

Minutes of DYNAMO briefing to the IAG

10 am – 12 pm, September 30, 2009, NSF, Washington DC

Participants:

DYNAMO: Chidong Zhang, Chris Fairall, Jim Moum, Socorro Medina, and Steve Rutledge (by telecon)

NSF: Eric DeWeaver (NSF contact), Eric Itsweire, Jay Fein, Linda Goad, Steve Nelson, and Brad Smull

ONR: Dan Eleuterio, Scott Harper, and Tim Schnoor

NOAA: Jin Huang, Jim Todd, and Steve Meador (by telecon)

NCAR/EOL: Scott Ellis, Tammy Weckwerth, Jose Meitin, J. Vivek, Brigitte Baeuerle (All by telecon)

The briefing started with an around-table introduction of all participants.

C. Zhang gave a presentation highlighting the progress of DYNAMO planning and the facility needs. Other DYNAMO participants helped present various aspects of the CINDY/DYNAMO observation networks and DYNAMO instrumentation. Following the presentation several issues were discussed around two main topics: instrumentation logistics and timeline.

SMART-R

S. Nelson and B. Smull pointed out that one of the SMART radars (SMART-R) has been upgraded with dual polarimetric capabilities. If this is confirmed and if polarimetric capabilities are desirable, this SMART-R might be considered for DYNAMO.

(Note: C. Schumacher, the SMART-R PI, subsequently clarified the issue. The SMART-R operated by U Texas A&M and planned to be deployed to DYNAMO is not polarimetric. The other SMART-R operated by U of Oklahoma is.)

JAMSTEC would like to communicate with the appropriate contact in NSF regarding sharing the deployment cost for SMART-R.

S-Polka

J. Vivek discussed the S-Polka status. The main upgrade to the S-band will be finished in Jan-Feb 2010. Then they will focus on the Ka-band upgrade. A new Ka-band magnetron has been ordered and is expected to arrive at NCAR around Feb-Mar 2010. After it is installed, it will take some 10 months to integrate the system with the S-band. They expect to have functional operations of the Ka-band by May 2011. The issues that are taking precedence at EOL are: the W-band radar development and the S-Pol (S-band) upgrade. After the OFAP in Spring 2010, the priorities could change depending on the outcomes.

B. Baeuerle is concerned about whether we will be allowed to deploy the S-Polka and have housing, etc. in Diego Garcia. EOL will need help from ONR for this. D. Eleuterio mentioned that this issue is not known yet, however ONR has made some preliminary inquiries. He suggested to wait until we know more about the experiment. Also, military personnel at the Diego Garcia base changes with time. About 18 months before the experiment is a good time to further pursue this.

Another issue is the possible frequency interference between S-Polka and airport radars. S-Polka hasn't been operated next to an airport before. D. Eleuterio suggested to find out what are the issues in deploying S-Polka near a US airport in general, i.e., codes, interference issues, etc, and make a plan based on that. EOL will pursue this.

A related issue is how the equipment is going to be shipped to Diego Garcia and whether it can be flown in by military aircraft. This has been done before for the S-Polka and worked well.

B. Baeuerle suggested that we should think of an alternative plan in case Diego Garcia doesn't work out. Male in the Maldives (north of Gan) was mentioned before; however it will have similar airport-radar interference issues.

Cloud radars

There was some discussion about the cloud radars at the same sites of precipitation radars, which will be able to observe clouds in both suppressed and active phases of the MJO. This will be the case for R/V Ron Brown, R/V Mirai, Gan Island (with the AMF2 W-band radar and SMART-R), and Diego Garcia (S-Polka after Ka-band upgrading).

TOGA radar and UNOLS ship (possible Revelle)

S. Rutledge gave an overview of the instrument and the timeline of installation on a UNOLS ship. A critical time for the installation is Jan-Feb 2011, when they need to know which ship will be used and start planning the installation. E. Itsweire was concerned with the deck space that the radar would take up and on its potential impact on other projects using the ship in the interim between the radar installation date and the start of DYNAMO. S. Rutledge suggested that after the installation the radar will be ready to operate during other projects.

L. Goad mentioned that the overall UNOLS ship schedule for the DYNAMO period will be made on Sep-Oct 2010. Some previously funded projects that need ships have been postponed to 2011 that will consume part of the total ship time in that year. She pointed out that the time for the radar installation (about one week) at a foreign port needs to be paid for.

L. Goad is also concern with piracy issues in the Indian Ocean. West of 60E is currently a region sensitive to this issue and no UNOLS ship is allowed to be there. The DYNAMO site is far eastward from this region. The office of naval intelligence has a weekly report on this issue and the decisions on individual cruises are partly based on this report. D. Eleuterio pointed out that this report changes in very short time scales so this is something we can't worry about at this point.

R/V R. Brown

S. Meador mentioned that about one half to two thirds of the R. Brown's time is taken up by projects/functions that are conducted annually. He suggested that it might not be very likely to get two 40-days legs, in particular because there are some issues with the ship maintenance and crew. NOAA scheduling for the DYNAMO period starts in Jan 2010. C. Fairall has already requested 30 days of the R. Brown for DYNAMO. He plans to re-request 80 days for either the R. Brown or another class 1 NOAA ship.

General ship issues

It was a consensus that it does not make any sense to send two US ships to the Indian Ocean for DYNAMO and that some coordination between agencies is needed to optimize the use of ship time. E. Itsweire brought up the issue of how additional moorings are going to be collected after the field experiment. C. Zhang mentioned that they can be retrieved by either the DYNAMO ships immediately after the field campaign or by a different ship later during a routine RAMA maintenance cruise.

It was suggested that it would be beneficial to have some coordination between the Australian ship PIs and ONR.

ONR Air-Sea field experiment

ONR maintains the flexibility on where to conduct their air-sea interaction experiment. The possibility of bringing an aircraft (A/C) was mentioned, but cost issue needs to be addressed first.

Proposal timeline

The main deadlines of concern discussed at the briefing are shown below

	NSF	NSF OCE	NSF ATM	NOAA
Jan 2010	EDO and SPO due			
Feb 2010		proposals due		
May 2010	EDO review by OFAP			
Jun 2010	decision	decision		
Jul 2010			proposals due	
Sep 2010				proposals due
Jan-Feb 2011			decision	
May 2011				decision

The SPO and EDO review schedule is fixed. All subsequent timelines apply only if NSF encourages full proposals in June 2010. C. Zhang requested if it would be possible for NSF ATM to decide on the individual proposals in Dec 2010 to give PIs more time for field preparation. It seems possible to obtain verbal confirmation at this time but the funds won't be available until later.

J. Moum pointed out that the current timeline is very tight to get potentially two 40-days legs of ship-borne air-sea interaction measurements ready. Ideally, he would like to know about the ship and legs by Summer 2010 for his planning.

As seen in the timeline, the proposals of the OCE are due before the decision on DYNAMO. E. Itsweire pointed out that this would be an issue with the OCE reviewers because they would not know the fate of DYNAMO. He suggested that the OCE proposals could be submitted later to have better synchronization and coherency in the review process between ATM and OCE. But this would give OCE PIs even shorter time to prepare for field operation.

Another issue discussed was whether it would be possible to have NOAA proposals submitted and decided on at the same times for NSF ATM proposals to give PIs equal time for field preparation. J. Todd mentioned that it might be possible to put out an announcement for DYNAMO separated from the NOAA regular annual proposal cycle.