

## How To - Use the MODIS satellite images - Part 2: Accessing Them from Rapidfire

### BACKGROUND

Satellite data of the entire Australian continent is available via the sensors known as MODIS on Terra (morning pass) and Aqua (afternoon pass). The MODIS Land Rapid Response system has been developed to provide rapid access to MODIS data globally (<http://rapidfire.sci.gsfc.nasa.gov/>).

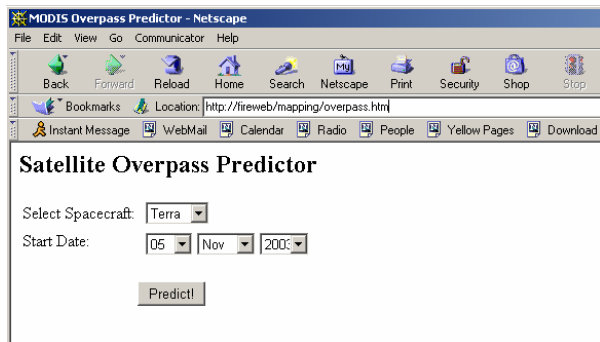
### HOW DO I ...?

#### ASSESS TIMES THE SATELLITE PASSED OVER

1. Start your web browser.
2. Enter <http://fireweb/mapping/overpass.htm> in the address bar (as shown).



3. Press the Enter key.
4. *The FireWeb Satellite Overpass Predictor will appear.*



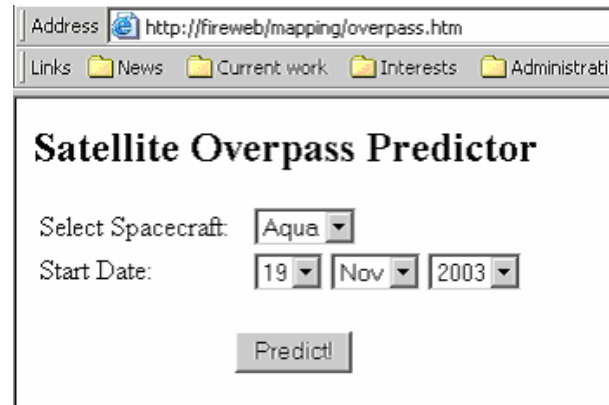
**Note:** Terra is the morning satellite and Aqua is the afternoon satellite

5. Select the satellite and date required.

### Example

*Look for an image of fires in Tasmania during the afternoon of Wednesday 19<sup>th</sup> November, so the*

*FireWeb Satellite Overpass Predictor will appear as shown.*



6. Press **Predict!**
7. Scroll down to the Overpass Summary section and look for passes that have a peak elevation of more than 40 degrees.

#### OVERPASS SUMMARY:

Date (LOC)	Time (LOC) of			Azimuth at			Peak Elev	Height at Pk		Vis Orbit
	Rise	Peak	Set	Ris	Pk	Set				
Wed 19Nov03	01:29:05	01:35:08	01:41:44	45	112	180	27.1	702	NNV	8205
	03:06:12	03:12:47	03:19:30	348	276	204	29.0	703	NNV	8206
	13:34:03	13:35:40	13:40:16	134	91	50	6.9	704	DDD	8212
	15:06:59	15:13:58	15:21:05	167	85	348	83.6*	703	DDD	8213
	16:45:48	16:50:57	16:56:13	193	241	290	10.3	702	DDD	8214

8. Record the peak time for the pass.

*In this example we pick 15:13 local.*

9. Convert this to Universal Time Convention (UTC) by subtracting 11 hours in summer for daylight savings and 10 hours in winter.
10. *In this example we get a time of 04:13 on the 19Nov03.*

#### ACCESS THE SATELLITE IMAGERY

1. Start your web browser.
2. Enter <http://rapidfire.sci.gsfc.nasa.gov/realtime/> in the address bar.
3. Press the Enter key.

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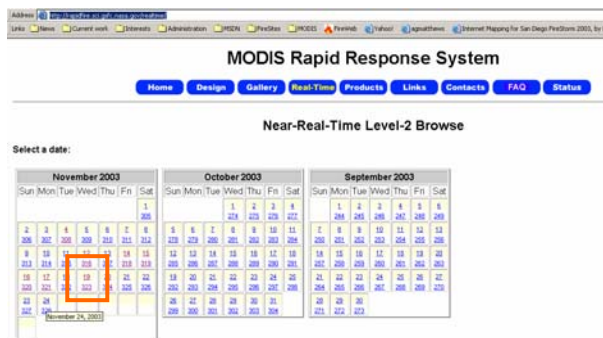
4. This will take you to the NASA rapid fire real-time web site.

*This page gives you a good overview image at 4km pixel resolution*

## MODIS Rapid Response System

5. Click on the date you picked before.

*In this example 19Nov03.*



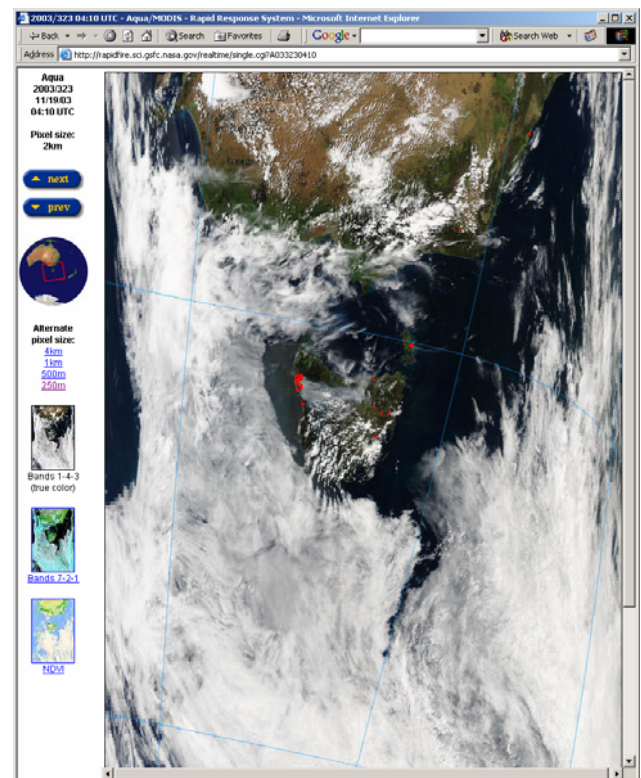
*The satellite images for the selected day will now appear.*



**Note:** This page can take a while to load as it contains a lot of images, you may need to scroll down or across to find the satellite and time you want. Terra passes are listed first followed by Aqua passes.

6. Click on the image with the nearest time before the time you calculated earlier.

*In this example it is the 04:10 UTC image.*



**Tip:** The alternate pixel sizes give you more detail – be warned that the 250m images are very large and will take some time to download. Not all band combinations are available in all resolutions.

7. Place the cursor over the image and click the right mouse button.
8. Select Save Picture As...and copy the jpg file to your local drive.

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### DIFFERENT BAND COMBINATIONS FOR DIFFERENT USES

1. You choose Bands 1-4-3 for true colour imagery. The advantage of using this imagery is the natural look of land surface oceanic and atmospheric features with fire detention outlined in red.



2. For identifying burn scars use Bands 7-2-1 imagery. This imagery partially sees through smoke and shows burnt area quite well.

