



**UN, UNESCO, International Astronomical Union
"The International Year of Astronomy"**

**INTERNATIONAL ASTRONOMICAL CONGRESS
"ASTROKAZAN - 2009", 19 – 28 AUGUST 2009, KAZAN, RUSSIA**

**USSR-Russia: The first artificial satellite of the Moon - 50 years
USA: The first step of the Man on the Moon - 40 years**

**International Scientific Symposium
The Moon, moons and planets: Robotic Exploration and Comparisons
August 19 - 26, 2009, Kazan State University, Russia**

T H I R D A N N O U N C E M E N T

It is a great pleasure to welcome you to attend and contribute to the International Scientific Congress "ASTROKAZAN - 2009". We hope that it will give the opportunity to scientists from different disciplines to meet and exchange ideas about present-day problems of the Astronomy. All the members of the Organizing Committee will be at the participant's disposal during the Conference to meet their requirements.

We wish you a pleasant stay in Kazan.

Organizing Committee of INTERNATIONAL ASTRONOMICAL CONGRESS
"ASTROKAZAN - 2009" cordially invite You to the Opening Ceremony and
Welcome reception to be held on Monday 19 August 2009 at 3.00 p.m.
in the Assembly hall of the Kazan State University

Calendar of Events

Wednesday, 19 August 2009 **Opening Ceremony** will be held at the Assembly hall of the Kazan State University, main building, Kremlevskaya str., 18 at 3 p.m.

9.00–14.00	Registration
11.30–13.30	Walking tour of the downtown, visiting the Kazan University museum
13.30–15.00	Lunch
15:00–16:00	Welcome and Opening Address
16:00–17:00	Scientific Plenary Session
17:00–17:15	Photography
17:15–18.00	Coffee, tea, mineral water
18.00–19.00	Concert of classical and spiritual music
19.00–20.00	Reception

Standard Daily Schedule of Meetings and Time Table of Symposium

09.00–11.00	Plenary session
11.00–11.30	Coffee/tea break
11.30–12.30	Plenary session
12.30–14.00	Lunch
14.00–15.30	Symposium/Workshop sessions
15.30–16.00	Coffee/tea break
16.00–17.30	Symposium/Workshop sessions
18.30–21.00	Evening events

Scientific and Social Events

19 August	09.00 – 14.00	Registration, Excursions
19 August	15.00 – 19.00	Opening Ceremony, Photography, Music Concert
19 August	19.00 – 20.00	Reception
20 August	09.00 – 17.30	Scientific Student Program, Evening Public Lecture (7-8 p.m.)
21 August	09.00 – 17.30	Scientific Student Program, Evening Public Lecture (7-8 p.m.)
22 August	09.00 – 13.00	Scientific Student Program, excursion to EAO, Raif's Cloister (2 – 7. p.m.)
23 August	10.00 – 19.00	Travel by Ship on the River Volga to Island Sviyazsk Russian Fortress XVI Century.
24 August	09.00 – 17.30	Scientific Program, Evening Public Lectures (7-8 p.m.)
25 August	08.00 – 20.00	Elabuga bus excursion.
26 August	09.00 – 18.00	Scientific Program, Discussion, Resolution of the Symposium, Closing, Farewell Party, Evening Public Lectures (7-8 p.m.)

**LIST OF PUBLIC LECTURES OF THE ASTRONOMICAL CONGRESS
“ ASTROKAZAN – 2009 ”**

Chair: Academician of AS RT, Professor of Kazan University Nail Sakhbullin

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PUBLIC LECTURE

August 20, Thursday, 19.00 – 20.00

Auditorium 1 Phys., Main Building of Kazan State University

Title: TBD

Lector: Professor Rashid Sunyaev Academician of RAS
(Space Research Institute, Moscow)

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PUBLIC LECTURE

August 21, Friday, 19.00 – 20.00

Auditorium 1 Phys., Main Building of Kazan State University

Title: Black hole in the Universe

Lector: Professor Anatoly Cherepaschuk Academician of RAS
(Moscow State University)

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PUBLIC LECTURE

August 22, Saturday, 19.00 – 20.00

Auditorium 1 Phys., Main Building of Kazan State University

Title: Change of Climate and Increase of World Ocean Level

Lector: Professor Yuri Barkin (Moscow state University)

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PUBLIC LECTURE

August 24, Monday, 19.00 – 20.00

Auditorium 1 Phys., Main Building of Kazan State University

Title: The Moon: Yesterday, Today, Tomorrow

Lector: Professor Vladislav Shevchenko (Moscow state University)

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PUBLIC LECTURE

August 26, Wednesday, 19.00 – 20.00

Auditorium 1 Phys., Main Building of Kazan State University

Title: “350 Extra-solar planets”

Lector: Professor Leonid Ksanfomality (Space Research Institute, Moscow)

Program of lunar & planetary symposium, Aug. 19-26, 2009, Kazan

Scientific Student Program

20 August, 2009 Morning session, Kazan University

10-00 – 12-00 Opening. Chair: Sakhibullin N.A.

1. Cherepaschuk A.M. Black hole in the Universe 60^m

2. Shustov B. M. Galaxies: Birth, Life, Ending 60^m

Lunch, 12-00 – 14.00

20 August, 2009 Evening session, Kazan University

14-00 – 16-00 Chair: Cherepaschuk A.M.

3. Marov M. Ya. Structure of Solar system - that we know today 60^m

4. Malkov O.Yu. International virtual observatory 60^m

Tee, Coffee – Break, 30 minutes

16-30 – 18-00 Poster Session

Dinner, 18-00 - 19-00

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19-00 – 20-00 Public Lecture TBD

Lector: Prof. Sunyaev R. A.

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21 August, 2009 Morning session, Kazan University

10-00 – 12-00 Chair: Marov M. Ya.

5. Rykhlova L.V. Near-Earth space: garbage artificial & garbage natural 60^m

6. Grechko G.M. Cosmic stories 60^m

Lunch, 12-00 – 14.00

21 August, 2009 Evening session, Kazan University

14-00 – 16-30 Chair: Stepanov A. V.

7. Hanada H. SELENE I mission (Japan): Lunar investigation (video) 60^m

8. Skulski M., Romanuk I. From magnetism of CP-stars to magnetism of

double stars 30^m

Tee, Coffee – Break, 30 min

9. Ksanfomality L.V. 350 Extra-solar planets 60^m

Dinner, 18-00 - 19-00

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19-00 – 20-00 Public Lecture Black holes and the Universe

Lector: Prof. Cherepaschuk A.M.

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22 August, 2009 Morning session, Kazan University

10-00 – 12-00 Chair: Abalakin V.K.

10. Stepanov A. V. Main problems of solar activity 60^m

11. Shevchenko V.V. Modern problem of lunar exploration 60^m

Lunch, 12-00 – 14.00

22 August, 2009 Evening session, Kazan University

14-00 - 16-30 Chair: Rykhlova L. V.

12. Savinykh V. P. Modern problem of cosmic research 60^m

Tee, Coffee – Break, 30 min.

13. Mingaliev M. Role and place of radio astronomy in Universe research 60^m

14. Mironov A.V. TBD 30^m

17-00 - 18-00 General Discussion, discussion and acceptance of resolutions.

Chairs: Sakhibullin N. A., Zhukov G.V.

Dinner, 18-00 - 19-00

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August 22, Saturday, 2009

19.00 – 20.00 Public Lecture: Increase of World Ocean Level

Lector: Professor Barkin Yu.V.

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23 August, Sunday 2009. Excursion: Travel by Ship on the River Volga to

10.00 – 19.00

Island Sviyazsk Russian Fortress XVI Century

Program of lunar & planetary symposium, Aug. 19-26, 2009, Kazan

Scientific Program

24 August, 2009 Morning session: Moon I

9-00 – 11-00 Opening. Chair: Nefed'ev Yu. A.

1. **Marov M. Ya.** Review of moon-planetary researches 30 min.
2. **Foing B.** SMART-1 results and future lunar exploration **Plenary** 60 min.
3. **Namiki N., S. Sugita , K. Matsumoto, S. Goossens , Y. Ishihara, H. Noda, S. Sasaki,**
T. Iwata, H. Hanada, H. Araki, S. Kamata, N. Kubo, A. Mori, M. Sato
COMPARATIVE STUDY OF COMPENSATION MECHANISM OF LUNAR IMPACT
BASINS FROM NEW GRAVITY FIELD MODEL OF SELENE (KAGUYA). 30 min.

Coffee – Break, 30 min

11-30 – 13-00 Chair: Marov M. Ya.

4. **Barkin Y, S.M.Kudryavsev, M.Y.Barkin** Perturbations of first order of the Moon rotation
30 min
5. **Hanada H, H. Noda, F. Kikuchi, S. Tazawa, H. Kunimori, K. Matsumoto, H. Araki, T. Iwata,**
K. Funazaki , S. Sasaki Different kinds of Observation of Lunar Rotation and
Gravity for SELENE-2 30 min
6. **Pinet P.C., S.D. Chevrel, J.-L. Josset, J. Haruyama.** Recent results on Lunar Spaceborne
Exploration based on Clementine, Smart-1 and Selene observations. 30 min

Lunch, 13-00 – 14.30

24 August, 2009 Evening session: Moon II

14-30 - 16-00

Chair: Foing B.

7. **Araki H**, S. Tazawa, H. Noda, Y. Ishii, S. Goossens, S. Sasaki, N. Kawano, I. Kamiya, H. Ohtake, J. Oberst, C. K. Shum. Lunar Global Topographic Map by the KAGUYA Laser Altimeter (LALT) 30min
8. **Zheng W.**, Ping J., Hu X. Applications of Chinese VLBI Network in Chang'E-1 lunar exploration project. 30 min
9. **Kopeikin S.M.** Millimeter Laser Ranging to the Moon: a comprehensive theoretical model for advanced data analysis. 30 min

Coffee – Break, 30 min. Poster Session

16-30 - 18-30

Chair: Hanada H.

10. **Kuskov O.L.** Joint inversion of seismic and petrologic data for lunar thermal state. 30 min
11. **Chao C.**, **B. Chen**, Q. Liang, J. Ping, Q. Huang. Lunar gravity anomaly and the Moon evolution based on CE-1 topography data. 30 min
12. **Shuanggen Jin**, A. Gusev, N. Petrova. Selenodesy and Selenophysics: recent results and problems. 15 min
13. **Kozlova E.A.**, Lazarev E.N., Rodionova J.F., Shevchenko V.V. Investigation of the Lunar South Polar Region relief. 15 min
14. **Kascheev R.A.**, R.E.Shakirov. Recent studies of the accuracy of lunar and terrestrial gravity models. 15 min
15. **Kondratyev B.P.** Vector approach to the Lunar physical libration 15 min

Dinner – Reception, 18-30 - 19-00

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24 August, 2009 Public Lecture: The Moon: Yesterday, Today, Tomorrow

19-00 – 20-00

Lector: Prof. V.V. Shevchenko

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25 August, 2009 8-00 – 20-00, Elabuga bus excursion

26 August, 2009 Morning session: Planets and moons of solar system

9-00 – 11-00

Chair: Korablev O.

1. **Zelenyi L. M.** Europa lander. 30 min.
2. **Souchay J**, Cottureau L. The rotation of Venus: state-of-the art and precession-nutation model. 30 min
3. **Ksanfomality L.** Results of ground observation of still unknown side of Mercury. 30 min.

4. **Akulenko L.D.**, Markov Yu.G., Perepelkin V.V. The dynamic analysis of oscillatory process of the deformable Earth 30 min

Coffee – Break, 30 min

11-30 – 13-15 Chair: Ksanfomality L.

5. **Korablev O.** Spacecraft observations of Mars: Recent achievements and plans for the future, 30 min
6. **Fedorova A.**, O. Korablev, A.Trokhimovsky, J.L. Bertaux, A.Rodin, F. Montmessin, L.Maltagliati, S.Guslyakova, A.Reberac, A.Kiselev and the SPICAM team. Infrared measurements with SPICAM experiment on Mars-Express: three Martian years of observations of the Martian atmosphere 15 min
7. **Marov M.Ya.**, A.B. Makalkin, A.V. Kolesnichenko, V.A. Dorofeeva, I.N. Ziglina. Modeling of evolution of the protoplanetary gas-dust circumsolar disk 30 min
8. **Titov D. V., Korablev O.**, H. Svedhem, S. Barabash, J.-L. Bertaux, P. Drossart, B. Häusler, W.J. Markiewicz, M. Pätzold, G. Piccioni, O. Witasse, R. Hoofs Venus Express: three years of atmospheric observations 30 min

Lunch, 13-15 – 14.30

26 August, 2009 Evening session

14-30 - 16-15 Chair: Gusev A.

Extra-Solar planet systems and moons

9. **Ksanfomality L.** Some results of observation and researches of exoplanet properties 30 min
10. **Franck Z.**, W. von Bloh, C. Bounama, M. Cuntz Gliese 581d: The first habitable super-Earth-planet 30 min
11. **Barkin Y.** Moons and planets: mechanism of their active life 30 min
12. **Busarev V.V.** SPECTRAL CHARACTERISTICS OF GALILEAN MOONS OF JUPITER 15 min

Coffee – Break, 30 min Poster Session

16-45 - 18-00 Chair: Souchay J.

13. **Valeev S.G.**, Nefed'ev Yu. A., Mikeev R.R., Varaksina N.Yu., The relative position of lunar centre of the masses and centre of the figure in selenocentric catalogues. 15 min
14. **Petrova N.**, Gusev A., Hanada H., Akutina M. Application of the analytical theory of lunar physical libration for the simulation of observations of stars for the future Japanese Lunar project ILOM 15 min
15. **Shpekin M.I.**, Sitdikova R.A. "Topographical Preparation of Landing Sites on Far Side of the Moon". 15 min
16. **Kazantseva L.V.** Modern application to observations of lunar occultations 15 min

17. **Abdulmyanov T.R.** The Newtonian model of perihelion motion of the planets 15 min

17-45–18-00 General Discussion and acceptance of resolutions, closing

Chairs: Marov M.Ya., Nefed'ev Yu. A.

Farewell Party , 18-00 - 19-00

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26 August, 2009 Public Lecture: “350 Extra-solar planets”

19-00 – 20-00 Lector: Prof. Ksanfomality L.V.

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Poster session:

1. **Mushailov B.R., V.S. Teplitskaya** On the evolution of two-frequency dynamical systems in the case of orbital Lindblad resonances, taking into account the Rayleigh dissipation
2. **Abdulmyanov T. R.** THE TWO PERIODIC ORBITS OF THE CELESTIAL BODIES OF CENTRAL GRAVITATIONAL FIELD
3. **Petrova N., Gusev A., Ivanova T.,** Coordinate systems on the Moon and Lunar Navigation Almanac.
4. **Petrova N., Gusev A., Kawano N., Kikuchi F., Hanada H.,** Radio-beacons on the Moon - Inverse VLBI - and estimation of the Lunar physical libration accuracy in Japanese space experiment
5. **Petrova N., Gusev A., Tatarinov P., Akutina M.,** Development of user interface for computer modeling of the free libration periods of the multi-layered Moon
6. **Petrova N., Gusev A., Kawano N., Hanada H.,** Physical Libration and Interior of the multi-layered Moon
7. **Gusev A., Petrova N., Zakiev I.,** Internal structure and geometrical flattening of mantle and liquid core of the Moon
8. **Gusev A., Petrova N.,** Physical libration of mantle and liquid core of the Moon
9. **Nefedjev Yu., L. Rakhimov , N. Rizvanov , M. Kutlenkov, N.Varaksina.** CATALOGUE OF A CRATERS LUNAR LIBRATION ZONE
10. **Shpekin M.I.** The Last “Apollo” Orbit Pass over the Tsiolkovsky Crater

Regulation

30 minute talks are 25 min. speaking, plus 5 min. questions;
15 min. talks are 12 + 3,
Short Presentations of Poster Session are by 5 min, 3 viewgraph.

Speaker assistance: *Available equipment*

All meeting rooms will be equipped with one 35mm slide projector and desk top overhead transparency projector. Microphones will be supplied in rooms in which amplified sound is required. Should you require any other form of technical equipment (including Power Point facilities) then contact LOC at least 24 hours before the presentation. Any request not made at least 24 hours in advance cannot be guaranteed.

Climate

The average temperature of August 19 –August 27 is 18 – 22 °C day, 12 – 14 °C night. Rain is possible.

General Facilities

Registration will take place in August 19 since 9.00 to 14.00 in the lobby of Assembly hall of the Kazan State University, main building, Kremlevskaya str., 18. All participants are obliged to register and to wear their badge during the Conference as well as during social events.

The registration fee covers admissions to all Conference activities, including the Participant's Handbook, Extensional Abstract Book, presentational, coffee/tea breaks, the reception of participants. Please, note that lunches, accommodation, Raif's excursion, river trips, photography and the Conference Dinner are not included within the basic registration fee. Payment will be at the conference desk upon registration. We will only accept cash money.

The registration for accompanying persons includes: coffee breaks, the reception for participants, and other entertainment events.

Tee and Coffee

Coffee, tea and cookies will be offered to participants during the scheduled breaks in the vicinity of the conference-halls.

Lunch – Dinner

No meals are included in the registration fee other than those that form part of the social program. There is the student cafe "Loza" (main building of KSU), student dining-hall located on the ground floor of the Physics faculty, Kazan University. The Local Org. committee has made a special agreement and lunch will be available there at a suitable time and a very reasonable price. Other restaurants and cafe are also located downtown, which are open until late at night. They are

- Restaurant McDonalds – 70, Bauman str.,
- Restaurant "Yakitoria" (Japanese restaurant) – 3, Pushkin str.,
- Restaurant of the "Tatarstan" hotel – 1, Kuibyshev str.
- "Tee-house" (Tatar cuisine) – 64, Bauman str.;
- Cafe "Akiyat" – 58, Bauman str.;
- Cafe "Pizzeria" – 4, Lobachevsky str.;
- Pizzeria "Juseppe" (Italian restaurant) – 13, Kremljevskaya str.

Glossary of tatar cuisine:

"Eshpochmak – treugol'nik" – pie of meat and potato;
"Peremjach" – pie of meat;
"Chak–Chak" – sweet honey nuts of paste.
"Gubadia" – pie of rice, boiled curds (of meat) and egg.

Banks and Foreign Exchange Facilities

There are several banks located near the Kazan University at the Kremljevskya and Bauman streets. All these banks are within walking distance from the conference place. Bank opening hours are 08.00 to 18.00 Monday to Friday and 08.00 to 14.00 on Saturday.

You should have dollars USA or Euro IN CASH for exchanging to Russian roubles. Payment of hotels, transport, shops, restaurants just is made by roubles. The rate of exchange is approximately to 31 roubles per 1 dollar USA or 44 roubles per Euro (August 2009).

Electric Power – 220 Volts; 50 Hz

Public Transportation in the City

There is a comprehensive public transportation system in the city. The bus, tram, trolley-bus fare is 10 roubles. The commercial mini-bus fare is 15 – 20 roubles.

Transportation from Kazan airport

The Kazan airport is about 25 km from the city. The best way to get to the city is to take a taxi or Bus No 121. The bus fare to the city is 40 rubles. Then you can take the trolley-bus No 2 to the "University"-station.

Transportation from Kazan Railway Station

The Kazan Railway Station is of 20min walking to the University. You can take the tram No 2, 4, 20 to the "Tukai place"- station, or “Detskii mir”.

Insurance

Insurance is the responsibility of participants. In cases of emergency there are always hospital on duty and the treatment is complimentary. The telephone number for emergency cases is 03.

Shopping

The large stores and supermarkets are open between 09:00 and 21:00 Monday to Saturday. Many shops are opened on Sunday.

Conference secretariat:

**Contact: “The Moon, moons and Planets” Aug. 19 - 26, 2009,
Kazan University, Russia**

<http://www.astroheritage.ru>

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International links

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**We are looking forward to meeting you in
Kazan.**

