1. **What are the differences between "bending waves" and "density waves" in the ring system?**

   Bending waves are produced by periodic vertical forces, and density waves are produced by periodic radial, or azimuthal forces, which cause variation in the surface density of the rings. The latter are the type of waves observed and analyzed in the paper.

2. **What evidence do the authors have that these waves are driven by internal modes on the planet, rather than from moons or something else?**

   The location of the C-ring features is not in an area that would result in resonance with any of the moons. The authors also state that satellite resonance would not produce the high speeds at which the oscillation patterns rotate around the planet. The observed speeds were more similar to those predicted from waves generated by oscillations interior to the planet itself.

3. **What "type" of interior modes are the ones that are thought to produce the ring features?**

   The features were thought to be produced by "low-order normal mode oscillations", where the order refers to the values of the different mode numbers. These were described as "f-modes", or surface gravity modes.

4. **What physical quantity are the authors measuring to show that there are some sort of waves in the particular ring area at which they are looking?**

   The raw data flux values from the stellar occultation were normalized to 1 (at a point where most of the starlight was being transmitted) to determine the transmission at every other location. These values were then converted to optical depth. Variations in optical depth reveal variation in density, though the authors wound up performing wavelet analysis on the raw flux data, not the optical depth.

5. **What potential for understanding Saturn is opened up by these observations? I.e., can these waves be exploited for something?**

   The authors mention several ways that interior models of Saturn could be constrained using their data, such as the timescales over which interior oscillations are created and dissipated, and a possible correlation between the amplitude of the interior oscillations and the density variations in the resulting waves seen in the C-ring.