Figure 9.2. Simple bolometer.

Figure 9.7. Composite bolometer.
BOLOCAM focal plane array
Figure 3.5. Absorption coefficients for various semiconductors, after Stillman and Wolle (1977).

Figure 1.3.3 Germanium gamma-ray detector.
Gas discharge tube

Geiger counter
Proportional counter

For proportional counter: measure charge position along the central wire to get the charge position.
Figure 1.4.3 A spark chamber.

Figure 7.19. The SAS-II γ-ray telescope showing the arrays of spark chambers within the spherical anticoincidence shield. (From C. E. Fichtel (1974). Phil. Trans. Roy. Soc. Lond., 277, 367.)
GLAST (Fermi) Detectors

Large Area Telescope (20% sky coverage)

- Anticoincidence detector triggers on charged particles (so, not gamma-rays)
- W sheets convert gammas to e+/‐ pairs
- Silicon strip detectors track particles
- Calorimeter measures particle energies

GLAST Burst Monitor

- Twelve NaI low-energy (8 keV – 1 MeV) X-/gamma-ray detectors facing in different directions locate source within a few degrees. Two BiGeO calorimeters do much the same for high-energy (150 keV – 30 MeV) gamma rays.

Figure 1.1.10 Schematic arrangement for a photomultiplier.
Figure 8.6. Design of a photomultiplier, after Coorba (1985).

Figure 8.10. Cross-sectional diagrams of a variety of image intensifier types: (a) inversely focused, (b) electromagnetically focused, and (c) magnetically focused. After Coorba (1985).
Figure 8.8. Operation of a single microchannel.

Figure 1.5.4 Schematic view of the operation of a microchannel plate.