



Preliminary Program

International Conference

Large Igneous Provinces, Mantle Plumes and Metallogeny In the Earth's History

Organized by

Institute of Geochemistry,
Siberian Branch,
Russian Academy of Sciences
(IGC SB RAS)

1 – 8 September 2015,
Irkutsk-Listvyanka, Russia

September, 2
Plenary session

- 9.00 – 9.10** *M.I. Kuzmin*
OPENING CEREMONY & WELCOMING ADDRESS
- 9.10 – 9.40** *M.I. Kuzmin*
CHANGE IN TECTONICS STYLE DURING THE EARTH EVOLUTION (FROM ITS ORIGIN TO THE PRESENT)
- 9.40 – 10.10** *N.V. Sobolev, A.V. Sobolev, D.V. Kuzmin, A.A. Tomilenko, V.G. Batanova, A.M. Logvinova, A.V. Tolstov, S.I. Kostrovitsky, D.A. Yakovlev*
EVOLUTION OF THE COMPOSITION OF SIBERIAN CRATONIC LITHOSPHERE DURING THE INTERACTION WITH SIBERIAN FLOOD BASALT (SFB) PROVINCE
- 10.10 – 10.40** *V.V. Yarmolyuk*
LATE MESOZOIC MAGMATIC PROVINCE OF EAST ASIA AS A RESULT OF PLUME-LITHOSPHERE INTERACTION ON CONVERGENT PLATE BOUNDARIES
- 10.40 – 11.10** *R.E. Ernst, U. Söderlund, M.A. Hamilton, K.R. Chamberlain, W. Bleeker, A.V. Okrugin, A.N. LeCheminant, T. Kolotilina, A.S. Mekhonoshin, K.L. Buchan, D.P. Gladkochub, A.N. Didenko, J.A. Hanes*
LONG-TERM NEIGHBORS: RECONSTRUCTION OF SOUTHERN SIBERIA AND NORTHERN LAURENTIA BASED ON MULTIPLE LIP BARCODE MATCHES OVER THE INTERVAL 1.9–0.7 GA
- 11.10 – 11.30** **Coffee break**
- 11.30 – 12.00** *Q. Wang, N. Bagdassarov*
MANTLE PLUMES AND STABILITY OF CRATONS
- 11.30 – 12.00** *K.-L. Wang, M.I. Kuzmin, S.Y. O'Reilly, W.L. Griffin, A.A. Vorontsov, N.J. Pearson, Y.-H. Chien*
GEOCHEMICAL FINGERPRINTS IN VITIM MANTLE XENOLITHS REVEAL PROGRESSIVE UPWELLING OF ASTHENOSPHERIC MANTLE IN LATE CENOZOIC
- 12.00 – 12.30** *D.P. Gladkochub, T.V. Donskaya, A.M. Mazukabzov, R.E. Ernst, S.A. Pisarevsky*
MESOPROTEROZOIC MANTLE PLUME BENEATH THE NORTHERN PART OF THE SIBERIAN CRATON
- 12.30 – 13.00** *N.A. Goryachev*
LARGE MESOZOIC MAGMATIC PROVINCE OF GRANITOIDS IN GOLD METALLOGENY OF THE NORTHERN PACIFIC RIM
- 13.00 – 14.00** **Lunch**

Plenary session

- 14.00 – 14.30** *P.Yu. Plechov, N.A. Nekrylov, M.S. Tikhonova, V.D. Shcherbakov*
EXTREMELY MAGNESIAN OLIVINES IN MAGMATIC ROCKS
- 14.30 – 15.00** *E.V. Sklyarov, Yu.V. Karyakin, N.S. Karmanov, N.D. Tostykh*
PLATINUM GROUP MINERALS IN DOLERITE OF THE ALEXANDRA LAND ISLAND (FRANZ JOSEF ARCHIPELAGO)
- 15.00 – 15.30** *A.E. Izokh, A.Ya. Medvedev, G.S. Fedoseev, G.V. Polyakov*
PLATINUM GROUP ELEMENTS DISTRIBUTION IN PERMO-TRIASSIC BASALTS OF SIBERIAN LARGE IGNEOUS PROVINCE
- 15.30 – 16.00** *Yu.G. Safonov*
ORE GENERATING FLUID-MAGMATIC SYSTEMS OF GIANT NOBLE AND NONFERROUS METAL DEPOSITS IN PROVINCES – REGIONS OF PLUME MAGMATISM
- 16.00 – 16.20** **Coffee break**

Silicic LIP magmatism in orogenic belts

- 16.20 – 16.50** *B.-M. Jahn, G. Valui, N. Kruk, V. Gonevchuk, M. Usuki, J.T.J. Wu*
LIP OF NON-PLUME ORIGIN – CRETACEOUS MAGMATISM IN THE RUSSIAN FAR EAST: EXAMPLE FROM THE SIKHOTE-ALIN OROGENIC BELT
- 16.50 – 17.10** *A.A. Tsygankov, V.B. Khubanov, A.V. Travin, E.N. Lepekhina, G.N. Burmakina, T.N. Antsyferova, O.V. Udoratina*
GRANITOID AREAS AS A CONSEQUENCE OF MANTLE PLUMES? (EXEMPLIFIED BY THE ANGARO-VITIM BATHOLITH)
- 17.10 – 17.30** *V.S. Antipin, O. Gerel, A.B. Perepelov, D. Odgerel*
LATE PALEOZOIC AND EARLY MESOZOIC RARE-METAL GRANITES OF LARGE IGNEOUS PROVINCES OF BAIKAL REGION AND MONGOLIA: COMPARATIVE GEOCHEMISTRY AND MAGMA SOURCES
- 17.30 – 17.50** *O. Gerel, B. Munkhtsengel, J. Dostal*
EARLY MESOZOIC ALKALINE GRANITOID MAGMATISM IN MONGOLIA: EVIDENCE OF PLUME ACTIVITY IN THE MONGOL-TRANSBAIKAL PROVINCE
- 17.50 – 18.10** *P. Kotler, S. Khromykh, A. Vladimirov, N. Kruk, O. Navozov, V. Khubanov*
PETROLOGY AND ISOTOPIC DATING OF KALBA-NARYM GRANITE BATHOLITH (EAST KAZAKHSTAN)
- 18.10 – 18.30** **Discussion**

September, 3

Plume-lithospheric interactions in Central Asia (Paleozoic to Mesozoic)

- 9.00 – 9.20** *E.V. Sklyarov, V.S. Fedorovsky, A.M. Mazukabzov, D.P. Gladkochub, T.V. Donskaya, A.V. Lavrenchuk, A.B. Kotov*
EVIDENCE OF PLUME-TECTONICS IN THE OLKHON COLLISIONAL SYSTEM (CENTRAL ASIAN OROGENIC BELT)
- 9.20 – 9.40** *N.N. Kruk, V.I. Krupchatnikov, N.I. Gusev, V.V. Vrublevsky*
EARLY DEVONIAN MAGMATISM IN ALTAI MOUNTAINS: RELATION OF PLUME- AND PLATE-TECTONIC FACTORS
- 9.40 – 10.00** *S.V. Khromykh, E.N. Sokolova, G.N. Burmakina, P.D. Kotler*
LATE PALEOZOIC MANTLE-CRUST MAGMATISM IN EASTERN KAZAKHSTAN AS A RESULT OF TARIM MANTLE PLUME ACTIVITY
- 10.00 – 10.20** *Y.Y. Shelepov, R.A. Shelepaev*
COMPOSITION OF SHIBEINGOL GABBRO-MONZONITE-GRANOSYENITE COMPLEX (LAKE ZONE OF WESTERN MONGOLIA)
- 10.20 – 10.40** *A.V. Vishnevskiy*
EARLY PALEOZOIC Pt-BEARING BELT OF ALTAI-SAYAN AREA (SOUTHERN SIBERIA): DEBATE ON ALASKAN-TYPE INTRUSIONS CRITERIA
- 10.40 – 11.00** **Coffee break**
- 11.00 – 11.20** *I.F. Gertner, V.V. Vrublevskii, T.S. Krasnova*
EVOLUTION OF HIGH-ALUMINA ALKALINE MAGMATISM IN THE CENTRAL ASIAN FOLDED BELT
- 11.20 – 11.40** *A.A. Vorontsov, T.Yu. Komaritsyna*
PLUME (GEOCHEMICAL AND ISOTOPE) SIGNATURE OF LATE MESOZOIC RIFTING VOLCANISM WITHIN THE UDA RIVER SECTOR, WESTERN TRANS-BAIKAL REGION
- 11.40 – 12.00** *G.S. Fedoseev*
MAFIC SILLOGENESIS IN DEPRESSION STRUCTURES OF THE CENTRAL ASIAN FOLD BELT

Cenozoic magmatism and geodynamics of Asia

- 12.00 – 12.20** *S.S. Tsypukova, A.B. Perepelov, E.I. Demonterova, A.V. Ivanov, A.V. Travin, S.I. Dril, Yu.D. Scherbakov, D. Odgerel, M.Yu. Puzankov*
CENOZOIC ALKALINE-BASALTIC MAGMATISM OF DARKHAT DEPRESSION IN NORTH MONGOLIA: EVOLUTION, SOURCES AND ORIGIN OF MAGMA, TECTONIC ACTIVITY
- 12.20 – 12.40** *M.A. Gornova, S.I. Dril, A.B. Perepelov, K.-L. Wang, V.A. Belyaev*
MINERALOGICAL AND GEOCHEMICAL STUDY OF LHERZOLITES FROM ALKALI BASALTS OF TUMUSUN VOLCANO (BAIKAL RIFT): REFERTILIZATION OR PARTIAL MELTING?
- 12.40 – 13.00** *I.S. Chuvashova, S.V. Rasskazov*
THE LATEST GEODYNAMICS OF ASIA
- 13.00 – 14.00** **Lunch**

Precambrian plume and LIP magmatism in Siberian craton

- 14.00 – 14.20** *D.P. Gladkochub, T.V. Donskaya, R.E. Ernst, S.A. Pisarevsky, A.M. Mazukabzov, M.A. Hamilton*
THREE STAGES OF INTRACONTINENTAL MAFIC MAGMATISM IN THE SOUTH-EASTERN PART OF THE SHARYZHALGAI INLIER OF THE SIBERIAN CRATONIC BASEMENT
- 14.20 – 14.40** *R.E. Ernst, A.V. Okrugin, R.V. Veselovskiy, S.L. Kamo, M.A. Hamilton, V. Pavlov, U. Söderlund, K.R. Chamberlain, C. Rogers*
THE 1501 MA KUONAMKA LIP OF NORTHERN SIBERIA: U-PB GEOCHRONOLOGY, GEOCHEMISTRY, PGE POTENTIAL, AND LINKS WITH OTHER CRUSTAL BLOCKS
- 14.40 – 15.00** *R.E. Ernst, D.P. Gladkochub, M.A. Hamilton, S.L. Kamo, S. Denyszyn, A.V. Okrugin, U. Söderlund*
NEWLY RECOGNIZED 1353-1338 MA LIP OF SIBERIA AND FORMERLY CONNECTED NORTHERN LAURENTIA: SPECULATIVE IMPLICATIONS FOR THE VOISEY'S BAY ORE DEPOSIT
- 15.00 – 15.20** *B.I. Gongalsky, A.L. Galyamov, G.D. Pavlovich, A.V. Petrov, K.Yu. Murashov*
3D MODEL OF THE HEAD OF A PALEOPROTEROZOIC PLUME IN THE SOUTHERN SIBERIAN CRATON

15.20 – 15.40 *S.N. Prusskaya, Yu.R. Vasil'ev*
GEOLOGIC POSITION OF THE ONEKA INTRUSIVE
COMPLEX (WESTERN SIBERIAN PLATFORM)

15.40 – 16.00 *O.M. Glazunov, T.A. Radomskaya, A.V. Salaev*
GEOCHEMICAL EVIDENCE OF PLATINOIDS IN
ULTRABASIC ROCKS OF THE SOUTHERN TERMINATION
OF NORTH-ASIAN CRATON

16.00 – 16.20 **Coffee break**

Kimberlite magmatism

16.20 – 16.40 *S.I. Kostrovitsky, D.A. Yakovlev*
AGES, MANTLE SOURCE AND TECTONIC CONTROL OF
KIMBERLITE VOLCANISM IN SIBERIAN PLATFORM

16.40 – 17.00 *S. Zhmodik, M. Buslov, P. Ivanov, E. Ayriyants, D. Belyanin, A.
Borisenko*
MESOZOIC STAGE OF THE CARBONATITE AND
KIMBERLITE MAGMATISM AT THE ANABAR AREA

17.00 – 17.20 *M.D. Tomshin, A.V. Travin, K.M. Konstantinov*
THE SEQUENCE OF MAGMATIC EVENTS WITHIN THE
NAKYN KIMBERLITE FIELD

17.20 – 18.00 **Poster session**

September, 4

Intraplate ore deposits and metallogeny

- 9.00 – 9.20** *A.M. Spiridonov, L.D. Zorina, Z.I. Kulikova, A.E. Budyak, A.V. Parshin, L.A. Pavlova, E.M. Granina*
DEPOSIT POGROMNOE – NON-TRADITIONAL
INDUSTRIAL TYPE OF GOLD MINERALIZATION IN
TRANSBAIKALIA
- 9.20 – 9.40** *N.V. Vladykin*
PETROLOGY OF SUPERGIANT RARE-METAL DEPOSITS
IN ALKALINE PLUME-RELATED ROCKS (EASTERN
ANABAR REGION)
- 9.40 – 10.00** *R.A. Badmatsyrenova*
LA-ICP-MS STUDY OF APATITE FROM THE ARSENTYEV
FE-TI-V-P DEPOSIT, TRANSBAIKALIA, RUSSIA

Modeling, theoretical and experimental studies

- 10.00 – 10.20** *N.S. Zhatnuev*
THE FLUID PLUMES MODEL AND FORMATION
MECHANISMS OF THE MAGMATIC RESERVOIRS OF
TRAP EFFUSION
- 10.20 – 10.40** *V.S. Shkodzinskiy*
ORIGIN OF MAGMAS ACCORDING TO MODERN DATA
ON HOT ACCRETION OF THE EARTH
- 10.40 – 11.00** *V.I. Kosyakov, E.F. Sinyakova, A.S. Borisenko, V.A. Shestakov*
ON THE PROBLEM OF SULFATE SULFUR ASSIMILATION
BY SULFIDE MELT
- 11.00 – 11.20** **Coffee break**
- 11.20 – 11.40** *D.S. Yudin, S.A. Novikova, A.V. Travin, E.I. Zhimulev, N.S. Tychkov, N.G. Murzintsev, T.N. Moroz*
MOBILITY OF ARGON IN PHLOGOPITE UNDER HIGH
TEMPERATURES AND PRESSURES
- 11.40 – 12.00** *I.V. Ashchepkov, N.V. Vladykin, Z.V. Spetsius, A.M. Logvinova, H. Downes, T. Ntaflos*
USAGE OF ECLOGITE THERMOBAROMETRY FOR
MANTLE PETROLOGY
- 12.00 – 12.20** *vacant*
- 12.20 – 12.40** *vacant*
- 12.40 – 14.00** **Lunch**

Deep Earth Interior (special session)

- 14.00 – 14.30** *E. Ohtani*
FORMATION PROCESS AND LIGHT ELEMENTS OF
EARTH'S CORE
- 14.30 – 15.00** *K. Litasov*
MATERIAL TRANSPORT AND VOLATILE BUDGET IN THE
DEEP EARTH'S MANTLE
- 15.00 – 15.30** *D. Zedgenizov*
EVIDENCE FOR SUBDUCTED CRUSTAL SOURCES OF
DIAMONDS FROM SUBLITHOSPHERIC MANTLE
- 15.30 – 16.00** *A. Ivanov*
THE SOURCE REGION OF FLOOD BASALT IN THE
HYDROUS TRANSITION ZONE
- 16.00 – 17.00** **General Discussion**

Poster session and distant participation

V.I. Alekseev, Yu.B. Marin

SIMILARITY OF ORE-MAGMATIC SYSTEMS IN THE FAR EAST LARGE IGNEOUS PROVINCE OF LITHIUM-FLUORIC GRANITES

R. Akhundjanov, S.O. Zenkova, F.B. Karimova, S.S. Saydiganiev

ORE-MAGMATIC SYSTEM OF ULTRABASIC-BASIC INTRUSIONS OF THE MIDDLE AND SOUTHERN TIEN-SHAN (UZBEKISTAN)

T.B. Bayanova, P.A. Serov

LARGE LOW-SULFIDE PT-PD DEPOSITS OF THE KOLA PENINSULA - DERIVATIVES PLUME MAFIC MAGMATISM

E.S. Borisenko, E.L. Kunakkuzin, P.A. Serov

GEOLOGICAL AND GEOCHEMICAL FEATURES OF THE DIFFERING IN AGE MONCHETUNDRRA MASSIF ROCKS (KOLA PENINSULA)

B.R. Choudhary, G.N. Jadhav

GEOCHEMISTRY AND PETROGENESIS OF BASALTIC LAVA FLOWS OF THE WAI SUBGROUP, DVP WESTERN INDIA

S.I. Dril, S.A. Sasim, Yu.V. Noskova

SR-O ISOTOPE SYSTEMS AND SOURCES FOR COLLISION-RELATED GRANITOIDS OF THE MONGOLO-OKHOTSK OROGENIC BELT (EXEMPLIFIED BY THE UNDINSKY COMPLEX, EASTERN TRANSBAIKALIA)

R.E. Ernst, S.A. Pisarevsky

DATABASES RELATED TO LARGE IGNEOUS PROVINCES

D.P. Gladkochub, A.M. Larin, A.B. Kotov, N.V. Vladykin, V.P. Kovach, E.V. Sklyarov, T.V. Donskaya, S.D. Velikoslavinskii

A POSSIBLE ROLE OF THE SUPERPLUME IN GENESIS OF UNIQUE KATUGIN RARE METAL DEPOSIT (ALDAN SHIELD)

B.I. Gongalsky, N.A. Krivolutsкая, Yu.G. Safonov

MAFIC DIKES AS INDICATORS OF TECTONIC AND MAGMATIC PROCESSES IN THE SOUTHERN SIBERIAN CRATON

N.I. Gusev, S.P. Shokalsky

EARLY CARBONIFEROUS MANTLE MAGMATISM PRODUCING TITANIUM-MAGNETITE ORE IN THE GORNY ALTAI

V.A. Guryanov, A.Yu. Peskov

ULKAN PALEORIFT STRUCTURE IN THE SOUTH-EASTERN ENVIRONS OF THE SIBERIAN PLATFORM: AGE, CONDITIONS, GEODYNAMIC SETTING AND METALLOGENY

V.A. Guryanov, V.S. Prikhod'ko, A.Yu. Peskov

PRISTANOVVOY ZONE OF THE PALEOPROTEROZOIC COLLISION – A NEW PLATINUM-COPPER-COBALT-NICKEL PROVINCE ON THE SOUTHEASTERN PERIPHERY OF THE SIBERIAN PLATFORM

E.L. Kunakkuzin, T.B. Bayanova, L.I. Nerovich, E.S. Borisenko, P.A. Serov
ISOTOPE-GEOCHEMICAL ND-SR FEATURES OF THE PALEOPROTEROZOIC
PGE-BEARING MONCHETUNDRA MASSIF MAFIC ROCKS
(FENNOSCANDIAN SHIELD)

Yu.V. Laptev, A.S. Borisenko, I.R. Prokopiev
CO₂ EFFECT ON HETEROGENIZATION CONDITIONS OF SULPHATE-
CHLORIDE-CARBONIC FLUIDS AND GOLD, PYRITE, AND MOLYBDENITE
SOLUBILITY

B. He, Y.-T. Zhong, Y.-G. Xu
DID THE SIBERIAN TRAPS TRIGGER PERMO-TRIASSIC BOUNDARY MASS
EXTINCTION?

V.V. Kulikova, V.S. Kulikov, Ya.V. Bychkova
EVOLUTION OF PLUME MAGMATISM AND ITS ASSOCIATED LARGE
IGNEOUS PROVINCES IN THE FENNOSCANDIA FROM THE ARCHEAN TO
THE PALEOZOIC

L.N. Morozova, T.B. Bayanova, A.V. Basai, P.A. Serov, E.S. Borisenko, E.L. Kunakkuzin

GEOLOGY AND GEOCHEMISTRY OF RARE-METAL PEGMATITES FROM
THE KOLMOZERO DEPOSIT (BAL TIC SHIELD, RUSSIA)

L.I. Nerovich, T.B. Bayanova, E.S. Borisenko, P.A. Serov, E.L. Kunakkuzin
DIKES TITANIFEROUS DOLERITES OF THE MONCHA TUNDRA MASSIF –
THE REAL REFLECTION OF THE COMPOSITION OF THE
PALEOPROTEROZOIC PLUME KOLA REGION

A.V. Okrugin
HIGH-Ti ALKALINE ULTRABASIC-BASIC ROCKS IN THE RIVER BASIN OF
ANABAR AS A CONTINUATION OF THE MAIMECHA-KOTUY PROVINCE

F. Pirajno
THE CONTINENTAL MARGIN OF EASTERN ASIA: HOME OF A
CRETACEOUS-CENOZOIC (VERY) LARGE IGNEOUS PROVINCE?

V.F. Polin, S.I. Dril
VARIATIONS OF THE LEAD ISOTOPE RATIOS IN POLYFORMATION
MAGMATITES OF THE KETKAP-YUNA MAGMATIC PROVINCE (ALDAN
SHIELD) – AN EVIDENCE OF INTERACTION OF MANTLE DIAPIRS AND
CONTINENTAL CRUST

T.A. Ponomareva
PETROPHYSICAL MODEL OF LITHOSPHERE BENEATH THE NORTH OF
THE URALS

V.N. Puchkov
MAGMATIC COMPLEXES OF THE URALS AS PROBABLE FRAGMENTS OF
LIPS

A. Romanko, A. Savichev, S. Stepanov, S.M. Tabatabaeimanesh
INTRAPLATE NORMAL AND CA-RICH IGNEOUS ROCKS ASSOCIATED
WITH CARBONATITES IN WEST BALUCHESTAN, MIDDLE EAST

I.D. Ryabchikov, L.N. Kogarko
THERMODYNAMIC PARAMETERS OF MANTLE PLUME MATERIAL

V.N. Sharapov, Y.V. Perepechko, Sorokin K.

FACTORS DETERMINING THE SIZE OF THE ASTHENOSPHERE ZONES
GENERATING INTRAPLATE LARGE PROVINCE OF IGNEOUS ROCKS

E.M. Sheremet

THE ORIGIN OF GRANITOIDS OF RAPA-KIVI FORMATION BY PLUME
TECTONICS OR BY SUBDUCTION PLATE-TECTONIC?

V.S. Shkodzinskiy

ORIGIN OF MAGMAS ACCORDING TO MODERN DATA ON HOT
ACCRETION OF THE EARTH

A.V. Travin

EPISODICITY OF CENTRAL ASIAN CALEDONIAN ACCRETION-COLLISION
EVENTS: IMPLICATIONS FOR SUPERPLUME-PLATE INTERACTIONS

R.V. Veselovskiy, S.N. Thomson, A.A. Arzamastsev, V.S. Zakharov

POST-DEVONIAN TECTONICS OF THE NE FENNOSCANDIA INFERRED
FROM APATITE FISSION TRACK DATING OF THE Khibina Massif
(KOLA PENINSULA)

C.Y. Wang

NEW TEXTURAL AND MINERALOGICAL CONSTRAINTS ON THE ORIGIN
OF THE XINJIE FE-TI-V OXIDE DEPOSIT IN THE EMEISHAN LARGE
IGNEOUS PROVINCE (SW CHINA)

Y.-G. Xu

CONTRASTING PLUME-LITHOSPHERE INTERACTIONS IN THE
GENERATIONS OF PERMIAN LARGE IGNEOUS PROVINCES IN CHINA

L.M. Zhitova

ORE-MAGMATIC SYSTEM OF METAL-BEARING REEFS OF THE
BUSHVELD COMPLEX, SOUTH AFRICA