

## **Sounder Support for the Southern Hemisphere from GOES-9**

NOAA-WP-09 provides an overview of the GOES-9 sounder operation over the western Pacific ocean

## Sounder Support for the Southern Hemisphere from GOES-9

### 1. Introduction

Through a cooperative agreement between NOAA and JMA, GOES-9 was stationed over the western Pacific Ocean at 155° East to provide operational data until Japan launches the next MTSAT satellite. Normal GOES-9 satellite operations began on May 2003. The initial request for GOES-9 support only addressed imagery data to replace JMA's ailing GMS-5 satellite. The proposed schedule for imagery data was based on the need for three (3) consecutive full disk images surrounding synoptic times (00Z, 06Z, 12Z, 18Z) to support JMA winds operations. The GOES-9 sounder was not needed for operational support to the JMA.

Since the GOES imager operates simultaneously with the sounder, NOAA scientists took this opportunity to demonstrate the usefulness of sounder derived products for the Alaska and Hawaii regions. Using the sounder data in a non-operational mode, the Cooperative Institute of Meteorological Satellite Studies (CIMSS) and the National Weather Service (NWS) coordinated with National Environmental Satellite, Data, and Information Service (NESDIS) to design a set of sounding sectors to support the generation of sounder derived products. The sounding sectors (north, central and south) were designed around the imager operations with special emphasis for the northern and central Pacific Ocean. NOAA developed experimental scenarios to use the information. The CIMSS and NWS worked with NESDIS in suggesting possible scanning scenarios for the sounder. The data from the sounder are available via direct broadcast, DOMSAT relay, NESDIS/OSDPD/SSD and at the CIMSS website, <http://cimss.ssec.wisc.edu/>.

Currently, NOAA supports the JMA western Pacific operations via the GOES-9 spacecraft. Northern and southern hemispheric sounder support is under the control of the National Weather Service, NESDIS' Office of Research (ORA) and Applications and the Cooperative Institute for Meteorological Satellite Studies (CIMSS). Requests to modify or revise the GOES-9 sounder schedule should be addressed to the Satellite Services Division at 301-763-8051 and will be coordinated and reviewed as appropriate.

## 2. GOES-9 Sounder Schedule

The GOES-9 sounder schedule is available at the NOAA web site of <http://www.ssd.noaa.gov/PS/SATS/GOES/NINE/sched.html>.

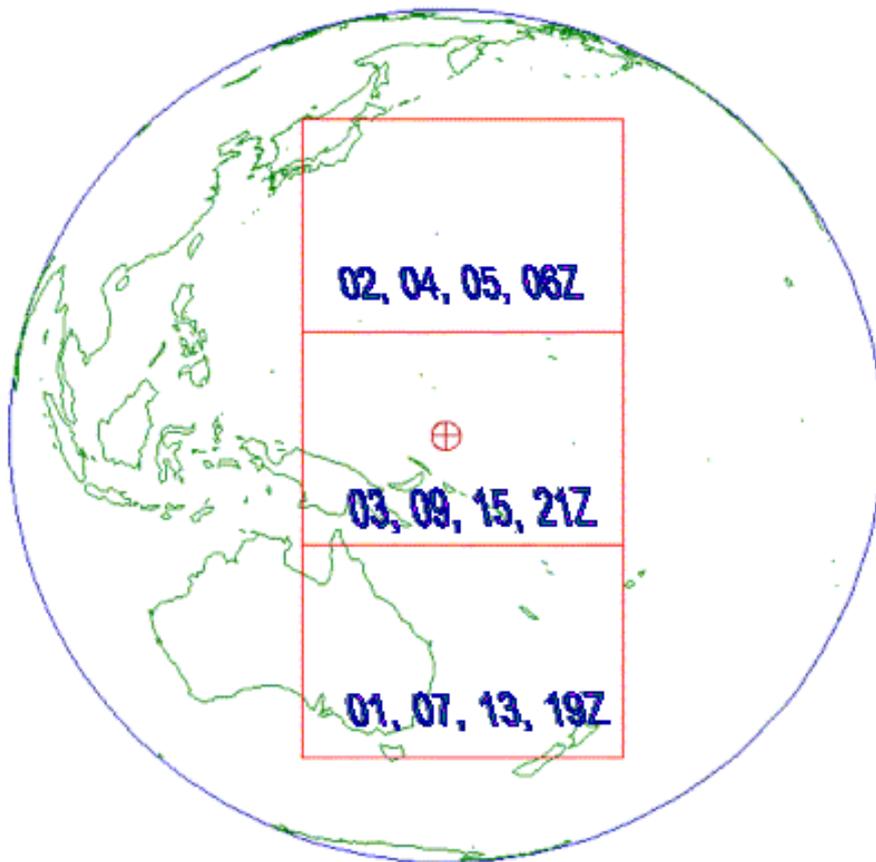
### SOUNDER GOES-09 ROUTINE SCHEDULE

TIME (UTC)	SCAN SECTOR	DURATION (MM:SS)
19:35:50.0	SOUTH SOUNDING	50:
20:35:10.0	NORTH SOUNDING	50:
21:35:10.0	CENTRAL SOUNDING	50:
22:35:10.0	NORTH SOUNDING	50:
23:35:10.0	NORTH SOUNDING	50:
00:35:10.0	NORTH SHORT SOUNDING	45:
01:35:10.0	SOUTH SOUNDING	50:
02:35:10.0	NORTH SOUNDING	50:
03:35:10.0	CENTRAL SOUNDING	50:
04:35:10.0	NORTH SOUNDING	50:
05:35:10.0	NORTH SOUNDING	50:
06:35:10.0	NORTH SHORT SOUNDING	45:
07:35:50.0	SOUTH SOUNDING	50:
08:35:10.0	NORTH SOUNDING	50:
09:35:10.0	CENTRAL SOUNDING	50:
10:35:10.0	NORTH SOUNDING	50:
11:35:10.0	NORTH SOUNDING	50:
12:35:10.0	NORTH SOUNDING	50:
13:35:10.0	SOUTH SOUNDING	50:
14:35:10.0	NORTH SOUNDING	50:
15:35:10.0	CENTRAL SOUNDING	50:
16:35:10.0	NORTH SOUNDING	50:
17:35:10.0	NORTH SOUNDING	50:
18:35:10.0	NORTH SHORT SOUNDING	45:

### 3. GOES-9 Sounder Sectors

The NOAA sounder schedule consists of hourly sounder scans (each scan takes 50 minutes, plus 10 minutes of INR, housekeeping, etc...) There are 16 images a day taken of the northern sector, 4 of the equator sector, and 4 of the southern sector. This scanning areas and times were coordinated through the NWS, CIRA, and NESDIS for optimal use.

#### GOES-9 DAILY SOUNDINGS



NORTH SOUNDING

Coordinates

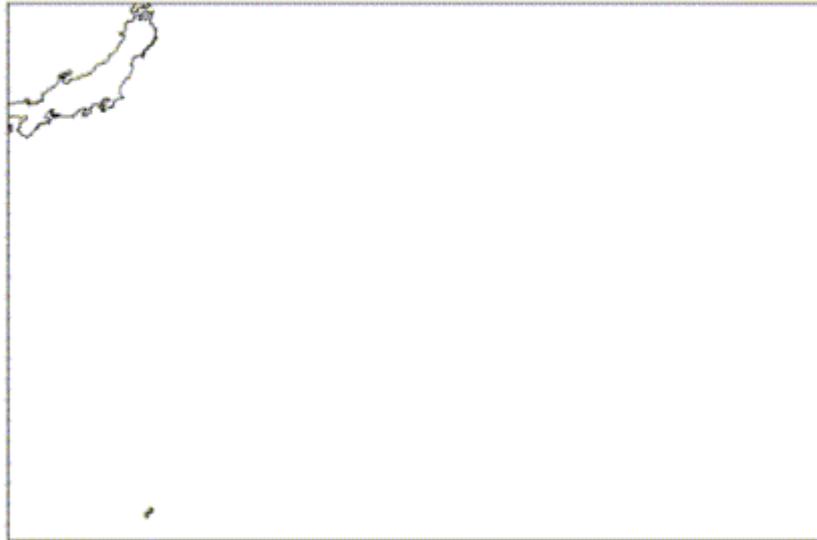
Start  
Lat Lon  
42.4 131.4

Stop  
Lat Lon  
12.3 176.2

Center  
Lat Lon  
25.5 157.2

Start  
Line Pixel  
390 700

Stop  
Line Pixel  
660 1099



MIDDLE SOUNDING

Coordinates

Start

Lat Lon  
12.2 138.2

Stop

Lat Lon  
-12.9 176.2

Center

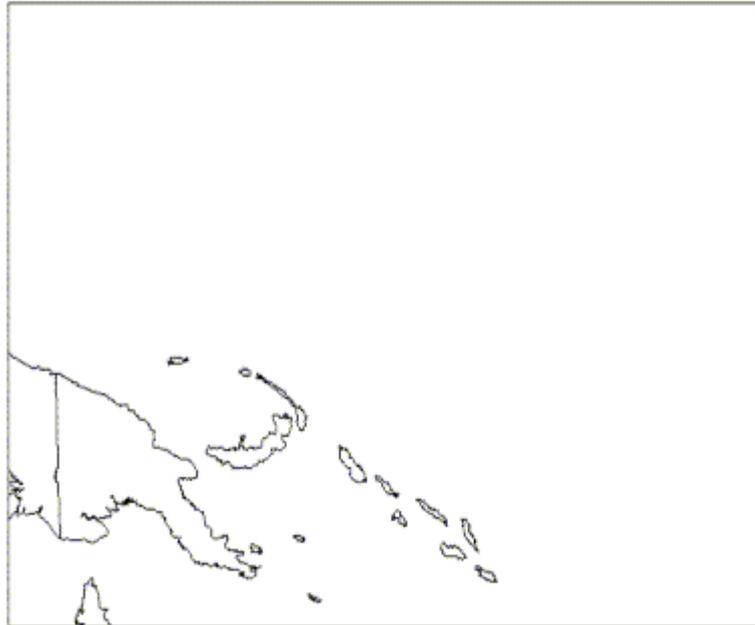
Lat Lon  
-0.3 156.9

Start

Line Pixel  
660 700

Stop

Line Pixel  
930 1099



SOUTH SOUNDING

Coordinates

Start  
Lat Lon  
-12.8 138.1

Stop  
Lat Lon  
-43.8 -174.1

Center  
Lat Lon  
-26.1 157.2

Start  
Line Pixel  
930 700

Stop  
Line Pixel  
1200 1099

