Date: Tue, 29 Apr 2014 09:42:14 +0200
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Subject: Space Weather medals

Dear Colleagues:

In 2013, a set of three medals in Space Weather have been created at the occasion of the 10th anniversary of the European Space Weather Week. These medals are now becoming an annual event, with a medal ceremony during the European Space Weather Week (November 17-21, 2014, Liège, Belgium, http://www.stce.be/esww11/).

- 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 11, 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 and fulfill the criteria below**.**
- As far as possible, join a CV of the suggested person. If you do not want to ask her/him a CV and if you do not find any on a web personal page for example, send at least a CV that emphasizes the points for which the application is made (publications, achievements).
- If possible, please include letters of support from two other colleagues, possibly from other countries than yours. You may also include those two colleagues as co-signatories on the proposal.
- 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 Royal Academy of Belgium, Øyvind Sørensen of the Norwegian academy of science and Dr. Galina Kotova, of the Russian academy of science. To complement this panel, space weather-related scientists 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 Journal of Space Weather and Space Climate (A. Belehaki). The program committee is chaired by 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 **September, 14th 2014.**

CRITERIA

All three prizes are prestigious recognitions in Space Weather. They only recognize excellence. This is difficult to measure, but some criteria are common to the three of them. The work must have been documented (in peer review journals or book chapters), or must be a technological contribution that has proved to work (not a project or a concept). It must be relevant to space weather and/or space climate. It must also be internationally recognized: International character of the scientific or technology contribution even if this criterion will not be as drastically used for the Chizhevsky medal than for the two others.

On top of those common criteria are some specific to each prize.

Criteria for attributing the Marcel Nicolet medal:

The candidate of the Baron Marcel Nicolet Medal must have demonstrated a unique ability to bind the space weather community in a spirit of peace and friendship, to educate in and outside of the space weather community, to go beyond the space weather research community and address a larger audience, and/or to serve the space weather community in conveying a roadmap going beyond the science involved.

Criteria for attributing the Alexander Chizhevsky medal:

The candidate of the Alexander Chizhevsky Medal must have taken unexplored ways, potentially at risk, to reach a successful achievement.
Practically, it would be useful to obtain a recommendation letter from the PhD advisor in case (s)he is not the person sending the application. In case of pregnancies, the 8 years period is augmented by 1.5 year per child

Criteria for attributing the Kristian Birkeland medal:

The candidate of the Kristian Birkeland Medal must have demonstrated a unique ability to combine basic and applied research to obtain useful products, preferentially being used outside the research community, or across disciplines in research. The work must have led to a better physical comprehension of the solar or terrestrial phenomena related to space weather, to a drastic improvement of the modeling, or to a new generation of instruments for space weather observations.

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 191**7** 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

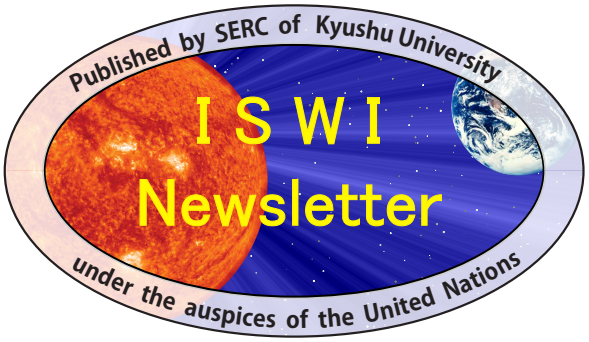
Marcel Nicolet (1912 – 1996) was a Belgian geophysicist and astrophysicist, specialized in solar ultraviolet radiation and stratospheric chemistry, who played an essential role at the birth of space aeronomy.

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, NO_2, HNO_3, HO_2 and H_2O_2 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 Royal Academy of Belgium and professor at the Universities of Liège (ULg) and Brussels (ULB). He received the title of Baron in 1987.



This pdf circulated in
Vol. 6, No. 034,
on 01 May 2014