

COAST GUARD

SECTOR SAN JUAN

Bienvenidos a Puerto Rico!
Welcome to Puerto Rico!

John Ware
Search and Rescue Specialist



International Maritime Organization (IMO)

International Search & Rescue Areas of Responsibility



Layers

- Run ALPHA_NOA
- Area of Intere
- Patterns
- Run Features
- Particles [11/2
- Probability Gri
- Currents [11/
- Winds [11/23]
- SLDMBs
- SLDMBS_200E
- SLDMBS_200E
- SLDMBS_200E
- <all other
- Buoynum
- ◆ 38998

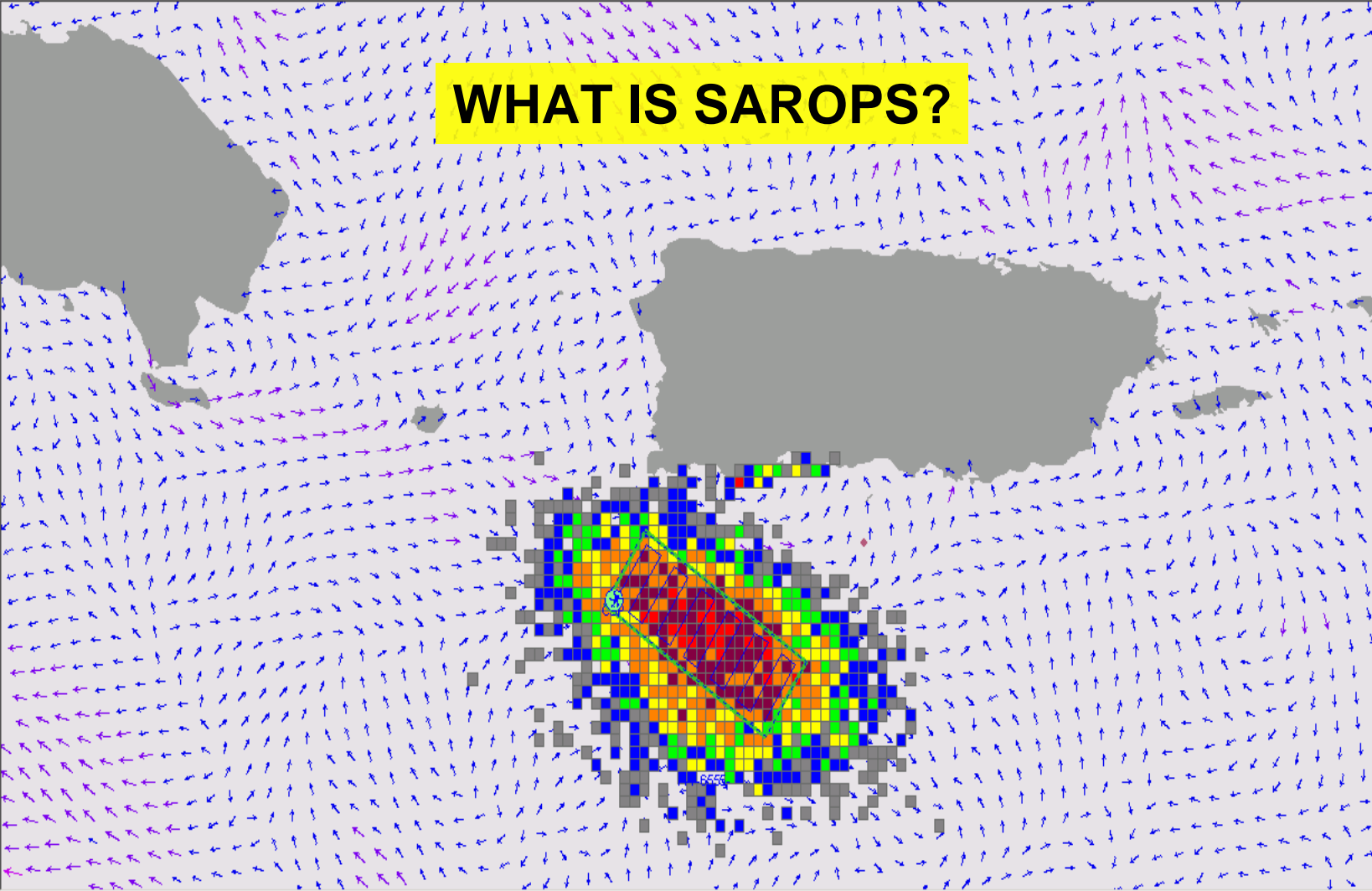
Display

Cases

- NOAAHYCOMW
 - DMB
 - DSC
 - Flares
 - Patterns
- Quick Overlays
 - Disabled
 - Untitled f
- SAROPS
 - Alpha NC
 - SARSAT
- XRAY and YANK

SAR Tools

WHAT IS SAROPS?



1:1,458,817

Layers

- Run ALPHA_NOAA
- Area of Interest
- Patterns
- Run Features
- Particles [11/2]
- Probability Grid
- Currents [11/2]
- Winds [11/21]
- SLDMBs
 - SLDMBS_2008
 - SLDMBS_2008
 - SLDMBS_2008
- <all other Buoynum
- 38998

Display

Cases

- NOAAHYCOMW
 - DMB
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 - Alpha NC
 - SARSAT
 - XRAY and YANK

SAR Tools

SAROPS: Alpha NOAAHYCOMW: Search Objects

- PIW with PFD (Average)
- PIW without PFD (Average)
- Life Raft
- Survival Craft
- Vessels
- Debris
- User-Defined Search Object
- SLDMB

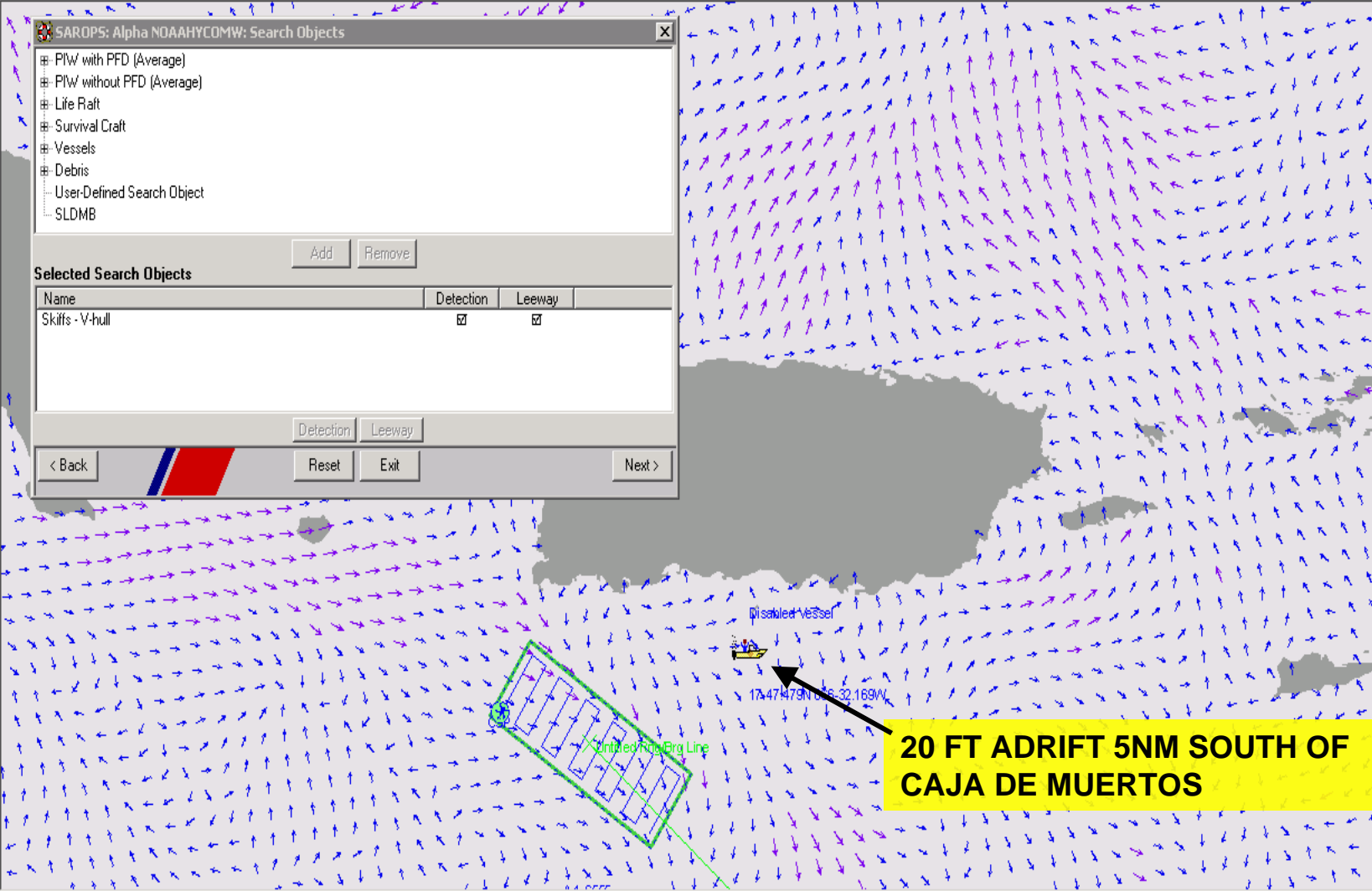
Add Remove

Selected Search Objects

Name	Detection	Leeway
Skiffs - V-hull	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Detection Leeway

< Back Reset Exit Next >



211100Z NOV 2008 232300Z NOV 2008

Probability Grid [11/23/200] View Time 211100Z NOV 2008 Interval: 1 hrs 0 mins

Layers

- Run ALPHA_NOAAHY
- SLDMBS
 - SLDMBS_200811:1
 - SLDMBS_200811:1
 - SLDMBS_200811:1
- <all other val
- Buoynum
 - 38998
 - 43280
 - 43283
 - 43364
 - 43376
- CMF Base Map

Display

Cases

- NOAAHYCOMW
 - DMB
 - DSC
 - Flares
 - Patterns
- Quick Overlays
 - Disabled Vessel
 - Untitled Rng/Brc
- SAROPS
 - Alpha NOAAHYC
 - SARSAT

SAR Tools

SAROPS: Alpha NOAAHYCOMW: LKP

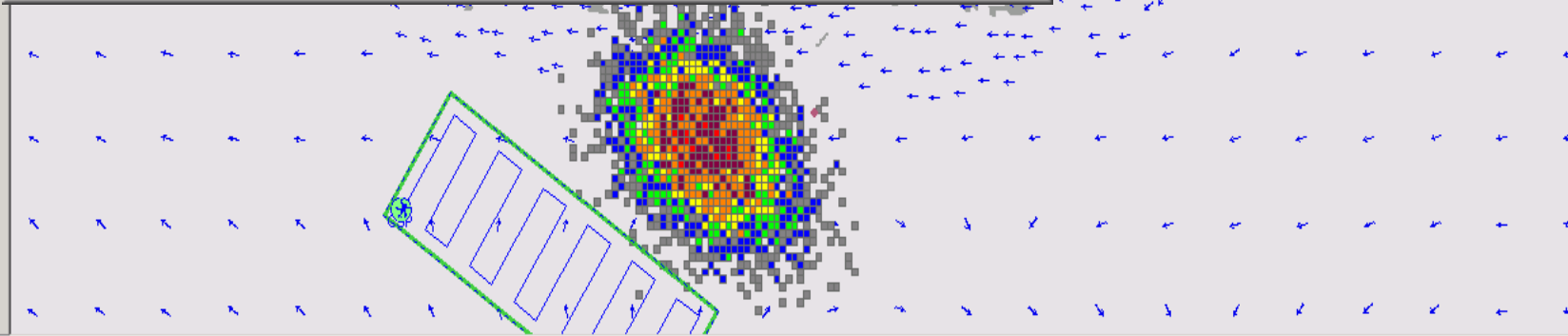
Scenario Name Weight

LKP Prob Error (X-Error) NM

LKP Time T-Error (+/-) Hrs

Search Object Weights (right-click to adjust weight)

Name	Wgt	Wgt %
Skiffs - V-hull	5	100



1:1,000,000

Layers

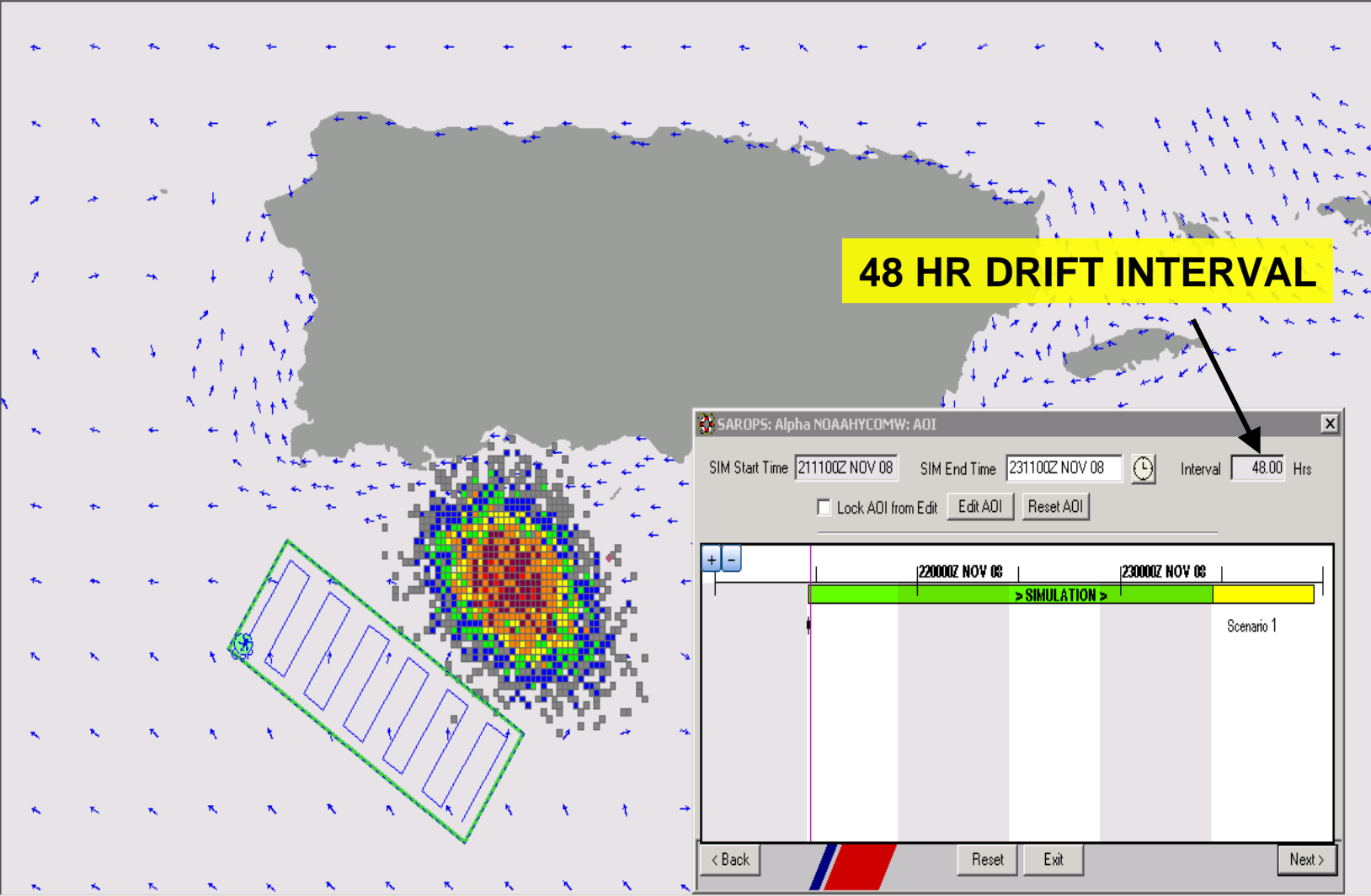
- Run ALPHA_NOAAHY
- SLDMBS
 - SLDMBS_200811
 - SLDMBS_200811
 - SLDMBS_200811
 - <all other val
- Buoynum
 - 38998
 - 43280
 - 43283
 - 43364
 - 43376
- CMF Base Map

Display

Cases

- NOAAHYCOMW
 - DMB
 - DSC
 - Flares
 - Patterns
 - Quick Overlays
 - Disabled Vessel
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 - Alpha NOAAHY
 - SARSAT

SAR Tools



48 HR DRIFT INTERVAL

SAROPS: Alpha NOAAHYCOMW: AOI

SIM Start Time: 211100Z NOV 08 SIM End Time: 231100Z NOV 08 Interval: 48.00 Hrs

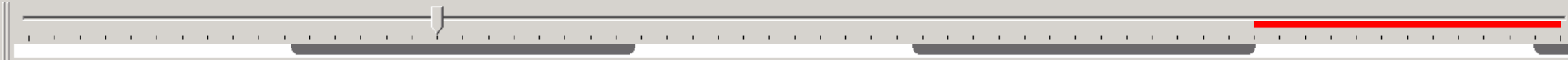
Lock AOI from Edit Edit AOI Reset AOI

220000Z NOV 08	230000Z NOV 08
> SIMULATION >	
Scenario 1	

< Back Reset Exit Next >

211100Z NOV 2008

232300Z NOV 2008



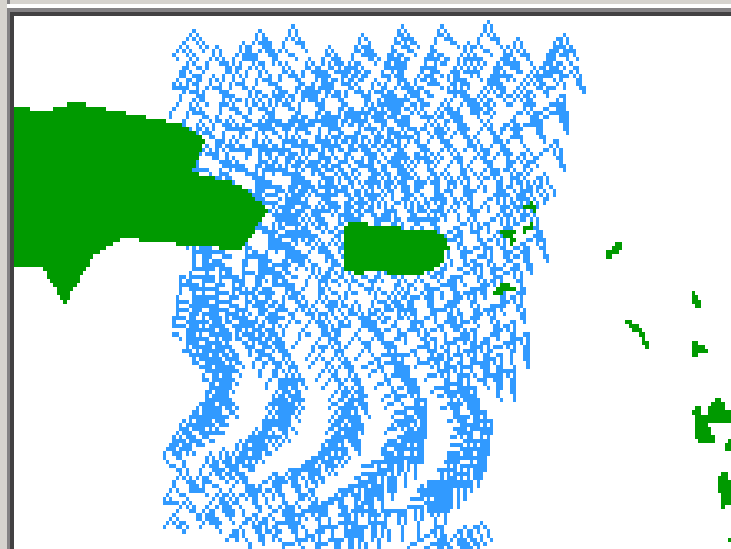
Probability Grid [11/23/200] View Time: 220300Z NOV 2008 Interval: 1 hrs 0 mins

NAM (NORTH AMERICAN MESO) IS USED FOR WINDS

- EDS
- Cached
- Manual

- ↓ NAM
- ↓ GFS
- ↓ FNMOC World

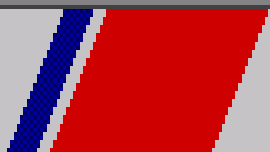
Get EDS
Data



- 211100Z NOV 08
- 211200Z NOV 08
- 211300Z NOV 08
- 211400Z NOV 08
- 211500Z NOV 08
- 211600Z NOV 08
- 211700Z NOV 08
- 211800Z NOV 08
- 211900Z NOV 08
- 212000Z NOV 08

Confidence Low

< Back



Reset

Exit

Next >

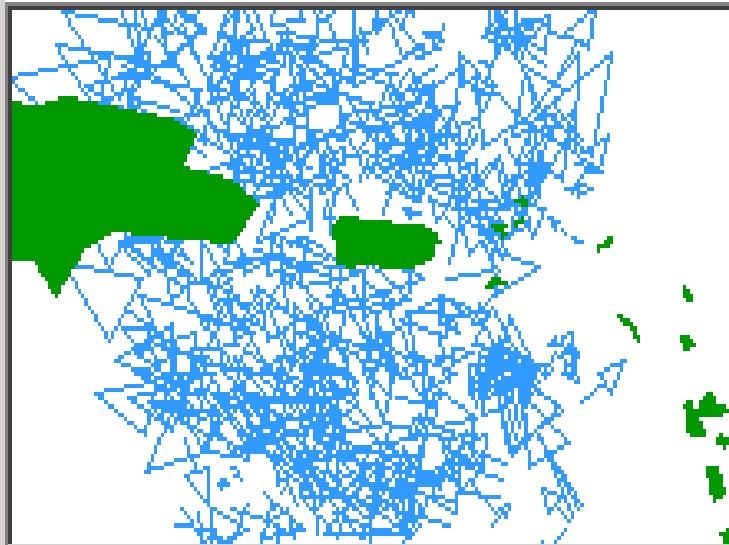
NCOM (Navy Coastal Ocean Model) BIG IMPROVEMENT OVER MARIANO DATA BASE

- EDS
- Cached
- Manual

- HYCOM
- Aggregated NCOM, AdCirc**
- NCOM
- MARIANO
- ADCIRC East

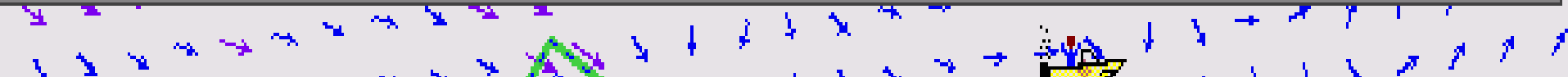
Get EDS
Data

SEA CURRENTS



- 211100Z NOV 08
- 211200Z NOV 08
- 211300Z NOV 08
- 211400Z NOV 08
- 211500Z NOV 08
- 211600Z NOV 08
- 211700Z NOV 08
- 211800Z NOV 08
- 211900Z NOV 08
- 212000Z NOV 08

HYCOM (Hybrid coordinate ocean model) DATA NOW AVAILABLE FOR PUERTO RICO



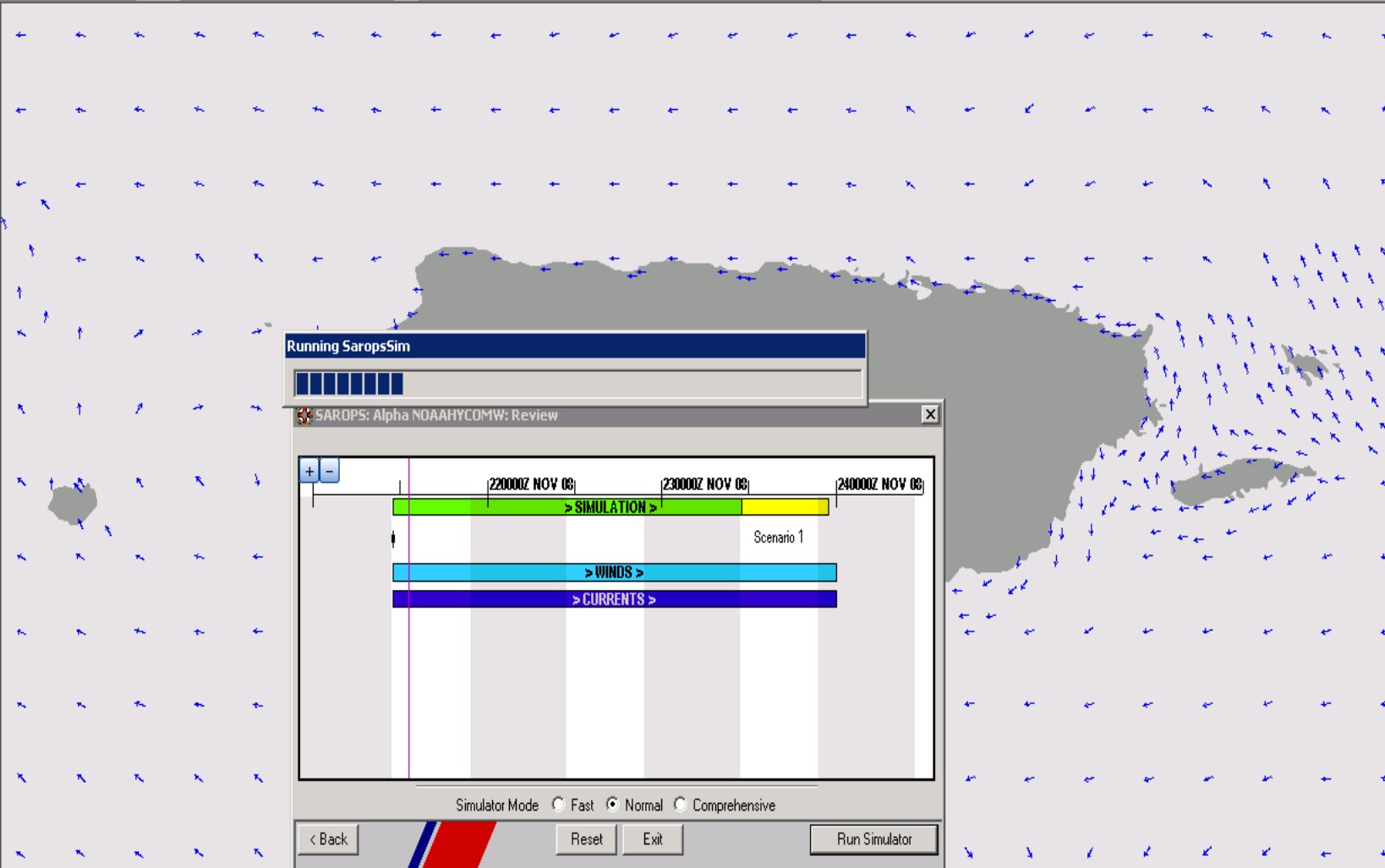
1:1,000,000

Layers

- Run ALPHA_NOAAHY
- SLDMBs
 - SLDMBS_200811
 - SLDMBS_200811
 - SLDMBS_200811
- <all other val
- Buoynum
 - 38998
 - 43280
 - 43283
 - 43364
 - 43376
- CMF Base Map

Cases

- NOAAHYCOMW
 - DMB
 - DSC
 - Flares
 - Patterns
 - Quick Overlays
 - Disabled Vessel
 - Untitled Ring/Brg
 - SAROPS
 - Alpha NOAAHY
 - SARSAT



Running SaropsSim

SAROPS: Alpha NOAAHYCOMW: Review

Time	Simulation	Winds	Currents
220000Z NOV 08	> SIMULATION >	> WINDS >	> CURRENTS >
230000Z NOV 08			
240000Z NOV 08			

Scenario 1

Simulator Mode: Fast Normal Comprehensive

< Back Reset Exit Run Simulator

211100Z NOV 2008 232300Z NOV 2008

Probability Grid [11/23/200] View Time 220300Z NOV 2008 Interval: 1 hrs 0 mins

**SAROPS DRIFT SCENARIO
20 FT SKIFF ADRIFT 5NM SOUTH OF CAJA DE MUERTOS
48 HR DRIFT TIME**

Cases

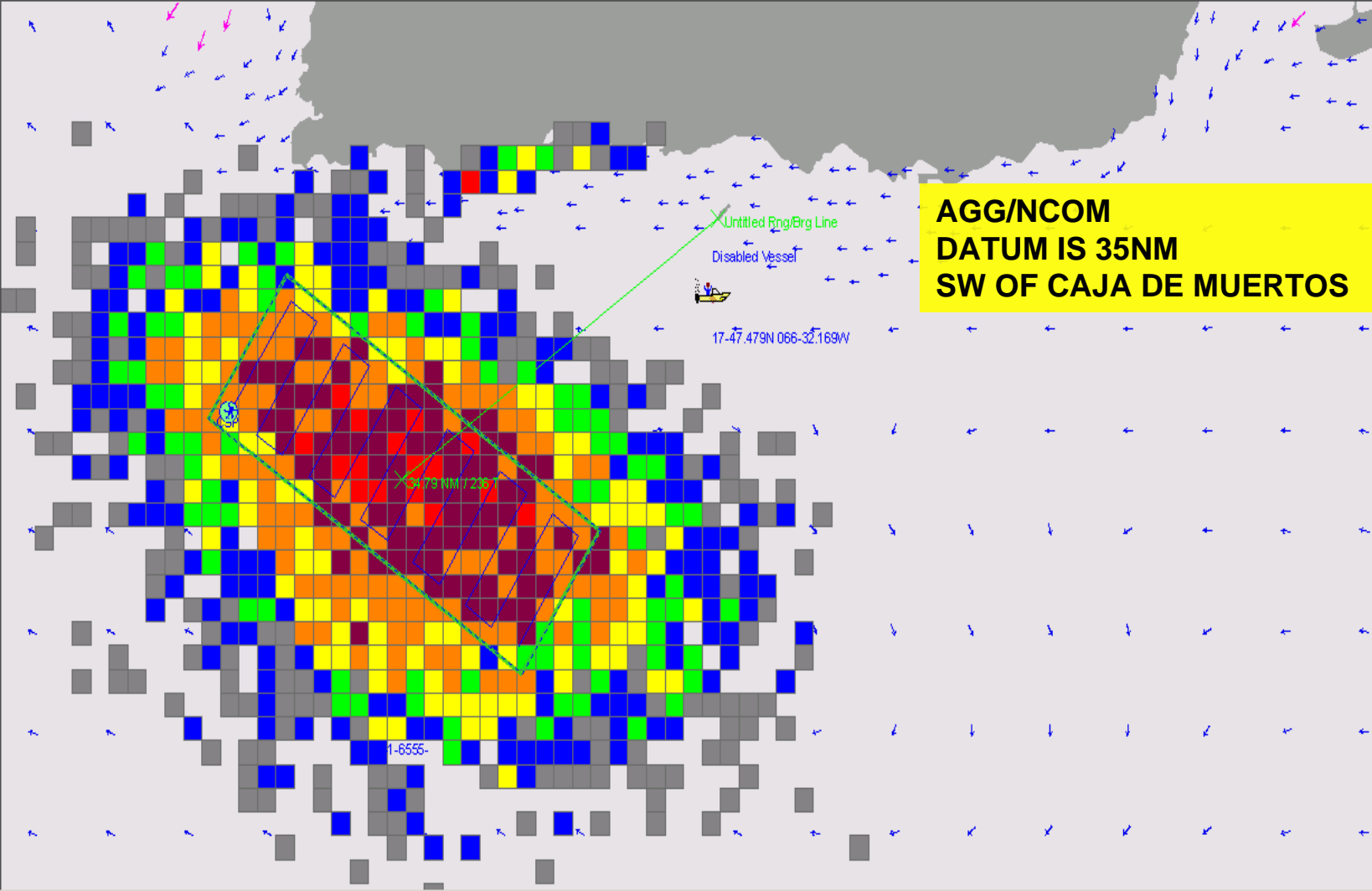
- [-] NCOM_26_SEP
- [-] HYCOM_26_SEP
- [+] NOAAHYCOMW
 - [-] DMB
 - [-] DSC
 - [-] Flares
 - [-] Patterns
 - [-] Quick Overlays
 - [x] 60% Disabled \
 - [x] Untitled R
 - [-] SAROPS
 - [x] Alpha NO.
 - [-] SARSAT

SAR Tools

Layers

- [x] Run ALPHA_NOAAHY
- [x] Raster Charts
- [x] CMF Base Map

Display



**AGG/NCOM
DATUM IS 35NM
SW OF CAJA DE MUERTOS**

1:1,000,000

Cases

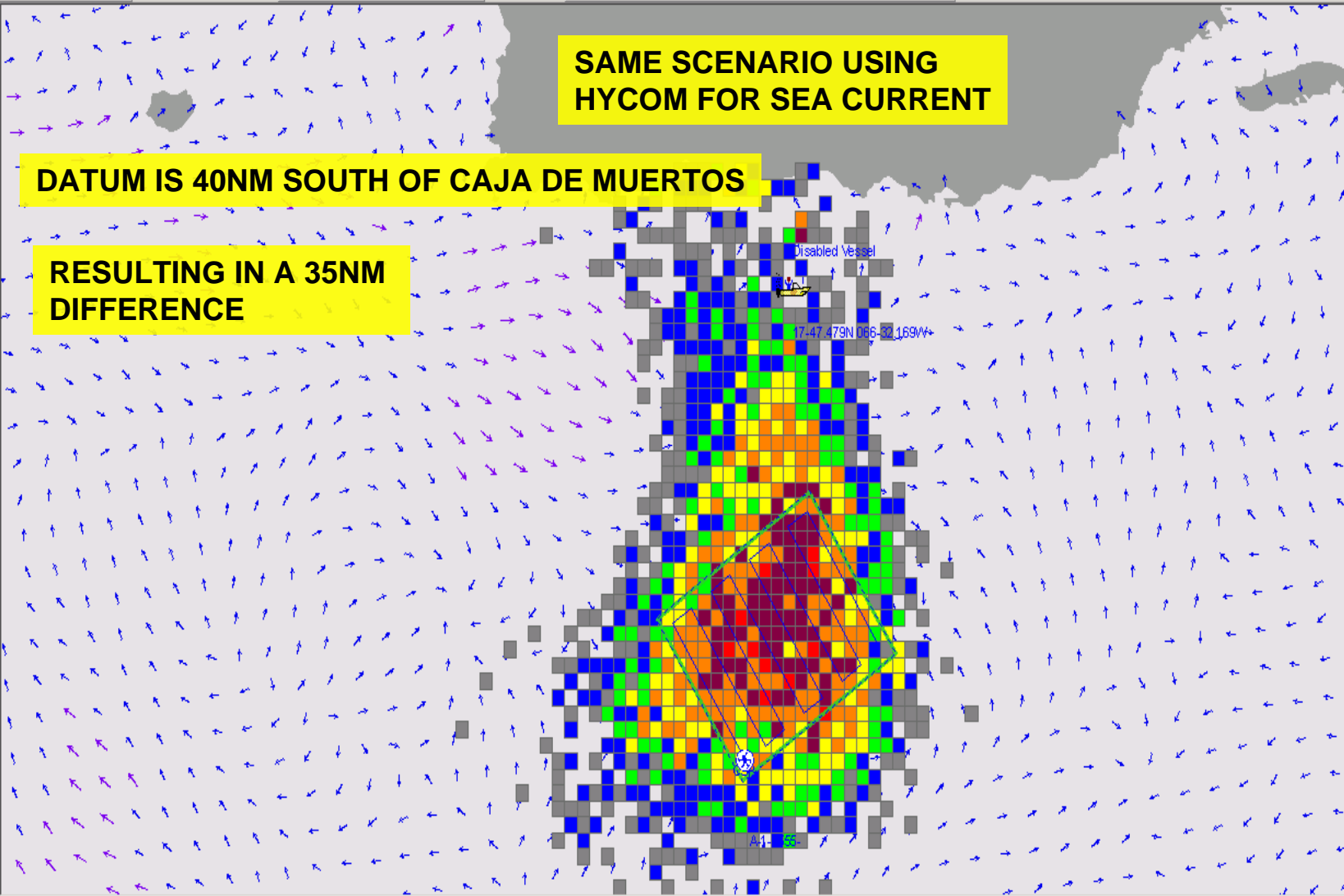
- NCOM_26_SEP
- HYCOM_26_SEP
- NOAAHYCOMW
 - DMB
 - DSC
 - Flares
 - Patterns
- Quick Overlays
 - Disabled \
- SAROPS
 - Alpha NO.
 - SARSAT

SAR Tools

Layers

- Run ALPHA_NOAAHY
- Raster Charts
- CMF Base Map

Display



1:2,345,049

Layers

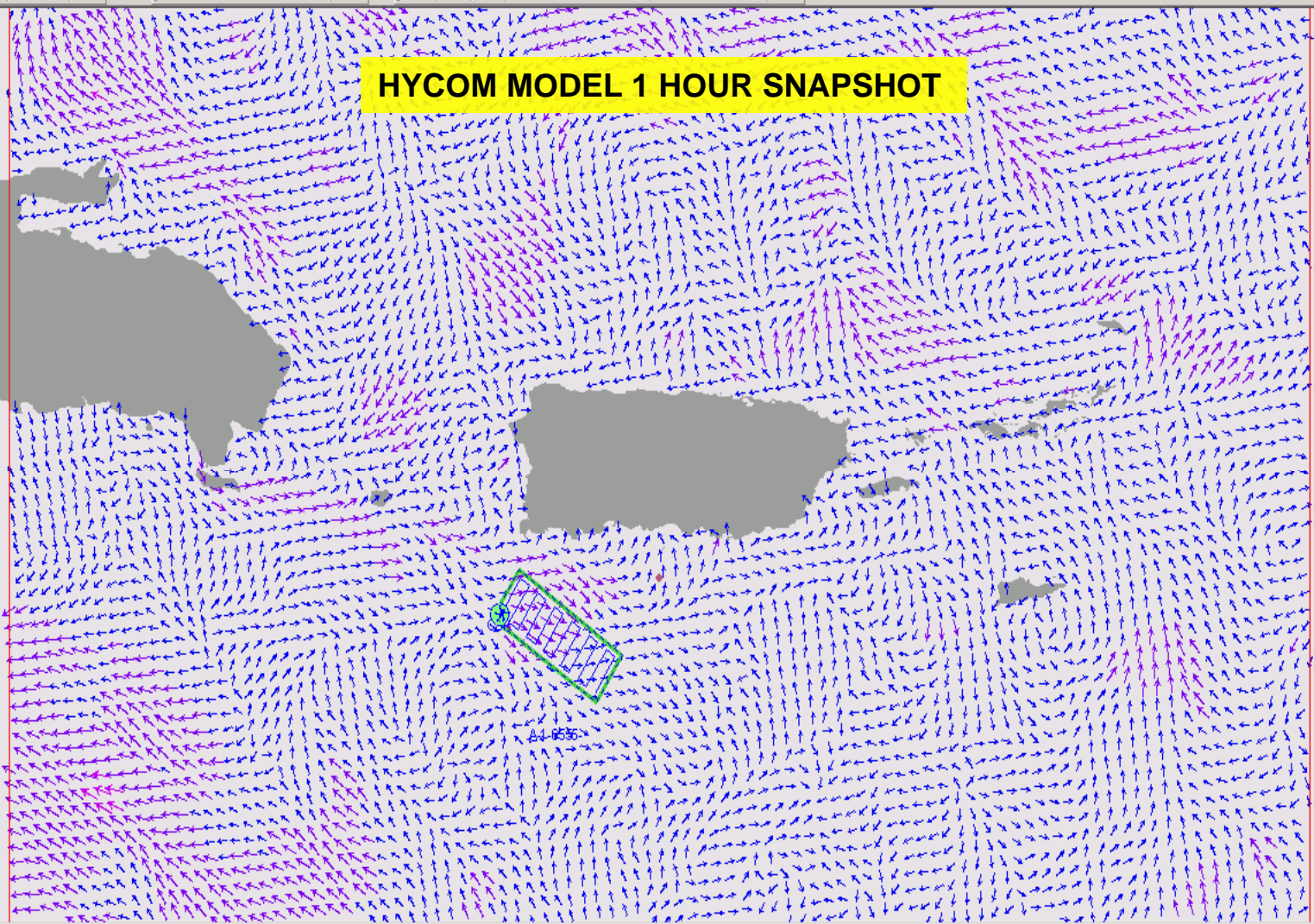
- Run ALPHA_NOAAHY
- SLDMBs
- SLDMBS_200811
- SLDMBS_200811
- SLDMBS_200811
- <all other val
- Buoynum
 - 38998
 - 43280
 - 43283
 - 43364
 - 43376
- CMF Base Map

Display

Cases

- NOAAHYCOMW
 - DMB
 - DSC
 - Flares
 - Patterns
 - Quick Overlays
 - Disabled Vessel
 - Untitled Ring/Brc
 - SAROPS
 - Alpha NOAAHYC
 - SARSAT

SAR Tools



211100Z NOV 2008 232300Z NOV 2008

Probability Grid [11/23/200] View Time 231100Z NOV 2008 Interval: 1 hrs 0 mins

Layers

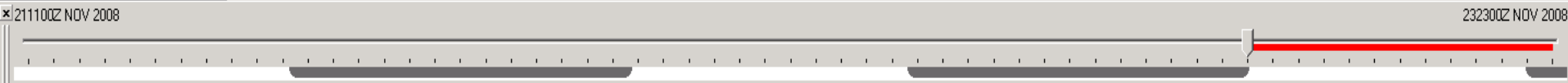
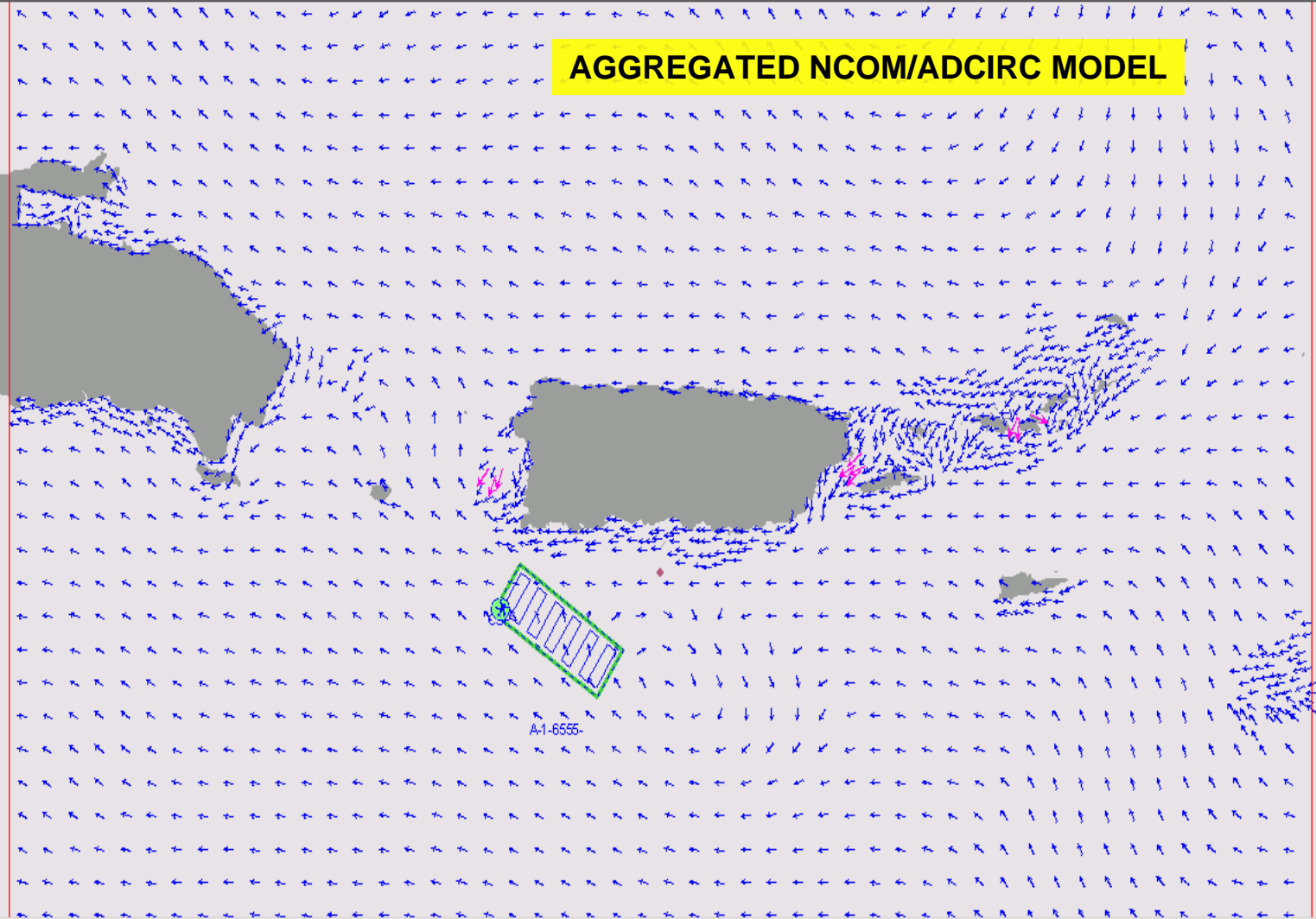
- Run ALPHA_NOAA
- Area of Interest
- Patterns
- Run Features
- Particles [11/23/2008]
- Probability Grid
- Currents [11/23/2008]
 - NCOM,AD
 - 0 - 1 (Knot)
 - 1 - 2 (Knot)
- Winds [11/23/2008]
- SLDMBs
 - SLDMS_2008
 - SLDMS_2008

Display

Cases

- NOAAHYCOMW
 - DMB
 - DSC
 - Flares
 - Patterns
- Quick Overlays
 - Disabled Vessel
 - Untitled Ring/Brg
- SAROPS
 - Alpha NOAAHYCOM
- SARSAT

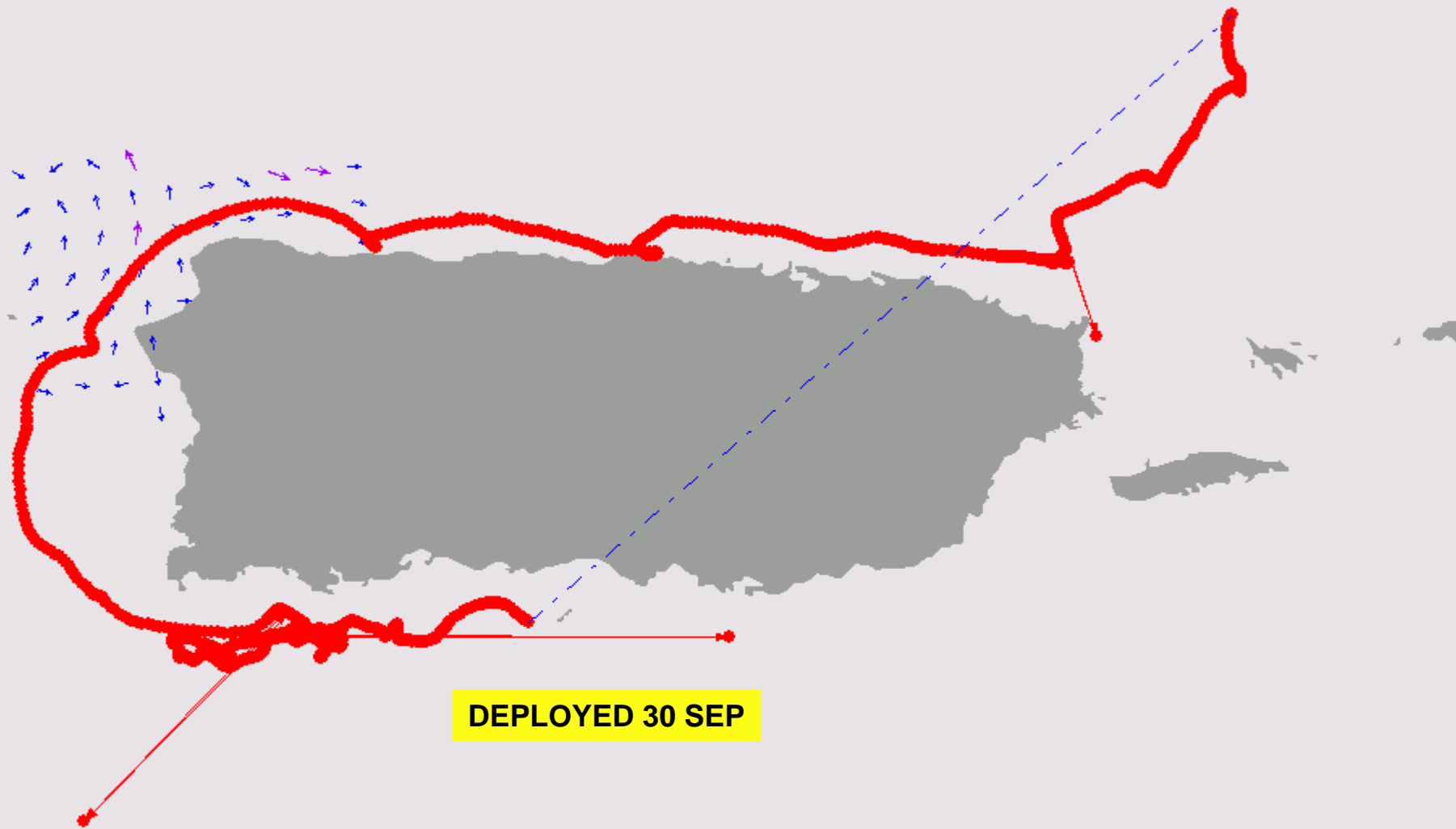
SAR Tools



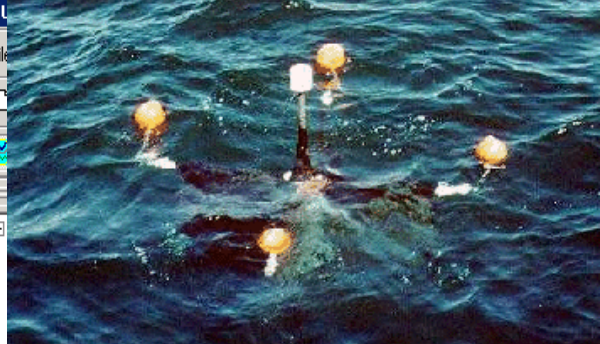
SELF LOCATING DATUM MARKER BUOY



30 DAY SLDMB DRIFT (38715)



DEPLOYED 30 SEP



SAROPS SEA CURRENT (AGG) COMPARED WITH SLDMB

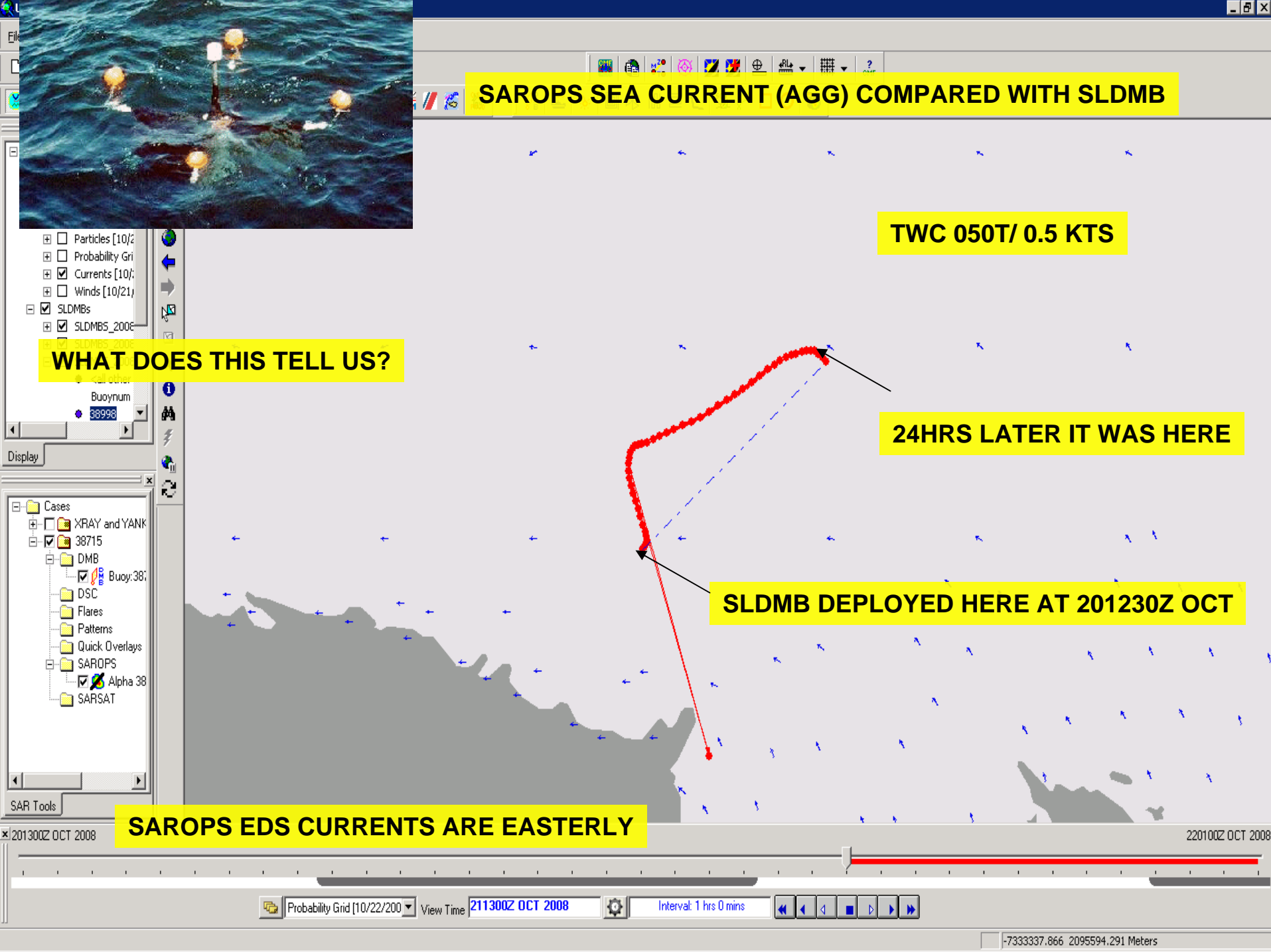
TWC 050T/ 0.5 KTS

WHAT DOES THIS TELL US?

24HRS LATER IT WAS HERE

SLDMB DEPLOYED HERE AT 201230Z OCT

SAROPS EDS CURRENTS ARE EASTERLY

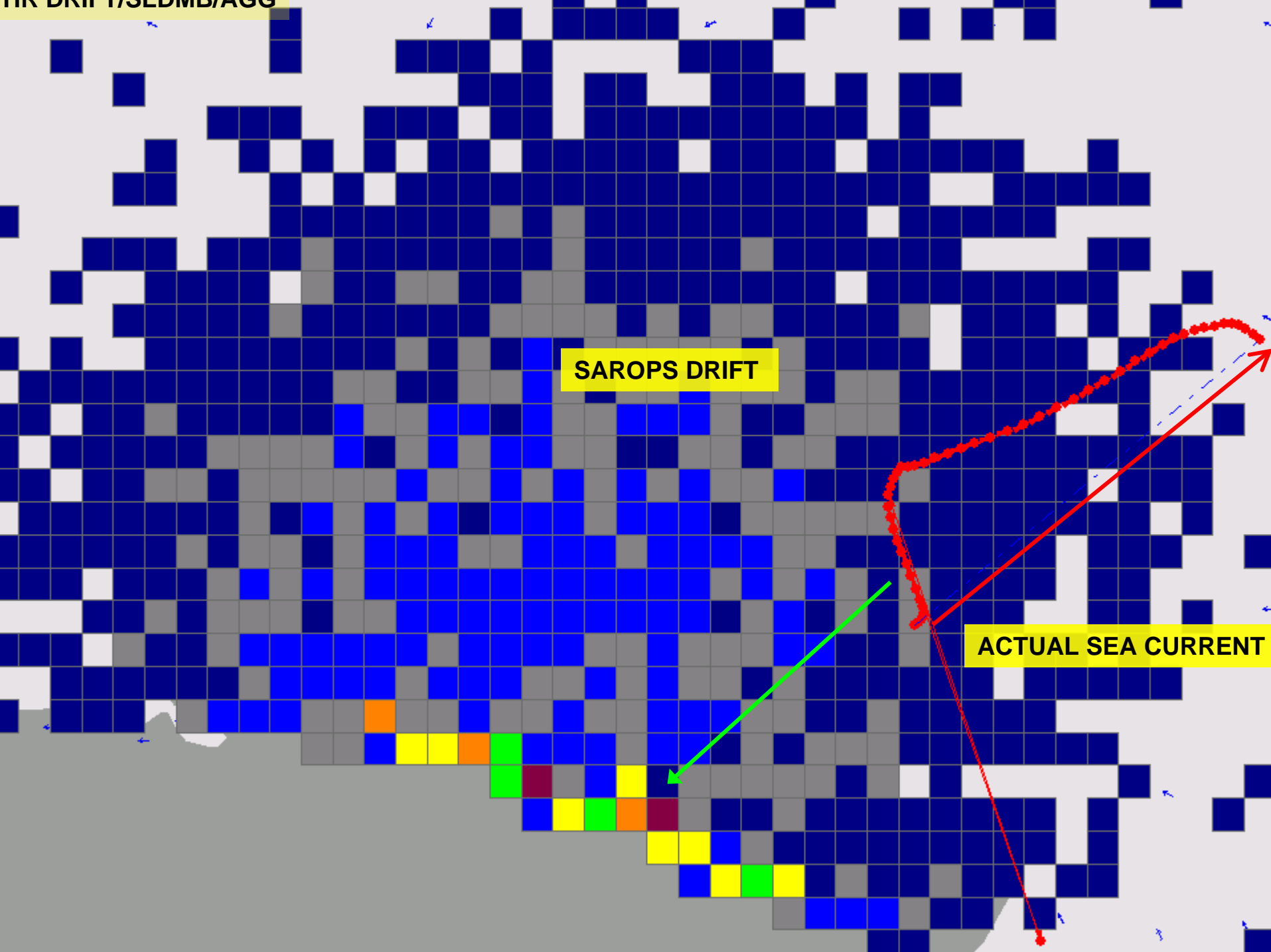


201300Z OCT 2008

220100Z OCT 2008

Probability Grid [10/22/200] View Time 211300Z OCT 2008 Interval: 1 hrs 0 mins

-7333337.866 2095594.291 Meters



SAROPS DRIFT

ACTUAL SEA CURRENT

1:312,945

Layers

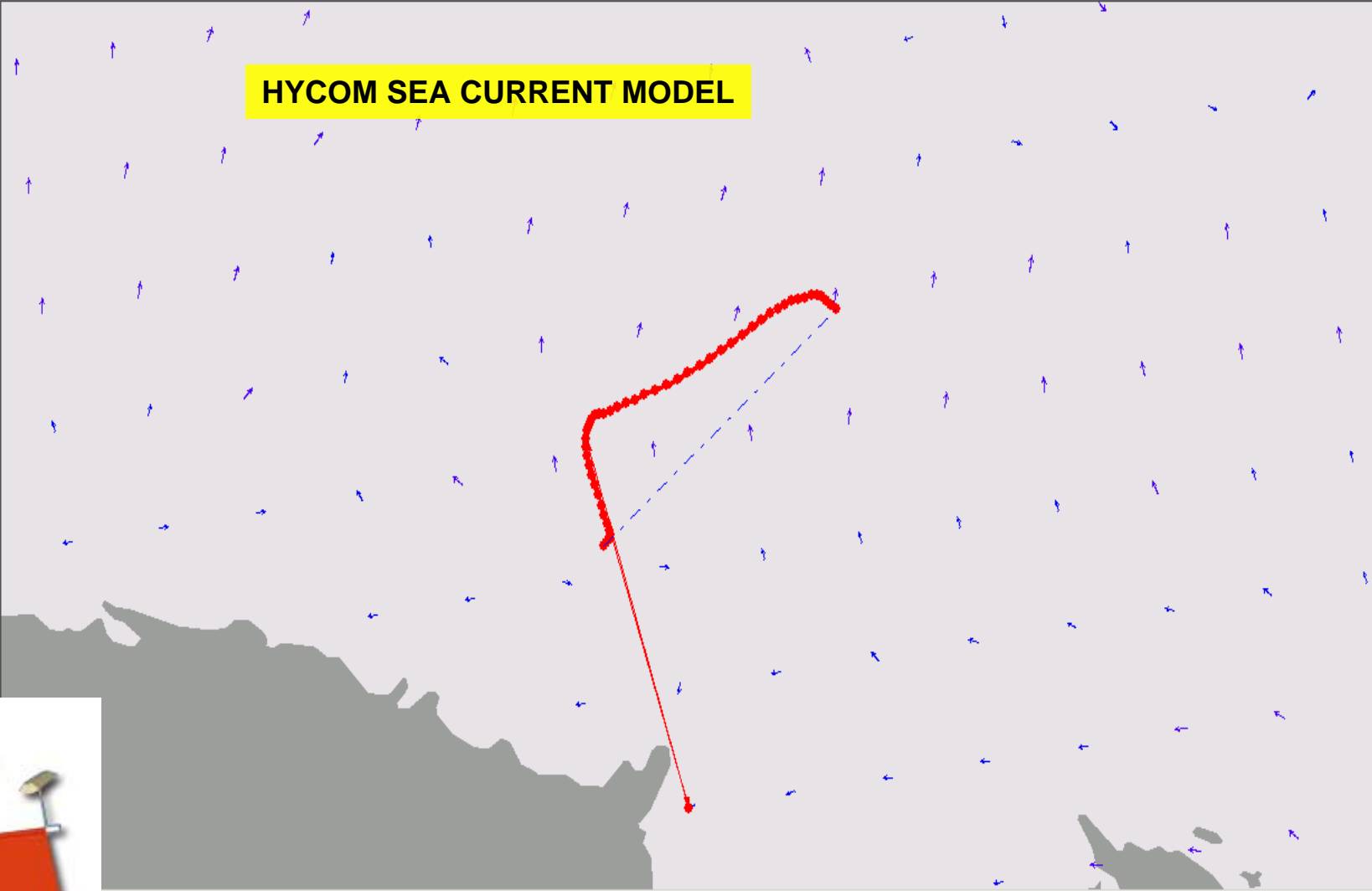
- Run ALPHA_38715
- SLDMBs
 - SLDMBS_200811:
 - SLDMBS_200811:
 - SLDMBS_200811:
 - <all other val
 - Buoynum
 - 38998
 - 43280
 - 43283
 - 43364
 - 43376
- CMF Base Map

Display

Cases

- XRAY and YANK
- 38715
 - DMB
 - Buoy:38:
 - DSC
 - Flares
 - Patterns
 - Quick Overlays
 - SAROPS

HYCOM SEA CURRENT MODEL



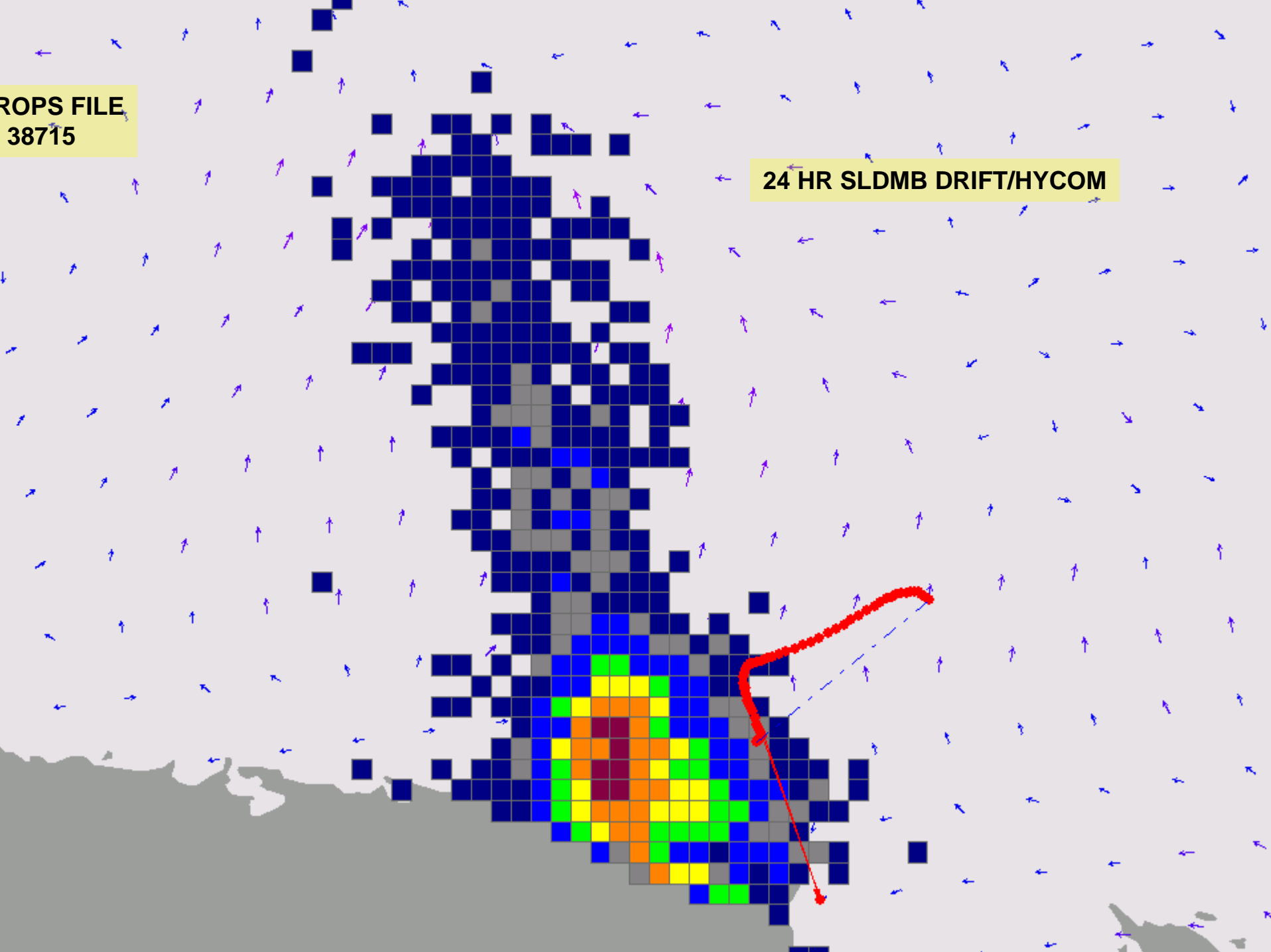
220100Z OCT 2008



Probability Grid [10/22/200] View Time **211300Z OCT 2008** Interval: 1 hrs 0 mins

PROPS FILE
38715

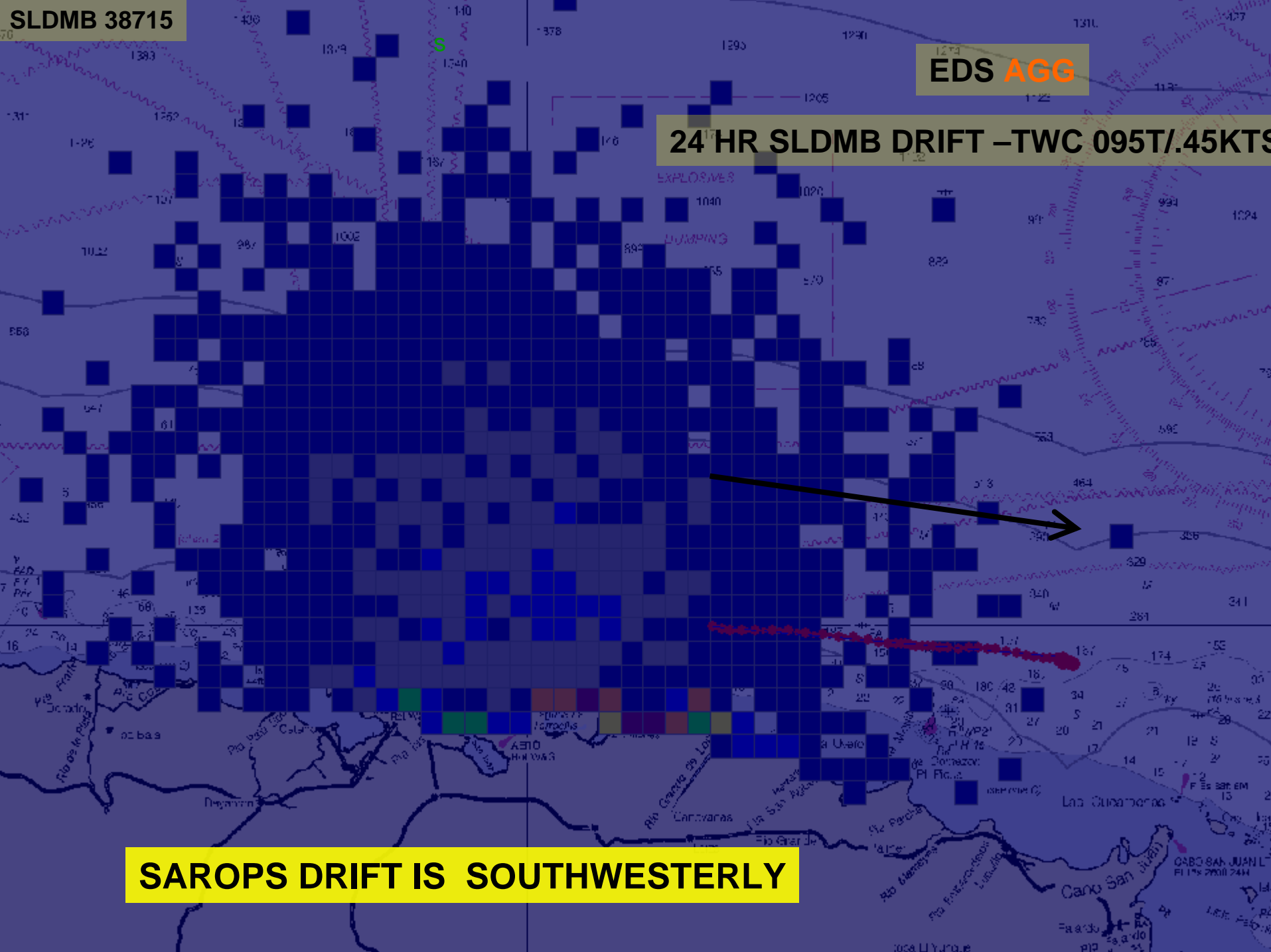
24 HR SLDMB DRIFT/HYCOM



SLDMB 38715

EDS AGG

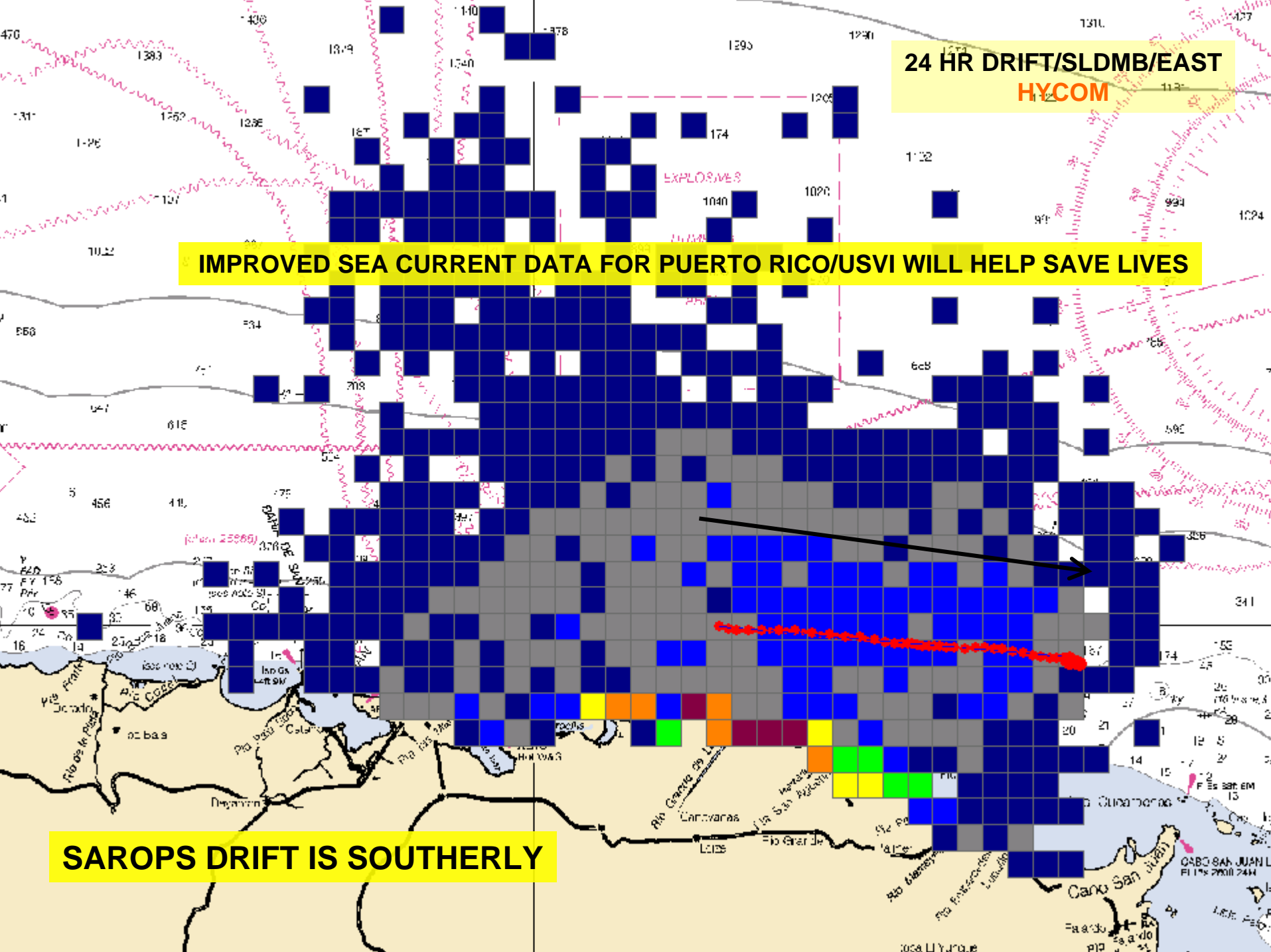
24 HR SLDMB DRIFT -TWC 095T/.45KTS



SAROPS DRIFT IS SOUTHWESTERLY

24 HR DRIFT/SLDMB/EAST
HYCOM

IMPROVED SEA CURRENT DATA FOR PUERTO RICO/USVI WILL HELP SAVE LIVES



SAROPS DRIFT IS SOUTHERLY