

SUMMARY

Chengli Liu

The doubling plan of china's national income in 2010–2020: A tentative study on the sustainability of economic growth

The report to the 18th National Congress of the CPC proposed a goal of completing the building of a Moderately Prosperous Society by 2020, when China is supposed to double its GDP and per capita income of urban and rural residents compared with 2010. This article discusses the possibility of attaining this goal from the perspectives of political and economic system, self-adaptive and learning capacity, and domestic demands, together with the constraints as for mode of economic development, environment, population, and income inequality. The author suggests that in order to double the quantity and improve the quality of economic growth, it is necessary to boost reforms of political, economic, and social systems, although there are potential advantages in terms of institution and inventory of sustainable economic growth in China.

Key words: National Income, Economic Growth, Sustainability, Economic Policy, Economic Reforms in modern China

M.M. Glazov, I.P. Firova

New methods of cost management as an important factor in increasing the efficiency of production

The article defines the degree of influence the level of production costs on the possibilities of improving product quality, the efficiency of logistic processes, motivation of the personnel of the enterprise; proposals on forming the modern formed tools to reduce costs and optimize performance through the application of the concept of «lean production».

Key words: production costs, an effective system of financial planning and management, basic principles of lean production, diagnostics of the enterprise.

V.P. Mikitchuk

The development of entrepreneurial environment in the special economic zone

The article considers the objective causes of the development of the entrepreneurial environment in the special economic zone in the conditions of the Magadan region. The proposals represent a set of tools connections efforts of the state and business in the process of development of the entrepreneurial environment.

Key words: entrepreneurship, government regulation, special economic zone, management, efficiency.

G.V. Smentsarev

On the determination of the composition and structure of social and cultural system's models for the tasks of system's states definition

The article describes the basic methodological approaches to the description and structuring a wide class of dynamical systems, it is difficult to formalize, including complex social and cultural systems in the measurement objectives of their condition and to identifying trends of their development. Problems for determination of the system boundaries, estimation of various system components and parameters, descriptions of structural links and internal relations are analyzed. The list of operations that are used in the modeling for these classes of systems, are considered.

Key words: social and cultural systems, humanitarian formalization, mathematical modeling

A.A. Kuprin, I.V. Zhuk

Formation and development of managerial process by innovations with the purpose of increase of efficiency of enterprise activity

The summary: In clause the present stage of development of modern business which is characterized not only conditions of active inclusion of subjects of business in economic attitudes, expansion of communications, an output on the world markets, but also by the necessity of output directed on use of results of scientific researches, i.e. creation of innovative technologies with their subsequent introduction and realization is considered.

Key words: innovations; innovative process; innovative activity; innovative technologies; innovative business.

M.A. Leshukova

Position and role of information technologies in modern higher education institution's management mechanism

The management of the University on the basis of information technologies is a complicated complex task that requires organizational and technological problems with the consideration of the economic expediency. The article provides the setting of the task.

The use of information technology in the management of the University allows you to provide a competitive advantage. Key events in the development of the information technologies are creating a reliable and efficient infrastructure of Informatization, provision of IT - infrastructure of the strategic objectives of the University.

In accordance with the program of development of the Vologda state pedagogical University for 2011-2015 management of the University on the basis of information technologies is one of the priority tasks. It is planned to create a single information space of the VSPU management activities and integrated system of information security and a unified system of scientific - educational Internet resources.

Introduction of the system of University management on the basis of information technology will be the improvement of the quality of training of specialists of a new generation and implementation of modern educational programs.

Key words: information technologies, informatization, infrastructure, mechanism, higher education institution, innovation, introduction, complex, technology, educational environment, portal, software, set, space, tool.

M.M. Tretyakov, G.S. Ivlev

Condition and factors of formation and financial services market

The paper identified the condition and factors of formation and development of financial services in terms of their connection with the characteristics of financial services. These factors are: communications, information technology, government regulation, income, population size and structure, the level of education. Considering the effect of these factors, the conditions under which these factors are set in motion – is improving financial literacy.

Key words: financial services market, condition, factors, financial literacy.

V.A. Korobko, A.B. Okun

Mechanisms to improve energy efficiency of housing and communal services

The paper analyzes the state of the processes of energy saving in the country and abroad. Federal legislation regulating the control of energy consumption and energy saving processes in the economy are given. The directions of the development of energy-saving processes and specific activities that improve the energy efficiency of housing and communal services are indicated.

Key words: housing and communal services, energy conservation, energy audits, energy performance certificate.

V.V. Rizzi

Analysis of the status and trends of tourism development in the global and russian economy

The paper analyzes the status and trend of development of tourism in the global and Russian economies. The basic trends in the development of tourism are presented. It is shown that Russia has a huge potential for tourism, while only 2.1 million foreign tourists visited Russia in 2010. While according to experts, Russia could take up to 40 million visitors a year. Problems, without which it is impossible to resolve this contradiction, are described and solutions of these problems are given.

Key words: tourism industry, tourism potential, trends, hotel chains.

V.V. Metlyuk, A.P. Upadysheva

The problems of quality management of service provided in small hotels

The article has the problems of quality service management in small hotels in Russia. There is a definition of small hotels and their difference from mini-hotels. Steady increase in the number of small hotels was noted, but in most cases, accompanied with the decreasing level of the service quality. The main problem of the low level of service in small hotels - absence of classification. This article contains the thesis about the need of creation of uniform classification system for small hotels in Russia.

Key words: management, service, quality, small hotel, classification.

Yu.E. Kondakov

Order of the Golden and Rosy Cross in Russia: the ritual practice

The article is dedicated to the Order of the Golden and Rosy Cross. A comparison of the device and the basic structural unit of the Order of the «circle» with masonic lodges. It is concluded that although the rosicrucians and used elements of ritual practice of Freemasons, but many aspects of their rites were original and inherited from medieval alchemical societies.

Key words: Masons, Rosicrucian's, Order golden and rosy cross, ritual, lodge, alchemy.

V.S. Delwig

The place and role of the moscow hospital in the history of the reforming of the russian medicine in 1706–1735

The article reflects the early period of the formation and development of the Moscow hospital and of the school for training its middle medical personnel. There are given the reasons for the establishment, and the difficulties, connected with the first years of existence of these medical institutions are shown.

Key words: the Apothecary garden, the hospital school, the doctor, the medic, the Moscow hospital, the surgery, the student.

A.V. Gnoevykh

The history of the magazine "Russian Wealth": V.G. Korolenko's status (1904–1914)

This article scrutinizes the question of V.G. Korolenko's status within «The Russian Treasure» magazine editorial group. Based on previously uninvolved archive sources, the conclusion is drawn that Korolenko had edited not only fictional materials, but also the articles on social and political issues. However, the writer had not been

the absolute master of the edition, constantly deferring to the colleagues' opinions instead. Refused opinion common for soviet scholars that Korolenko was follower of marksism and collaborator of revolution.

Key words: "The Russian Treasure", neopopulism, social thought, editing

A.V. Gotnoga

Forecasting potential of idealistic and materialistic understanding of history

The author attempts to assess the prognostic potential of the materialist and the idealist conception of history. As a comparative analysis of the objects taken historical concepts of Hegel and Marx.

Key words: materialist conception of history, idealist conception of history, falsificationism, forecast, scientific laws.

I.G. Shestakova

Problems of strategic planning of social development in the context of accelerating of updates data exchange technologies

By analyzing the stages of development of scientific and technological progress, the author concludes that in the modern world problem possibility of strategic planning is especially acute. In this context, philosophy has a special role.

Key words: pace of technological progress, IT, dimensionless characteristic time of progress, strategic planning.

V.A. Kutz

Protective strategies in culture: a bayesian method for optimizing (illustrated russian fisticuffs)

It is assumed, that the optimal strategy for protection of the culture is Bayesian method. This method allows to minimize the average risk of life activity. Bayesian likelihood function (a semantic vacuum) is shown. This function provides absolute protection of information system. Semantic vacuum is used as an etalon to compare the performance of martial arts. The probabilities of types of ligaments in context (the main forms of Russian fisticuffs) are determined. The Comparing of the characteristics of fisticuffs and martial arts with the etalon is performed. Rapprochement of semantic components of Russian culture and Russian fisticuffs is shown.

Key words: Russian culture, semantic vacuum, absolute protection, the Bayesian method, self-defense, martial arts, Russian fisticuffs.

I.V. Azeeva

Philosophical knowledge as a basis of integrative processes in science about theater and modern russian drama school

In the article the role of the integrative processes that are happens in the theater science and modern drama school on the basis of philosophical knowledge is shown. An integrative practice opens new prospects in development of science about theater and drama school.

Key words: Theater art; theatre science; science about theater; theory of theatre, theatre and philosophy, integrative process; concept of theatre; drama school.

A.F. Chernova

The impact of the islamic revolution on the persian gulf monarchies

The article focuses on the political, social, religious and legal factors of the impact of the Islamic Revolution in Iran on the internal political affairs of the Persian Gulf States. Special attention is given to the rise of nationalist movements in Bahrain and Saudi Arabia as a result of the Ayatollah Khomeini policy of "exporting the Islamic revolution". The article also analyzes the Iranian Gulf policy.

Key words: Islamic Revolution, foreign policy of Iran, "export of the Islamic Revolution", Bahraini opposition, Saudi-Iranian relations, Ayatollah Khomeini, the hajj season of 1987.

E.O. Novozhilova

Modern international migrations: causes, features, consequences

The author interprets the modern international migration as one of the most ubiquitous forms of globalization claiming that this migration is mainly caused by different timing of demographic and economic processes in various parts of the world. Today, the phenomenon of migration reflects integration processes of peripheral countries into the world economy. As a result of international migration there has been and will always be leveling up of economic development of various countries and world regions. The author outlines the main features of the modern international migrations.

Key words: modern international migration, migration features, the first and second demographic transitions, quantitative and qualitative changes in the world population, segmentation of the labour markets, guest workers.

M.S. Negrova

About turbulent processes of space time repartition: prospects and fears (on the example of Krasnoyarsk region)

New repartition of the world space-time as a problem of turbulent society is considered in the article on the example of Krasnoyarsk region. It is estimated as the 1:7 model of Russia, it is typical for the Russian social and economic structure and is especially interesting from the point of view of resource efficiency. The analysis of the situation was carried out by means of a field research (expert interviews and analysis of print and online publications).

I.F. Ignatyeva

The space of flows: the economic and geopolitical analysis of tourism

Modern international tourism becomes a key factor in the formation of the space of flows and networks, as in the economic well as in the geopolitical aspects. Dynamics of international tourist flows in the last two decades shows their unwavering upward trend. Increasing geopolitical role of Russia in the world increasingly dependent on the development of tourist flows and formation of tourist centers. Russia is actively included in the movement of international tourist flows.

Key words: The space of flows, global flows, global networks and centers, tourist flows and centers, tourist destinations, actors and centers of geopolitical influence.

L.L. Kushnir

Resource providing of national economy: in search of ways of decision of problem

The definition of «resource providing of national economy» is offered in this article. The key aspects of national economy resource providing problem are analyzed. The urgency of state policy concerning reproduction of national economic resources with using method of strategic planning is grounded.

Key words: national economy, economic resources, resource providing of national economy, reproduction of the resources, state policy, strategic planning.

A.A. Dorskaya

The problems of disposal of religious purpose property to religious organizations in Russian Federation (about the court practice materials)

In the article the problems of disposal of religious purpose property to religious organizations, which coming into existence in Russia last twenty years are considered. The article analyzes court practice the cases of 2011 - the beginning of 2013 are classified.

Key words: court practice, religious purpose property, religious organizations

O.V. Gromtsev

Political impact of labour migration

The article examines the impact of labor migration on the national political process. The author focuses on the fact that in today's global world, global accept and migration. The aspects of labor migration, which are reflected in international documents and analyzes contemporary domestic policy against migrant workers on the example of Germany and France.

Key words: globalization, migration, labor migration, immigrant policy of multiculturalism.

T.S. Tanganova

Stylistic features songs of buryat people

In this article considered stylistic features songs, riddles and drilled taamag zugaa, taabari duunud of Buryat people, natives of Eastern Siberia. They are a relict of the ancient folk traditions, endangered or nearly extinct genre of folk art. Analyzes their poetic, pitch, modal and rhythmic features.

Key words: Song of mystery, an allegory, a typical tune, angemitonika and rhythm.

N.V. Aleksandrova

Udmurt musical genre ekton gur: terms and semantics

Summary: Udmurt musical genre ekton gur is a complex phenomenon of the musical culture of the Udmurt nation. Semantics of Udmurt musical terms ekton, gur are considered. The author tries to describe some features of using traditional music dance tunes at Udmurt sacred ceremonials. Dance tunes are performed on musical instruments.

Key words: Udmurt musical culture, Udmurt musical genre, Udmurt musical instruments, Udmurt ethnic music, dance tunes.

M.C. Tezic

National language as republican politics – resource of the construction of ethnic identity in the example of youths in Republic of Buryat

In this article analyses the attitudes of youths to the politics of development of national language in society as a part of project national cultural rebirth. Analyzed the relationship of state politics and attitudes of young's within the framework of our filed research.

Key words: language politics, national identity, youths, and republic of Buryat.

M.A. Bekishev

Wayfinding graphics for transport objects

The article investigates graphical features of wayfinding systems in the space of transport objects based on the analysis of theoretical works by Russian and foreign specialists, as well as practical developments in the field of graphic design which used for orientation in space.

Key words: graphic design, visual communication systems, visual navigation systems, font, pictograms.

The artist in the dialogue space of Siberian cultures at the turn of the XX–XXI centuries

The author provides a short history of studying the problem of cultural dialogue and specifies the tools of its research. The author gives some results of the analysis of the fine art of traditional and contemporary Siberian cultures at the turn of the XX–XXI centuries, associated with certain aspects of philosophy and the creative process of the artist.

Key words: the universe, dialogue, the master, Siberia, contemporary culture, traditional culture, the artist.

N.V. Kurakova

The role of mukhina higher school of art and design in the development of tapestry art in Leningrad

This article, based on the documentary and literary sources, is the first to examine the role of Mukhina Higher School of Art and Design in the development of tapestry art in Leningrad.

Key words: textiles, V. Mukhina Higher School of Art and Design, department of Decorative Textiles.

O.E. Startseva

Mass and serial products of the mid-1950's – the first half of the 1960's. Leningrad plant of artistic glass in the meeting elagin of the palace-museum

Is considered output serial and mass production of the mid-1950's-the first half of the 1960's. Leningrad Plant of Artistic Glass, one of the leading Soviet of glass industry enterprises of the country. In the article is a brief historical tour around the everyday life of a Soviet man in this period of time.

Key words: Elagin of the Palace-Museum, Leningrad Plant of Artistic Glass, artist, glass and crystal, mass and serial products, everyday life, decorative art

M.V. Golovanova

Functionalism as a basic principle of lighting fixture design in the beginning of the XX century

The end of the XIXth – beginning of the XXth century is a period when industrial design starts its history. It appears as a result of conflict between developing industry and pre-industrial culture. Looking for the aesthetics suitable for the new way of object creation theorists and practitioners come up to functionalism as a basic principle. Functionalism is based on formula expressed by Luis Sullivan: “Form follows the function”. Evolution of early lighting fixture design is strongly connected with development of this principle. Bauhaus was one of the first design schools as well as a leading art community. Bauhaus lighting fixture design comes through the following stages:

1. Shifting the focus of attention from working on candleholders and oil lamps to electric lamps for domestic use.
2. Working on form based on function and free from ornaments.
3. Improving the quality of light (by developing different types of shades) and additional lamp functions.
4. Matching design ideas and market needs.

By the 1930s functionalism becomes a classical principle for design. It stays the main principle for the next 30 years and is actual nowadays as well.

Key words: XX century, the Bauhaus, product design, industrial design, light, form, shape, functionalism, the function.

N.N. Drozdova-Pichurina

Possibilities of art paradigms for the study of photographic art

The article focused on the formation and justification of the concept of artistic paradigms in photography. The relevance of the theme is associated with the necessity to develop new criteria for evaluating photographs from various periods and concepts that will allow to combine different areas of research of art history studying in the art of photography. The study is based on the works of recognized scientists (G.G. Dadamyan, V.I. Tyupa, B.M. Bernstein and others). Author gives a scientific definition for term “art paradigm of photography”, the features that structure the artistic paradigm of photography have been selected, and theoretical framework of artistic paradigms of photography, according to which the further typology is possible, has been established. When ordering these typically- distinctive signs of paradigms data, the author proposes to use the concept of historical typology of B.M. Bernstein. The proposed concept enables to reveal more wide range of issues of photography development, considering the historical, aesthetic, technical, artistic and ideological components. The author's approach is much differ from previously proposed approaches of the art to photography and can serve as a methodological basis for the study of photography as an art form.

Key words: artistic paradigms in photographic art; photography; methodology

U Saolin

The Great Wall of China images in gohua tradition and modern painting

In article the landscape compositions devoted to the image of the Great Wall are analyzed. The author shows the reasons of emergence of this subject in the modern art of the People's Republic of China and giving of the important ideological sense equal to a symbol of updating of life of the country to it.

Key words: Great Wall of China, symbol, tradition, painting, GoHua.

The Second Symphony by Shostakovich: failed or masterpiece?

The Second Symphony is not chanting "winds of change" nor those in honour of the deity, the wind given, much less a "Compromise with the regime" and never becomes "kukiľem" in your pocket. The Second Symphony is an artistic Chronicle of his time and at the same time ingenious glimpse into the future. "All the necessary pieces" when translating this kind of custom essay writing in the Second Symphony is evident: and major, and a choral Finale – Apotheosis, and schema. But the result put those patterns directly opposite of the composer. Reproducing the trappings of the genre "slavleniř Shostakovich, creates an opposite it on the internal content of the piece – perhaps the first example of the dramatic inconsistencies of declared plot and its artistic expression.

Key words: the idea, contents, drama, Chaos – Awakening – wrestling – Victory (Apotheosis), Chronicle, crystallization, movement, deprived of his ultimate goal

S.A. Emeljanov

Cultural and uncivilized policy

Phenomena of policy, culture and education is closely interconnected practical aspects ideal and factors of development of intrinsic forces of the person and society. Overcoming of geopolitical tendencies is interfaced to problems of historical memory, reformative intelligence and investors of national idea.

Key words: Culture, art, policy, moral, oligarchy, requirements, intellectuals, education, national idea

N.V. Rudskaya

Autoimmune syndrome of russian society in the study of domestic conservative thinkers. (On an example of journalism Mikhail Katkov and Basil Katkov)

The article deals with the development M.N.Katkova and V.D.Katkova dedicated Russian genesis of chronic illness - the desire for self-destruction.

Key words: autoimmune syndrome, self-destruction, indifference, patriotic, fear of power, state unity.

A.A. Mel'nikova, I.Ja. Kruglyanskaya

Leader archetypes and deep foundations of culture: linguistic-cultural research

The article considers the question of whether leader archetypes are universal or we can talk about domination in a particular culture quite specific leadership archetypes. The authors explore the substantial characteristics of leadership behavior standards in Russian culture, comparing them to the standards of leadership behavior in American culture. The authors conclude that such standards have cultural differences and connect with deep foundations of culture - the last give criterial basis for inclusion the concrete archetypes in cultural normative models.

Key words: archetypes, culture, deep foundation of culture, leaders, cultural bases of behavior, linguistic-culturological analysis.

G.M. Vasil'eva

"Spiritual connectors" of the russian community in the reflection of linguistic assessment

The article looks into the changes in the axiological content of vocabulary encouraged by the value system of native speakers. The dynamics of linguistic assessment is observed on the basis of the axiological hierarchy of Russian culture. Attention is drawn to the moral assessment reflecting the ethic and spiritual foundations of culture which are its "spiritual connectors".

Key words: axiology of culture, linguo-cultural studies, linguistic assessment, value system.

P.G. Chernikova

Transcendental paradox in the history of popular culture XX – began XXI centuries

This article tries to analyze the basic concepts of popular culture, consider the phenomenon of cultural paradox in the context of the features of contemporary cultural code. Special attention is paid to the concepts of emerging and developing now, the modern approach to the issue and the problem of mass culture, the culture of consumption and commercial popular culture in the context of its interaction with the cultural constants and cultural tradition. In the article discusses the main features of the «mass» and «elite» culture of XX and beginning of XXI century, the similarities and differences between the two cultural formations, possible models of the dynamics of the cultural forms. Used the example of Georges Bataille, E. Petrovskaya, T. Leary, M. Stewart, V. Shestakov and other researchers in the text demonstrates the relevance, the main determining factor of the phenomenon of the emergence of mass culture, strong and decent correction effects in the structure of the object. So, in the present text of the detailed retrospective analysis of the need and development of the phenomenon of mass culture in the historical realities of today. Demonstrated particular media channels of popular culture and specificity of the interaction of the media with the transcendental experience of traditional culture in the era of globalization.

Key words: Mass culture, elite culture, Globalization, Media Technology, Transcendental, Limit mental states, cultural paradox in the culture of death.

I.V. Sinova

Everyday life of children of the worker of the population of Saint-Petersburg in the second half of the XIX - beginning of XX centuries

Investigation of the problems of the everyday life of children of the worker of the population of Saint-Petersburg in the second half of the XIX - beginning of XX centuries, which includes the conditions of life, food,

clothing, punishment, of free time. It is shown that the absence of the parents or the complete lack of attention and care from their side made the children themselves to fight for survival, to adapt to the outside world, to obtain their food, look for the night.

Key words: agricultural colony, all-Russian Congress on family education, everyday life, lodging shelters, Society for the preservation of people's health protection, punishment of children, the court on Affairs of minors.

E.A. Ivanyuk

Pedagogical installation of sculptor M.K. Anikushin

This article dedicated to the methodical principles of teaching sculpture in the academic system. The statements of sculptor M. K. Anikushin, which in Soviet times was teaching at the Academy of Fine Arts is given in the article, summarizes its main pedagogical installation, given quotes from archival research of bibliographic archive of the Russian Academy of Arts.

Key words: M.K. Anikushin, the Academy of Fine Arts, methodical principles, sculpture, statement.

N.A. Sychina

Traditional calendar as a reflection of the ethnic culture chronotope

Considered a unique phenomenon in the traditional culture of the indigenous peoples of Western Siberia – the traditional calendar. In it, in contrast to the modern calendar reflects both the temporal and spatial representation of the peoples. Such a feature, explained by the syncretism of traditional culture, can serve as the basis for the study of this phenomenon.

Key words: calendar, chronotope, etnoregional features, space-time, syncretism, traditional culture, time.

A.V. Fedotova

Plavmornin and the first soviet research vessel «Persey» in creativity of the artist and the seaman M. Golitsyn

The northern period in creativity of the artist and seaman Vladimir Golitsyn who has displayed in the works a considerable stage in development of a domestic science - creation of Ship-based Marine Research Institute (Plavmornin) and the first soviet research vessel «Persey» is analysed in this article.

Key words: the fine arts, V.M.Golitsyn, the artist, Ship-based Marine Research Institute (Plavmornin), the research vessel «Persey», drawing, watercolor.

L.S. Ivlev

Aerosols and global climate changes

There is the observation of the influence of natural and anthropogenic aerosols on the climatic processes. We can see that the calculation of aerosol influences on the climate in present time wasn't made reasonably enough mostly because of the inaccuracy of data about the processes of generation and on physico-chemical properties of atmospheric aerosols. Up-to-date state of the knowledge on the subject is observed.

Key words: natural and anthropogenic aerosols, global climate changes, albedo, sulphate, volcanic substance, stratosphere, phase transitions of water

G.T. Frumin, Zhan-Zhan Khuan

Thermodynamic estimation of a condition of water objects

Dynamics of the trophic status of some freshwater lakes located in Russia (Lake Pskovskoe), Russia and Estonia (transboundary Lake Peipsi) and China (Lake Taihu) has been assessed. The research submitted is based on the thermodynamic approach developed by A. G. Volokhonskiy.

Key words: thermodynamic characteristics, water objects, eutrophication, mineral phosphorus, Lake Peipsi, Lake Taihu.

N.V. Lovelius, V.I. Ulichev

Changes in the number of harp seals in the era of high and low speed rotation of the earth

Presumably, one of the factors for indirect effect of the distribution. Numbers and population dynamics is speed rotation of the earth. Our study was based on data by on the harvest of the harp seal (*Histophoca groenlandica*) of the population which is the most suitable subject for ecological monitoring in the Newfoundland water area of the Nord Atlantic and Arctic seas. We assumed that the number of harvested seals reflects their total numbers. Of particular importance in the functioning of marine ecosystems are sharp climate anomalies, affect the trophic and ecosystemic relations.

Key words: harp seal, environmental factors, population, speed rotation of the earth, marine ecosystems, catches.

N.V. Lovelius

Space reference points as the basis of revealing of rhythms

In elements of atmosphere, hydrosphere, biosphere

Recurring dates of solar and astrophysical processes are considered as bench mark to identify rhythms in the elements of climate, hydrological and biological systems.

These bench marks can be used to predict long-term changes of the said objects.

Key words: bench mark, Wolf numbers, galactic cosmic rays, biomass, phytomass, livestock, catch, Jupiter, perihelion, aphelion.