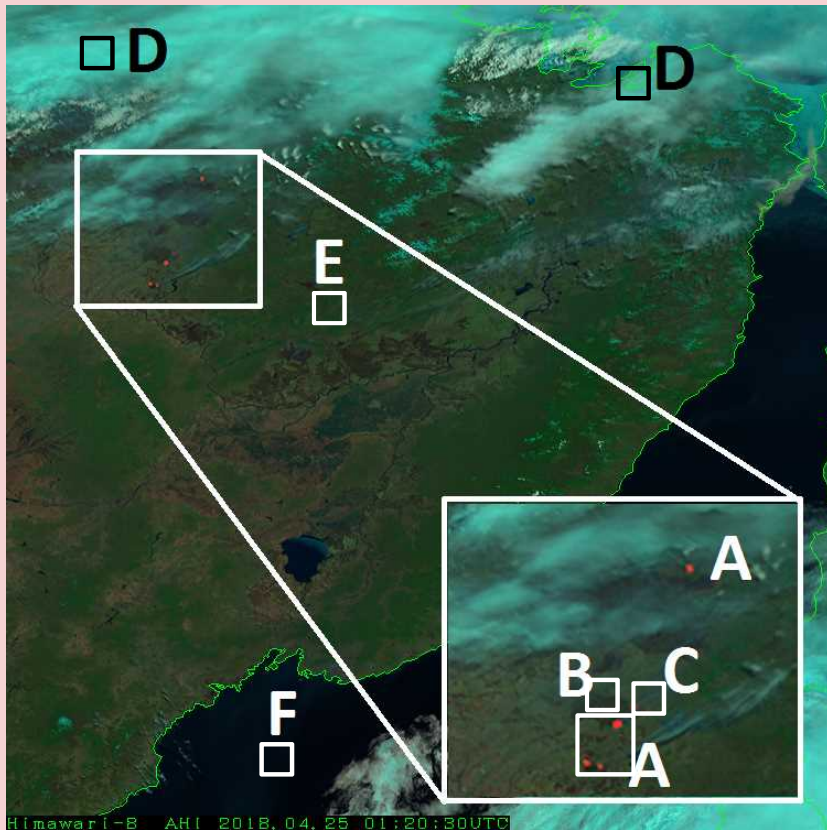
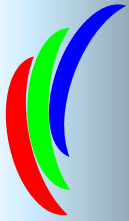


Himawari Natural Fire Color RGB Quick Guide



Forest fire in the vicinity of Siberia, Russia
(01:20 UTC, 25 April 2018)

- A ■ : fire hotspots
- B ■ : burn scars
- C ■ : smoke
- D ■ : clouds
- E ■ : vegetation
- F ■ : sea surface

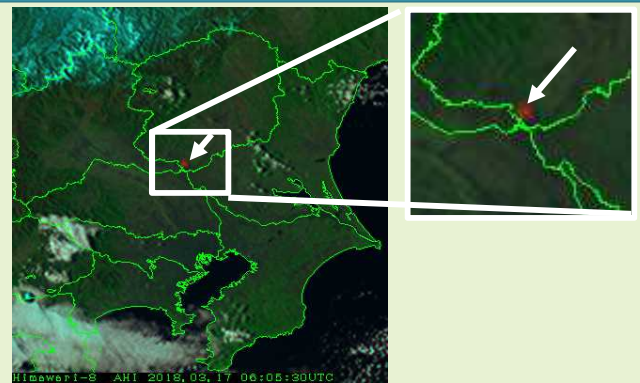
Main applications: Fire hotspots, surface features (vegetation, snow/ice cover)

Benefits:

- Usefulness in highlighting fire hotspots, burn scars and smoke on an ongoing basis
- Similar to Natural Color RGB, except that the 1.6 μm band (B05) used in the red component is replaced with the 2.3 μm band (B06)

Limitations:

- Available for daytime only
- Appearance of water and ice clouds as cyan, unlike original Natural Color RGB
- Cloud color similar to that of snow/ice-covered surfaces



Controlled burn in the Watarase-Yusuichi area of the Kanto region, Japan (06:05 UTC, 17 March 2018)

Controlled burning is characteristically conducted during Japan's summer months. The white arrow indicates a related fire hotspot.

RGB composition with recommended thresholds and related specifications for Natural Fire Color RGB

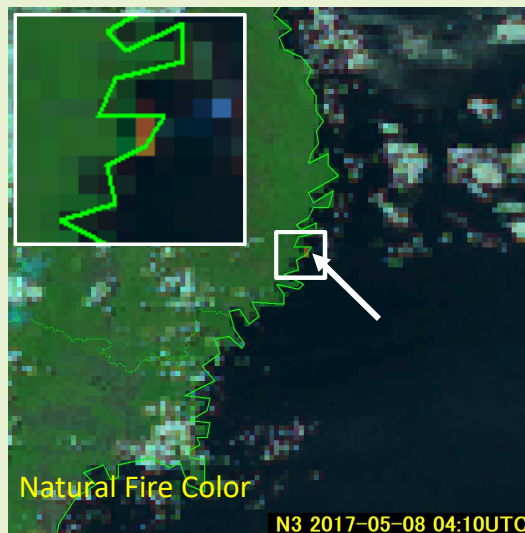
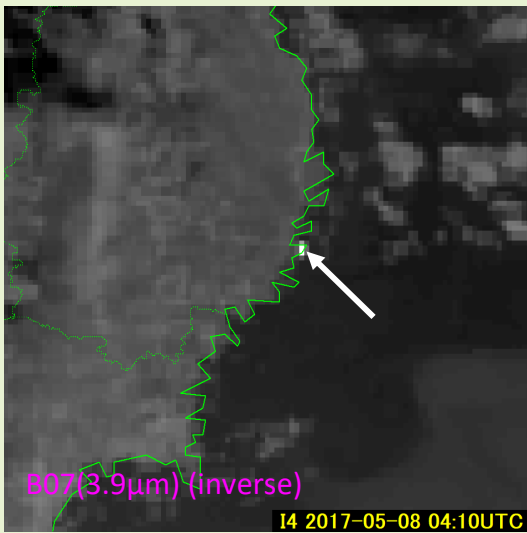
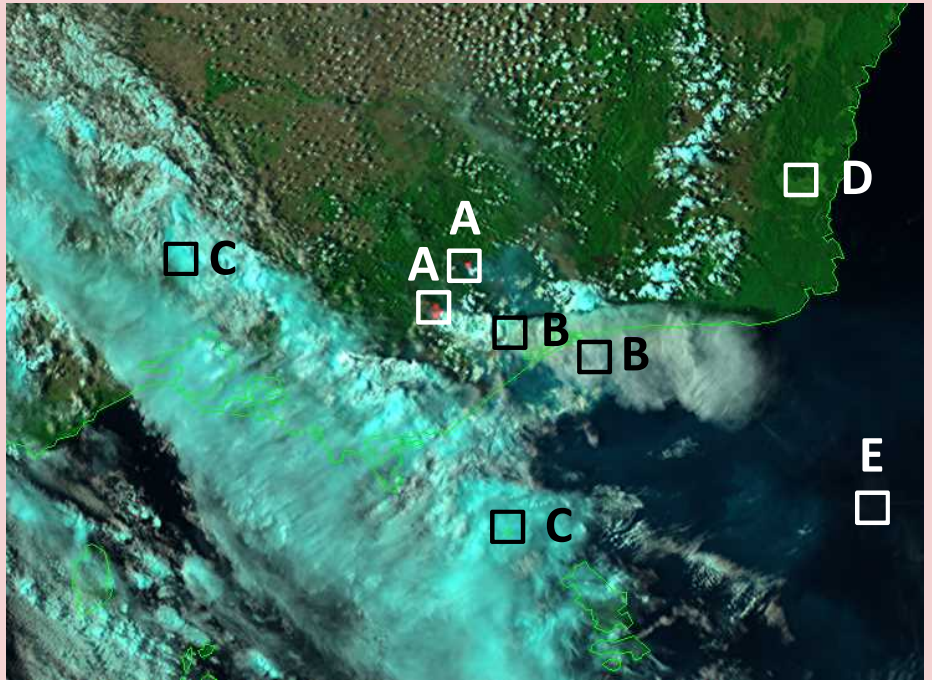
Color	AHI bands	Central wave length [μm]	Min [%]	Max [%]	Gamma	Physical relation to	Smaller contribution to signal of	Larger contribution to signal of
Red	B06	2.3	0%	100%	1.0	Temperature Clouds	Thin clouds	Fire hotspots Thick clouds
Green	B04	0.86	0%	100%	1.0	Cloud optical thickness Green vegetation	Thin clouds Burn scars	Thick clouds Vegetation Snow-covered land Sea ice
Blue	B03	0.64	0%	100%	1.0	Cloud optical thickness	Thin clouds Burn scars	Thick clouds Snow-covered land Sea ice Smoke

Himawari Natural Fire Color RGB Quick Guide

Large-scale fires in Victoria, Australia (05:30 UTC, 3 March 2019)

“B” corresponds to fire cloud (including pyrocumulus) caused by bush fires (marked “A”).

- A ■ : fire hotspots
- B ■ ■ : fire clouds (pyrocumulus) with smoke
- C ■ : clouds
- D ■ : vegetation
- E ■ : sea surface



In the inverse Band 7 image (left), the hotspot caused by fire appears bright (indicated by the white arrow) but would appear dark in a normal (non-inverse) Band 7 image. Hotspots are thus highlighted in cloudless areas. The Natural Fire Color RGB image (right) shows a distinct red hotspot (see the insert zoom-in).

Forest fire in Iwate Prefecture, Japan (04:10 UTC, 8 May 2017)

Color interpretation for Natural Fire Color RGB

Color	Interpretation
■	Fire hotspots
■	Healthy vegetation
■	Burn scars
■	Smoke
■	Clouds

Color interpretation may be developed in future work to enhance distinguishability.