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Your Name

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Department of Physics

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Abstract

What? Make it snappy! Phasellus id magna. Duis malesuada interdum arcu. Integer metus. Morbi pulvinar pellentesque mi. Suspendisse sed est eu magna molestie egestas. Quisque mi lorem, pulvinar eget, egestas quis, luctus at, ante. Proin auctor vehicula purus. Fusce ac nisl aliquam ante hendrerit pellentesque. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Morbi wisi. Etiam arcu mauris, facilisis sed, eleifend non, nonummy ut, pede. Cras ut lacus tempor metus mollis placerat. Vivamus eu tortor vel metus interdum malesuada.

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Chapter 1

Introduction

Physicists frequently report numerical values to which units are attached. For this purpose, the `siunitx` package is indispensable. When I write $3.24 \times 10^6 \text{ m/s}$, this macro takes care of setting the units in roman font and inserting the necessary small (nonbreaking) space between the number and the units. [7] You can also use its magic on either just the numerical part or just the units part: a number in scientific notation is 1.23×10^4 , but the units we use for mass density are kg/m^3 .

1.1 Time for Nonsense

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tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

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As shown in Fig. 1.1, the component of the incident wave vector lying in the plane of the interface is preserved in both the reflected and refracted waves (Snel's law).

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac

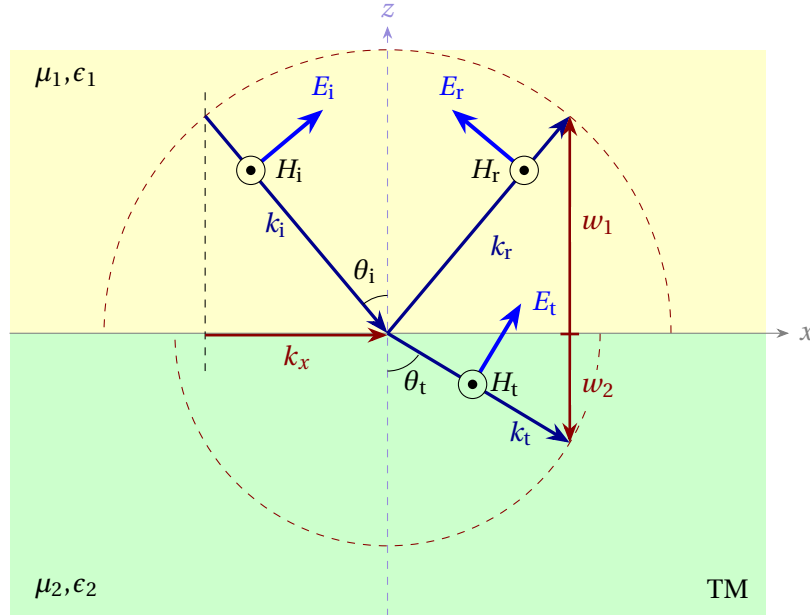


Figure 1.1: Just an example figure.

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1.2 More Gibberish

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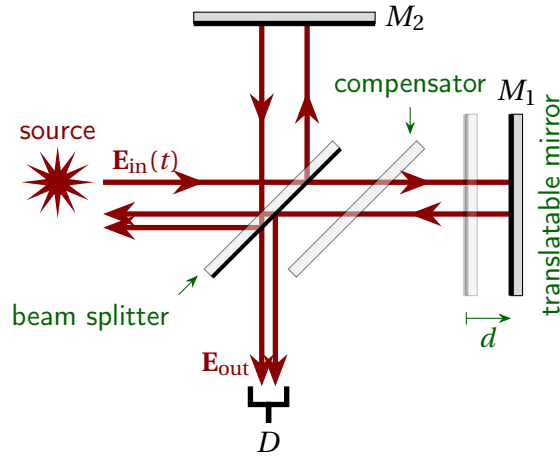


Figure 1.2: In a Michelson interferometer, light from a source encounters a partially reflecting mirror, which splits the wavefront into two beams, each of which is reflected by a flat mirror. (In the figure the reflected beams are shown displaced to distinguish them, but in a real interferometer they are not displaced.) One flat mirror is fixed; the other may be translated along the beam direction to increase or decrease the path length of that arm. A compensator plate in one arm of the interferometer ensures that the two beams arriving at detector D have traveled through the same thickness of glass.

Nulla in ipsum. Praesent eros nulla, congue vitae, euismod ut, commodo a, wisi. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Aenean nonummy magna non leo. Sed felis erat, ullamcorper in, dictum non, ultricies ut, lectus. Proin vel arcu a odio lobortis euismod. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Proin ut est. Aliquam odio. Pellentesque massa turpis, cursus eu, euismod nec, tempor congue, nulla. Duis viverra gravida mauris. Cras tincidunt. Curabitur eros ligula, varius ut, pulvinar in, cursus faucibus, augue.

Nulla mattis luctus nulla. Duis commodo velit at leo. Aliquam vulputate magna et leo. Nam vestibulum ullamcorper leo. Vestibulum condimentum rutrum mauris. Donec id mauris. Morbi molestie justo et pede. Vivamus eget turpis sed nisl cursus tempor. Curabitur mollis sapien condimentum nunc. In wisi nisl, malesuada at, dignissim sit amet, lobortis in, odio. Aenean consequat arcu a ante. Pellentesque porta elit sit amet orci. Etiam at turpis nec elit ultricies imperdiet. Nulla facilisi. In hac habitasse platea dictumst. Suspendisse viverra aliquam risus. Nullam pede justo, molestie nonummy, scelerisque eu, facilisis vel, arcu.

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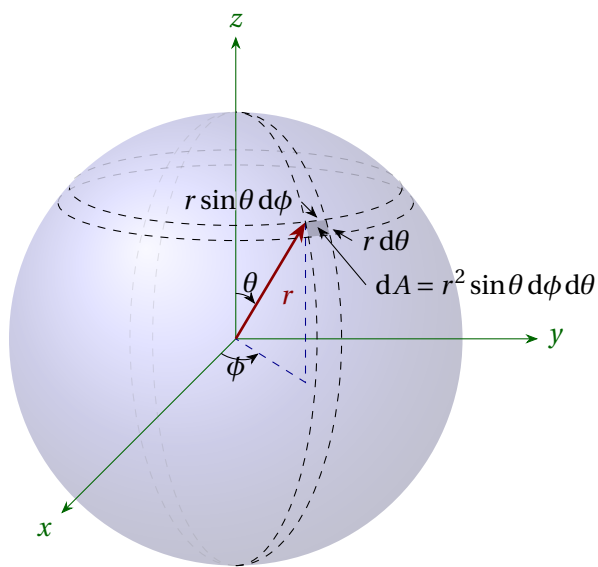


Figure 1.3: Physicists' spherical coordinates. For some reason, mathematicians and physicists parted ways in the nineteenth century on the definition of the two angles used in spherical polar coordinates. All the physics literature is written using the convention illustrated at left.

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Donec et nisl at wisi luctus bibendum. Nam interdum tellus ac libero. Sed sem justo, laoreet vitae, fringilla at, adipiscing ut, nibh. Maecenas non sem quis tortor eleifend fermentum. Etiam id tortor ac mauris porta vulputate. Integer porta neque vitae massa. Maecenas tempus libero a libero posuere dictum. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Aenean quis mauris sed elit commodo placerat. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Vivamus rhoncus tincidunt libero. Etiam elementum pretium justo. Vivamus est. Morbi a tellus eget pede tristique commodo. Nulla nisl. Vestibulum sed nisl eu sapien cursus rutrum.

1.3 Tabula rasa

But what if you need a table? No fear! You may use \LaTeX 's table/tabular environments as illustrated here.

Thingy	Abbreviation	Value
Unicorn horn length (m)	uhl	0.947
Ark length (cubits)	—	47.2
Warming since pre-industrial era (Celsius)	T_{crap}	1.54

Table 1.1: You should usually use figures, but sometimes you absolutely need a table. Note that the S column style is provided by the siunitx package.

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