Ocean Battlespace Sensing (OBS) S&T Department Annual Report

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LONG-TERM GOALS

Briefly identify your top-level goals within which your effort exists.

OBJECTIVES

Scientific or technological objectives of this effort. Demonstrate the use of an itemized list.

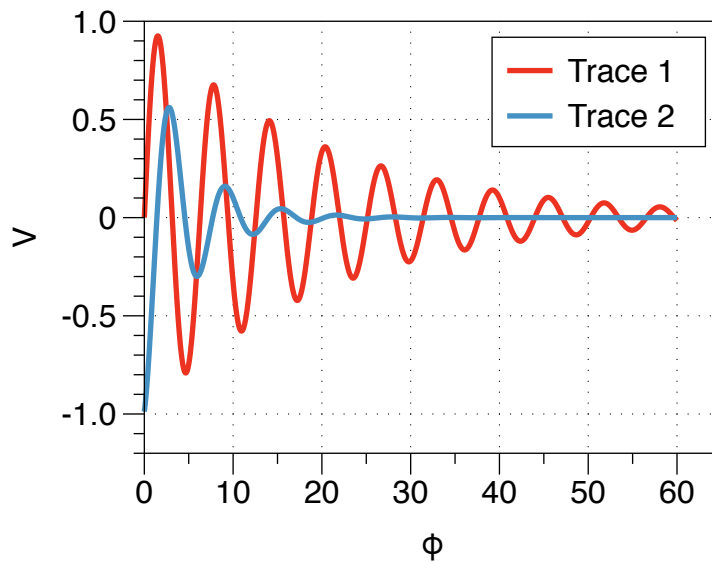- Objective 1

- Objective 2

APPROACH

Describe your proposed technical approach. Briefly identify the key individuals participating in this work at your own or other organizations and the roles they play. Look at the Navier-Stokes equations, as given by Schlichting and Gersten (2000):

$$\rho \frac{\partial D \vec{v}}{Dt} = \vec{f} - \mathrm{grad}\, p + \mathrm{Div}\, \tau \tag{1}$$

with

$$\tau = \mu \left(2\dot{\varepsilon} - \frac{2}{3} \delta \,\mathrm{div}\, \vec{v} \right) \tag{2}$$

where δ is the Kronecker unit tensor $\left(\delta_{ij} = 1\, for\, i = j, \delta_{ij} = 0\, for\, i \neq j \right)$.

Figure 1: An example graphic. In general, you should use a long caption to describe the graphic in words. In this case, we use a long caption to ensure that all the caption text is correctly centered under the graphic.

WORK COMPLETED

Actual tasks completed or technical accomplishments.

RESULTS

Describe meaningful technical results achieved in the report fiscal year. Make the significance clear. Emphasize what was learned, not what was done. This should be a summary of significant results and conclusions, and, especially, any "new capabilities" generated.

Figure 1 is a test graphic.

IMPACT/APPLICATIONS

Potential future impact for science and/or systems applications

TRANSITIONS

An S&T product has sufficiently matured and some organization (acquisition, industry, customer) outside of ONR is doing something with it. "Product" includes equipment, prototypes, original ideas/theories, and equations. Include 'who' that 'organization' is, how they are using it, and when it is expected to be used. It is of special interest if it is already being used or has had acquisition funds committed. Examples are 'products' entering acquisition, being used by industry, or being used by other S&T organizations such as DARPA).

RELATED PROJECTS

Identify closely related projects and briefly describe the nature of each relationship (include web links as appropriate/available).

REFERENCES

Schlichting, H. and Gersten, K. (2000). *Boundary Layer Theory*. Springer, Berlin, 8th edition.

PUBLICATIONS

Listing of publications produced during this effort. If you use BibTeX, you can use e.g., bibunits or multibib to insert a second set of references, or just copy the contents of a .bbl file here.

PATENTS

List all patent applications / awards for the project not reported in prior year's reports, or that have been previously reported but whose status has changed. Note at end of item in brackets whether patent has been "GRANTED", for example: "...[granted]", otherwise "pending" will be assumed.

HONORS/AWARDS/PRIZES

List any received and not previously reported. Include recipient, recipient's institution, award 'name', and award sponsor.