Appendix No 1

14th Saint Petersburg International Conference on Integrated Navigation Systems
28 – 30 May 2007, Russia

30, Malaya Posadskaya St., St. Petersburg, 197046, Russia. Tel. 7 (812) 499 81 57, 499 81 18 Fax 7 (812) 232 33 76
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PRELIMINARY PROGRAM*

MONDAY, 28 MAY 2007

8.00-9.50 REGISTRATION OF CONFERENCE PARTICIPANTS

10.00-10.15 **OPENING CEREMONY**

10.15-10.55 0. **B.Ye. Chertok** (*Rocket Space Corporation Energia, Korolyov, Moscow Region, **Russia***)
The 100th Anniversary of Sergei Korolyov, the Chief Designer of Space Technology, and the 50th Anniversary of the Circumterrestrial Satellite Launch

10.55-11.25 COFFEE BREAK

SESSION I – INERTIAL SYSTEMS AND SENSORS

PLENARY PAPERS

11.25 – 11.45 1. **A.P.Mezentsev, E.N.Frolov, M.Yu. Klimkin, O.A. Mezentsev** (*i-SENSE, Moscow, **Russia**)*
Development, Production and Test Results for a Medium-accuracy MEMS INS "AIST-320" based on Coriolis Vibratory Gyro "AIST-100"

11.55-12.05 2. **Jacques Leclerc** *(THALES Avionics, Valence, **France**)*
MEMS for Aerospace Navigation

POSTER PAPERS **

12.05-13.00 3. **M.A. Lestev** (Join-stock company GYROOPTICS" Ltd., *St. Petersburg, **Russia)***
The Influence of Nonlinear Factors on Dynamics and Accuracy of Micromechanical Gyroscopes

4. **Victor Fedossov, Milan Chvojka** *(Aeronautical Research and Test Institute, Prague, **Czech Republic**)*
Microaccelerometer MAC Control Concept Analysis

5. **A.A. Tulchinskiy, V.D. Egorov, V.P. Gubko, A.A. Ryazanov, I.Yu. Kozlov** *(Elektromechanics Scientific Production Association, Miass, Chelyabinsk Region, **Russia**)*
Sensors of Control System of New Russian "SOYUZ-2" Launcher

6. **V. M. Slyusar** *(National Technical University of Ukraine "KPI", Kiev, **Ukraine**)*
Digital Dynamically Tuned Gyros for Strapdown Systems

The Conference Program Committee reserves the right to make alterations to the final Conference Program.

** The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters

7. **L.Ya. Kalihman**, **D.M. Kalihman, A.V. Polushkin, Yu.V.Sadomtsev, R.V.Ermakov** , **S.F. Nahov** *(FSUE PC Korpus, Saratov, **Russia**)*
Technique for Arranging of Miniature Packs of High Performance Rate Gyros for Space Vehicles on the Basis of Floating Rate-of Turn Gyros and Modern Element Base

8. **Yu Hai-Cheng, Wang Wei** (*Beijing Institute of Aerospace Control Devices, Beijing, **China***)
Improved Performance of Scale Factory Linearity in Closed-Loop Interferometric Fiber Optic Gyro

9. **A.V. Molchanov** *(Moscow Institute of Electromechanics and Automatics, Moscow, **Russia**)*, **D.A. Morozov, A.Yu. Stepanov, M.V. Chirkin** *(Department of Physics, Ryazan State University, Ryazan, **Russia**)*
Estimation of Random Error for Laser Gyro with Adjustable Beam Path Geometry in Imperfect Ring Cavity

10. **Rossen Miletiev, Rumen Arnaudov** (*Technical University of Sofia, Sofia, **Bulgaria***)
3D Vibration Analysis Using MEMS Inertial Sensors

11. **S.A. Sarapuloff, V.V. Rogov, T.O. Bakalor** *(STM (Special Technologies & Machines) Co. / Ukraine's Academy of Technological Sciences (ATSU) & Ukraine's National Academy of Sciences (NASU), Kiev, **Ukraine**)*
Particularities of Designs and Fabrication Technology of High-Q Sapphire Resonators of CRG-1 Type Solid-State Gyroscopes

12. **P.K. Plotnikov, B.K. Syvyakov, Yu.P. Slapovskaya, I.B. Jakovleva** *(Saratov State Technical University, Saratov, **Russia**)*
Simulation of Waveguide Type SHF Resonance Gyroscope Operation

13. **T.G. Nesterenko, I.A. Plotnikov, I.V. Plotnikova** *(Tomsk Polytechnic University, Tomsk, **Russia**)*
The Extra Small Azimuth Unit with a Two-Mass Vibration Gyroscope

14. **V.P.Podchezertsev, V.V.Barykin, R.N.Bykov, V.V. Fateyev** (*Bauman Moscow State Technical University, Moscow, **Russia***)
A Series Beam Vibrating Gyroscopes of Various Purpose

15. **S.V. Bogoslovsky** *(JSC «Avangard-Elionica», Saint Petersburg, **Russia**)*
Precision Primary Sensing Element on the Basis of the Dispersive Resonator on SAW for Accelerometers and Measurement of Pressure

16. **V.M. Nikiforov, Y.A. Trounov, V.A. Nemkevich, A.I. Sapozhnikov, A.V. Naumenko, A.A. Lisitsyn** *(Pilyugin Scientific-Production Center of Automatics and Instrument-Making, Moscow, **Russia**)*
Terminal Motion Control of Gyro-Stabilized Platform for Elimination of Dynamic "Bounce" in the Regime of Power Stabilization

17. **Yu.V. Chebotarevsky, P.K. Plotnikov, Yu.A. Zakharov** *(Saratov State Technical University, Saratov, **Russia**)*, **S.F. Nakhov, D.M. Kalikhman, A.V. Polushkin** *(FGUP PO "Korpus", Saratov, **Russia**)*
Ways of the Reduction of the Friction Effect for the Single-Axis Calibrating

Gyroscopic Stand Accuracy Analysis

18. **Yu.G. Egorov, S.V. Smirnov** *(Bauman Moscow State Technical University, Moscow,* ***Russia****)*
Observability of Azimuthal Orientation Error and Instrumental Errors of Triaxial Gyrostabilizer by Means of Currents Measured in Horizontal Correction Channels with Azimuthal Rotation of Gyroplatform

19. **A.V. Dmitriev, S.L.Pogorelsky, V.Ya. Filimonov** *(State Unitary Enterprise "KBP Instrument Design Bureau", Tula,* ***Russia)***, **V.V. Matveyev, D.M. Malyutin, V.Ya. Raspopov** *(Tula State University, Tula,* ***Russia)***
Experience of Development of Optoelectronic Single-Rotor Target Gyro-Coordinators

20. **A.A. Dovbeshko, A.V. Zbrytskyi, I.V. Maksimov, I.V. Rassokha** *(National Technical University of Ukraine «KIEV POLYTECHNIC INSTITUTE», Kiev,* ***Ukraine****)*
Microprocessor-Based Data Controlling & Processing Blocks for Quantum-Optical Gyroscopes of New Generation

13.00-14.00 LUNCH

PLENARY PAPERS

14.00-14.20 21. **Michael Shatalov** *(Sensor Science and Technology of CSIR Material Science and Manufacturing, Pretoria,* ***South Africa****),* **B.S. Lunin** *(Moscow Lomonosov State University, Moscow,* ***Russia****)*
Vibratory Gyroscopes: Identification of Mathematical Model from Test Data

14.20-14.40 22. **V.V. Chikovani, Yu.A. Yatsenko, A.S. Barabashov, V.A. Kovalenko, V.I. Scherban, P.I. Marusyk** *(INNALABS Holding Inc., Kiev,* ***Ukraine****)*
Thermophysical Parameters Optimization of Metallic Resonator CVG and Temperature Test Results

POSTER PAPERS*

14.40 – 15.35 23. **A.Yu. Mishin, E.A. Chumankin, O.A. Frolova** *(JSC Arzamas Research & Production Enterprise «TEMP-AVIA», Arzamas, Nizhny Novgorod region,* ***Russia****)*
Laser Gyrocompass Study

24. **S.M.Yakoushin** *(Perm State Technical University, Perm,* ***Russia****)*
Increase of Accuracy of Inertial Navigating Systems with Use of a Method of Equivalent Drift in Prestarting Adjustment Mode

25. **N.N. Kokoshkin, Ye.I. Verzunov, D.A. Burov** *(Federal State Unitary Enterprise "All-Russian Scientific Research Institute "Signal", Kovrov, Vladimir region,* ***Russia****)*
Application of Algorithms and Algorithmic Compensation to Improve the Efficiency of Gyro Course-Roll Indicating System Used in Ground Vehicle

* The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters

26. **V.E. Dzhashitov, V.M. Pankratov** *(Precision Mechanics and Control Institute, Russian Academy of Sciences, Saratov,* ***Russia****)*
Control by the Interconnected Mechanical and Thermal Processes of Nonlinear Dynamic Systems with Feedback to Thermal Perturbation

27. **Ye. I. Somov** *(Samara Scientific Center of RAS, Samara,* ***Russia****)*
Analytic Synthesis of the Gyromoment Guidance Laws for Information Spacecraft

28. **A.V. Chernodarov**, **A.P. Patrikeev** *(Zhukovsky Air Force Engineering Academy, Moscow,* ***Russia****)*, **S.E. Perelyaev** *(Moscow Institute of Electromechanics and Automatics, Moscow,* ***Russia****)*
Monitoring and Estimation of the Inertial-Sensor Condition During Integrated Primary Processing of Signals

29. **N.I. Krobka, A.P. Mezentsev, O.A.Mezentsev** (*i-SENSE, Moscow,* ***Russia****)*
Calibrations Methods of MEMS Inertial Measurement Units for Mass-Production

30. **Yu.Yu. Broslavets, M.A. Georgieva, A.A. Fomitchev** *(Moscow Institute of Physics and Technology (State University), JSC "Lasex", Dolgoprudny, Moscow region,* ***Russia****)*
The Problems of Bidirectional Generation and Effect of Synchronization Frequencies of Counter Propagation Waves' in a Laser Gyro

31. **Yu.Yu. Broslavets, T.E. Zaitseva, A.A. Fomitchev** *(Moscow Institute of Physics and Technology (State University), JSC "Lasex", Dolgoprudny, Moscow region,* ***Russia****)*
Mode Structure of Field in the Zeeman Laser Gyro with the Non-Planar Resonator and Non-Gaussian Diaphragm

32. **L.B. Ruleva** (*RAS Institute for Problem in Mechanics, Moscow,* ***Russia***)
The Synchronous Gyro Motor Rotor Oscillations Influence on Errors of the Gyro Angular Velocity Vector Measuring Device

33. **N.A. Atamanov , V.A. Troitsky, I.V. Gusev** *(«Navteco» Ltd, Moscow,* ***Russia****)*
A Method of Accelerometers Errors Estimation and Compensation in Strapdown Inertial Systems

34. **Junxiang Lian, Wenqi Wu, Xiaoping Hu** *(National University of Defense Technology, Changsha, Hunan,* ***China****)*
Strapdown INS Alignment Algorithm in Inertial Frame

35. **E.A. Chumankin, A.Yu Mishin** *(JSC Arzamas Research & Production Enterprise «TEMP-AVIA», Arzamas, Nizhny Novgorod region,* ***Russia****)*
Nonstationary Random Drift Estimation

36. **Yang Gong-Liu, Chen Chao-Ying, Weng Hai-Na, Zheng Rong-Cai** (*Tianjin Navigation Instrument Research Institute, Tianjin,* ***China***)
Study on Optimizing Layout of Shipborne IMU Based on Genetic Algorithm

37. **S.A. Brodsky, A.V. Nebylov, A.I. Panferov (***International Institute for Advanced Aerospace Technologies of State University of Aerospace Instrumentation, Saint Petersburg,* ***Russia****)*
Optimization of Distributed Inertial Sensors System for Measuring the Motion Parameters of Flexible Construction

38. **Xianfei Pan, Wenqi Wu, Mingming Jiang, Meiping Wu** (*National University of Defense Technology, Changsha,* ***China***)
Optimization on Attitude Algorithm for RLG Dither Demodulation Ways

39. **V. A. Belenkiy** ***(Russia)***
Inertial System with Linear Correction

15.35-16.05 COFFEE BREAK

PLENARY PAPERS

16.05-16.20 40. **G.I. Dzhandzhgava, A.V. Trebukhov, K.A. Bahonin, G.M. Vinogradov** *(JSC Ramenskoye Design Company, Ramenskoye, Moscow region,* ***Russia****)*
Strapdown Inertial Navigation System on the Basis of Hemispherical Resonator Gyros

16.20-16.40 41. **S.F. Konovalov, A.V. Polynkov, A.A. Trunov** *(Bauman Moscow State Technical University,* ***Russia****)*, **J. B. Seo, H. K. Moon** ***(Korea)***
Research of Operability of Accelerometers at Great Linear Accelerations, Vibration and Shocks Effects without Using Centrifuges, Vibration and Shock Stends

17.00-21.00 SIGHT-SEEING GUIDED BUS TOUR OF ST. PETERSBURG

TUESDAY, 29 MAY 2007

SESSION I – INERTIAL SYSTEMS AND SENSORS
(*Continued*)

PLENARY PAPERS

9.00 – 9.20 42. **V.S. Ermakov, O.L. Kel, A.S. Parfenov** (*JSC Perm Research and Production Instrument Company (PNPPK), Perm,* ***Russia****),* **A.B. Kolchev, P.V. Larionov, A.A. Fomichev** *(JSC "Lasex", Dolgoprudny, Moscow region,* ***Russia****)*
Tests of the Fibre-Optical Gyros Unit in a Structure of the Integrated Navigating System NSI-2000MTF

9.20 – 9.40 43. **Yu.N. Korkishko, V.A. Fedorov, V.E. Prilutskii, V.G. Ponomarev, V.G.Marchuk, I.V.Morev, S.M.Kostritskii, E.M. Paderin** *(RPC "OPTOLINK" Ltd.", Moscow,* ***Russia****)*, **L.P. Nesenyuk, A.S.Buravlev, L.G.Lisin (***Federal State Unitary Enterprise Central Scientific and Research Institute (CSRI) "Elektropribor", Saint Petersburg,* ***Russia****)*
Navigation-Grade Interferometric Fiber Optical Gyroscope

9.40 – 10.00 44. **Wang Jun-Long, Wang Wei** (*Beijing Institute of Aerospace Control Devices, Beijing,* ***China***)
A Novel Resonator Integrated Optic Gyro Based on Silica Waveguide Circuit

SESSION II –INTEGRATED SYSTEMS

PLENARY PAPERS

10.00 – 10.20 45. **Ralf Mönikes, Oliver Meister, Armin Teltschick, Jan Wendel, Gert F. Trommer** (*ITE – University of Karlsruhe, Karlsruhe, **Germany***)
Performance Comparison of a Fixed-Interval Smoother and a Kalman Filter for GNSS/INS Integration

10.20 – 10.40 46. **D.A. Antonov, K.K.Veremeenko, M.V.Zharkov, R.Yu.Zimin**
*(Moscow Aviation Institute (State Technical University), Moscow, **Russia**)*
Small-Sized Integrated Navigation and Attitude Determination System

10.40 – 11.00 47. **Randall Jaffe, Honghui Qi, Tony Rios** *(Systron Donner Inertial, Walnut Creek, CA, **USA**)*
Test Results and Description of the MMQ-G, MEMS INS-GPS

11.00 – 11.30 COFFEE BREAK

PLENARY PAPERS

11.30 – 11.50 48. **G.P.Anshakov, V.P.Makarov, A.I.Manturov, Y.A.Mostovoi** *(State Research and Production Space Rocket Center "TsSKB-PROGRESS", Samara, **Russia**)*
Methods and Control Facilities in Highly Informative Observation of the Ground From Space

11.50 – 12.10 49. **V. Nikulin**, **J. Sofka**, **V. Skormin** (Center for Advanced Information Technologies, Binghamton University, USA), **D. Hughes**, **D. Legare (**Air Force Research Laboratory, Rome NY, USA
Demonstration of Optical Connectivity Between Two Mobile Platforms

12.10 – 12.30 50. **N.N. Sevastianov, V.N. Branets, M.Yu. Belyaev, D.A. Zavalishin, V.N. Platonov** *(Rocket and Space Corporation "Energia", Korolyov, Moscow region, **Russia**)*, **Yu.R. Banit** *(Public corporation "Gazkom", Korolyov, Moscow region, **Russia**)*, **V.V. Sazonov** *(Keldysh Institute of Applied Mathematics RAS, Moscow, **Russia**)*
Analysis of the Control Possibilities of the "Jamal-200" Using Motion Mathematical Model

POSTER PAPERS*

12.30 – 13.00 51. **V.A. Karelin, I.G. Rubin** *(Russian Institute of Radionavigation and Time, St. Petersburg, **Russia**)*
The Angle Transmitter on Basis of the Ferromagnetic Resonance (FMR)

52. **Muhammad Haris Afzal, Muhammad Asif, Naveed Akram, Muhammad Akhtar Khan** *(National Engineering and Scientific Commission, Islamabad, **Pakistan**)*
Guidance Chip for Micro Aerial Vehicles

53. **G.A. Avanesov, T. Yu. Drozdova, M.I. Kudelin, A.V. Nikitin, A.A Forsh**
(Space Research Institute of the Russian Academy of Sciences, Moscow, Russia)
Optical Solar Sensor

* The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters

54. **Byong-Suk Suk** *(Korea Aerospace Research Institute Daejeon, **Korea**),* **Min-Seok Seo** *(Korea Aerospace Industry LTD. Sacheon, **Korea**)*, **Joon Lyou** *(Chungnam National Univ., Daejeon, **Korea**)*
Energy Balance Analysis of Low Earth Orbiting Satellite

55. **A.P. Mezentsev, V.M. Achildiev, O.A. Mezentsev** *(i-SENSE, Moscow, **Russia**)*
Flying Test Results of a Miniature Helicopter UAV Equipped with an Integrated Control and Navigation System (ICNS)

56. **A.A. Tunik** *(National Aviation University, **Ukraine**),* **A.N. Klipa** *(National Aviation University, **Ukraine**)*
Identification of "Stiff" Mathematical Models of Aircraft in Presence of Measurement Noise and Systematic Errors

57. **E.I. Druzhinin, V.A.Voronov** *(Institute of System Dynamics and Control Theory of SB RAS, Irkutsk, **Russia**)*
The Construction of Rough Program Control by Work Processes of Orbital Telescope

58. **Hua Mu, Meiping Wu, Xiaoping Hu, Hongxu Ma** (*National University of Defense Technology, Changsha, Hunan, **China***)
Geomagnetic Air Navigation Using Adaptive EKF

59. **M. M. Busko** *(Irkutsk State Linguistic University, Irkutsk, **Russia**)*
Integration GPS/GLONASS with Altimeter and Compass in the Navigation Systems of Land Moving Objects

60. **G.V. Antsev, V.A. Sarychev, V.A. Tupikov, L.S. Turnetsky** *(Joint-Stock Company «Radar mms», St. Petersburg, **Russia**)*
Radioelectronic Systems for Aircraft Automatic Guidance

13.00 – 14.00 LUNCH

PLENARY PAPERS

14.00 – 14.20 61. **G.A. Avanesov, A.A. Forsh, , R.V.Bessonov, Ya.L. Ziman, M.I. Kudelin** *(Space Research Institute of the Russian Academy of Sciences, Moscow, **Russia**),* **R.G. Zalyalova** *(Samara Space Center, Samara, **Russia**)*
BOKZ-M Star Tracker

14.20 – 14.40 62. **Abilio Azenha, Adriano Carvalho** (*Institute for Systems and Robotics, University of Porto, Porto, **Portugal**)*
AGV Control in the Presence of Localization Systematical Errors

14.40 – 15.00 63. **V.S. Lobanov, N.V. Tarasenko, D.N. Shulga, V. N. Zboroshenko** *(FSUE Central Scientific Research Institute of Machine Building (TsNIImash), Korolyov, Moscow region, **Russia**),* **S.V. Fedoseev, U.A. Khahanov** *(Russian Mobile Vehicle Institute, St. Petersburg, **Russia**)*
The Pointing Systems of Target Equipment on the Basis of Automatic Rotary Platforms for RS ISS

POSTER PAPERS*

* The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters

15.00 – 15.30 64. **Petr Bojda** (*University of Defense, Brno, Czech Republic*)
Trajectory Prediction Algorithm and Its Application into FPGA Unit

65. **D.G.Arseniev, V.P. Shkodyrev** *(St. Petersburg State Polytechnical University, St.Petersburg, **Russia**)*
Agent-based Navigation and Control for Optimal Cooperative Behavior of Autonomy Mobile Systems

66. **Aibin Chen** (*College of Information Science and Engineering, Central South University, College of Computer Science, Central South University of Forestry Technology, Changsha, **China***), **Zixing Cai** (*College of Information Science and Engineering, Central South University, Changsha, **China***)
Advances in Multiple Mobile Robots

67. **A.V. Sholokhov** *(IRSI "Institute of Engineering Physics", Serpukhov, Moscow region, **Russia**)*
Identification of Information Failures in the Terrain Navigation System Integrated with a Digital Map of Road

68. **Weng Haina, Huang Fengrong** (*Tianjin Institute of Navigation Instrument, Tianjin, **China***)
A Study and Visual Simulation on Integrated INS/Gravity-Map Matching Navigation System

69. **V.B. Kostousov, A.E. Tarkhanov** *(Institute of Mathematics and Mechanics, Ural Branch of the Russian Academy of Sciences, Ekaterinburg, **Russia**)*
Estimation of Binary Images Informativeness

70. **V.I. Kortunov, G.A. Proskura** *(National Aerospace University named by N.E.Zhukovsky "KhAI", **Ukraine**)*
The Analysis of Process of Correction for Strapdown INS

71. **G.B. Volobuev, V.I. Suchilin** *(Open Society «Concern «Sozvezdie», Voronezh, **Russia**)*, **V.I. Parfenov** *(Voronezh State University, Voronezh, **Russia**)*
The Choice of Algorithms of Filtering of Coordinates of Ground Mobile Object for Realization in Integrated Navigation System of New Generation with Satellite and Autonomous Segments by Results of Computer Modeling

72. **L.N. Blokhin, N.V. Bilak, I.Yu. Prokofieva** (*National Aviation University, Kiev, **Ukraine**)*
Problems and Task of Optimal Stochastic State Estimation of Stabilized Plant by Data of Full-Scale and Scaled-Down Experiments

15.30 – 16.00 COFFEE BREAK

PLENARY PAPERS

16.00 – 16.20 73. **Baifan Chen, Zixing Cai** (*School of Information Science and Engineering, Central South University, **China***)
Simultaneous localization and mapping using sonar and vision sensors in dynamic environments

16.20 – 16.40 74. **O.S. Amosov** *(State Technical University, Komsomolsk-on-Amur, **Russia**)*, **S.P. Dmitriev, D.A. Koshaev, A.V. Osipov, O.A. Stepanov** (*SRC of Russia – CSRI Elektropribor, St.Petersburg, **Russia**)*

Fuzzy Logic in Navigation Data Processing

16.40 – 17.00 75. **Andrzej Banachowicz, Adam Wolski, Grzegorz Banachowicz** *(Maritime University of Szczecin, Szczecin,* ***Poland)***
Integration of the Short-Range Hyperbolic System JEMIOLUSZKA and DGPS

17.00 – 17.20 76. **A.A.Tunik**, **M.A. Touat** *(National Aviation University, Kiev,* ***Ukraine****)*
Combination of Fuzzy and Traditional Control in Robust Flight Stabilization Systems

17.20 – 17.40 77. **Yan Ping** *(Unit of PLA China, Xingcheng , Liaoning****, China****)*
Sensor Fusion for Integrated Navigation Using Adaptive Federal Kalman Filter

17.40 – 18.00 78. **Yu.V. Vaulin, Yu.V. Matvienko, A.F.Scherbatyuk** *(Institute for Marine Technology Problems of FEB RAS, Vladivostok,* ***Russia****)*
Positioning of the AUV MMT-3000

18.30 – 22.00 BANQUET

WEDNESDAY, 30 MAY 2007

SESSION II – INTEGRATED SYSTEMS
(Continued)

PLENARY PAPERS

9.00 – 9.20 79. **A.A. Bermishev, I.V. Voronovsky, N.I. Kaznovsky, L.A. Krivospitsky, A.V. Konechnych, S.G. Revnivych** *(Mission Control Center, Korolev, Moscow region,* ***Russia****)*, **S. P. Kovita, I.K. Konardzevsky, B.B. Tikko** *(Russian Institute of Radionavigation and Time, St. Petersburg,* ***Russia****)*, **L.B. Rapoport, Javad Asjai** *(GNSS company)*, **P.G. Itin** *(Scientific & Production Enterprise «Termoteh", Korolev, Moscow region,* ***Russia****),* **S.S. Gusarov, A.A. Lazarev** *(Coast Guard Department of Boundary Armies,* ***Russia****)*
The Results of Experiment for Researching to Navigating Condition at Northern Seaway

POSTER PAPERS*

9.20 – 9.35 80. **M.B. Bogdanov, A.V. Prokhortsov, V.V.Savel'ev, V. A. Smirnov** *(Tula State University, Tula,* ***Russia****)*
The Way of Estimation a Strapdown Inertial Navigation System Errors in Coordinates and Velocities by Means Data from Two Navigation Satellites

81. **Inanc Moran** *(Turkish Naval Forces, İstanbul,* ***Turkey****)*
Three Plane Approach for 3D True Proportional Navigation

82. **P.P. Paramonov, Yu.I. Sabo** *(GUE SPb. ODO "Electroavtomatika", St. Petersburg,* ***Russia),*** **V.Ya. Raspopov, S.E. Tovkach, R.V. Alaluev, V.V. Matveev, Yu.V. Ivanov** *(Tula State University, Tula,* ***Russia***
The Microsystem Avionics of Smallsize Pilotless Aircraft

83. **Abilio Azenha, Adriano Carvalho** *(Institute for Systems and Robotics, University of Porto, Porto,* ***Portugal****)*
Radio Frequency Localization for AGV Positioning

* The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters

SESSION III – SATELLITE SYSTEMS

PLENARY PAPERS

9.35 – 9.55 84. **Christophe Ouzeau** (*ENAC/TéSA/DTI, **France***), **Christophe Macabiau**, **Anne-Christine Escher** (*ENAC, Toulouse, **France***), **Benoît Roturier** (*DSNA-DTI, **France***)
Detection and Degradation Techniques Using RAIM Algorithm to Declare a Degraded Mode

9.55 – 10.15 85. **Nicolai Mikhailov** *(Mstar Semiconductor, Inc., St. Petersburg, **Russia)***
Autonomous Navigation of Space Vehicles Using GPS

10.15 – 10.35 86. **A.A. Zhalilo** (*Main Astronomical Observatory of the NASU, Kiev**, Ukraine)***
Carrier-Phase Cycle-Slip Detection and Repair of Single/Dual-Frequency GPS/GNSS Observations – New Universal Technique and Algorithms

POSTER PAPERS*

10.35 – 11.00 87. **E.G. Kharin, I.A. Kopylov, V.G. Polikarpov, V.A. Kopelovich., V.M. Padenko** *(Gromov Flight Research Institute, Zhukovsky, Moscow Region, **Russia**),* **A.Y. Yankush** *(SIC «GPS COM», **Russia)***
Accuracy Assessment of the Differential Mode Coordinates by SNS Phase Measurements at Flight Tests

88. **O.O. Barabanov, L.P. Barabanova** *(Kovrov State Technological Academy named after V.A. Degtyarev, Kovrov, **Russia)***
Method of Satellite Positioning with Measurement of Effective Velocity of Light

89. **D.A. Shelkovenkov** *(Kharkov National University of Radio Electronics, Kharkov, **Ukraine)***
Quality Control of Code and Carrier Phase GPS - Observations at Pre-Processing Stage

90. **V.I. Baburov, N.V. Ivanszevich, E.A. Panov, N.V. Vasileva** *(Branch Office "AUSRIRE" "AUSRIRE-Navigator", Saint Peterburg, **Russia)***
The Analysis of Methods of the Ionospheric Delay Correction for GPS Receivers in Case of High Solar Activity

91. **S.S. Suvorov, Y.V. Kuleshov, A.M. Devyatkin, M.O.Ivanec** *(Mozhaisky Military Aerospace Academy, St. Petersburg, **Russia)***
Accounting Methods of the Geophysical Factor in Goals of Quality Improvement of Coordinate and Time Ensuring GLONASS Consumers

92. **A.A. Zhalilo** *(Main Astronomical Observatory of the NASU, Kiev, **Ukraine)***, **D.A. Shelkovenko** *(Kharkov National University of Radio Electronics, Kharkov, **Ukraine)***
"OCTAVA": Multifunctional Software Toolkit for Processing and Analysis of GPS/GNSS Observations

93. **E.I. Ignatovich, A.F. Schekutiev** *(MCC (ZUP-M TsNIImasch), Korolyov,*

*The authors of poster papers present 1-2 slides within 3 minutes at the plenary session; the discussion will be continued at the posters

*Moscow Region, **Russia**)*
Methods and Algorithms of Frequency-Time Parameters Refinement and Onboard Clock Sinchronization for Modernized GNSS Glonass Spacecrafts with Use of Intersatellite Measurements

11.00 – 11.30 COFFEE BREAK

PLENARY PAPERS

11.30 – 11.50 94. **Ali Telli, Ediz Cetin, Izzet Kale** *(University of Westminster, DSP and VLSI Research Group, Cavendish School of Computer Science London, **UK**)*
GaliSys: Fully Integrated Software Configurable Receiver Integrated Circuit(s) (ICs) for GALILEO Radio Navigation Satellite Systems

11.50 – 12.10 95. **I.V. Belokonov, A.V. Kramlikh, S.A. Soboda** *(Samara State Aerospace University, Samara, **Russia**)*
Problems of Navigation Support of Research Experiments in Space on an Example of Mission of Spacecraft "Foton - M2"

12.10 – 12.30 96. **Pavel Kovář, František Vejražka, Libor Seidl, Pavel Puričer, Josef Špaček** (*Czech Technical University in Prague, Praha, **Czech Republic***)
GPS/EGNOS/Galileo Software Receiver for Railway

12.30 – 12.50 97. **G.A. Avanesov, Ya.L. Ziman, M.I. Kudelin, A.A. Forsh** *(Space Research Institute of the Russian Academy of Sciences, Moscow, **Russia**),* **V.E. Druzhin, A.E. Tyulyakov, D.N. Fiodorov, B.V. Shebshaevich** *(Russian Institute of Radionavigation and Time, St. Petersburg, **Russia**)*
Reference & Clock System for S/C Flight Control

12.50 – 13.00 **CLOSING CEREMONY**

13.00-14.00 LUNCH

14.00-15.00 **VISIT TO THE EXHIBITION OF SPECIMENTS OF NEW EQUIPMENT DEVELOPED BY CSRI ELEKTROPRIBOR OR TO THE ENTERPRISE MUSEUM** *(at conferees' option)*