## $^{124}$Sn(t,$\alpha$) 1982Wa26

| Type | Author | History Citation | Literature Cutoff Date |
|---|---|---|---|
| Full Evaluation | Jun Chen | NDS 174, 1 (2021) | 15-Apr-2021 |

1982Wa26 (also 1979Wa17): E=4.75, 5.00, 5.25 MeV triton beams were produced from the University of Manchester 6-MV Van de Graaff. Targets were 200 $\mu$g/cm$^2$ isotopically enriched $^{124}$Sn. Alpha particles were detected with an array of silicon surface-barrier detectors (FWHM≈70 keV). Measured $\sigma(\theta)$ from 60° to 160°. Deduced levels, L-transfers, spectroscopic factors from DWBA analysis. Uncertainty in absolute cross section is 5%.

### $^{123}$In Levels

Spectroscopic factor $C^2S$ is obtained from $d\sigma/d\Omega(exp)=N\times C^2S\times d\sigma/d\Omega(DWBA)$, where the normalization constant N=18.9 *15* used in 1982Wa26.

| E(level) | L† | $C^2S$† |
|---|---|---|
| 0.0 | 4 | 6.72 *22* |
| 320 | 1 | 1.31 *4* |
| 660 | 1 | 1.59 *5* |

† From DWBA analysis (1982Wa26). $C_2S$ are obtained assuming $1g_{9/2}$, $2p_{1/2}$, and $2p_{3/2}$ single-particle orbit for g.s. 320 and 660 levels, respectively.