

**In this issue:**[News](#)[Tutorial](#)[Related Conferences](#)[Presentation of DIAS results in International Meetings](#)[Published papers about DIAS](#)[Call for contributions](#)

DIAS is a demonstration project co-funded by the [eContent](#) programme of the European Commission, of two years duration (2004 - 2006).

DIAS consortium members:

- [National Observatory of Athens, Greece \(Co-ordinator\)](#)
- [University of Athens, Department of Telecommunication and Informatics, Greece](#)
- [Rutherford Appleton Laboratory, Council for the Central Laboratory of the Research Councils, UK](#)
- [National Institute of Geophysics and Volcanology, Italy](#)
- [Swedish Institute of Space Physics, Sweden](#)
- [Leibniz Institute of Atmospheric Physics, Germany](#)
- [Space Research Center, Polish Academy of Sciences, Poland](#)
- [Blustaff S.p.A., Italy](#)

DIAS data contributors:

- [Pruhonice Ionospheric Station Institute of Atmospheric Physics, Czech Republic](#)
- [Observatori de l'Ebre, Spain](#)

NEWS**DIAS Web Demonstrator and DIAS server prototype**

Two interfaces are available to evaluate DIAS services. The [WEB DEMONSTRATOR](#) is available to **anyone** who would like to view a display of all the DIAS services in their final form. This Demo gives the opportunity to explore the DIAS products and services for a pre-selected period (from 5th to 14th of September 2005).

The [SERVER PROTOTYPE](#) offers, to **registered users**, online access to added-value products of real-time ionospheric data over Europe.

DIAS Training kit

The training kit for DIAS user includes a new release of [DIAS brochure](#) and the demonstration CD of DIAS products and services. It is possible to receive the web demo CD asking for it at the address: dias@ingv.it.

European space weather related web pages

Space weather information is widely spread in many web pages over the whole world. COST 724 "Developing the Scientific Basis for Monitoring, Modelling and Predicting Space Weather" and 296 "Mitigation of Ionospheric Effects on Radio Systems" European Actions assemble many European entities which give the substantial input to collect and make a convenient access to different types of such information. They offered publicly free data, models, services, education' information at their web pages. Joint Action's initiative is to propose a useful link to European Internet sites. Many European, national and international links have been already posted at http://www.cbk.waw.pl/sw_europe and <http://www.cbk.waw.pl/cost296>. We invite you to give addresses of your website to such a database and make an advantage of having European space weather related web pages together. Contact: <http://www.cbk.waw.pl/cost296/contact.html> or http://www.cbk.waw.pl/sw_europe/contact.html

TUTORIAL

The ionospheric disturbance level described by an activity index AI

For an interested user of ionospheric data it is very important to know if the current state of the ionosphere is normal due to the mean solar activity level or disturbed due to short time solar activity changes or specific solar events (solar flares, ionospheric storms etc.). Especially for ionospheric propagation purposes (HF or transionospheric propagation) it is necessary to get some on-line information about the main ionospheric behaviour. Therefore, an ionospheric activity index has been developed in the frame of the DIAS project which could be very helpful to for such purposes. It bases on simultaneous ionosonde observations at different stations in Europe continuously carried out every 15 minutes. Using the critical frequency foF2 an activity index AI is derived by the following simple formula:

$$AI=100*(foF2-foF2^{med})/foF2^{med}$$

In this equation the foF2^{med} value is the median value of foF2 at the corresponding time during the last 30 days before the day of the current foF2 value. As the foF2^{med} value represents the nearly undisturbed level of foF2, the AI values describe the deviation of the current value foF2 from the normal level in per cent. Such indices are continuously derived every 15 minutes at different European ionosonde stations. In

Fig. 1 some examples of such ionospheric activity indices are presented using data of 4 different stations working together in the DIAS project (Juliusruh, Chilton, Pruhonice, and Athens).

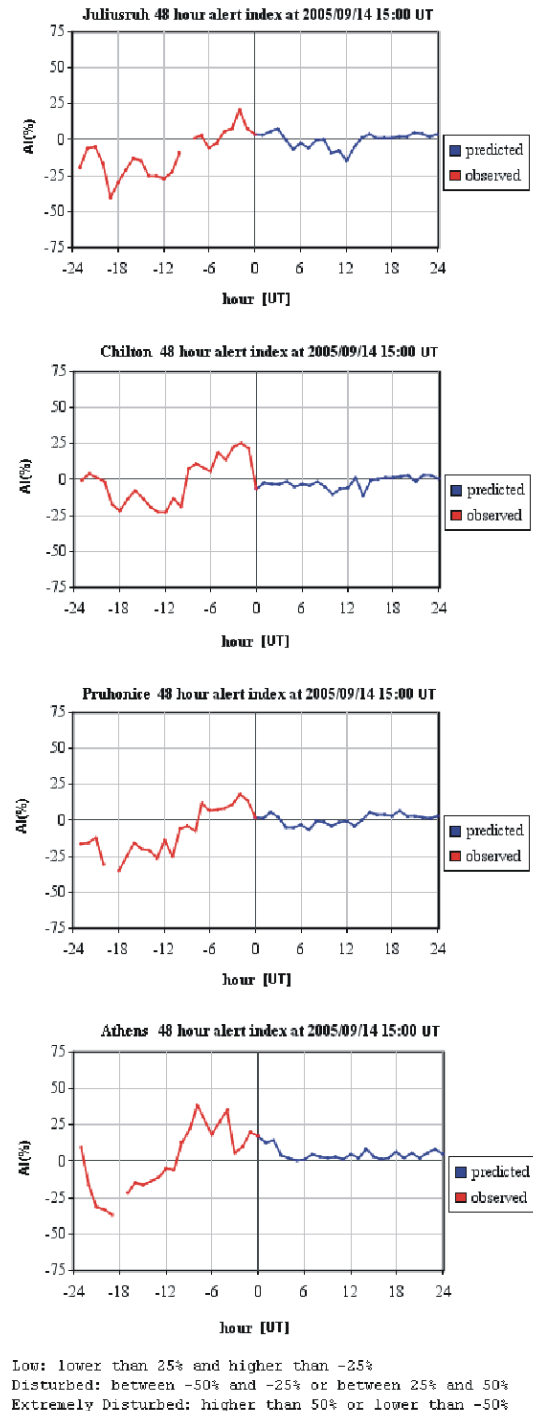


Figure 1. Example of the variation of ionospheric activity indices in dependence on time at 4 different European ionosonde stations using observed (red) and predicted foF2 values (blue).

In the near future such indices will even be available for 8 different stations, thus covering an essential part of the ionosphere over the European continent. In

Fig. 1 current activity index values are presented for time 0, past values up to 24 hours back are shown in red, predicted values up to 24 hours ahead are drawn in blue. With such data series it is easily possible to compare the ionospheric activity level during the last 24 hours with the current values and the expected ionospheric activity changes in the near future.

RELATED CONFERENCES

- EGU General Assembly
Vienna, Austria
2 - 7 April 2006
<http://meetings.copernicus.org/egu2006/>
- Third CNES Workshop On Earth-Space Propagation
Toulouse, France
25 - 27 September 2006 *** New date!!! ***
<http://www.cnes.fr/>
- IEE Ionospheric Radio Systems and Techniques conference
London, UK
18 - 21 July 2006
<http://conferences.iee.org/IRST2006/>
- SCOSTEP 11th Quadrennial Solar Terrestrial Physics Symposium
"Sun, Space Physics and Climate"
Hotel Gloria Convention Center
Rio de Janeiro, Brazil
6 - 10 March 2006
<https://salvador.secure-braslink.com/compassturismo.com.br/events/scostep/index.htm>
- International School of Space Science: The Active Sun on your Active Desktop
L'Aquila, Italy
27 March - 1 April 2006
<http://62.173.166.248/iss/>
- International Advanced School on Space Weather
Abdus Salam International Center for Theoretical Physics
Trieste, Italy
2 - 19 May 2006
http://cdsagenda5.ictp.trieste.it/full_display.php?id_a=a05201
- 36th COSPAR Scientific Assembly
Beijing, China
16 - 23 July 2006
<http://www.cospar2006.org/>

PRESENTATION OF DIAS RESULTS IN INTERNATIONAL MEETINGS

3rd EGU Assembly (Vienna, Austria, 2 - 7 April 2006), session ST5.7 "Measurements of ionospheric parameters influencing radio systems"

["Ionospheric specification and forecasting based on observations from European ionosondes participating in DIAS project"](#)

A. Belehaki, Lj. Cander, B. Zolesi, J. Bremer, C. Juren, I. Stanislawski, D. Dialetis and M. Hatzopoulos

PUBLISHED PAPERS ABOUT DIAS

"DIAS Project: The establishment of a European digital upper atmosphere server", Belehaki A., Cander Lj., Zolesi B., Bremer J., Juren C., Stanislawski I., Dialetis D., Hatzopoulos M., Journal of Atmospheric and Solar-Terrestrial Physics, Vol. 67, no. 12, pp. 1092-1099, 2005.

CALL FOR CONTRIBUTIONS TO DIAS NEWSLETTER

If you would like to submit a short contribution for the next issue of the DIAS newsletter, please contact the editorial office: DIAS@ingv.it.

The goal of DIAS is to develop a pan-European digital data collection on the state of the upper atmosphere, based on historical data collections and on real-time information provided by ionospheric stations belonging to Public European Research Institutes. DIAS services, such as radio propagation characteristics for the European region, ionospheric maps, alerts and warnings for ionospheric disturbances, etc., will be useful for large number of HF communication and navigation systems users and will contribute to the formation of a network of public research institutes and private sector users. For the effective exploitation of DIAS products and services a network of users will be established that will work together with DIAS data providers to bring out the full potential of this type of information.

Detailed information about the project can be found on [DIAS home page](http://www.iono.noa.gr/DIAS/) (<http://www.iono.noa.gr/DIAS/>).

To change your e-mail address, to unsubscribe or to receive more information, please contact the editorial team: DIAS@ingv.it or visit: <http://www.iono.noa.gr/DIAS/>

This issue of the DIAS newsletter has been edited by Lucilla Alfonsi and Silvia Pau, INGV- Italy.

The Tutorial Section has been edited by Jürgen Bremer, IAP - Germany.

The "European space weather related web pages" in the "NEWS section" has been edited by I. Stanislawska, M. Tomasik, H. Rothkaehl, SRC - Poland.