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Non-Interceptive Beam Current and Position Monitors for a Cyclotron Based Proton Therapy Facility

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Propositions

Supporting the PhD thesis

Non-Interceptive Beam Current and Position Monitors for a Cyclotron Based Proton Therapy Facility

Sudharsan Srinivasan

1. By choosing a reentrant cavity design with a dielectric filling, a compact cavity with high shunt impedance, which is essential for measurements on low intensity beams, can be realized. (This PhD thesis)
2. Sometimes, accepting increased complexity in an instrument, such as the four-quadrant cavity BPM in this thesis, will provide a complete solution compared to a simpler instrument such as a pillbox cavity. (This PhD thesis)
3. The tuning of the monopole mode resonance frequency in a cavity resonator is relatively simpler when the cavity is designed with multiple pickups instead of a single pickup. (This PhD thesis)
4. The general perception of noise as a bad component in a system does not hold true for all practical systems.
5. Constructive criticism of certain cultural and traditional practices in agriculture along with intensive lobbying for new traditions will help in fighting global climate change.
6. A framework must exist to oblige case-based ethics courses in financial and legal institutes worldwide that will help in preventing large-scale corruptions.
7. The goal of equality cannot be achieved without addressing the systemic barrier of unfairness but will result in compromises.