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## A wildfire monitoring system as a platform of remote sensing study

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Wildfire emits carbon into atmosphere for 1.7 to 4.1GtC/yr in entire earth (IPCC AR4, Mack et al. 1996, Andreae et al. 2001). Although this amount corresponds to 3-5% of GPP (Gross Primary Product), it corresponds around one quarter to one half amount of GHGs emission by anthropogenic fuel combustion. With consideration of existence of much human induced wildfire, this amount should not be negligible. Thus, studies of accurate impact of wild fire are quite important for climate study as well as disaster management of wild fire.

On the other hand, Arctic and Subarctic region is suitable for research and development of wildfire remote sensing, because frequent observation comparing low- and mid- latitude area and because much fire occur in this area. Therefore JAXA is developing a wildfire monitoring system in IJIS (IARC-JAXA Information System) and IJ-Dir (IARC-JAXA Research Directory) system.

In IJ-Dir system, not only holding meta-data of research activities related to IARC but also satellite imagery including RGB, infrared and hotspots of wildfire as near real time products of MODIS. We can overlay our own research plots and wildfire hotspots over MODIS RGB or Infrared imagery on same day.

This system is easy for researchers to handle satellite imagery and to compare their own ground observation datasets and satellite imagery as a first step of remote sensing study using satellite imagery. Therefore it should be useful for making a plan of ground observation, or should be useful to induce a new remote sensing study by researchers who is not specialist of remote sensing.

Keywords: Remote sensing, Arctic, Forest fire, Wildfire, Disaster