



Istituto Nazionale di
Geofisica e Vulcanologia



INGV Contribution to GWSWF

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Lucilla Alfonsi, Luca Spogli*

INGV-RM2/UPPER ATMOSPHERE PHYSICS GROUP

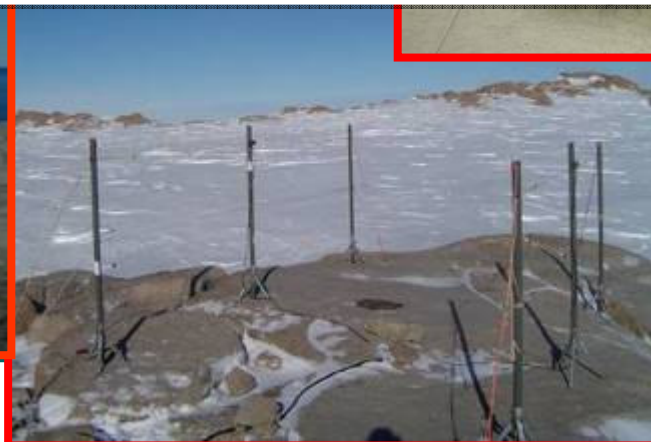
Modena (Italy), 11-12 April

Equipment



Ny Al
Longye

INGV manage different kind of instruments located at polar latitudes of both the poles: a digital ionosonde, riometers, GPS Scintillation and TEC Monitors (GISTM).



ESWua- The Electronic Upper Atmosphere Database for Space Weather at INGV

INGV - electronic Space Weather upper atmosphere - Microsoft Internet Explorer

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Address <http://www.eswua.ingv.it/ingv/home.php?res=1024>

electronic Space Weather upper atmosphere

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HOME IONOSPHERIC MONITORING SCINTILLATION MONITORING RIOMETER MONITORING EDUCATIONAL

ISACCO (Ionospheric Scintillations Arctic Campaign Coordinated Observation) is an INGV project to monitor ionospheric scintillations at polar regions by means GISTM (GPS Ionospheric and TEC Monitor) receiver. At the moment 4 stations have been installed: two, ISACCO nya0 and ISACCO nya1, in NyAlesund (Svalbard), another one, ISACCO lyb0, in Longyearbean (Svalbard), and the last one, ISACCO btn0, in Mario Zucchelli Station (Antarctica). In this page it is possible to plot and download the Arctic scintillation data in quasi-real time (the DB is updated every 15 min), the 50 Hz raw data are also downloadable.

ISACCO nya0
S4 - ISACCO nya0 - NyAlesund (78.927° N, 11.927° E)
2007 Jun 22 from 8:00 UT

ISACCO nya1
S4 - ISACCO nya1 - NyAlesund (78.927° N, 11.864° E)
2007 Jun 22 from 8:00 UT

ISACCO lyb0
S4 - ISACCO lyb0 - Longyearbean (78.195° N, 15.002° E)
2007 Jun 14 from 6:00 UT

S4 - ISACCO nya0 - NyAlesund (78.927° N, 11.927° E)
S4 - ISACCO nya1 - NyAlesund (78.927° N, 11.864° E)
S4 - ISACCO lyb0 - Longyearbean (78.195° N, 15.002° E)

[Polar Plot] | [Linear Plot] | [Download Data]

Station: btn0

from: 2007 6 13

hour: 23

hour: 2 hours 4 hours 12 hours 24 hours

S4 VTEC Track

Elevation (deg): 10

L1locktime (s): 240

Make graph

Station: ISACCO btn0 - BTN (74.7° S, 164.110° E)
2007 Jun 13 from 23:00 to 23:59 UT

PRN LIST

8	11
12	14
17	20
22	26
28	

Threshold values: L1locktime = 240 s, Satellite elevation = 10°

[Linear Plot] | [Download Data]

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Monitoring Accesses

from Rome and Gibilmanna ionospheric from Arctic and Antarctica are available (both

scintillation 719 ionospheric 2020 downloads 655

please register yourself in order to get the enables you to see data and plots all over the

unt, please login in the form aside.

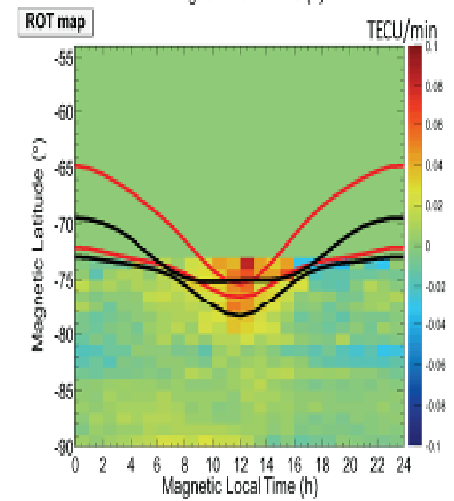
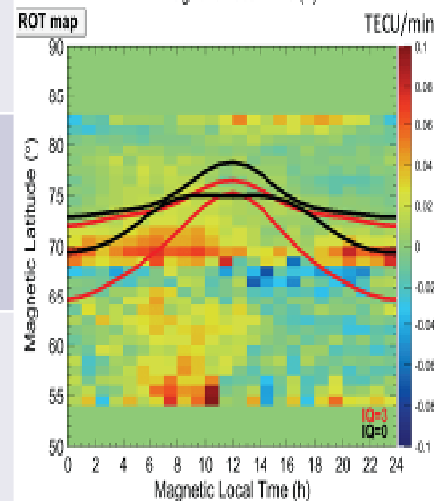
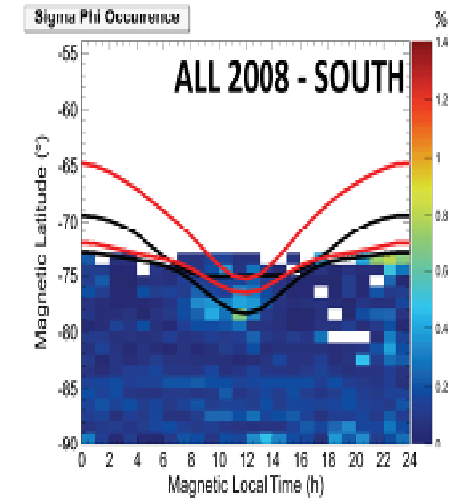
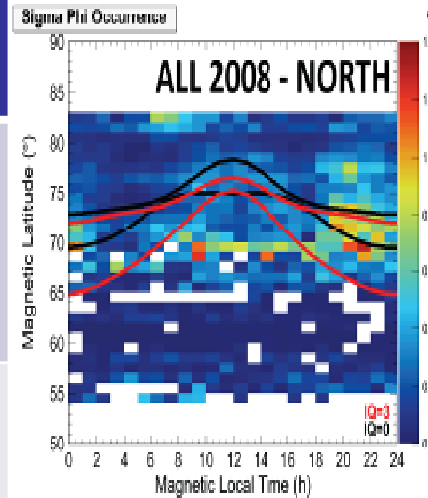
User: romano@ingv.it - Feedback - Logout

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Start Posta in arrivo per def... Microsoft PowerP... www.eswua.ingv.it Internet C:\Alfa (D)\SCINTILLA... 15.26

Ground Based Scintillation Climatology - GBSC

Quantity	Description	Typical assumption
Elevation angle	Reduce the impact of large values of the indices not related with scintillation	20°
Vertical/Slant	Projection to the vertical to minimize the impact of the geometry	Vertical
Statistical accuracy	Remove the contribution of bins with low statistics	2.5 – 10 %
Geomag condition	Geomagnetic behavior of each day, based on the Kp and DST index	Quiet/Disturbed/All
IMF	A selection on the IMF component	Bx,By,Bz > or < 0 No IMF selection



Alfonsi et al. (2011), Bipolar climatology of GPS ionospheric scintillation at solar minimum, Radio Sci., in press.