# en/SunStorm

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Solar Storms

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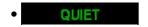
## actual Solar storm activity

On the website "http://www.n3kl.org/sun/noaa.html" you can watch an actual graphic with the solar-storm activity.

Right now the solar-storm activity is : Solar X-rays:



Geomagnetic Field:



(A "Click" on the solar-storm activity displays the activity over a period of 4 days in a bar diagram.)

#### **IMPORTANT:**

Are the bars in the diagram on "Green" everything is OK.

If you have yellow or red bars there might be problems with the GPS-signal and the included associated features.

## **Android APP**

If you use a Android mobile phone or Tablet you can also use our "Solar Activity Monitor Widget": APP

### **Solar Storm**

During a solar storm substance of the sun will be thrown explosively into the space.

Even that the sun is about 150 Mio. kilometers far away from us those solar particles hit the earth with a speed of more than 2000 Km/sec.

The most known effect of the solar storms are the Northern Lights (polar lights).

Normally the Earth's magnetic field protects us against solar storms. With particularly strong solar storms this magnetic field will brake and can lead to disturbances on earth.

And due to those solar storms in February 2011 the radio reception in south China was disrupted or in 1989 the power grid of Quebec City was paralyzed down.

Right now (2012) we have the strongest solar storms since 5 years. The severe phase of solar activity is currently still growing.

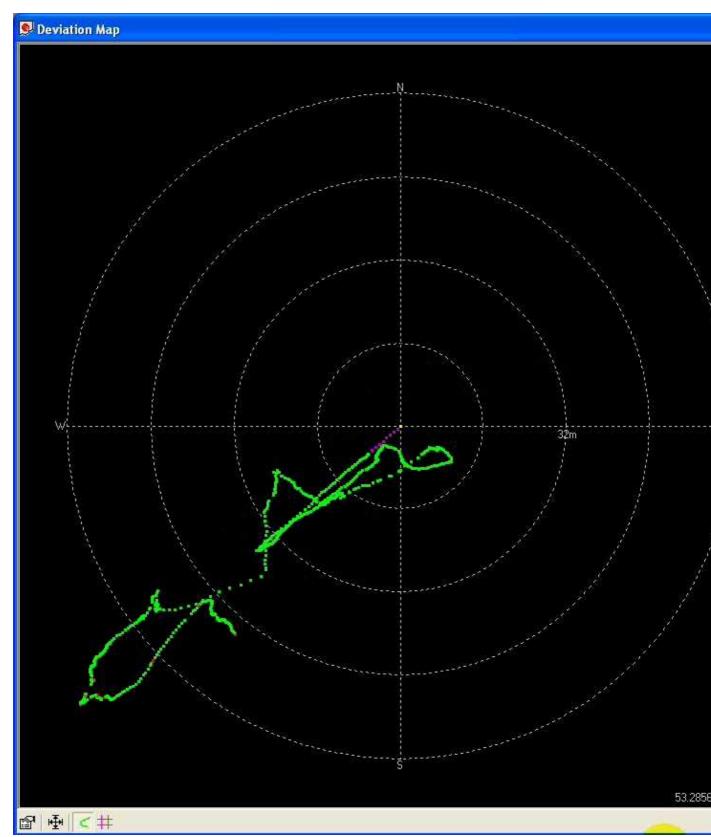
The peak will be reached approximately in 2013. The effects are not estimated yet.

These solar storms are also the GPS satellites in space exposed. In an interrupted GPS reception the exact location of course also affected. GPS-based systems can not function properly.

The Kopter cannot hold i.e. with the function <u>PositionHold</u> the exact position or fly to a different point with the function <u>ComingHome</u> or execute different other GPS-based function without any error.

To see the GPS behavior during a solar storm the Kopter was placed in an open meadow and been **not** moved. The received satellite data showed now no precise position. By the incorrectly transmitted data through the satellite the GPS on the Kopter thought, that the Kopter moves.

And that with ~10m/s in a radius of ~64mtr!



In the MikroKopter-Forum you can read and discuss further information about solar-storms : Forum