

Quantum Analogs

Name:		Content		Presentation	
		Distribution	Given	Distribution	Given
Abstract	Description of what was done	1	3		
	Accomplishments including key numerical results with uncertainties	2			
	Critical thinking (See note 1 below)			1	2
	Readability (See note 2 below)			1	
Introduction	Discussion of similarities and differences in the physics of acoustics and QM	4	6		
	Motivation	2			
	Critical thinking (See note 1 below)			2	4
	Readability (See note 2 below)			2	
Experimental Procedure	Description of apparatus	4	16		
	Relationship between α , θ & φ for spherical and broken symmetry configurations	4			
	Measurement procedure	4			
	Discussion of potential problems	4			
	Critical thinking (See note 1 below)			2	4
	Readability (See note 2 below)			2	
Results and Analysis	Spectra for spherical cavity with $\alpha = 180^\circ$	4	47		
	Table of measured resonant frequencies with uncertainties and nodal angles	6			
	Comparison of nodal angles with theory	4			
	Spectra at $\alpha = 0^\circ$, 20° and 40° with explanation of the observation	5			
	Polar plots of the acoustic pressure for several resonances with spherical cavity	4			
	Comparison of polar plots with spherical symmetry to theory	6			
	Spectra of $l = 1$ resonances, labeled by m , with 3 mm, 6 mm & 9 mm spacer rings	4			
	Polar plots of the acoustic pressure for split peaks of $l = 1$ with broken symmetry	4			
	Comparison of polar plots with broken symmetry to theory	6			
	Measurement and description of phase relationship for broken symmetry states	4			
	Critical thinking (See note 1 below)			2	4
	Readability (See note 2 below)			2	
Conclusion	Accomplishments	2	3		
	Improvements and future experiments	1			
	Critical thinking (See note 1 below)			2	4
	Readability (See note 2 below)			2	

Note 1: Logical progression, clarity, coherency and thoughtful style that demonstrates significance.

Note 2: Use of transitions, word choice, proper structure and grammatical correctness.

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Other	Figure and table captions with correct placement and text reference	2	7	
	Correct numbering of figures, tables, equations, and pages	2		
	Correct formatting for title, authorship, affiliation and date	1		
	Correct format for references with reference indicators in text	2		
Category Total		75		25
Report Total				
Final Score (with 10 point reduction if late)				

Date Due:

Date Received:

Overall Comments and Suggestions