

# UMBRA COMMERCIAL SATELLITE IMAGERY

UMBRA PUBLIC

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**June 6-7 2023**

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**NextGen space technology company**

**100% American owned/controlled**

Operates the US's **highest resolution shareable commercial Synthetic Aperture Radar constellation**

125 employees (as of June 2023)

Online **UI or API** for self-tasking



# THE UMBRA DIFFERENCE



100% American owned  
and operated



Transparent pricing model



Cost-effective built,  
launched and operated  
micro-sats

HD

Highest resolution  
spotlight SAR imagery on  
the commercial market



Dedicated focus on  
commercial markets



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# TARTUS, SYRIA

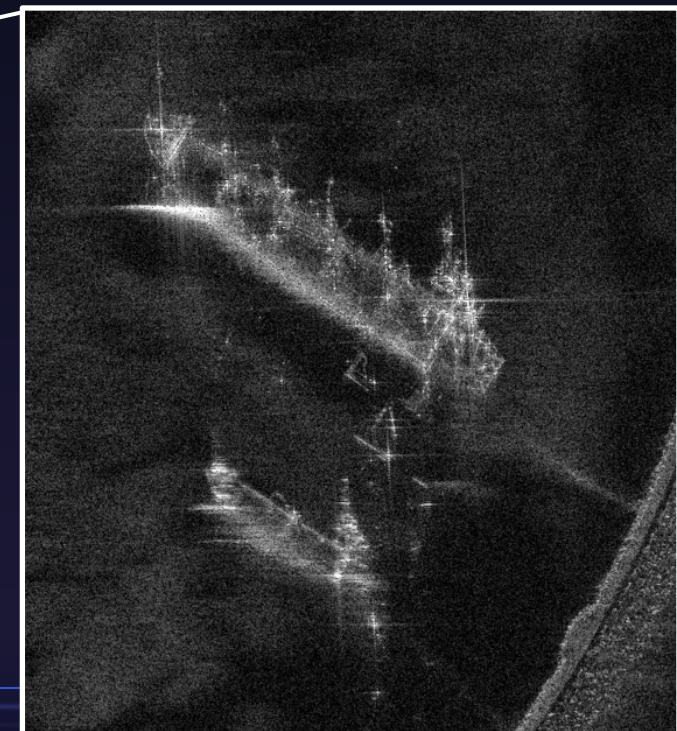
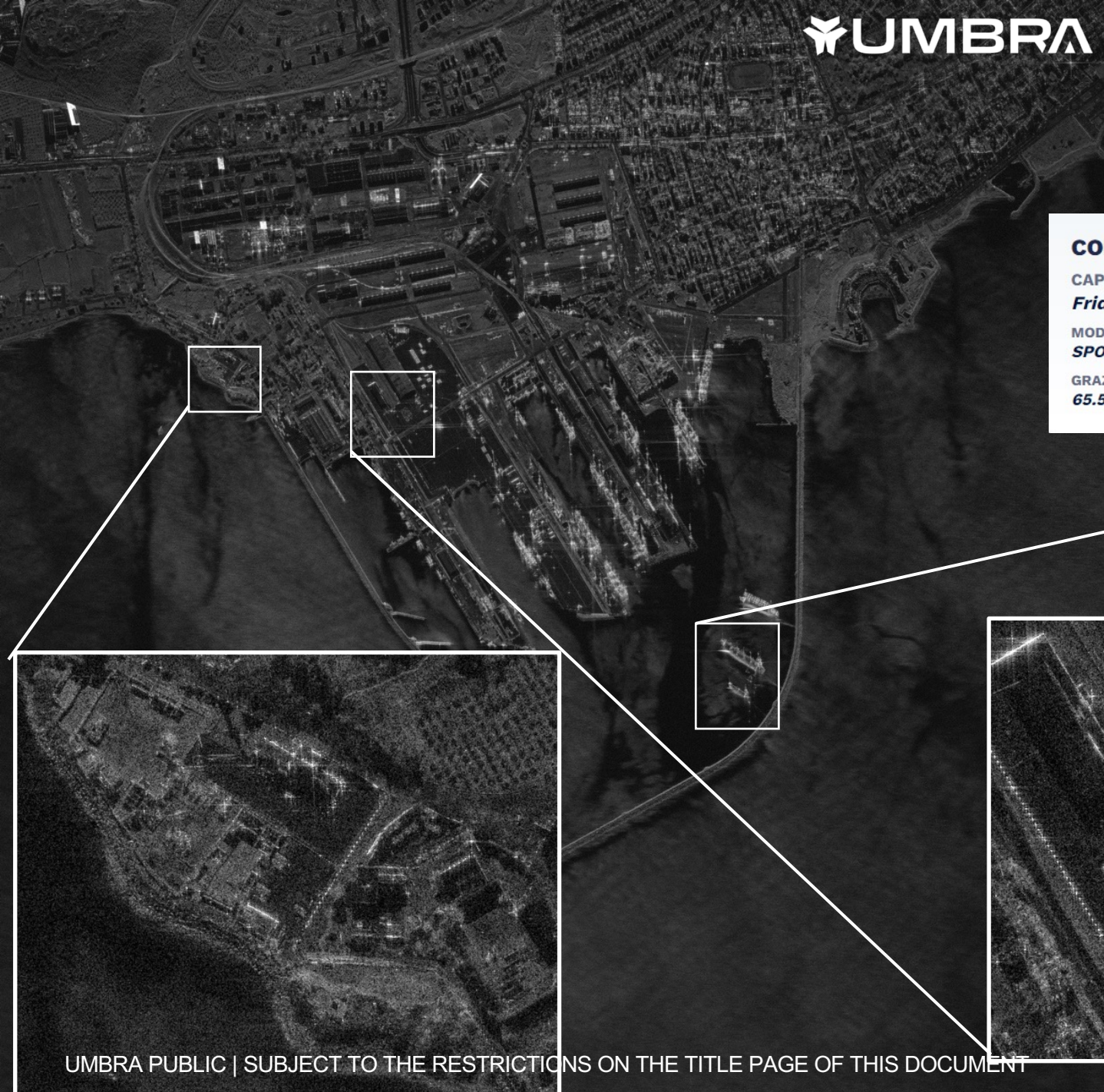
## Russian Mediterranean Fleet

### COLLECT PARAMETERS

#### CAPTURE WINDOW

Friday, February 10, 2023 7:18:49 AM - 7:18:49 AM UTC

|                  |               |                          |                 |                |
|------------------|---------------|--------------------------|-----------------|----------------|
| MODE             | RESOLUTION    | FOOTPRINT                | SATELLITE ID    | TARGET AZIMUTH |
| <i>SPOTLIGHT</i> | <i>0.35 m</i> | <i>16 km<sup>2</sup></i> | <i>UMBRA_05</i> | <i>100.85°</i> |
| GRAZING          | INCIDENCE     | SLANT RANGE              | SQUINT          | POLARIZATION   |
| <i>65.54°</i>    | <i>24.42°</i> | <i>567.7 km</i>          | <i>-2.97°</i>   | <i>VV</i>      |



# YUNLIN COUNTY, TAIWAN

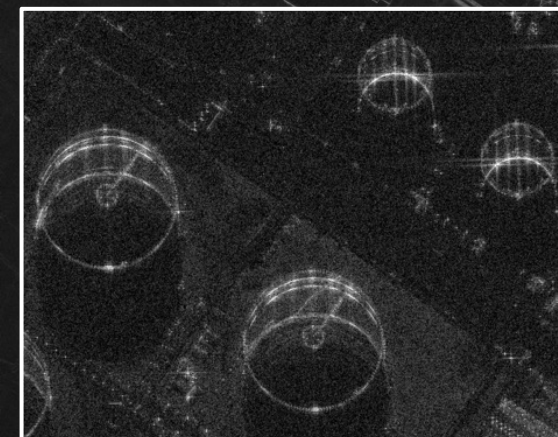
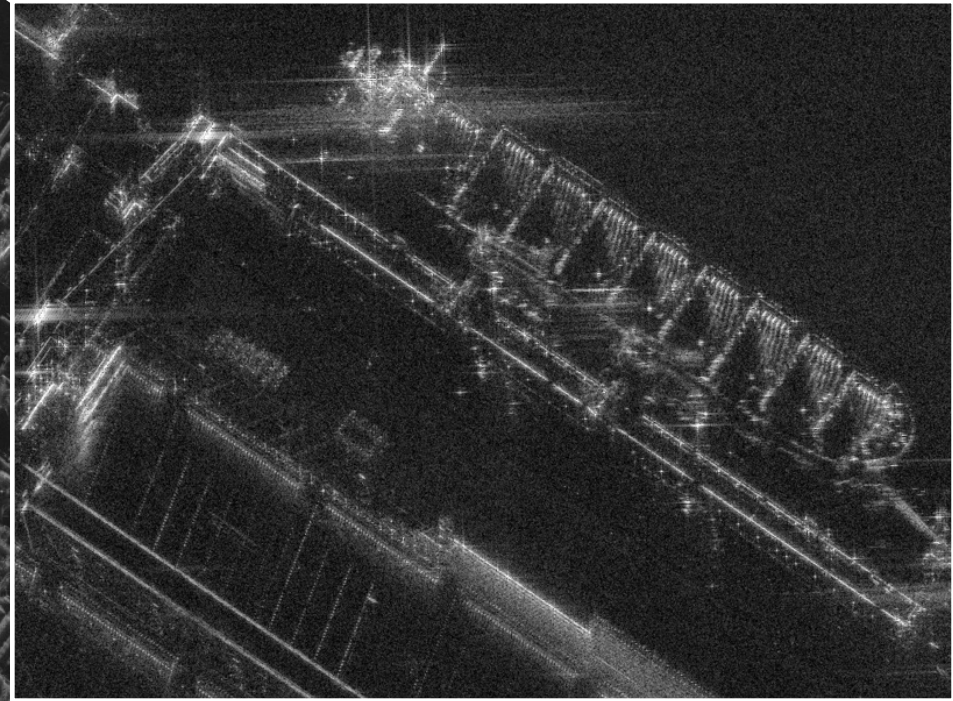
## Oil storage and port activity

### COLLECT PARAMETERS

#### CAPTURE WINDOW

Tuesday, January 24, 2023 1:36:02 PM - 1:36:02 PM UTC

|                  |               |                          |                 |                |
|------------------|---------------|--------------------------|-----------------|----------------|
| MODE             | RESOLUTION    | FOOTPRINT                | SATELLITE ID    | TARGET AZIMUTH |
| <b>SPOTLIGHT</b> | <b>0.25 m</b> | <b>16 km<sup>2</sup></b> | <b>UMBRA_04</b> | <b>259.80°</b> |
| GRAZING          | INCIDENCE     | SLANT RANGE              | SQUINT          | POLARIZATION   |
| <b>44.34°</b>    | <b>45.63°</b> | <b>734.1 km</b>          | <b>-0.41°</b>   | <b>VV</b>      |



# KAMCHATKA, RUSSIA

## Rybachiy Submarine Base



### COLLECT PARAMETERS

#### CAPTURE WINDOW

Monday, March 6, 2023 11:54:21 PM - 11:54:21 PM UTC

|                  |               |                          |                 |                |
|------------------|---------------|--------------------------|-----------------|----------------|
| MODE             | RESOLUTION    | FOOTPRINT                | SATELLITE ID    | TARGET AZIMUTH |
| <i>SPOTLIGHT</i> | <i>0.5 m</i>  | <i>16 km<sup>2</sup></i> | <i>UMBRA_05</i> | <i>308.17°</i> |
| GRAZING          | INCIDENCE     | SLANT RANGE              | SQUINT          | POLARIZATION   |
| <i>59.18°</i>    | <i>32.47°</i> | <i>608.5 km</i>          | <i>-1.29°</i>   | <i>VV</i>      |



# KAMCHATKA, RUSSIA

## Rybachiy Submarine Missile Loading Docks

### COLLECT PARAMETERS

#### CAPTURE WINDOW

Tuesday, March 7, 2023 12:10:42 AM - 12:10:42 AM UTC

| MODE             | RESOLUTION    | FOOTPRINT                | SATELLITE ID    | TARGET AZIMUTH |
|------------------|---------------|--------------------------|-----------------|----------------|
| <b>SPOTLIGHT</b> | <b>0.5 m</b>  | <b>16 km<sup>2</sup></b> | <b>UMBRA_04</b> | <b>291.08°</b> |
| GRAZING          | INCIDENCE     | SLANT RANGE              | SQUINT          | POLARIZATION   |
| <b>40.70°</b>    | <b>49.28°</b> | <b>775.0 km</b>          | <b>-1.17°</b>   | <b>VV</b>      |



# KAMCHATKA, RUSSIA

## Rybachiy Submarine Missile Loading Docks

### COLLECT PARAMETERS

#### CAPTURE WINDOW

*Tuesday, March 7, 2023 10:40:46 AM - 10:40:46 AM UTC*

|                          |                            |                                       |                                 |                                  |
|--------------------------|----------------------------|---------------------------------------|---------------------------------|----------------------------------|
| MODE<br><i>SPOTLIGHT</i> | RESOLUTION<br><i>0.5 m</i> | FOOTPRINT<br><i>16 km<sup>2</sup></i> | SATELLITE ID<br><i>UMBRA_05</i> | TARGET AZIMUTH<br><i>274.41°</i> |
| GRAZING<br><i>49.62°</i> | INCIDENCE<br><i>40.22°</i> | SLANT RANGE<br><i>664.4 km</i>        | SQUINT<br><i>-15.83°</i>        | POLARIZATION<br><i>VV</i>        |



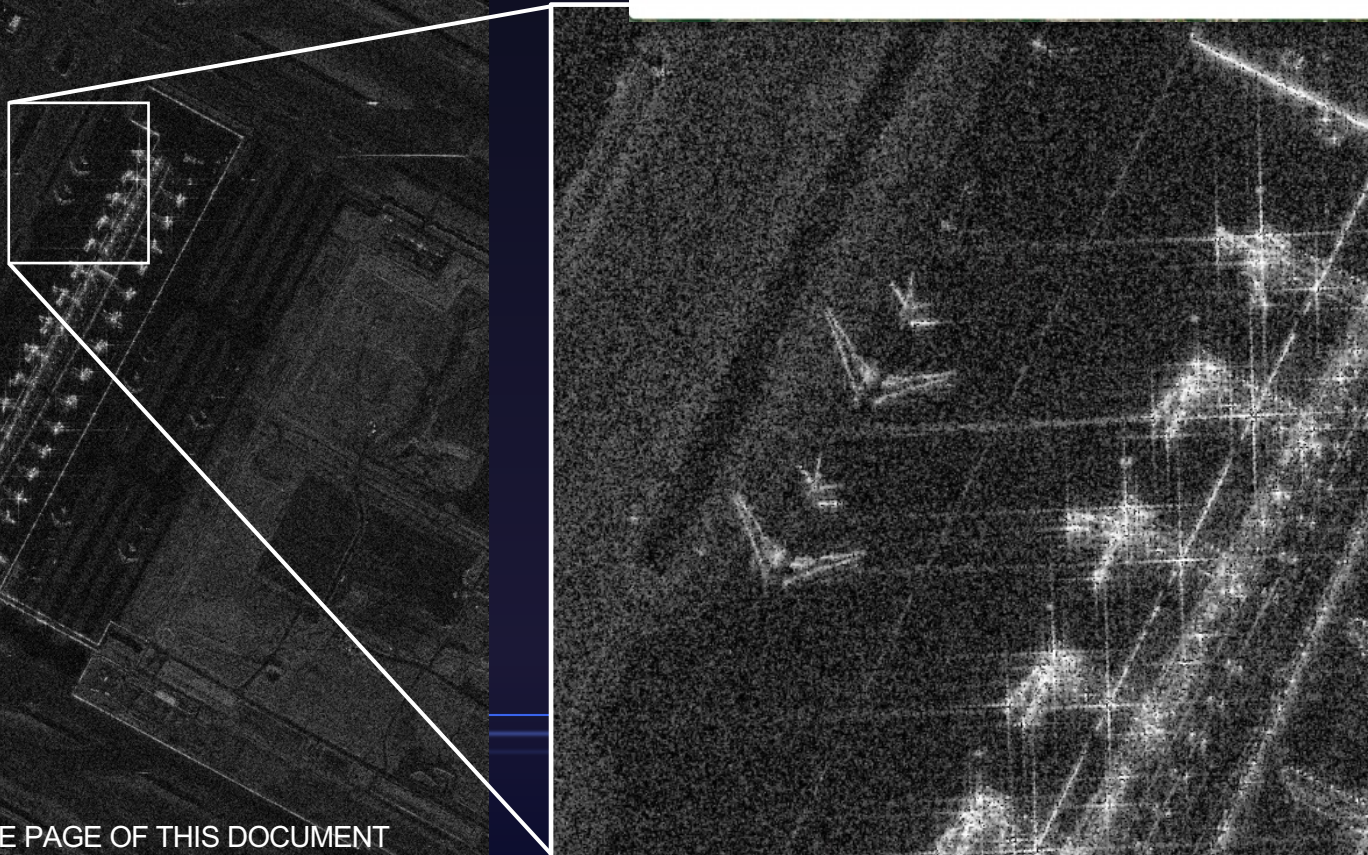


## COLLECT PARAMETERS

### CAPTURE WINDOW

*Wednesday, February 1, 2023 3:05:26 AM - 3:05:26 AM UTC*

|                  |                 |                          |
|------------------|-----------------|--------------------------|
| MODE             | RESOLUTION      | FOOTPRINT                |
| <b>SPOTLIGHT</b> | <b>0.5 m</b>    | <b>16 km<sup>2</sup></b> |
| SATELLITE ID     | TARGET AZIMUTH  | GRAZING                  |
| <b>UMBRA_04</b>  | <b>281.83°</b>  | <b>59.97°</b>            |
| INCIDENCE        | SLANT RANGE     | SQUINT                   |
| <b>30.02°</b>    | <b>593.5 km</b> | <b>-1.69°</b>            |
| POLARIZATION     |                 |                          |
| <b>VV</b>        |                 |                          |



# SPARKS, NEVADA

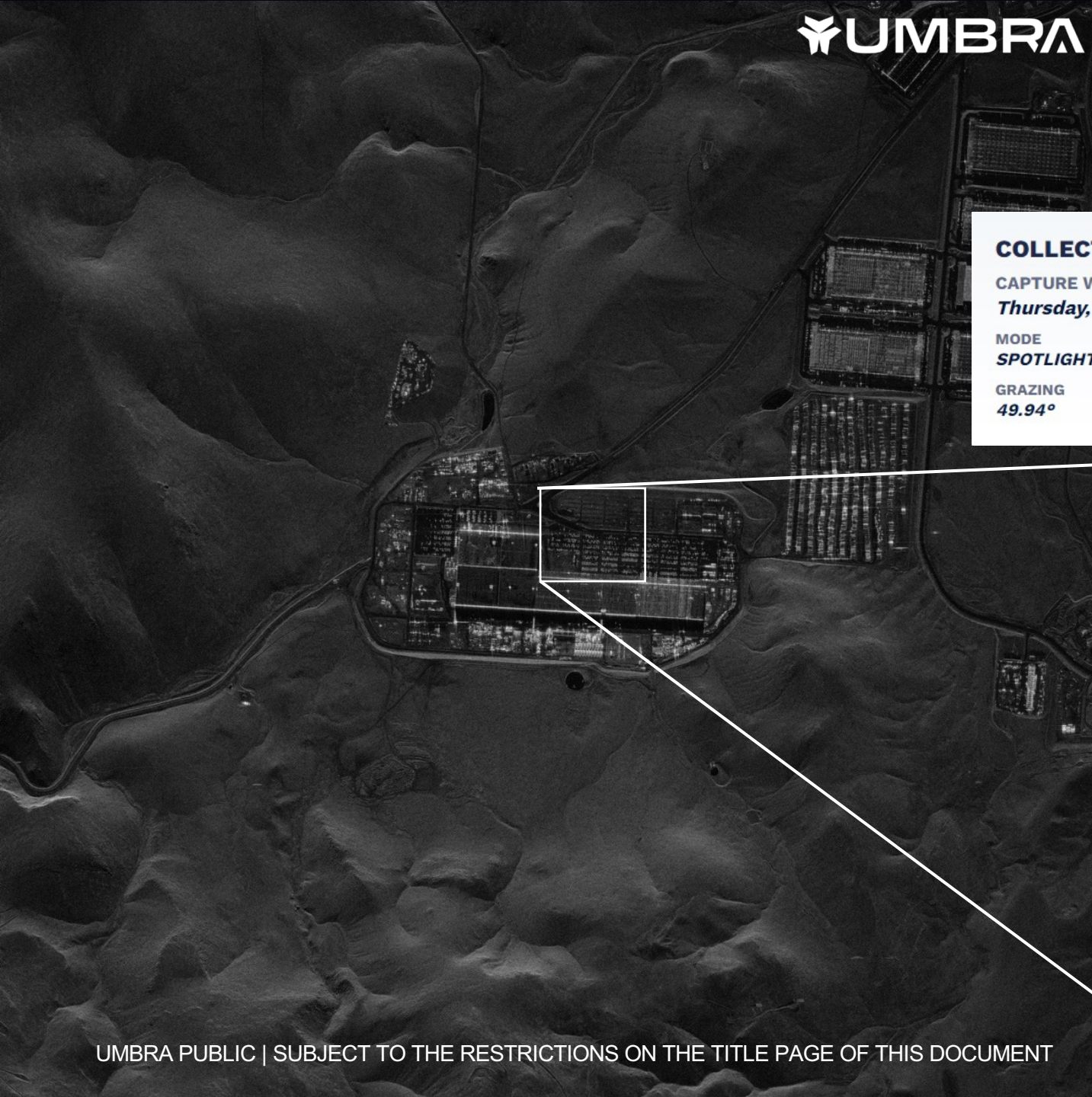
## Industrial production - Tesla Gigafactory

### COLLECT PARAMETERS

#### CAPTURE WINDOW

Thursday, February 2, 2023 5:22:34 AM - 5:22:34 AM UTC

|                          |                            |                                       |                                 |                                  |
|--------------------------|----------------------------|---------------------------------------|---------------------------------|----------------------------------|
| MODE<br><i>SPOTLIGHT</i> | RESOLUTION<br><i>0.5 m</i> | FOOTPRINT<br><i>16 km<sup>2</sup></i> | SATELLITE ID<br><i>UMBRA_05</i> | TARGET AZIMUTH<br><i>265.66°</i> |
| GRAZING<br><i>49.94°</i> | INCIDENCE<br><i>40.10°</i> | SLANT RANGE<br><i>668.9 km</i>        | SQUINT<br><i>-4.84°</i>         | POLARIZATION<br><i>VV</i>        |



# YAPACANA NATIONAL PARK

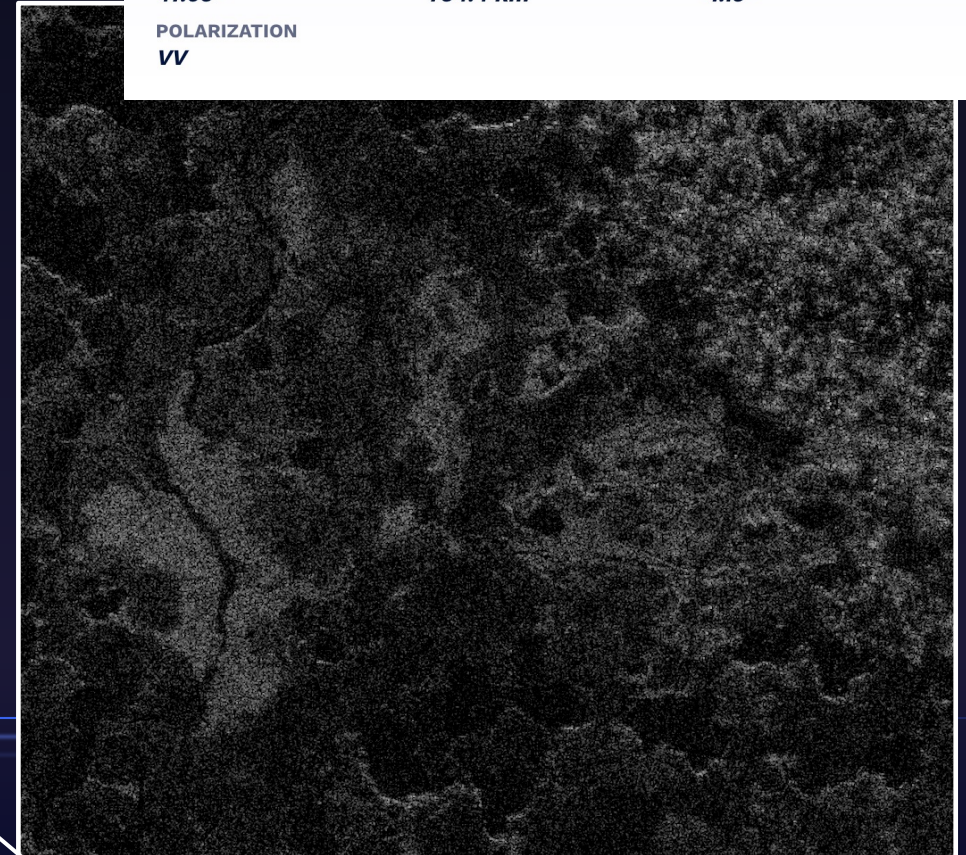
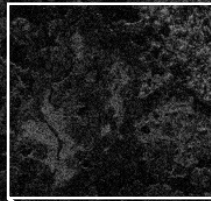
## Illegal deforestation and mining

### COLLECT PARAMETERS

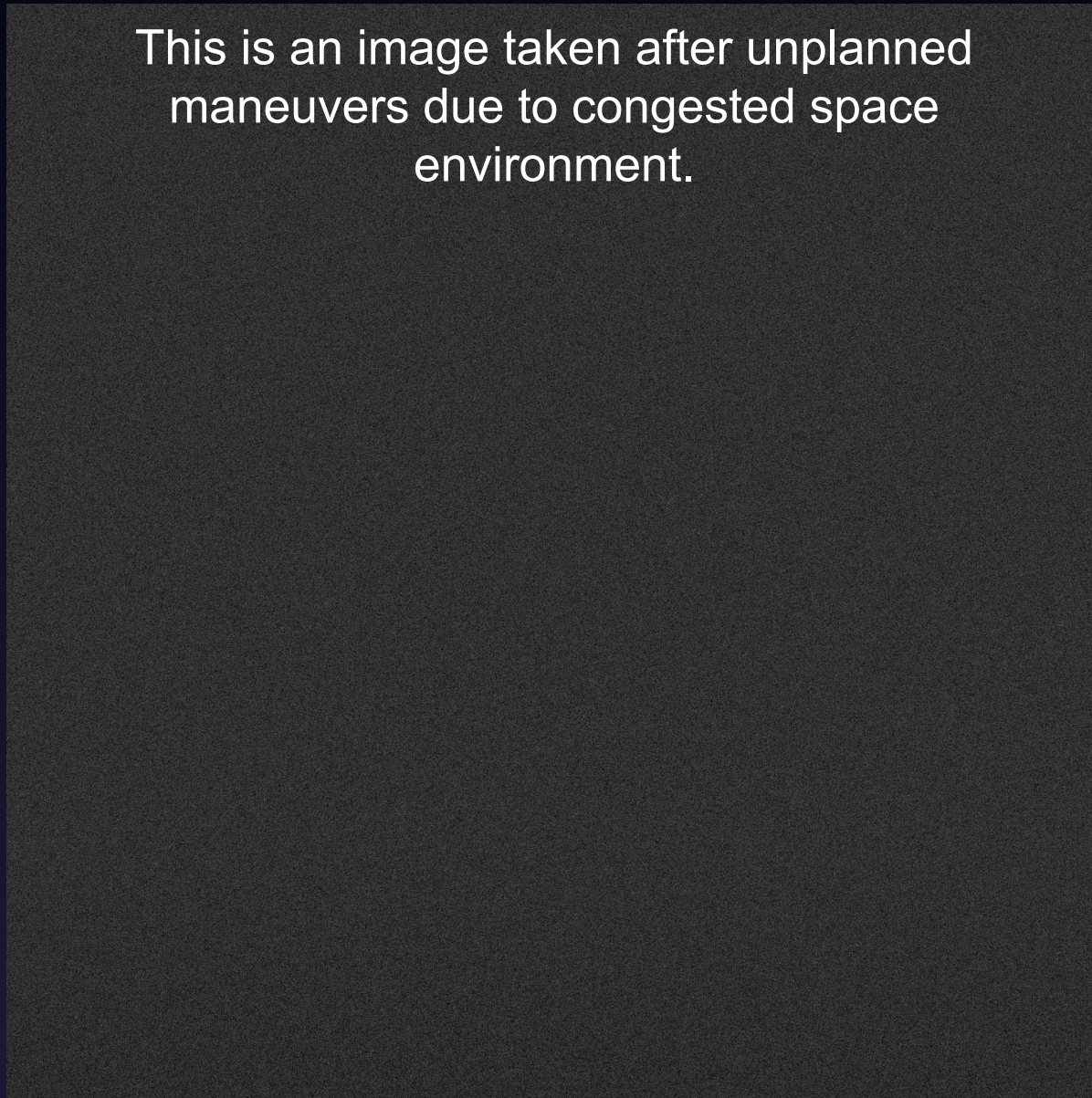
#### CAPTURE WINDOW

*Friday, February 3, 2023 1:42:03 PM - 1:42:03 PM UTC*

|                  |                 |                          |
|------------------|-----------------|--------------------------|
| MODE             | RESOLUTION      | FOOTPRINT                |
| <b>SPOTLIGHT</b> | <b>1 m</b>      | <b>16 km<sup>2</sup></b> |
| SATELLITE ID     | TARGET AZIMUTH  | GRAZING                  |
| <b>UMBRA_05</b>  | <b>100.60°</b>  | <b>42.94°</b>            |
| INCIDENCE        | SLANT RANGE     | SQUINT                   |
| <b>47.03°</b>    | <b>734.4 km</b> | <b>-1.15°</b>            |
| POLARIZATION     |                 |                          |
| <b>VV</b>        |                 |                          |



This is an image taken after unplanned maneuvers due to congested space environment.



This is the same task, taken when able to operate freely and securely from space.



You Are Here!

### COLLECT PARAMETERS

#### CAPTURE WINDOW

*Saturday, June 3, 2023 3:52:21 PM - 3:52:21 PM UTC*

|                  |               |                          |                 |                |
|------------------|---------------|--------------------------|-----------------|----------------|
| MODE             | RESOLUTION    | FOOTPRINT                | SATELLITE ID    | TARGET AZIMUTH |
| <b>SPOTLIGHT</b> | <b>0.35 m</b> | <b>16 km<sup>2</sup></b> | <b>UMBRA_05</b> | <b>120.74°</b> |
| GRAZING          | INCIDENCE     | SLANT RANGE              | SQUINT          | POLARIZATION   |
| <b>46.05°</b>    | <b>44.71°</b> | <b>707.3 km</b>          | <b>135.89°</b>  | <b>VV</b>      |



**DELIVERING GLOBAL OMNISCIENCE**