

## Computed Chronozones of the last 80 million years

My paleomagnetic survey in the Austrian Tyrol had yielded a result that could not be disputed: the intervals between peaks of paleodeclination and/or paleoinclination were linked to each other by the law of geometrical means. Early attempts to find a general equation failed, but the use of the Sommerfeld constant for the fine structure of matter ( improved by Klitzing et alii in 1980) was successful and the equation for the new constant 'K' could be written as  $100.K^3 = \alpha^{-1}$ . A model with 22 magnetic waves and a limited number of their harmonics (H 1-18) predicted all of the known magneto-climatic events of the last 10,000 years and was, therefore, considered valid. It was published in the Proceedings of the Kyoto Meeting of IGCP24/1973, reprinted by the Geological Survey of Czechia in 1985 and included in [www.mayrchronology.ca](http://www.mayrchronology.ca) as file 1.

The full equation

$$K^3 = \alpha^{-1} \cdot \tan \vartheta / \pi$$

was used to compute the logarithmic spiral of successive galactic orbits of the Sun. It is valid if  $K$ ,  $\alpha^{-1}$  and  $\tan \vartheta$  were constant during the last 2-3 billions of years. To test the assumption, the radiometric ages of the boundaries between geological periods were marked on the graph in [www.mayrheliophysics.com](http://www.mayrheliophysics.com), file 8: connected, all of them formed straight lines pointing to the centre of our galaxy. Since the geological data were reliable and confirmed ( A.Holmes, Physical Geology, second edition 1969), the simplicity and elegance of the graph should replace outdated opinions; but it might take another 100 or 200 years before it will be taught in our schools. According to this graph there are seven directions of enhanced radiation from the centre (or

central part) of our galaxy changing the conditions on Earth to such a degree that a new geological epoch is born.

The computations for file 2 of this website were carried out in 1983, that is, at the UQAM in Montreal, in order to prove that the 'Mayr model of galactic magnetic waves' was a useful new tool in science. It was a statistical approach.  $\sum \cos \omega t$  was computed once every 10 years; the deviations from the average for the last 80 million years were expressed in decades per 10,000 years (with  $\sum \cos \omega t$  being more than +10.0 above or more than -6.0 below the average). The results of this test were published as graph 25 and graph 26 of the 'Calendrier des Savants' of Nomos Interscience (Montreal 1985).

Figure 25 predicted a very strong magneto-climatic anomaly 66.38 my ago, and another one 63.13 my ago which suggests environmental stress as the leading cause for the end of the Cretaceous Period. It took almost 5 million years to achieve the extinction of Dinosaurs in Canada!

The events of the last 5 million years were the subject of a big graph exhibited by Nomos Interscience at the 12th INQUA Congress in Ottawa (1987) and of a page in file 3 of [www.mayrheliophysics.com](http://www.mayrheliophysics.com). There was no physicist at the Congress in Ottawa, but there were geologists who knew that mussels from the Bering Sea did migrate to Iceland around 3.1 my ago which implies that climate in Northern Siberia was much warmer than today. The climatic anomaly occurred as predicted. Likewise, a recent geological survey in Chile had uncovered the existence of very old glacial tills which were interstratified with volcanic rocks, hence datable. The radiometric ages of the rocks confirmed the prediction of two rather wet and cool parts of the Pliocene peaking around 3.7 and 2.35 my BC with

major glaciations in high and humid parts of the globe. The younger one of the two glaciations ended abruptly 2.2 million years ago, and this was the beginning of the Quaternary; and the early part of the Quaternary was long and mostly dry. As I have said before, all of the continental glaciations of North America are younger than 700,000 BC.

The results of my research will be accepted, but not too soon: therefore, and to prevent surprise, I have added file 5 with predictions for every decade of the next 1000 years. That should be enough!



