FINAL REPORT:

ONR Grant: N00014-01-1-0834
Web-based Data Archive for the High Wind CBLAST Project

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20060203 062

REPORT DOCUMENTATION PAGE

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (From - To)
01/30/06	Final	05/01/01-09/30/05

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
WEB Based Data Archive for the High Wind C-Blast Project	N00014-01-1-0834

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)	5d. PROJECT NUMBER
Stephen J. Frasier	

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	8. PERFORMING ORGANIZATION REPORT NUMBER
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9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
Same as above	

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT

APPROVED FOR PUBLIC RELEASE

13. SUPPLEMENTARY NOTES

14. ABSTRACT

This report summarizes activities performed and results obtained for the period 05/01/01-09/30/05. This grant suported implementation of a web server and data archive to house data sets collected during the Coupled Boundary Layers/Air-Sea Transfer (CBLAST) Hurricane component. This project was initiated by Dr. James Carswell. Upon his departure from the University of Masschusetts, it was transferred to Prof. David J. McLaughlin in 2001. It was subsequently transferred again to Prof. Stephen J. Frasier in 2003 when McLaughlin resigned as PI.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Stephen J. Frasier
				4	**19b. TELEPHONE NUMBER** (Include area code) 4135454582

1 Introduction

This report summarizes activities performed and results obtained under grant N00014-01-1-0834, "Web-based Data Archive for the High-Wind CBLAST Project" for the period 24 May 2001 to 30 Sept 2005. This grant supported implementation of a web server and data archive to house data sets collected during the Coupled Boundary Layers/Air-Sea Transfer (CBLAST) Hurricane component. This project was initiated by Dr. James Carswell. Upon his departure from the University of Massachusetts, it was transferred to Prof. David Mclaughlin in 2001. It was subsequently transferred again to Prof. Stephen Frasier in 2003 when Mclaughlin resigned as PI to direct an Engineering Research Center.

2 Goals & Objectives

The objective of this effort is to develop and maintain a web archive for data sets collected during CBLAST.

3 Approach

A web site and data archive was created at **http://cblast.ecs.umass.edu**. The front page of the web archive is shown in Figure 1. This is a dedicated Linux server with several hundred GB of storage capacity running the Apache web server.

4 Work Completed: Summary of Activities

The site includes links describing the experiments, goals, instruments used, participating organizations, and other background information. Access to the data archive is currently password protected (username: cblastdownload, password: interaction04) but will be made public in the near future, once CBLAST investigators have completed their initial analyses.

Initially, a "web-form-based" interface was implemented to access the site, to upload data, and to retrieve data. However, in 2003 it was found that most investigators disliked this interface, preferring instead a simple "ftp-like" archive. As a result the form interface was removed. Data are browsable directly from the site upon password authentication. Data are uploaded to the site via the following process:

1. upload via scp: "scp -o Port=2022 datafiles cblast@cblast.ecs.umass.edu: /"

2. enter pass "airsea2003". All data files are uploaded into a directory /upload on the cblast server.

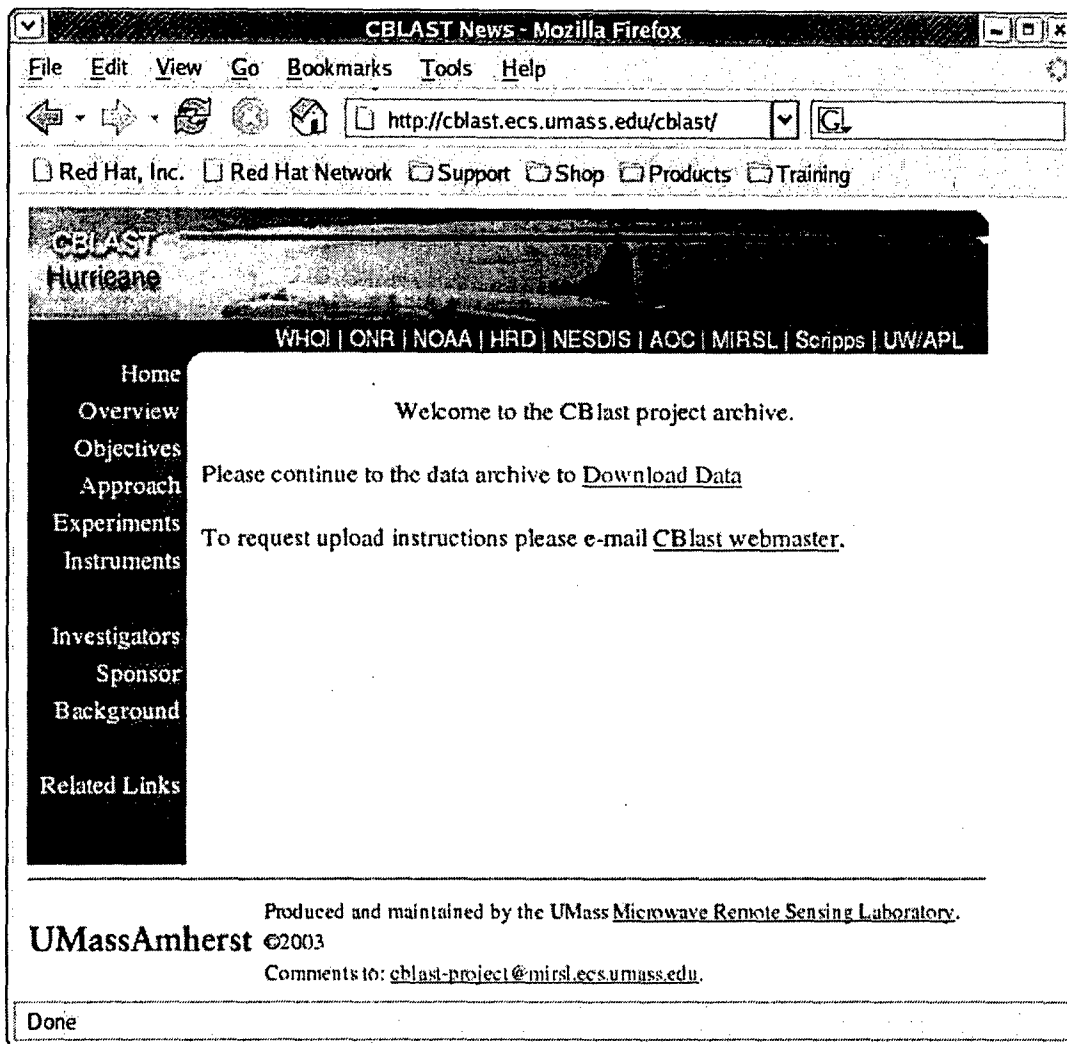3. email to cblast-project@mirsl.ecs.umass.edu to notify of upload

Figure 1: Screen shot of CBLAST web archive front page

A file naming convention was encouraged as outlined below. Most data files conform to this, and if not, are sufficiently self explanatory.

Filenames should conform to "YYYYMMDDhhmmss.DESC.TYPE.EXT" where

YYYYMMDDDhhmmss is the UTC start time of the data file

DESC is a text descriptor of your instrument, eg. "sfmr", "bat-probe", etc.

TYPE is either the string "data" for data (files containing actual numbers) or "plot" (for summary plots, images, etc.)

EXT is the extension: txt (ascii), nc (netCDF), jpg, png (plots/images)

Finally, if the data compressed reasonably well – they may be gzipped resulting in a trailing '.gz' on the filename.

Data are now stored directory structures accessible by instrument, by year, or by experiment. Instrument descriptoins and "Readme" files are included as provided by investigators. To date, most of the CBLAST investigators have uploaded at least some of their data sets to this archive. A few have elected to keep data at their own sites, so links are available to them. The most complete set of data on the site is from Hurricane Isabel in September 2003.

5 Publications

None