

Experimental Activity in Japan

1. Low Energy Region (En<0.5 MeV)

| Institute | Facility & Apparatus | Quantities, Nuclides |
|--|--|--|
| Kyoto Univ. Reactor (KUR) | Reactor, Linac, Pb Slowing-down spectrometer (KULS) | $\sigma_c, \sigma_f, \sigma_t$ of higher actinides, FP ^{237}Np $\sigma_c: E < 10\text{keV}$, Dy, Hf $\sigma_t: 0.002 - 100\text{ eV}$ |
| Tokyo Institute Technology (TIT) | 3.2 MV Pelletron, Hig- ϵ γ spectrometer | Capture cross section, γ -ray spectra $^{140}\text{Ce}, ^{141}\text{Pr}, ^{167}\text{Er}$ |
| Japan Nuclear Cycle Development Inst. | Reactor | FP Capture cross sections: $^{166\text{m}}\text{Ho}, ^{137}\text{Cs}$ Integral decay heat measurement |

2. Fast Neutron Region ($0.5 < E_n < 20 \text{ MeV}$)

| Institute | Facility & Apparatus | Quantities, Nuclides |
|---------------|--|---|
| JAERI, FNS | Intense 14 MeV source 3 Beam Lines, TOF spectrometer | Benchmark experiment; n and γ spectra LiAl_2O , Li_2TiO_3 , Li_2ZrO_3 Activation CS measurement (Nagoya, Osaka Univ.) (n,2n) coincident measurement |
| Nagoya Univ., | Van de Graaf; D(d, n) JAERI FNS, OKTAVIAN | Activation cross section: 13.4 – 14.9 MeV; (n,np+d), ^{14}N , ^{31}P , ^{54}Fe , ^{63}Cu , ^{79}Br , ^{87}Rb 2.0 - 3.2 MeV; ^{27}Al , ^{51}V , ^{61}Ni , ^{65}Cu , ^{69}Ga , ^{92}Mo |
| Osaka Univ., | Intense 14 MeV source OKTAVIAN JAERI FNS | Benchmark experiment; n and γ spectra ; LiAl_2O , Li_2TiO_3 , Li_2ZrO_3 Double differential (n,p) emission; F, Si (n,2n) coincident measurement |

3.High Energy Region: $E > 20$ MeV

| Institute | Facility & Apparatus | Quantities, Nuclides |
|---------------|--------------------------------------|--|
| Tohoku Univ., | JAERI TIARA HIMAC/ RIKEN | (n,n ₀) and (n,xZ) ; E _n = 75 MeV, N, O, Al HI induced activation: C, Ne, c, He, p (230MeV/u) on Cu HI induced neutron emission: C, Ne, He (135MeV/u) on C, Al, Cu, Pb |
| JAERI | KEK 12 GeV PS JAERI Tandem linac | Neutron emission; 1.5 GeV p on thick Fe HI induced evaporation residue: $^{82}\text{Se} + ^{\text{nat}}\text{Ce}$, $^{76}\text{Ge} + ^{150}\text{Nd}$ |
| Kyushu Univ., | RCNP Ring cyclotron KEK 12 GeV PS | ^{12}C , ^{27}Al , ^{93}Nb , ^{197}Au (p,xZ), (p,p') @ 300, 400 MeV π^+ , π^- induced neutron emission @0.87 & 2.1 GeV p-induced reactions: (p,xn) |