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Crisis in geosciences in epoch of altimetry measurments and ways of its overcoming

Yu.V. Barkin

Sternberg Astronomical Institute, celestial mechanics and gravimetry department, Moscow, Russian Federation (barkin@inbox.ru, 07-495-9328841)

Scientific results by determination of increase of a global sea level, basing on altimetry measurements, are erroneous. Unfortunately, modern researches of global behavior of ocean in present period have resulted in a lot of paradoxes, to the inexplicable phenomena for today and to contradictions with the classical data of ground (coastal) observations. The basic contradiction consists that values of rate of increase of mean sea level, obtained with the help of satellite methods - methods of altimetry, in 2 - 3 times and more surpass classical determinations of this velocity by coastal methods with the help of measurements at tidal stations. Some authors actually resort to a juggling of the facts in the attempts to explain the found out contradictions (for example, with the help of selection of stations and regions of ocean with the increased values of rates). Thus rather big series of works has lost the scientific importance. The purpose of the report - to show, that conclusions about global increase of a level of the ocean, obtained with application of a method of satellite altimetry are rough - erroneous.

“The global sea level rise estimate in the 20th century has been reported at 1.8 mm/yr [Church et al., 2004; Douglas, 2001], which is consistent with the IPCC TAR estimate of 1.5+/-0.5 mm/yr for the 20th Century [Church et al., 2001]. In contrast to the 1.8 mm/yr sea level rise estimate derived from tide gauges, sea level trend estimate from satellite altimetry since 1993 has increased to 3.1+/-0.4 mm/yr [Cazenave and Nerem, 2004]. Although the sea level rise during the TOPEX/POSEIDON period or the last decade is observed to rise almost 50% faster than the average rate over the last Century, visual inspection and fitting a quadratic to the time series confirms there is no significant increase in the rate [Church et al., 2004].” [2], p.7.

The statement is rather eloquent. We shall notice only, that the marked difference in rates of MSLR not 50 %, and 100 % and more. I.e. with the help of application of altimetry technique of measurements of velocities has made more than 200 %, and actually if closely to look narrowly at the data on coastal measurements, all is especial in a southern hemisphere, and of 300 %. Is even more tremendous conclusions of similar researches look. There is no necessity to list about the similar conclusions made in numerous publications of last years by known authors on a problem of global change of mean sea level. Among themselves these conclusions will more - less be coordinated, being in too time strictly erroneous.

The scientific works basing on the joint analysis of altimetry and coastal methods of measurements, are strictly erroneous. The big list of publications of well-known authors in which attempts of determination of rates of mean sea level increase have been made on the basis of the joint analysis of the data of coastal ground observations and satellite altimetry observations concerns to the list of erroneous works. It is natural, that erroneous results of the specified works in the most serious image have affected researches in the connected sciences about an atmosphere and ocean, climatology, hydrology and others. The crisis situation in the big area of sciences about the Earth is created, satellite achievements in which have actually lost the scientific importance.

In the report the explanation of the created crisis situation is given, and the fundamental phenomena in global behavior of ocean obtain an explanation on the basis of geodynamic model developed by the author about trend, the forced swing and wanderings of the core of the Earth relatively to the viscous-elastic mantle [1].

Role of space geodesy. This important discipline of a modern science has serviced bad service for considered scientific problems. The matter is that it could not study and correctly prove conclusions about existence and character of secular drift of the centre of mass of the Earth which here has played the central role – “original Susanin’s role” and has got the scientific world community in an impassable wood of mistakes. This fundamental and most important natural phenomenon was carefully camouflaged with numerous and erroneous discussions about a choice of those or other terrestrial systems of coordinates. About existence of secular trend of the center of

mass and native phenomenon of the core drift to the North I repeatedly spoke and wrote in reports and publications of last 12-15 years.

Another reasons of mistakes. Altimetry data reflect at least two comparable effects: an increase of mean see level of ocean and effects caused by secular drift of the centre of mass and as can not act in one pair with classical observations - they give falsification each other. For a popular explanation of mentioned altimetry-geodesy effect it is possible to present, that an orbit of the satellite which is determined relatively to the centre of mass, at a polar drift of the last to the north, as though rises or falls above a surface of the Earth depending on that - it flies by above a southern hemisphere or northern hemisphere [3] - [5]. An asymmetry in distribution of the ocean areas in relation to the specified hemispheres lead to additional (significant) effect of increase of sea level by averaging of altimetry measurements. Even if the sea level would not vary at all, altimeters would find out its secular global increase. And in relation to ocean in polar part of northern hemisphere they would find out effect of decrease of sea level. The similar situation takes place with known Arctic paradox in decreasing of sea level in polar zones. An attempt of some scientists "to put a horse and a quivering fallow deer to one harness", there were unsuccessful, and all scientific conclusions in sciences about the Earth of last 15 years anyhow basing on altimetry measurements, strictly speaking, are erroneous.

"Have eyes, but do not see ...". In unenviable position the scientists, trying by the natural reasons to explain a mistake in 100-150 % in value of rate of increase of an average global sea level, certainly, have got. To try to make it is possible, only having closed eyes on reality. A sympathy is caused with similar attempts. And how many they still that though somehow to rescue or even will be to smooth a situation with crisis, but it for the specified authors is unsolved problem.

"Have ears, but do not hear ...". Unfortunately some authors of the specified erroneous works have occupied a strange position and refuse to discuss even the fact of huge distinction in rates of global increase of a level of ocean on the coastal and satellite data, being limited to excuses of absolutely not scientific character. For example, having heard on EGU 2008 reports of known experts that in extensive regions around of India, Africa and in general in extensive regions of a southern hemisphere the rates of increase of sea level at many stations are given with values of velocities of 0.5 - 1.0 mm/yr, and even negative values, Dr. Don Chambers says in his report, that a mean sea level, not looking on anything, increases with velocity in 3 - 4 mm/yr. At least it is necessary will stop and to think - in what the reason of similar divergences?

The strong illustration to told is obtained in work [6]. In this work on the basis of coastal data of observations the velocities of trends of sea levels for all main regions of the Earth (12 regions), including for last 20 years covering "altimetry period" have been determined. "Altimetry velocity" of increase of a global level does not explain any of these values, and on the average surpasses them twice.

In application altimetry in sciences about ocean the author has specified the reason of the specified crisis in brief notes [3] - [5]. Suggested mechanism and geodynamic model [1] offered by the author specifies a unique possible output from crisis in geosciences.

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