

## SAFARI 2000 MAS Flight 00151

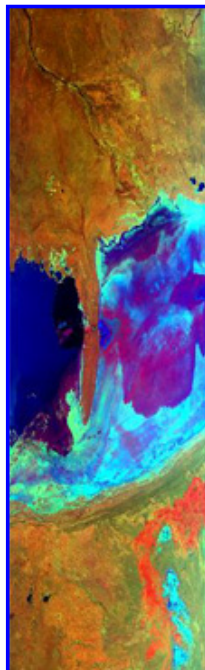
The SAFARI 2000 MAS contains 146 GB of data. Individual HDF files may exceed the size of a CD, and are best written to DVD. You may use this automated interface to order data from selected tracks (flight segments). If you require large portions of this data, we recommend that you contact us by email or phone and make special arrangements.

### Flight #00-151

#### RBG Images

[Click Image](#)

#### Track #01



R: 11.01 microns  
G: 2.15 microns  
B: 0.46 microns

#### Track #03



#### Summary Information

Date: **August 25, 2000**  
 ER-2 Flight Number: **00-151**  
 Location: **South Africa to Zambia**  
 Principal Investigator: **Dr. Michael King (NASA GSFC)**  
 Flight Scientist:  
 Additional Sensors: **AirMISR, CLS, LAS, MAS, MOPITT-A, S-HIS, SSFR** (see [Instrument Status](#) below)

#### Flight Track Map



[Click to enlarge](#)

#### Processing Information

Level-1B Data processed by: **Ames Research Center**  
 Level-1B Data Version: **#2**  
 Level-1B Configuration: ([sample file](#))  
 Calibration Type: **Final**  
 Calibration Version: **1.0**

#### Level-1B Browse Imagery

Straight Line Flight Tracks: **16 processed**  
 Scanlines Processed: **106006**  
[Solar Azimuth and Zenith Angles](#)

#### Browse Images

Click on the Flight Track number to see track images.  
 Click on the Check Box to list HDF files prior to adding to shopping cart.  
 Lat/Lon ranges are for the BEG-END scanline nadir pixels.

List	Flight Track	Time_Span (GMT)	Heading (Deg)	Lat_Range (Deg_S)	Lon_Range (Deg_E)	Length (Scanlines)	Altitude m (msl)
<input type="checkbox"/>	<a href="#">01</a>	07:32-07:46	307	21.71-20.75	27.75-26.38	5334	19363
<input type="checkbox"/>	<a href="#">02</a>	07:46-08:12	307	20.75-19.04	26.38-23.81	9772	19830
<input type="checkbox"/>	<a href="#">03</a>	08:13-08:40	9	18.94-16.01	23.76-24.26	9999	19987
<input type="checkbox"/>	<a href="#">04</a>	08:40-08:43	14	16.01-15.68	24.26-24.33	1126	20037
<input type="checkbox"/>	<a href="#">05</a>	08:49-09:03	13	15.59-14.02	24.35-24.66	5352	19846
<input type="checkbox"/>	<a href="#">06</a>	09:04-09:18	11	13.93-12.36	24.70-24.98	5399	19980
<input type="checkbox"/>	<a href="#">07</a>	09:20-09:39	85	12.27-12.17	25.09-27.30	7303	19919
<input type="checkbox"/>	<a href="#">08</a>	09:41-09:54	125	12.21-13.02	27.45-28.70	4961	19968
<input type="checkbox"/>	<a href="#">09</a>	09:56-10:23	267	13.16-13.39	28.62-25.55	9999	19949
<input type="checkbox"/>	<a href="#">10</a>	10:23-10:44	268	13.39-13.54	25.54-23.03	8036	20054
<input type="checkbox"/>	<a href="#">11</a>	10:47-11:14	175	13.79-16.81	22.99-23.39	9999	19999
<input type="checkbox"/>	<a href="#">12</a>	11:15-11:20	168	16.98-17.54	23.41-23.57	1933	20094
<input type="checkbox"/>	<a href="#">13</a>	11:21-11:47	177	17.57-20.55	23.58-23.59	9999	20089
<input type="checkbox"/>	<a href="#">14</a>	11:47-11:51	179	20.55-20.93	23.59-23.59	1293	20104
<input type="checkbox"/>	<a href="#">15</a>	11:52-12:19	123	21.03-22.41	23.65-26.40	9999	20132

	<a href="#">16</a>	12:19-12:33	118	22.41-23.14	26.40-27.93	5502	20131
<a href="#">All images in sequence</a>							

### ER-2 Flight Log

Author: [Dr. Michael King](#)  
 Mission Scientist: [Dr. Michael King](#)  
 ER-2 Pilot: [Jim Barrilleaux](#)  
 Takeoff: [25Aug2000 0000 UTC](#)  
 Landing: [25Aug2000 0000 UTC](#)  
 Duration: [06:00:00](#)

#### Objective:

The objective of this mission was to fly the ER-2 over Francistown en route to the surface site at Sowa Pan and then on to the Terra overpass of Kaoma, Zambia and a prescribed burn at 14° 49'S, 24°31'E. Terra passed over Kaoma at 0856:30 UTC with an orbital inclination of 12.4°, coincident with the ER-2 overpass of the prescribed burn. The ER-2 then flew over the copper belts in northern Zambia before flying west along the Zambezi River and 3 AERONET sites at Zambezi, Mongu, and Senanga. The ER-2 then did a pass over the Maun Tower in Botswana.

#### Key Flight Legs:

The RC-10 camera was turned on for flights over Francistown and Sowa Pan, Kaoma, the copper belts in northern Zambia, the Zambezi River from Zambezi through to the Caprivi Strip, and over Maun.

The AERONET sites were overflown during this mission:

- Sowa Pan (20°33'S, 26°04'E)
- Kaoma (14°49'S, 24°31'E)
- Zambezi (13°32'S, 23°06'E)
- Mongu airport (15°15'S, 23°10'E)
- Senanga (16°07'S, 23°18'E)
- Maun Tower (19°55'S, 23°36'E)

#### Pilot Report:

The skies were largely cloud free, but smoky over northern Zambia in particular. The skies were generally hazy over western Zambia and the Okavanga Delta but were less hazy than in northern Zambia.

#### Meteorology:

A ridge of high pressure ran from the Atlantic high to the west through the central regions of South Africa to the Indian Ocean high to the east. A weak easterly wave passed westwards across Zambia on Thursday and over the night, and moved into northern Namibia. The cloudy areas with fog patches over the eastern and northeastern parts of South Africa cleared during the course of the morning. Isolated thundershowers developed over the eastern highveld regions. Fine weather occurred over Zambia and western Botswana throughout the mission.

#### Instrument Status:

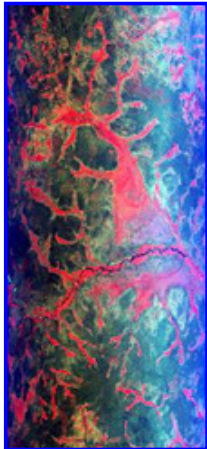
- AirMISR (Airborne Multi-angle Imaging Spectroradiometer): Not on plane; being repaired
- CLS (Cloud Lidar System): Lidar worked properly, but navigation data not recorded
- LAS (Leonardo Airborne Simulator): Not on plane
- MAS (MODIS Airborne Simulator): Worked well
- MOPITT-A (MOPITT Airborne Simulator): Worked well
- S-HIS (High-resolution Interferometer Sounder): Worked well
- SSFR (Solar Spectral Flux Radiometer): Worked well





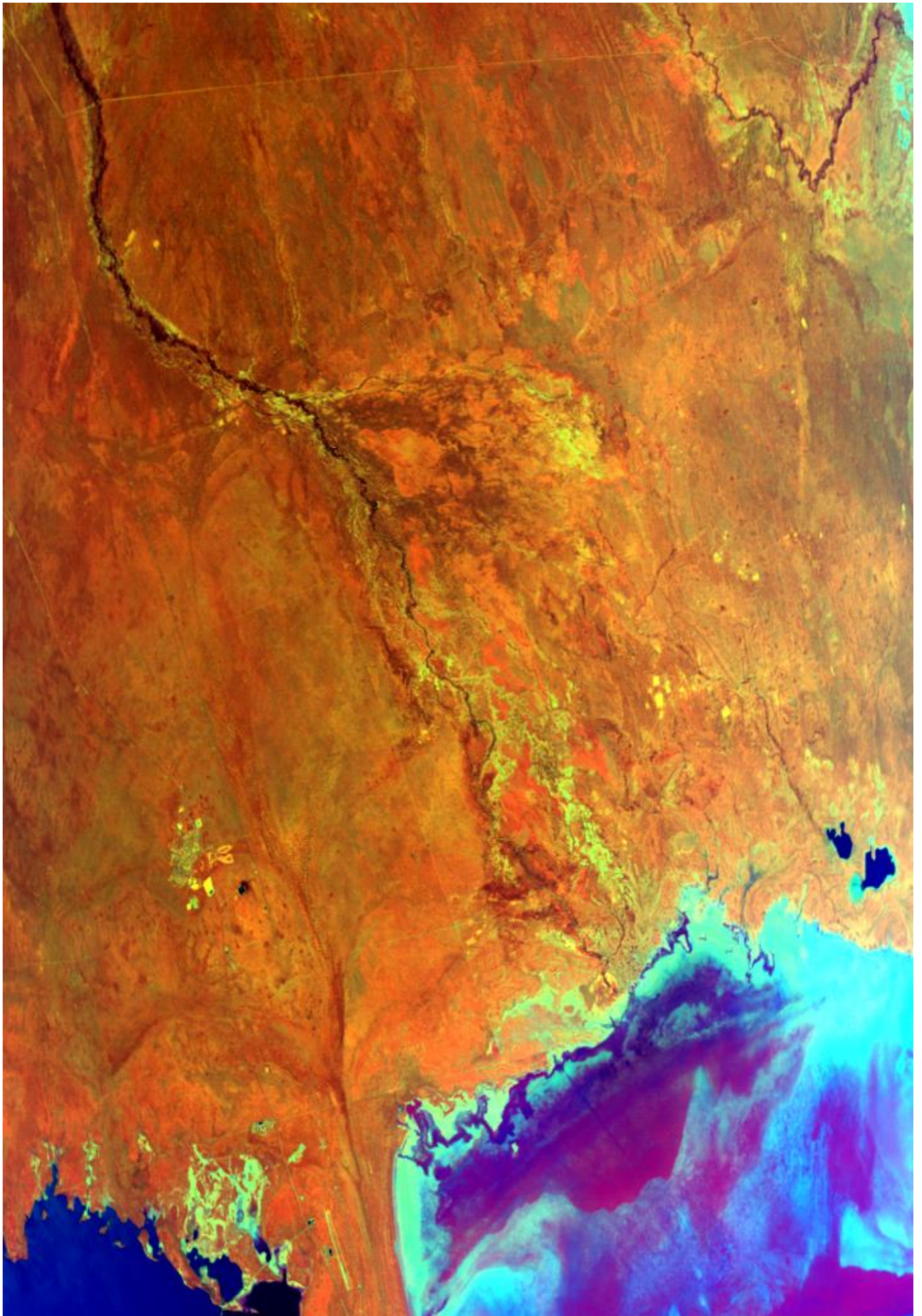
R: 11.01 microns  
G: 1.64 microns  
B: 0.55 microns

Track #09

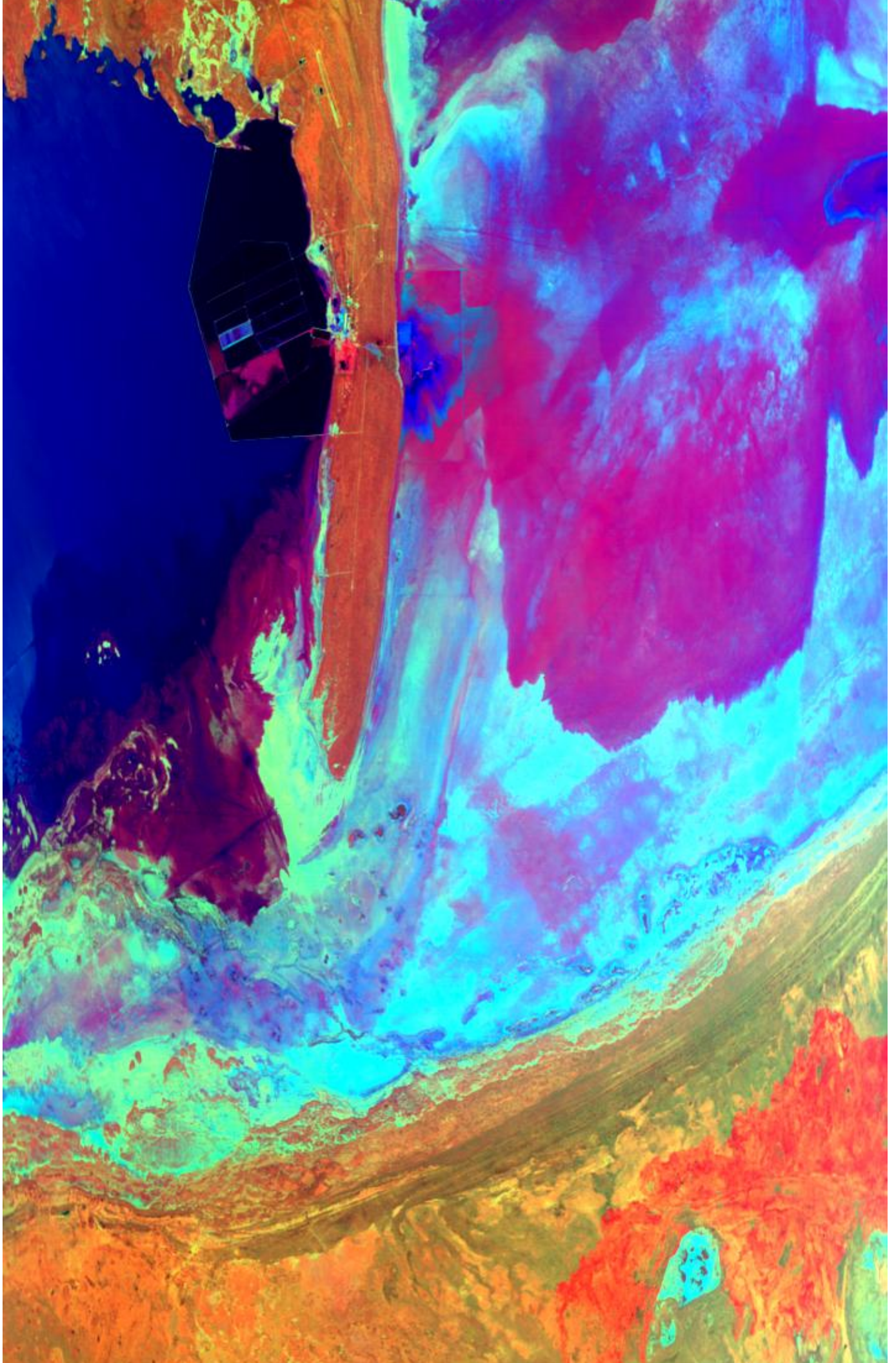


R: 11.01 microns  
G: 2.15 microns  
B: 0.46 microns

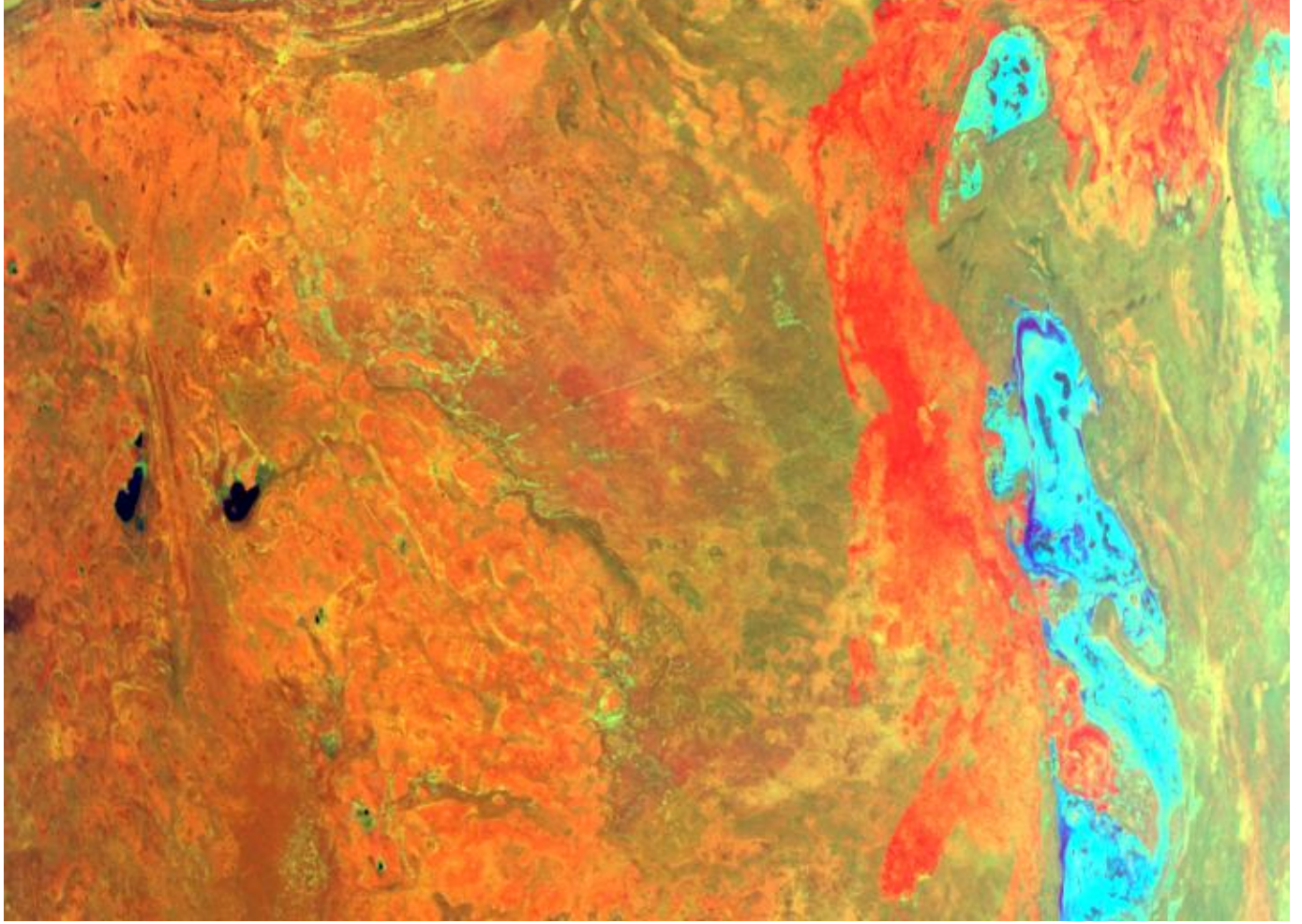




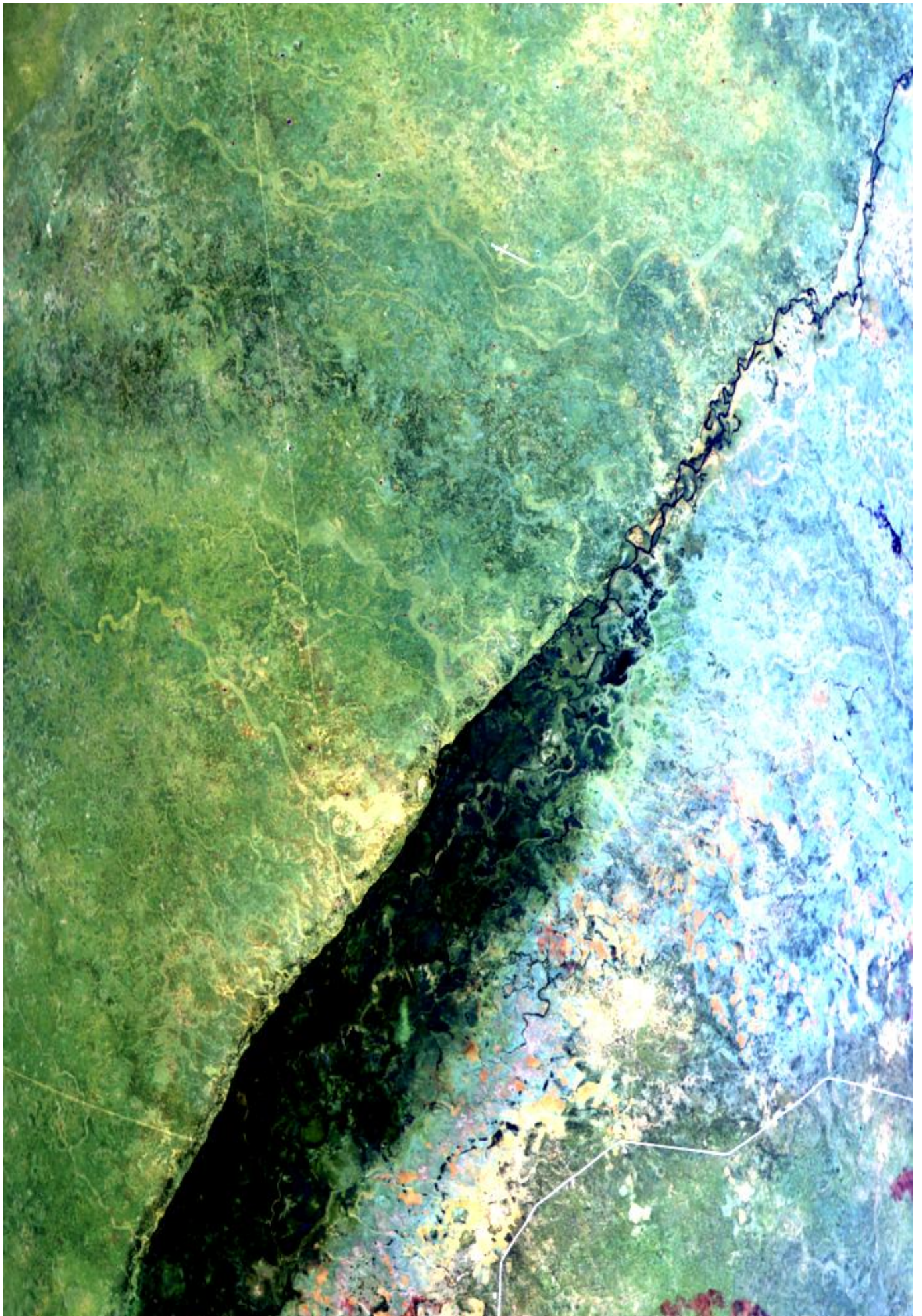




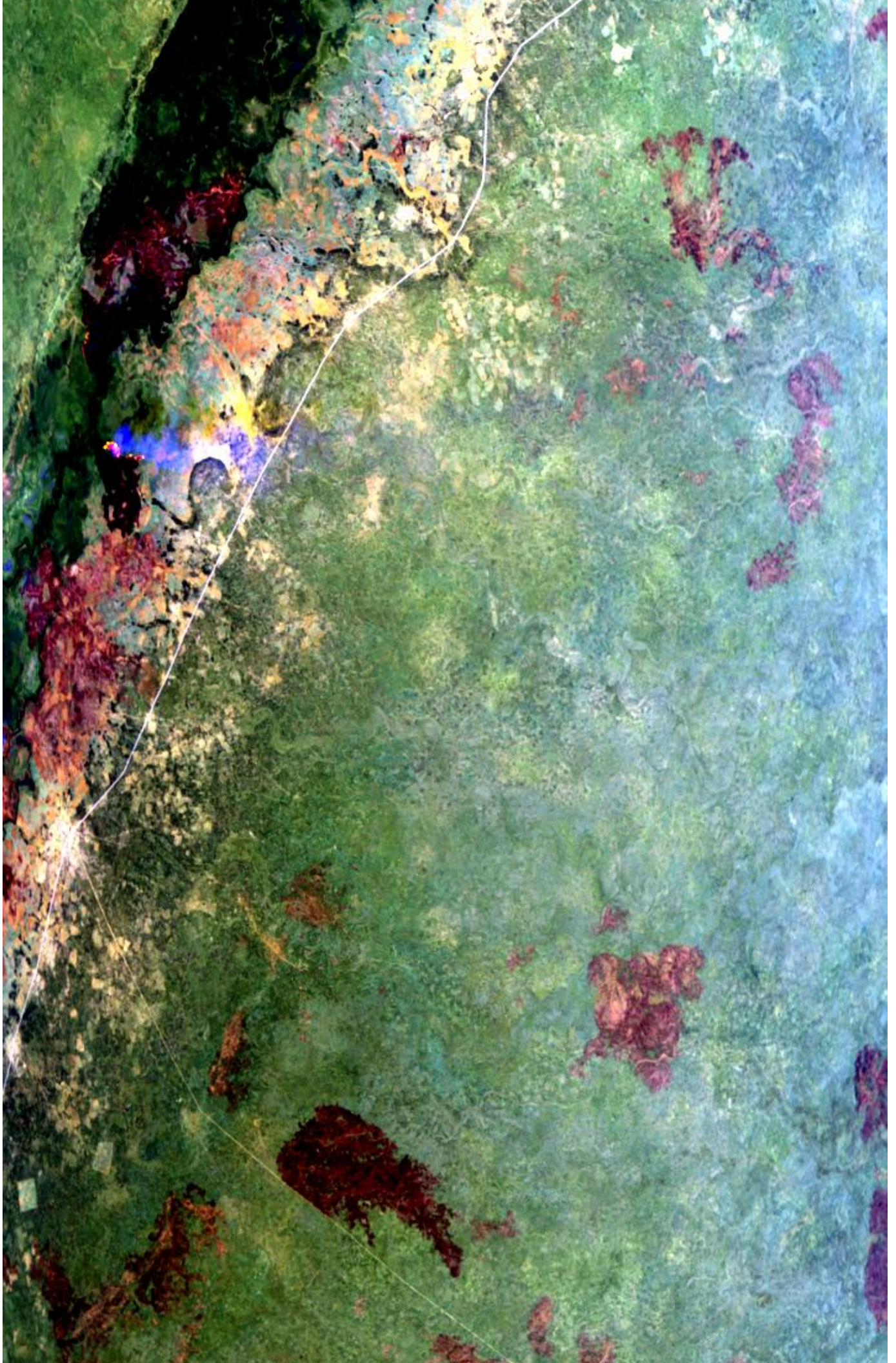












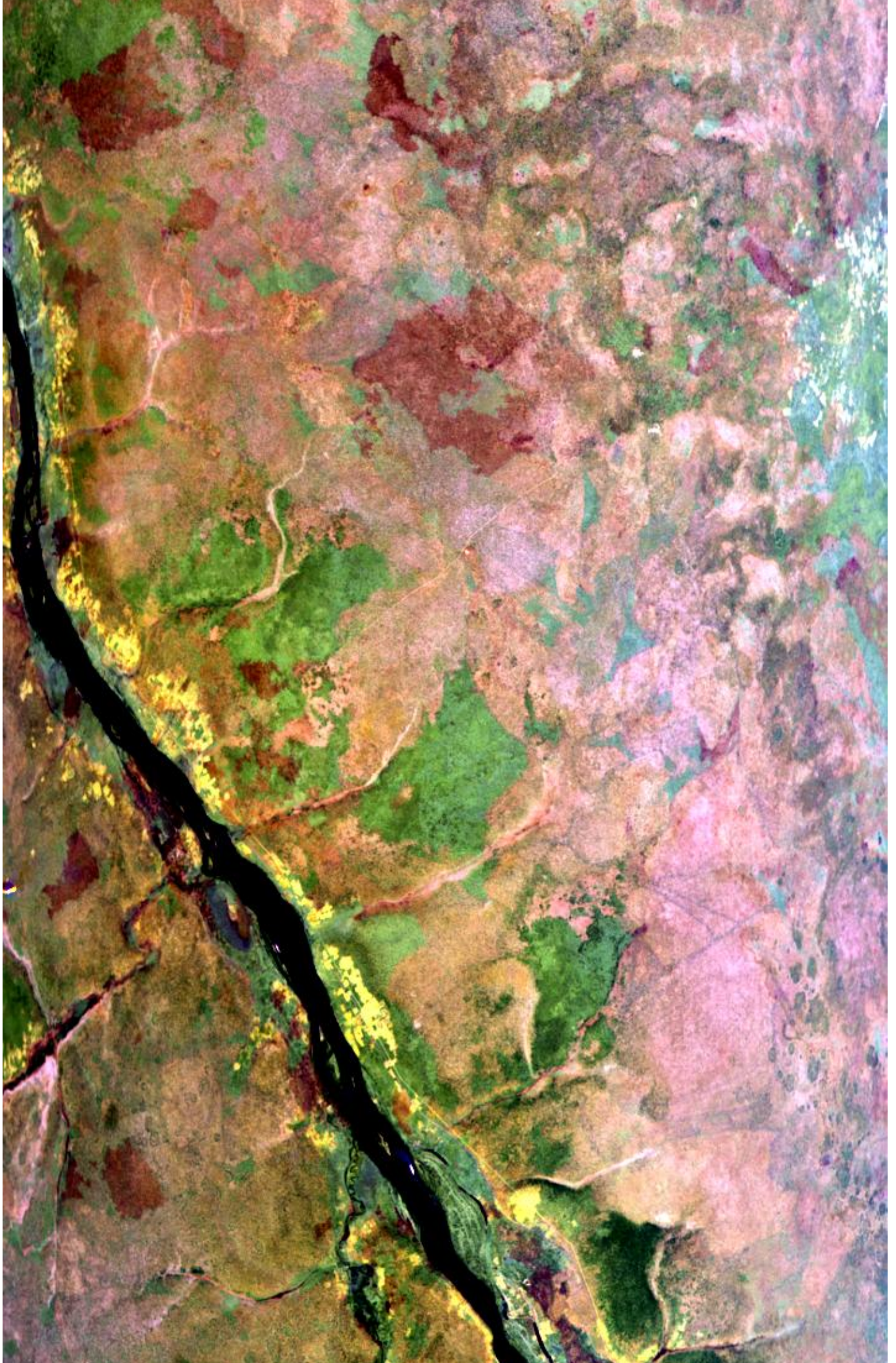








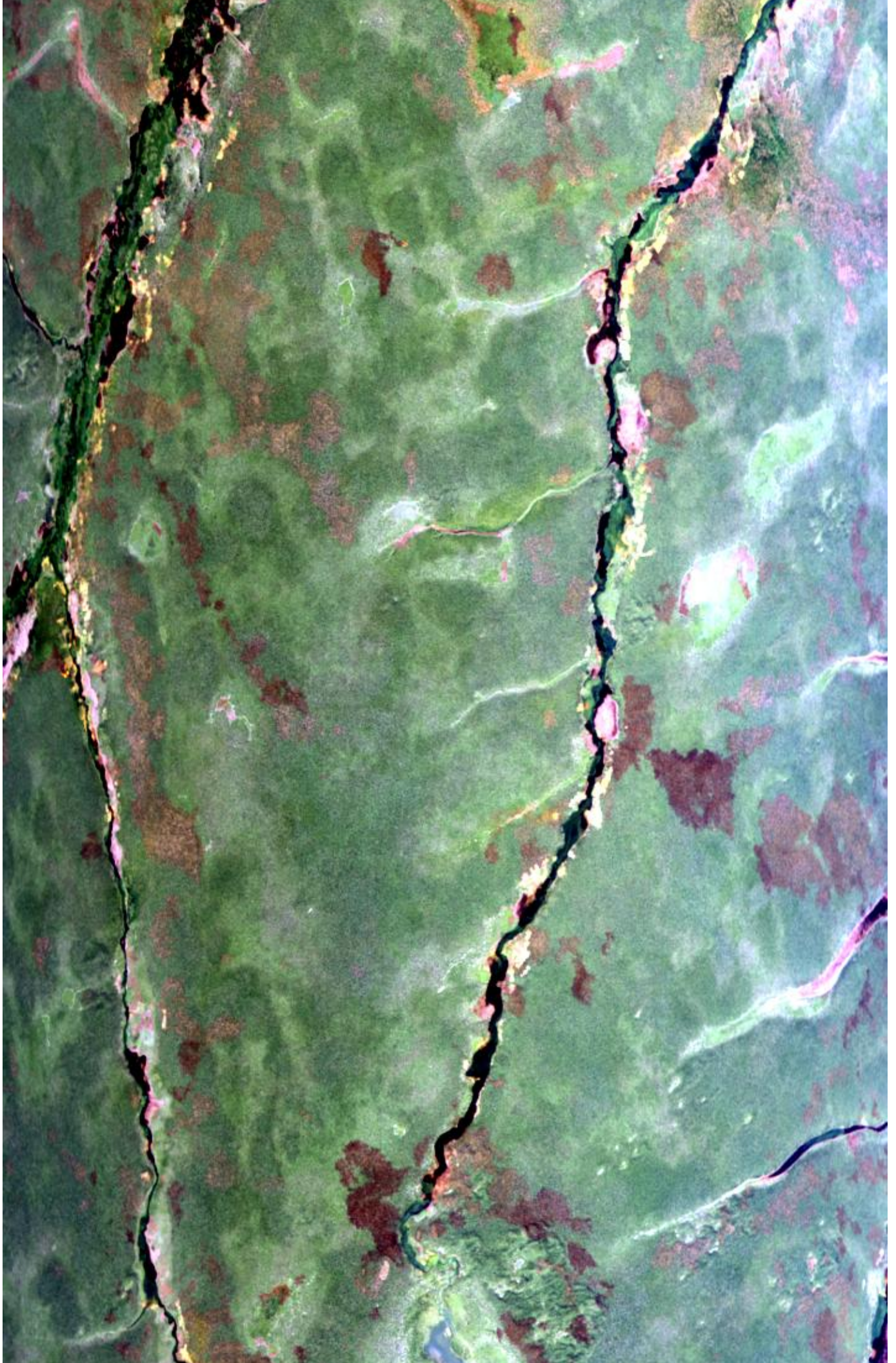








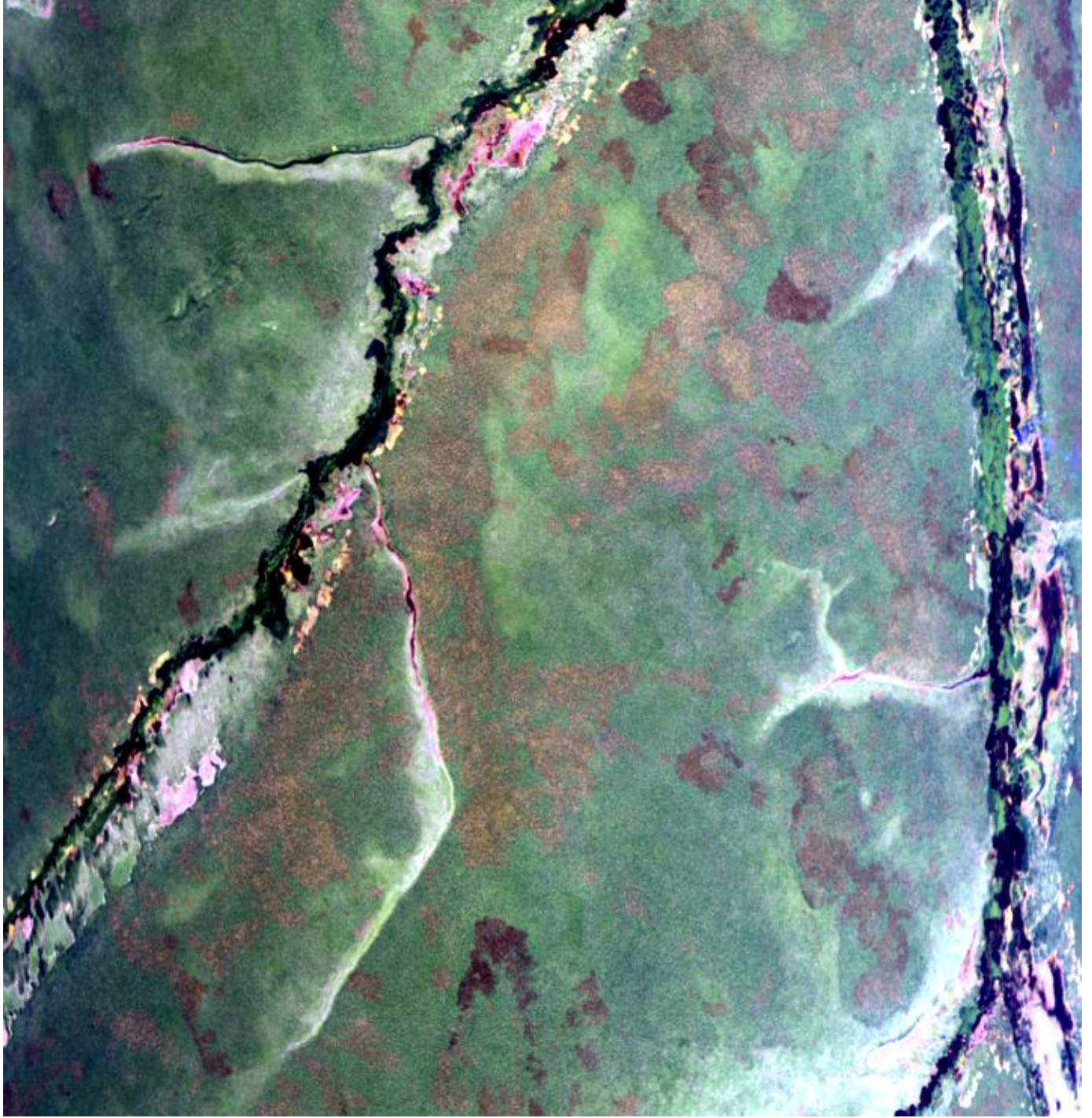






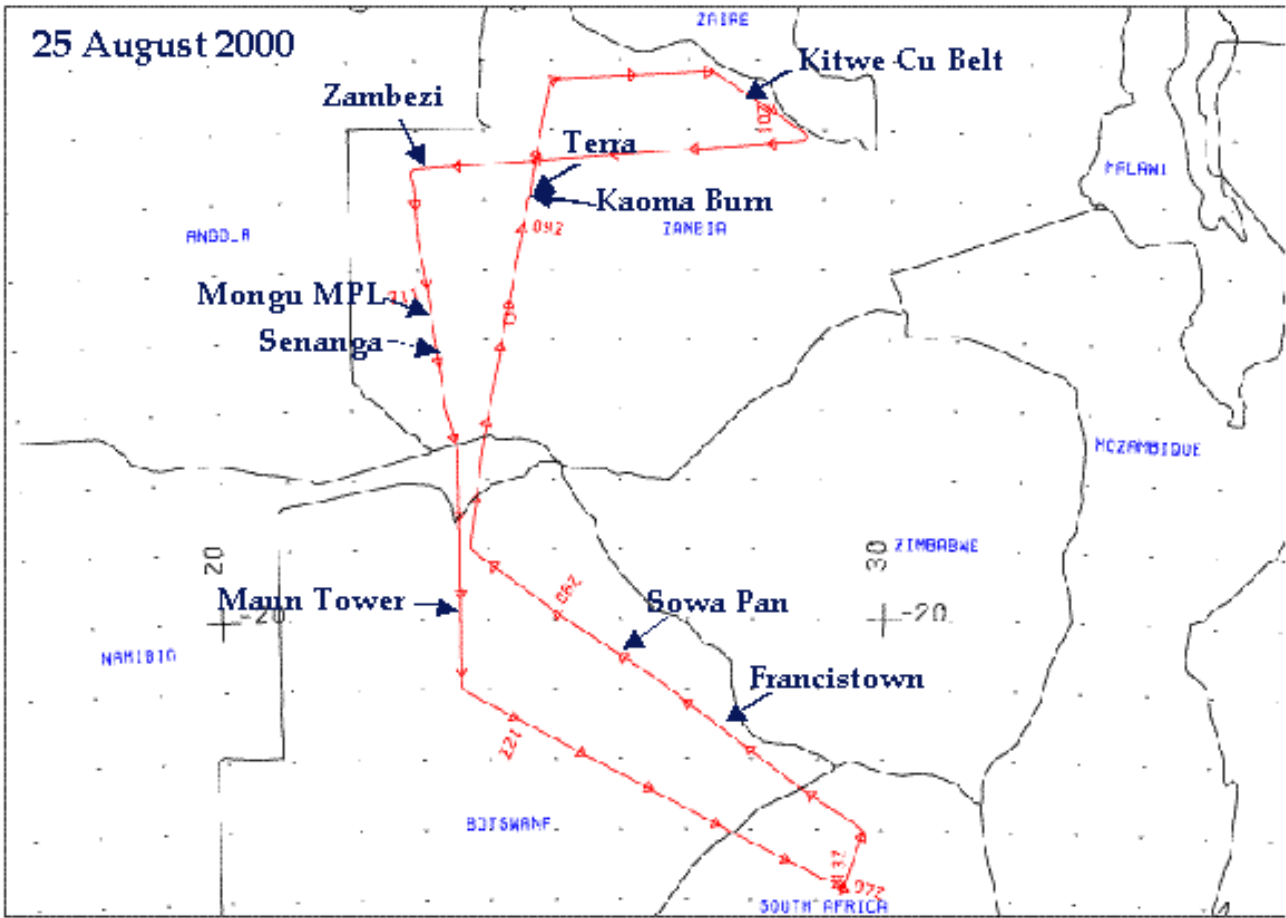








25 August 2000



FLIGHT 03-151 25 AUGUST 2000 A/C 605 SAFARI



50 MAS Configuration for 00-151 25 Aug 2000 Botswana and Zambia

01	01	16	0	0.035915	0.0000	0.452	0.472	0.493	0.100	1981.92
02	02	16	0	0.038764	0.0000	0.534	0.554	0.577	0.100	1857.88
03	03	16	0	0.026488	0.0000	0.635	0.658	0.689	0.100	1549.55
04	04	16	0	0.031096	0.0000	0.687	0.708	0.731	0.100	1386.41
05	05	16	0	0.023697	0.0000	0.729	0.750	0.773	0.100	1260.07
06	06	16	0	0.024503	0.0000	0.810	0.830	0.855	0.100	1053.65
07	07	16	0	0.024405	0.0000	0.853	0.874	0.895	0.100	962.82
08	08	16	0	0.019574	0.0000	0.893	0.912	0.934	0.100	869.28
09	09	16	0	0.021075	0.0000	0.933	0.954	0.974	0.100	784.92
10	10	16	0	0.003384	0.0000	1.586	1.612	1.640	0.100	244.16
11	11	16	0	0.006257	0.0000	1.642	1.668	1.695	0.010	227.32
12	12	16	0	0.002891	0.0000	1.698	1.722	1.749	0.010	201.29
13	13	16	0	0.002858	0.0000	1.751	1.776	1.801	0.010	176.56
14	14	16	0	0.002944	0.0000	1.805	1.830	1.855	0.010	156.28
15	15	16	0	0.002815	0.0000	1.855	1.880	1.906	0.010	139.66
16	16	16	0	0.002675	0.0000	1.906	1.932	1.956	0.100	131.21
17	17	16	0	0.002424	0.0000	1.956	1.982	2.006	0.010	122.76
18	18	16	0	0.002371	0.0000	2.006	2.032	2.057	0.010	109.78
19	19	16	0	0.002293	0.0000	2.058	2.082	2.107	0.010	98.67
20	20	16	0	0.002332	0.0000	2.107	2.132	2.157	0.010	86.28
21	21	16	0	0.004912	0.0000	2.156	2.180	2.205	0.010	76.85
22	22	16	0	0.002673	0.0000	2.205	2.230	2.255	0.010	73.57
23	23	16	0	0.002749	0.0000	2.255	2.280	2.305	0.010	68.38
24	24	16	0	0.002588	0.0000	2.306	2.330	2.354	0.010	58.53
25	25	16	0	0.002533	0.0000	2.355	2.380	2.404	0.010	57.88
26	26	16	1	0.956000	0.0000	3.105	3.180	3.261	0.001	20.15
27	27	16	1	0.960000	0.0000	3.250	3.325	3.401	0.001	17.66
28	28	16	1	0.961000	0.0000	3.405	3.475	3.559	0.001	15.05
29	29	16	1	0.949000	0.0000	3.556	3.640	3.718	0.001	13.06
30	30	16	1	0.945000	0.0000	3.702	3.770	3.847	0.001	11.39
31	31	16	1	0.942000	0.0000	3.857	3.940	4.023	0.001	9.98
32	32	16	1	0.940000	0.0000	4.014	4.095	4.183	0.001	8.69
33	33	16	1	0.939000	0.0000	4.138	4.210	4.291	0.001	7.73
34	34	16	1	0.938000	0.0000	4.288	4.360	4.441	0.001	6.71
35	35	16	1	0.935000	0.0000	4.471	4.550	4.632	0.001	5.63
36	36	16	1	0.934000	0.0000	4.622	4.700	4.784	0.001	4.87
37	37	16	1	0.933000	0.0000	4.773	4.860	4.937	0.001	4.28



38	38	16	1	0.932000	0.0000	4.917	4.990	5.084	0.001	3.80
39	39	16	1	0.931000	0.0000	5.055	5.165	5.235	0.001	3.39
40	40	16	1	0.930000	0.0000	5.215	5.315	5.371	0.001	3.03
41	41	16	1	0.932000	0.0000	5.342	5.380	5.421	0.001	2.80
42	42	16	1	0.966000	0.0000	8.330	8.564	8.759	0.010	0.45
43	43	16	1	0.963000	0.0000	9.436	9.665	9.928	0.010	0.28
44	44	16	1	0.960000	0.0000	10.218	10.474	10.711	0.010	0.20
45	45	16	1	0.957000	0.0000	10.694	10.943	11.209	0.010	0.17
46	46	16	1	0.947000	0.0000	11.684	11.953	12.208	0.010	0.12
47	47	16	1	0.943000	0.0000	12.583	12.803	13.035	0.010	0.09
48	48	16	1	0.948000	0.0000	12.939	13.193	13.446	0.010	0.08
49	49	16	1	0.939000	0.0000	13.425	13.712	14.035	0.010	0.07
50	50	16	1	0.944000	0.0000	13.953	14.193	14.403	0.010	0.06

| | | | |     |     |     |     |     |     |  
 | | | | |     |     |     |     |     |     =(!)  
 | | | | |     |     |     |     |     =-Scale Factor  
 | | | | |     |     |     =- Right 50% spectral response  
 | | | | |     |     |     =-Peak 100% spectral response (microns)  
 | | | | |     |     =-Left 50% spectral response (microns)  
 | | | | |     =-Calibration intercept (only used for visible bands)  
 | | | | | =-----Calibration slope (only used for visible bands 1-25)  
 | | | |     Blackbody emmissivity (only used for IR bands 26-50)  
 | | | =-----0 => visible band, 1 => thermal infrared band"  
 | | =-----Number of bits in this channel (8 or 10)  
 | =-----Spectral band assigned to this channel  
 =----- Channel number  
 (!) Sensor weighted solar spectral irradiance (Watts/meter<sup>2</sup>/micron)  
 at mean Earth-Sun distance

NOTE: Factor in column 10 is used to scale radiances in  
 calibrated data by the following method:  
 $value\_stored = int( radiance / factor )$  for each channel

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Title	MODIS Airborne Simulator (MAS) Level-1B Data
Sensor_ID_Code	M5 105 MAS50
ExperimentName	SAFARI 2000
AircraftPlatform	NASA ER-2 (809)
NavFormatCode	Format (A-1)



LocationCode	Inertial (INU)
AltitudeCode	Inertial (INU)
CalibrationVersion	Version 1.0 Calibration
CalibrationName	SAFARI_Jul19-Oct19
SRF_Dataset	/rarray/calibrat/mas/srf/Oct_00/
SRF_FTP	ftp://asapdata/mas/srf/Oct_00/
NavDataSource	ER2 navigation recorder
NavDataPath	/nav/2000/er2/00-151
TbackBand	45, 47, 31, 273.0
GranuleVersion	1.0.0
MetadataVersion	1.0.0

-----  
 -----  
 Conversion from counts to radiance in VIS and NIR channels is  
 $rad = (count - (cbb\_avg)) * slope$

"where,"

rad = radiance

cbb\_avg = cold black body counts (running average)

slope = from column 7 in above table

count = count value

\*\*\*\*\*

IR Emissivity Correction (for MAS-50)

From Chris Moeller (UWisc)

\*\*\*\*\*

This is done in 2 steps:

1. Get the (TBACK Band) scan head count and convert it to a brightness temperature
2. Use the scan head temperature and the cold and warm black body counts/temperatures for computing the corrected slope and intercept for all IR bands.

(note: set to 1.0 for channels 1-25)

MAS BB Emissivity Coefficients

Hemispherical Reflectance (JPL) 11/00

convolved with MAS SRF (ARC) 10/00

Red spot Paint



Values in form Wavelength, Emissivity

\*\*\*\*\*

For Bands 26 thru 50:

0.95600, 0.96000, 0.96100, 0.94900, 0.94500,  
0.94200, 0.94000, 0.93900, 0.93800, 0.93500,  
0.93400, 0.93300, 0.93200, 0.93100, 0.93000,  
0.93200, 0.96600, 0.96300, 0.96000, 0.95700,  
0.94700, 0.94300, 0.94800, 0.93900, 0.94400,

\*\*\*\*\*

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Config.asc creation date = 13-June-2001

Config.asc creation date = 13-June-2001



MODIS AIRBORNE SIMULATOR (MAS) FLIGHT LINE  
 INFORMATION FOR 25 Aug 2000  
 NASA FLIGHT NUMBER 00-151

START OF FLIGHT LINE					END OF FLIGHT				
LINE	FLIGHT DATA								
LINE	TIME	LAT	LON	SOLAR	TIME	LAT	LON		
SOLAR	SCAN	HEAD	ALT	ZEN	AZIM	ZEN	AZIM	HH:MM:SS	DEG
HH:MM:SS	DEG	DEG	DEG	M (GPS)	HH:MM:SS	DEG	DEG	DEG	DEG
ZEN	AZIM	LINES	DEG	M (GPS)	ZEN	AZIM	LINES	DEG	M (GPS)
1	07:32:22	-21.713	27.754	50.6	54.3	07:46:39	-20.752	26.384	48.4
53.2	5334	306.6	19363						
2	07:46:43	-20.748	26.376	48.4	53.2	08:12:52	-19.043	23.811	44.4
50.9	9772	306.7	19830						
3	08:13:56	-18.939	23.763	44.1	50.8	08:40:42	-16.010	24.263	37.1
45.9	9999	8.5	19987						
4	08:40:42	-16.009	24.263	37.1	45.8	08:43:43	-15.679	24.328	36.3
45.2	1126	13.5	20037						
5	08:49:08	-15.587	24.349	35.3	43.6	09:03:27	-14.021	24.663	31.6
39.9	5352	12.6	19846						
6	09:04:22	-13.929	24.702	31.3	39.6	09:18:49	-12.361	24.982	27.8
35.1	5399	10.9	19980						
7	09:20:10	-12.268	25.088	27.5	34.5	09:39:42	-12.169	27.301	24.2
20.3	7303	85.1	19919						
8	09:41:04	-12.207	27.447	24.0	19.1	09:54:21	-13.019	28.697	23.8
7.9	4961	125.1	19968						
9	09:56:30	-13.163	28.623	23.9	6.8	10:23:15	-13.385	25.545	23.9
358.0	9999	266.5	19949						
10	10:23:15	-13.385	25.544	23.9	358.0	10:44:45	-13.537	23.029	24.3
351.2	8036	268.1	20054						
11	10:47:24	-13.789	22.994	24.7	349.8	11:14:10	-16.811	23.388	29.6
336.8	9999	175.2	19999						
12	11:15:38	-16.977	23.412	29.9	336.2	11:20:48	-17.537	23.573	31.0



334.0	1933	167.6	20094						
13	11:21:05	-17.567	23.579	31.0	333.9	11:47:51	-20.551	23.594	36.8
325.8	9999	177.0	20089						
14	11:47:51	-20.552	23.594	36.8	325.8	11:51:18	-20.931	23.594	37.6
324.9	1293	179.4	20104						
15	11:52:22	-21.027	23.652	37.8	324.5	12:19:08	-22.409	26.398	44.6
314.4	9999	122.5	20132						
16	12:19:08	-22.409	26.398	44.6	314.4	12:33:51	-23.144	27.926	48.6
309.9	5502	118.3	20131						

NUMBER OF FILES FOR THIS FLIGHT = 16  
 TOTAL NUMBER OF SCAN LINES = 106006  
 DATE THESE FILES WERE PROCESSED = 04-Oct-2002  
 DATE THIS LIST WAS CREATED = Fri Oct 4 15:01:44

PDT 2002

GRANULE VERSION = 2

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GLOBAL ATTRIBUTES

Attribute Name	Description
-----	-----
CreationDate	04-Oct-2002 11:41:46
AircraftPlatform	NASA ER-2 (809)
NavFormatCode	Format (A-1)
LocationCode	Inertial (INU)
AltitudeCode	Inertial (INU)
NavDataSource	ER2 navigation recorder
NavDataPath	/nav/2000/er2/00-151
CalibrationName	SAFARI_Jul19-Oct19
Reference	NCSA HDF Reference Manual, Version 4.1r4, 2000
title	MODIS Airborne Simulator (MAS) Level-1B Data
ExperimentName	SAFARI 2000
FlightNumber	00-151
FlightDate	25 Aug 2000



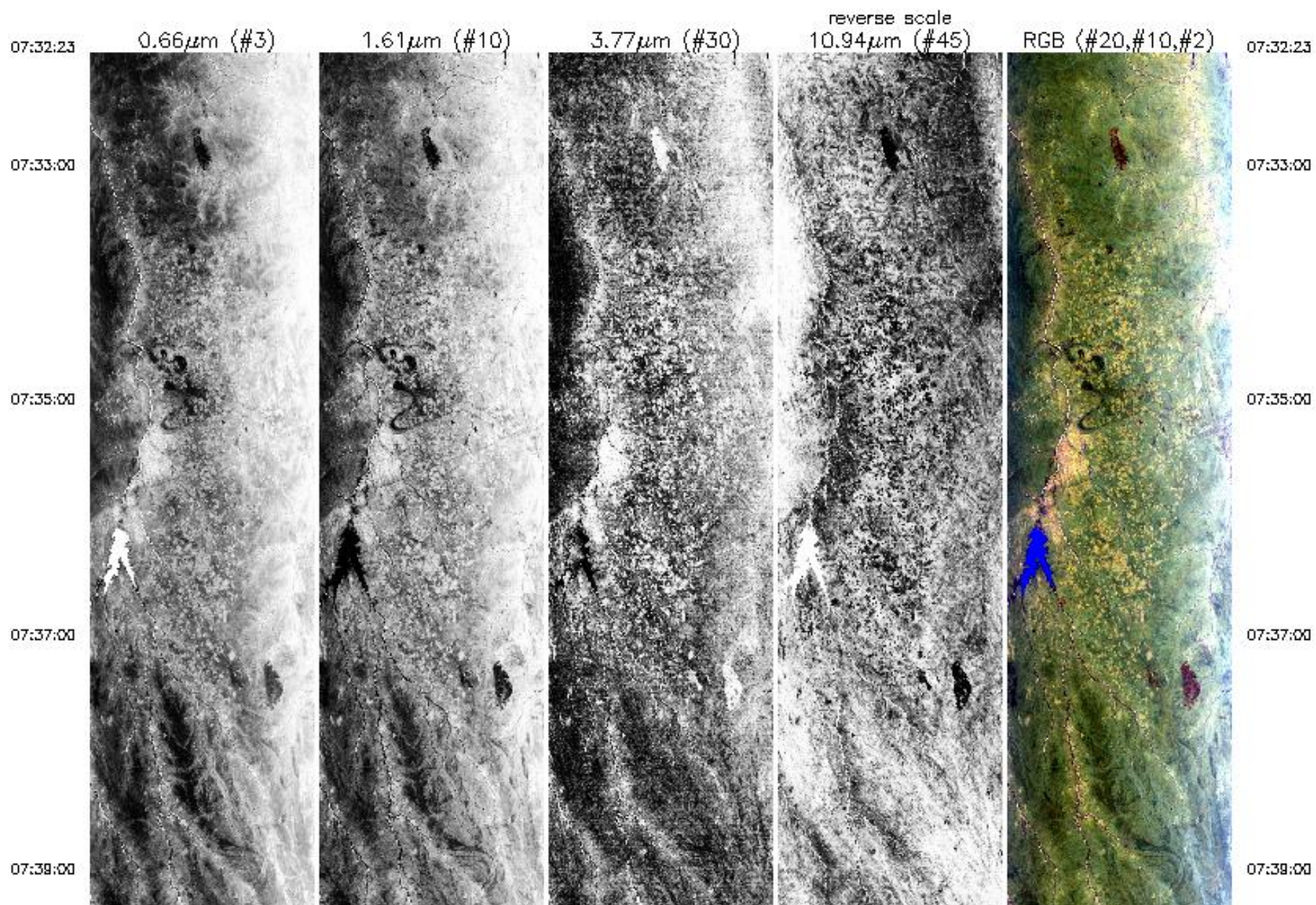
SiteLineRun	void
GeographicArea	Botswana
SRF_FTP	ftp://asapdata/mas/srf/Oct_00/
SRF_dataset	/rarray/calibrat/mas/srf/Oct_00/
FlightLineNumber	1
TotalFlightLines	17
DataUsersGuideSource	<a href="http://ltpwww.gsfc.nasa.gov/MAS/">http://ltpwww.gsfc.nasa.gov/MAS/</a>
SoftwareVersion	Level-1b Version 10.1.1 UR
CalibrationVersion	Version 1.0 Calibration
data_set	MAS SAFARI 2000
day_night_flag	D
granule_version	2
metadata_version	2.0.0
data_quality	Good
Other_Aircraft_Sensors	AirMISR, CLS, MOPPIT-A, S-HIS, RC-10
Principal_Investigator	King
lat_UL	-21.58726
lon_UL	27.85522
lat_UR	-21.83623
lon_UR	27.65137
lat_LL	-20.61923
lon_LL	26.48415
lat_LR	-20.88194
lon_LR	26.28030
begin_date	20000824 073223
end_date	20000824 074639
RunTime	363,270 ms, or 68 ms/scanline
CompletionDate	04-Oct-2002 11:52:13
producer_granule_id	

MASL1B\_00151\_01\_20000824\_0732\_0746\_V02.hdf

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MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Botswana  
Flight #00-151 Track #1





07:39:00

07:41:00

07:43:00

07:45:00

07:46:39



07:39:00

07:41:00

07:43:00

07:45:00

07:46:39

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

10.94µm (#45)  
reverse scale

RGB (#20,#10,#2)

Upper Left Lat, Lon = -21.6°, 27.9°

Lower Right Lat, Lon = -20.9°, 26.3°

Aircraft Heading = 307.3°



07:48:38



0.66 $\mu$ m (#3)



1.61 $\mu$ m (#10)



3.77 $\mu$ m (#30)



10.94 $\mu$ m (#45)  
reverse scale



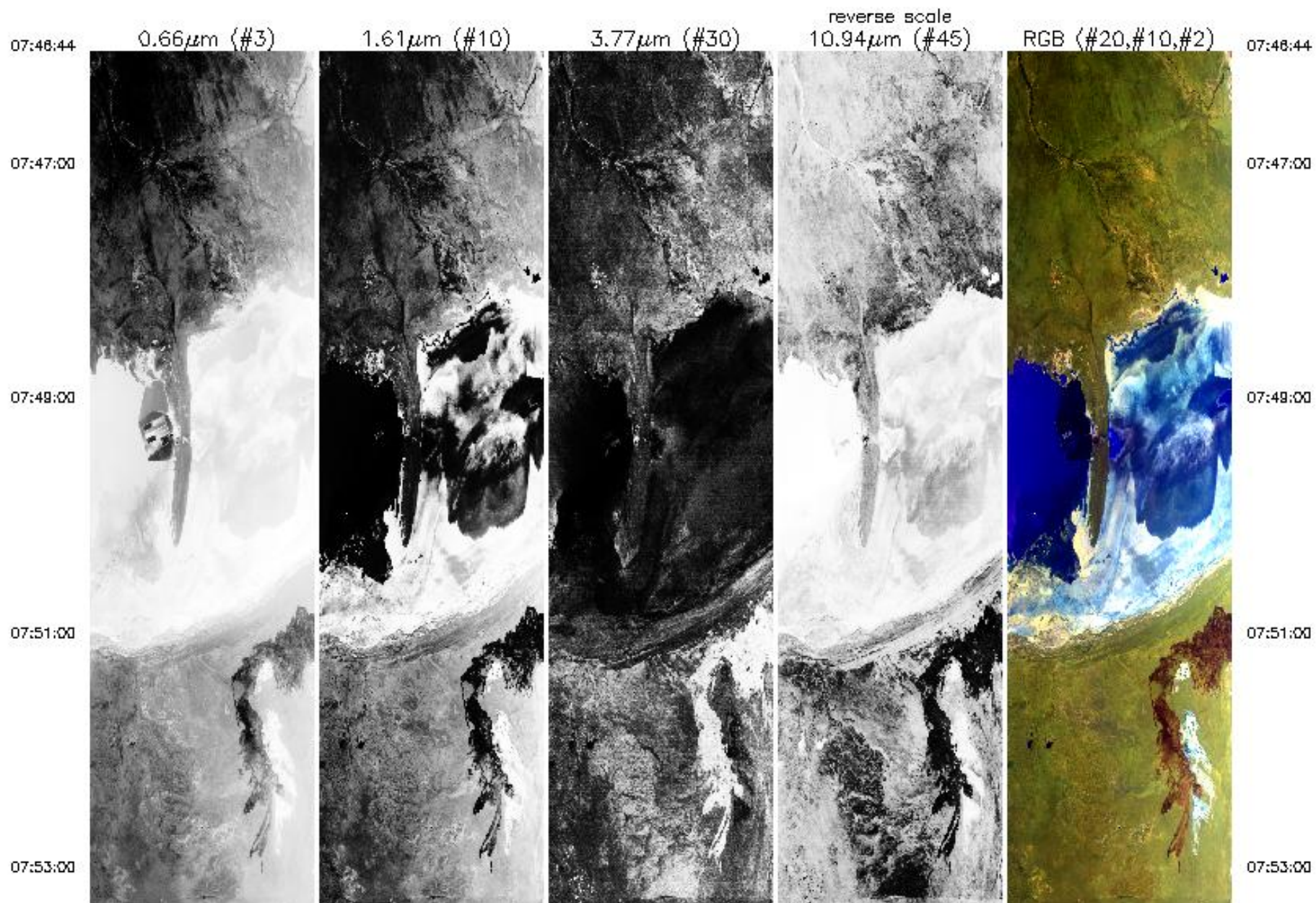
RGB (#20,#10,#2)

07:48:38

Upper Left Lat, Lon = -21.6°, 27.9°  
Lower Right Lat, Lon = -20.9°, 26.3°  
Aircraft Heading = 307.3°  
Solar Zenith = 50.2°  
GPS Altitude = 19334. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Botswana  
Flight #00-151 Track #2





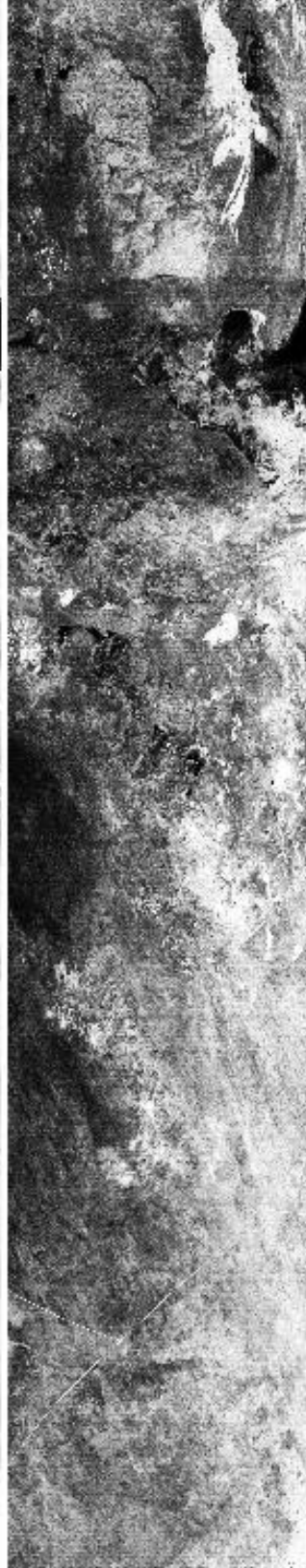
07:53:00



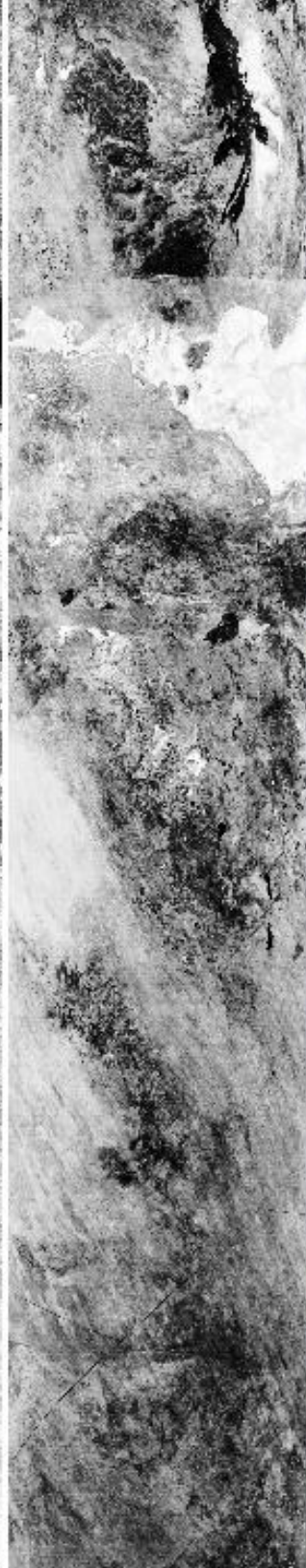
07:55:00



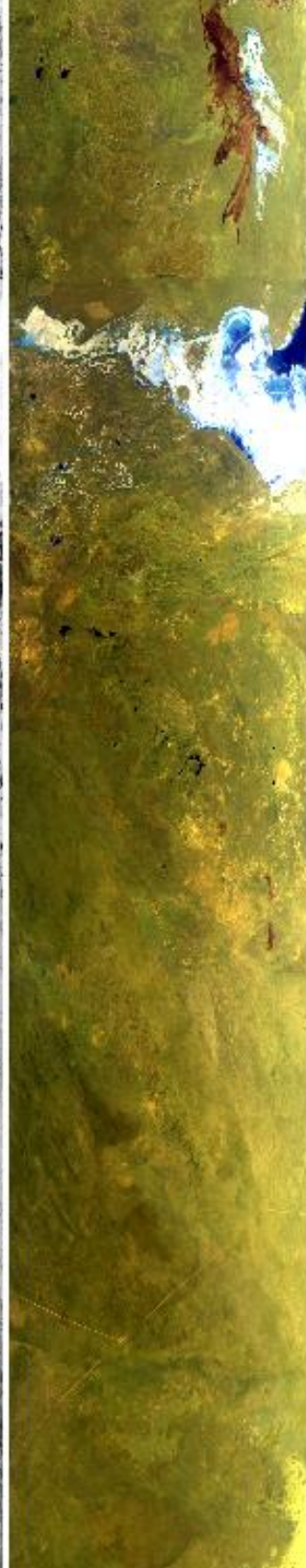
07:57:00



07:58:00



08:01:00



07:53:00

07:55:00

07:57:00

07:58:00

08:01:00



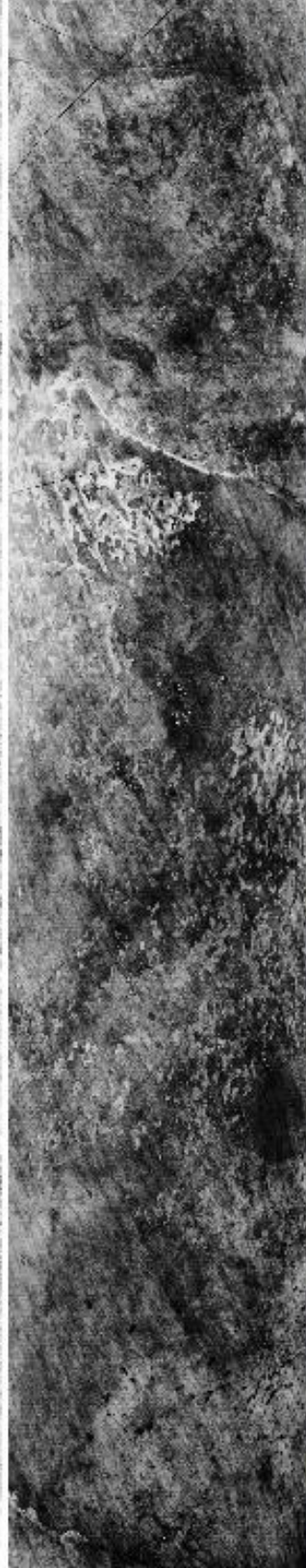
06:01:00

06:03:00

06:05:00

06:07:00

06:09:00



06:01:00

06:03:00

06:05:00

06:07:00

06:09:00



06:09:00

06:11:00

06:12:53



0.66µm (#3)



1.61µm (#10)



3.77µm (#30)



10.94µm (#45)  
reverse scale



RGB (#20,#10,#2)

06:09:00

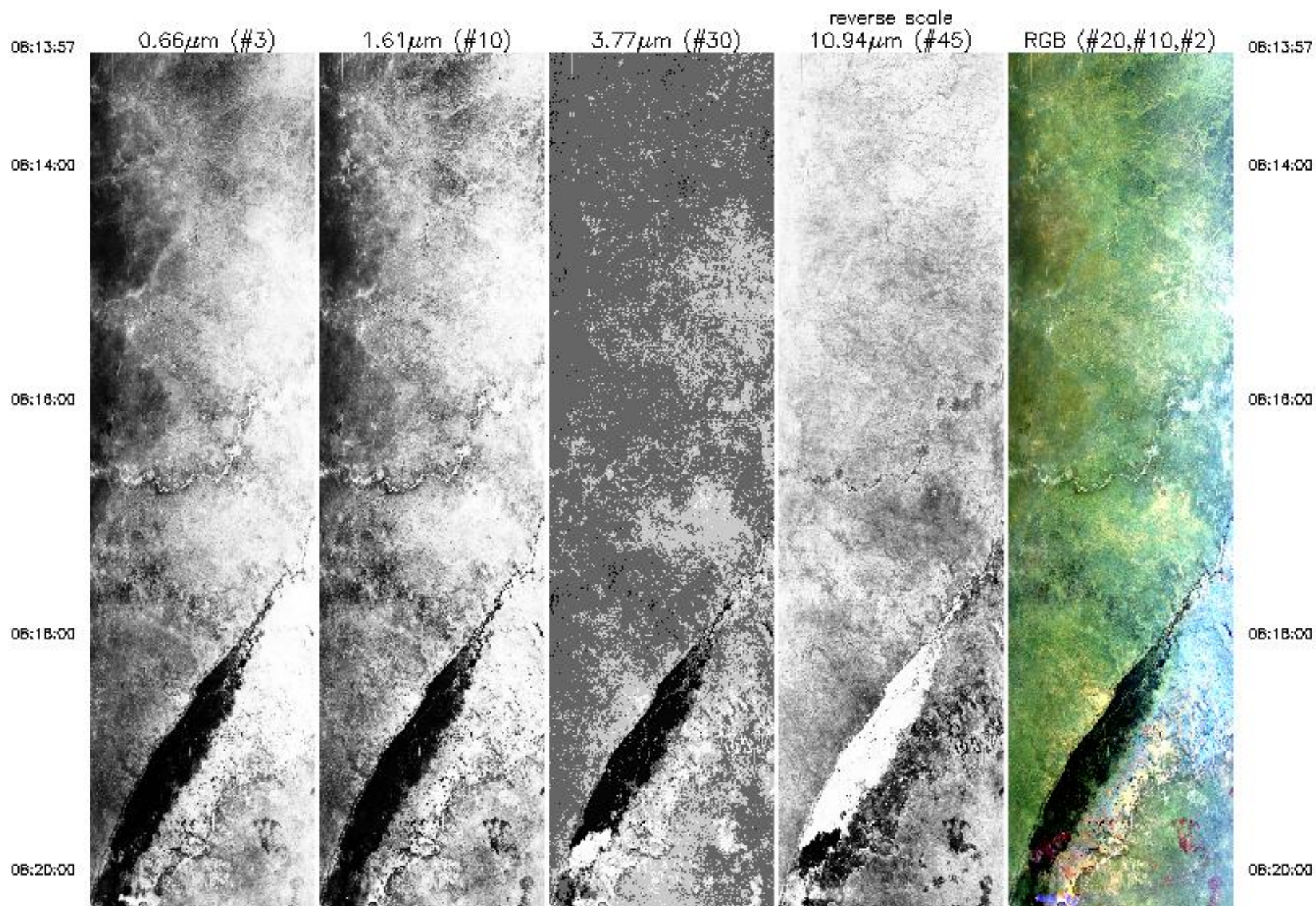
06:11:00

06:12:53

Upper Left Lat, Lon = -20.6°, 26.5°  
Lower Right Lat, Lon = -19.2°, 23.7°  
Aircraft Heading = 304.4°  
Solar Zenith = 47.9°  
GPS Altitude = 19934. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Namibia, Zambia  
Flight #00-151 Track #3





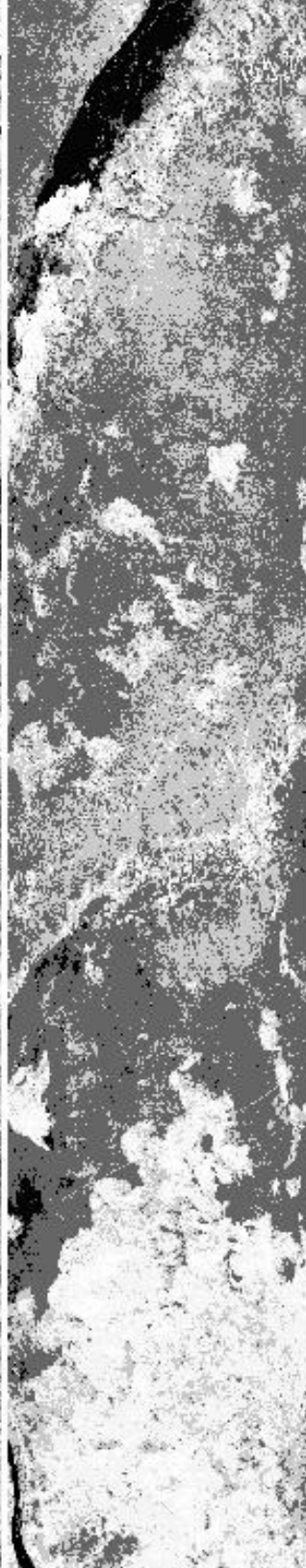
06:20:00

06:22:00

06:24:00

06:26:00

06:28:00



06:20:00

06:22:00

06:24:00

06:26:00

06:28:00



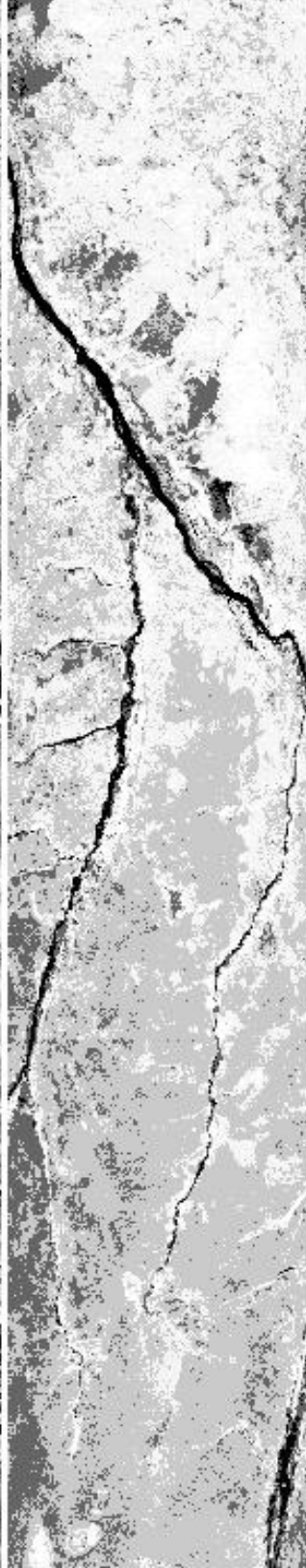
06:28:00



06:30:00



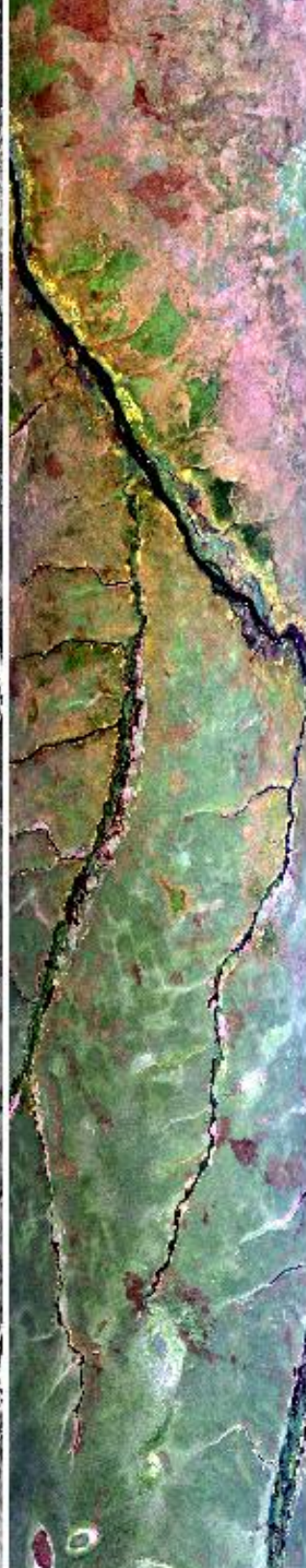
06:32:00



06:34:00



06:36:00



06:28:00

06:30:00

06:32:00

06:34:00

06:36:00



06:36:00

06:38:00

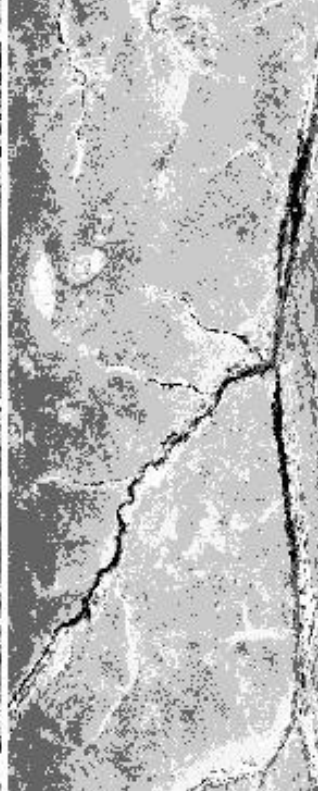
06:40:43



0.66µm (#3)



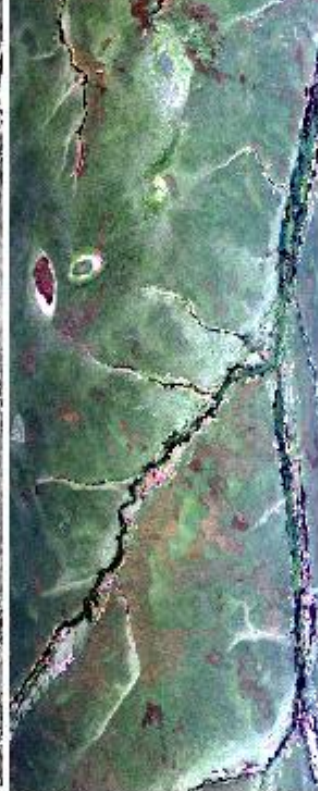
1.61µm (#10)



3.77µm (#30)



10.94µm (#45)  
reverse scale



RGB (#20,#10,#2)

06:36:00

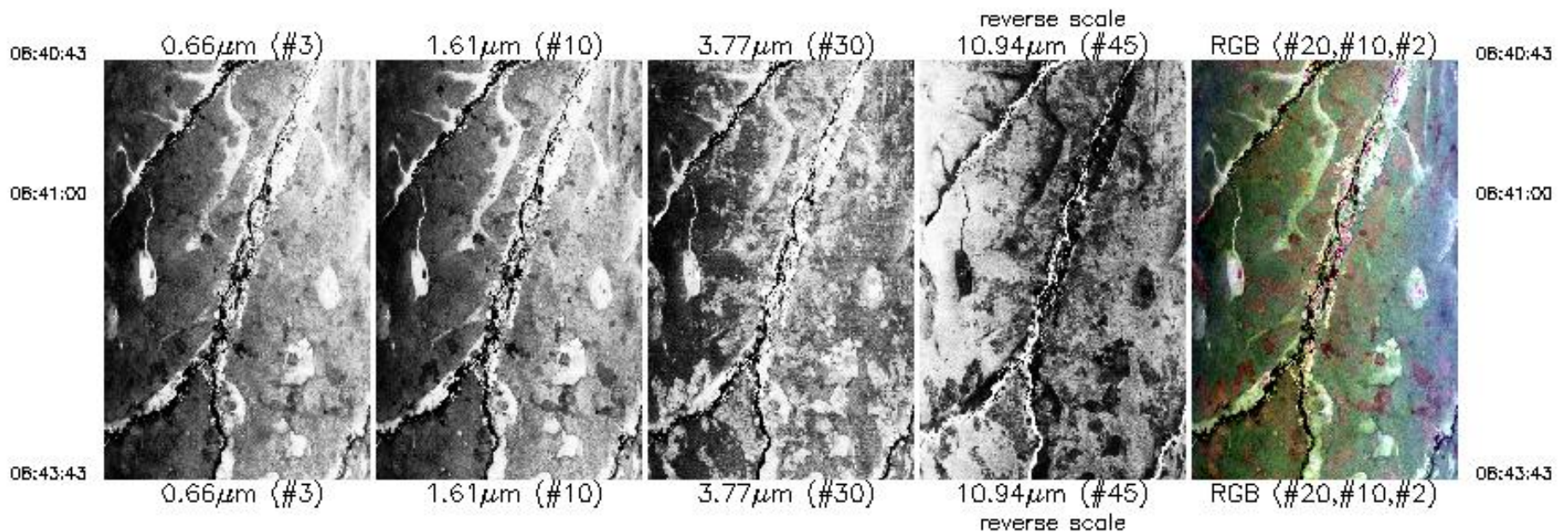
06:38:00

06:40:43

Upper Left Lat, Lon =  $-18.9^\circ$ ,  $23.9^\circ$   
 Lower Right Lat, Lon =  $-16.0^\circ$ ,  $24.1^\circ$   
 Aircraft Heading =  $3.6^\circ$   
 Solar Zenith =  $43.7^\circ$   
 GPS Altitude = 19966. m (MSL)



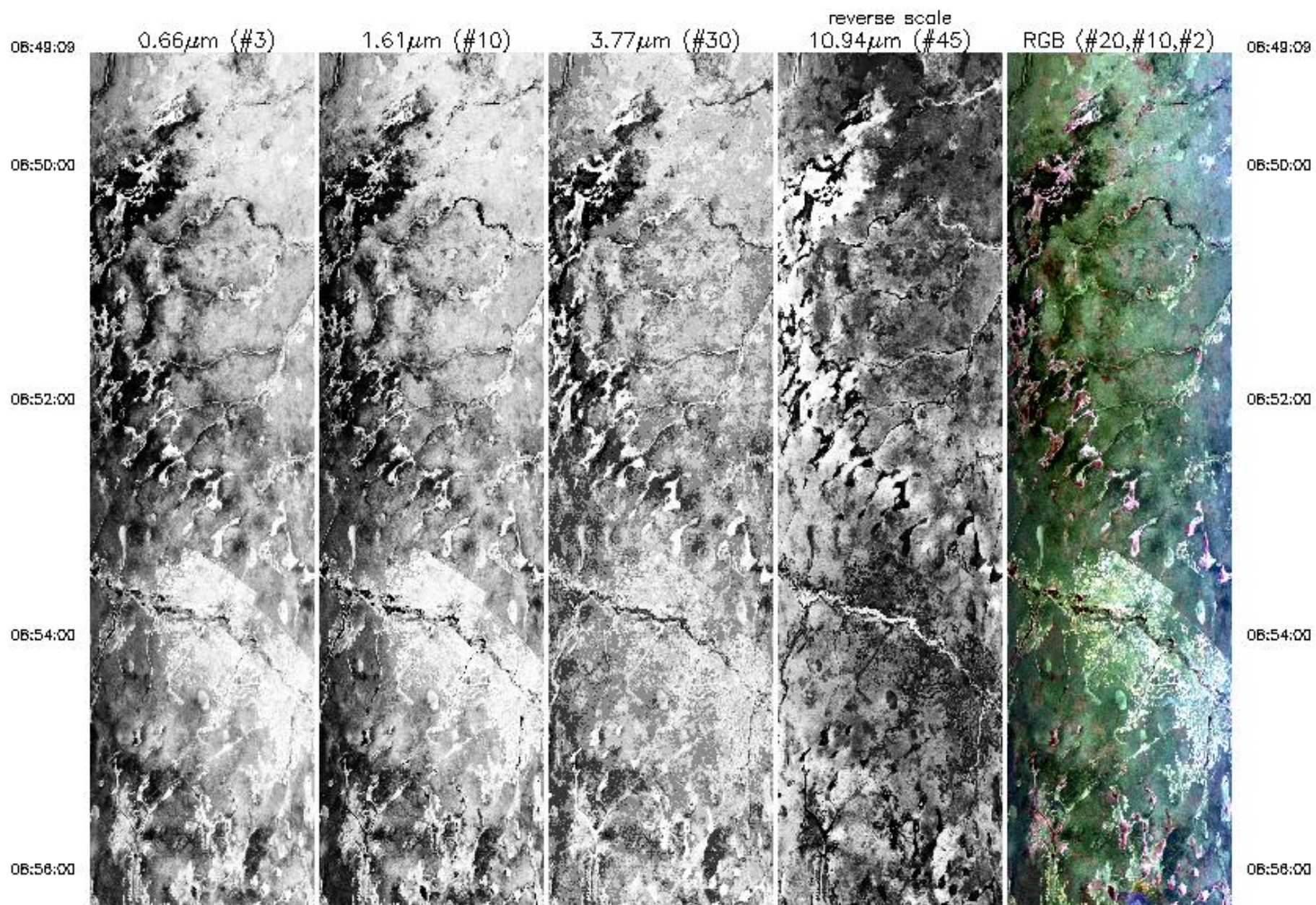
MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign - 26 Aug 2000  
 Zambia  
 Flight #00-151 Track #4



Upper Left Lat, Lon = -16.0°, 24.4°  
 Lower Right Lat, Lon = -15.6°, 24.2°  
 Aircraft Heading = 13.5°  
 Solar Zenith = 36.7°  
 GPS Altitude = 20037. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #5





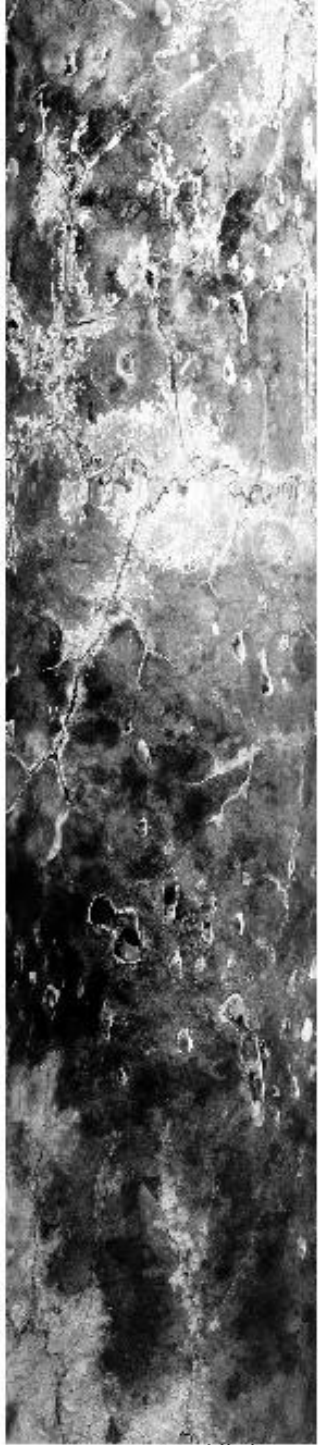
06:56:00

06:56:00

09:00:00

09:02:00

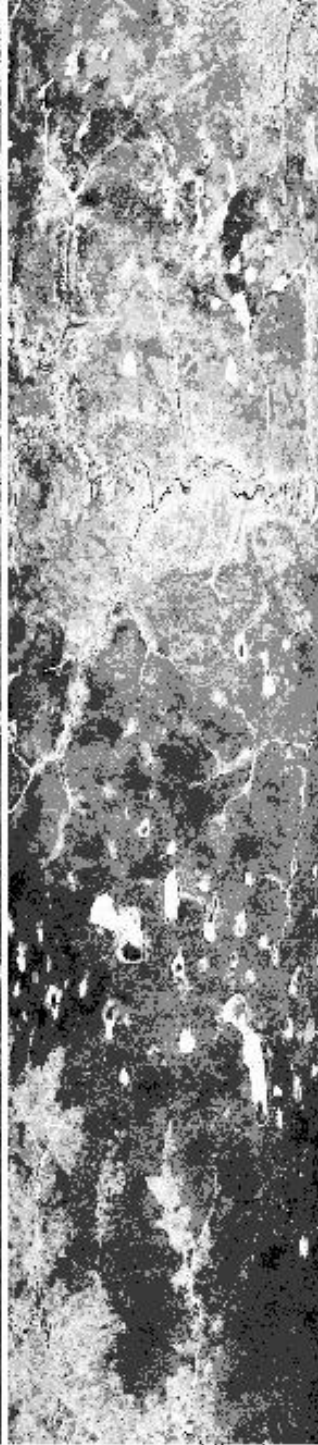
09:03:28



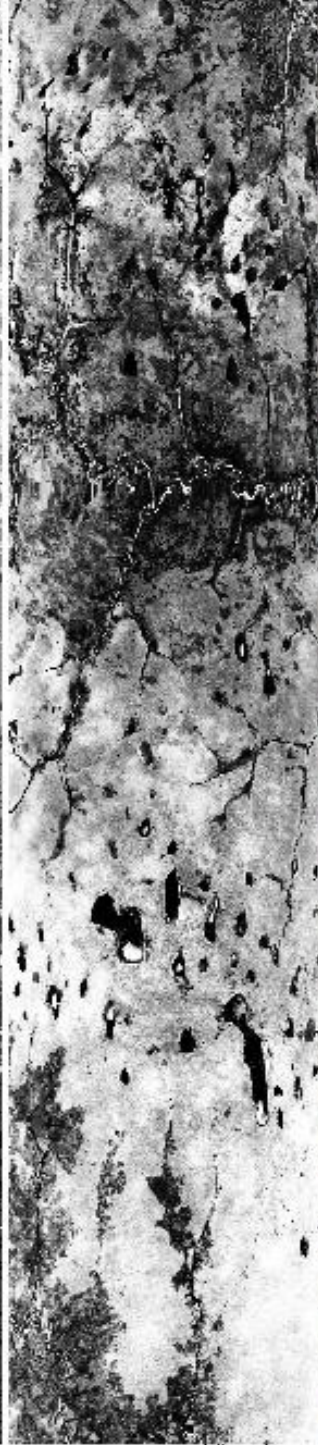
0.66 $\mu$ m (#3)



1.61 $\mu$ m (#10)



3.77 $\mu$ m (#30)



10.94 $\mu$ m (#45)  
reverse scale



RGB (#20,#10,#2)

06:56:00

06:56:00

09:00:00

09:02:00

09:03:28

Upper Left Lat, Lon = -15.6°, 24.5°

Lower Right Lat, Lon = -14.0°, 24.5°

Aircraft Heading = 10.9°



09:03:28



0.66 $\mu\text{m}$  (#3)



1.61 $\mu\text{m}$  (#10)



3.77 $\mu\text{m}$  (#30)



10.94 $\mu\text{m}$  (#45)  
reverse scale



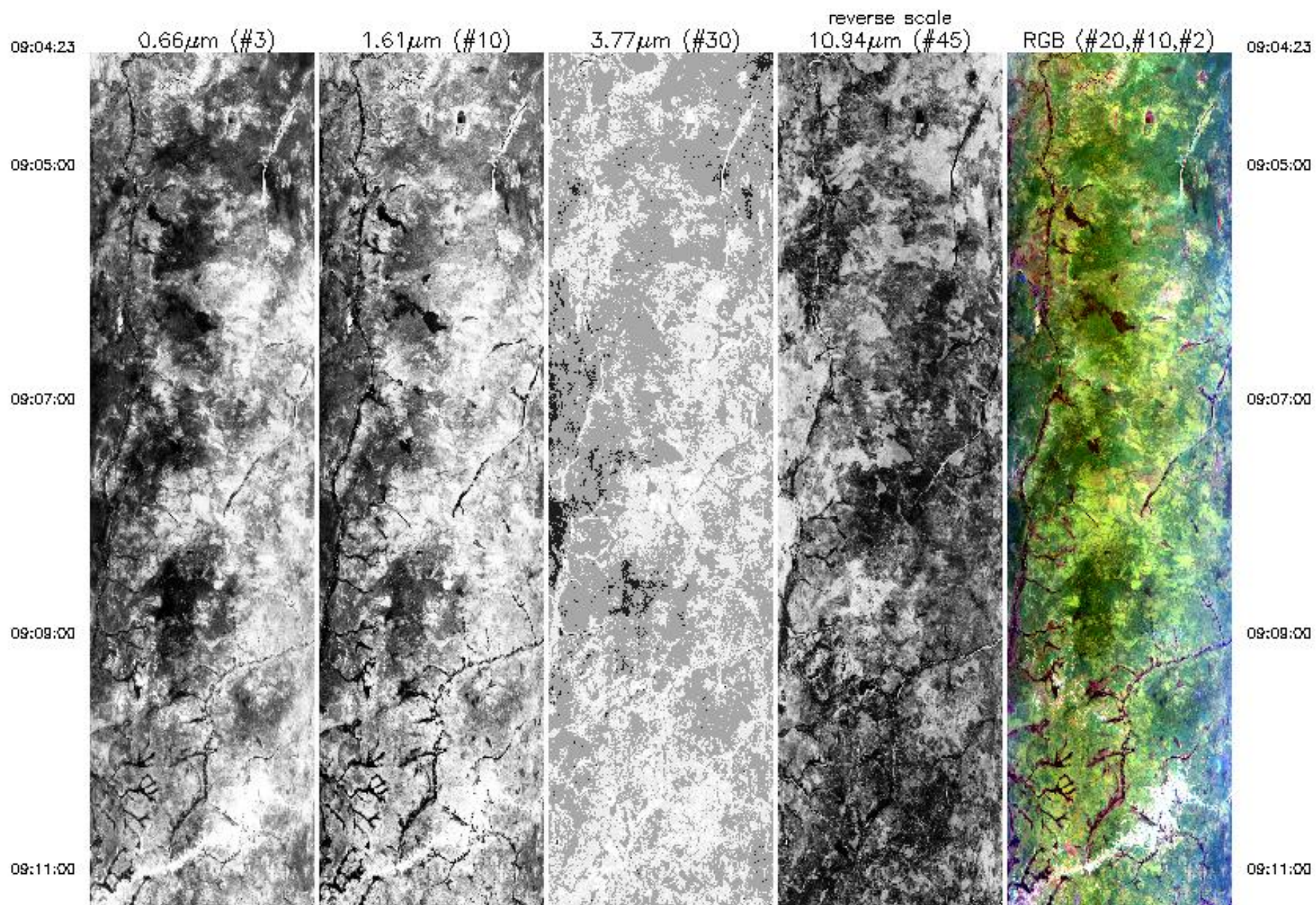
RGB (#20,#10,#2)

09:03:28

Upper Left Lat, Lon =  $-15.6^\circ$ ,  $24.5^\circ$   
Lower Right Lat, Lon =  $-14.0^\circ$ ,  $24.5^\circ$   
Aircraft Heading =  $10.9^\circ$   
Solar Zenith =  $34.9^\circ$   
GPS Altitude = 19966. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #6





09:11:00

09:13:00

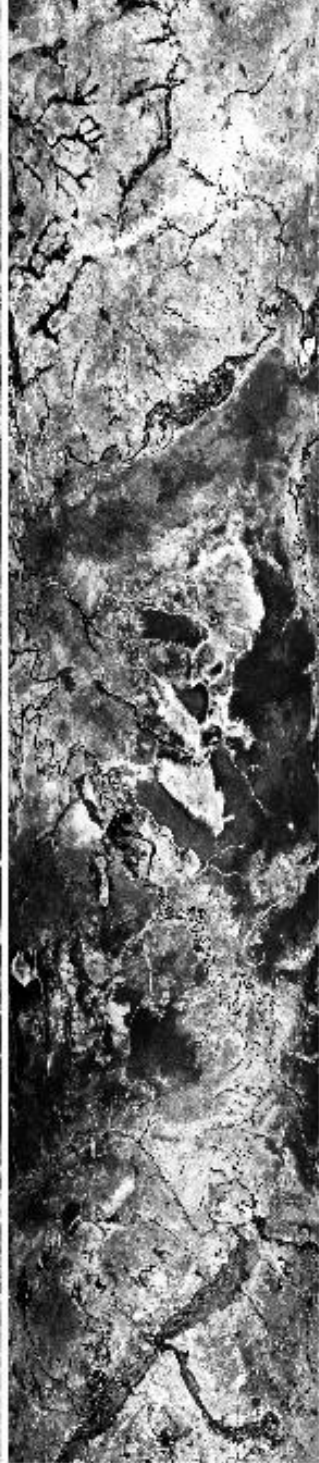
09:15:00

09:17:00

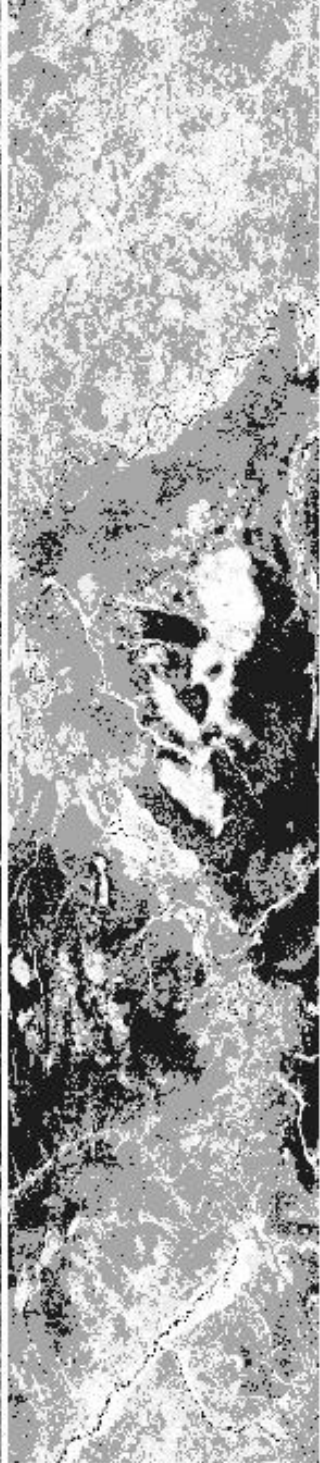
09:18:50



0.66 $\mu\text{m}$  (#3)



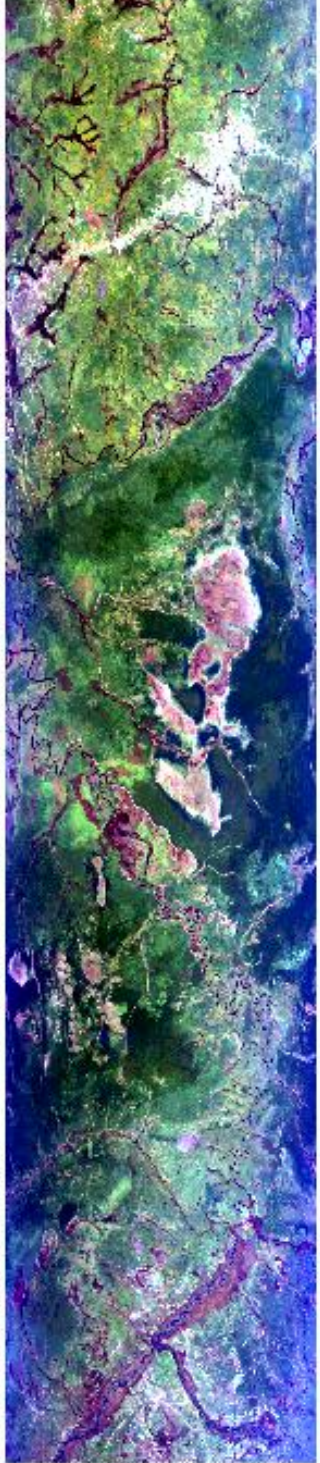
1.61 $\mu\text{m}$  (#10)



3.77 $\mu\text{m}$  (#30)



10.94 $\mu\text{m}$  (#45)  
reverse scale



RGB (#20,#10,#2)

09:11:00

09:13:00

09:15:00

09:17:00

09:18:50

Upper Left Lat, Lon =  $-14.0^\circ$ ,  $24.9^\circ$   
Lower Right Lat, Lon =  $-12.3^\circ$ ,  $24.8^\circ$



09:18:50



0.66 $\mu\text{m}$  (#3)



1.61 $\mu\text{m}$  (#10)



3.77 $\mu\text{m}$  (#30)



10.94 $\mu\text{m}$  (#45)  
reverse scale



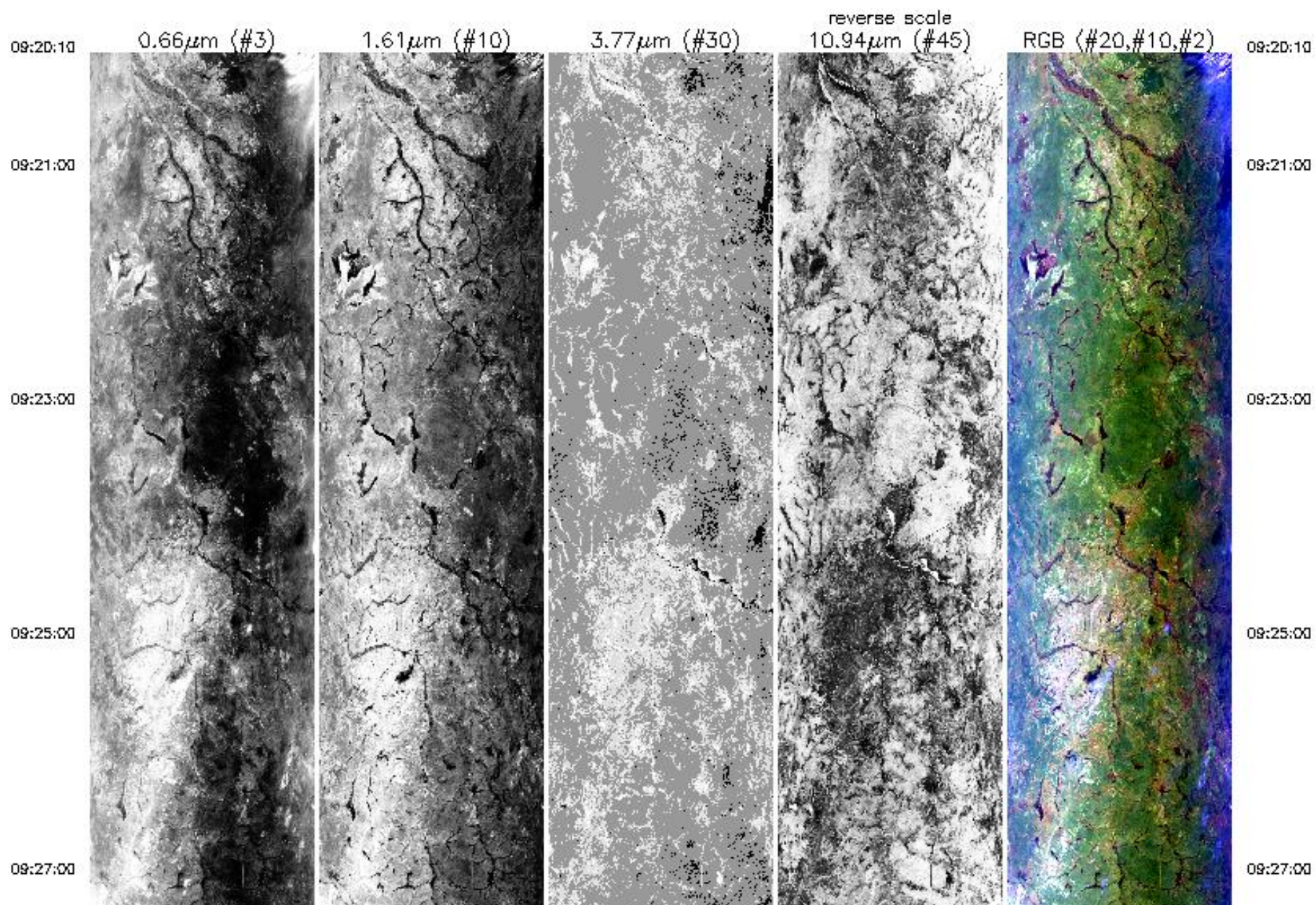
RGB (#20, #10, #2)

09:18:50

Upper Left Lat, Lon =  $-14.0^\circ$ ,  $24.9^\circ$   
Lower Right Lat, Lon =  $-12.3^\circ$ ,  $24.8^\circ$   
Aircraft Heading =  $10.1^\circ$   
Solar Zenith =  $31.0^\circ$   
GPS Altitude = 20032. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #7





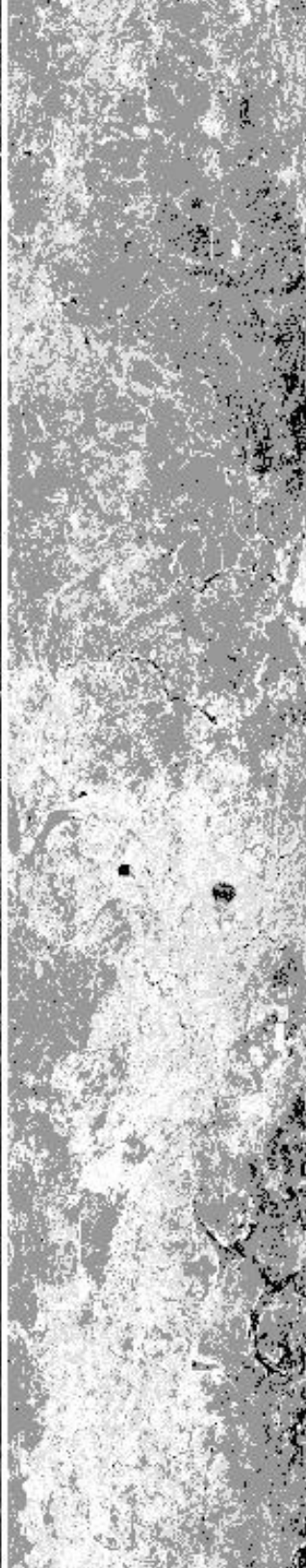
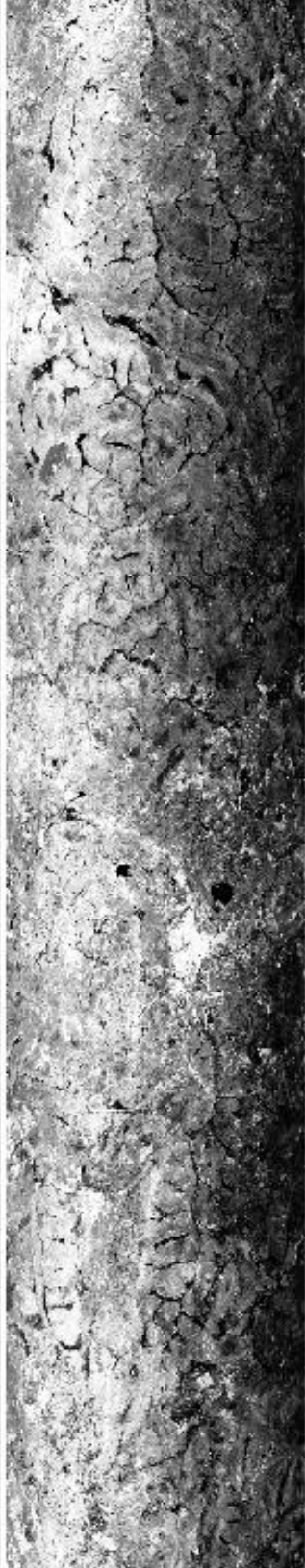
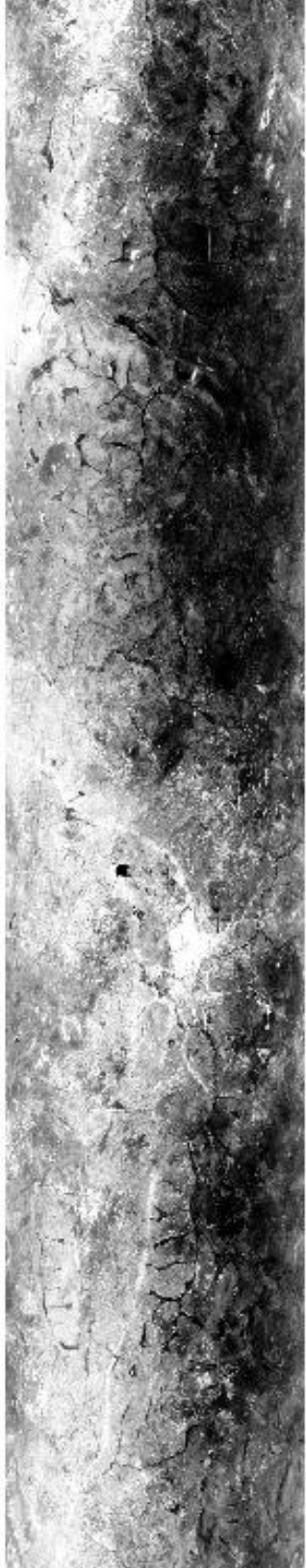
09:27:00

09:29:00

09:31:00

09:33:00

09:35:00



09:27:00

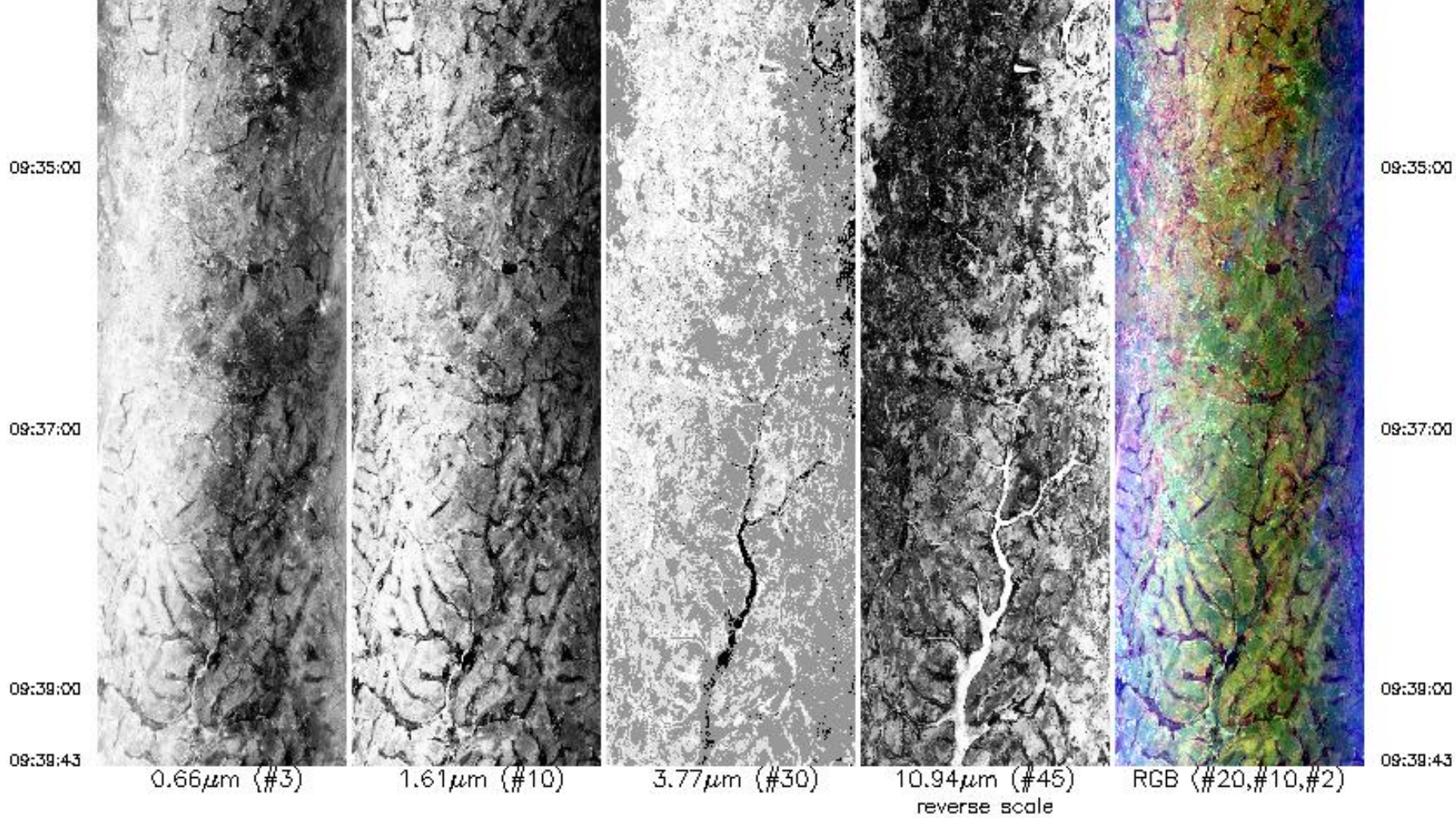
09:29:00

09:31:00

09:33:00

09:35:00

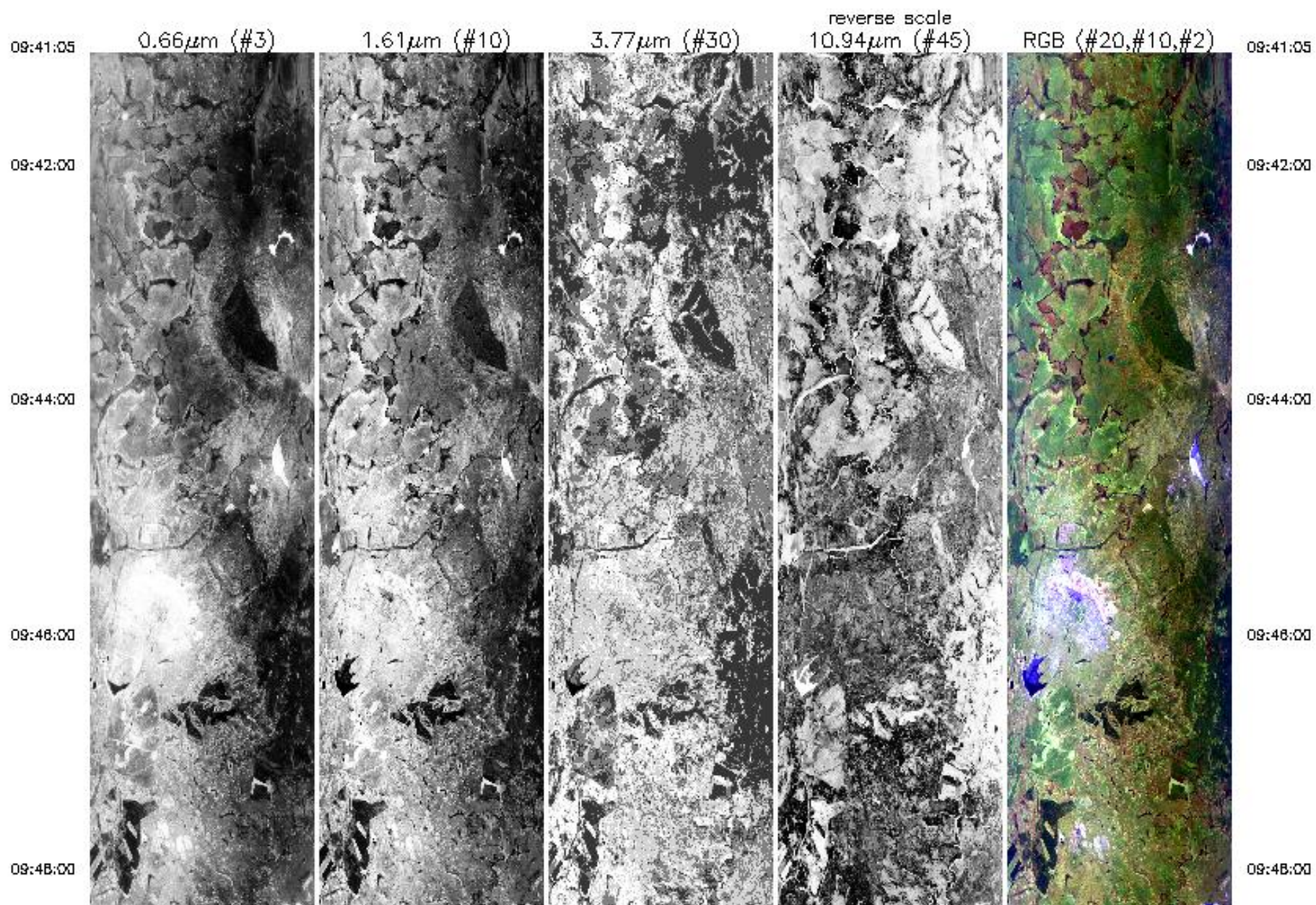




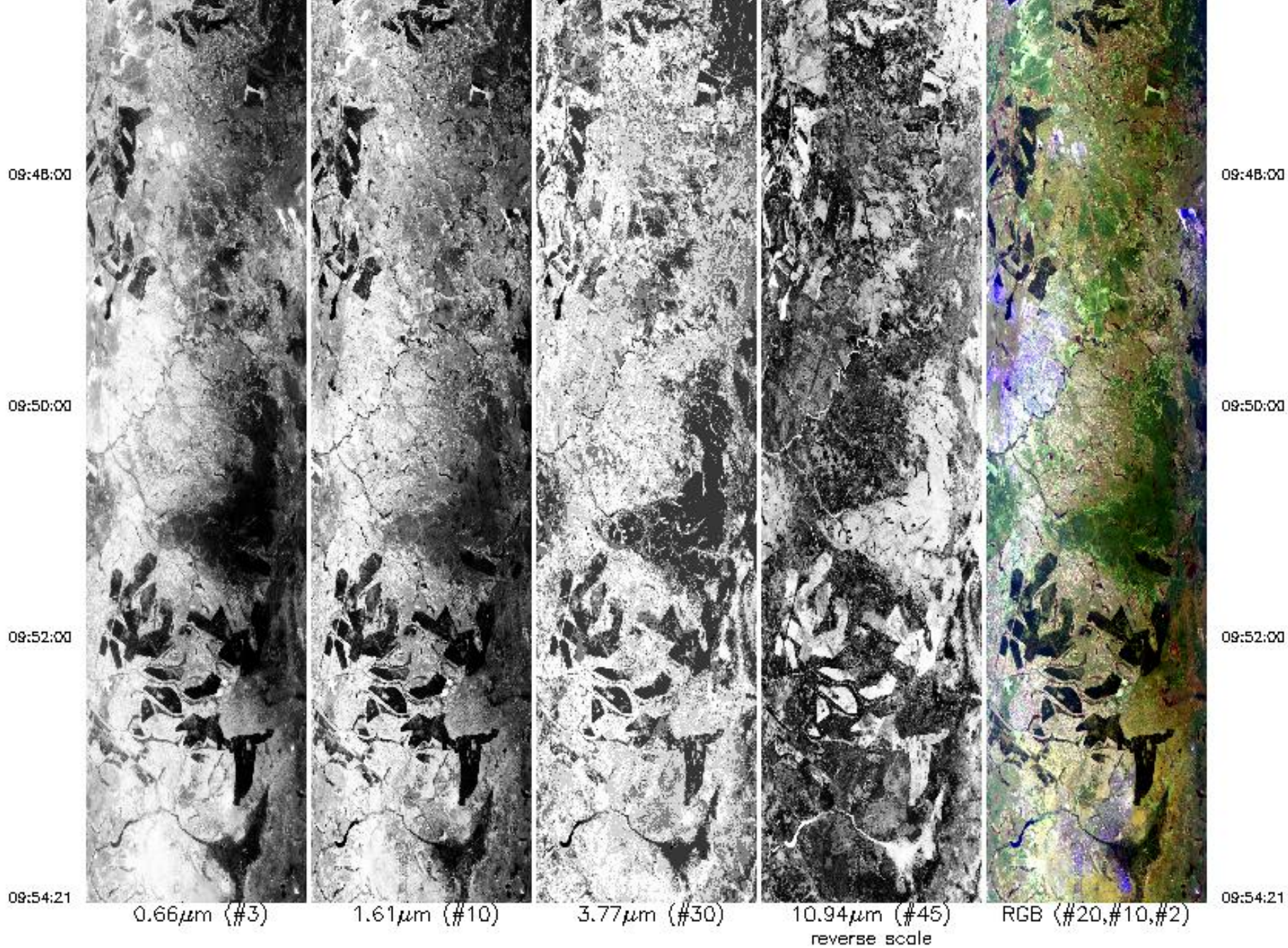
Upper Left Lat, Lon =  $-12.4^\circ$ ,  $25.1^\circ$   
 Lower Right Lat, Lon =  $-12.0^\circ$ ,  $27.3^\circ$   
 Aircraft Heading =  $82.6^\circ$   
 Solar Zenith =  $27.3^\circ$   
 GPS Altitude = 19886. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #8







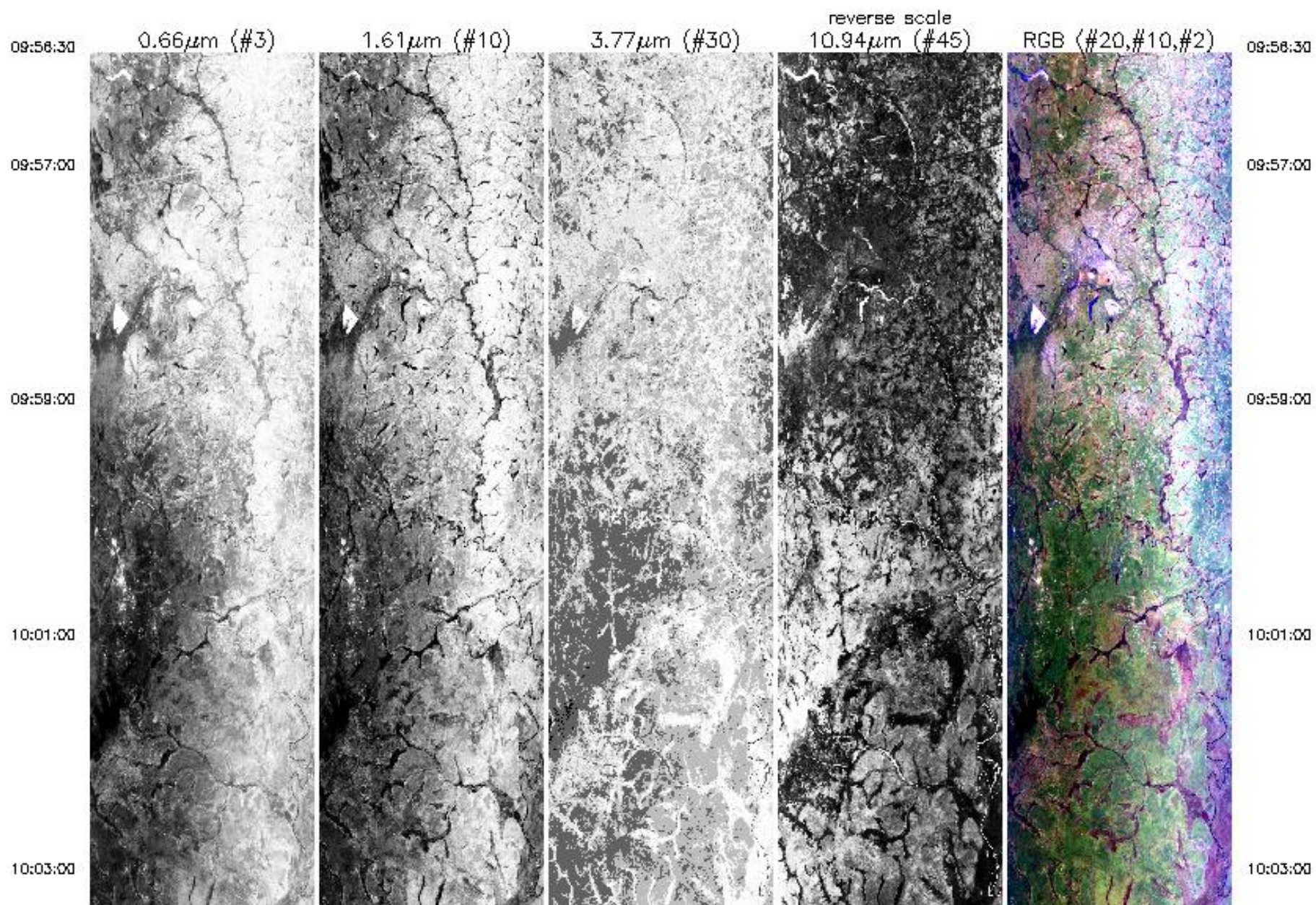
Upper Left Lat, Lon =  $-12.3^\circ$ ,  $27.3^\circ$   
 Lower Right Lat, Lon =  $-12.9^\circ$ ,  $28.8^\circ$   
 Aircraft Heading =  $126.9^\circ$   
 Solar Zenith =  $23.8^\circ$   
 GPS Altitude = 19994. m (MSL)



Upper Left Lat, Lon =  $-12.3^\circ$ ,  $27.3^\circ$   
Lower Right Lat, Lon =  $-12.9^\circ$ ,  $28.8^\circ$   
Aircraft Heading =  $126.9^\circ$   
Solar Zenith =  $23.8^\circ$   
GPS Altitude = 19994. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #9





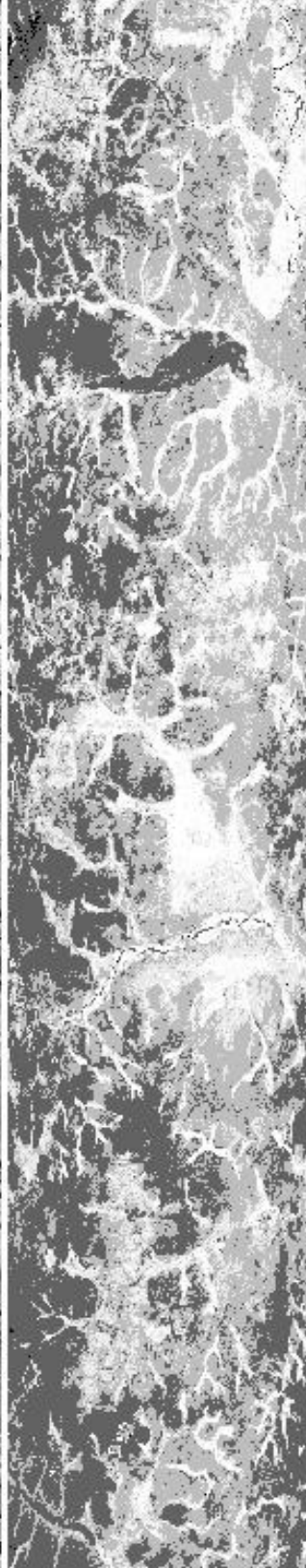
10:03:00

10:05:00

10:07:00

10:08:00

10:11:00



10:03:00

10:05:00

10:07:00

10:08:00

10:11:00



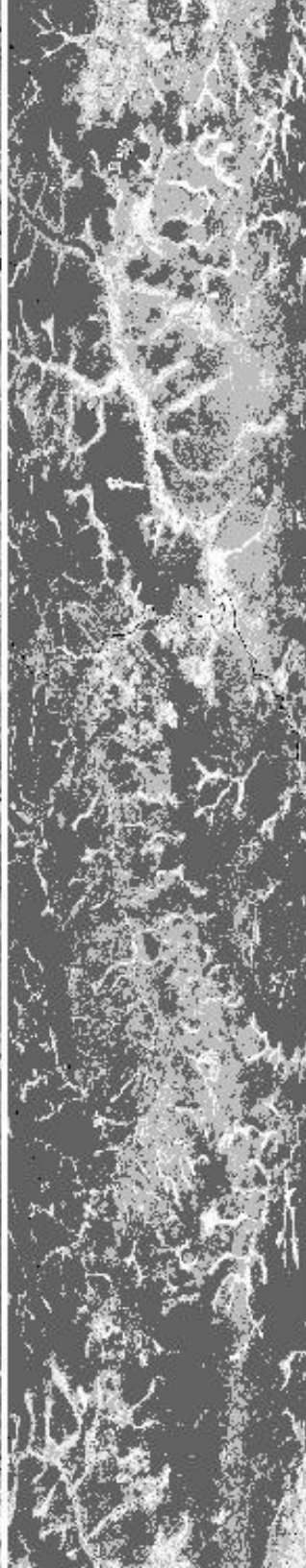
10:11:00



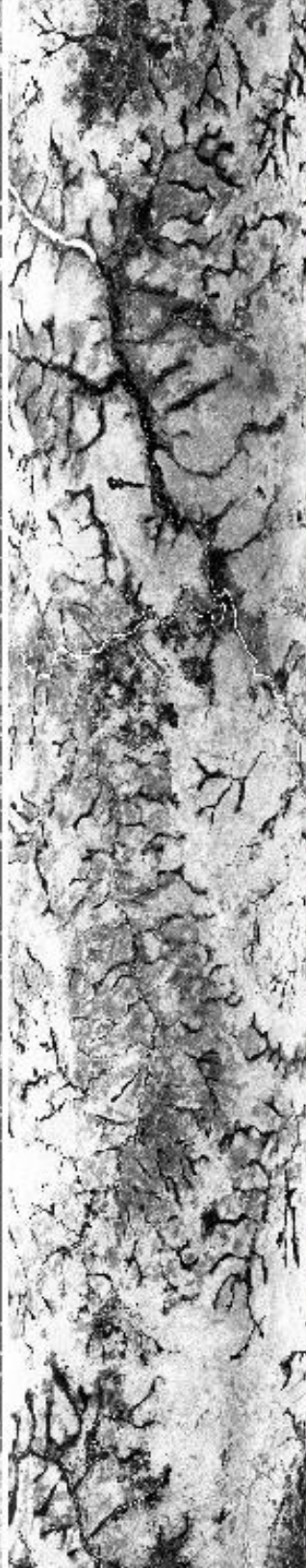
10:13:00



10:15:00



10:17:00



10:19:00



10:11:00

10:13:00

10:15:00

10:17:00

10:19:00



10:19:00

10:21:00

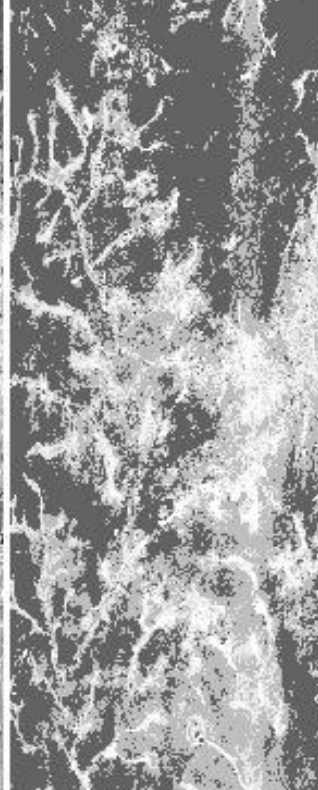
10:23:15



0.66 $\mu\text{m}$  (#3)



1.61 $\mu\text{m}$  (#10)



3.77 $\mu\text{m}$  (#30)



10.94 $\mu\text{m}$  (#45)  
reverse scale



RGB (#20, #10, #2)

10:19:00

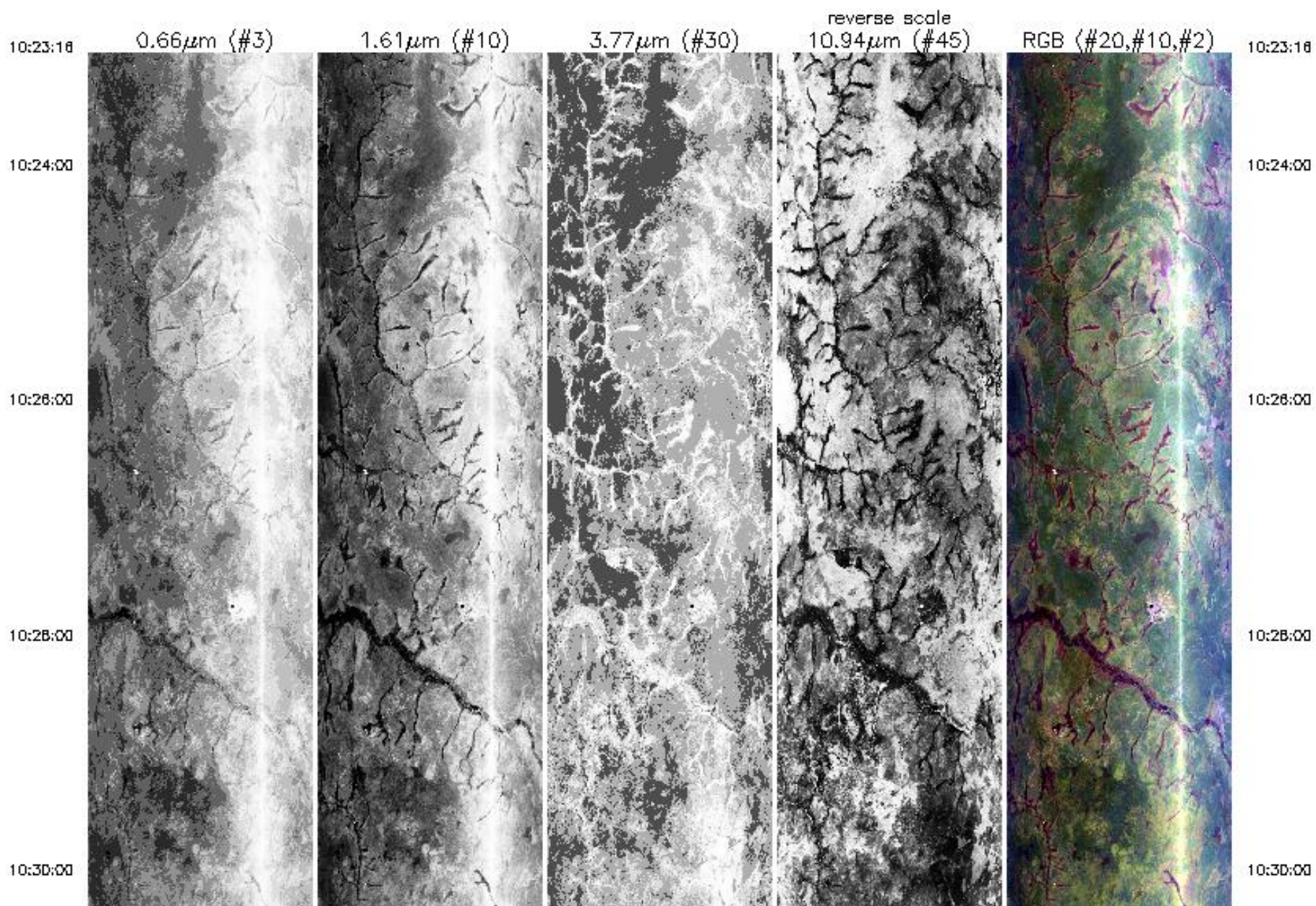
10:21:00

10:23:15

Upper Left Lat, Lon =  $-13.0^\circ$ ,  $28.6^\circ$   
Lower Right Lat, Lon =  $-13.5^\circ$ ,  $25.6^\circ$   
Aircraft Heading =  $265.6^\circ$   
Solar Zenith =  $23.4^\circ$   
GPS Altitude = 19990. m (MSL)

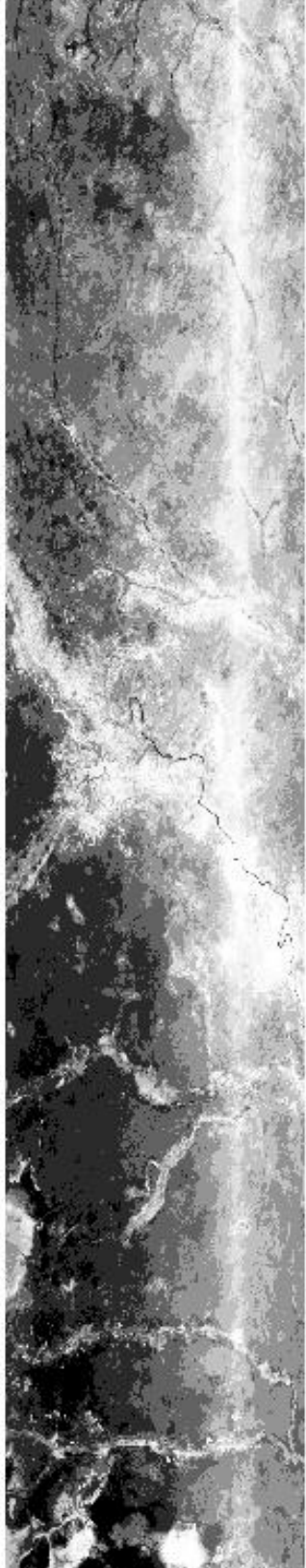


MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #10

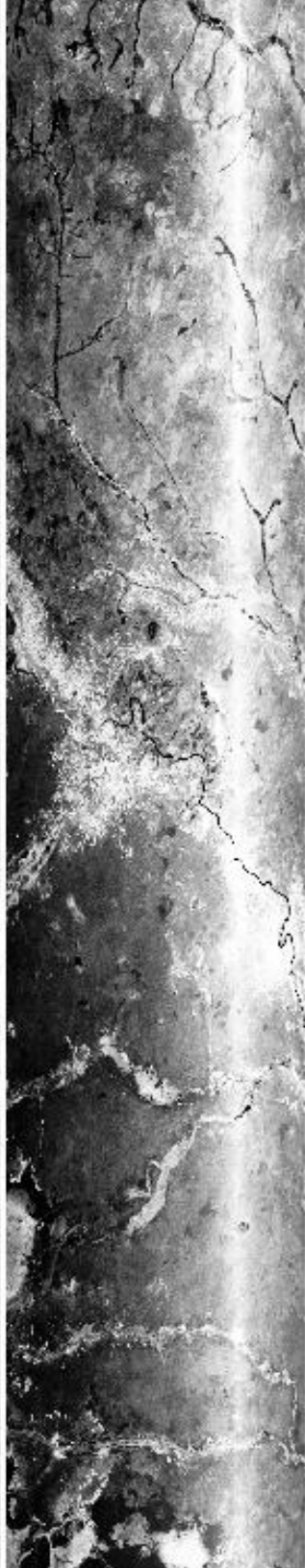




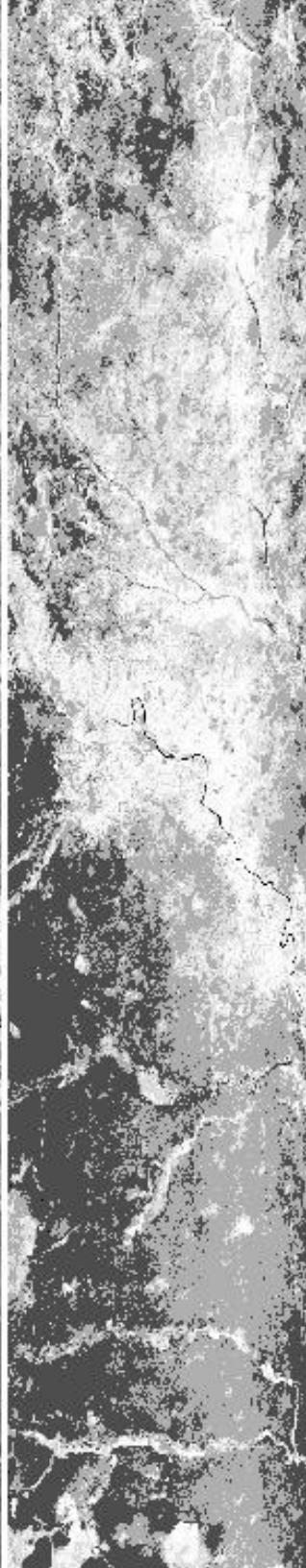
10:30:00



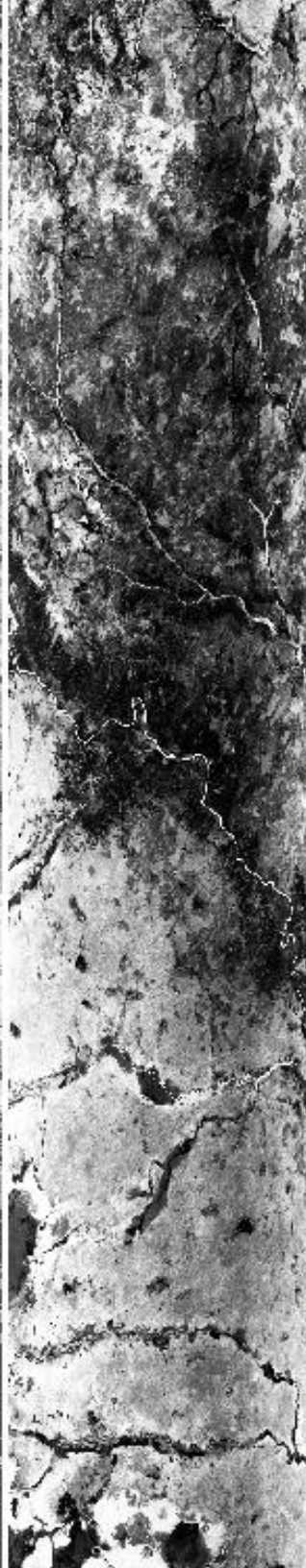
10:32:00



10:34:00



10:36:00



10:38:00



10:30:00

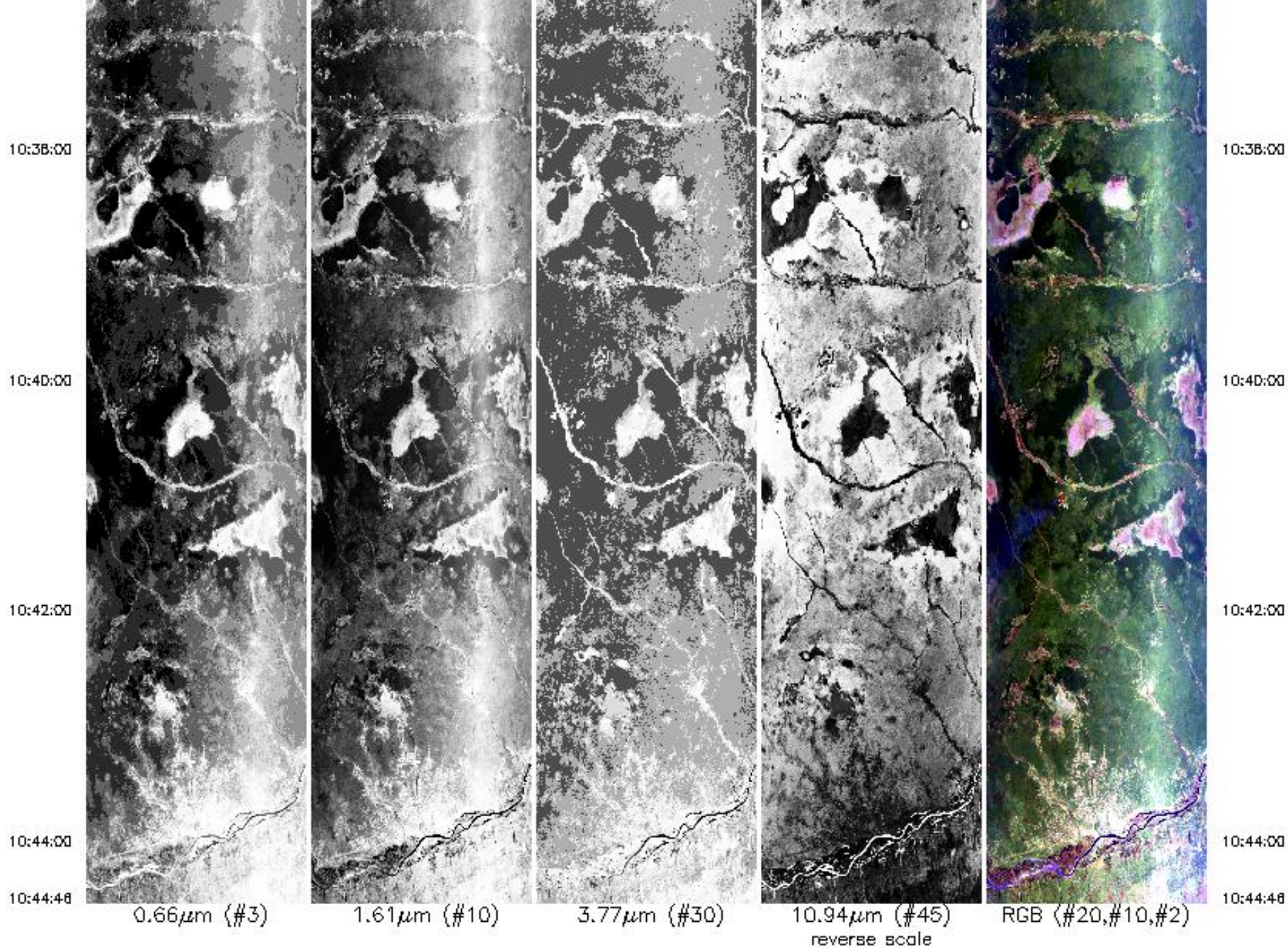
10:32:00

10:34:00

10:36:00

10:38:00





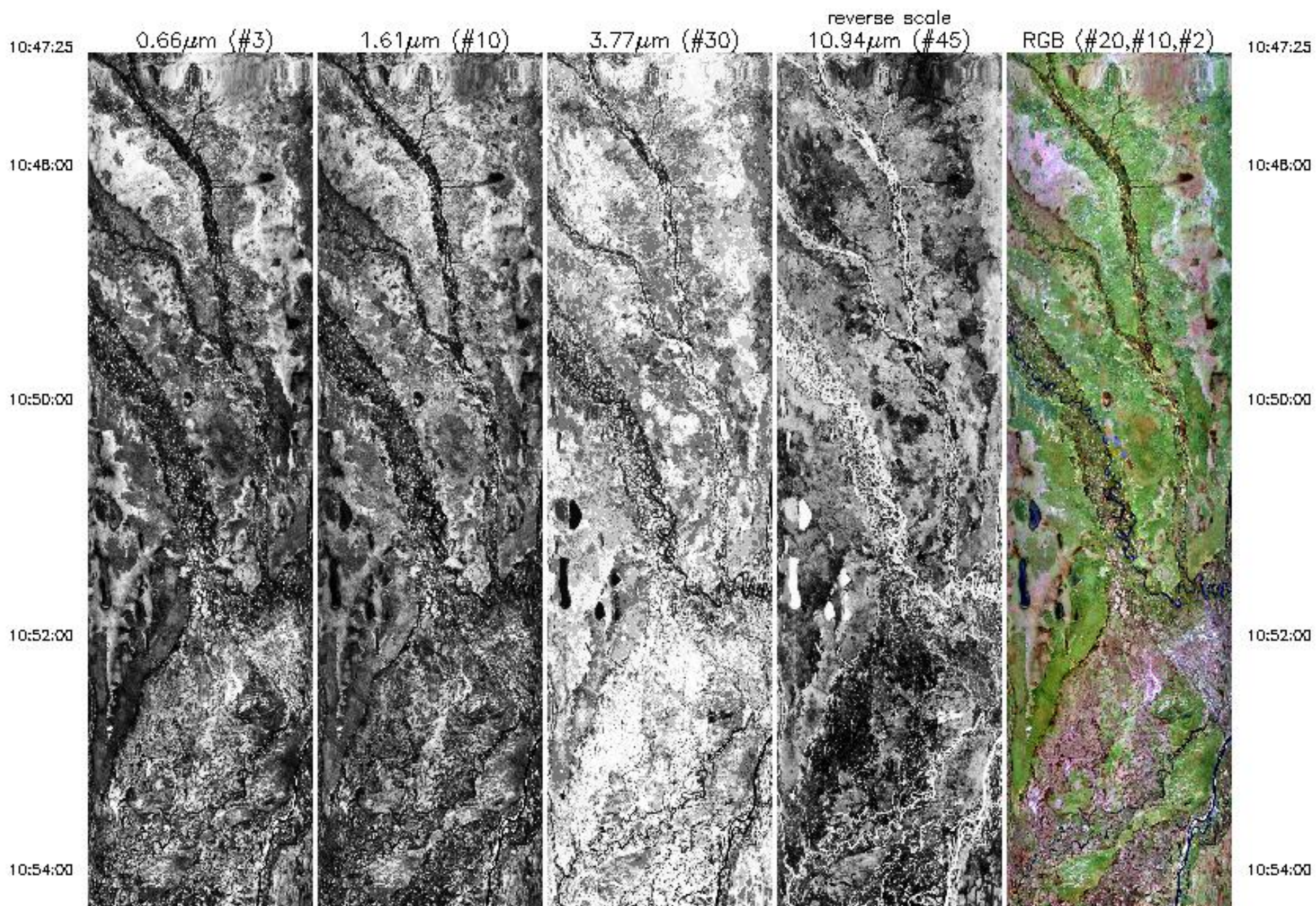
Upper Left Lat, Lon =  $-13.2^\circ$ ,  $25.5^\circ$   
 Lower Right Lat, Lon =  $-13.7^\circ$ ,  $23.0^\circ$   
 Aircraft Heading =  $267.4^\circ$   
 Solar Zenith =  $23.4^\circ$   
 GPS Altitude = 20067. m (MSL)



Upper Left Lat, Lon =  $-13.2^\circ$ ,  $25.5^\circ$   
Lower Right Lat, Lon =  $-13.7^\circ$ ,  $23.0^\circ$   
Aircraft Heading =  $267.4^\circ$   
Solar Zenith =  $23.4^\circ$   
GPS Altitude = 20067. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #11





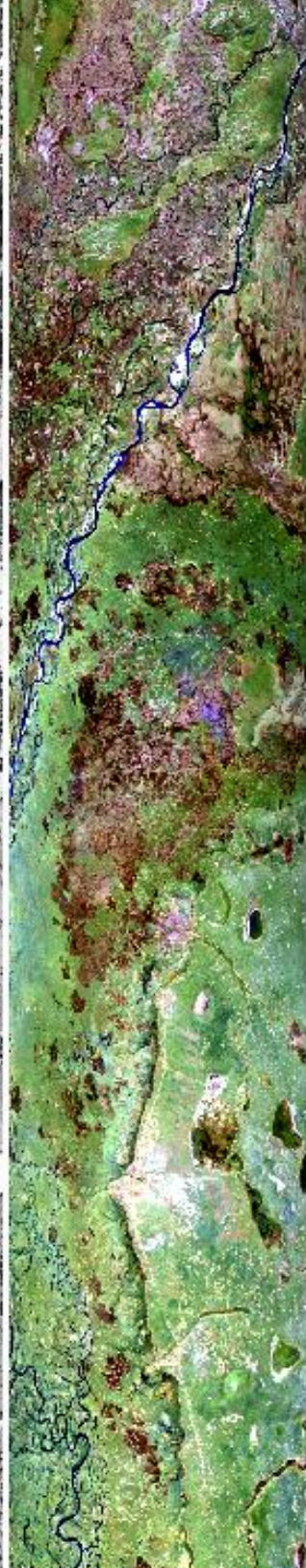
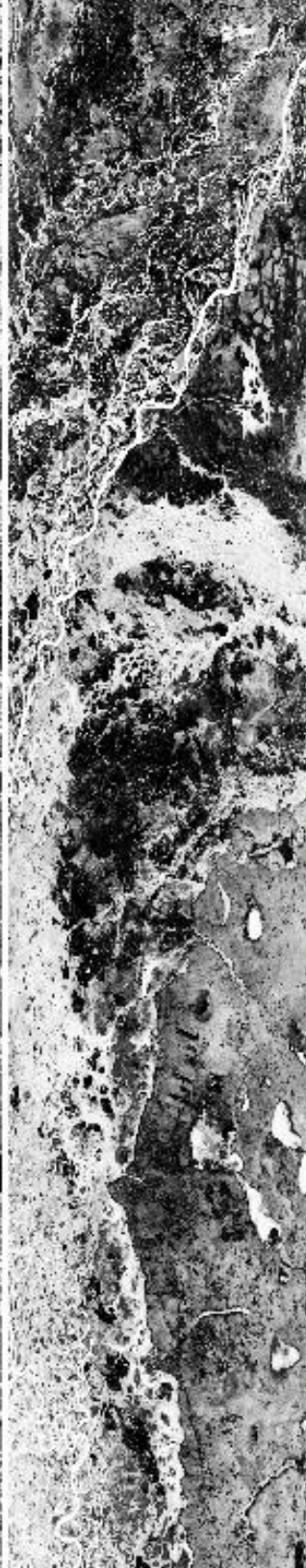
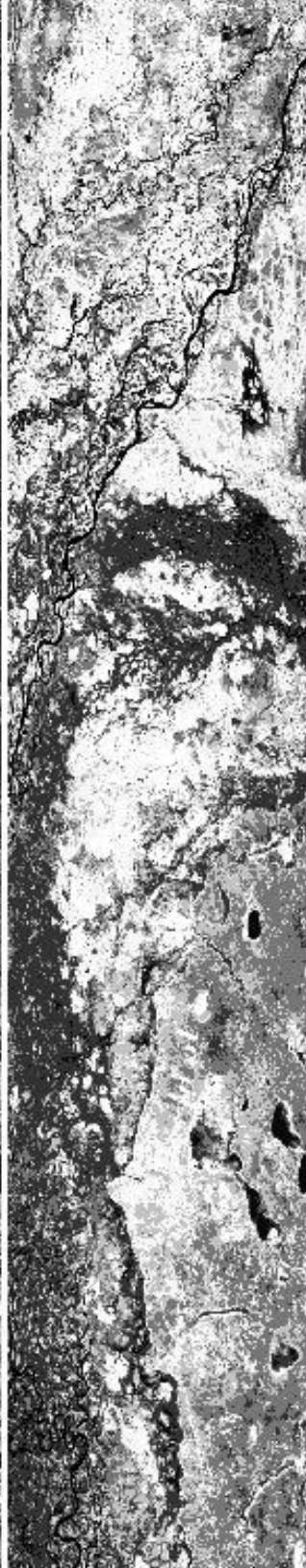
10:54:00

10:56:00

10:58:00

11:00:00

11:02:00



10:54:00

10:56:00

10:58:00

11:00:00

11:02:00



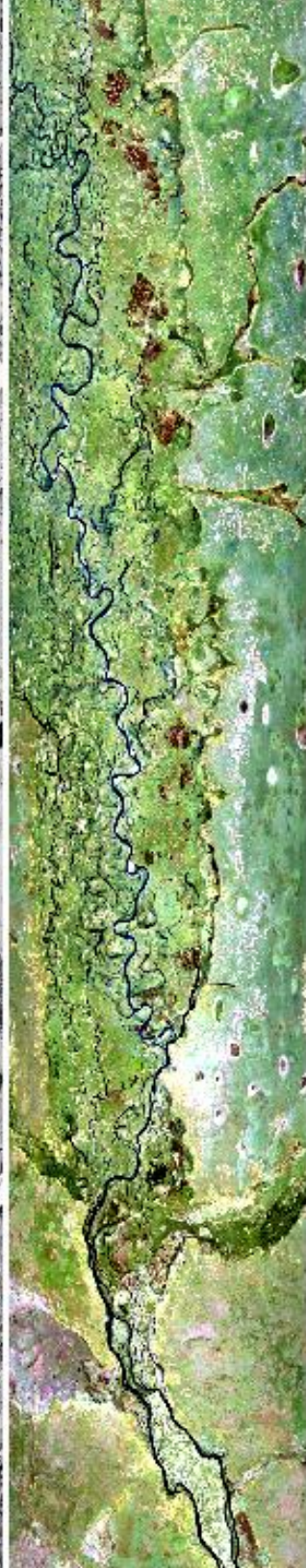
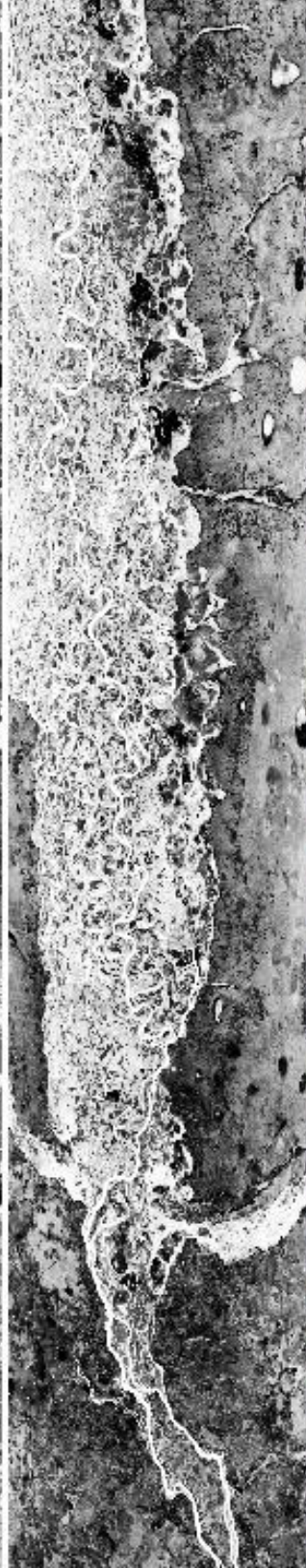
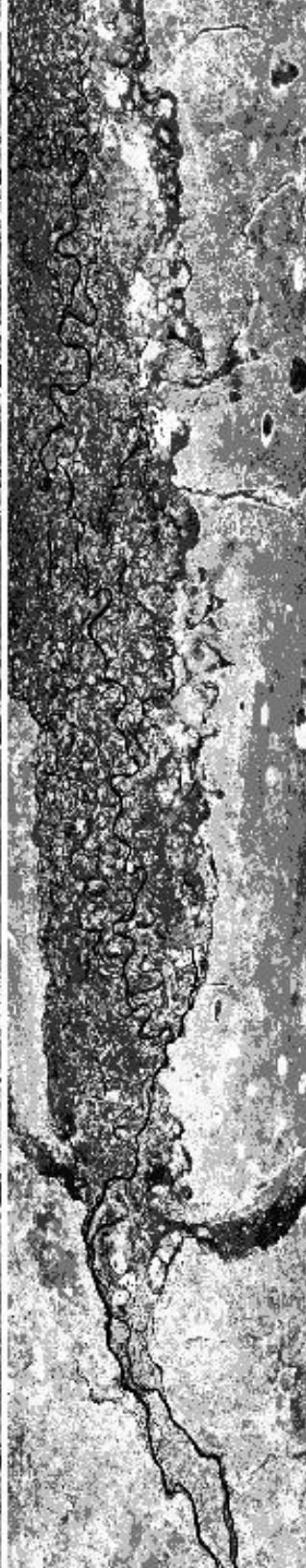
11:02:00

11:04:00

11:06:00

11:08:00

11:10:00



11:02:00

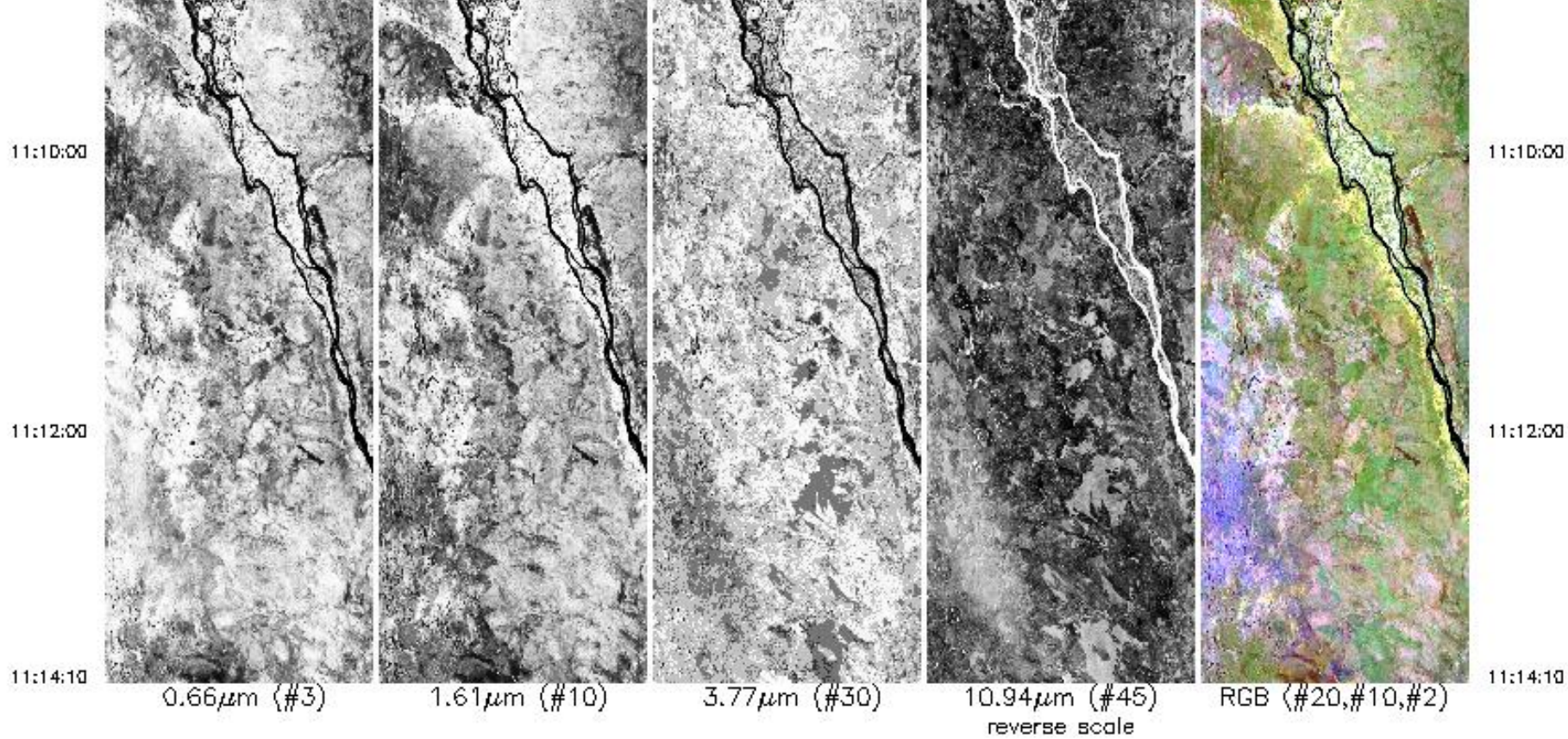
11:04:00

11:06:00

11:08:00

11:10:00

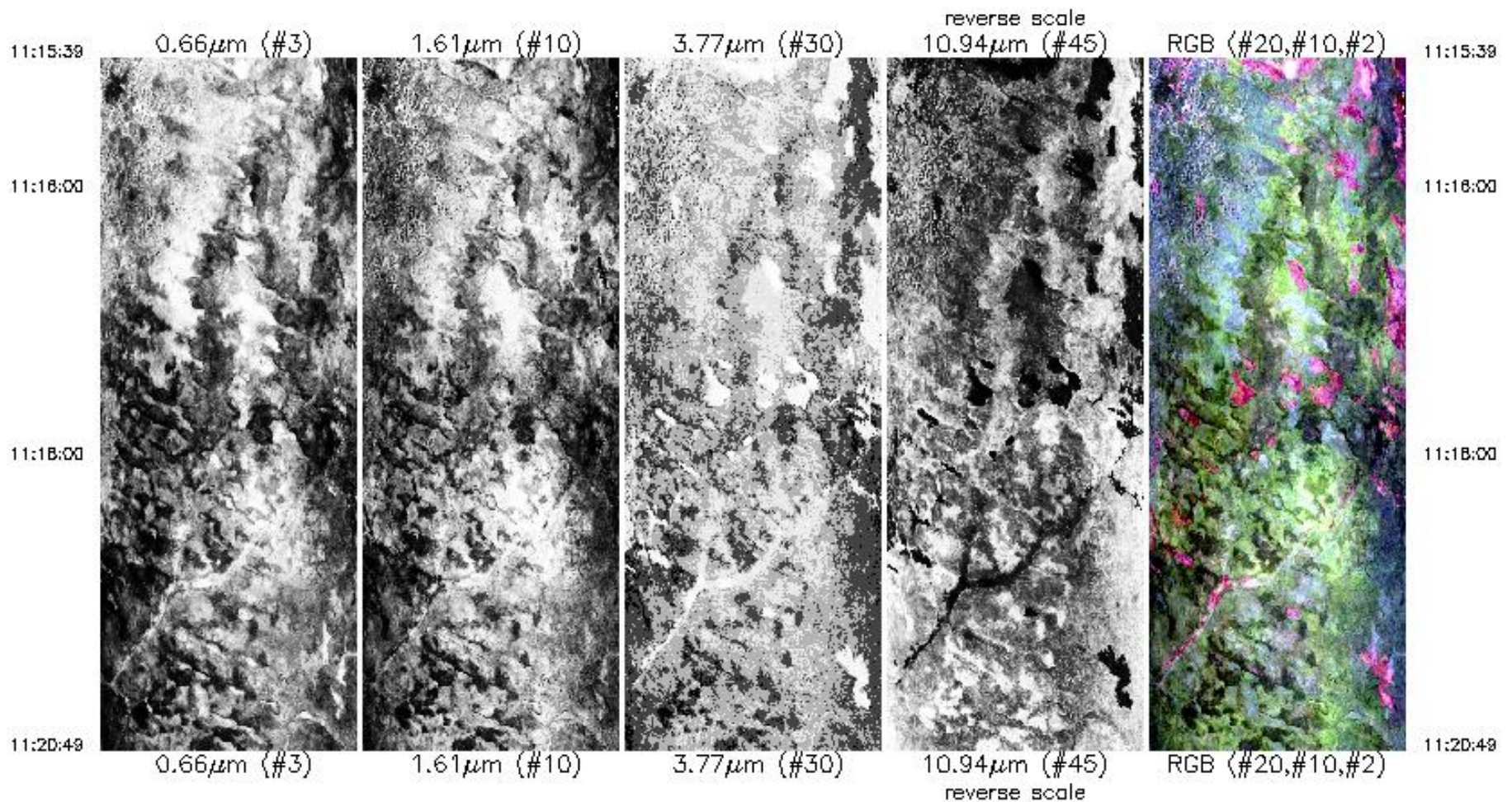




Upper Left Lat, Lon =  $-13.8^\circ$ ,  $22.8^\circ$   
 Lower Right Lat, Lon =  $-16.8^\circ$ ,  $23.6^\circ$   
 Aircraft Heading =  $178.6^\circ$   
 Solar Zenith =  $24.3^\circ$   
 GPS Altitude = 20047. m (MSL)



MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Zambia  
 Flight #00-151 Track #12



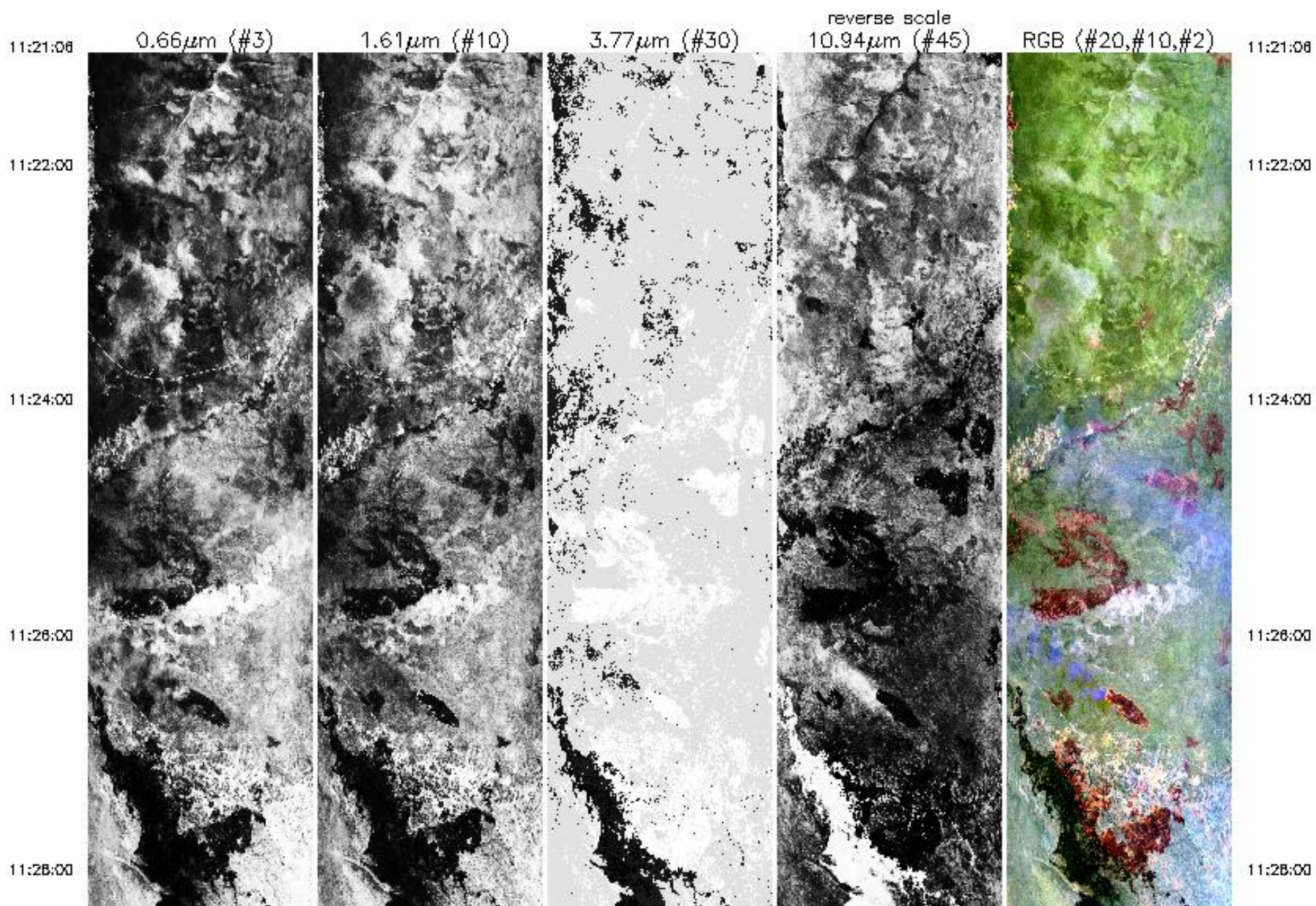
Upper Left Lat, Lon = -17.0°, 23.2°  
 Lower Right Lat, Lon = -17.5°, 23.7°  
 Aircraft Heading = 170.3°  
 Solar Zenith = 29.5°  
 GPS Altitude = 20090. m (MSL)



Upper Left Lat, Lon =  $-17.0^\circ$ ,  $23.2^\circ$   
Lower Right Lat, Lon =  $-17.5^\circ$ ,  $23.7^\circ$   
Aircraft Heading =  $170.3^\circ$   
Solar Zenith =  $29.5^\circ$   
GPS Altitude = 20090. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Namibia, Botswana  
Flight #00-151 Track #13





11:28:00



11:30:00



11:32:00



11:34:00



11:36:00



11:28:00

11:30:00

11:32:00

11:34:00

11:36:00



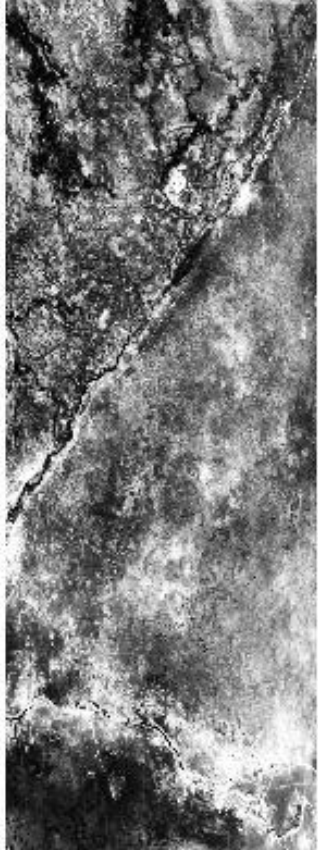
11:36:00



11:36:00



11:40:00



11:42:00



11:44:00



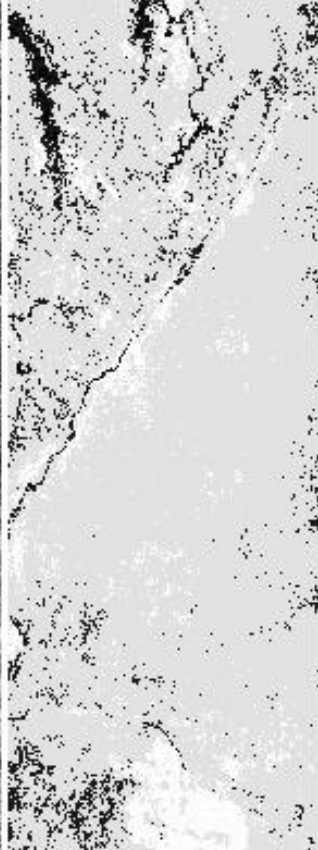
11:36:00



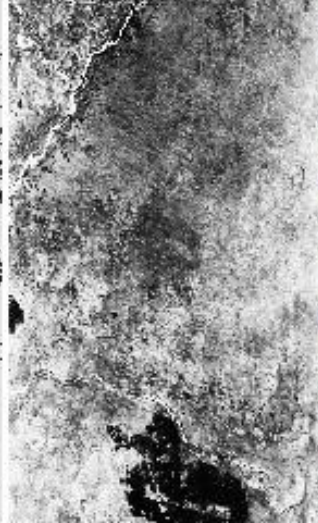
11:36:00



11:40:00



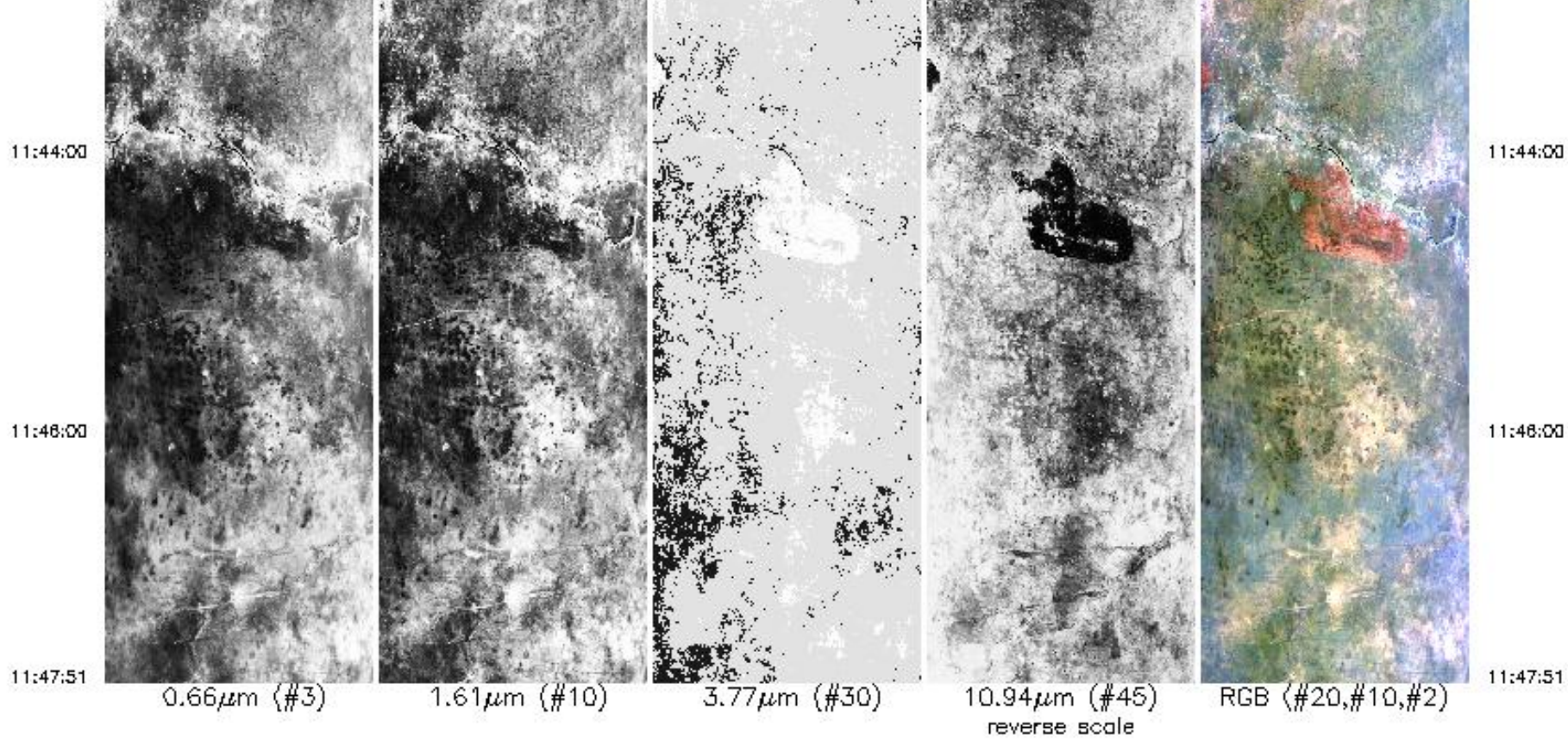
11:42:00



11:44:00



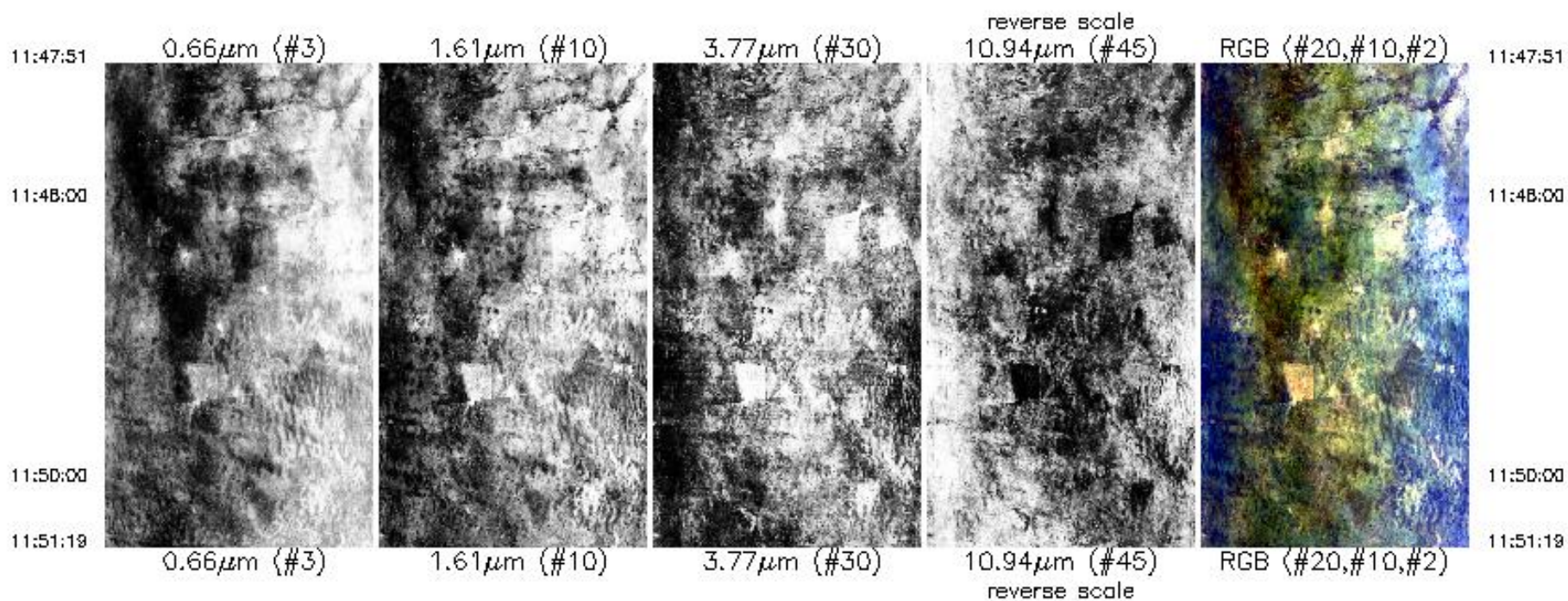




Upper Left Lat, Lon =  $-17.6^\circ$ ,  $23.4^\circ$   
 Lower Right Lat, Lon =  $-20.5^\circ$ ,  $23.8^\circ$   
 Aircraft Heading =  $174.7^\circ$   
 Solar Zenith =  $30.7^\circ$   
 GPS Altitude = 20033. m (MSL)



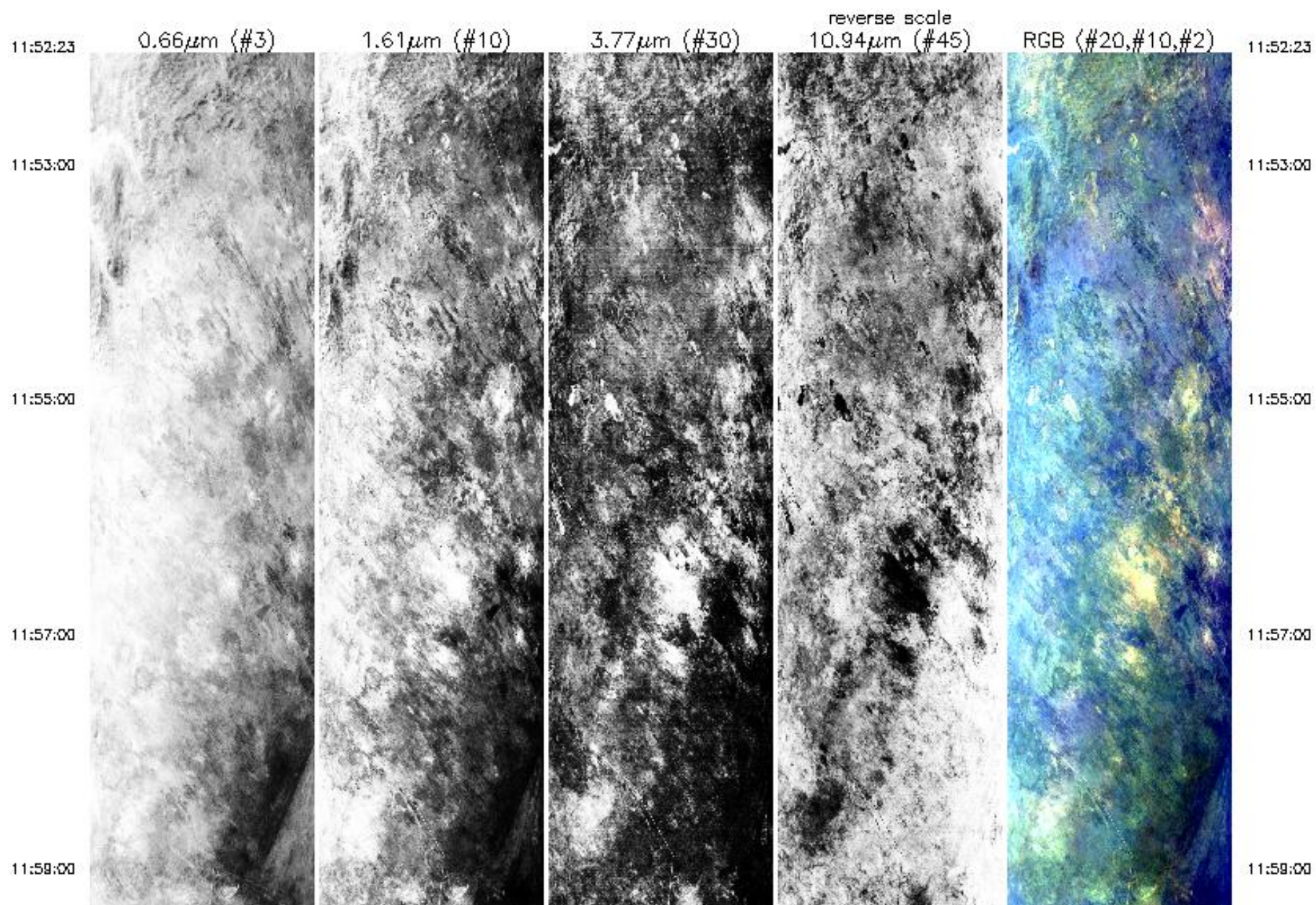
MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Botswana  
 Flight #00-151 Track #14



Upper Left Lat, Lon =  $-20.6^{\circ}$ ,  $23.4^{\circ}$   
 Lower Right Lat, Lon =  $-20.9^{\circ}$ ,  $23.8^{\circ}$   
 Aircraft Heading =  $179.3^{\circ}$   
 Solar Zenith =  $36.4^{\circ}$   
 GPS Altitude = 20085. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Botswana  
Flight #00-151 Track #15





11:58:00



12:01:00



12:03:00



12:05:00



12:07:00



11:58:00

12:01:00

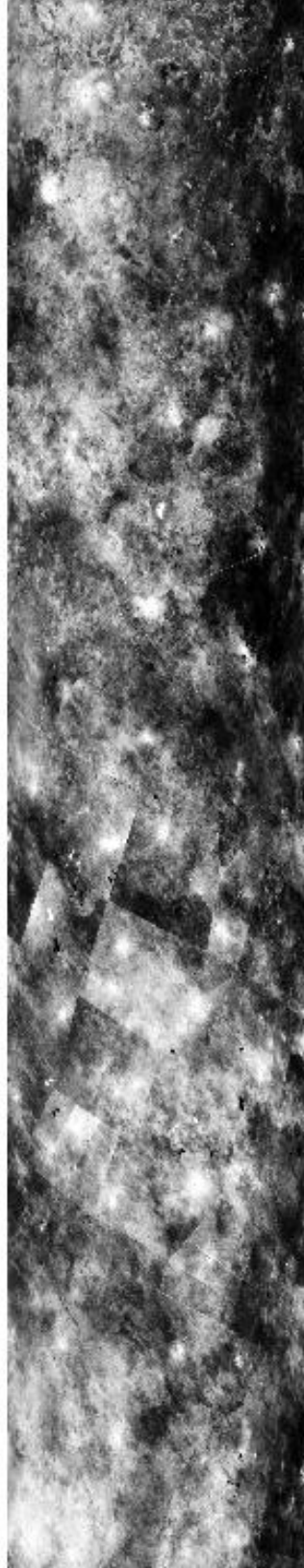
12:03:00

12:05:00

12:07:00



12:07:00



12:08:00



12:11:00



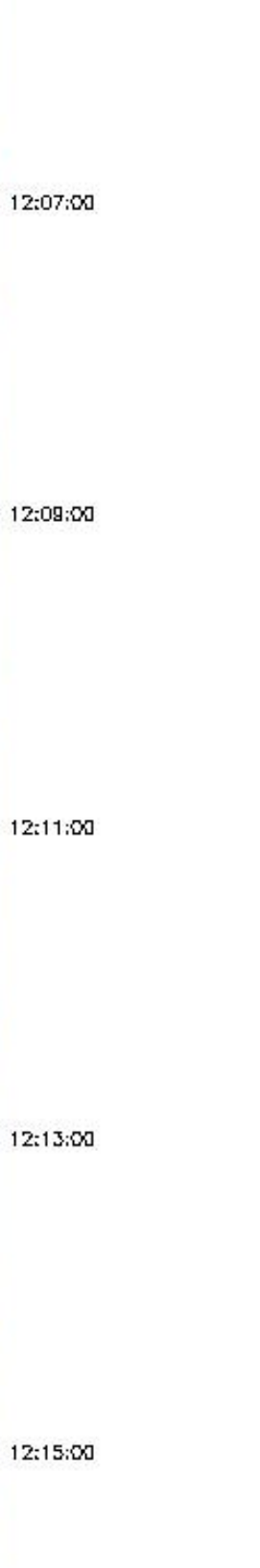
12:13:00



12:15:00



12:07:00



12:08:00



12:11:00



12:13:00



12:15:00





12:15:00

12:17:00

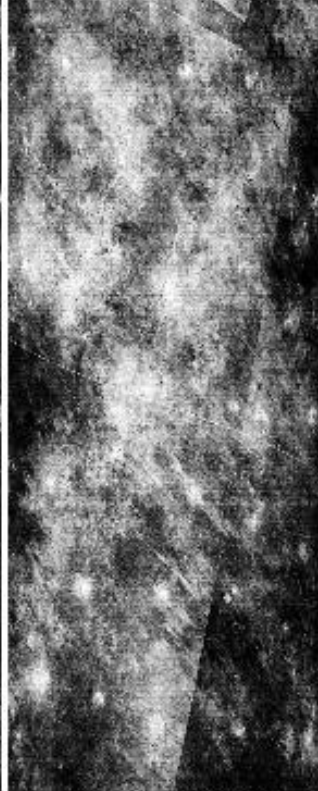
12:19:08



0.66 $\mu$ m (#3)



1.61 $\mu$ m (#10)



3.77 $\mu$ m (#30)



10.94 $\mu$ m (#45)  
reverse scale



RGB (#20,#10,#2)

12:15:00

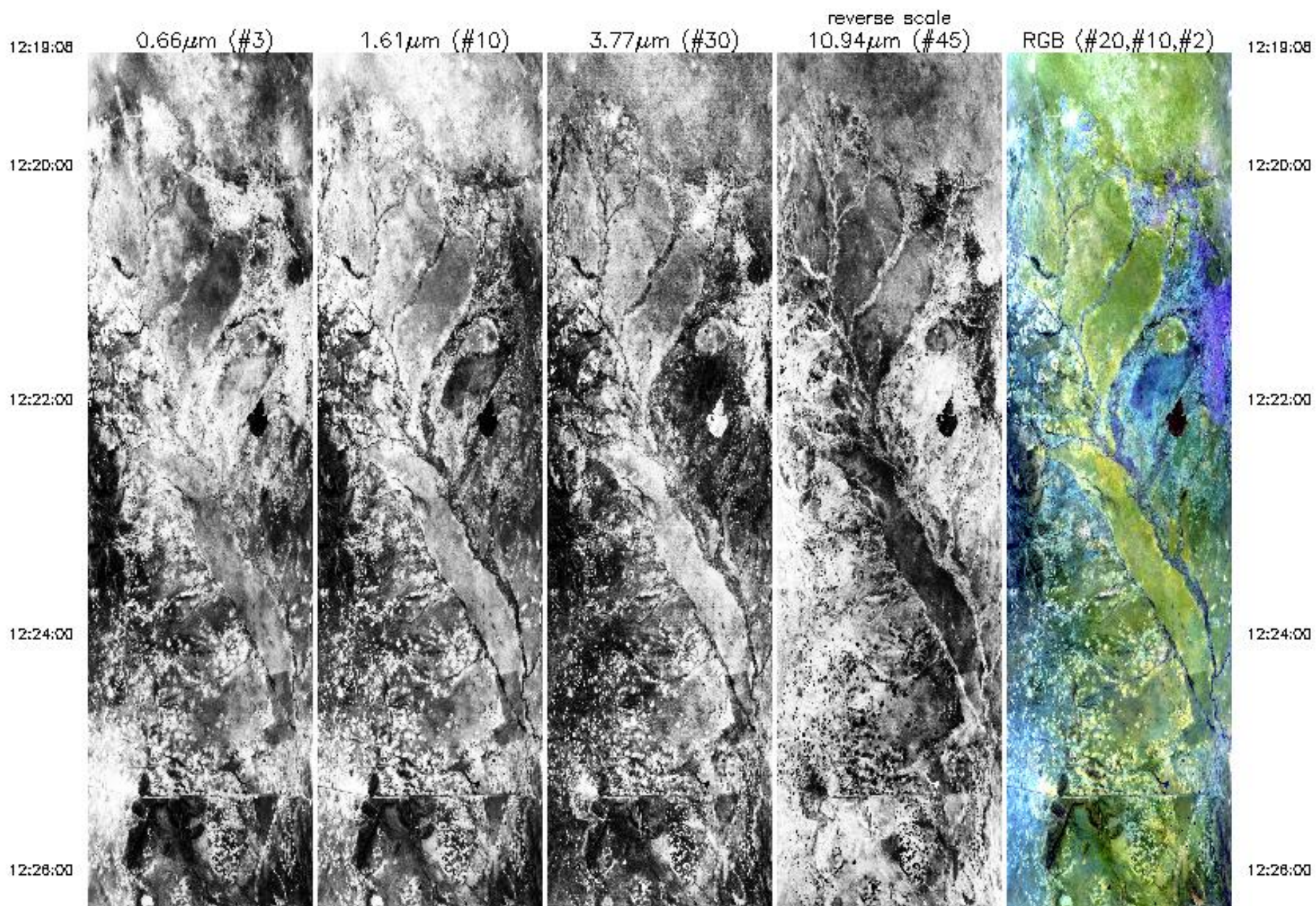
12:17:00

12:19:08

Upper Left Lat, Lon =  $-21.2^\circ$ ,  $23.5^\circ$   
 Lower Right Lat, Lon =  $-22.3^\circ$ ,  $26.5^\circ$   
 Aircraft Heading =  $125.9^\circ$   
 Solar Zenith =  $37.6^\circ$   
 GPS Altitude = 20115. m (MSL)



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Botswana  
Flight #00-151 Track #16





12:26:00

12:26:00

12:30:00

12:32:00

12:33:52



12:26:00

12:26:00

12:30:00

12:32:00

12:33:52

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

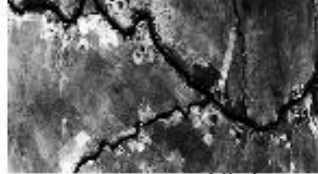
10.94µm (#45)  
reverse scale

RGB (#20,#10,#2)

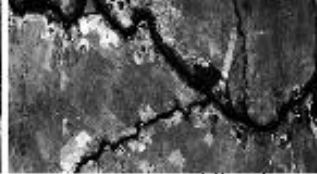
Upper Left Lat, Lon = -22.6°, 26.3°



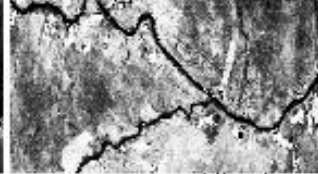
12:33:52



0.66 $\mu\text{m}$  (#3)



1.61 $\mu\text{m}$  (#10)



3.77 $\mu\text{m}$  (#30)



10.94 $\mu\text{m}$  (#45)  
reverse scale



RGB (#20,#10,#2)

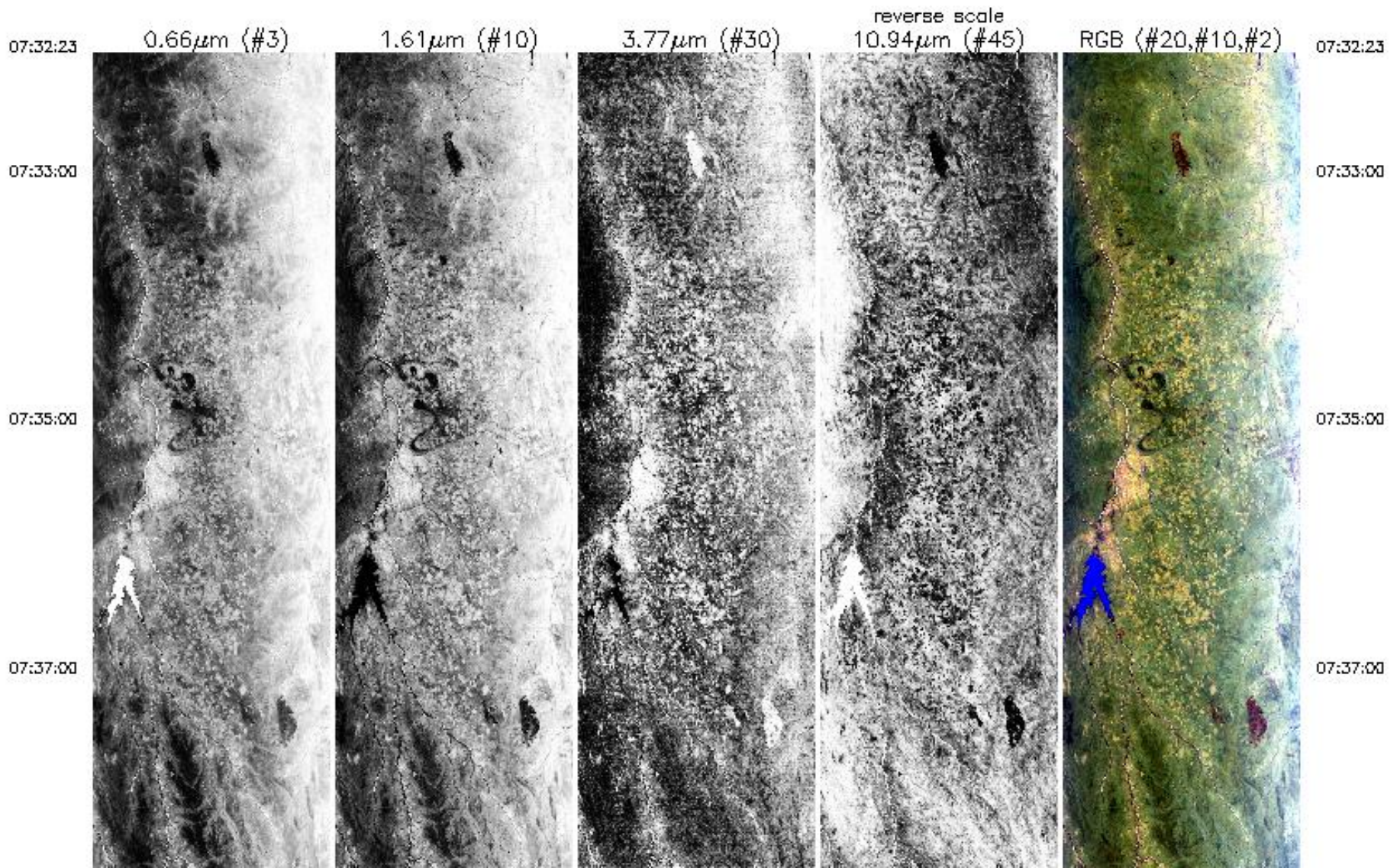
12:33:52

Upper Left Lat, Lon =  $-22.6^\circ$ ,  $26.3^\circ$   
Lower Right Lat, Lon =  $-23.0^\circ$ ,  $28.0^\circ$   
Aircraft Heading =  $119.1^\circ$   
Solar Zenith =  $44.4^\circ$   
GPS Altitude = 20177. m (MSL)



# Flight #00-151 Browse Imagery

MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Botswana  
Flight #00-151 Track #1





07:37:00

07:38:00

07:41:00

07:43:00

07:45:00

07:46:39



07:37:00

07:38:00

07:41:00

07:43:00

07:45:00

07:46:39

0.66 $\mu\text{m}$  (#3)

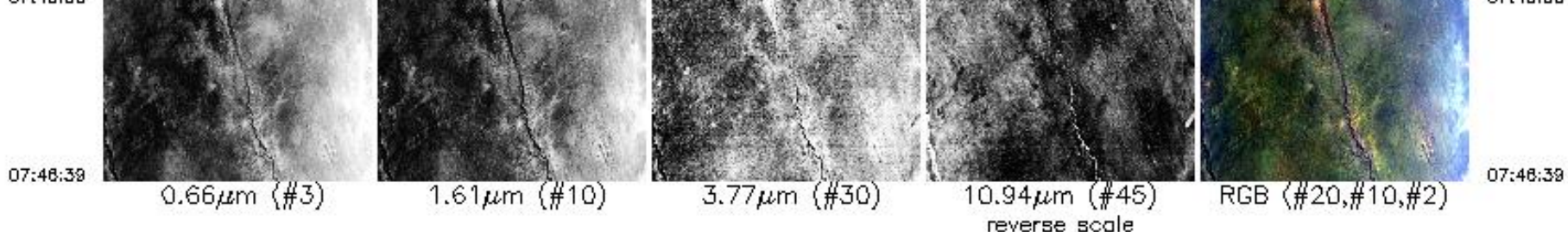
1.61 $\mu\text{m}$  (#10)

3.77 $\mu\text{m}$  (#30)

10.94 $\mu\text{m}$  (#45)  
reverse scale

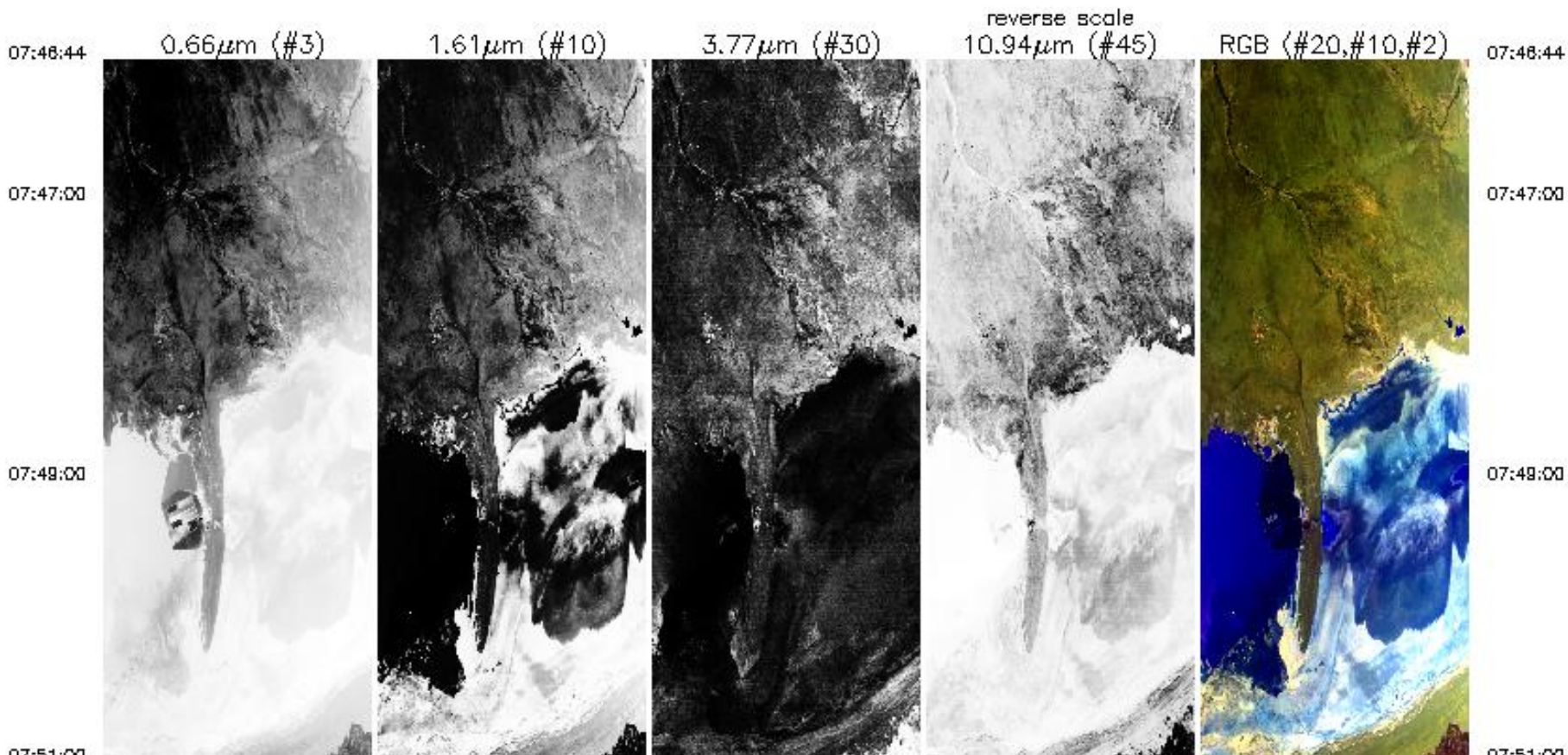
RGB (#20,#10,#2)





Upper Left Lat, Lon =  $-21.6^{\circ}$ ,  $27.9^{\circ}$   
 Lower Right Lat, Lon =  $-20.9^{\circ}$ ,  $26.3^{\circ}$   
 Aircraft Heading =  $307.3^{\circ}$   
 Solar Zenith =  $50.2^{\circ}$   
 GPS Altitude = 19334. m (MSL)

MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign - 26 Aug 2000  
 Botswana  
 Flight #00-151 Track #2









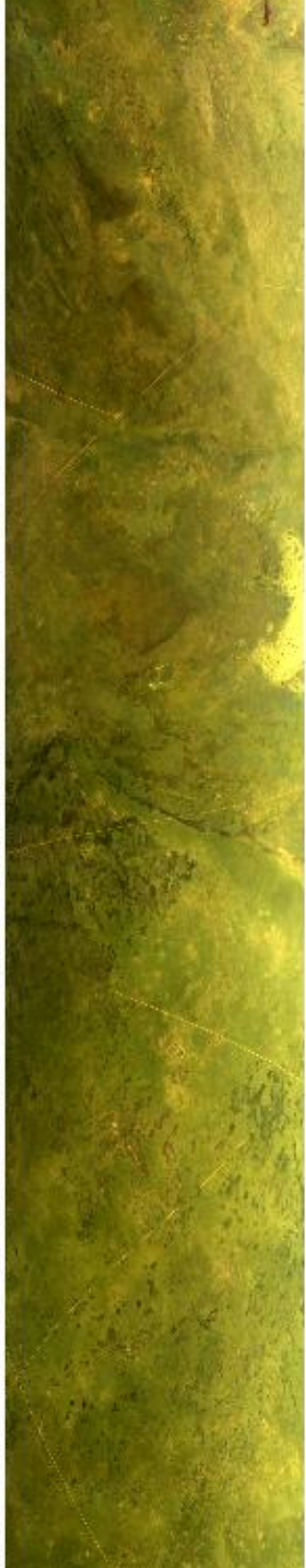
07:59:00

06:01:00

06:03:00

06:05:00

06:07:00



07:59:00

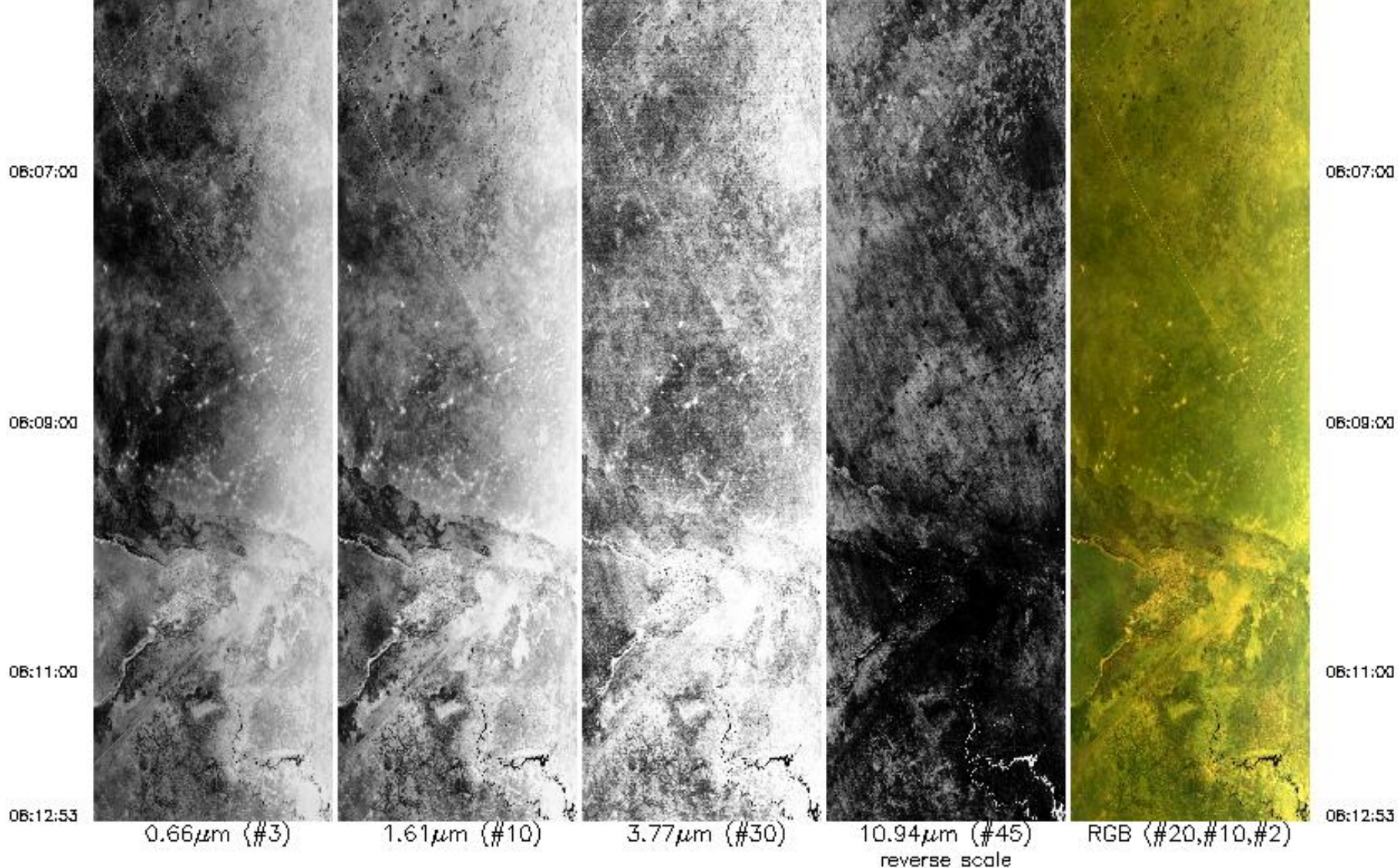
06:01:00

06:03:00

06:05:00

06:07:00



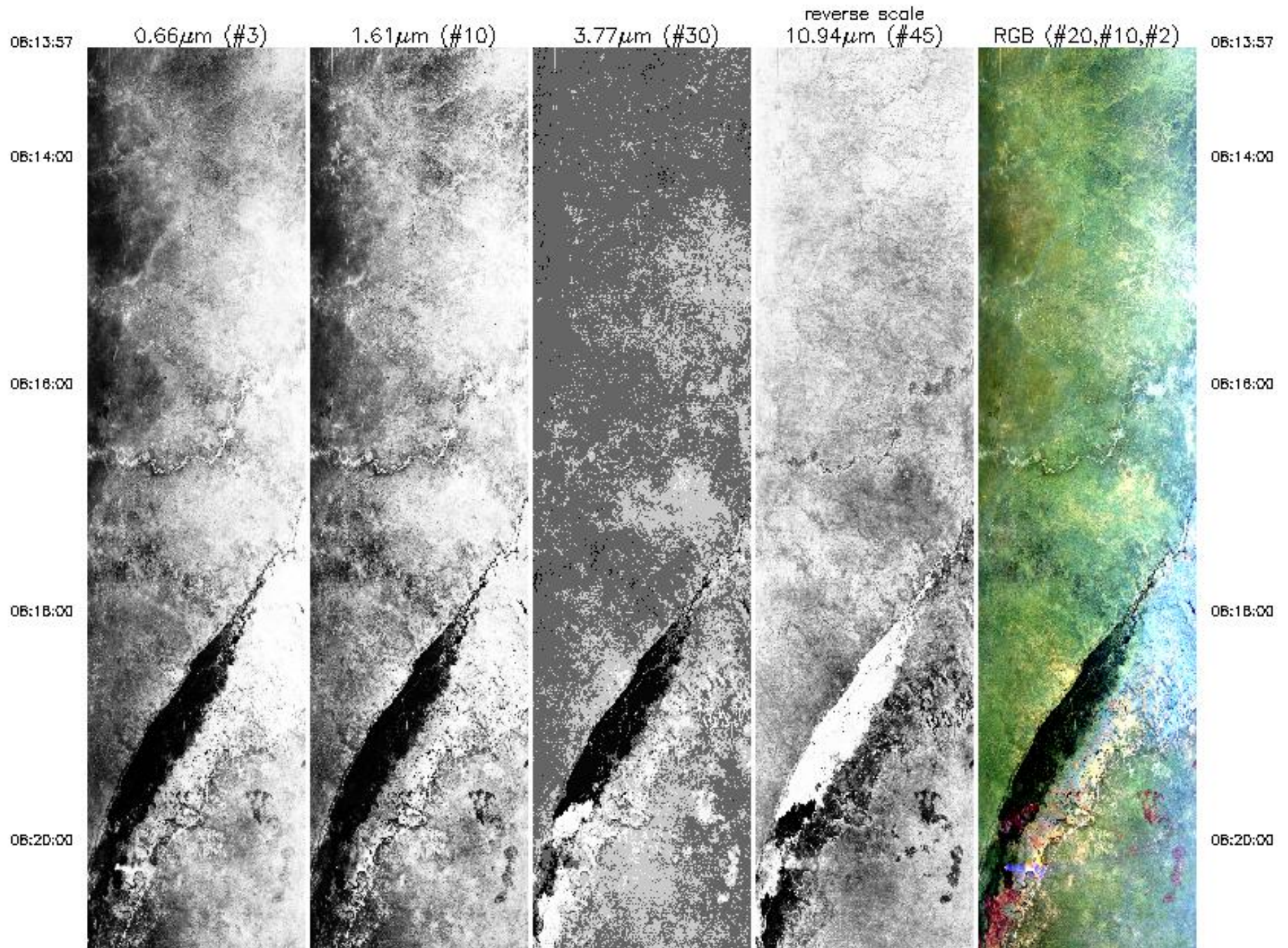


Upper Left Lat, Lon =  $-20.6^\circ$ ,  $26.5^\circ$   
 Lower Right Lat, Lon =  $-19.2^\circ$ ,  $23.7^\circ$   
 Aircraft Heading =  $304.4^\circ$   
 Solar Zenith =  $47.9^\circ$   
 GPS Altitude = 19934. m (MSL)

MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign - 26 Aug 2000  
 Namibia, Zambia  
 Flight #00-151 Track #3



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Namibia, Zambia  
Flight #00-151 Track #3





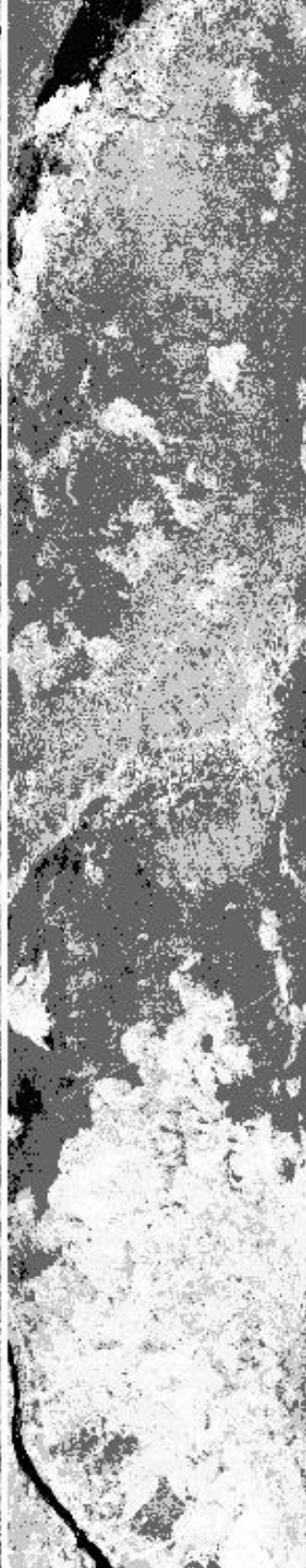
06:20:00



06:22:00



06:24:00



06:26:00



06:28:00



06:20:00

06:22:00

06:24:00

06:26:00

06:28:00



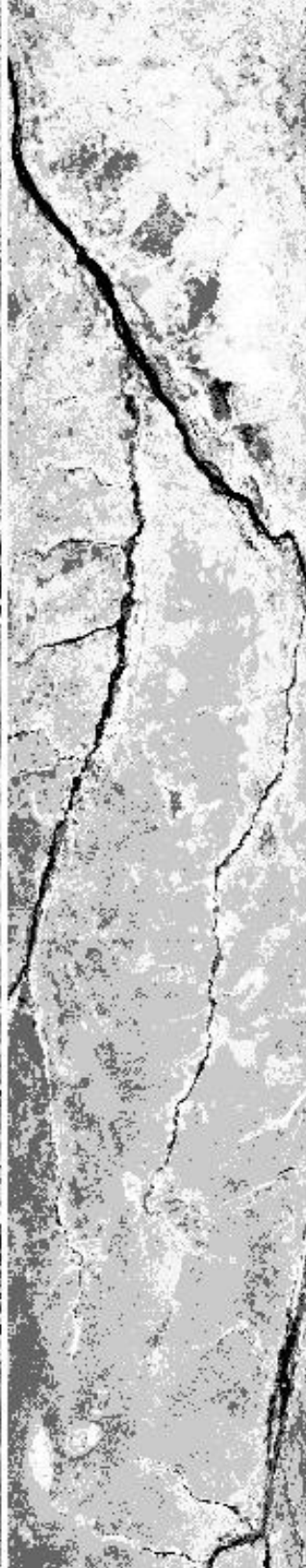
06:28:00



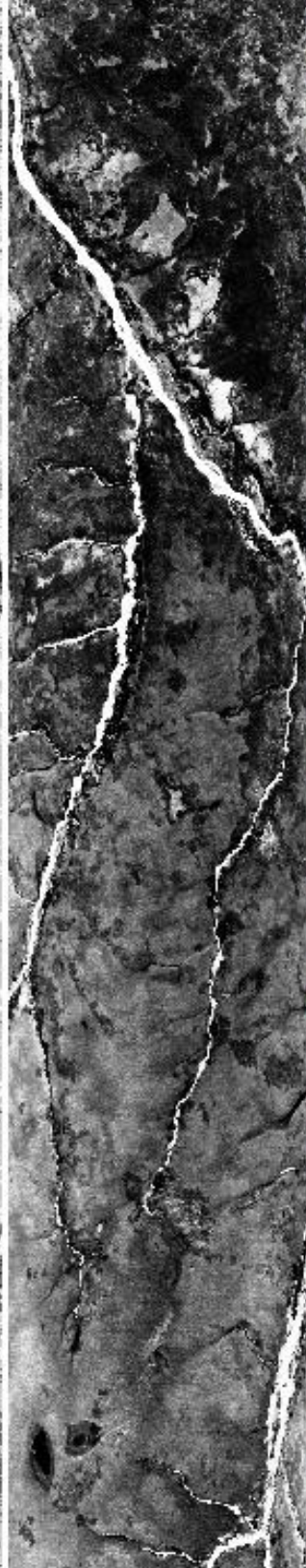
06:30:00



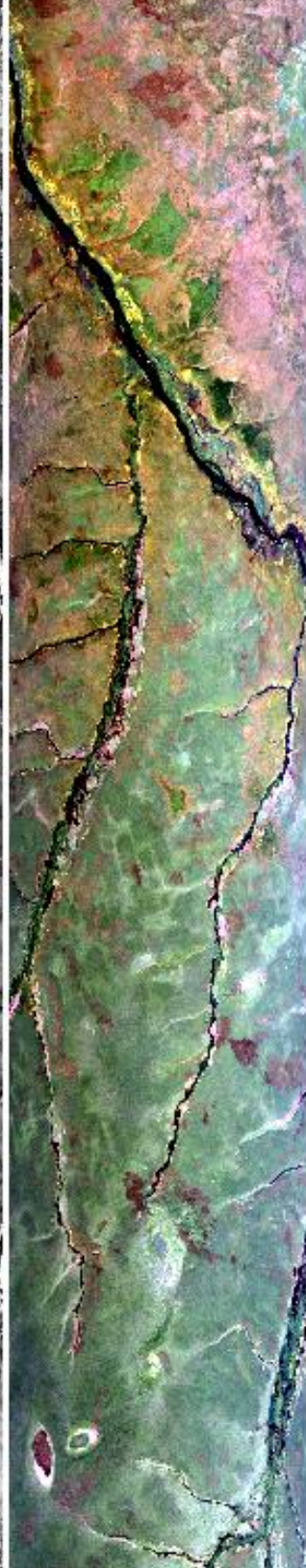
06:32:00



06:34:00



06:36:00



06:28:00

06:30:00

06:32:00

06:34:00

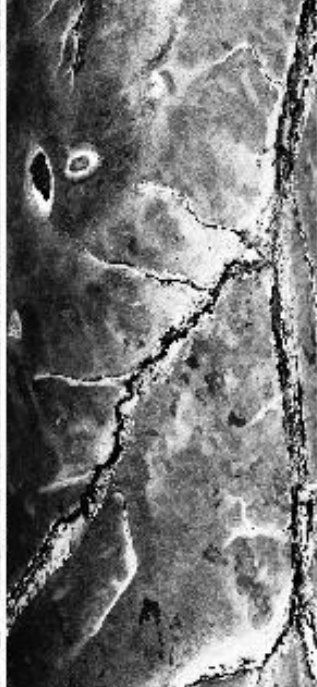
06:36:00



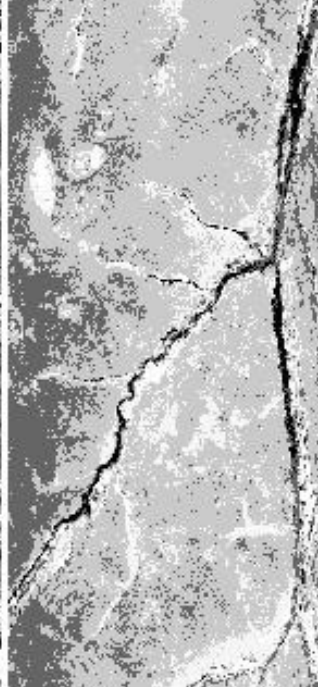
06:36:00



0.66µm (#3)



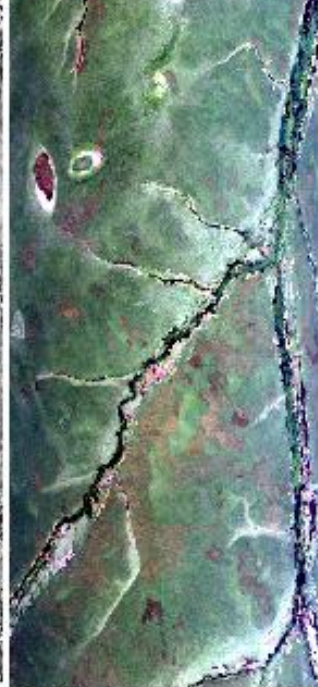
1.61µm (#10)



3.77µm (#30)



10.94µm (#45)  
reverse scale



RGB (#20,#10,#2)

06:36:00

06:36:00

06:36:00

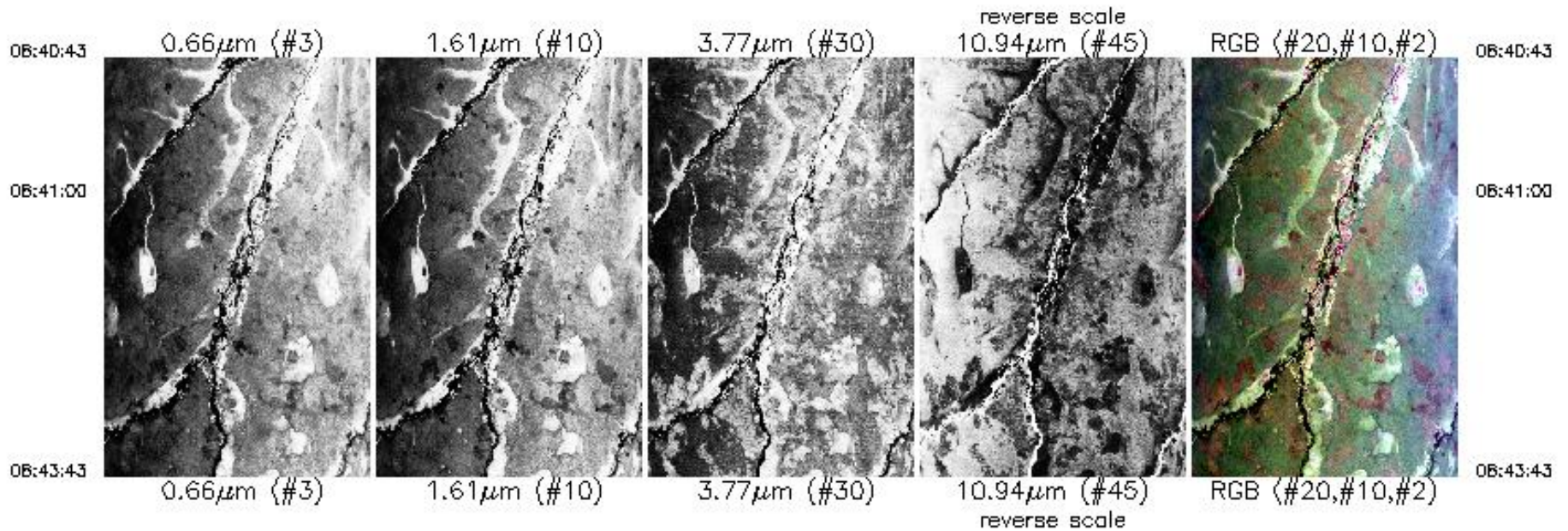
06:40:43

06:40:43

Upper Left Lat, Lon = -18.9°, 23.9°  
 Lower Right Lat, Lon = -16.0°, 24.1°  
 Aircraft Heading = 3.6°  
 Solar Zenith = 43.7°  
 GPS Altitude = 19966. m (MSL)

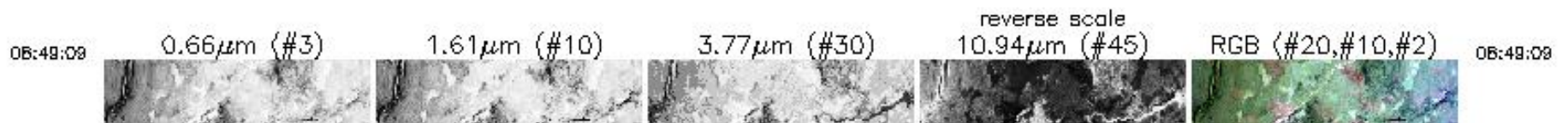


MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Zambia  
 Flight #00–151 Track #4



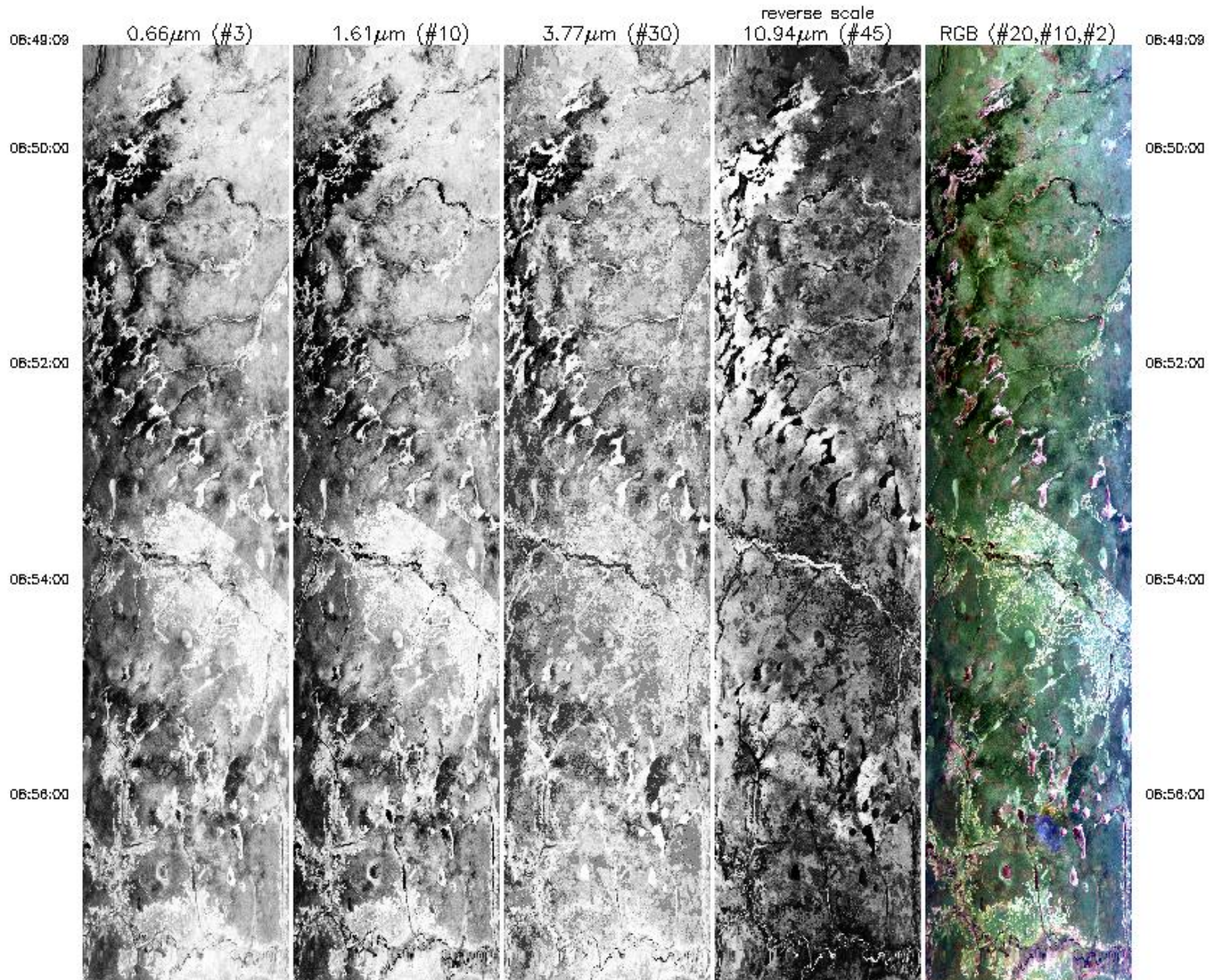
Upper Left Lat, Lon =  $-16.0^{\circ}$ ,  $24.4^{\circ}$   
 Lower Right Lat, Lon =  $-15.6^{\circ}$ ,  $24.2^{\circ}$   
 Aircraft Heading =  $13.5^{\circ}$   
 Solar Zenith =  $36.7^{\circ}$   
 GPS Altitude = 20037. m (MSL)

MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Zambia  
 Flight #00–151 Track #5





Zambia  
Flight #00-151 Track #5





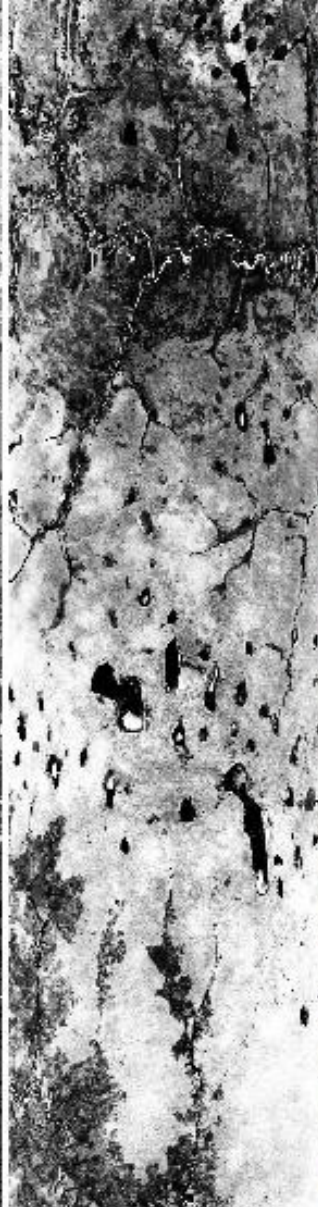
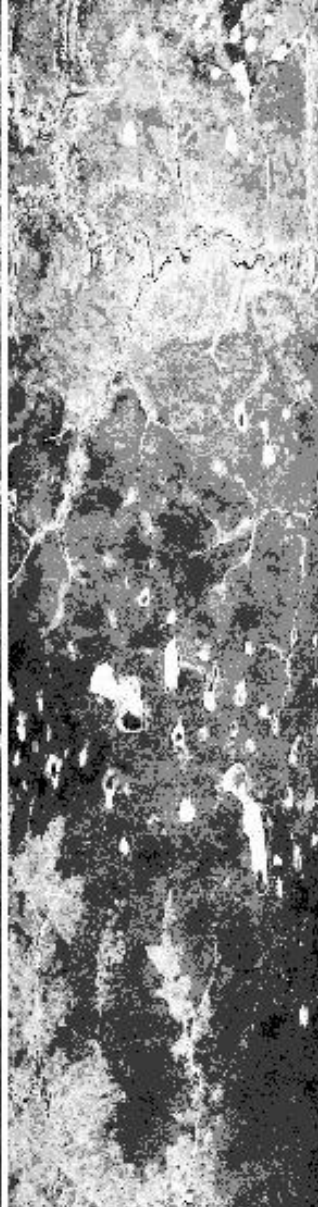
06:58:00

06:58:00

09:00:00

09:02:00

09:03:28



06:58:00

06:58:00

09:00:00

09:02:00

09:03:28

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

10.94µm (#45)  
reverse scale

RGB (#20,#10,#2)

Upper Left Lat, Lon = -15.6°, 24.5°  
Lower Right Lat, Lon = -14.0°, 24.5°  
Aircraft Heading = 10.9°  
Solar Zenith = 34.9°  
GPS Altitude = 19966. m (MSL)



Lower Right Lat, Lon = -14.0°, 24.5°

Aircraft Heading = 10.9°

Solar Zenith = 34.9°

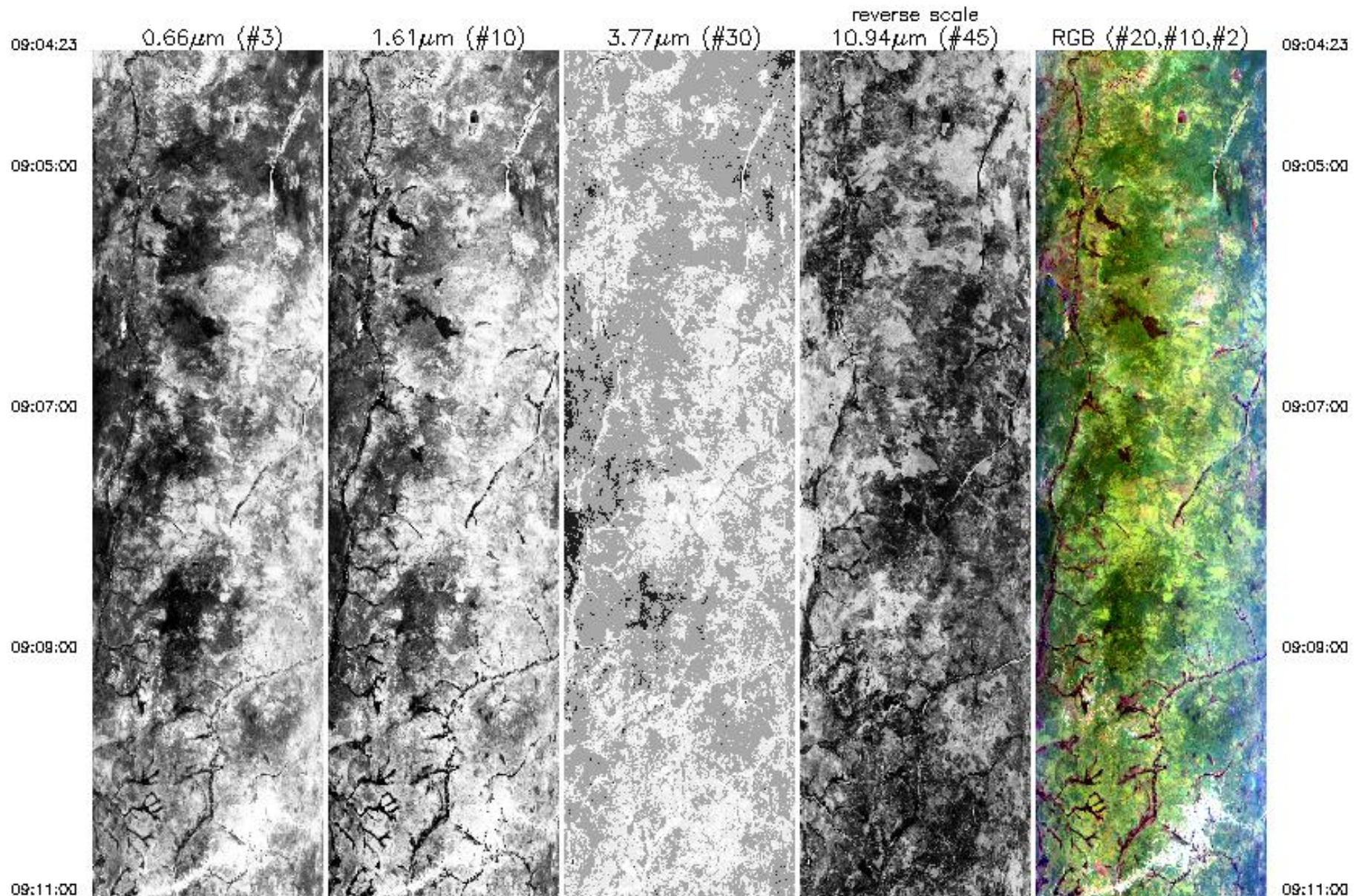
GPS Altitude = 19966. m (MSL)

MODIS Airborne Simulator Browse Imagery

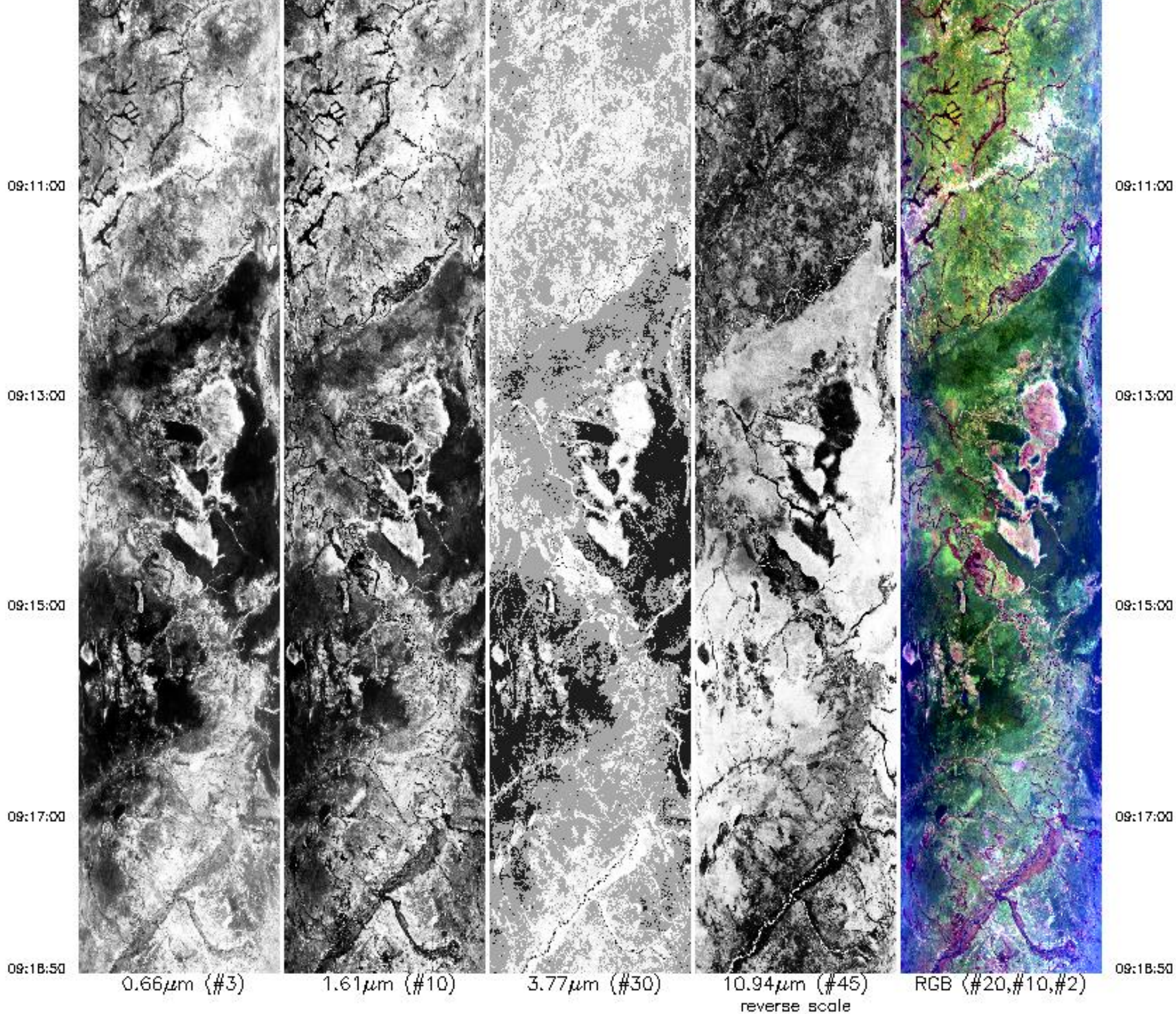
SAFARI 2000 Campaign - 26 Aug 2000

Zambia

Flight #00-151 Track #6







Upper Left Lat, Lon =  $-14.0^\circ$ ,  $24.9^\circ$



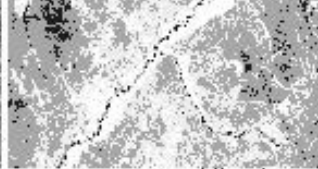
09:18:50



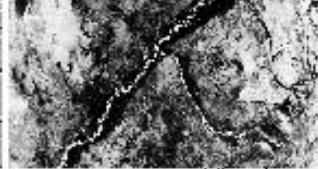
0.66µm (#3)



1.61µm (#10)



3.77µm (#30)



10.94µm (#45)  
reverse scale



RGB (#20,#10,#2)

09:18:50

Upper Left Lat, Lon = -14.0°, 24.9°  
Lower Right Lat, Lon = -12.3°, 24.8°  
Aircraft Heading = 10.1°  
Solar Zenith = 31.0°  
GPS Altitude = 20032. m (MSL)

MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #7

09:20:10

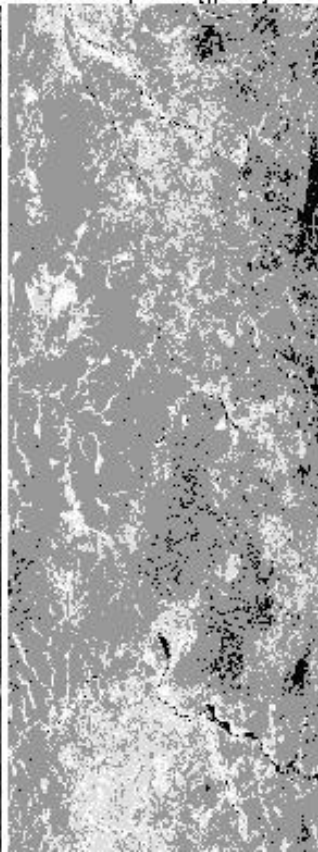
0.66µm (#3)



1.61µm (#10)



3.77µm (#30)



reverse scale  
10.94µm (#45)



RGB (#20,#10,#2)



09:20:10

09:21:00

09:21:00

09:23:00

09:23:00

09:25:00

09:25:00



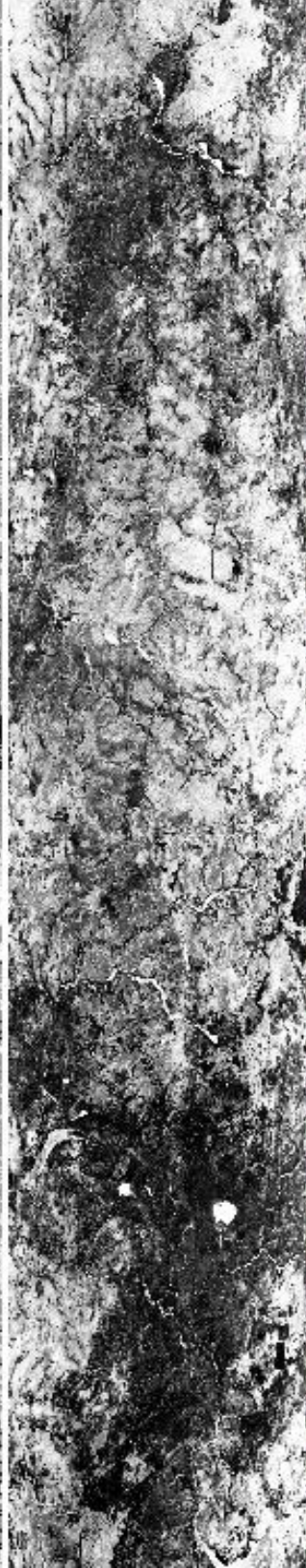
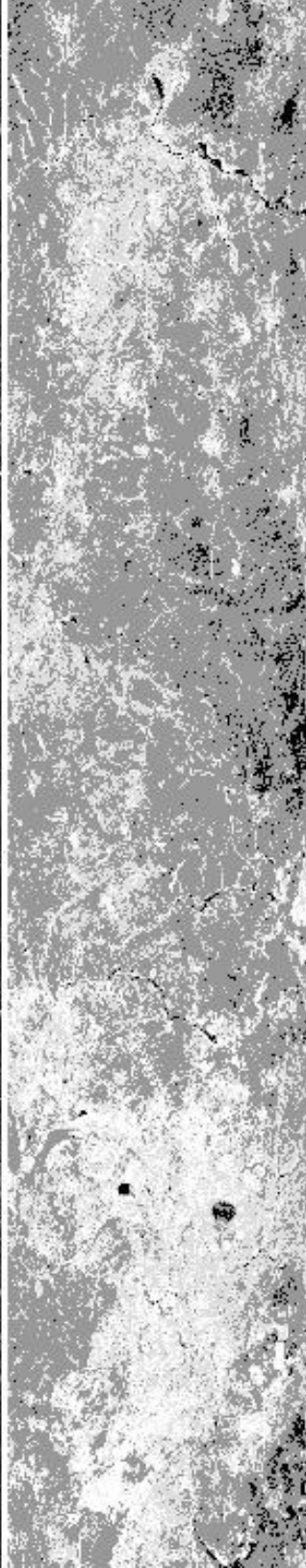
09:25:00

09:27:00

09:29:00

09:31:00

09:33:00



09:25:00

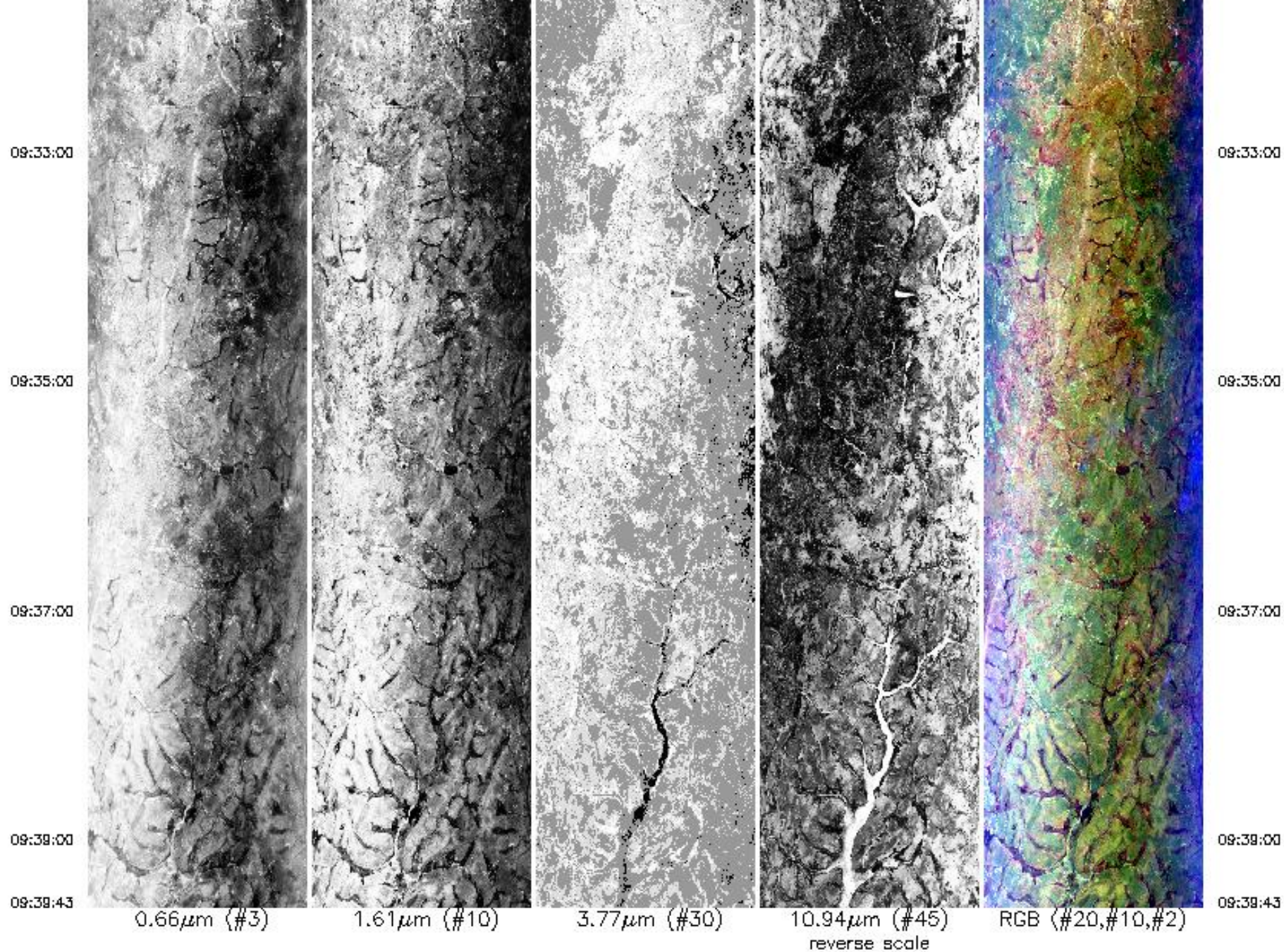
09:27:00

09:29:00

09:31:00

09:33:00



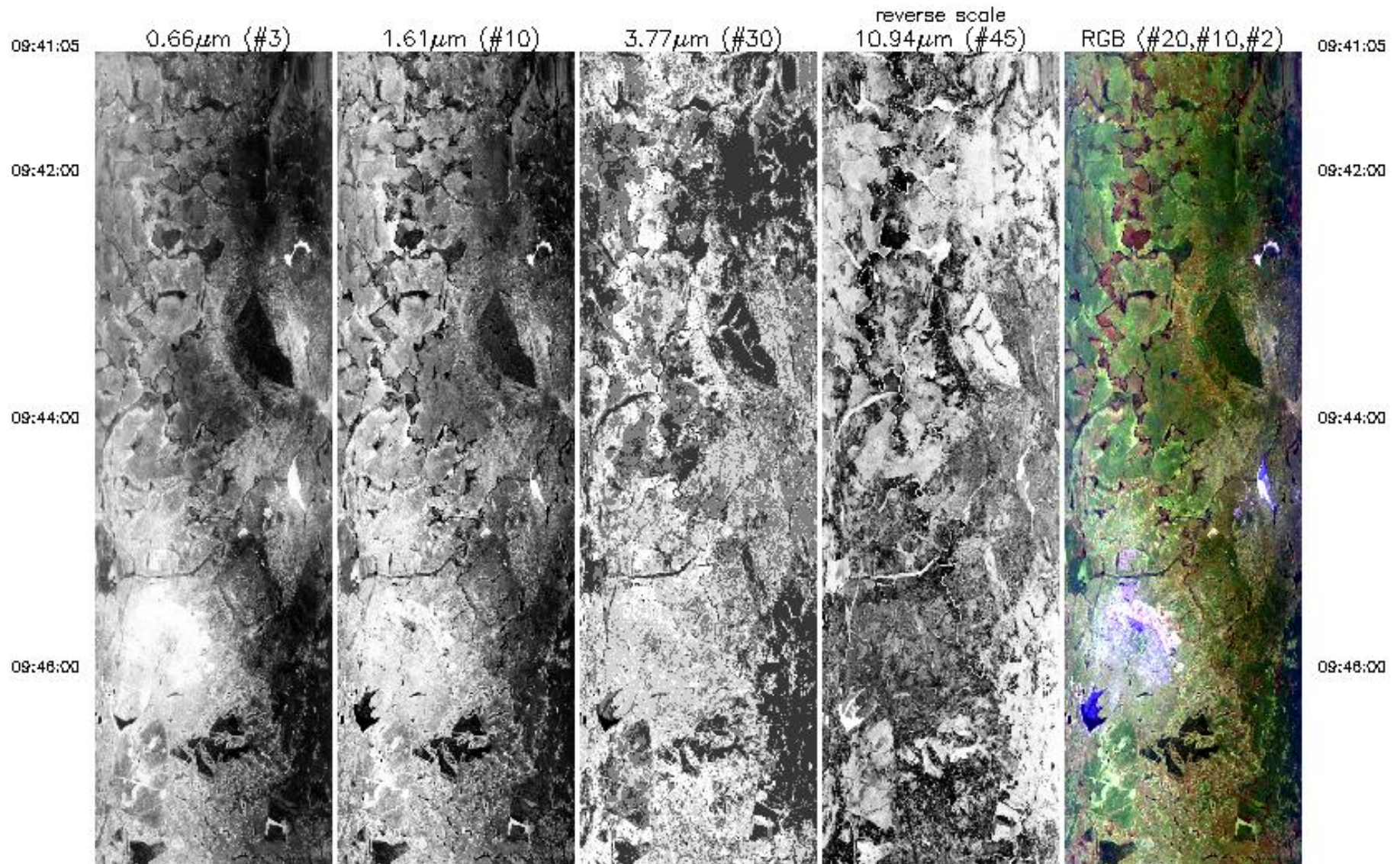


Upper Left Lat, Lon =  $-12.4^\circ$ ,  $25.1^\circ$   
 Lower Right Lat, Lon =  $-12.0^\circ$ ,  $27.3^\circ$   
 Aircraft Heading =  $82.6^\circ$   
 Solar Zenith =  $27.3^\circ$   
 GPS Altitude = 19886. m (MSL)



Upper Left Lat, Lon =  $-12.4^\circ$ ,  $25.1^\circ$   
Lower Right Lat, Lon =  $-12.0^\circ$ ,  $27.3^\circ$   
Aircraft Heading =  $82.6^\circ$   
Solar Zenith =  $27.3^\circ$   
GPS Altitude = 19886. m (MSL)

MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #8





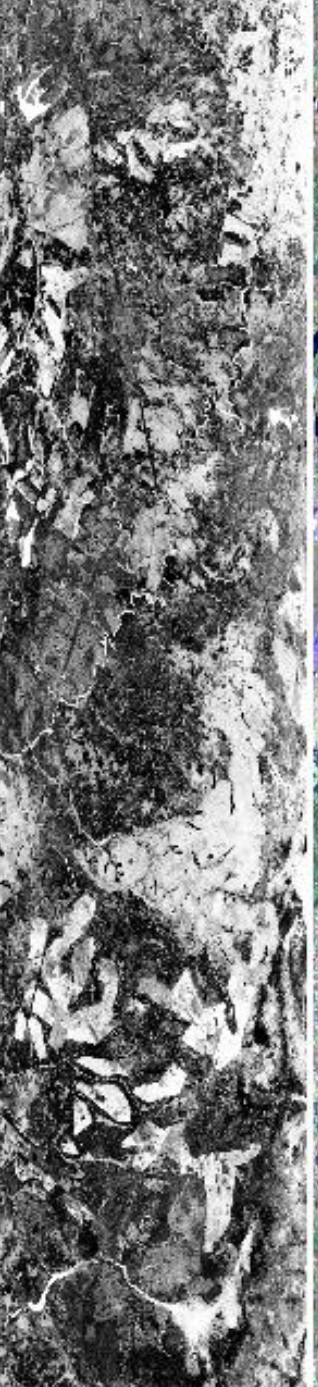
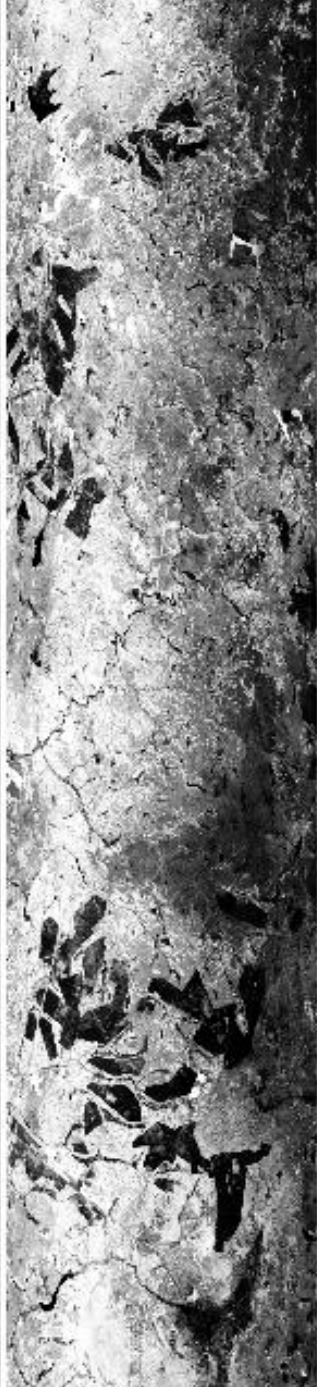
09:48:00

09:48:00

09:50:00

09:52:00

09:54:21



09:48:00

09:48:00

09:50:00

09:52:00

09:54:21

0.66 $\mu$ m (#3)

1.61 $\mu$ m (#10)

3.77 $\mu$ m (#30)

10.94 $\mu$ m (#45)  
reverse scale

RGB (#20,#10,#2)

Upper Left Lat, Lon =  $-12.3^\circ$ ,  $27.3^\circ$

Lower Right Lat, Lon =  $-12.9^\circ$ ,  $28.8^\circ$

Aircraft Heading =  $126.9^\circ$

Solar Zenith =  $23.8^\circ$



09:54:21



0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

10.94µm (#45)

RGB (#20,#10,#2)

09:54:21

reverse scale

Upper Left Lat, Lon = -12.3°, 27.3°

Lower Right Lat, Lon = -12.9°, 28.8°

Aircraft Heading = 126.9°

Solar Zenith = 23.8°

GPS Altitude = 19994. m (MSL)

MODIS Airborne Simulator Browse Imagery

SAFARI 2000 Campaign - 26 Aug 2000

Zambia

Flight #00-151 Track #9

09:56:30

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

reverse scale  
10.94µm (#45)

RGB (#20,#10,#2)

09:56:30



09:57:00

09:57:00

09:58:00

09:58:00

10:01:00

10:01:00



10:01:00



10:03:00



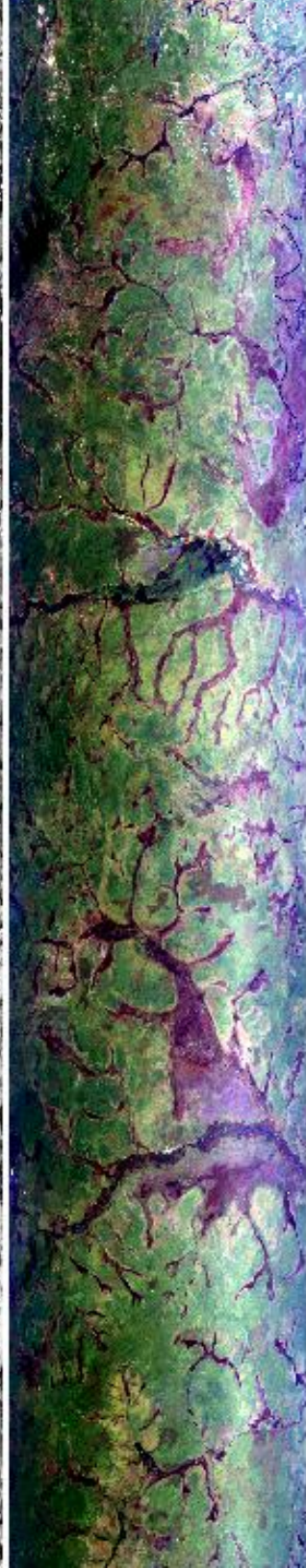
10:05:00



10:07:00



10:09:00



10:01:00

10:03:00

10:05:00

10:07:00

10:09:00



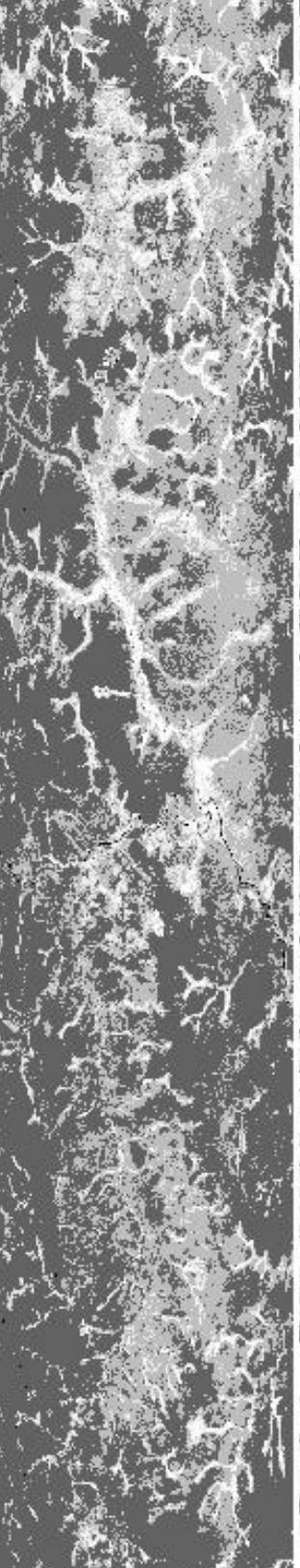
10:08:00



10:11:00



10:13:00



10:15:00



10:17:00



10:08:00

10:11:00

10:13:00

10:15:00

10:17:00

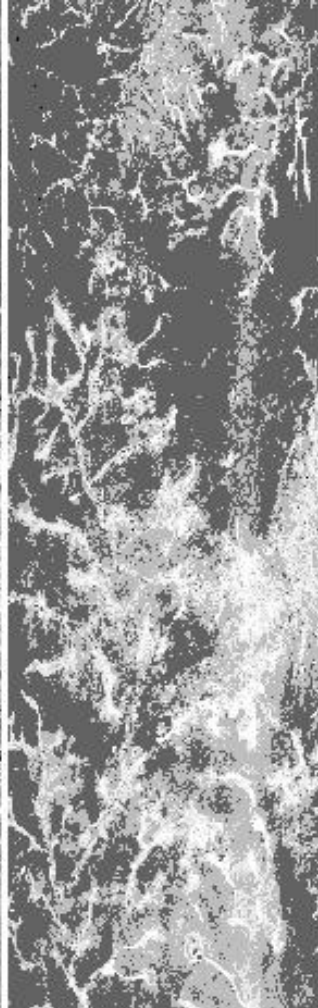
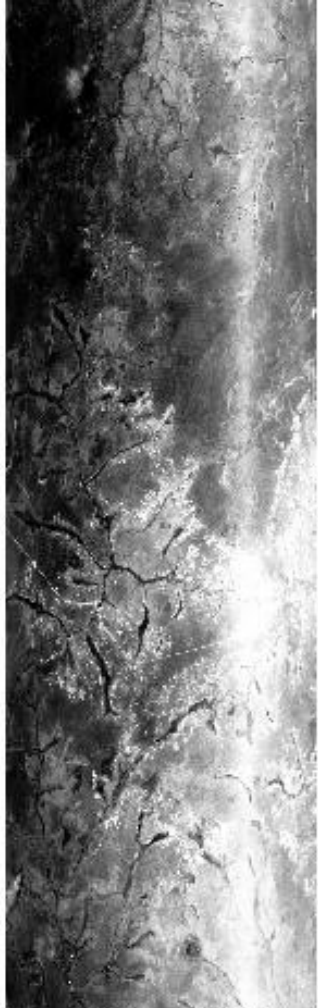


10:17:00

10:19:00

10:21:00

10:23:15



10:17:00

10:19:00

10:21:00

10:23:15

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

10.94µm (#45)  
reverse scale

RGB (#20,#10,#2)

Upper Left Lat, Lon = -13.0°, 28.6°  
Lower Right Lat, Lon = -13.5°, 25.6°  
Aircraft Heading = 265.6°  
Solar Zenith = 23.4°  
GPS Altitude = 19990. m (MSL)

MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #10

10:23:16

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

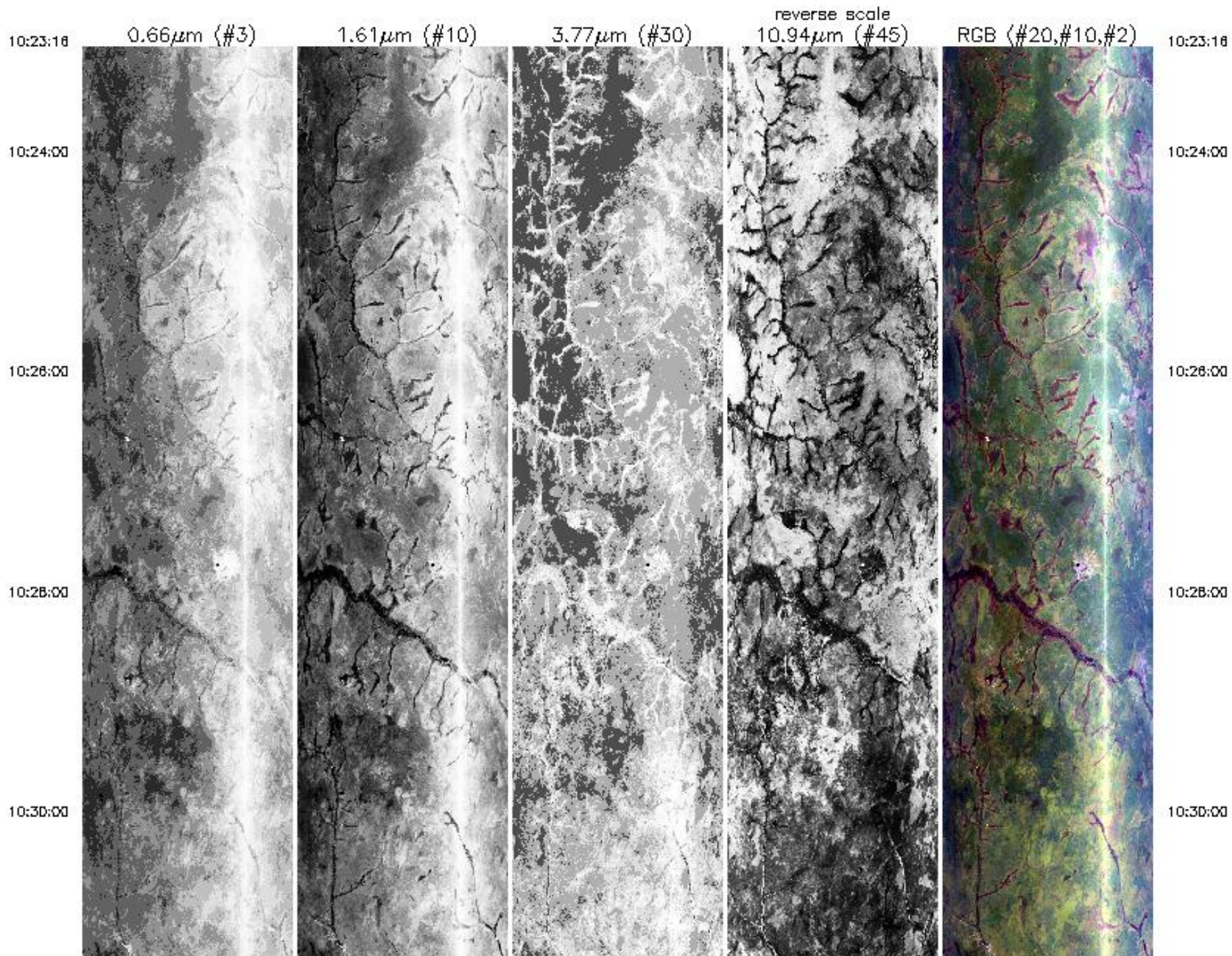
reverse scale  
10.94µm (#45)

RGB (#20,#10,#2)

10:23:16

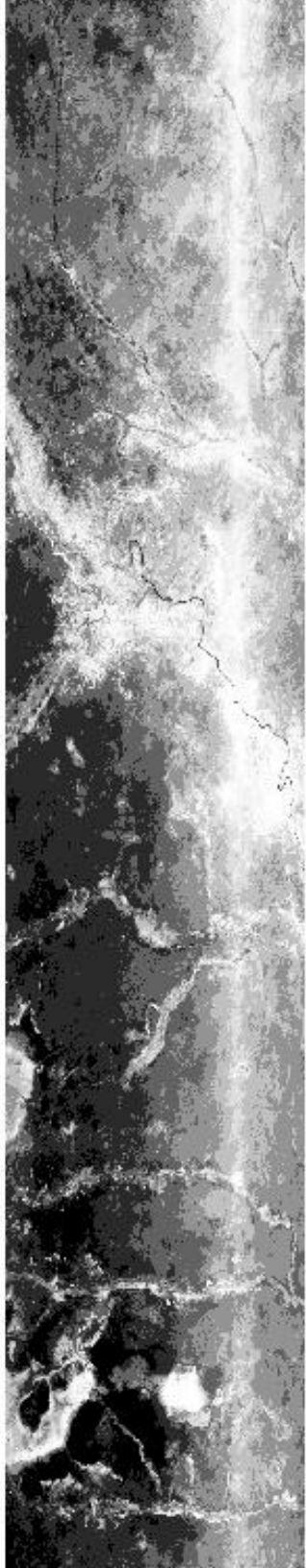


MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #10





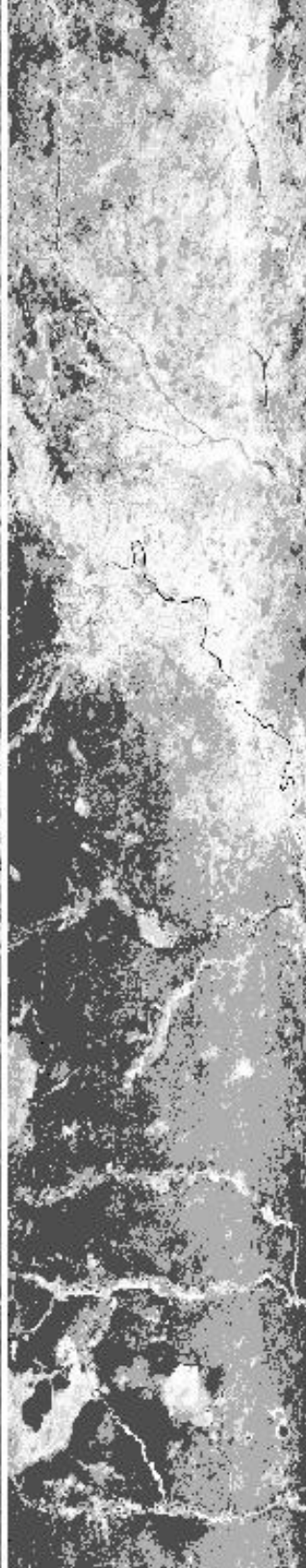
10:30:00



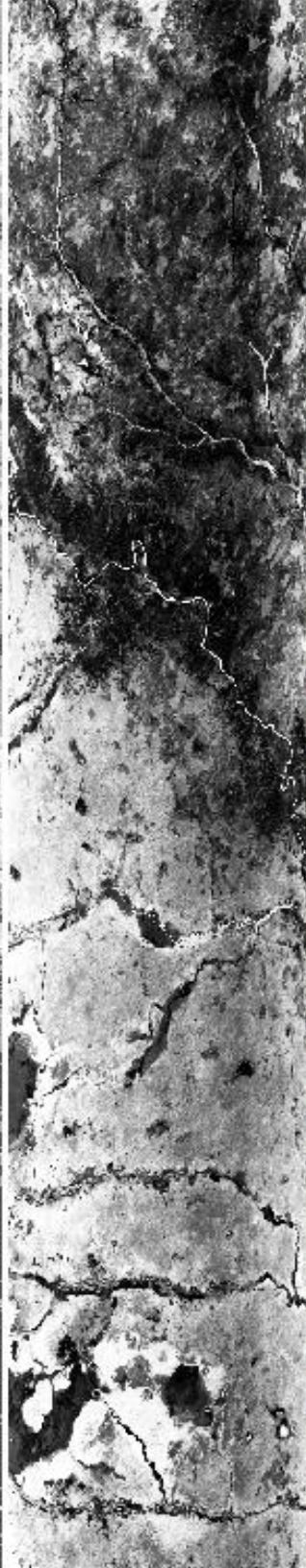
10:32:00



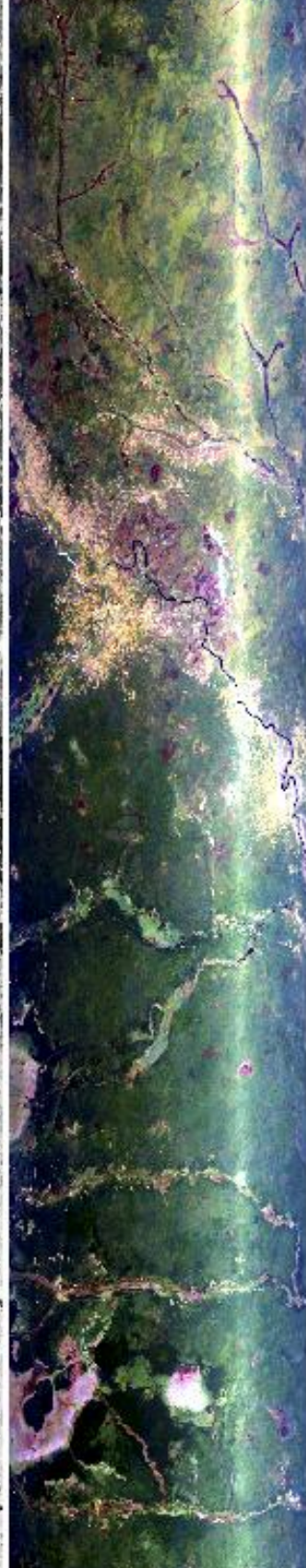
10:34:00



10:36:00



10:38:00



10:30:00

10:32:00

10:34:00

10:36:00

10:38:00



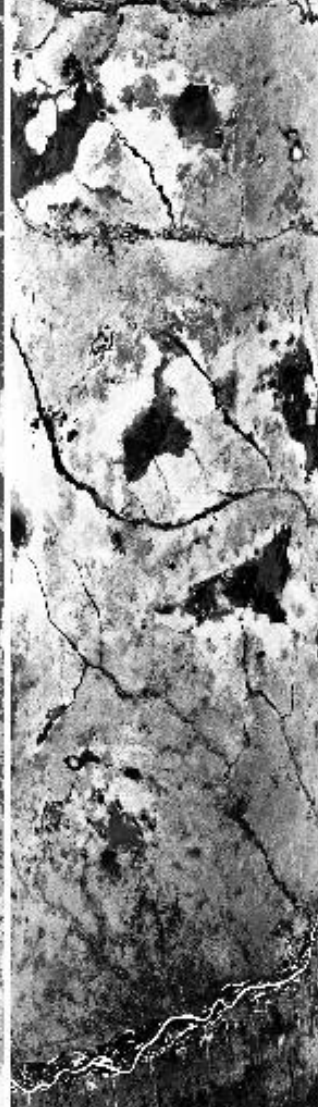
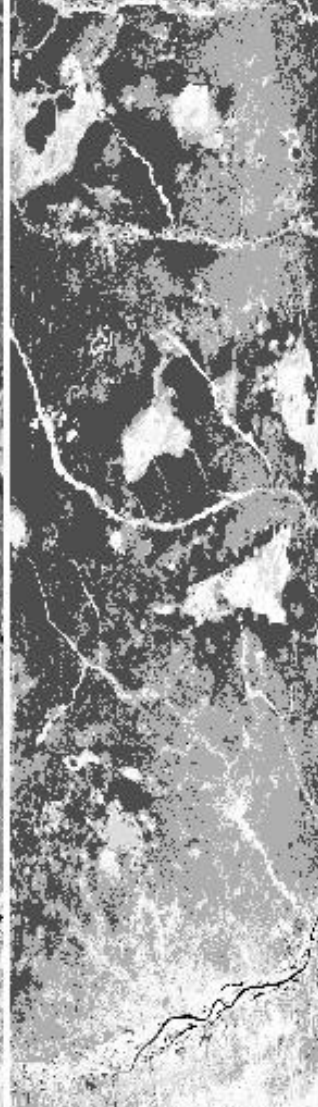
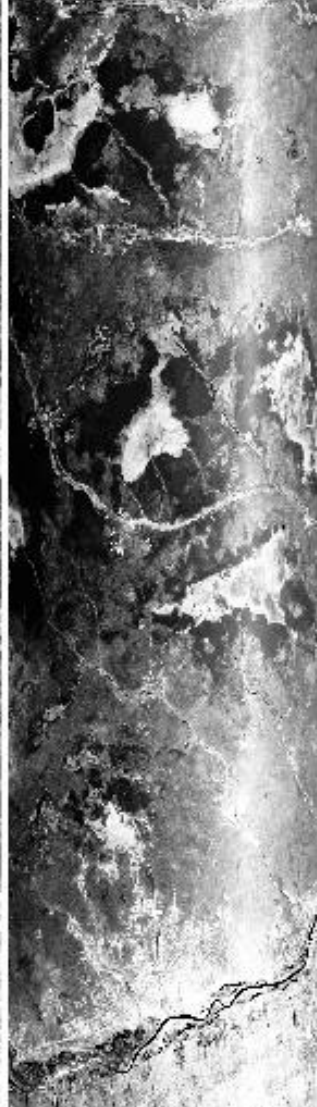
10:38:00

10:40:00

10:42:00

10:44:00

10:44:48



10:38:00

10:40:00

10:42:00

10:44:00

10:44:48

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

10.94µm (#45)  
reverse scale

RGB (#20,#10,#2)

Upper Left Lat, Lon = -13.2°, 25.5°

Lower Right Lat, Lon = -13.7°, 23.0°

Aircraft Heading = 267.4°

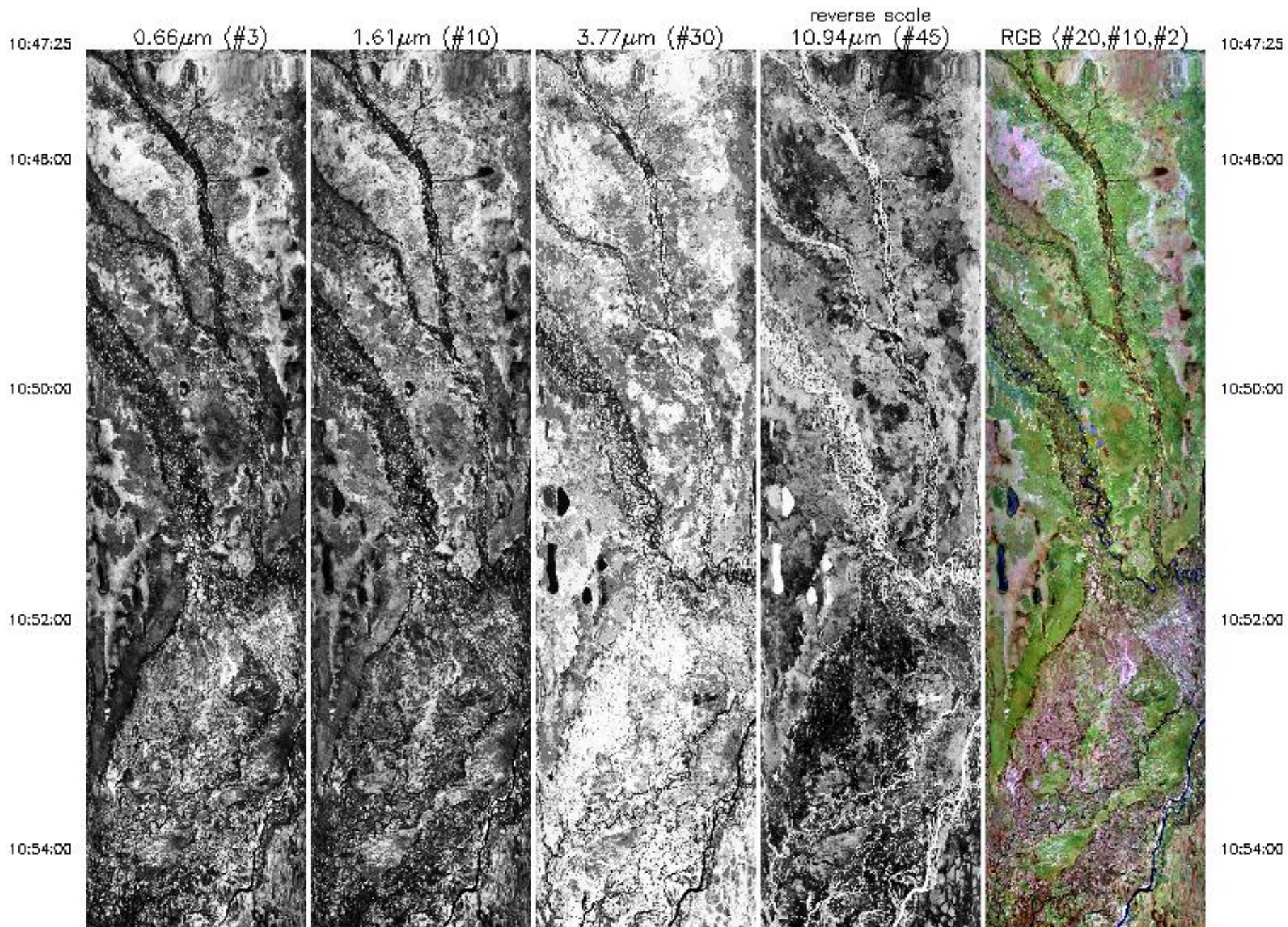
Solar Zenith = 23.4°

GPS Altitude = 20067. m (MSL)

MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #11



MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Zambia  
Flight #00-151 Track #11

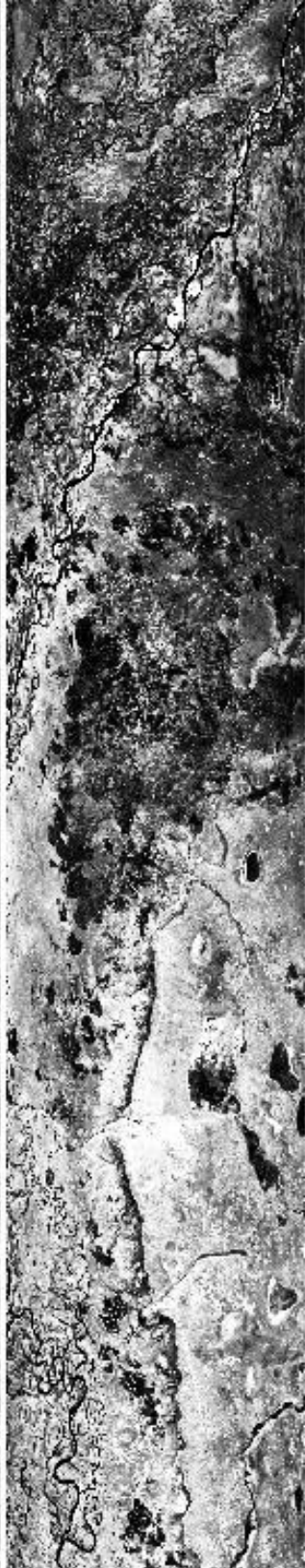




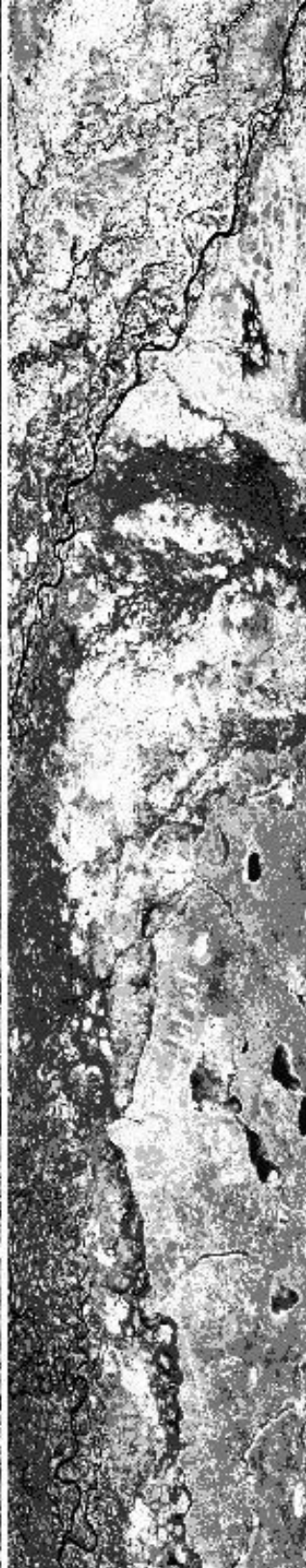
10:54:00



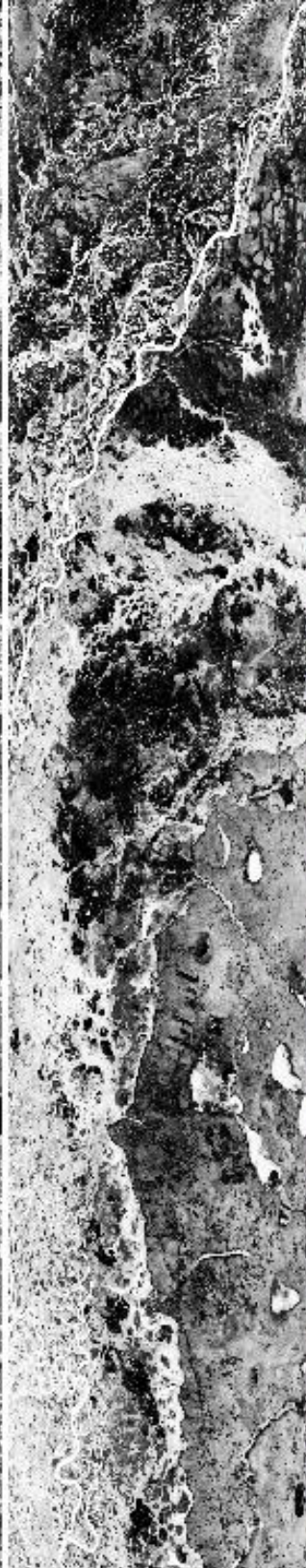
10:56:00



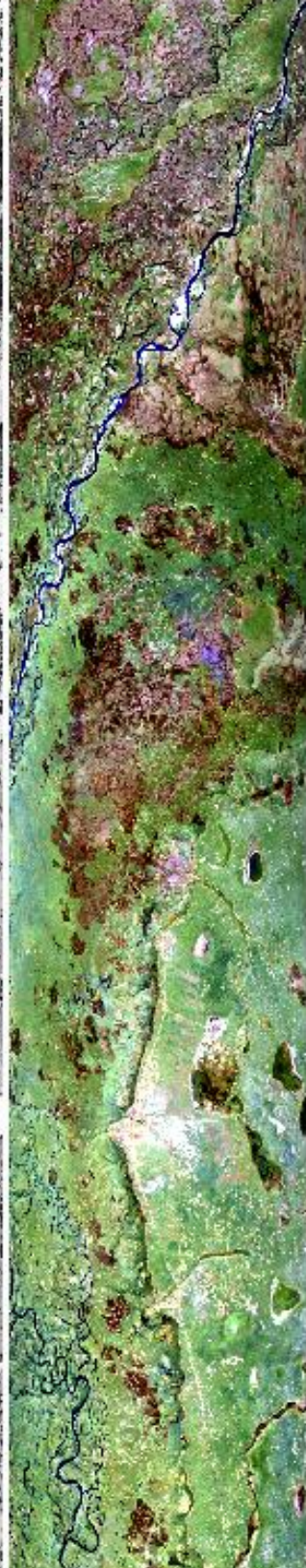
10:58:00



11:00:00



11:02:00



10:54:00

10:56:00

10:58:00

11:00:00

11:02:00



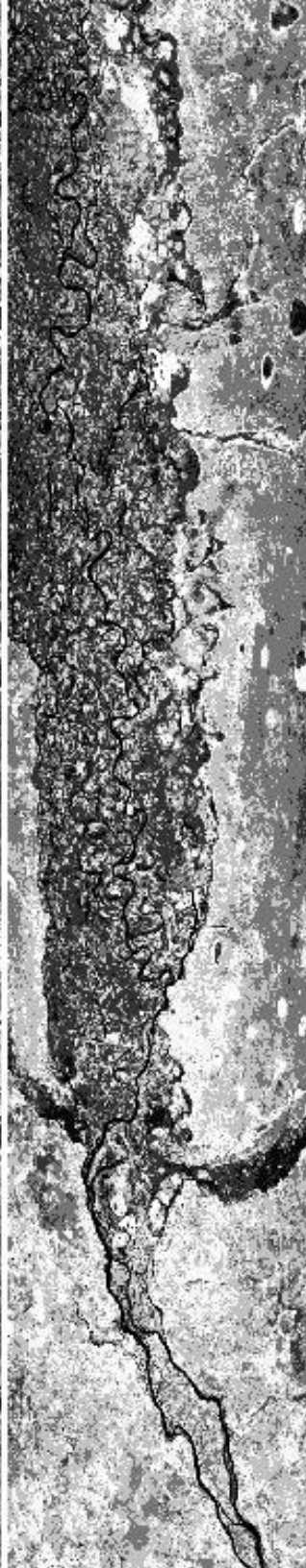
11:02:00

11:04:00

11:06:00

11:08:00

11:10:00



11:02:00

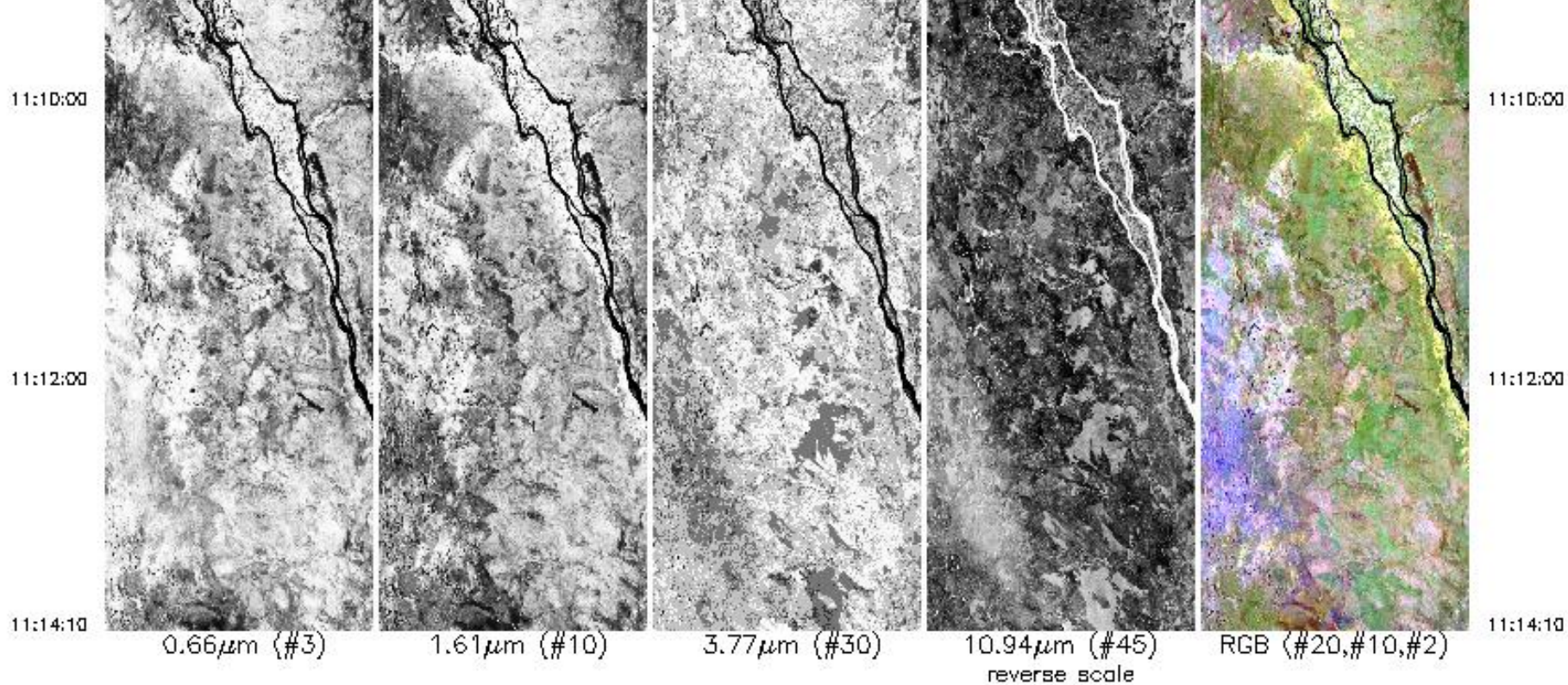
11:04:00

11:06:00

11:08:00

11:10:00

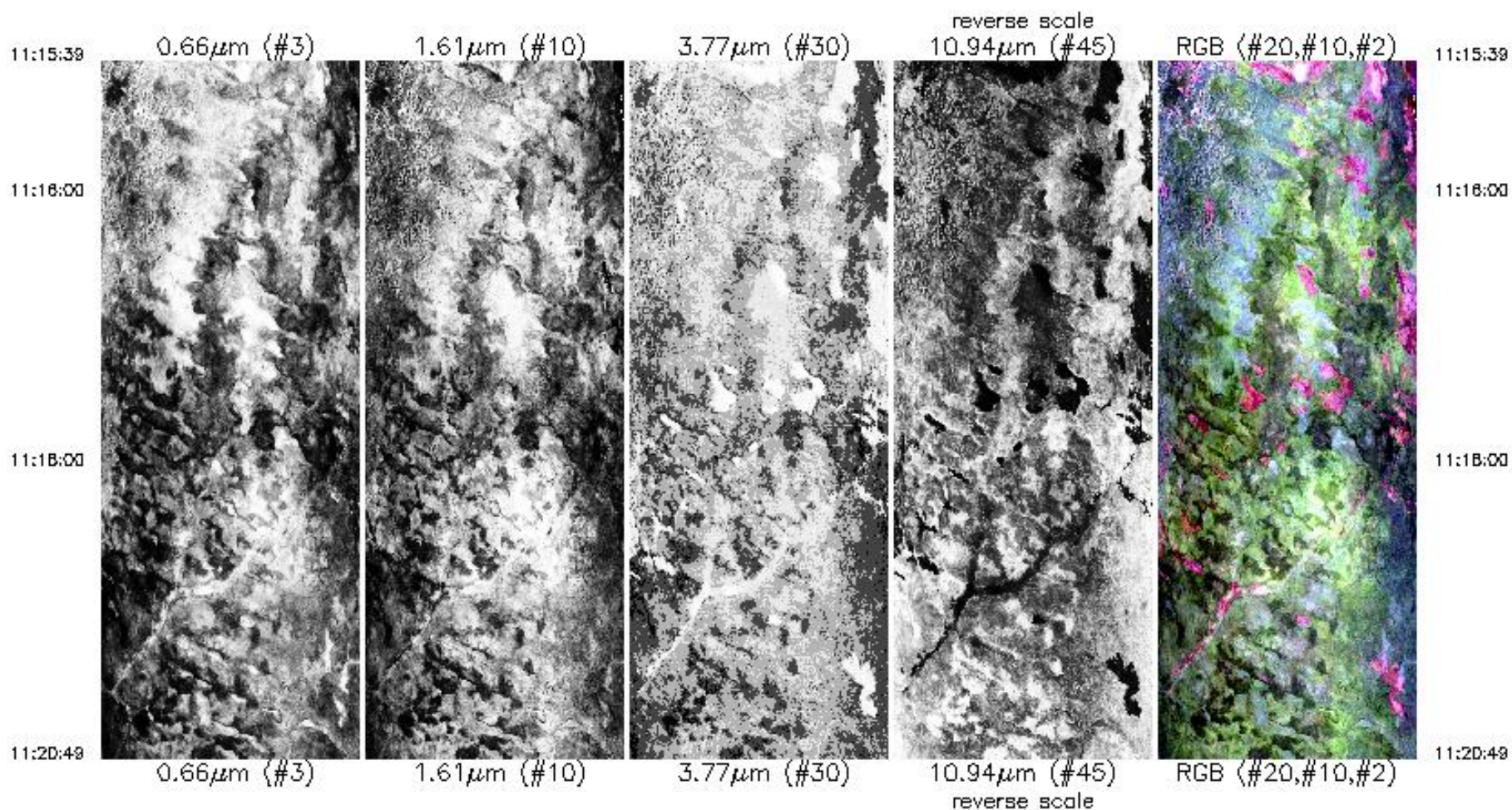




Upper Left Lat, Lon =  $-13.8^\circ$ ,  $22.8^\circ$   
Lower Right Lat, Lon =  $-16.8^\circ$ ,  $23.6^\circ$   
Aircraft Heading =  $178.6^\circ$   
Solar Zenith =  $24.3^\circ$   
GPS Altitude = 20047. m (MSL)



MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Zambia  
 Flight #00-151 Track #12

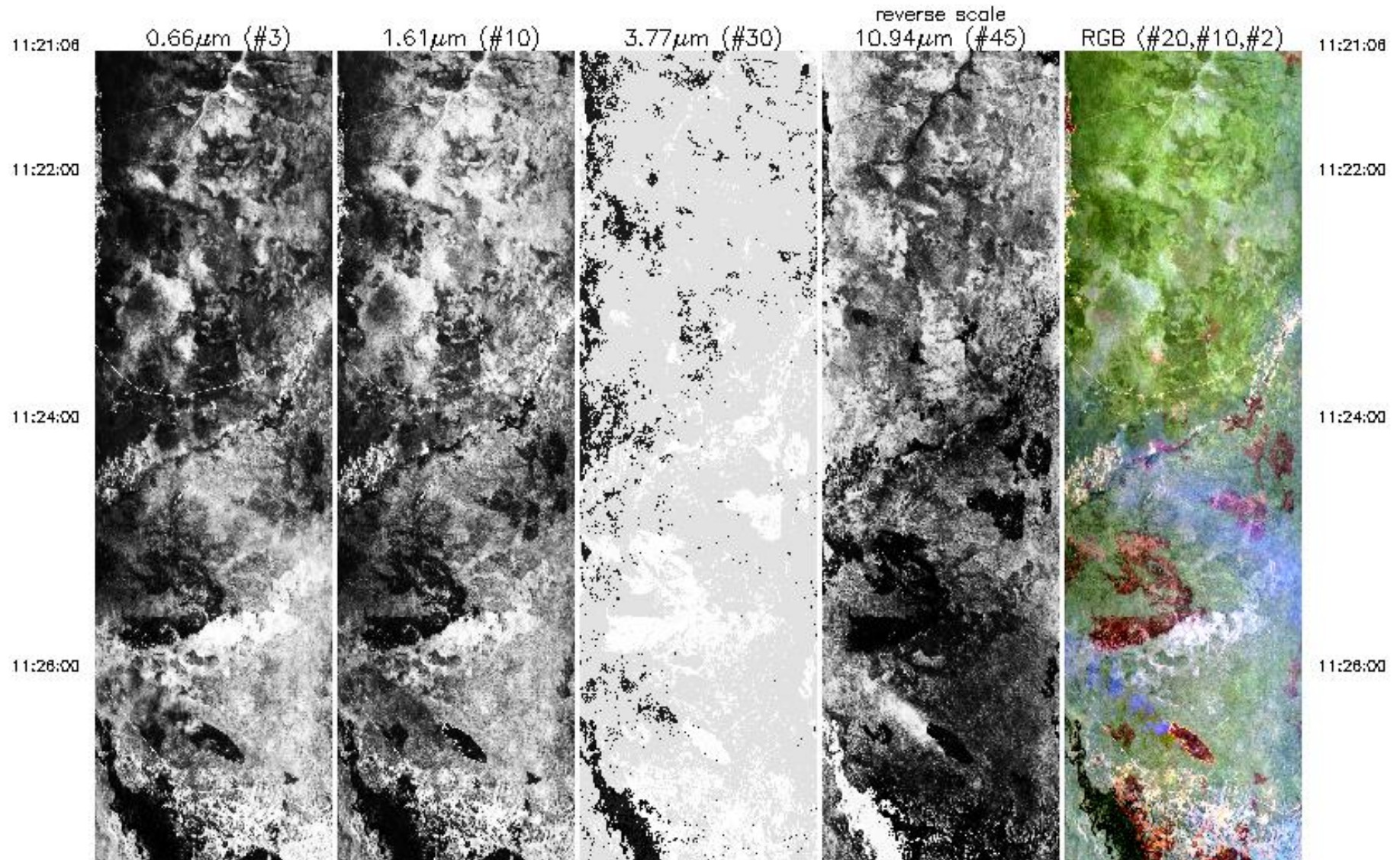


Upper Left Lat, Lon =  $-17.0^{\circ}$ ,  $23.2^{\circ}$   
 Lower Right Lat, Lon =  $-17.5^{\circ}$ ,  $23.7^{\circ}$   
 Aircraft Heading =  $170.3^{\circ}$   
 Solar Zenith =  $29.5^{\circ}$   
 GPS Altitude = 20090. m (MSL)



Upper Left Lat, Lon =  $-17.0^\circ$ ,  $23.2^\circ$   
Lower Right Lat, Lon =  $-17.5^\circ$ ,  $23.7^\circ$   
Aircraft Heading =  $170.3^\circ$   
Solar Zenith =  $29.5^\circ$   
GPS Altitude = 20090. m (MSL)

MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign – 26 Aug 2000  
Namibia, Botswana  
Flight #00-151 Track #13





11:28:00



11:28:00



11:30:00



11:32:00



11:34:00



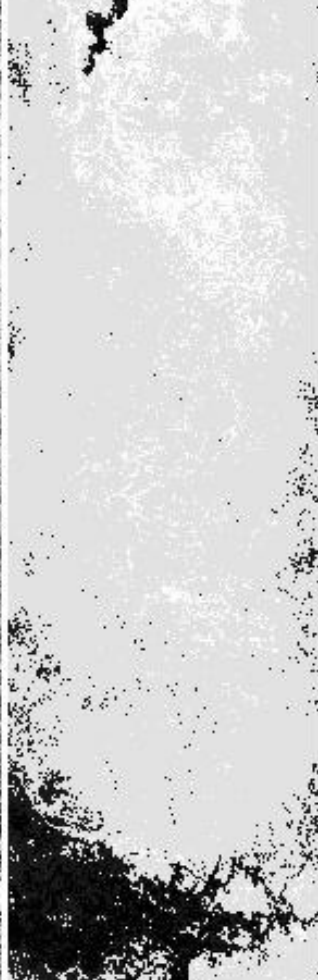
11:28:00



11:28:00



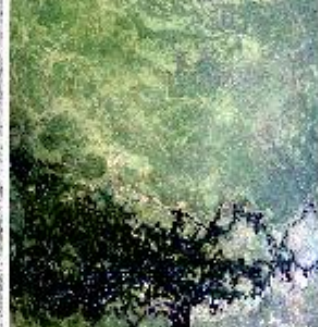
11:30:00



11:32:00



11:34:00





11:34:00

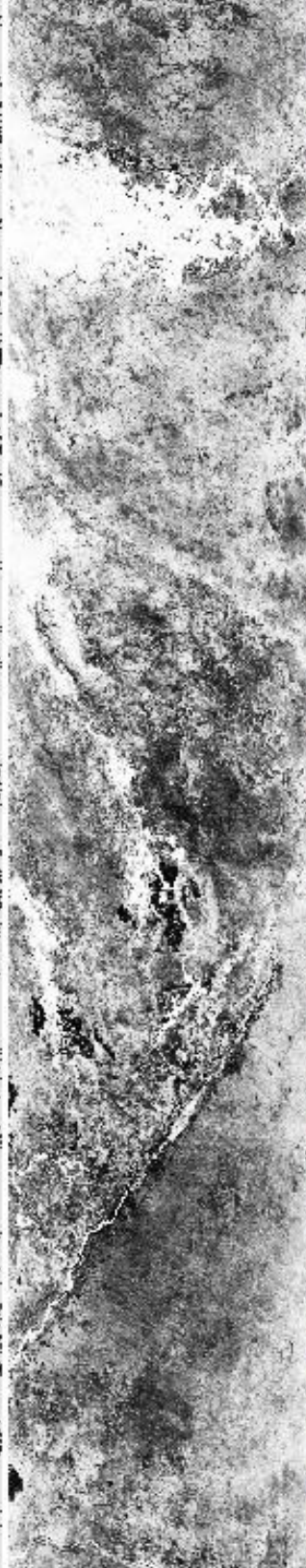
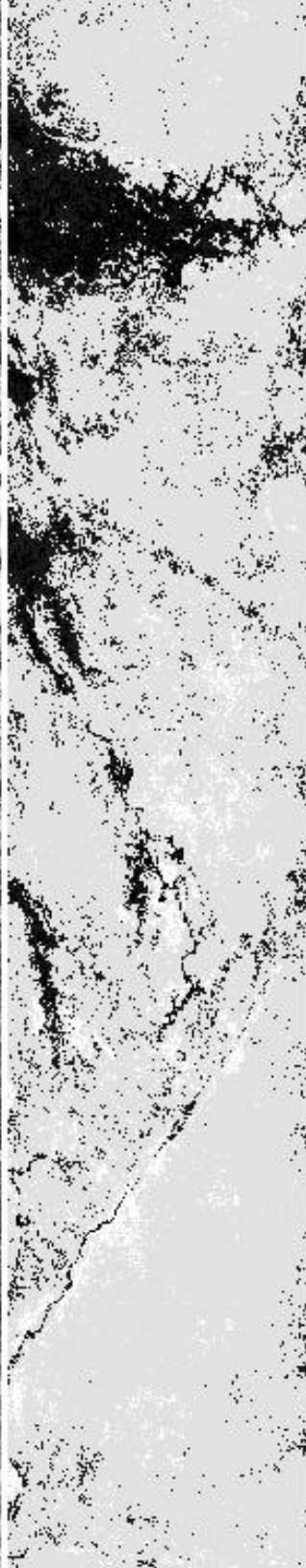
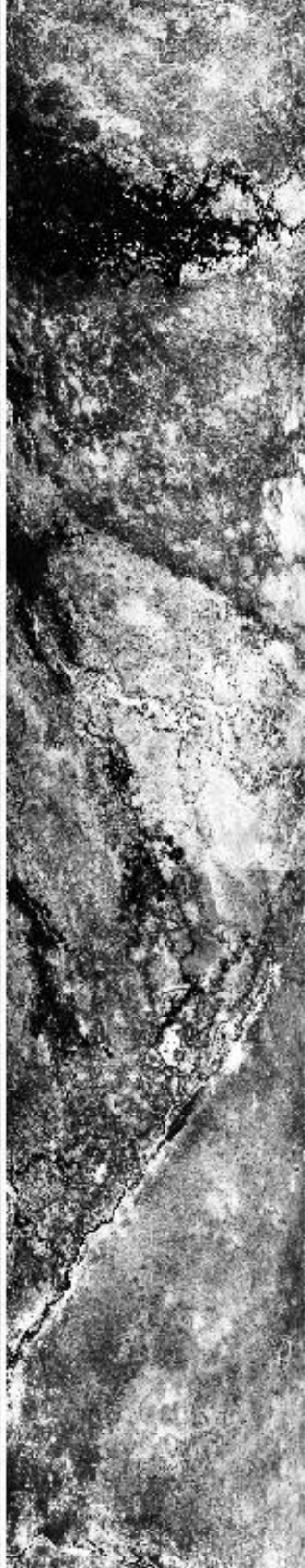
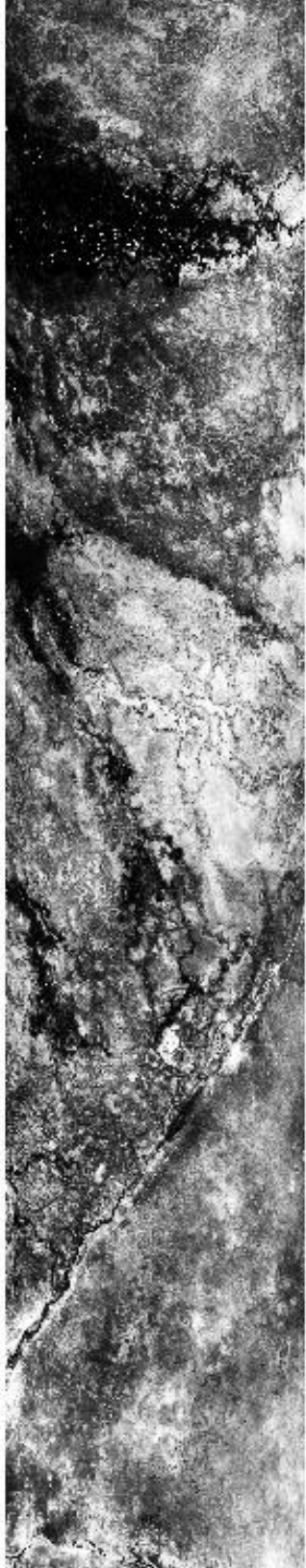
11:36:00

11:38:00

11:40:00

11:42:00

11:44:00



11:34:00

11:36:00

11:38:00

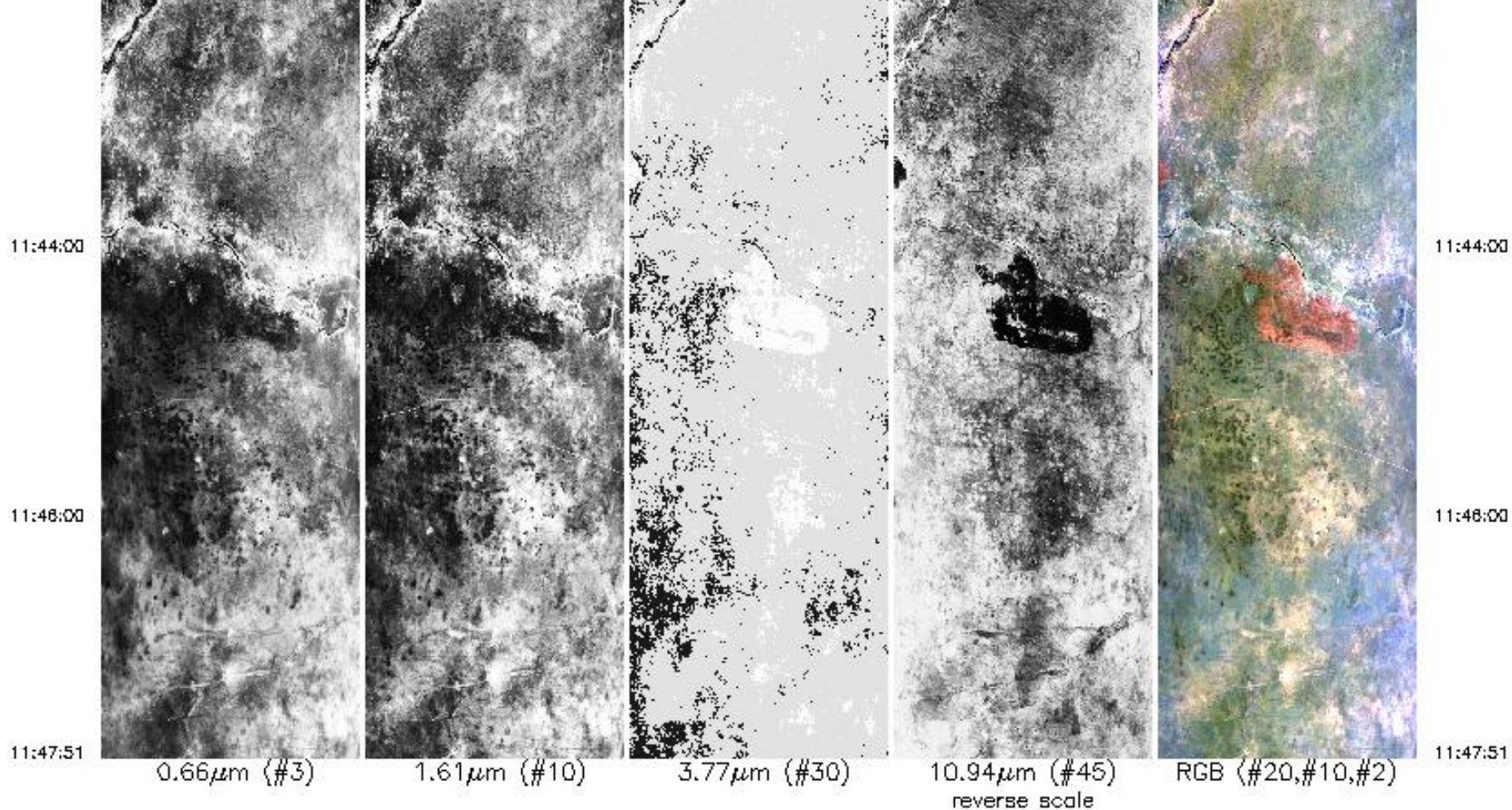
11:40:00

11:42:00

11:44:00



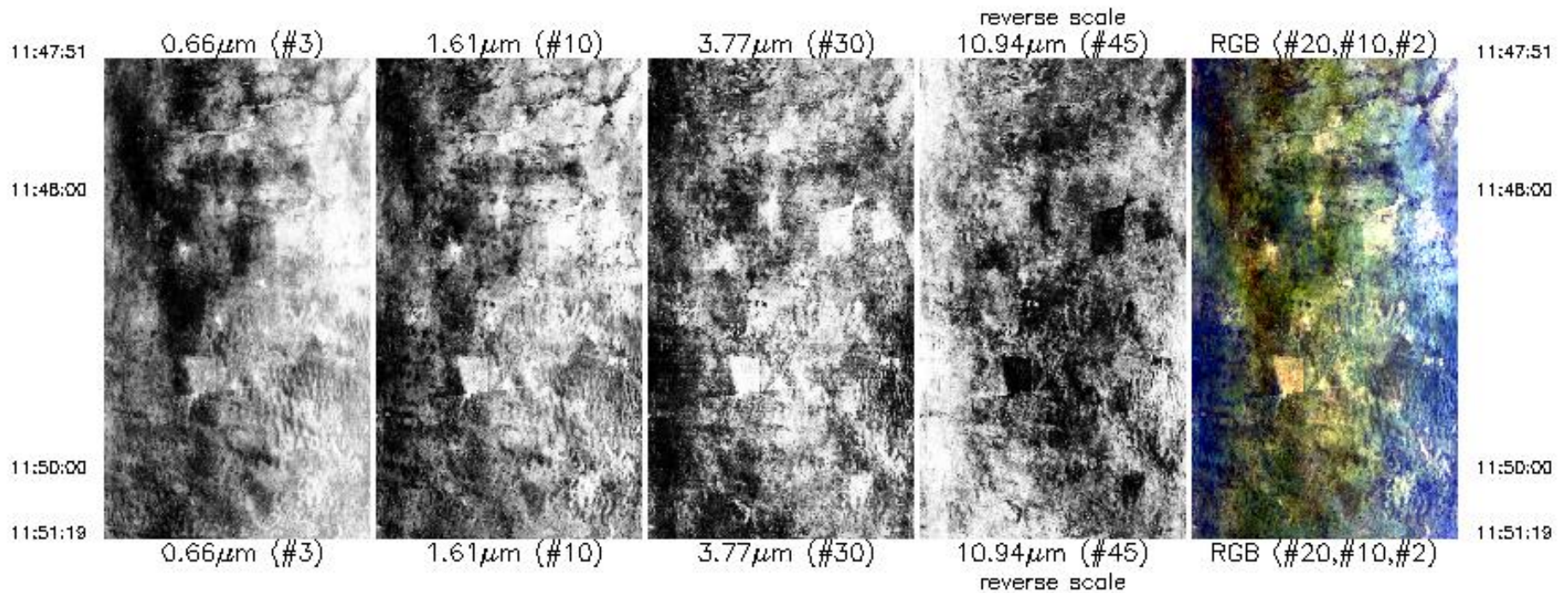




Upper Left Lat, Lon =  $-17.6^\circ$ ,  $23.4^\circ$   
 Lower Right Lat, Lon =  $-20.5^\circ$ ,  $23.8^\circ$   
 Aircraft Heading =  $174.7^\circ$   
 Solar Zenith =  $30.7^\circ$   
 GPS Altitude = 20033. m (MSL)

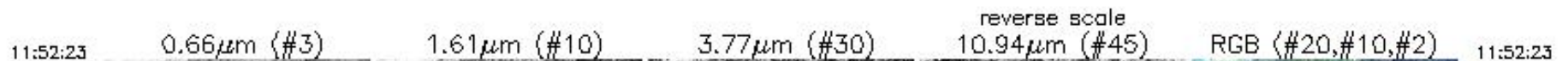


MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Botswana  
 Flight #00-151 Track #14



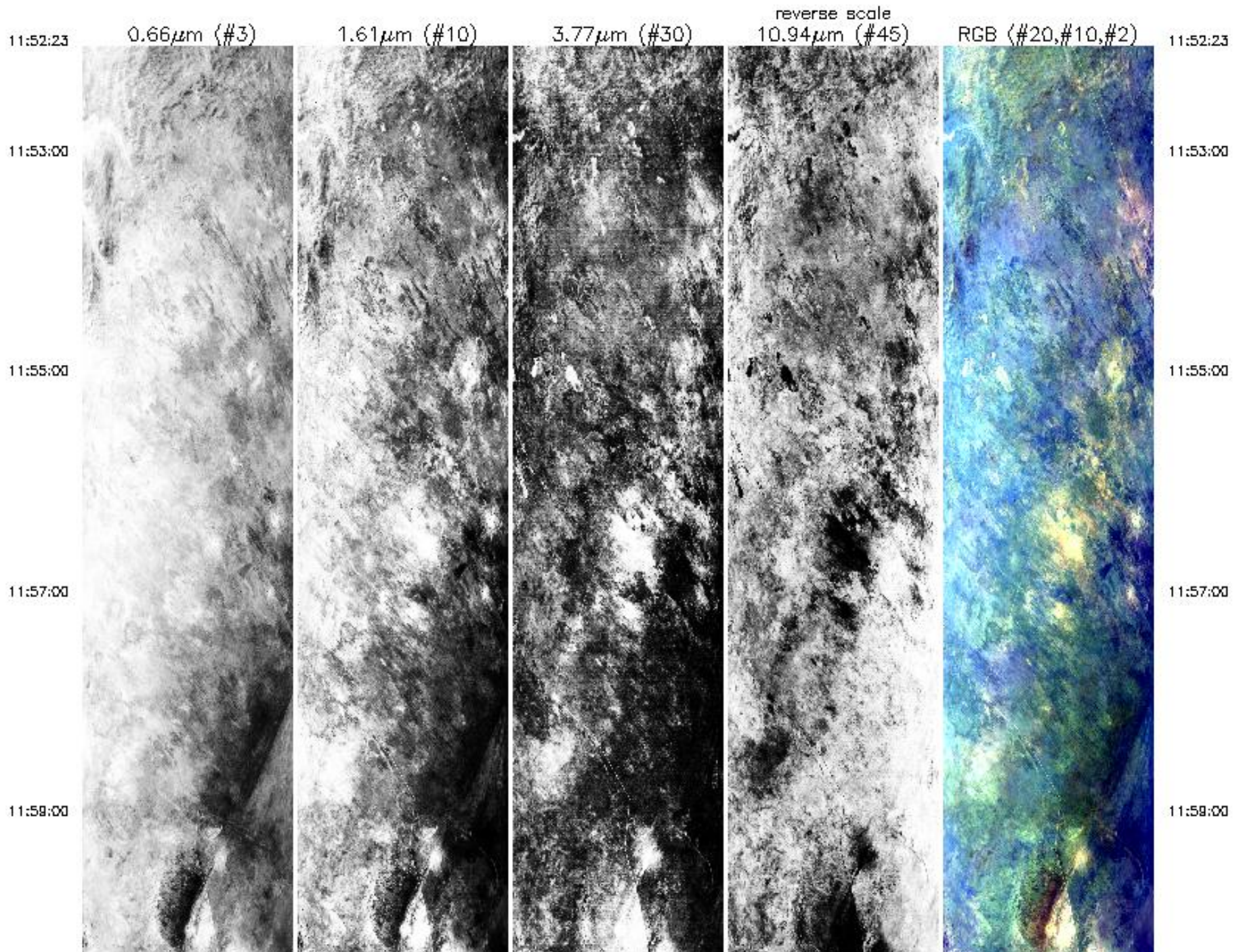
Upper Left Lat, Lon =  $-20.6^{\circ}$ ,  $23.4^{\circ}$   
 Lower Right Lat, Lon =  $-20.9^{\circ}$ ,  $23.8^{\circ}$   
 Aircraft Heading =  $179.3^{\circ}$   
 Solar Zenith =  $36.4^{\circ}$   
 GPS Altitude = 20085. m (MSL)

MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Botswana  
 Flight #00-151 Track #15



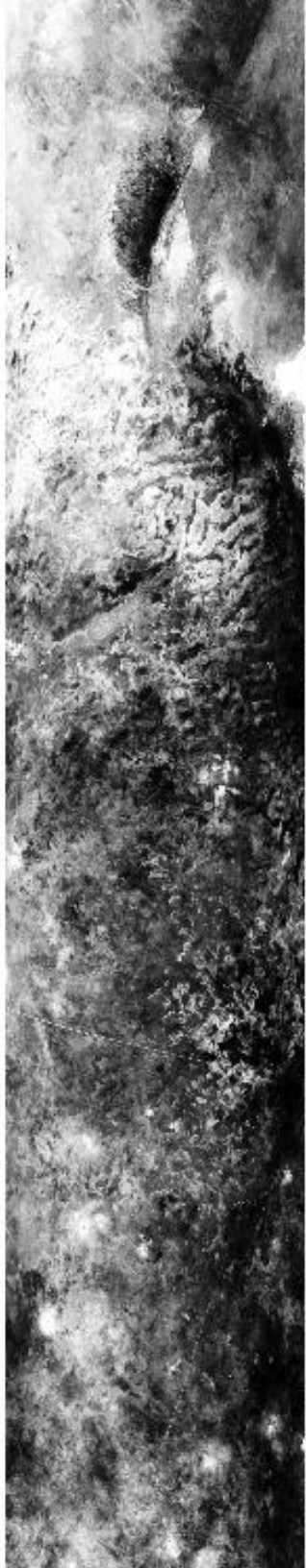


MODIS Airborne Simulator Browse Imagery  
SAFARI 2000 Campaign - 26 Aug 2000  
Botswana  
Flight #00-151 Track #15

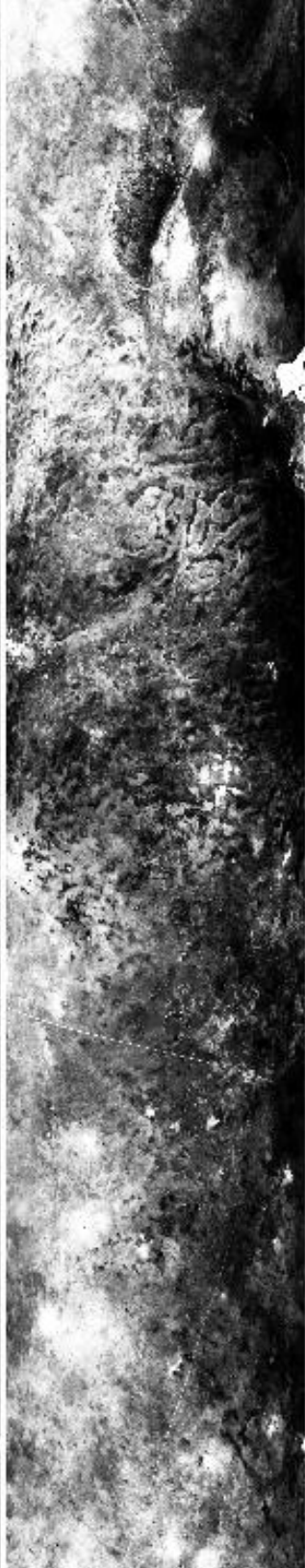




11:58:00



12:01:00



12:03:00



12:05:00



12:07:00



11:58:00

12:01:00

12:03:00

12:05:00

12:07:00



12:07:00



12:08:00



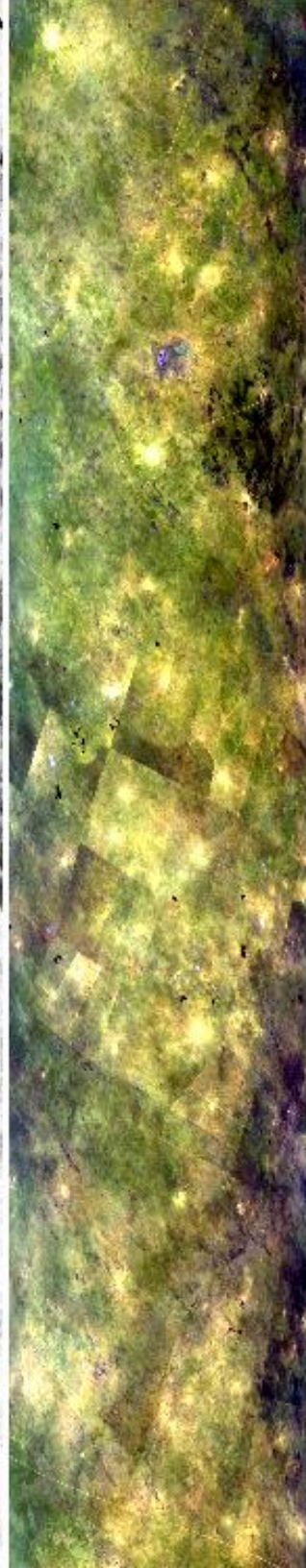
12:11:00



12:13:00



12:15:00



12:07:00

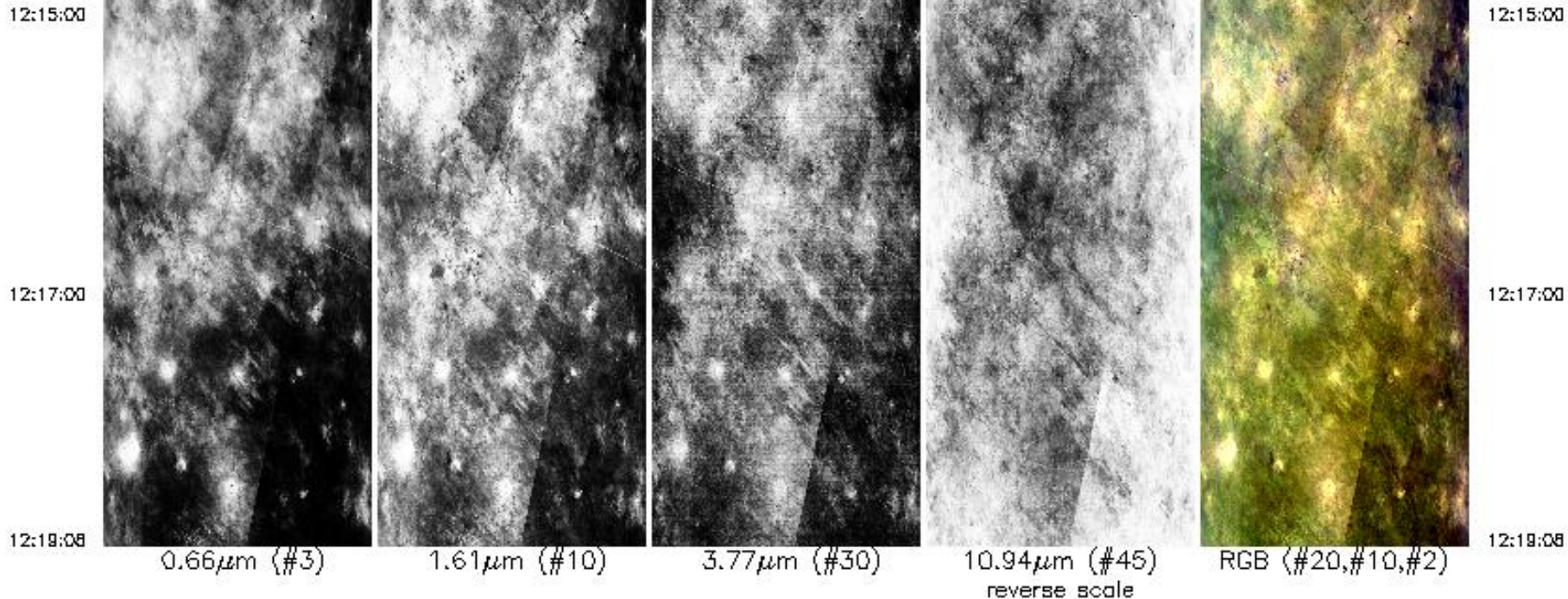
12:08:00

12:11:00

12:13:00

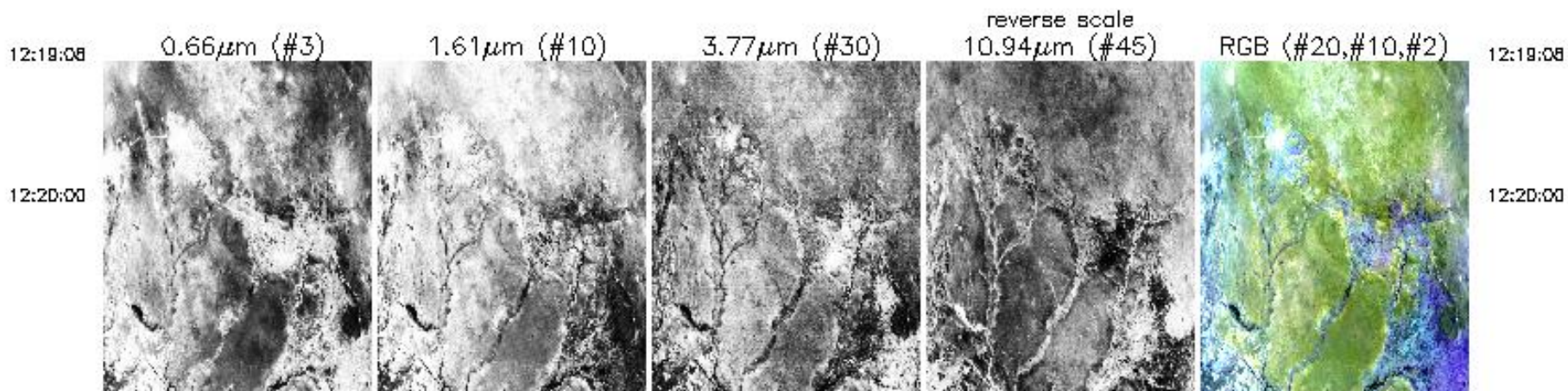
12:15:00





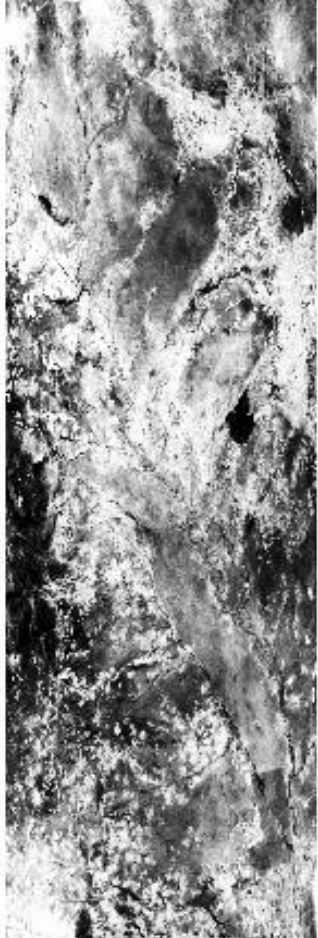
Upper Left Lat, Lon =  $-21.2^\circ$ ,  $23.5^\circ$   
 Lower Right Lat, Lon =  $-22.3^\circ$ ,  $26.5^\circ$   
 Aircraft Heading =  $125.9^\circ$   
 Solar Zenith =  $37.6^\circ$   
 GPS Altitude = 20115. m (MSL)

MODIS Airborne Simulator Browse Imagery  
 SAFARI 2000 Campaign – 26 Aug 2000  
 Botswana  
 Flight #00-151 Track #16





12:20:00



12:22:00



12:24:00



12:26:00



12:28:00



12:20:00



12:22:00



12:24:00



12:26:00



12:28:00





12:28:00

12:30:00

12:32:00

12:33:52



12:28:00

12:30:00

12:32:00

12:33:52

0.66µm (#3)

1.61µm (#10)

3.77µm (#30)

10.94µm (#45)  
reverse scale

RGB (#20,#10,#2)

Upper Left Lat, Lon = -22.6°, 26.3°  
 Lower Right Lat, Lon = -23.0°, 28.0°  
 Aircraft Heading = 119.1°  
 Solar Zenith = 44.4°  
 GPS Altitude = 20177. m (MSL)



