

Image intensifiers, optical and television systems

Robert D. Moseley, M.D.

Albuquerque, New Mexico

A. Image intensifiers

1. Design
 - a. Input phosphor
 - b. Photocathode
 - c. Accelerating potential
 - d. Electron optics
 - e. Anode
 - f. Output phosphor
2. Operation
3. Gain
 - a. Brightness gain
 - i. Minification gain
 - ii. Flux gain
 - b. Conversion factor
4. Image quality
 - a. Statistical consideration
 - b. Contrast
 - c. Resolution
 - d. Distortion
5. Dual- and three-field intensifiers
6. Automatic brightness control
 - a. Reasons for

b. Methods

- i. mamp control
- ii. kV control
- iii. Pulse width control
- iv. Combinations
- c. Use and problems

B. Viewing (optical and television systems)

1. Systems
 - a. Mirror optics
 - b. Television
 - i. Camera tubes
 - ii. Monitors
 - c. Biplane systems and associated problems
2. System evaluation
 - a. Description
 - b. Resolution and contrast
 - c. Patient exposure
 - d. Advantages and disadvantages