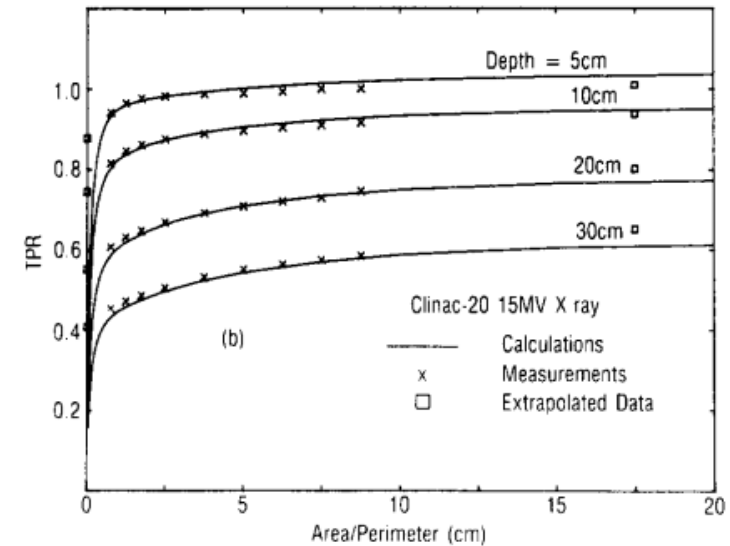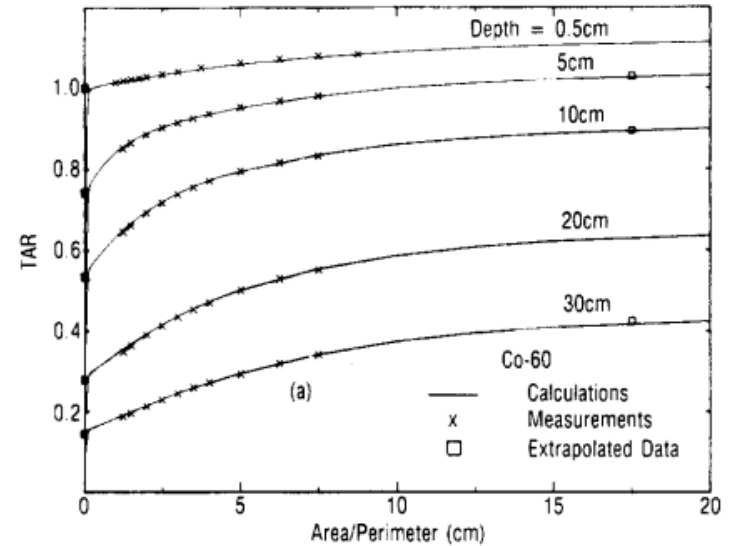# Methods of Separating Primary and Scatter

- What are these two plots and how would they be used to distinguish primary from scatter contributions?

- What class of algorithms utilize them?

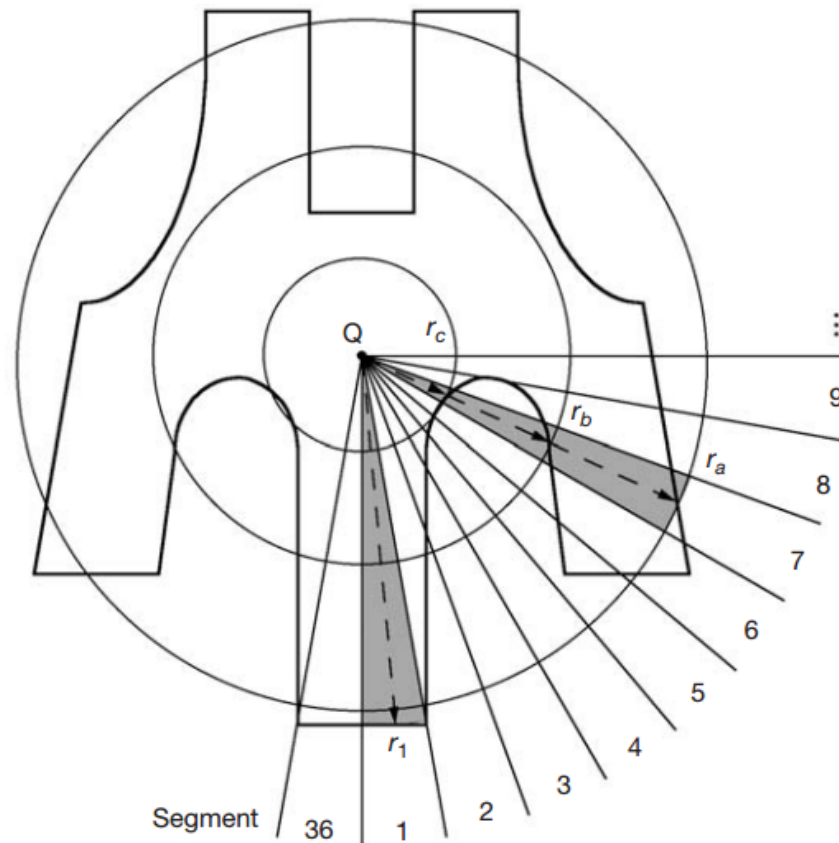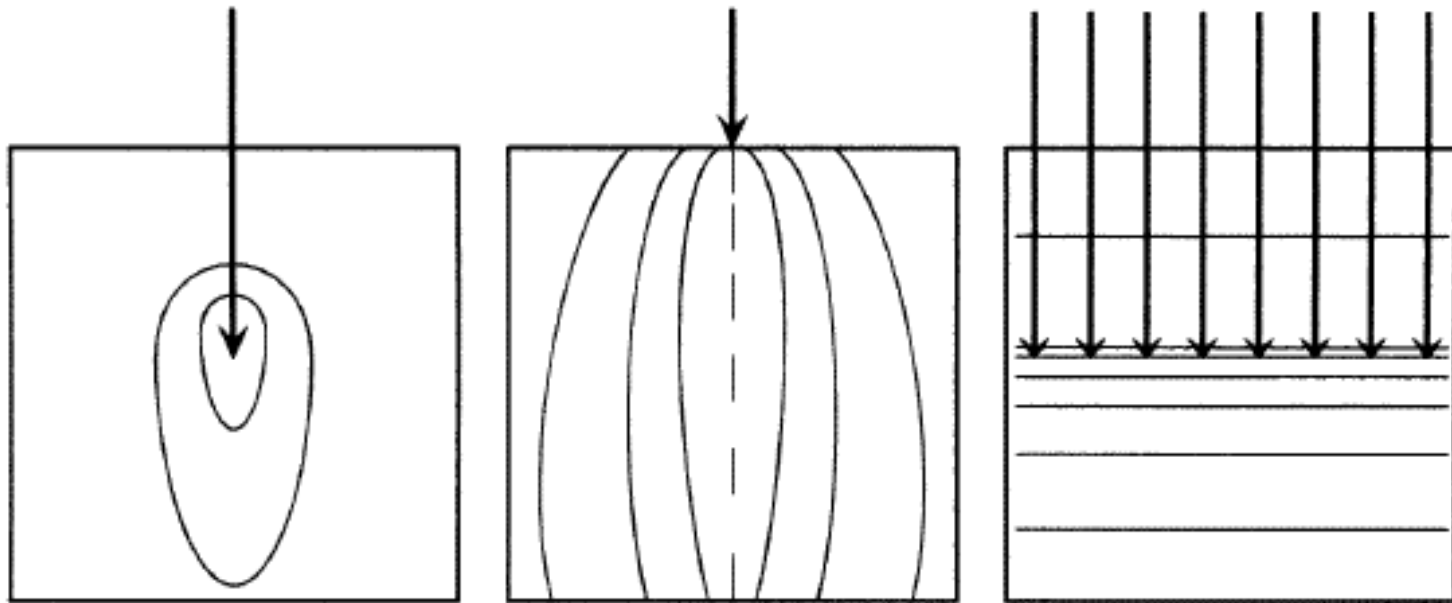- What method of scatter integration is the figure below illustrating?

FIG. 6.20. *An example of a mantle irregular field. Two segments out of 36 are highlighted. The first is simple with radius* r_1, *the seventh is composite with three radii:* r_a, r_b *and* r_c.

Podgorsak. *Radiation Oncology Physics Handbook.*

Miscellaneous

- Describe the difference between the Back Scatter Factor (BSF) and the Peak Scatter Factor (PSF)

- Describe the measurement method for determining Scp, Sc, and Sp

- What are these figures?

- How are they created?

- What class of algorithms use them?
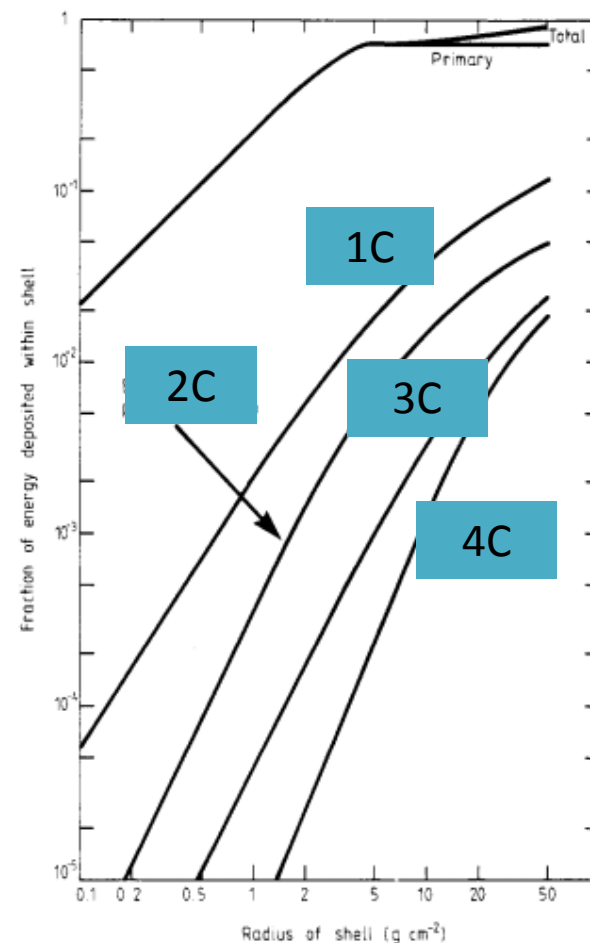
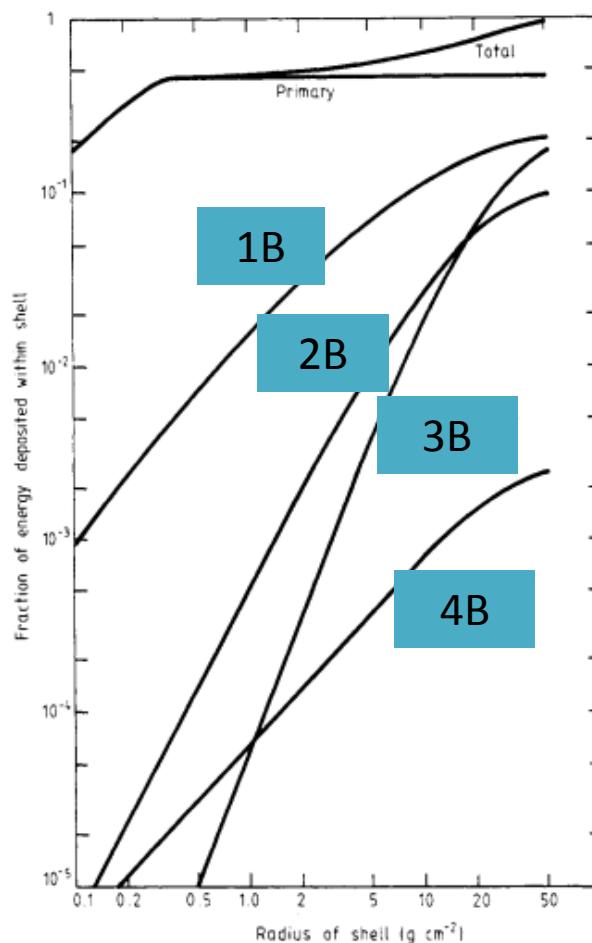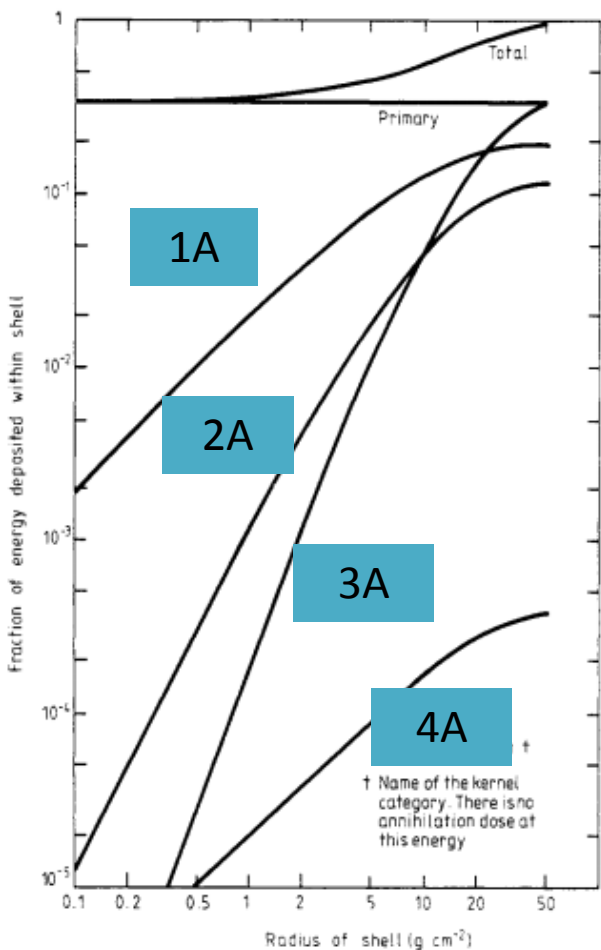- How is the primary dose contribution calculated?

- Label these contributions to dose at different energy levels

0.5 MeV

1.25 MeV

10 MeV

1A

2A

3A

4A

† Name of the kernel category. There is no annihilation dose at this energy

1B

2B

3B

4B

1C

2C

3C

4C

Mackie TR et al. *PMB*. 33: 1-20.

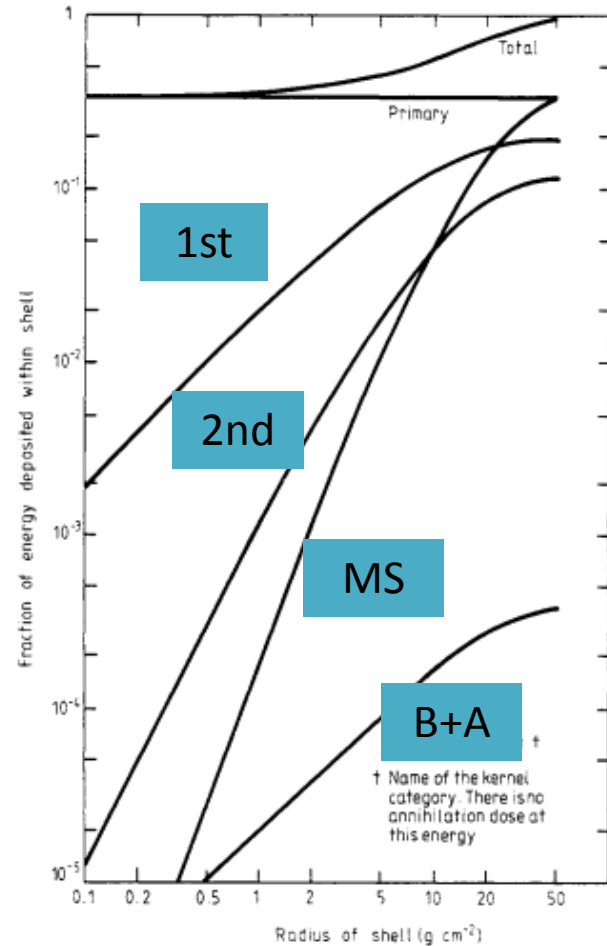- Label these contributions to dose at different energy levels

0.5 MeV   1.25 MeV   10 MeV

Mackie TR et al. *PMB*. 33: 1-20.
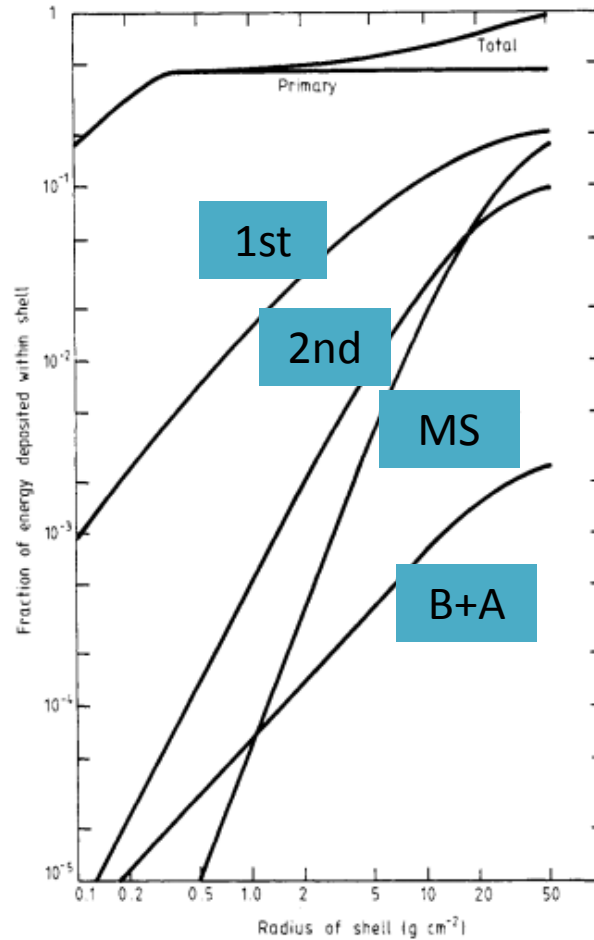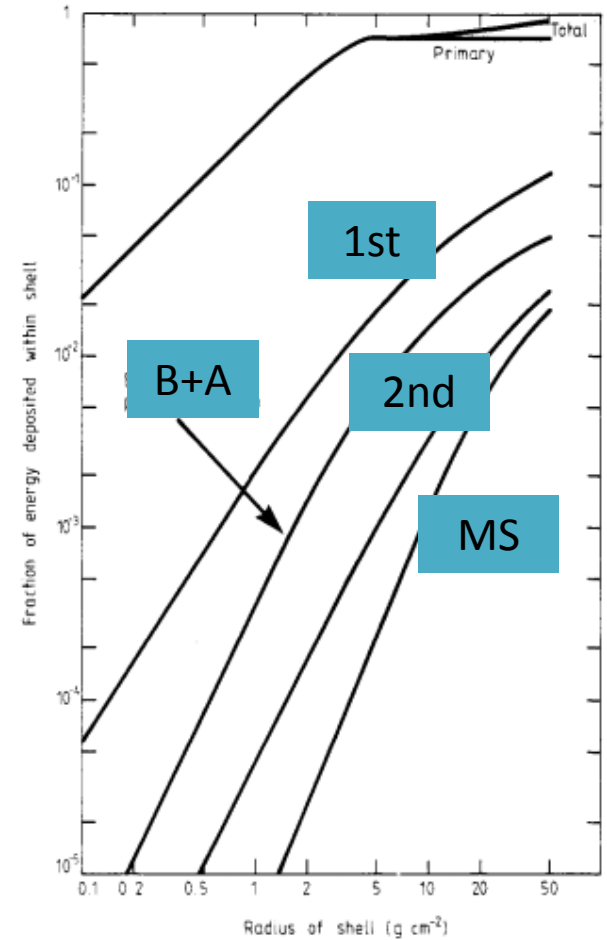
Resources

- Dose calculations for external photon beams in radiotherapy.
  - 1999 Phys. Med. Biol. 44 R99-R155
  - Anders Ahnesjo and Maria Mania Aspradakis

- Ch. 6: Radiation Oncology Physics Handbook
  - http://www-naweb.iaea.org/nahu/DMRP/RadiationOncologyPhysicsHandbook.html