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(57) Abstract :

THREE-LASER BEAMS DETECTION ARRANGEMENT FOR MEASUREMENT OF GRAVITATIONAL ACCELERATION The present subject matter relates to three-laser beams detection arrangement for measurement of gravitational acceleration comprising a long polyvinyl chloride (PVC) pipe (101) having three-level detection points (L1, L2, L3); three laser LEDs (LD1, LD2, LD3) and three detectors (D1, D2, D3) fixed exactly with each level on opposite sides of the outer surface of the PVC pipe (101). Further, a transistor goes to a cutoff region making collector-emitter voltage high around 5V when an object cuts the laser beam during its motion downwards due to a gravitational field, and hence the transistor remains at the cutoff region as long as the object passes through the laser beam such that the object crosses the other two beams. The object travels downwards by more and more distances, thereby increasing the velocity due to gravitational acceleration (g). Here transistor BC108 is uniquely used as a laser detector. The derived equation for g is a function of distance and time. The numerator term of the derived equation is always positive irrespective of distances between the laser beams.

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