Performance of fire detection algorithms using Himawari-8

AFAC/ 2018

Dr Chermelle Engel/ RMIT University, Bushfire and Natural Hazards CRC.
Prof Simon Jones / RMIT University, Bushfire and Natural Hazards CRC.
Dr Karin Reinke / RMIT University, Bushfire and Natural Hazards CRC.

@bnhcrc    @bnhcrc
Polar-Orbiting

Source: NOAA Science on a Sphere website
https://sos.noaa.gov/

Geostationary

Source: Japan Meteorological Agency website
http://www.jma-net.go.jp
Himawari-8, 100 x 100 pixels

True color

MIR
Polar Orbiting
MODIS/TERRA
MODIS/AQUA
VIIRS/SUOMI

Once a day between
0000 UTC and 0610 UTC

Himawari-8

AHI/WFABBA (Sentinel)

AHI/IBRA (New)

Every 10 minutes between
0000 UTC to 0610 UTC

1st December 2015

summer

autumn

winter

spring

30th November 2016

Early
Late

8 sub-seasons
Polar Orbiting

MODIS/TERRA
MODIS/AQUA
VIIRS/SUOMI

X AHI/WFABBA
( Sentinel )

Re-projected onto Himawari-8 grid.
Pixel “on” if hotspot at any time between 0000 UTC and 0610 UTC.
IBRA

Interim Biogeographic Regionalisation for Australia

419 sub-regions
clear-sky MIR distribution 50th percentile for each IBRA sub-region and sub-season
Re-projected onto Himawari-8 grid.

Pixel “on” if hotspot at any time between 0000 UTC and 0610 UTC.

Polar Orbiting

- MODIS/TERRA
- MODIS/AQUA
- VIIRS/SUOMI

X AHI/IBRA
(New Australia Specific)
Polar Orbiting into AHI

AHI into Polar Orbiting

[counts]

EarlySummer LateSummer EarlyAutumn LateAutumn EarlyWinter LateWinter EarlySpring LateSpring

AHI/WFABBA

AHI/IBRA
True color

Himawari-8, 100 x 100 pixels

FRP > 40 MW
FRP > 20 MW
FRP > 10 MW

MIR
QUESTIONS ?