

Ph195a study problems for 10/29/01

1. How does one compute the quantity

$$\langle g \rangle = \frac{1}{N} \sum_n g_n$$

from a table of data such as the one on page 11 of the notes for 10/24/01?

2. The Clauser-Horne-Shimony-Holt (CHSH) form of Bell's Inequality relies on a "fair sampling" assumption, which is that the particle source cannot choose the values of A_n, A'_n, B_n, B'_n in a way that depends on Alice's or Bob's choice of measurement. Explain.

3. Have a look at the papers in Physical Review Letters (available from campus IP addresses at <http://prl.aps.org>) and Nature (available from www.nature.com) that are referenced on page 13 of the notes for 10/24/01. We'll discuss these experiments in class.