大氣遙測 作業二

說明目前仍在運轉的氣象衛星、地球資源衛星的**軌道特性**、**高度**、**各頻道特徵與功能**。

一、氣象衛星

Himawari-8 (2015/7/7 開始運轉)
軌道特性：高度距地表 35,790 公里，地球同步軌道(140.7 degrees east)。
Himawari-8 Imager : AHI (Advanced Himawari Imager)

Band	波段(μm)	空間解析度 (at SSP)	功能
1：藍光	0.47 ± 0.05	1 km	vegetation, aerosol
2：綠光	0.51 ± 0.02	1 km	vegetation, aerosol
3：紅光	0.64 ± 0.03	0.5 km	Vegetation, low cloud, fog
4：近紅外光	0.86 ± 0.02	1 km	vegetation, aerosol
5：近紅外光	1.6 ± 0.02	2 km	cloud phase
6：近紅外光	2.3 ± 0.02	2 km	particle size
7：紅外光	3.9 ± 0.22	2 km	low cloud, fog, forest fire
8：紅外光	6.2 ± 0.37	2 km	mid- and upper-level moisture
9：紅外光	6.9 ± 0.12	2 km	mid-level moisture
10：紅外光	7.3 ± 0.17	2 km	mid- and lower-level moisture
11：紅外光	8.6 ± 0.32	2 km	cloud phase, SO_2
12：紅外光	9.6 ± 0.18	2 km	Ozone content
13：紅外光	10.4 ± 0.30	2 km	cloud imagery, information of cloud top
14：紅外光	11.2 ± 0.20	2 km	cloud imagery, sea surface temperature
15：紅外光	12.4 ± 0.30	2 km	cloud imagery, sea surface temperature
16：紅外光	13.3 ± 0.20	2 km	cloud top height, CO2

二、地球資源衛星

FORMOSAT-2 (2017/8/25 開始運轉)
軌道特性：高度距地表 720 公里，太陽同步軌道。
Swath：24 km

Band	波段(μm)	空間解析度 (at SSP)	功能
1：全色 (Panchromatic)	0.45~0.90	2 km	Sharp definition Contrast Discrimination between dark and light
2：藍光	0.48 ± 0.03	4 km	Fire fractional cover Fraction of vegetated land Land cover Soil type Vegetation type
3：綠光	0.56 ± 0.04	4 km	Fire fractional cover Fraction of vegetated land Land cover Soil type Vegetation type
4：紅光	0.66 ± 0.03	4 km	Normalised Difference Vegetation Index (NDVI) Fire fractional cover Fraction of vegetated land Land cover Soil type Vegetation type
5：近紅外光	0.83 ± 0.07	4 km	Normalised Difference Vegetation Index (NDVI) Fraction of vegetated land Land cover Soil type Vegetation type

References

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Bessho, K., Date, K., Hayashi, M., Ikeda, A., Imai, T., Inoue, H., ... & Yoshida, R. (2016). An introduction to Himawari-8/9—Japan's new-generation geostationary meteorological satellites. *Journal of the Meteorological Society of Japan. Ser. II*, *94*(2), 151-183.

http://www.jma.go.jp/jma/jma-eng/satellite/himawari89.html

http://www.typhooncommittee.org/docs/roving_seminar/2018/2018_A_Yamashita.pdf

https://directory.eoportal.org/web/eoportal/satellite-missions/h/himawari-8-9

福衛五號

https://www.nspo.narl.org.tw/inprogress.php?c=20021501&ln=zh_TW

https://space.oscar.wmo.int/instruments/view/rsi_formosat_5