Monitor NB ion species mix

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> Knowledge of NB ion species mix (full, 1/2, 1/3 energy) crucial for

- Analysis of active charge-exchange spectroscopic data: CHERS, FIDA, …
- Predictions of NB deposition (hence NB-driven current, torque, etc.)
- Monitoring behavior of NB sources

> Values presently used (e.g. in TRANSP) obtained for TFTR sources

- Last update: 1994
- Species mix characterized for E_{inj}=80-120 keV
- Data at lower energies missing

>**Proposal**:

Install monitor for NB fractions for both NB lines on NSTX-U

- A 'simple' D-alpha monitor might be enough
- Some of the hardware may still be available (?)
- Vertical + radial arrays required to get information on beam divergence, footprint (perhaps a 2D camera?)