

**JHU/APL Space Weather Products**  
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As technology advances, space weather prediction has become increasingly important to our nation's defense, commerce, and research activities. For example, space weather can affect communications, navigation systems, satellite health, power grids, and space travel. All these activities benefit from accurate forecasts and nowcasts of space conditions. In response to the growing need, we have developed 22 state of the art space weather products that offer evenly distributed nowcasts and forecasts all the way from the Sun to the Earth. Some of these products have been transitioned to AFWA. One of them, Kp forecast model, has been transitioned to AFWA and is being transitioned to NOAA SWPC. We are developing a Johns Hopkins University Applied Physics Website to serve these products. For the initial stage, we have chosen ten of these 22 products to be served at our website, which is presently still under construction. These ten products, which are listed below, are presented and discussed.

Region	Sub-region	Capabilities	Now Cast	Fore cast
The Sun	Photosphere	Major solar flare and CME prediction	√	√
	Chromosphere	Ha filament identification	√	
	Corona	X-ray sigmoid identification / CME prediction	√	√
Solar Wind	near-Earth	IMF, solar wind density, velocity, pressure		√
Geospace	Near-Earth	Kp		√
	Near-Earth	Dst		√
	Near-Earth/ Magnetotail	magnetotail stretching (b2i)	√	
Magnetosphere	Geosynchronous Orbit	07-1.8 MeV & > 2 MeV electron fluxes		√
	Radiation belt	Electron/proton fluxes & pitch angle at 2-8 Re	√	
Ionosphere	High-latitude	size, position, intensity of auroral oval (OVATION)	√	
	High-latitude	intensity & location of field-aligned currents	√	