

PHYSICS GRADs vs. PROFs CHALLENGE

For Physics Block Party on 11 September 2015:

ROUND 1:

This round has short answers of one-or-two words. The panelists are to just speak the answer out loudly, with the points going to the first person on either side to state the answer correctly. I instruct the audience to keep quiet, as your time will come later. The first correct answer is worth +2 points.

- (1) (2 points) What _____ is the specialty of the 'Bond Girl' Christmas Jones?
- (2) (2 points) Who was named as the Person of the Century by Time magazine in 2000?
- (3) (2 points) Suppose that we have a simple pendulum 10 meters long and give it a small push. To within 10%, what is its period of oscillation?
- (4) (2 points) What is the only element in the Periodic Table that is pronounced as six syllables?
- (5) (2 points) The very popular television show Bonanza, set in Silver City Nevada around the 1870s had one episode covering the early life of what famous US physicist?
- (6) (2 points) How many editions has the book Classical Electrodynamics by Jackson gone through?
- (7) (2 points) What physicist has won the Nobel Peace Prize?
- (8) (2 points) Who is the other physicist that has won the Nobel Peace Prize?
- (9) (2 points) What movie had Kip Thorne as a scientific consultant and executive producer?
- (10) (2 points) Here, I am wanting the exponent of a dimensionless number, that is the nearest power of ten to within one order of magnitude. How many electrons are there in my brain?
- (11) (2 points) Which signer of the US Declaration of Independence was known in Europe primarily as a physicist?
- (12) (2 points) For the current semester, what professor is teaching PHYS 7398?
- (13) (2 points) What is the element in the Periodic Table that is immediately after Uranium?
- (14) (2 points) What is the element in the Periodic Table that is immediately after Neptunium?
- (15) (2 points) How many planets are displayed on the Physics Department logo?

ROUND 3:

For the third round, I will give a series of questions, often related, and I will alternate back and forth between teams. Each correct answer is worth +4 points.

For the third round, we will have 3 'lifelines', where a panel can try to get further help; (1) getting the audience to shout out answers for them, or (2) by explicitly asking one person in the audience, with this person being instructed to give their best possible answer, or (3) by asking for a hint from me. Each team gets to use each type of lifeline just once.

*** **(4 points each)** Name a physicist who has won *TWO* Nobel Prizes. (Three answers.)

*** **(4 points)** Xiaoyao Ma just earned his PhD in Physics in our Department. What was his thesis topic?

*** **(4 points)** Who was his advisor?

*** **(4 points)** Out of all the planets, dwarf planets, the Sun, and our Moon inside out Solar System, which one does ___ have an element named after it?

*** **(4 points)** What exoplanet has the same name as an element?

*** **(4 points)** Our department has an active group working on the Pierre Auger Observatory in Argentina, for detecting the very highest energy cosmic rays. But what is the Auger Effect?

*** **(4 points)** In the famous Alpher-Bethe-and-Gamow paper of 1948, who was the third person gratuitously added?

*** **(4 points)** What was the subject of the _____ paper?