

Table 4.27 from (1992TI02):
Measurements and summaries (S) of $\pi^+ + {}^4\text{He}$ reactions

Reaction	E_π (MeV)	Description	Refs.
${}^4\text{He}(\pi^+, p){}^3\text{He}$	60, 100, 220	Measured $\sigma(E, \theta)$ and proton spectra at $45^\circ, 90^\circ$ (lab). Studied absorption mechanism.	1977JA15
	50 – 295	Measured $\sigma(E, \theta)$ at $20^\circ, 40^\circ$. Yields nearly proportional to number of target NN pairs.	1980KA37
	50 – 300	Measured $\sigma(E, \theta)$ at 20° . Compared $\pi^+ \text{NN} \rightarrow \text{Np}$ and $\pi^+ \text{d} \rightarrow \text{pp}$.	1981KA41
	400, 475	Measured yields for $\theta_p = 30^\circ$. Two-nucleon pion absorption kinematic region emphasized.	1981KA43
	100, 160, 220	Measured $\sigma(E_\pi, \theta)$ and proton spectra at $\theta_p = 30^\circ - 150^\circ$. Observed quasi-deuteron absorption mode.	1981MC09
	50 – 295	Measured $\sigma(E_\pi, E_p)$ at $\theta_p = 30^\circ, 40^\circ$. Studied pion scattering and absorption contributions.	1983KA14
${}^4\text{He}(\pi^+, 2p){}^2\text{H}$	165	Measured $\sigma(\theta_{p_1}, \theta_{p_2})$. Deduced contribution of $2\text{N} + \pi \rightarrow 2\text{N}$ reactions where initial 2 nucleons are in a relative S-state.	1981AS10
	65 – 320	Measured charged-particle multiplicity, $\sigma(\theta_1, \theta_1)$.	1990ADZY