

Tile Number of Surface Reflectance.

Data region: 60°N~60°S, 85°E~205°E

Band: Band 01 ~ Band06

Tile Size: 6° x 6°

Naming rule:  $H8_{\text{datetime}} h\{xx\}v\{xx\}_{\text{LSR.nc}}$ 

e.g. H8\_202301010000\_h08v04\_LSR.nc

Read **example**. (I would recommend using xrray to read the file.)

(https://docs.xarray.dev/en/latest/getting-started-guide/installing.html)

```
####
```

```
import xarray as xr

path = '/h08v04/2023/01/01/H8_202301010000_h08v04_LSR.nc'

ds = xr.open_dataset(path)
```

####

▶ Dimensions:	(lat_1km: 600, lon_	<b>1km</b> : 600	0, lat_2km: 300, lon_2km: 300)	
▼ Coordinates:				
lat_1km	(lat_1km)	float32	35.99 35.99 35.97 30.01 30.0	
lon_1km	(lon_1km)	float32	133.0 133.0 133.0 139.0 139.0	
lat_2km	(lat_2km)	float32	35.99 35.97 35.95 30.03 30.01	
lon_2km	(lon_2km)	float32	133.0 133.0 133.1 139.0 139.0	
▼ Data variables:				
Band01	(lat_1km, lon_1km)	int16		
[360000 values	with dtype=int1	6]		
Band02	(lat_1km, lon_1km)	int16		
Band03	(lat_1km, lon_1km)	int16		
Band04	(lat_1km, lon_1km)	int16		
Band05	(lat_2km, lon_2km)	int16		
Band06	(lat_2km, lon_2km)	int16		
Solar Zenith An	(lat_2km, lon_2km)	float32		
Solar Azimuth A	(lat_2km, lon_2km)	float32		
View Zenith An	(lat_2km, lon_2km)	float32		
View Azimuth A	(lat_2km, lon_2km)	float32		
Cloud Mask(2km)	(lat_2km, lon_2km)	float32		
▼ Indexes:				
lat_1km	PandasIndex			
lon_1km	PandasIndex			•
lat_2km	PandasIndex			9
lon_2km	PandasIndex			•

## **Spatial resolution:**

0.01deg for Band01~04

## $0.02 deg \ for \ Band 05/06$ , Cloud mask, angular data.

SR data information

Nan value: -32768

 $Valid\_Range: 0 \sim 10000$ 

Slope: 0.0001

Code example

```
import numpy as np
import matplotlib.pyplot as plt
AHI_B4 = np.array(ds['Band04'])
AHI_B4 = np.where(AHI_B4==-32768, np.nan, AHI_B4 / 10000)
plt.imshow(AHI_B4)
plt.colorbar()
<matplotlib.colorbar.Colorbar at 0x7f796a891e80>
  0
                                                             - 1.6
100
                                                             1.4
                                                             - 1.2
200
                                                             - 1.0
300
                                                              0.8
                                                              0.6
400
                                                              0.4
500
                                                              0.2
                                                              0.0
     0
           100
                    200
                            300
                                     400
                                             500
```