

Lab Assignment 7. Minisodar

Objective: Become familiar with active sensor systems through set up, operation., and take down of a minisodar.

Before the Lab Session. YOU MUST HAVE YOUR ANSWERS TO QUESTIONS 1-3 REVIEWED AT THE BEGINNING OF THE LAB OR YOU WILL NOT BE ALLOWED TO START!!!

- Read through pgs. 1-16 of the minisodar manual posted on the class web page.
- *Question 1.* Based on the information in the manual complete the following:

Minimum/ maximum sampling height (m)	Vertical resolution (m)	Wind speed accuracy (m/s)	Wind direction accuracy (+- deg)	Typical Pulse length (m)	Typical Pulse duration (ms)	Beam angle relative to the vertical (deg)

- *Question 2.* List the three primary components of a minsodar and describe their function in a couple sentences each
 - a. _____
 - b. _____
 - c. _____
- *Question 3.* Describe in a couple of paragraphs how horizontal wind velocity is determined from a minisodar. Start from what environmentally is sensed and what the amplitude and frequency of the acoustic pulse measure.
- *Question 4.* What are some of the possible sources of interference at the site? Which ones seemed to be evident during operation of the minisodar?
- *Question 5.* What was the maximum height to which realistic winds were observed? What factors appeared to control the maximum height?
- *Question 6.* How realistic do you think the winds that you observed were?
- *Question 7.* If some usable data was collected, we will provide it to you for some additional graphing and interpretation.

Final Steps

- a. Create a lab report with all of your answers to Questions 1-7 . This must be typed.
- b. Turn your lab report in by the following lecture.