Astronomy Abroad:  
American Southwest  
PHYS 108  
May Term 2003  
Application

Name__________________________________________

Class (Freshman, Soph, etc.)________________________

Major__________________________________________

1. What previous experience do you have with astronomy (either formal class work, or informal personal experience)?

2. There is one required 6-mile round trip hike that will take place in a fairly level canyon in New Mexico. Are you physically able to do this? In addition, there will be several other opportunities to hike (Grand Canyon, Saguaro National Park) so an ability to engage in physical activity will be highly beneficial.

3. Are you willing to spend four nights sleeping in a tent?

4. Are you comfortable with the idea of spending several hours outside in the dark, away from lights and other amenities, several times a week for the month we are away?

5. The fee is $1700, $400 of which is due by 11/10/2002. Can you afford this?

6. If chosen to go, how likely are you to go (check one)?  
100% certain____; Pretty likely____; Maybe if nothing better____; Don’t know____
7. While math is not a large part of this class, it will be necessary for the final project where you tell me what to photograph with the telescope. In order for me to make sure everyone is at the same math level, please solve the following four problems (you can use a calculator).

\[ N = \frac{D^2}{\sqrt{t}} \]

1A. If \( D = 16 \), \( t = 15 \), what is \( N \)?

1B. If \( D = 72 \), what must \( t \) be in order for \( N \) to be the same as in 1A?

\[ m - M = 5 \log \left( \frac{D}{10} \right) \]

2A. If \( m = 3 \) and \( D = 45 \), what is \( M \)?

2B. If \( m = 3 \) and \( M = 12 \), what is \( D \)?
8. In a few paragraphs tell me a) why you want to go on this trip, b) what aspect(s) of this trip you find the most interesting to you, and c) what you hope to gain from this trip.