



Solar Condition Update and Advisory

Activity on the Sun continues to intensify as Active Region 9393 evolves and transits across the solar disk. This region is continuing to intensify and grow, similar growth and intensification is occurring in other regions as well. This active region is already larger than the region that produced the large X-Class flares responsible for the Bastille Day storms of July 14-16, 2000. So far only M Class solar flare activity has been observed, a factor of 10 less than the X-Class. The outlook over the next few days indicates increasing probability of significant X Class flare from this region.

Flare observations from active regions give a one to five day precursor of possible geomagnetic storms at the Earth. Flare energies have been observed already that are capable of producing geomagnetic storms in the next few days that can have impacts on power system operations. A flare observed March 28 is similar in size to flares that triggered the April 6-7, 2000 storm. This relatively mild storm resulted in the largest Power Grid GIC ever observed, a level of over 300 Amps in Scandinavia. A number of power system problems were reported all across North America due to this storm as well, a GIC of 175 Amps was observed in New York, 90 Amps in Pennsylvania, Pacific Northwest, etc. Aurora was observed as far south as Japan. The optimal coupling between the Earth's magnetic field and the solar wind allows for enhanced storm activity during the equinox periods. Therefore, even smaller flare activity can lead to locally intense storm conditions. Only real-time observations of solar wind conditions can provide reliable forecasts of geomagnetic storm onsets and intensities.

Our clients who are subscribers to our continuous forecast services will receive updates each minute on solar wind condition changes and resulting geomagnetic storm activity in their specific regions.

John G. Kappenman, Metatech
john@metatechcorp.com, 218-727-2666