data
S-GP-99	Sailhac, P.,	Modelling the sensitivity of magnetotelluric monitoring data to geothermal fluids at depth in Northern Alsace
S-GP-377	Samrock, F., Shah, N., Saar, M. O.	Magnetotelluric Investigation of the Northern Swiss Heat Flow Anomaly
S-GP-260	Santilano, A., Manzella, A., Rizzo, E., Giampaolo, V., Capozzoli, L., Godio, A.,	Imaging the deep structures of the Larderello geothermal field (Italy) by electrical resistivity measurements: the IMAGE experiment
S-GP-330	Schmittbuhl, J.,	b-value variations and fracture pinning
S-GP-317	Tezel, T., Foulger, G., Julian, B.	Relative Microearthquake Locations at the Geysers
S-GP-159	Ucar, E., Berre, I., Keilegavlen, E.,	Modelling of the Shear Dilation Based Hydraulic Stimulation in Enhanced Geothermal Systems Considering Fractures in Different Scales

S-GP-292	Vallier B., Magnenet V., Fond C., Schmittbuhl J.	Two and three dimensional THM modelling of the Soultz-sous-Forêts geothermal reservoir: a comparison
S-GP-239	Verdel, A., Wedemeijer, H., Paap, B., Vandeweijer, V., Weemstra, C., Jousset, P., Franke, S., Blanck, H., Águstsson, K., Páll Hersir, G.	Reykjanes ambient noise reflection interferometry
S-GP-207	Weemstra, C.	Time-lapse seismic imaging of the Reykjanes geothermal reservoir

4.D. Science – Other (S-O)

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S-O-13	Bazargan, M., Gudmundsson, A., Meredith, P., Kenyon, I.	Developing Geothermal Energy from Hydrothermal and EGS Sources while Minimizing Risks
S-O-62	Blaisonneau	A simplified operational strategy combining well architecture and hydraulic stimulation for EGS
S-O-163	Burté, L., Cotiche Baranger, C., Aquilina, L., Le Borgne, T., Gerard, M-F.	Clogging of shallow geothermal doublets: hydrologic, geochemical and microbiological observations in a pilot site
S-O-365	Gáspár, E.	Hydrodinamic and heat transport modelling of the regional transboundary geothermal aquifers of Western Hungary
S-O-168	Held, S.	Effects of major fault zones on geothermal reservoirs – a case study at Villarrica Volcano, southern Chile
S-O-93	Ingólfsson, H. P., Árnason, K., Axelsson, G., Franzson, H., Hreinsdottir, S., Jónsson, M. T., Sævarsdóttir, G., Gunnarsson, G., Júlíusson, E., Sigmundsson, F., Gardarsson, S. M.	Deep roots of geothermal systems a georg collaborative project
S-O-393	Carvalho, J. M., Nunes, J. M., do Rosário Carvalho, M.	Direct uses as environmental mitigation measure in Ribeira Grande Geothermal Field (S. Miguel, Azores Islands, Portugal)
S-O-55	Kasmaee, S., Tinti, F.? Ferrari, M., Lanconelli, M., Egger, H., Di	Use of Universal Kriging as a tool to estimate mountain temperature distribution affected

	Bella, R., Voza, A., Zurlo, R., Boldini, D., Bruno, R.	by underground infrastructures: the case of the Brenner Base Tunnel
S-O-341	Pereira, A., Costa, J., Panão, M., Miranda, M., Machadinho, A., Lamas, R., Neves, L., Rodrigues, N.	Estimation of heat flow and geothermal gradient from numerical modelling in central Portugal
S-O-360	Roth-Zehner, M.	Prehistoric and ancient occupations near Kesseldorf and Rittershoffen: archaeological surveying excavations along the underground heat network
S-O-388	Salimzadeh, S. Hamid N., Paluszny, A., Bruhn, D. F.	Towards numerical modelling of THMC coupled processes in fractured geothermal reservoirs
S-O-143	Sanjuan B.	Inter-well chemical tracer testing at the Rittershoffen geothermal site
S-O-313	Schaming M., Grunberg M., Jahn M., Schmittbuhl J., Cuenot, N. Genter, A., Dalmais, E.	CDGP, a data center for deep geothermal data from Alsace
S-O-83	Schulze Darup, M., Renner, J.	Automatic pressure control in enhanced geothermal systems
S-O-253	Þorsteinsdóttir, U., Helgadóttir, H. M., Hersir, G. P., Einarsson, G. M.	Conceptual modelling of the Krafla geothermal area, NE-Iceland and lessons on constructing a workflow
S-O-254	Weisenberger, T. B., Ingimarsson, H., Eyjólfsdóttir, E. I., Lévy, L., Hersir, G. P., Flóvenz, Ó. G.	Validation of the Influence of Cation-Exchange Capacity on Resistivity Logs

4.E. Science – Thermodynamics (S-T)

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S-T-153	Freymark, J., Sippel, J., Scheck-Wenderoth, M., Bär, K., Stiller, M., Fritsche, J-G., Kracht, M.	The thermal field of the Upper Rhine Graben - Temperature predictions based on a 3D model
S-T-150	Frick, M., Sippel, J., Cacace, M., Scheck-Wenderoth, M.	Influence of geological structure and geophysical parameters on the geothermal field below the city of Berlin, Germany
S-T-166	Loeve, D., Peters, L., Plzzocolo, F., Veldkamp, H., van Wees, J-D., Fokker, P.	Screening of thermal fractures in geothermal doublets

S-T-305	Niederau, J., Börsing, N., Wellmann, F., Clauser, C.	Entropy production and attractors: Measures to quantify uncertainty and complexity introduced by convection
S-T-73	Nigon, B., Englert, A., Christophe, P.	Modeling of heat transport through fractures with emphasis to roughness and aperture variability
S-T-356	Nusiaputra, Y.	A two-phase geothermal wellbore simulator to model THC behavior using Elmer-PHREEQC

5. Committes

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