

Dear colleagues,

In 2013, the European Space Weather Week will celebrate its tenth anniversary. At this occasion, a set of three medals is created. These medals will be attributed during a special Prize event at the 10th European Space Weather Week (ESWW10).

- The **International Kristian Birkeland medal for Space Weather and Space Climate** relates to outstanding scientific or technological results.
- The **International Marcel Nicolet medal for Space Weather and Space Climate** rewards efforts to structure the space weather community at an international level.
- The **International Alexander Chizhevsky medal for Space Weather and Space Climate** rewards a young researcher (PhD or having defended his thesis within the last 8 years prior to the ESWW 10, i.e. after October 30th, 2005) for major contributions to space weather research and/or services.

In order to propose a candidate, please send a pdf document including:

- Your name, first name, professional address.
- The name, first name, professional address of the person that you suggest for a prize.
- Which of the three prizes is concerned for your nomination.
- Reasons for the nomination (two pages). Please, make sure that these reasons relate to space weather.
- The names of two colleagues in two different countries other than yours that could, in your point of view, support this candidacy.
- Up to five references (journal articles, prizes, patents...).

It is not allowed to apply for one-self. The Medal Committee may not attribute a medal if it considers that the applications do not have the necessary level of international excellence.

Composition of the Medal Committee:

The Medal committee is composed of Claude Tomberg of the Belgian academy of science, Øyvind Sørensen of the Norwegian academy of science and Dr. Galina Kotova, of the Russian academy of science. To complement this panel, a space weather scientist of each of these three countries will work with the academies, namely

Prof. Jøran Moen, Prof. Alv Egeland, Dr. Pål Brekke, Norway

Prof. Véronique Dehant, Belgium

Prof. Anatoli Petrukovich, Russia

Finally, there will be a representative of the Local Organizing Committee of the European Space Weather Week (R. Van der Linden), the head of the Space Weather Working Team (S. Poedts) and of the Program Committee of the European Space Weather Week (A. Belehaki) and of the Journal of Space Weather and Space Climate (A. Belehaki and J. Lilensten).

None of the Medal Committee members are eligible for a medal.

Send your documents by email only to SWmedals@oma.be. The deadline for the applications is October, 15th, 2013.

Kristian Birkeland

Olaf Kristian Bernhard Birkeland was born in Oslo, Norway, on December 13, 1867 and died in Tokyo on June 15, 1917. He was appointed professor of physics at The Royal Frederik University in Kristiania, near the end of the 19th century.

His life spans a watershed period when insights about electricity and magnetism, codified by Maxwell in the mid-19th century, evolved from theoretical curiosities to become the basis for modern electronic technology as well as our understanding of the geospace environment.

His mathematical training provided a superb foundation for developing the first general solution of Maxwell's equations and energy transfer in 1895, by means of electromagnetic waves. He continued to investigate the properties of electromagnetic waves in conductors and wave propagation through space. From 1895 to 1917 his basic-science research focused on geomagnetic disturbances, auroras, solar-terrestrial relations and cosmology. Birkeland was gifted with a wonderfully inventive mind that bubbled with ideas and sought to investigate any and all aspects of the physical sciences. His main work regarding auroras and geomagnetic disturbances is summarized in *The Norwegian Aurora Polaris Expedition 1902-1903*; a 801-page monograph.

From 1903 to 1906 Birkeland diverted much of his attention toward applied physics and technological development. His primary motive for engaging in such activities was to generate the funds he needed to support his ambitious research projects and to build a modern research laboratory whose cost greatly exceeded what the University's budget could afford. All together Birkeland developed sixty patents in ten different subject areas. In one field, the production of agricultural fertilizers, he earned large sums of money. He invented the plasma arc leading to the Birkeland-Eyde method for industrial nitrogen fixation for synthesizing artificial fertilizers, and the founding of *Norsk Hydro* that today remains one of Norway's largest industrial enterprises, stands as a living tribute to his genius. Eight nominations for the Nobel Prize, attest to the high esteem in which contemporary scientists regarded Kristian Birkeland

Alexander Chizhevsky,

Alexander Chizhevsky was born in 1897 in the town of Ciechanowiec in the Grodno region of the Russian Empire (now Poland). He was an outstanding interdisciplinary scientist, a biophysicist who founded the "heliobiology" which is the study of the effect of the sun on biology and the "aero-ionization" which is the study of the effects of the ionization of air on biological entities. He was also noted for his work in "cosmobiology", biological rhythms and hematology." He may be most notable for his use of historical research (historiometry) techniques to link the 11 year solar cycle, Earth's climate and the mass activity of peoples.

Chizhevsky is recognized as the founder of Sun-Earth research, having proved that solar activity has an effect on many terrestrial phenomena. Chizhevsky proposed that not only did geomagnetic storms

resulting from sunspot-related solar flares affect electrical usage, plane crashes, epidemics and grasshopper infestations, but human mental life and activity. Chizhevsky proposed that the eleven-year peaks influence human history in sunspot activity, triggering humans en masse to act upon existing grievances and complaints through revolts, revolutions, civil wars and wars between nations.

Chizhevsky's ideas were not in line with Soviet ideology; in 1942 he was arrested and spent eight years in Gulag. In 1950 he was allowed to live peacefully in Karaganda, but was rehabilitated only in 1958.

Chizhevsky was also a marked landscape painter and the author of hundreds of poems. Chizhevsky died in Moscow in 1964. An "In memoriam" in the International Journal of Biometeorology stated that he had "carved new paths and approaches to the vast expanse of unexplored fields." He is buried in Pyatnickoe cemetery in Moscow with a headstone featuring an engraved carving representing the sun. The Chizhevsky Science Memorial Cultural Center opened in Kaluga, Russia in 2000 in the home where Chizhevsky lived and worked for nearly 15 years. In December 2012 a monument to A. Chizhevsky was built in Kaluga also.

More information is available at http://en.wikipedia.org/wiki/Alexander_Chizhevsky

Baron Marcel Nicolet

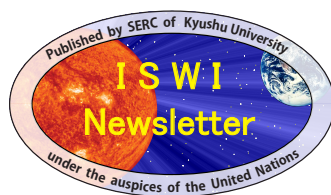
Marcel Nicolet (1912 – 1996) was a Belgian geophysicist and astrophysicist, specialized in solar ultraviolet radiation and stratospheric chemistry, who played an essential role at the birth of space aeronomy.

Amongst his most remarkable scientific achievements, we cite the explanation, on a purely theoretical basis, of the ionospheric D-region formation process. He postulated that the solar radiation in the hydrogen Lyman-alpha wave length could penetrate into the Earth's mesosphere, leading to the ionization of nitrogen oxide. He was also the first person to clarify the effect of atmospheric drag acting upon the first man-made satellites orbiting the Earth. He played a decisive role in the determination of photo-dissociation and photo-ionization in the atmosphere, predicting the presence of a belt of helium around the Earth and of the presence of NO, NO₂, HNO₃, HO₂ and H₂O₂ in the atmosphere before any of these were measured. For these achievements he was bestowed with the Bowie medal, one of the highest distinctions of the American Geophysical Union, after having received already several other scientific distinctions.

Marcel Nicolet was one of the founders of the Committee on Space Research (COSPAR) of the International Council of Scientific Unions (ICSU). He participated in the creation of the *Commission préparatoire d'Études et de Recherches Spatiales* (COPERS) that afterwards led to the foundation of the European Space Research Organisation (ESRO) and the European Launcher Development Organisation (ELDO), forerunners of the European Space Agency.

He was one of the main promoters of the International Geophysical Year and became its secretary general.

In his home country Belgium, Marcel Nicolet was the founder of the Belgian Institute of Space Aeronomy in 1964. He was a member of the Belgian Royal Academy and professor at the Universities of Liège (Ulg) and Brussels (ULB). He received the title of Baron in 1987.



This pdf was circulated in
Vol. 5, Number 98, on
14 September 2013.