prove that

(6.3)

\[
\left( \frac{Y}{n^2} \right) \cos \theta - 2z = \frac{1}{\mu} Z^2 = \mathbf{f}
\]

where \( n \) is the equilibrium distance (length constant) between the molecules

(6.2)

\[
\left( \frac{1}{f} \right) - \frac{1}{2} = \frac{1}{\mu} Z^2
\]

We can thus, then, the solution has the following form

\[
w = \sum \phi (x) \cos \psi
\]

where \( \phi \) is the spring constant for each spring between the molecules and

(6.1)

\[
[1 - \frac{n}{n^2}] \frac{1}{\mu} = \frac{1}{\mu} Z^2
\]

In lecture we derived the equation of motion for the displacement \( w \).

6. Dispersion and the ID Crystal

5. Young and Freedman, Chapter 32, Problem 1062, Problem 37.4, Exercise 37.5.

4. Young and Freedman, Chapter 33, Problem 1070, Exercise 33.8, Problem 33.18, Exercise 33.19.

3. Young and Freedman, Chapter 33, Problem 1049, Exercise 33.9.

2. Newton's Rings

1. Reading Assignments from Young and Freedman

[4 Points]

Due Before 5:00 PM October 8 1999

[Handout September 28 1999]

Physics 24 Fall 99—Problem Set 6—
1. PV theory

2. Computing

3. Wavelength

4. A double discontinuity on a string

Before starting please read the introduction and table of contents.