



# Dating of water

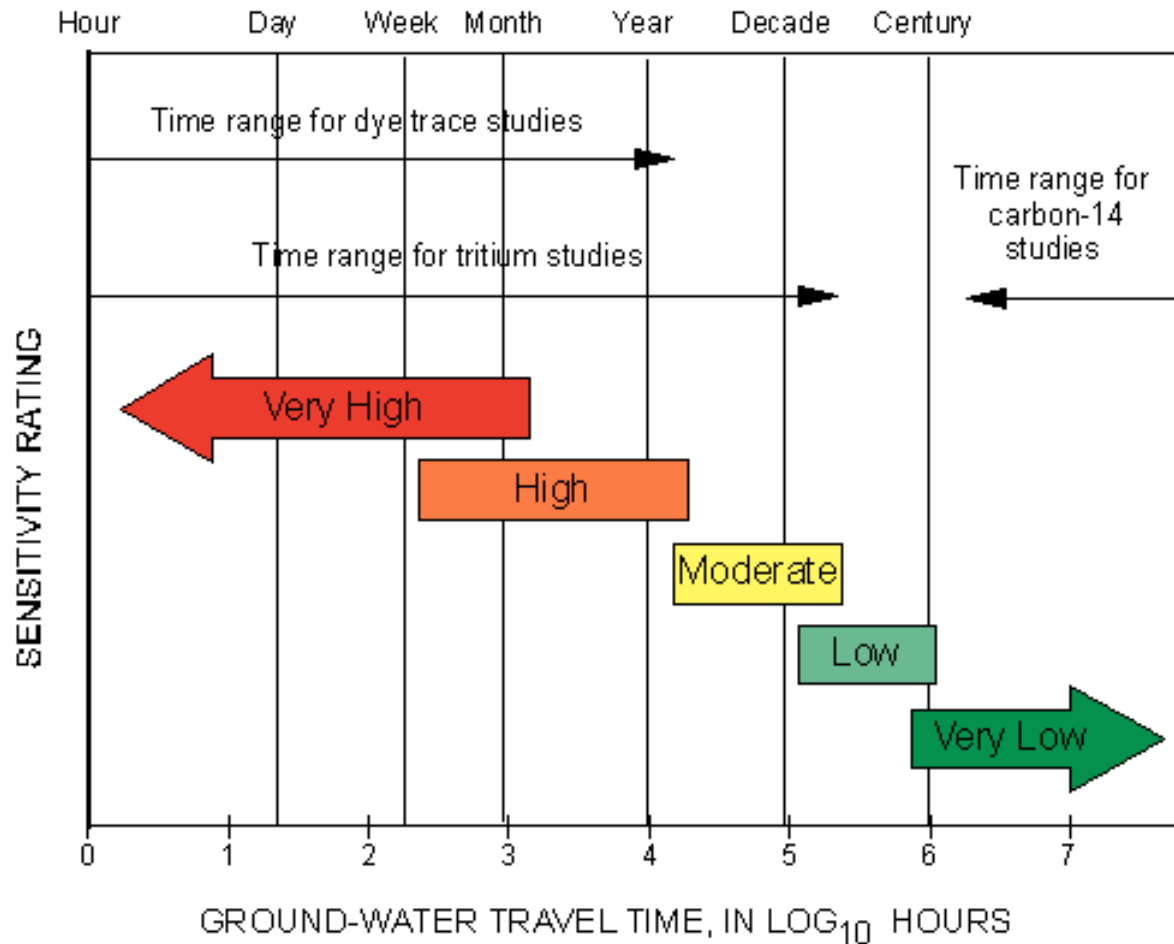


# Concepts

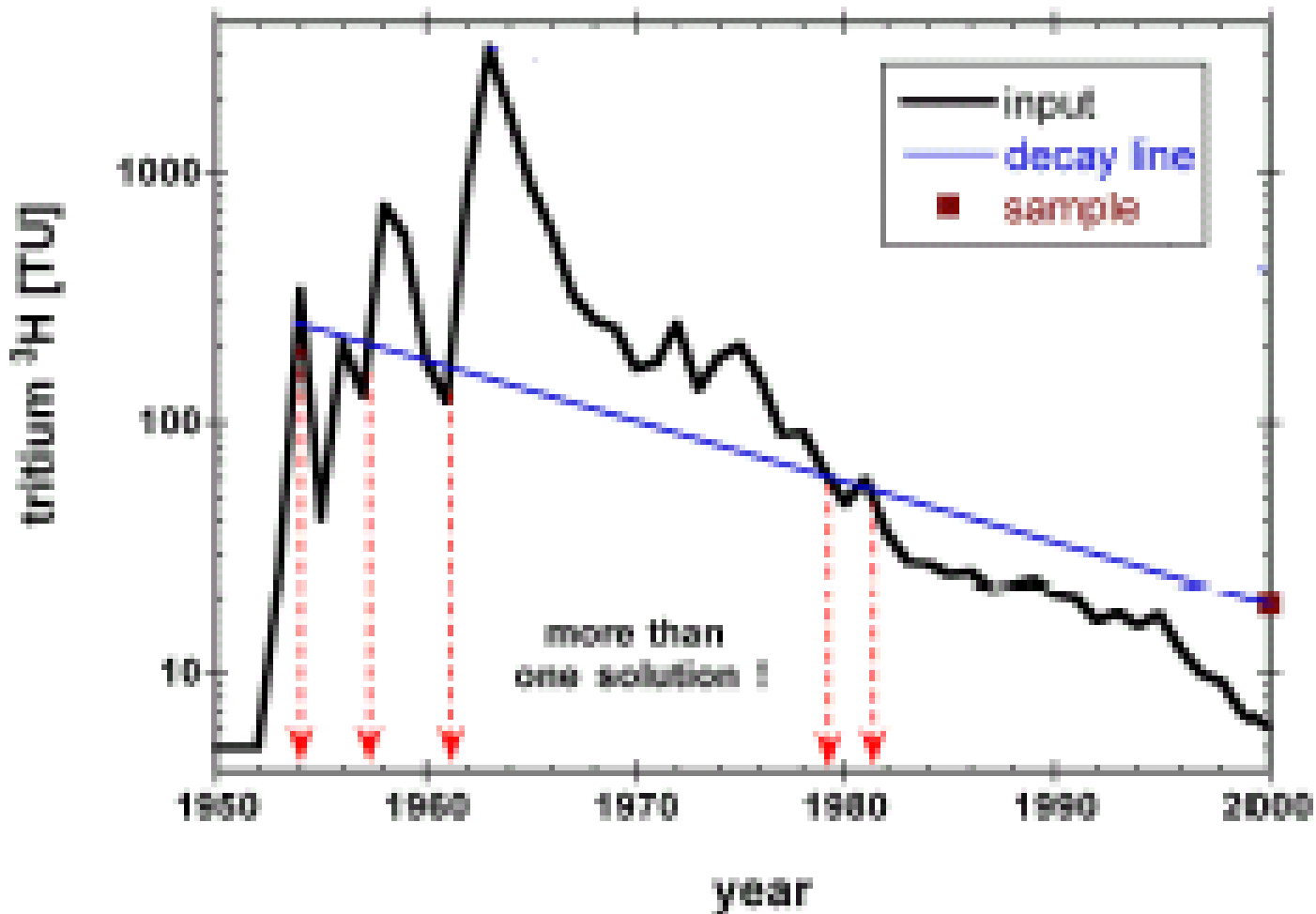
- Atmosphere  $\leftrightarrow$  Groundwater interaction
  - At time of recharge, groundwater concentrations reflect atmospheric conditions
- Types of tracer
  - Natural isotopes
    - Carbon 14
    - Tritium
  - Contaminants
    - CFC's
    - Tritium (atmospheric weapons testing)

- >20,000 BP
- recent

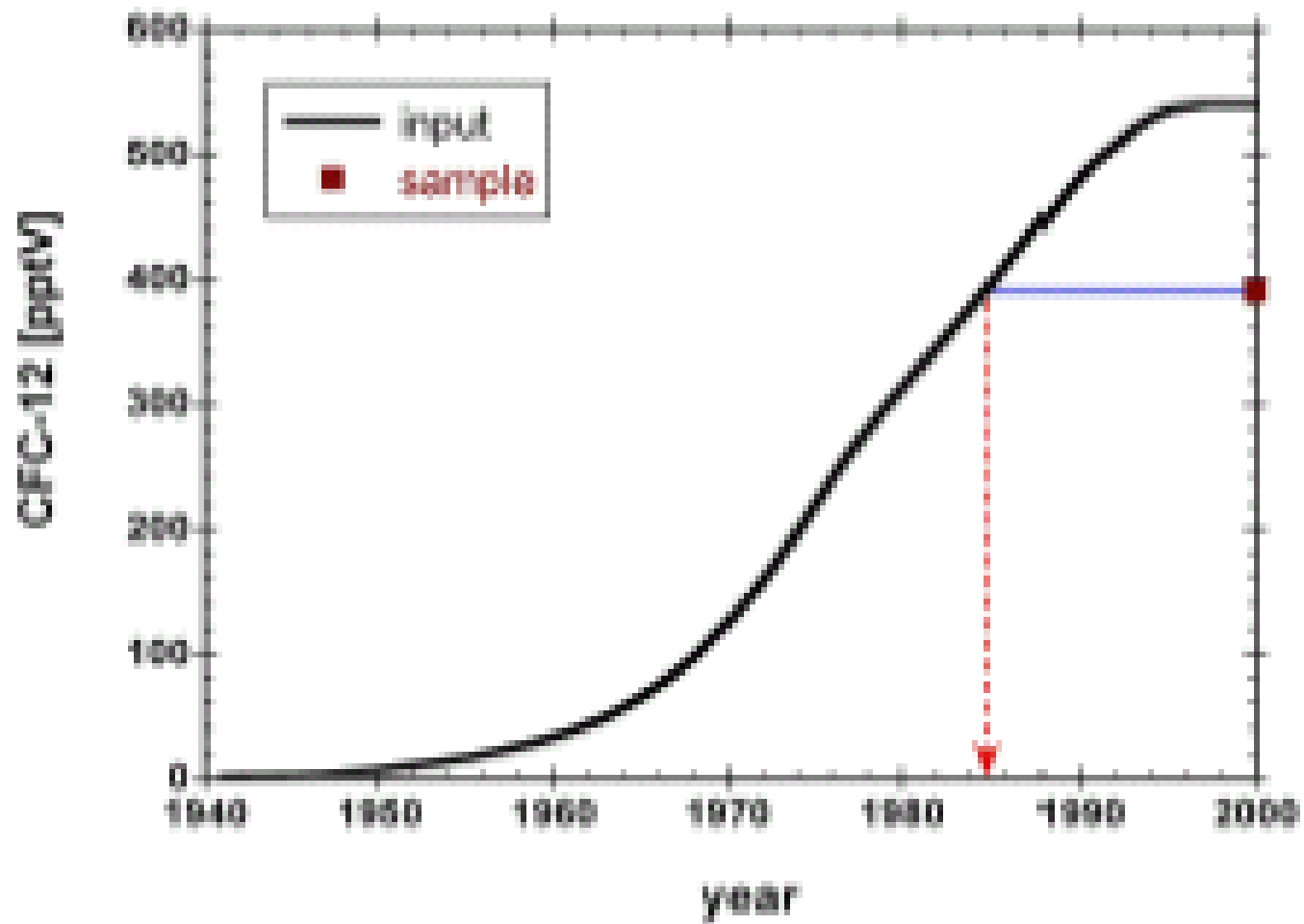
# Time



# Tritium



# CFC-12



# Outlook

- Sampling & analysis techniques
  - Have been complex and costly
  - Some improvements have been achieved
- Environmental changes
  - Contamination controls lead to a reduction in sensitivity of dating
  - New compounds and improved measurement techniques likely to continue to provide opportunities