CRITICAL THINKING: DESCRIPTION, ANALYSIS AND EVALUATION

Example 2: Physics taken from an introduction: "Quantum effects in biology"

EXAMPLE

In the case of Herbig stars, material accretes onto the star via an accretion disc, which in some cases can be directly observed. For example, the dust component of the disc can be observed via the scattering of optical and near-infrared light [11]. The geometry of Herbig star accretion discs is still under investigation; however, it is widely accepted that as dust grains coagulate, they settle towards the midplane of the disc, making them easier to observe [13]. However, this only applies to Herbig stars close enough to the observer; the majority of the time, these accretion discs cannot be directly observed. As accretion discs are often not directly observable, other methods must be used in order to provide proof their existence. An example of such a method is the measurement of disc velocity profiles, which imply the presence of a rotating disc around a star. These profiles reveal velocity gradients, which indicate the presence of material orbiting a protostar in a disclike configuration [14]

TUTOR COMMENTS FOLLOW ON PAGE 2

BROKEN DOWN EXAMPLE	COMMENTS
In the case of Herbig stars, material accretes onto the star via an accretion disc, which in some cases can be directly observed.	**Description:** The student outlines the point of the paragraph. They are describing their key point.
For example, the dust component of the disc can be observed via the scattering of optical and near-infrared light [11]. The geometry of Herbig star accretion discs is still under investigation; however, it is widely accepted that as dust grains coagulate, they settle towards the midplane of the disc, making them easier to observe [13]. However, this only applies to Herbig stars close enough to the observer; the majority of the time, these accretion discs cannot be directly observed. As accretion discs are often not directly observable, other methods must be used in order to provide proof their existence. An example of such a method is the measurement of disc velocity profiles, which imply the presence of a rotating disc around a star.	**Analysis:** Student uses evidence to further explain their main point. Student develops their analysis, demonstrating why observation happens only in "some cases" as outlined in the first sentence of this paragraph.
These profiles reveal velocity gradients, which indicate the presence of material orbiting a protostar in a disclike configuration [14]	**Evaluation:** Student then reveals the significance of the point.