

DEPLOYMENT OF DATA BUOYS IN ARABIAN SEA

ORV SAGAR KANYA SK-210

SEPTEMBER 27 to OCTOBER 3, 2004

Goa to Karwar



NATIONAL DATA BUOY PROGRAMME
NATIONAL INSTITUTE OF OCEAN TECHNOLOGY
CHENNAI

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1. CRUISE SUMMARY

The ORV Sagarkanya cruise SK-210 was taken up to reinstate the buoy network in Arabian Sea by deploying three data buoys. This cruise was combined with Deep Sea Technology and Mining group of NIOT.

2. OBJECTIVES OF THE CRUISE

The main objectives of the cruise are:

- Deployment of one deep water buoys at DS1.
- Deployment of two shallow water buoys at Ennore at SW2 and SW3 location.
- Taking core samples (mining group)
- Conducting Hydro sweep survey (mining group)

3. LIST OF PARTICIPANTS

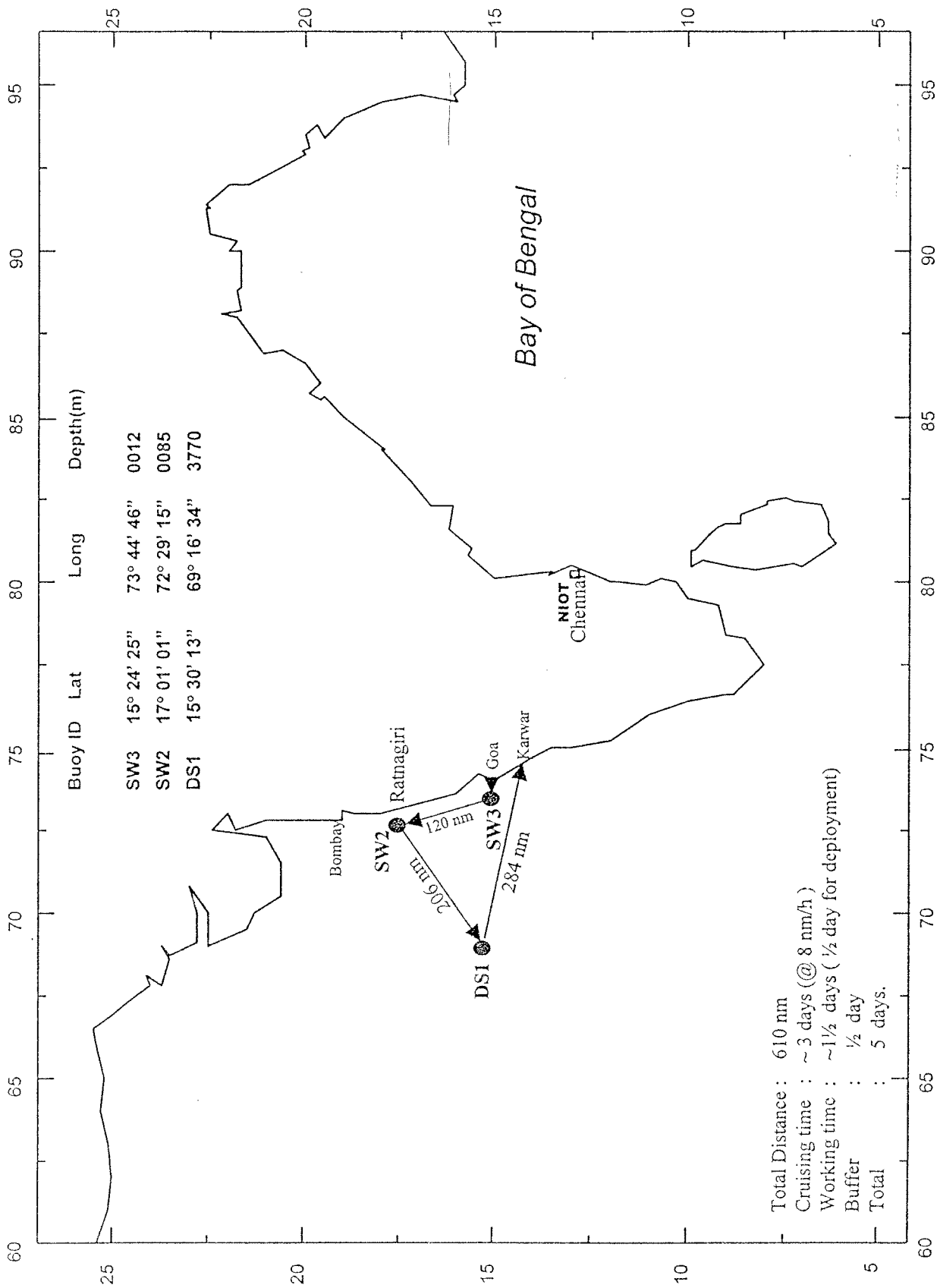
NIOT, Chennai

1. Mr. P.Selvakumar Chief Scientist
2. Mr. G.Senthilkumar
3. Mr. M.Saravanan
4. Mr. M. Rajavel
5. Mr. M. Athiyaman
6. Mr. P. Ramesh
7. Mr. Unnikrishnan
8. Mr. Chandran
9. Mr. Jayakumar
10. Mr. Vishvanath
11. Mr. Suresh
12. Mr. Gopalakrishnan

SEAMEN CHARTED FROM M/s. SEAPOL LOGISTICS, CHENNAI

1. Mr. D. Kalyana Sundaram
2. Mr. Raghunath

Proposed NDBP buoy deployment schedule in September 2004 (Goa to Karwar)



Total Distance : 610 nm
 Cruising time : ~ 3 days (@ 8 nm/h)
 Working time : ~ 1½ days (½ day for deployment)
 Buffer : ½ day
 Total : 5 days.

* Distance calculated based on the tentative deployment location.

4. DIARY OF EVENTS

Date	Time	Event
27-09-04	12.30 Hrs	One trailer and one truck have not reached Goa, and the ship was sent to anchorage. Getting the berth again for loading is ruled out. So it was decided to divert the ship to Karwar, accordingly the trucks were also diverted to Karwar.
	15.30 Hrs	Boarded the vessel in anchorage thru' boat and immediately sailed out to karwar.
	22.00	Anchored at karwar
28.09.04	10.00 – 11.00 Hrs	Sea trial of hydro sweep
	12.30 Hrs	Started loading of material from truck and trailer
	16.00 Hrs	Sailed out from Karwar port to DS1
	19.00Hrs	Assembled and started testing of one WS buoy Sent mail to NCAOR for extension of cruise time
29.09.04	10.00 Hrs	Started preparing the mooring system for DS1
		Received mailed from NCAOR stating that cruise time is extended up to 3 rd Oct. AM. And we are advised not to keep the ship idle for day break and do the operation as soon as reaches the location.
30.09.04	02.40 Hrs	Reached Ds1 location, started deploying the buoy under heavy rain.
	04.40 Hrs	Anchor dropped at N 15°28.75' and E 69°14.3' at 3770 m of water depth. Started sailing towards Aungria bank for doing mining group's operations

01-10-04	01.30 – 14.00	Coring samples taken at 11 locations
	02.30 – 23.00 Hrs	Hydro sweep survey
01-10-04 And 02-10-04	23.00 – 06.00 Hrs	Coring samples taken at another six locations.
	11.15 Hrs	SW2 location reached
	11.30 Hrs	SW2 buoy deployed at N 17°1.23' and E 72°29.1' at 82 m of water depth. Started sailing towards SW3
03-10-04	04.00 Hrs	Reached Sw3 location, when we are about to deploy the buoy captain of the ship refused to deploy and aborted the operation. When we asked for the reason he said winds are heavy and the data buoy location is close to the marker buoy so he will run over the marker buoy. And he ordered the ship to sail to karwar.
	04.15 – 05.15 Hrs	Communicated situation to Mr.Tata sudhakar and Mr. MM subramaniyam. Mr. MMS discussed with captain over mobile phone and advised us to talk again to captain. Again we talked to captain and he agreed to deploy the buoy little further away from the marker buoy. And he ordered the vessel to turn back and sail to SW3 location.
	13.00 Hrs	Reached Karwar
	19.00 Hrs	Signed off.

UPDATED

DS-1

Deployed on: 30-09-04

Lat : 15° 28.75'N

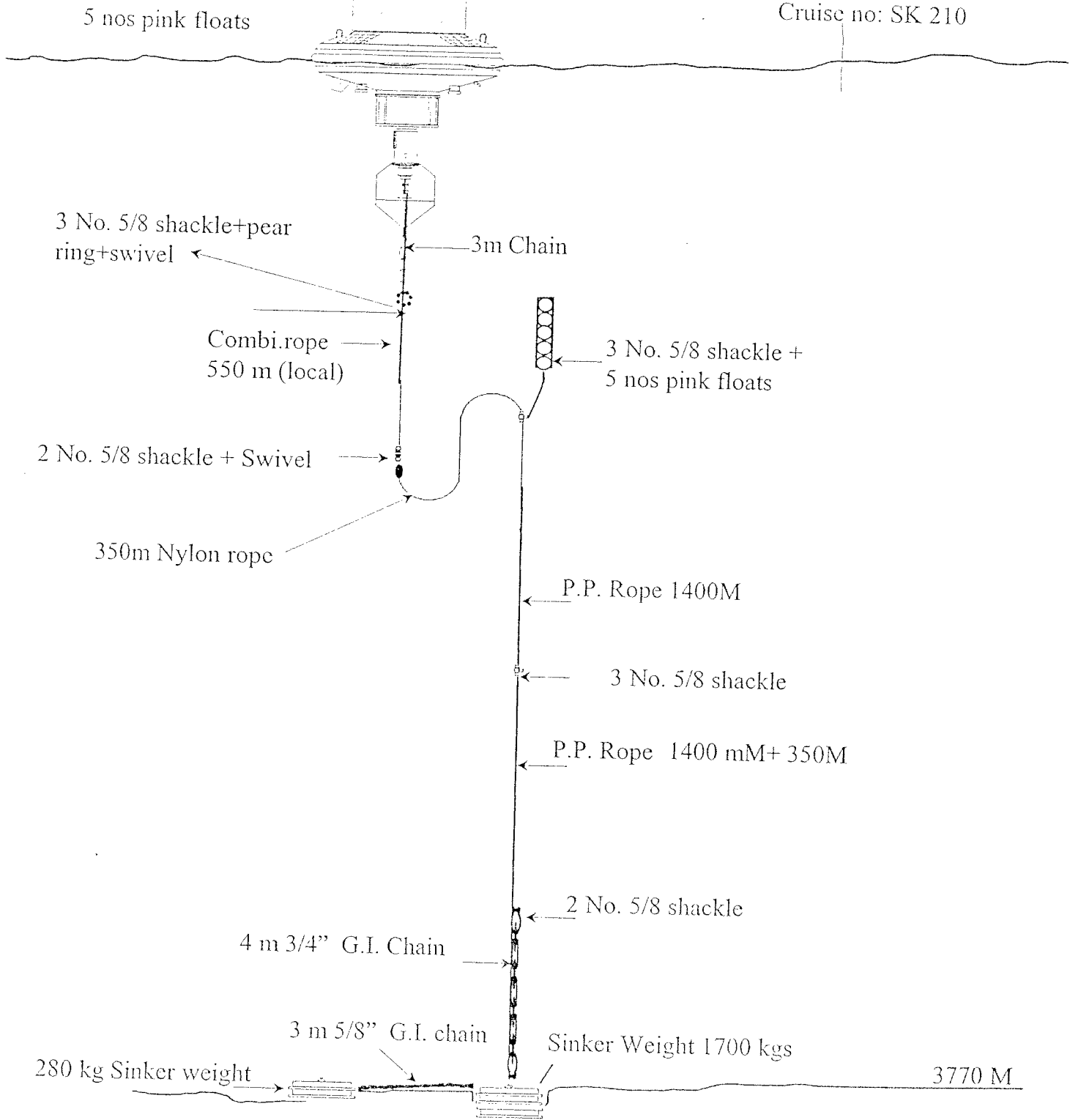
Long : 69° 14.3'E

Time : 02.45 pm

Depth : 3770 M

Ship: ORV SAGARKANYA

Cruise no: SK 210



Mooring Configuration For Data Buoy At- DS1

UPDATED

SW2

Deployed on: 2-10-04

Lat : 17° 01.23' N

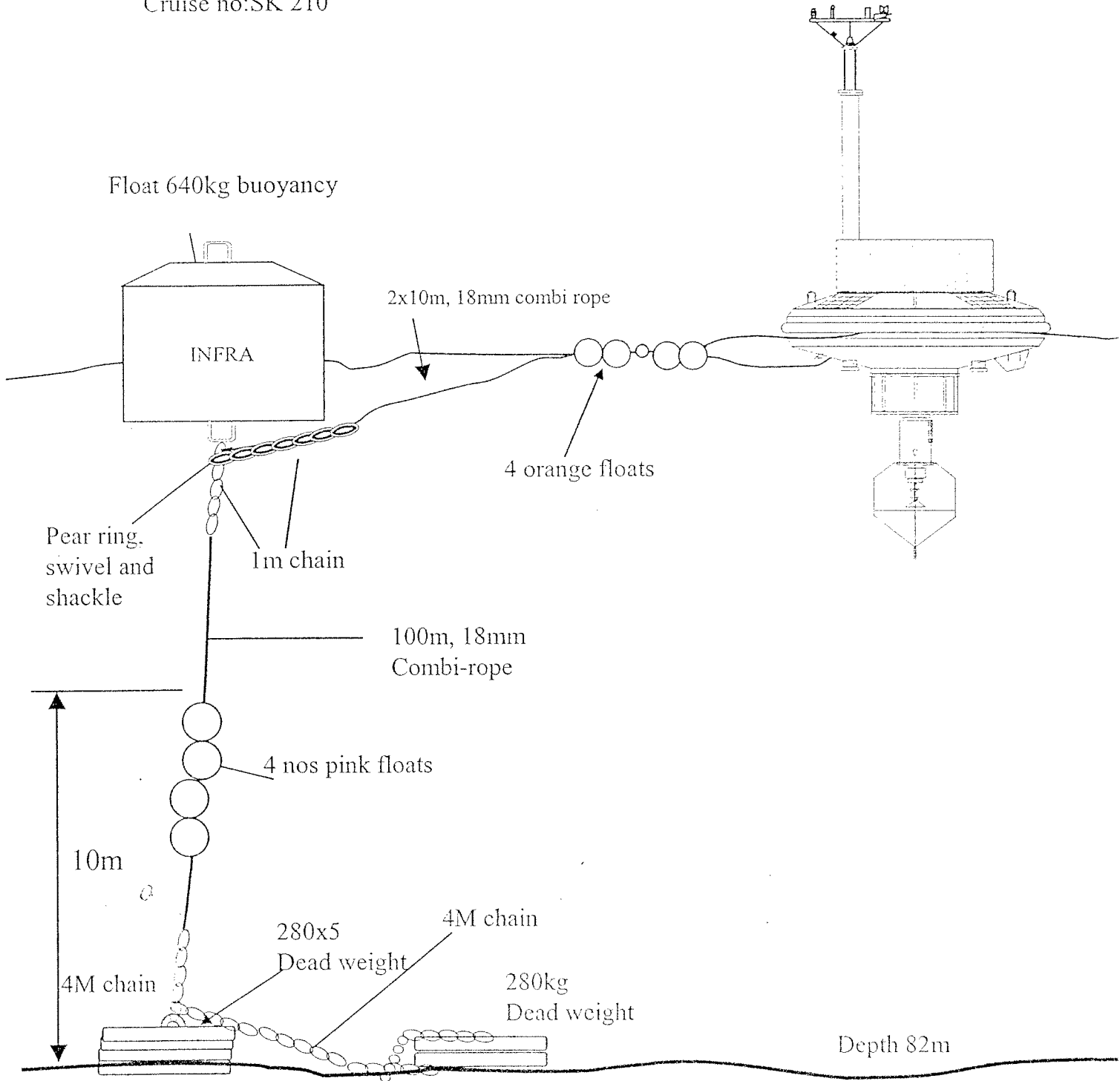
Long : 72° 29.10' E

Time : 11.30 am

Depth : 82M

Ship: ORV SAGARKANYA

Cruise no: SK 210



UPDATED

SW3

Lat : 15°24.1' N

Long : 73°45.0' E

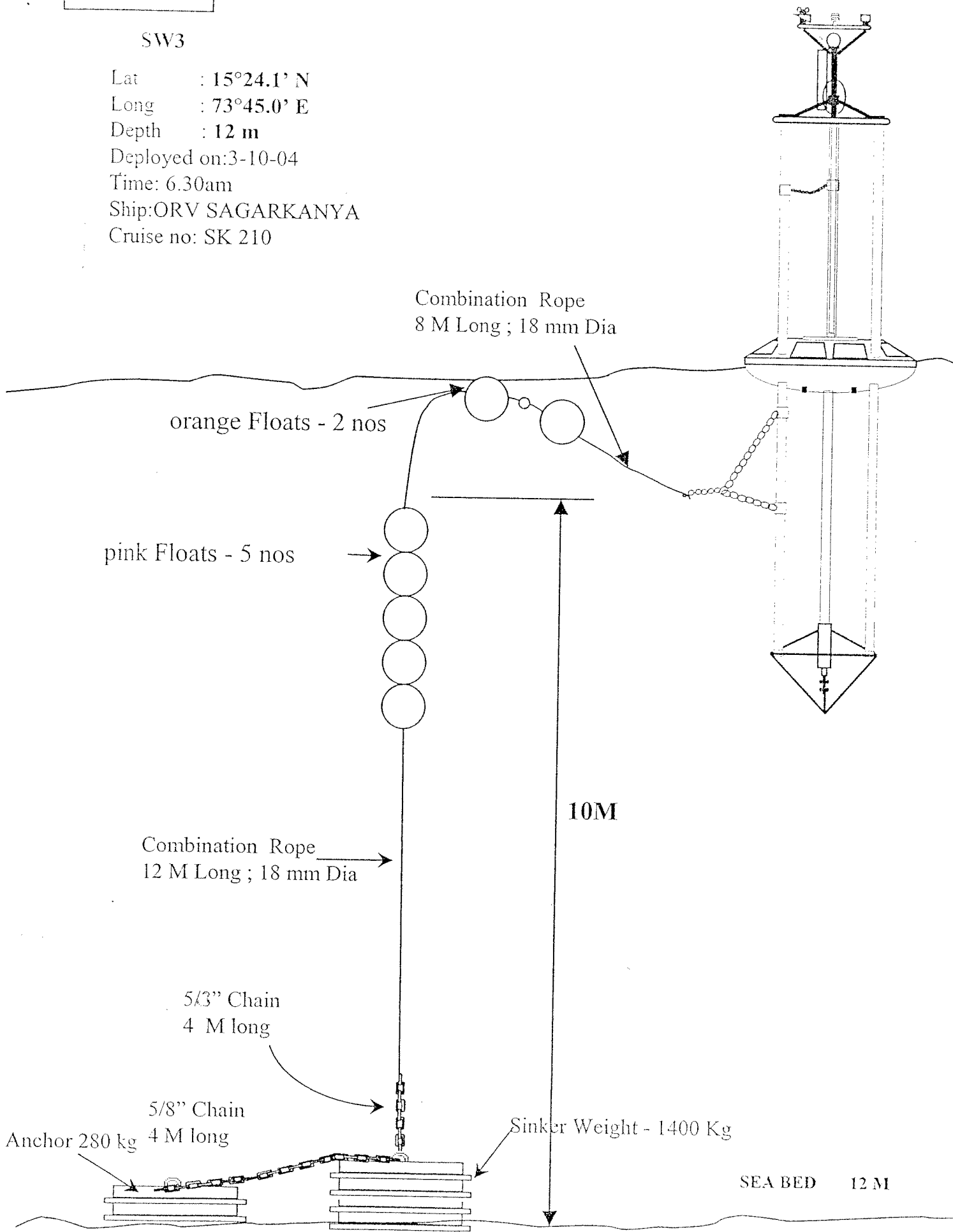
Depth : 12 m

Deployed on: 3-10-04

Time: 6.30am

Ship: ORV SAGARKANYA

Cruise no: SK 210



DEPLOYMENT SHEET

GENERAL															
Station & ID		Off Goa & DS1													
Position		Latitude		15 Deg 28.75' N		Longitude		69 Deg 14.30' E							
Deployment		Date		30-09-04		Time (IST)		02.40 AM							
Station Depth (m)		3,770 Mts.													
Mooring length (m)		3,975 Mts.													
Flash Light Characteristics		1 Flash / 4 sec.													
CPU Type		GENI 2000, S. No: 098													
Satellite used (Please tick the appropriate column)		INMARSAT		<input checked="" type="checkbox"/> (T&T)		INSAT									
Transceiver ID		456499650 (T&T)													
Software Version		1.31 Ver.													
Buoy Type (Please tick the appropriate column)		Spar		Discus		<input checked="" type="checkbox"/>		Imported Hull		<input checked="" type="checkbox"/>		Indigenous Hull			
Vessel Name and Cruise Reference ID		ORV- SAGAR KANYA & SK 210.													
INSTRUMENT FIT															
Meteorological			Oceanographic				Water Quality								
Sensor	Serial No.		Sensor	Serial No.		Sensor	Serial No.								
Air Pressure- 1	X0510012		MRU	1927		Radar Reflector	Indigenous								
UCM	6042		Beacon Lamp	Indigenous		Keel weight and Frame	Indigenous								
Air Temperature	Yes.		UCM Cable	Yes. (Imported)		Battery Box	Indigenous								
Wind-1	701049.0006		Battery	12V- 42 Ah.		Sensor Carrier Arm	SS								
Wind-2	-		Antenna- INMARSAT	Thrane & Thrane		Central Mast	SS								
Solar Panel	TATABP-TBP 1220		Power Box with Ah and Charger Module	Yes		Mooring	New Mooring.								
Solar Panel Cable	Indigenous, IL 2M		Mast Cable	OCEANOR		Cylinder	Old -Aluminum.								
Field Team Remarks															
Shore Station Remarks															

H. S. S. S.
Signature
Instrumentation

Signature
Mechanical

Signature
Chief Scientist

Date: 30/9/04

DEPLOYMENT SHEET

GENERAL					
Station & ID		Off Ratnagiri & SW2			
Position		Latitude	17 Deg 01.23 ' N	Longitude	72 Deg 29.10' E
Deployment		Date	02-10-04	Time (IST)	11.20 AM
Station Depth (m)		82 Mts.			
Mooring length (m)		100 Mts.			
Flash Light Characteristics		2 Flashes / 4 sec.			
CPU Type		GENI 2000, S. No: 012			
Satellite used (Please tick the appropriate column)		INMARSAT	<input checked="" type="checkbox"/>	INSAT	<input type="checkbox"/>
Transceiver ID		456499627, SL.No: 0200015308.			
Software Version		1.31 Ver.			
Buoy Type (Please tick the appropriate column)		Spar	<input type="checkbox"/>	Discus	<input checked="" type="checkbox"/>
		Imported Hull	<input type="checkbox"/>	Indigenous Hull	<input checked="" type="checkbox"/>
Vessel Name and Cruise Reference ID		ORV- SAGAR KANYA & SK 210.			
INSTRUMENT FIT					
Meteorological		Oceanographic		Water Quality	
Sensor	Serial No.	Sensor	Serial No.	Sensor	Serial No.
Air Pressure- 1	X 0440009	MRU	2039	Radar Reflector	Indigenous
Falmouth-CM	1752-15Jul04	Beacon Lamp	Imported	Keel weight and Frame	Indigenous
Air Temperature	Yes.	CM Cable	Indigenous	Battery Box	Indigenous
Wind-1	710183.0003	Battery	12V- 42 Ah.	Sensor Carrier Arm	SS
Wind-2	-	Antenna- INMARSAT	Yes	Central Mast	SS
Solar Panel	TATABP-TBP 1220	Power Box with Ah and Charger Module	Yes	Mooring	New Mooring.
Solar Panel Cable	Indigenous, IL 2M	Mast Cable	OCEANOR	Cylinder	New - Aluminum.
Field Team Remarks					
As availed SS cylinder at NDBP stores was reserved for indigenous buoy (CPU) deployment, new aluminum hull was used.					
Shore Station Remarks					

M. Saif
Signature
Instrumentation

Signature
Mechanical

Signature
Chief Scientist

Date: 2/10/04

DEPLOYMENT SHEET

GENERAL					
Station & ID		Mormugao Port & SW3.			
Position		Latitude	15 Deg 24.1' N	Longitude	73 Deg 45.0' E
Deployment		Date	03/09-04	Time (IST)	06.45 AM
Station Depth (m)		12 Mts.			
Mooring length (m)		16 Mts.			
Flash Light Characteristics		2 Flashes / 6 Sec.			
CPU Type		GENI 2000. S.No: 013.			
Satellite used (Please tick the appropriate column)		INMARSAT	<input checked="" type="checkbox"/>	INSAT	<input type="checkbox"/>
Transceiver ID		S. No: 0200011930			
Software Version		1.31 Ver.			
Buoy Type (Please tick the appropriate column)		Spar	<input checked="" type="checkbox"/>	Discus	<input type="checkbox"/>
		Imported Hull	<input checked="" type="checkbox"/>	Indigenous Hull	<input type="checkbox"/>
Vessel Name and Cruise Reference ID		ORV- SAGARKANYA & SK- 210.			
INSTRUMENT FIT					
Meteorological		Oceanographic		Water Quality	
Sensor	Serial No.	Sensor	Serial No.	Sensor	Serial No.
Air Pressure- 1	W 0420026.	MRU	2350	Radar Reflector	Indigenous
Air Pressure -2	-	Falmouth CM.	1751-15Jul 04.	Top & Bottom Frame	Imported
Air Temperature	Yes.	Falmouth CT	-	Battery Box	Imported
Wind-1	701049.0012	Battery	12V- 42 Ah.	Sensor Carrier Arm	Al.
Wind-2	-	Antenna- INMARSAT	10889965	Central Mast	SS
Solar Panel	SOLAREX-MSX10	Power Box with Ah and Charger Module	Yes.	Cylinder	SS.
Solar Panel Cable	Imported, MCIL 2M	Mast Cable	OCEANOR	Beacon Light	Imported
Field Team Remarks					
Shore Station Remarks					

M. Singh.
Signature
Instrumentation

Signature
Mechanical

Signature
Chief Scientist

Date: 8/10/04