



Natural Diamond Detectors for Energetic Ion and Neutral Particle Detection

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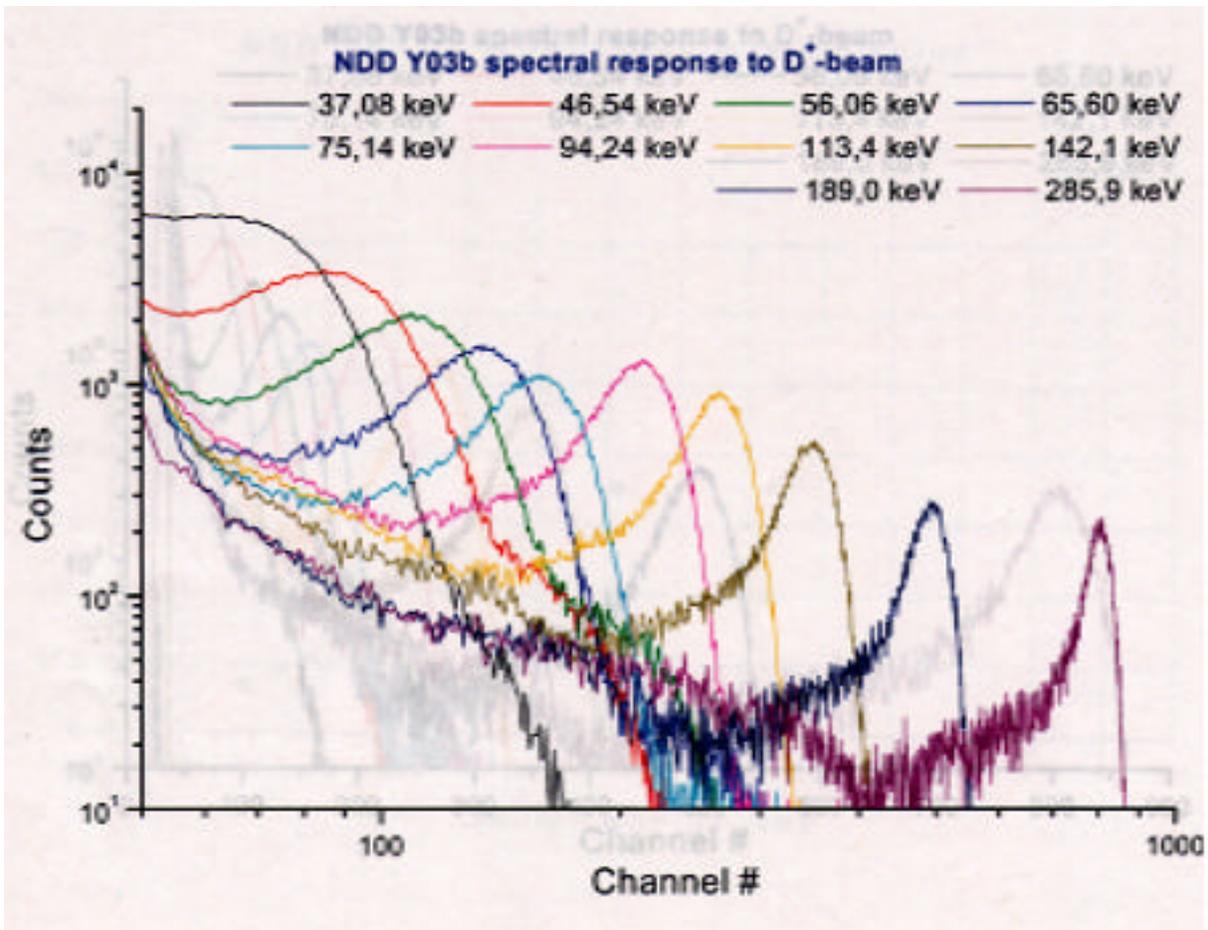
NDDs suited to several fast ion detection tasks on NSTX



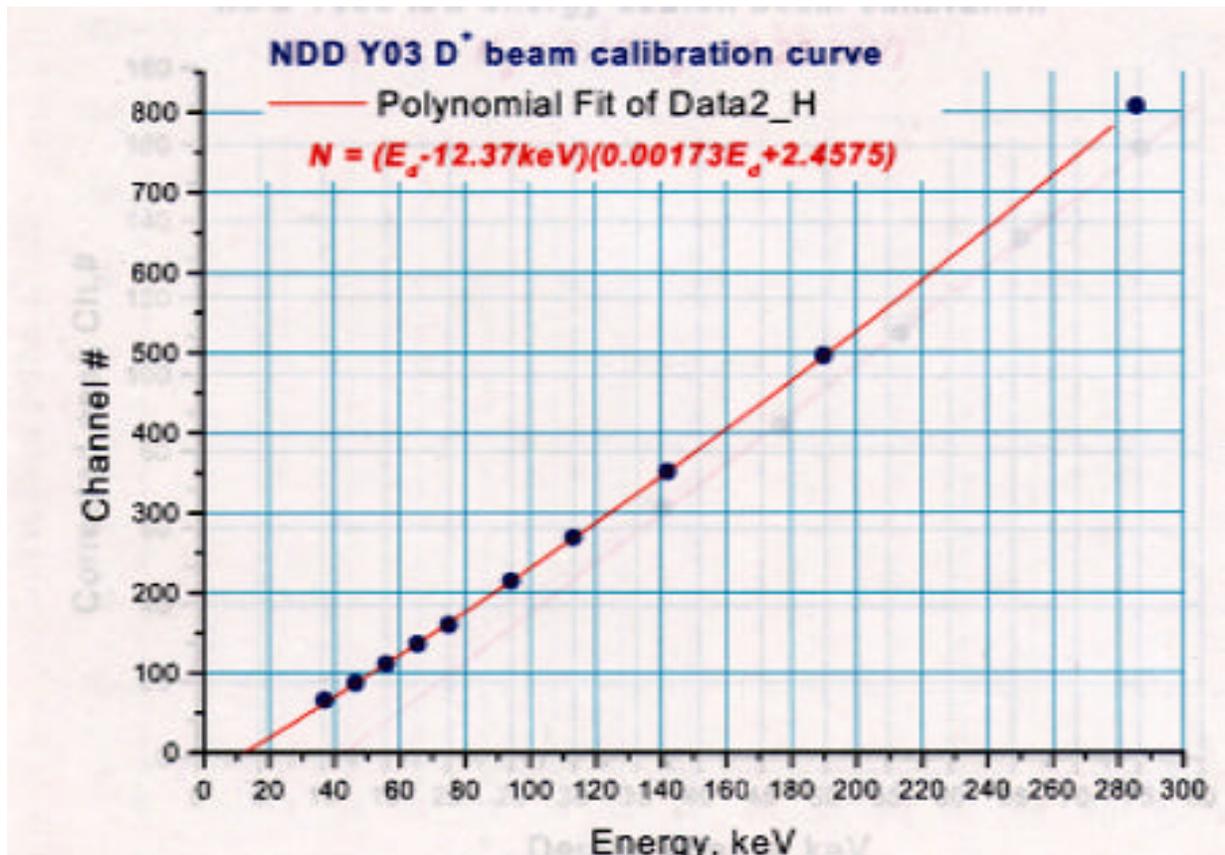
- Energetic neutral particles (NPAAs)
- Fusion product loss
- Beam ion loss

- Compact: few mm²
- Operate to 150° C, unlike SBDs
- Multi-strip versions have been fabricated

NDDs can provide energy discrimination for slowing beam ions



Lower cutoff energy is ~20 keV



For 2001: 2 NDDs as NPAs



- 1 NDD with tangential view
- 1 with perpendicular view
- Both mount on Bay K (near CENA)?

2002 & after: Fusion source profile diagnostic using multi-strip NDD

