

2011 年度入力データ

Data-Entries of 2011

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1 今年度入力論文リスト

以下の雑誌から今年度のデータ収集を行った。データの収集・入力にあたって、国内外の多くの研究機関の著者の方々のご協力を得ることができ、質の高いデータ入力を行うことができた。今後も一層協力を緊密にする努力を重ね、データの直接入力を促進していく。

- Physical Review Letters
- Physical Review C
- Journal of the Physical Society of Japan
- Physics Letters, Section B
- Nuclear Physics A
- Nuclear Instruments and Methods in Physics Research A
- The European Physical Journal A
- Progress in Nuclear Science and Technology
- Journal of the Korean Physical Society
- Chinese Physics Society

今年度の収集論文全 35 編のリストを表 1 に示す。

表 1: 採録論文一覧

Data 2167

Title (d, alpha) reactions on C12 and O16 with deuterons in the energy range from 15 MeV to 20 MeV
Author T.Yanabu *et al.*
Reference J.Phys.Soc.Jpn. **18** (1963) 747
Table Total : 56 EXFOR : 56 Author : 0 Table :54 Curve : 2 Unobt : 0

Data 2177

Title Mechanism of the Reaction $^{28}\text{Si}(d,p)^{29}\text{Si}$ from 2.0 to 4.2 MeV
Author C. C. Hsu *et al.*
Reference Phys.Rev.C **7** (1973) 1425
Table Total : 3 EXFOR : 3 Author : 0 Table : 0 Curve : 3 Unobt : 0

Data 2182

Title Structure of Giant Resonance in $^{27}\text{Al}(p,g)$ Reaction
Author M.Kimura *et al.*
Reference J.Phys.Soc.Jpn. **15** (1960) 1128
Table Total : 2 EXFOR : 2 Author : 0 Table : 0 Curve : 2 Unobt : 0

Data 2200

Title Identification of 45 new neutron-rich isotopes produced by in-flight fission of a ^{238}U beam at 345 MeV/nucleon
Author T.Ohnishi *et al.*
Reference J.Phys.Soc.Jpn. **79** (2010) 073201
Table Total : 2 EXFOR : 2 Author : Table : 2 Curve : 0 Unobt : 0

Data 2201

Title Mechanism of the reaction $^{24}\text{Mg}(d,p)^{25}\text{Mg}$ from 2 to 4 MeV
Author S.M.Lee *et al.*
Reference Nucl.Phys.A **122** (1968) 97
Table Total : 15 EXFOR : 15 Author : 0 Table : 0 Curve : 15 Unobt : 0

Data 2216

Title The reactions $^{7}\text{Li}(p,n)^{7}\text{Be}$, $^{11}\text{B}(p,n)^{11}\text{C}$ and $^{27}\text{Al}(p,n)^{27}\text{Si}$ at 8 to 14 MeV
Author K.Hisatake *et al.*
Reference J.Phys.Soc.Jpn. **15** (1960) 741
Table Total : 18 EXFOR : 18 Author : 0 Table : 0 Curve : 18 Unobt : 0

Data 2232

Title Elastic Scattering of Protons from ^{11}B , Al, P, Co and Cu from 6 to 7.4 MeV
Author K. Kimura *et al.*
Reference J.Phys.Soc.Jpn. **17** (1962) 9
Table Total : 23 EXFOR : 23 Author : 0 Table : 0 Curve : 23 Unobt : 0

Data 2281

Title Direct measurement of $4\text{He}(^{12}\text{C}, ^{16}\text{O})\text{g}$ reaction at KUTL
Author K.Fujita *et al.*
Reference AIP- **1238** (2010) 211
Table Total : 3 EXFOR : 3 Author : 0 Table : 3 Curve : 0 Unobt : 0

Data 2284

Title Direct measurement of the astrophysical reaction $^{14}\text{O}(\text{a,p})^{17}\text{F}$
Author M.Notani *et al.*
Reference Nucl.Phys.A **746** (2004) 113C
Table Total : 1 EXFOR : 1 Author : 0 Table : 0 Curve : 1 Unobt : 0

Data 2286

Title Elastic scattering of $6\text{He} + \text{p}$ at 82.3 MeV/nucleon
Author Jamil-Qureshi Faisal *et al.*
Reference Chin.Phys.Lett. **27** (2010) 092501
Table Total : 1 EXFOR : 1 Author : 1 Table : 0 Curve : 0 Unobt : 0

Data 2287

Title Analyzing power for proton elastic scattering from the neutron-rich 6He nucleus
Author T.Uesaka *et al.*
Reference Phys.Rev.C **82** (2010) 021602
Table Total : 2 EXFOR : 0 Author : 2 Table : 0 Curve : 0 Unobt : 0

Data 2288

Title High-precision (p,t) reaction to determine $^{25}\text{Al}(\text{p},\gamma)^{26}\text{Si}$ reaction rates
Author A.Matic *et al.*
Reference Phys.Rev.C **82** (2010) 025807
Table Total : 1 EXFOR : 1 Author : 0 Table : 0 Curve : 1 Unobt : 0

Data 2289

Title Proton-production double-differential cross sections for 300-MeV and 392-MeV proton-induced reactions
Author H.Iwamoto *et al.*
Reference Phys.Rev.C **82** (2010) 034604
Table Total : 8 EXFOR : 8 Author : 8 Table : 0 Curve : Unobt : 0

Data 2290

Title Density distribution of ^{17}Ne and possible shell-structure change in the proton-rich sd-shell nuclei
Author K.Tanaka *et al.*
Reference Phys.Rev.C **82** (2010) 044309
Table Total : 10 EXFOR : 10 Author : Table : 10 Curve : 0 Unobt : 0

Data 2291

Title Neutron density distributions of ^{204}Pb , ^{206}Pb , ^{208}Pb deduced via proton elastic scattering at $E_p=295$ MeV
Author J.Zenihiro *et al.*
Reference Phys.Rev.C **82** (2010) 044611
Table Total : 8 EXFOR : 8 Author : 0 Table : 0 Curve : 8 Unobt : 0

Data 2292

Title Proton resonance elastic scattering in inverse kinematics on the medium heavy nucleus ^{68}Zn
Author N.Imai *et al.*
Reference Eur.J.Phys.A **46** (2010) 157
Table Total : 2 EXFOR : 2 Author : 1 Table : 1 Curve : 0 Unobt : 0

Data 2296

Title Semi-monoenergetic neutron field for activation experiments up to 40 MeV
Author Y. Uwamino *et al.*
Reference Nucl.Instrum.Methods A **271** (1988) 546
Table Total : 9 EXFOR : 9 Author : 0 Table : 0 Curve : 9 Unobt : 0

Data 2297

Title Quasi-monoenergetic neutron energy spectra for 246 and 389 MeV $^7\text{Li}(p,n)$ reactions at angles from 0 deg to 30 deg
Author Y.Iwamoto *et al.*
Reference Nucl.Instrum.Methods A **629** (2011) 43
Table Total : 4 EXFOR : 4 Author : 3 Table : 1 Curve : 0 Unobt : 0

Data 2298

Title Development of a quasi-monoenergetic neutron field using the ${}^7\text{Li}(p,n){}^7\text{Be}$ reaction in the 70-210 MeV energy range at RIKEN
Author N.Nakao *et al.*
Reference Nucl.Instrum.Methods A **420** (1999) 218
Table Total : 9 EXFOR : 9 Author : 9 Table : 0 Curve : 0 Unobt : 0

Data 2324

Title Production and decay properties of the 1.9-s isomeric state in ${}^{261}\text{Rf}$
Author H.Haba *et al.*
Reference Phys.Rev.C **83** (2011) 034602
Table Total : 2 EXFOR : 2 Author : 2 Table : 2 Curve : 0 Unobt : 0

Data 2325

Title ${}^{14}\text{Be}(p,n){}^{14}\text{B}$ reaction at 69 MeV in inverse kinematics
Author Y.Satou *et al.*
Reference Phys.Lett.B **697** (2011) 459
Table Total : 2 EXFOR : 2 Author : 2 Table : 0 Curve : 0 Unobt : 0

Data 2327

Title Quasielastic scattering of ${}^6\text{He}$ from ${}^{12}\text{C}$ at 82.3 MeV/nucleon
Author J.L.Lou *et al.*
Reference Phys.Rev.C **83** (2011) 034612
Table Total : 1 EXFOR : 1 Author : 0 Table : 0 Curve : 1 Unobt : 0

Data 2329

Title Four-body breakup process through the $({}^3\text{He},{}^3\text{H})$ reaction on ${}^9\text{Be}$
Author H.Ueno *et al.*
Reference J.Phys.Soc.Jpn. **40** (1976) 1537
Table Total : 10 EXFOR : 10 Author : 0 Table : 0 Curve : 10 Unobt : 0

Data 2331

Title ${}^{12}\text{C}(\tau,d){}^{13}\text{N}$ Reaction at 81.4 MeV
Author K.Koyama *et al.*
Reference J.Phys.Soc.Jpn. **41** (1976) 1445
Table Total : 8 EXFOR : 8 Author : 0 Table : 0 Curve : 8 Unobt : 0

Data 2337

Title Nuclear-charge polarization at scission in proton-induced fission of ${}^{233}\text{U}$
Author I. Nishinaka *et al.*
Reference Eur.J.Phys.A **47** (2011) 9
Table Total : 4 EXFOR : 4 Author : 1 Table : 0 Curve : 3 Unobt : 0

Data 2338

Title Measurement of proton-production double differential cross sections from 290 MeV/u ¹²C incidence on carbon at forward angles
Author Y. Fukuda *et al.*
Reference NSTP **1** (2011) 102
Table Total : 4 EXFOR : 4 Author : 0 Table : 0 Curve : 4 Unobt : 0

Data 2339

Title Fragment DDX measurement of proton induced reactions on light-medium nuclei for energy range from reaction threshold to a few hundred MeV
Author T.Sanami *et al.*
Reference KPS **59** (2011) 1805
Table Total : 20 EXFOR : 20 Author : ??? Table : 0 Curve : 0 Unobt : 5

Data 2340

Title Spectrum measurement of neutrons and gamma-rays from thick H₂-18O target bombarded with 18 MeV protons
Author M.Hagiwara *et al.*
Reference KPS **59** (2011) 2035
Table Total : 7 EXFOR : 7 Author : 7 Table : 0 Curve : 0 Unobt : 0

Data 2341

Title Measurement of neutron-production double-differential cross-section on carbon bombarded with 290-MeV/nucleon carbon and oxygen ions
Author D.Satoh *et al.*
Reference Nucl.Instrum.Methods A **644** (2011) 59
Table Total : 2 EXFOR : 2 Author : 2 Table : 0 Curve : 0 Unobt : 0

Data 2345

Title Nuclear structure study of ^{19,21}N nuclei by gamma spectroscopy
Author Z.Elekes *et al.*
Reference Phys.Rev.C **82** (2010) 027305
Table Total : 3 EXFOR : 3 Author : 0 Table : 3 Curve : 0 Unobt : 0

Data 2346

Title Three nucleon force effects in intermediate-energy deuteron analyzing powers for d p elastic scattering
Author K.Sekiguchi *et al.*
Reference Phys.Rev.C **83** (2011) 061001
Table Total : 4 EXFOR : 4 Author : 4 Table : 0 Curve : 0 Unobt : 0

Data 2347

Title The $^{150}\text{Nd}(^3\text{He},t)$ and $^{150}\text{Sm}(t,^3\text{He})$ reactions with applications to double beta decay of ^{150}Nd
Author C.J.Guess *et al.*
Reference Phys.Rev.C **83** (2011) 064318
Table Total : 8 EXFOR : 8 Author : 0 Table : 0 Curve : 8 Unobt : 0

Data 2349

Title Scaling of charge-changing interaction cross sections and point-proton radii of neutron-rich carbon isotopes
Author T.Yamaguchi *et al.*
Reference Phys.Rev.Lett. **107** (2011) 032502
Table Total : 9 EXFOR : 9 Author : 0 Table : 9 Curve : 0 Unobt : 0

Data 2350

Title Nuclear reactions of $^{19,20}\text{C}$ on a liquid hydrogen target measured with the superconducting TOF spectrometer
Author T.Yamaguchi *et al.*
Reference Nucl.Phys.A **864** (2011) 1
Table Total : 14 EXFOR : 14 Author : 0 Table : 14 Curve : 0 Unobt : 0

Data 2352

Title Complete set of polarization transfer observables for the $^{16}\text{O}(p,n)^{16}\text{F}$ reaction at 296 MeV and 0 degrees
Author T.Wakasa *et al.*
Reference Phys.Rev.C **84** (2011) 014614
Table Total : 3 EXFOR : 3 Author : 3 Table : 0 Curve : 0 Unobt : 0

今年度採録したデータは、以下の研究所で実験したものである。その内訳を表 2 に示す：

表 2: 実験実施研究所内訳

大阪大学核物理研究センター	3 件	大阪大学	3 件
京都大学	1 件	日本原子力研究開発機構	3 件
放射線医学総合研究所	4 件	理化学研究所	12 件
東北大学	3 件	東京大学	3 件
東京大学 原子核研究所	3 件		

2 NRDF データ量

表3は、NRDFに入力されたデータ量を各年度ごとに示したものである。

表 3: NRDF データ蓄積量

年度	作成計画		実績		累積	
	レコード量 (レコード数)	データ量 (MB)	レコード量 (レコード数)	データ量 (MB)	レコード量 (レコード数)	データ量 (MB)
1980	—	—	2,144	5.96	2,144	5.96
1981	1,912	5.74	1,824	6.81	3,968	12.77
1982	2,080	7.14	1,801	6.52	5,769	19.29
1983	2,200	7.00	2,252	6.53	8,021	25.82
1984	1,700	5.60	1,703	5.03	9,724	30.85
1985	1,800	5.60	2,170	5.50	11,894	36.35
1986	1,000	3.20	962	3.14	12,856	39.49
1987	1,100	3.50	1,364	3.16	14,220	42.65
1988	1,500	3.50	1,384	3.30	15,604	45.95
1989	1,500	3.20	1,224	3.20	16,828	49.15
1990	1,200	3.20	1,282	2.90	18,110	52.05
1991	1,000	3.00	789	2.20	18,899	54.25
1992	1,000	3.00	1,620	3.00	20,519	57.25
1993	1,000	3.00	1,096	3.09	21,615	60.34
1994	1,000	3.00	1,328	3.00	22,943	63.34
1995	1,000	3.00	200	3.00	23,143	66.34
1997	1,000	3.00	595	1.60	24,914	70.93
1998	1,000	3.00	196	0.53	25,110	71.46
1999	1,000	3.00	457	1.20	25,567	72.66
2000	1,000	3.00	95	0.30	25,662	72.96
2001	1,000	3.00	360	2.20	26,022	75.16
2002	1,000	3.00	717	3.22	26,739	78.38
2003	1,000	3.00	984	6.85	27,723	85.23
2004	1,000	3.00	540	2.12	28,263	87.35
2005	1,000	3.00	631	1.80	28,894	89.15
2006	1,000	3.00	453	1.83	29,347	90.98
2007	1,000	3.00	1530	8.06	30,877	99.04
2008	1,000	3.00	343	1.26	31,220	100.3
2009	1,000	3.00	117	0.63	31,337	100.93
2010	1,000	3.00	238	0.94	31,575	101.87
2011	1,000	3.00	263	1.37	31,838	103.24