# Status of the ENSDF Analysis & Utility Codes – Update since 2005 NSDD Meeting

## Presentation for the USNDP 2005 Meeting
## November 9-11, 2005

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Latest status: http://www.nndc.bnl.gov/nndcscr/ensdf_pgm/code_status.html

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# Status of the ENSDF Analysis & Utility Codes

- BrIcc version 2.0 distributed – To be discussed later
- Minor updates to the subprogram library NSDFLIB related to platform-dependent precision problems noted in BrIcc and GTOL

# Status of the ENSDF Analysis & Utility Codes – 2

- **GTOL 7.1a distributed**
  - FORTRAN 95
  - Double precision implemented – Based on 6.4d from PNPI
  - Additional summary tables introduced in report – Based on 6.4c from PNPI
    - Comparison of input excitation energies with calculated
    - Comparison of input transition energies with calculated including $\chi^2$
  - Total $\chi^2$ and $\chi^2$(Normalized) output in report file
  - Check on $\chi^2$(Normalized) and $\chi^2$(Critical) – Warning issued in report and to terminal if normalized exceeds critical

# Status of the ENSDF Analysis & Utility Codes – 3

| $\chi^2$(norm) | Adopted Levels, Gammas | PNPI |
|---|---:|---:|
| **>10000** | 4 | 49 |
| **1000-10000** | 0 | 35 |
| **100-1000** | 4 | 3 |
| **10-100** | 26 | 25 |
| **1-10** | 489 | 465 |
| $0<\chi^2\leq 1$ | 892 | 939 |
| **=0** | 297 | 216 |
| **Total** | 1712 | 1732 |

# Status of the ENSDF Analysis & Utility Codes – 4

- Work to be done – BrIcc related
  - FMTCHK, ENSDAT – Properly recognize new partial conversion coefficients (NC, OC, …, RC, IPC)
  - RadList
    - Properly recognize new partial conversion coefficients (NC, OC, …, RC, IPC)
    - Extend atomic data tables (energies and fluorescence and Auger electron yields)
  - GTOL, RULER – Currently assume $\Delta\alpha(tot)=3\%$ if DCC is blank