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西南日本に産する高圧変成岩類の K-Ar 年代値データベース

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要旨　西南日本の高圧変成帯および弱変成付加体から報告されている K-Ar（および，Ar/Ar）年代を地質単元毎にコンパイルし，その年代値をデータファイルとして公開した．

キーワード：K-Ar 年代，Ar/Ar 年代，高圧変成帯，弱変成付加体，西南日本，データベース

1. はじめに

1990 年代までの日本列島の地体構造論の進歩は，微化石層序学と高圧変成岩類の年代学に大きく依存した．特に，西南日本では高圧変成帯と弱変成付加体の泥質岩から抽出した変成白雲母の K-Ar 法による年代マッピングによって，「三郡帯」の分割・再定義（柴田・西村，1989；Nishimura，1990，1998）や「黒瀬川内帯起源説」の提唱（磯崎・板谷，1991；磯崎ほか，1992）がなされ，造山帯としての大構造とその発達史がプレートテクトニクスに基づき，分かり易く説明されはじめた（例えば，磯崎・丸山，1991）．2000 年代初頭に欧米諸国から端を発した砕屑性ジルコンの U-Pb 年代学のブームが折よく日本の地質学に到来しなかったことは，分析技術の問題よりも，むしろ，日本列島の地帯構造区分の議論が既に大枠で解決済みであったことが原因であろう．その後（2000 年代後半以降），日本列島においても，いよいよ大量の砕屑性ジルコンの U-Pb 年代値の頻度分布に基づいた地体構造区分の再訪が始まったが（例えば，磯崎ほか，2010），白雲母の K-Ar 年代測定は決して時代遅れの手法としてその役目を終えることはなく，高圧変成帯の下限・上限認定や変成ユニット内部の極性の検証など，造山帯の地質学的研究手段の一つとして健在である（例えば，Aoki *et al*., 2008; Nuong *et al*., 2008, 2011）．

本稿は，西南日本の高圧変成帯と弱変成付加体から報告されている K-Ar（および，Ar/Ar）年代をコンパイルし，その年代値をデータファイルとして公開する．

2. データソースの概要

本稿でコンパイルした K-Ar（および，Ar/Ar）年代値が掲載されたデータソース・文献は既存の学術論文や報告書・紀要のほか，著者の若干の未公表データ（岡山理科大学自然科学研究所にて測定）を含む．和文の文献については英語情報で記した．白雲母（フェンジャイト）年代のほかに，パラゴナイト，角閃石類，イライトおよび全岩の年代を含む．データは地質単元毎に表にまとめ（表 1 − 13），同じ内容の Excel シート（karsheet_swj_v1）を株式会社蒜山地質年代学研究所 Web サイト（http://geohiruzen.co.jp/）にて公開した．コンパイルした年代データを図 1 に示した．年

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Database of K-Ar ages reported from high-pressure metamorphic rocks in SW Japan.

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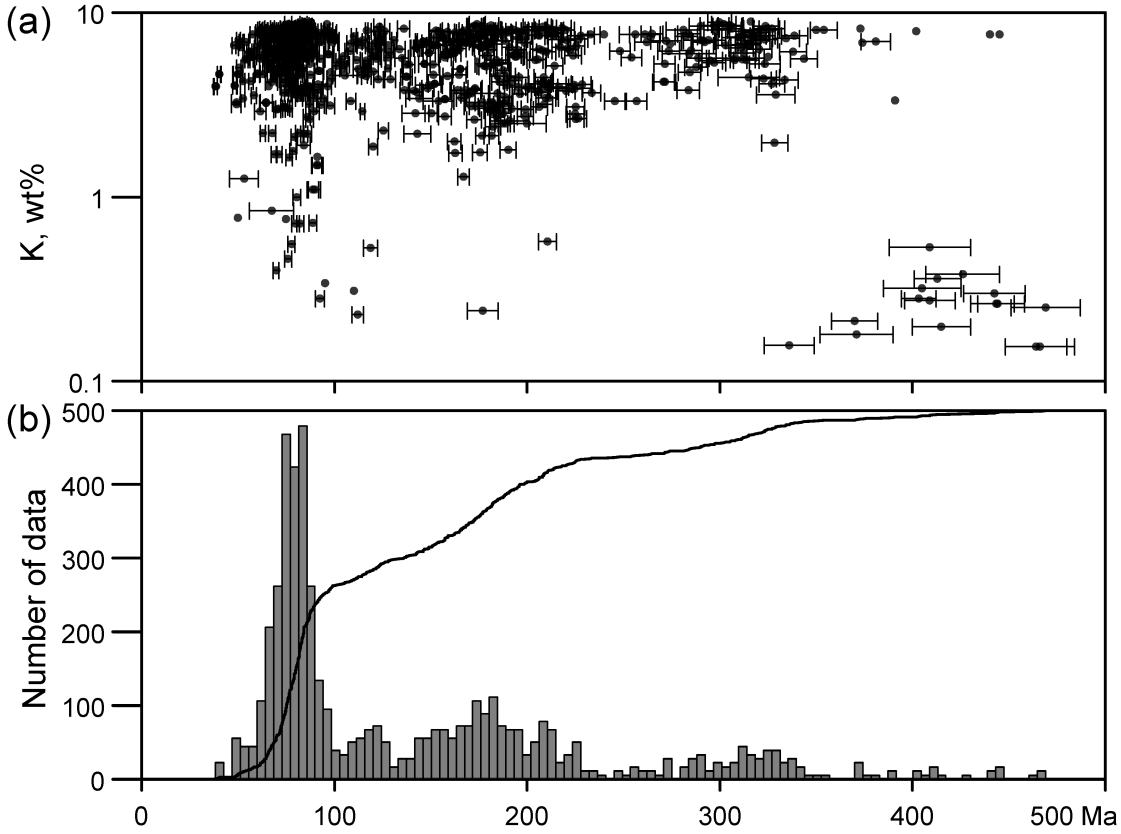

図 1　karsheet_swj_v1（2014 年 9 月版）に含まれる K–Ar 系年代値のプロット．(a) 年代測定対象の鉱物（バルク試料を含む）のカリウム含有量と K–Ar 年代値の関係．K 含有量が少ないプロットは，主として角閃石類，パラゴナイトのデータからなる．(b) 年代頻度分布と積算頻度曲線．ビンの幅は 5Ma とした．

代値の他に，測定した鉱物のカリウム濃度は表に加えたが，アルゴン同位体組成は省略した．後者は年代値が掲載されたオリジナルの論文を参照されたい．1977 年以前の年代は Steiger and Jäger（1977）の壊変定数で再計算した．現時点（2014 年 9 月版 Excel シート）で 1008 個のデータ数を有する．今後，東北日本の高圧変成岩類についてのデータベースは稿を改めて公開する．参照の便宜のため，本稿には地質単元毎のヒストグラムを示した（図 2）．

3. 高圧変成岩類の鉱物 K–Ar 系放射年代の地質学的意味

含カリウム変成鉱物の K–Ar 系放射年代測定は，閉止温度と過剰アルゴンという 2 つの大きな問題があった．変成温度ピークが 550 ～ 600℃に達するような標本の場合，白雲母の K–Ar 年代は，一般に冷却過程で系が閉じたタイミングを記録し，変成温度ピークのタイミングを示さない．閉止温度は，鉱物の形状のほかに，鉱物の結晶粒度と冷却速度に依存するので，一般に提案されている白雲母の閉止温度約 300 ～ 500℃は，あくまでも経験的な温度に過ぎない．白雲母の閉止温度は，1 つの変成ユニットの中でも一様ではなく，変成岩の上昇・冷却過程においての塑性変形の持続程度に関係するらしい（Itaya and Takasugi, 1988; Itaya *et al*., 2011）．周防帯の錦町地域と石垣島の例を図 3 に示した．また，緑泥石など不純物の混在による若返りや，同一標本において細粒フラクションが粗粒のそれに比べてやや若い年代を示すこともある（例えば，Tsujimori and Itaya, 1999）．

高圧変成岩地域の貫入岩による接触変成帯では，白雲母が再結晶して化学組成を変える温度に達する前に放射壊変起源アルゴンの脱ガスが連続的に進行するようである（Fukui *et al*., 2012）．花崗岩などの貫入岩が存在する地域では，白雲母が低温高圧で安定な Si に富んだフェンジャイト質の組成を持っていたとしても，注意が必要である．

K–Ar 系放射年代測定では，Ar 同位体初生値が大気の同位体比と同値という大前提に基づいている．しかしながら，その大前提の検証は簡単ではない．^{40}Ar/ ^{39}Ar 法段階加熱法によっていくつかの温度フラクションの同位体組成からアイソクロンを定義し，同位体初生値を確認することができる．ところが，分離

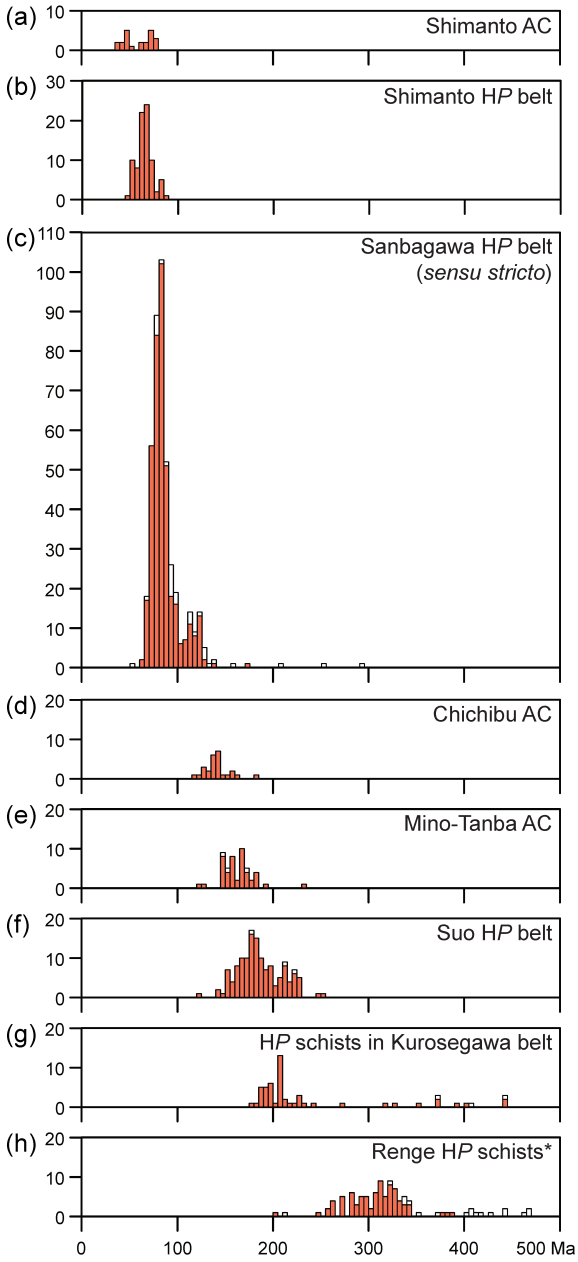

図２　地質体毎の K–Ar 系年代頻度分布（Itaya *et al*., 2011 を改図）．(a) 四万十帯（付加体），(b) 四万十変成帯，(c) 三波川変成帯（狭義），(d) 秩父帯（付加体），(e) 美濃－丹波帯（付加体），(f) 周防変成帯，(g) 黒瀬川帯の高圧変成岩類，(g) 蓮華変成岩類（* 大江山オフィオライトに伴う高圧角閃岩類もこれに含めた）．赤色のビン：泥質片岩のフェンジャイトおよびイライトの K–Ar 年代．白抜きのビン：砂質片岩，塩基性片岩，角閃岩およびエクロジャイトの角閃石類，パラゴナイトおよび全岩の K–Ar 年代．

した結晶及びそのバルクが完全に均質であればアイソクロンを定義するだけのバリエーションを得ることはできない．大前提を検証するためには，アルゴン同位体だけでは解決は不可能で，ヘリウムやネオンといった他の希ガス同位体組成を測定し，どれだけ大気に近いのかの評価が必要となる．

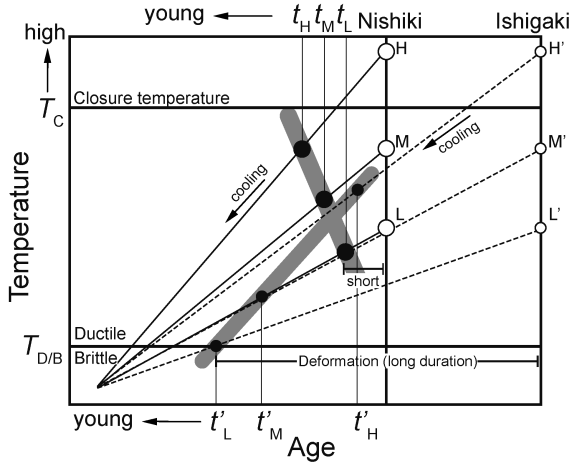

図３　変成度と白雲母年代の相関を説明するための概念図（Nuong *et al*., 2008 を改図）．周防変成帯の錦町地域と石垣島地域の例．T_C と $T_{D/B}$ は，それぞれ，閉鎖温度と塑性・脆性遷移温度を示す．t_L, t_M, t_H は，錦町地域の低（L），中（M），高（H）変成度から得られた年代．t'_L, t'_M, t'_H は，石垣島地域の低（L'），中（M'），高（H'）変成度から得られた年代．

4. まとめ

高圧変成岩類の K–Ar 年代学は，雲母類や一部の角閃石など岩石の成因や生成条件を推定するために重要な主成分鉱物を用いて直接年代測定する利点がある．年代値は主に冷却過程で系が閉じたタイミングを記録し，変成温度ピークのタイミングを示すことは稀である．しかし，系統的なマッピングの方法を用いることで，高圧変成帯の下限・上限認定や変成ユニット内部の極性の検証などが可能となる．本稿でコンパイルしたように，西南日本の高圧変成岩類と弱変成付加体からは，約半世紀の間に 1000 個を超える年代値が報告され，地体構造論の基礎となってきた．オリジナルの文献に敬意を払いつつ，本データベースが新しい価値観で過去の既存のデータを見直す機会になれば幸いである．

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表 1　蓮華変成岩類（大江山オフィオライトに伴う高圧角閃岩類も含む）から報告されている K–Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Shibata and Nozawa (1968)										
	TN66081401	pelitic schist	biotite	4.47	–	**315**	16	Omi	Bt	
Shibata and Ito (1978)										
	MI-63100806	pelitic schist	phengite	7.31	–	**311**	10	Renge	Grt	
Igi *et al*. (1979)										
	YD-73-11-11	amphibolite	hornblende	0.230	–	**457**	22	Nomozaki		
	YD-73-11-13	amphibolite	hornblende	0.140	–	**480**	22	Tsunakake-iwa		
	YD-73-11-14	amphibolite	hornblende	0.129	–	**457**	65	Tsunakake-iwa		
Shibata *et al*. (1979)										
	KANo. 377	amphibolite	hornblende	0.442	–	**409**	21	Kochi		
	KANo. 341	amphibolite	hornblende	0.227	–	**409**	13	Kumamoto		
	KANo. 14	pelitic schist	phengite	3.60	–	**329**	10	Omi	Bt	
Shibata *et al*. (1980)										
	77-2508	amphibolite	hornblende	0.198	–	**415**	15	Kuzuryu		
Shibata (1981)										
		albitite	phlogopite	8.08	–	**321**	10	Omi		
		metagabbro	hornblende	0.157	–	**336**	13	Omi		
		amphibolite	hornblende	0.212	–	**370**	12	Renge		
Nishimura *et al*. (1983)										
	80306-6	pelitic schist	phengite	7.37	–	**264**	–	Toyogadake		
	80306-8	pelitic schist	phengite	6.77	–	**274**	–	Toyogadake		
Watanabe *et al*. (1987)										
	Oosa-yama	mafic schist	phengite	3.30	–	**256.9**	5.4	Osayama	Ep	
	Oosa-yama	mafic schist	phengite	3.30	–	**245.5**	5.2	Osayama	Ep	
Nishimura and Shibata (1989)										
	85104-9	amphibolite	hornblende	0.154	–	**466**	18	Wakasa		
	85104-9	amphibolite	hornblende	0.154	–	**464**	16	Wakasa		
	85104-10	amphibolite	hornblende	0.252	–	**469**	18	Wakasa		
	85105-6	amphibolite	hornblende	0.263	–	**444**	14	Wakasa		
Shibata and Nishimura (1989)										
	81725-1	pelitic schist	phengite	7.11	–	**290**	9	Wakasa	Chl	
	81725-1	pelitic schist	phengite	7.11	–	**294**	9	Wakasa	Chl	
	8348-11	pelitic schist	phengite	8.08	–	**281**	9	Wakasa	Chl	
	80722-1	pelitic schist	phengite	7.61	–	**256**	8	Wakamiya	Chl	
	80722-1	pelitic schist	phengite	7.61	–	**261**	8	Wakamiya	Chl	
	80722-3	pelitic schist	phengite	7.05	–	**272**	8	Wakamiya	Chl	
Yokoyama (1992)										
	121625	pelitic schist	phengite	5.66	–	**308**	15	Tanigawadake		
	121626	pelitic schist	phengite	5.99	–	**284**	14	Tanigawadake		
Kabashima *et al*. (1995)										
	A-1	pelitic schist	phengite	8.63	0.17	**302.2**	6.3	Kiyama		
	A-2	pelitic schist	phengite	8.43	0.17	**290.2**	6.1	Kiyama		
	A-3	pelitic schist	phengite	8.03	0.16	**297.9**	6.2	Kiyama		
	A-4	pelitic schist	phengite	7.67	0.15	**264.9**	5.6	Kiyama		
	B-1	pelitic schist	phengite	8.55	0.17	**305.5**	6.5	Kiyama		
	B-2	pelitic schist	phengite	8.49	0.17	**297.2**	7.4	Kiyama		
	B-3	pelitic schist	phengite	8.38	0.17	**304.3**	6.3	Kiyama		
	B-4	pelitic schist	phengite	8.47	0.17	**305.0**	6.3	Kiyama		
	B-5	pelitic schist	phengite	8.21	0.16	**306.0**	6.4	Kiyama		
Tsujimori and Itaya (1999) / Tsujimori (1998)										
	OS162a	pelitic schist	phengite	6.81	0.14	**314.7**	6.4	Osayama	Lws-Pmp	
	OS80	pelitic schist	phengite	6.44	0.13	**311.0**	6.3	Osayama	Lws-Pmp	
	OS182	pelitic schist	phengite	8.20	0.16	**324.3**	6.6	Osayama	Ep	
	OS277	pelitic schist	phengite	5.52	0.11	**307.7**	6.3	Osayama	Ep	
	OS304	pelitic schist	phengite	8.21	0.16	**326.9**	6.7	Osayama	Ep	
	OS190	pelitic schist	phengite	8.44	0.17	**323.6**	6.6	Osayama	Ep	
	OS224	pelitic schist	phengite	7.47	0.15	**317.6**	6.5	Osayama	Ep	
	OS329(100/150)	pelitic schist	phengite	7.82	0.16	**318.8**	6.5	Osayama	Ep	
	OS329(150/200)	pelitic schist	phengite	7.42	0.15	**282.6**	5.8	Osayama	Ep	
	OS93(100/150)	pelitic schist	phengite	6.95	0.14	**292.0**	6.0	Osayama	Ep	
	OS93(150/200)	pelitic schist	phengite	6.18	0.12	**273.4**	5.6	Osayama	Ep	
	OS350	pelitic schist	phengite	7.94	0.16	**311.5**	6.3	Osayama	Ep	
	OS188	pelitic schist	phengite	8.89	0.18	**299.8**	6.1	Osayama	Ep	
	OS318	pelitic schist	phengite	7.66	0.15	**284.9**	5.9	Osayama	Ep	
	OS267	pelitic schist	phengite	7.55	0.15	**315.0**	6.5	Osayama	Ep	
	OS281	pelitic schist	phengite	6.68	0.13	**312.2**	6.4	Osayama	Ep	
	OS23(100/150)	mafic schist	phengite	7.48	0.15	**322.1**	6.5	Osayama	Ep	
	OS23(150/200)	mafic schist	phengite	6.72	0.13	**314.5**	6.4	Osayama	Ep	
	OS23B(100/150)	mafic schist	phengite	7.07	0.14	**319.4**	6.5	Osayama	Ep	
	OS23B(150/200)	mafic schist	phengite	5.68	0.11	**288.6**	5.9	Osayama	Ep	

表1（つづき）

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
	OS110	mafic schist	Cr-phengite	8.06	0.17	**354.0**	7.1	Osayama	Lws-Pmp	
Tsujimori *et al*. (2000)										
	FK01	amphibolite	hornblende	0.264	0.005	**443.3**	9.6	Oeyama		
	FK02	amphibolite	hornblende	0.281	0.006	**403.2**	8.9	Oeyama		
	OE9a	amphibolite	hornblende	0.376	0.008	**426**	19	Oeyama		
	OE9b	amphibolite	hornblende	0.362	0.007	**413**	12	Oeyama		
Kunugiza *et al*. (2004)										
	OM91	pelitic schist	phengite	7.15	0.14	**323.4**	6.6	Omi	Bt	
	OM92	pelitic schist	phengite	7.24	0.15	**334.3**	6.9	Omi	Bt	
	OM93	pelitic schist	phengite	6.26	0.13	**285.0**	5.9	Omi	Bt	
	OM94	pelitic schist	phengite	7.52	0.15	**338.8**	6.9	Omi	Bt	
	OM95	pelitic schist	phengite	6.33	0.13	**320.5**	6.6	Omi	Bt	
	OM96	pelitic schist	phengite	5.59	0.11	**311.8**	6.5	Omi	Chl	
	OM97	pelitic schist	phengite	5.36	0.11	**297.0**	6.2	Omi	Chl	
	OM82	pelitic schist	phengite	6.94	0.14	**262.2**	6.5	Omi	Chl	
	AG2204A	pelitic schist	phengite	5.25	0.11	**323.3**	8.0	Omi	Grt	
	AS0318	pelitic schist	phengite	6.14	0.12	**338.0**	6.9	Omi	Grt	
	KZ2214	pelitic schist	phengite	6.96	0.14	**380.9**	7.7	Omi	Grt	
	KM0391	pelitic schist	phengite	6.67	0.11	**303.1**	6.2	Shirouma	Grt	
	MM1003	pelitic schist	phengite	7.03	0.14	**291.3**	6.0	Shirouma	Grt	
	MM1014	pelitic schist	phengite	7.40	0.15	**309.7**	6.5	Shirouma	Grt	
	GM0308	pelitic schist	phengite	4.77	0.10	**284.3**	5.9	Gamata	Bt	
	GM0806	pelitic schist	phengite	5.49	0.11	**295.2**	6.1	Gamata	Bt	
	IS0723	pelitic schist	phengite	4.40	0.09	**322.7**	6.7	Ise	Bt	
	IS0732	pelitic schist	phengite	4.12	0.08	**327.0**	6.7	Ise	Bt	
	IS0735	pelitic schist	phengite	5.54	0.11	**313.7**	6.6	Ise	Bt	
	NR0503	pelitic schist	phengite	5.07	0.10	**287.8**	6.0	Nigure	Grt	
	NR0505	pelitic schist	phengite	3.80	0.08	**283.6**	5.9	Nigure	Grt	
Tsujimori *et al*. (2006)										
	IS-PS01	pelitic schist	phengite	6.03	0.12	**312.3**	6.5	Ise	Bt	
	PGEA	amphibolite	paragonite	0.573	0.011	**210.6**	4.6	Ise	EA	
Tsujimori (*unpublished data*)										
	SB(100/150)	mafic schist	phengite	5.63	—	**343.7**	7.0	Omi	EBS	
	SB(150/200)	mafic schist	phengite	4.33	—	**333.6**	7.0	Omi	EBS	
	SB(200/250)	mafic schist	phengite	1.96	—	**328.5**	6.8	Omi	EBS	
Tsujimori (*unpublished data*)					total gas					
	YTPS-R	pelitic schist	phengite	Ar/Ar		**342.5**	5.0	Omi	EC	
	YTPS-R	pelitic schist	phengite	Ar/Ar		**334.4**	—	Omi	EC	
	YTPS-R	pelitic schist	phengite	Ar/Ar		**389.1**	—	Omi	EC	
	YTPS-R	pelitic schist	phengite	Ar/Ar		**375.9**	—	Omi	EC	
	FMM	albitite	phengite	Ar/Ar		**340.0**	—	Omi		
	FMM	albitite	phengite	Ar/Ar		**329.0**	—	Omi		
	FMM	albitite	phengite	Ar/Ar		**329.0**	—	Omi		
	FMM	albitite	phengite	Ar/Ar		**327.0**	—	Omi		
	FMM	albitite	phengite	Ar/Ar		**323.0**	—	Omi		
	FMM	albitite	phengite	Ar/Ar		**332.0**	—	Omi		
	FMM	albitite	phengite	Ar/Ar		**337.0**	—	Omi		
	Tr-Bt	tremorite rock	biotite	Ar/Ar		**344.1**	—	Omi		
	Tr-Bt	tremorite rock	biotite	Ar/Ar		**336.4**	—	Omi		
Kobayashi and Goto (2008)										
	Cg-A	pelitic schist	phengite	4.22	0.08	**271.5**	5.6	Sasayama G.	pebble	
	Cg-A	pelitic schist	phengite	4.22	0.08	**270.7**	5.6	Sasayama G.	pebble	

表２　周防変成帯から報告されている K–Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Nishimura *et al*. (1983)										
	791011-1	pelitic schist	phengite	7.73	–	**175**	–	Nishiki-cho	E-G	
	K1011-14	pelitic schist	phengite	7.13	–	**172**	–	Nishiki-cho	P-A	
Watanabe *et al*. (1987)										
	TQ-3	pelitic schist	phengite	2.50	–	**189**	4	Gotsu	Ep	
	TQ-3	pelitic schist	phengite	2.50	–	**187**	4	Gotsu	Ep	
Faure *et al*. (1988)						total gas				
	JA69	pelitic schist	phengite	Ar/Ar		**222.2**	4.8	Tomuru		
	JA70	pelitic schist	barroisite	Ar/Ar		**222.0**	6.3	Tomuru		
	JA74	pelitic schist	crossite	Ar/Ar		**104.8**	8.3	Tomuru		
Fukutomi *et al*. (1989)										
	R.1	pelitic schist	phengite	8.01	0.16	**180.1**	3.6	Tsuwano	P-A	
	R.2	pelitic schist	phengite	6.86	0.14	**148.5**	3.0	Tsuwano	P-A	
	R.3	pelitic schist	phengite	7.35	0.15	**172.9**	3.4	Tsuwano	P-A	
	R.4	pelitic schist	phengite	7.64	0.25	**169.9**	3.3	Tsuwano	P-A	
	R.5	pelitic schist	phengite	6.91	0.14	**160.6**	3.2	Tsuwano	P-A	
	R.6	pelitic schist	phengite	7.98	0.16	**179.1**	3.5	Tsuwano	P-A	
	R.7	pelitic schist	phengite	6.92	0.14	**179.9**	3.5	Tsuwano	P-A	
	R.8	pelitic schist	phengite	6.27	0.13	**180.7**	3.6	Tsuwano	P-A	
	R.9	pelitic schist	phengite	5.15	0.10	**177.6**	3.5	Tsuwano	P-A	
	R.10	pelitic schist	phengite	6.86	0.14	**179.1**	3.5	Tsuwano	P-A	
	R.11	pelitic schist	phengite	6.46	0.13	**176.3**	3.5	Tsuwano	P-A	
	R.12	pelitic schist	phengite	7.91	0.16	**175.9**	3.5	Tsuwano	P-A	
	R.13	pelitic schist	phengite	3.44	0.07	**166.0**	2.6	Tsuwano	P-A	
Isozaki and Itaya (1989)										
	Sh-1	pelitic schist	phengite	2.85	0.06	**187.7**	3.9	Onogawa G. pebble		
	Sh-1*	pelitic schist	phengite	2.74	0.06	**199.0**	4.2	Onogawa G. pebble		
	Sh-2	pelitic schist	phengite	3.47	0.07	**188.6**	4.0	Onogawa G. pebble		
	Sh-3	pelitic schist	phengite	6.68	0.13	**153.0**	3.3	Onogawa G. pebble		
	Sh-3*	pelitic schist	phengite	6.40	0.13	**164.9**	3.5	Onogawa G. pebble		
	Sh-4	pelitic schist	phengite	2.15	0.04	**181.5**	3.8	Onogawa G. pebble		
	Sh-5C	pelitic schist	phengite	4.27	0.09	**191.7**	4.0	Onogawa G. pebble		
	SH-5F	pelitic schist	phengite	3.21	0.06	**181.6**	3.8	Onogawa G. pebble		
	Sh-6	pelitic schist	phengite	2.41	0.05	**182.3**	3.9	Onogawa G. pebble		
Nishimura *et al*. (1989)										
	O-7	pelitic schist	phengite	2.67	0.05	**226.5**	4.4	Nishiki-cho	P-C	
	O-9	pelitic schist	phengite	2.65	0.05	**225.2**	4.4	Nishiki-cho	P-C	
	O-16	pelitic schist	phengite	3.85	0.08	**224.5**	4.4	Nishiki-cho	P-C	
	O-17	pelitic schist	phengite	4.03	0.08	**224.6**	4.4	Nishiki-cho	P-A	
	O-20	pelitic schist	phengite	7.44	0.15	**213.5**	4.2	Nishiki-cho	P-A	
	O-22	pelitic schist	phengite	7.82	0.16	**213.6**	4.2	Nishiki-cho	P-A	
	O-25	pelitic schist	phengite	6.50	0.13	**217.1**	4.3	Nishiki-cho	P-A	
	O-28	pelitic schist	phengite	6.41	0.13	**220.8**	4.3	Nishiki-cho	P-A	
	O-30	pelitic schist	phengite	7.99	0.16	**213.5**	4.2	Nishiki-cho	P-A	
	O-33	pelitic schist	phengite	5.86	0.12	**223.9**	4.4	Nishiki-cho	P-A	
	O-35	pelitic schist	phengite	6.62	0.13	**225.6**	4.4	Nishiki-cho	E-G	
	O-36	pelitic schist	phengite	7.18	0.14	**227.0**	4.4	Nishiki-cho	E-G	
	O-38	pelitic schist	phengite	6.27	0.13	**222.2**	4.3	Nishiki-cho	E-G	
	O-40	pelitic schist	phengite	7.08	0.14	**220.4**	4.3	Nishiki-cho	E-G	
	821014-13	meta tuff	whole-rock	4.10	–	**212.0**	11.0	Nishiki-cho	P-C	
	821014-21	meta tuff	whole-rock	3.88	–	**223.0**	11.0	Nishiki-cho	P-C	
Shibata and Nishimura (1989)										
	791011-1	pelitic schist	phengite	7.49	–	**228.0**	7.0	Nishiki-cho		
	8299-12	pelitic schist	phengite	7.54	–	**206.0**	7.0	Yamaguchi		
	80723-7	pelitic schist	phengite	7.16	–	**218.0**	7.0	Yame		
	80723-17	pelitic schist	phengite	8.00	–	**211.0**	7.0	Yame		
	80723-3	pelitic schist	phengite	5.55	–	**184.0**	6.0	Kurume		
	80723-5	pelitic schist	phengite	7.05	–	**159.0**	5.0	Kurume		
	80723-5	pelitic schist	phengite	7.05	–	**167.0**	5.0	Kurume		
	87623-27	pelitic schist	phengite	8.03	–	**193.0**	6.0	Yamaga		
	8347-17	pelitic schist	phengite	7.93	–	**154.0**	5.0	Wakasa		
	80718-9	pelitic schist	phengite	6.73	–	**181.0**	6.0	Aasahi-cho		
	80718-3	pelitic schist	phengite	8.02	–	**191.0**	6.0	Katsuyama		
	80717-12	pelitic schist	phengite	6.95	–	**165.0**	5.0	Tsukita		
	81108-1	mafic schist	barroisite	0.241	–	**177.0**	8.0	Tari		
	80719-1	pelitic schist	phengite	7.80	–	**191.0**	6.0	Gotsu		
	80719-4	pelitic schist	phengite	7.94	–	**195.0**	6.0	Gotsu		
Takeshita and Nakajima (1992)										
	TP-1	pelitic schist	phengite	1.88	0.04	**120.0**	2.4	Tatsuno		
	TP-2	pelitic schist	phengite	3.21	0.06	**188.3**	3.7	Tatsuno		
	TP-3	pelitic schist	phengite	2.15	0.04	**176.8**	3.5	Tatsuno		
	TP-4	pelitic schist	phengite	3.83	0.08	**172.8**	3.4	Tatsuno		
	TP-5	pelitic schist	phengite	2.85	0.06	**150.2**	3.0	Tatsuno		
	TP-6	pelitic schist	phengite	3.78	0.08	**164.0**	3.3	Tatsuno		
	TB-1	pelitic schist	phengite	1.29	0.03	**167.0**	3.0	Tatsuno		

表2（つづき）

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Nishimura *et al*. (1996)										
	Ik-1	mafic schist	phengite	5.17	0.10	**182.9**	3.9	Ikura I F.	P-C	
	Ik-2	mafic schist	phengite	2.63	0.05	**172.5**	3.8	Ikura I F.	P-C	
	Tn-1	pelitic slate	phengite	3.60	0.07	**169.3**	3.6	Taniai F.	P-C	
	Tn-2	pelitic slate	phengite	3.11	0.06	**173.8**	3.8	Taniai F.	P-C	
	Tn-3	pelitic slate	phengite	3.08	0.06	**183.6**	3.9	Taniai F.	P-C	
	Tn-5	pelitic phyllite	phengite	7.11	0.14	**182.8**	4.0	Taniai F.	P-A	
	Tn-6	pelitic phyllite	phengite	7.27	0.15	**169.7**	3.6	Taniai F.	P-A	
	Tn-8	pelitic phyllite	phengite	4.85	0.10	**187.6**	4.0	Taniai F.	P-A	
	Oj-1	pelitic schist	phengite	8.43	0.17	**187.3**	4.0	Oojaridani F.	E-G	
	Oj-2	pelitic schist	phengite	7.19	0.14	**174.4**	3.7	Oojaridani F.	E-G	
	Oj-4	pelitic schist	phengite	8.08	0.16	**190.2**	4.0	Oojaridani F.	E-G	
	Oj-5	pelitic schist	phengite	7.67	0.15	**188.4**	4.1	Oojaridani F.	E-G	
	Oj-6	pelitic schist	phengite	7.87	0.15	**187.5**	4.1	Oojaridani F.	E-G	
Nagakawa *et al*. (1997)										
	203(100/200)	psammitic schist	phengite	5.16	0.10	**214.1**	4.5	Manotani	A zone	
	203(200/280)	psammitic schist	phengite	3.08	0.06	**206.2**	4.4	Manotani	A zone	
	205(100/200)	pelitic schist	phengite	3.63	0.07	**184.5**	3.9	Manotani	A zone	
	205(200/280)	pelitic schist	phengite	2.89	0.06	**182.3**	3.9	Manotani	A zone	
	206(200/280)	pelitic schist	phengite	1.74	0.04	**175.6**	3.8	Manotani	A zone	
Yamamoto *et al*. (2000)										
	GSJ R70290	pelitic schist	phengite	2.50	—	**200**	10	Yamasaki F.	Chl	
Tsujimori (*unpublished data*)										
	SKN-01	pelitic schist	phengite	3.03	0.06	**179.0**	3.8	Sekinomiya	Chl	
Nishimura *et al*. (2004)										
	010210-14	pelitic schist	phengite	5.74	0.12	**193.9**	4.1	Mogi	Chl	
	010210-15	pelitic schist	phengite	7.66	0.15	**185.1**	3.9	Mogi	Chl	
	010209-10	pelitic schist	phengite	7.65	0.15	**213.9**	4.5	Mogi	Chl	
	000325-06	pelitic schist	phengite	6.63	0.13	**161.6**	3.5	Mogi	Chl	
	000325-11	pelitic schist	phengite	6.60	0.13	**178.7**	3.8	Mogi	Chl	
	010208-07	pelitic schist	phengite	5.84	0.12	**179.2**	3.8	Mogi	Chl	
	920321-13	pelitic schist	phengite	6.16	0.12	**248.2**	5.2	Nomo		
	920321-15	pelitic schist	phengite	5.71	0.11	**254.1**	5.3	Nomo		
	930326-05	pelitic schist	phengite	3.96	0.08	**199.8**	4.2	Nomo		
	940405-12	pelitic schist	phengite	1.73	0.04	**162.7**	3.5	Nomo		
	940405-10	pelitic schist	phengite	2.00	0.04	**162.3**	3.5	Nomo		
	921218-03	pelitic schist	phengite	2.74	0.06	**157.4**	3.4	Nomo		
	920917-01	pelitic schist	phengite	7.78	0.16	**162.8**	3.5	Nomo		
	920930-02	pelitic schist	phengite	5.72	0.11	**157.4**	3.4	Nomo		
	940407-14	pelitic schist	phengite	7.31	0.15	**153.5**	3.3	Nomo		
	940407-20	pelitic schist	phengite	7.97	0.16	**152.7**	3.4	Nomo		
	940407-22	pelitic schist	phengite	8.46	0.17	**172.4**	3.9	Nomo		
	920918-01	pelitic schist	phengite	8.52	0.17	**181.4**	3.9	Nomo		
	800507-06	pelitic schist	phengite	7.57	—	**177.0**	5.0	Nomo		
	920320-03	pelitic schist	phengite	7.83	0.16	**166.8**	3.6	Nomo		
	920321-12	pelitic schist	phengite	7.80	0.16	**177.2**	3.8	Nomo		
	790923-10	pelitic schist	phengite	8.00	0.16	**168.4**	3.8	Nomo		
	920320-06	pelitic schist	phengite	7.58	0.15	**177.1**	3.8	Nomo		
	920322-01	pelitic schist	phengite	7.13	0.14	**164.8**	3.6	Nomo		
	920322-02	pelitic schist	phengite	7.60	0.15	**183.4**	3.9	Nomo		
	790923-01	pelitic schist	phengite	6.63	—	**153.0**	5.0	Nomo		
	920519-04	pelitic schist	phengite	7.89	0.16	**158.8**	3.7	Nomo		
	940408-09	pelitic schist	phengite	8.63	0.17	**174.1**	4.2	Nomo		
Oho *et al*. (2007)										
	8992902	pelitic schist	whole-rock	3.78	—	**168**	8	Misumi G.	Chl	
	9032205	pelitic schist	whole-rock	3.31	—	**154**	8	Misumi G.	Chl	
	8741306	pelitic schist	whole-rock	3.27	—	**177**	9	Chizu F.	Chl	
	9080701	pelitic schist	whole-rock	2.58	—	**191**	10	Chizu F.	Chl	
	9040407	pelitic schist	whole-rock	2.20	—	**143**	7	Maizuru G.	Chl	
	9051507	pelitic schist	whole-rock	3.26	—	**182**	9	Maizuru G.	Chl	
	89Y0506	pelitic schist	whole-rock	2.85	—	**142**	7	Tsunotani F.	Chl	
	9072401	pelitic schist	whole-rock	3.65	—	**171**	9	Tsunotani F.	Chl	
Nuong *et al*. (2008)										
	1	pelitic schist	phengite	7.02	0.14	**188.3**	4.0	Ishigaki (Tomuru F.)	Zone A	
	2	pelitic schist	phengite	7.79	0.16	**195.9**	4.1	Ishigaki (Tomuru F.)	Zone A	
	3	pelitic schist	phengite	7.39	0.15	**196.1**	4.1	Ishigaki (Tomuru F.)	Zone A	
	4	pelitic schist	phengite	7.98	0.16	**198.4**	4.2	Ishigaki (Tomuru F.)	Zone A	
	5	pelitic schist	phengite	8.05	0.16	**204.8**	4.3	Ishigaki (Tomuru F.)	Zone A	
	6	pelitic schist	phengite	7.81	0.16	**196.1**	4.1	Ishigaki (Tomuru F.)	Zone B	
	7	pelitic schist	phengite	5.53	0.11	**204.1**	4.3	Ishigaki (Tomuru F.)	Zone B	
	8	pelitic schist	phengite	7.48	0.15	**206.4**	4.3	Ishigaki (Tomuru F.)	Zone B	
	9	pelitic schist	phengite	7.19	0.14	**196.0**	4.1	Ishigaki (Tomuru F.)	Zone B	
	10	pelitic schist	phengite	8.03	0.16	**214.5**	4.5	Ishigaki (Tomuru F.)	Zone C	
	11	pelitic schist	phengite	8.05	0.16	**208.8**	4.4	Ishigaki (Tomuru F.)	Zone C	
	12	pelitic schist	phengite	8.22	0.16	**210.7**	4.4	Ishigaki (Tomuru F.)	Zone C	
	13	pelitic schist	phengite	8.28	0.17	**218.1**	4.7	Ishigaki (Tomuru F.)	Zone C	
	14	pelitic schist	phengite	8.37	0.17	**208.1**	4.4	Ishigaki (Tomuru F.)	Zone C	
	15	pelitic schist	phengite	8.07	0.16	**219.8**	4.6	Ishigaki (Tomuru F.)	Zone C	

表３　美濃－丹波帯（弱変成付加体）から報告されている K-Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Takami *et al*. (1990)										
	N-1	pelitic schist	phengite	7.37	0.15	**156.4**	3.4	Kuga G.		
	N-2	pelitic schist	phengite	8.11	0.16	**182.0**	4.3	Kuga G.		
	N-3	pelitic schist	phengite	7.79	0.16	**166.1**	3.6	Kuga G.		
	N-4	pelitic schist	phengite	7.29	0.15	**174.9**	3.8	Kuga G.		
	N-5	pelitic schist	phengite	7.51	0.15	**169.7**	3.6	Kuga G.		
	N-6	pelitic schist	phengite	6.87	0.14	**168.2**	3.7	Kuga G.		
	N-7a	pelitic schist	phengite	6.98	0.14	**146.1**	2.9	Kuga G.		
	N-7b	pelitic schist	phengite	5.27	0.11	**146.8**	3.0	Kuga G.		
	B-8	pelitic schist	phengite	4.94	0.10	**165.3**	3.6	Kuga G.		
	N-9	pelitic schist	phengite	6.54	0.13	**175.5**	3.8	Kuga G.		
	N-10	pelitic schist	phengite	6.86	0.14	**168.0**	3.6	Kuga G.		
	N-11a	pelitic schist	phengite	6.64	0.13	**150.8**	3.2	Kuga G.		
	N-11b	pelitic schist	phengite	6.04	0.12	**149.2**	3.2	Kuga G.		
	N-12	pelitic schist	phengite	5.99	0.12	**159.0**	3.9	Kuga G.		
	N-13	pelitic schist	phengite	5.88	0.12	**157.3**	3.4	Kuga G.		
	N-14	pelitic schist	phengite	7.14	0.14	**172.0**	3.8	Kuga G.		
	N-15	pelitic schist	phengite	6.03	0.12	**162.3**	3.5	Kuga G.		
	N-16	pelitic schist	phengite	3.38	0.07	**157.5**	3.4	Kuga G.		
	N-17	pelitic schist	phengite	4.12	0.08	**152.0**	3.3	Kuga G.		
	N-18	pelitic schist	phengite	6.74	0.14	**145.9**	3.1	Kuga G.		
Takami and Itaya (1996)										
	Unit III-1	pelitic schist	phengite	7.29	0.15	**174.9**	3.8	Gonomoto		
	Unit III-2	pelitic schist	phengite	7.79	0.16	**166.1**	3.6	Gonomoto		
	Unit III-3	pelitic schist	phengite	8.11	0.16	**182.0**	4.3	Gonomoto		
	Unit III-4	pelitic schist	phengite	7.37	0.15	**156.4**	3.4	Gonomoto		
	Unit III-5	pelitic schist	phengite	6.87	0.14	**168.2**	3.7	Gonomoto		
	Unit III-6	pelitic schist	phengite	7.51	0.15	**169.7**	3.6	Gonomoto		
	Unit III-7	pelitic schist	phengite	4.94	0.10	**165.3**	3.6	Gonomoto		
	Unit III-8	pelitic schist	phengite	6.54	0.13	**175.5**	3.8	Gonomoto		
	Unit III-9	pelitic schist	phengite	6.86	0.14	**168.0**	3.6	Gonomoto		
	Unit III-10	pelitic schist	phengite	7.14	0.14	**172.0**	3.8	Gonomoto		
	Unit III-11	pelitic schist	phengite	6.03	0.12	**162.3**	3.5	Gonomoto		
	Unit II-12-a	pelitic schist	phengite	6.98	0.14	**146.1**	2.9	Gonomoto		
	Unit II-12-b	pelitic schist	phengite	5.27	0.11	**146.8**	3.0	Gonomoto		
	Unit II-13-a	pelitic schist	phengite	6.64	0.13	**150.8**	3.2	Gonomoto		
	Unit II-13-b	pelitic schist	phengite	6.04	0.12	**149.2**	3.2	Gonomoto		
	Unit II-14	pelitic schist	phengite	5.99	0.12	**159.0**	3.9	Gonomoto		
	Unit II-15	pelitic schist	phengite	5.88	0.12	**157.3**	3.4	Gonomoto		
	Unit II-16	pelitic schist	phengite	3.38	0.07	**157.5**	3.4	Gonomoto		
	Unit II-17	pelitic schist	phengite	4.12	0.08	**152.0**	3.3	Gonomoto		
	Unit II-18	pelitic schist	phengite	6.74	0.14	**145.9**	3.1	Gonomoto		
	Unit I-19	pelitic schist	phengite	5.63	0.11	**121.8**	2.7	Gonomoto		
	Unit I-20	pelitic schist	phengite	4.34	0.09	**129.0**	2.8	Gonomoto		
Takami and Itaya (1998)										
	A-1	siliceous claystone	phengite	3.11	0.06	**170.9**	3.6	Gonomoto		
	B-2	chert	phengite	3.90	0.08	**148.5**	3.2	Gonomoto		
	B-4	chert	phengite	5.23	0.11	**151.1**	3.2	Gonomoto		
Takami *et al*. (2001)										
	706-11	pelitic schist	phengite	2.70	0.05	**184.4**	3.9	Kanayama U.		
	706-12	pelitic schist	phengite	2.96	0.06	**181.5**	3.8	Kanayama U.		
	706-13	pelitic schist	phengite	1.80	0.04	**190.2**	4.1	Kanayama U.		
	313-05	pelitic schist	phengite	3.68	0.07	**233.4**	4.9	Iheya U.		

表4 広義の三波川変成帯（四国地方）から報告されている K–Ar および Ar/Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Ueda *et al*. (1977)										
	YK67030701	quartz schist	whole-rock	0.31	—	**110**	—	Tosa	Chl	
	YK67051101	quartz schist	phengite	4.75	—	**98**	—	Iyomishima	Grt	
	YK67030902	quartz schist	whole-rock	0.76	—	**74**	—	Otoyo	Chl	
	S69P	pelitic schist	phengite	3.58	—	**79**	—	Shirataki	Chl	
	S94S	quartz schist	phengite	6.90	—	**86**	—	Shirataki	Grt	
	7272804	mafic schist	biotite	6.67	—	**128**	—	Doi	Bt	
	7273007	quartz schist	phengite	8.65	—	**96**	—	Jyoushi	Grt	
Monie *et al*. (1987)										
	JA35	pelitic schist	phengite	Ar/Ar		**79.8**	2.3	Asemi	Olig-Bt	
	JA31	pelitic schist	phengite	Ar/Ar		**82.0**	2.0	Asemi	Ab-Bt	
	JA28	pelitic schist	phengite	Ar/Ar		**82.0**	2.1	Asemi	Grt	
	JA17	pelitic schist	phengite	Ar/Ar		**81.7**	1.9	Tokushima	Grt	
	JA15	pelitic schist	phengite	Ar/Ar		**83.6**	2.3	Tokushima	Grt	
	JA10	pelitic schist	phengite	Ar/Ar		**81.8**	2.0	Tokushima	Grt	
	JA6	pelitic schist	phengite	Ar/Ar		**81.2**	1.9	Tokushima	Grt	
Itaya and Takasugi (1988)										
	1401	psammitic schist	phengite	3.92	0.08	**86.7**	2.0	Sangawa	Ab-Bt	
	1401	psammitic schist	phengite	3.92	0.08	**87.6**	2.0	Sangawa	Ab-Bt	
	1401	psammitic schist	phengite	3.92	0.08	**87.3**	2.0	Sangawa	Ab-Bt	
	1403	pelitic schist	phengite	7.09	0.14	**75.3**	1.7	Sangawa	Ab-Bt	
	1403	pelitic schist	phengite	7.09	0.14	**75.7**	1.7	Sangawa	Ab-Bt	
	1404	pelitic schist	phengite	6.22	0.12	**76.8**	1.8	Sangawa	Ab-Bt	
	1404	pelitic schist	phengite	6.22	0.12	**74.6**	1.5	Sangawa	Ab-Bt	
	1405	pelitic schist	phengite	5.74	0.12	**75.0**	1.7	Sangawa	Ab-Bt	
	1405	pelitic schist	phengite	5.74	0.12	**73.3**	1.7	Sangawa	Ab-Bt	
	1406	pelitic schist	phengite	6.95	0.14	**73.4**	1.7	Sangawa	Grt	
	1406	pelitic schist	phengite	6.95	0.14	**72.4**	1.5	Sangawa	Grt	
	1501	pelitic schist	phengite	6.80	0.14	**75.7**	1.7	Sangawa	Grt	
	1501	pelitic schist	phengite	6.80	0.14	**73.6**	1.5	Sangawa	Grt	
	1502	pelitic schist	phengite	6.47	0.13	**72.5**	1.6	Sangawa	Grt	
	1502	pelitic schist	phengite	6.47	0.13	**72.5**	1.6	Sangawa	Grt	
	1503	psammitic schist	phengite	6.33	0.13	**76.8**	1.7	Sangawa	Grt	
	1503	psammitic schist	phengite	6.33	0.13	**75.3**	1.5	Sangawa	Grt	
	1601	pelitic schist	phengite	5.96	0.12	**73.3**	1.7	Kamio	Grt	
	1601	pelitic schist	phengite	5.96	0.12	**74.1**	1.5	Kamio	Grt	
	1602	pelitic schist	phengite	7.09	0.14	**74.7**	1.7	Kamio	Grt	
	1602	pelitic schist	phengite	7.09	0.14	**74.5**	1.5	Kamio	Grt	
	1603	pelitic schist	phengite	6.17	0.12	**83.5**	1.9	Kamio	Ab-Bt	
	1604	mafic schist	phengite	4.98	0.10	**83.8**	1.9	Kamio	Ab-Bt	
	1605	pelitic schist	phengite	6.31	0.13	**81.2**	1.8	Dozan	Ab-Bt	
	1704	pelitic schist	phengite	6.51	0.13	**76.7**	1.7	Asemi	Grt	
	1703	pelitic schist	phengite	5.98	0.12	**77.7**	1.8	Asemi	Grt	
	1702	pelitic schist	phengite	6.31	0.13	**73.6**	1.7	Asemi	Grt	
	1702	pelitic schist	phengite	6.31	0.13	**75.5**	1.7	Asemi	Grt	
	805	pelitic schist	phengite	6.07	0.12	**80.2**	1.8	Asemi	Grt	
	804	mafic schist	phengite	4.36	0.09	**79.3**	1.8	Asemi	Grt	
	803	mafic schist	phengite	6.01	0.12	**77.7**	1.6	Asemi	Grt	
	803	mafic schist	phengite	6.01	0.12	**80.1**	1.8	Asemi	Grt	
	802	pelitic schist	phengite	6.32	0.13	**80.3**	1.8	Asemi	Ab-Bt	
	801	pelitic schist	phengite	5.36	0.11	**79.6**	1.8	Asemi	Ab-Bt	
	607	pelitic schist	phengite	7.84	0.16	**75.8**	1.7	Asemi	Ab-Bt	
	606	pelitic schist	phengite	7.57	0.15	**83.1**	1.7	Asemi	Ab-Bt	
	604	pelitic schist	phengite	7.73	0.16	**81.6**	1.7	Asemi	Ab-Bt	
	603	pelitic schist	phengite	7.59	0.15	**82.2**	1.7	Asemi	Ab-Bt	
	602	pelitic schist	phengite	7.77	0.16	**81.9**	1.7	Asemi	Ab-Bt	
	601	pelitic schist	phengite	7.67	0.15	**81.2**	1.7	Asemi	Ab-Bt	
	913	mafic schist	phengite	5.02	0.10	**81.8**	1.9	Asemi	Ab-Bt	
	913	mafic schist	phengite	5.02	0.10	**81.9**	1.7	Asemi	Ab-Bt	
	912	pelitic schist	phengite	7.46	0.15	**80.1**	1.8	Asemi	Olig-Bt	
	911	pelitic schist	phengite	7.93	0.16	**81.1**	1.8	Asemi	Olig-Bt	
	910	pelitic schist	phengite	7.60	0.15	**81.9**	1.9	Asemi	Olig-Bt	
	705	mafic schist	phengite	6.87	0.14	**80.2**	1.9	Asemi	Olig-Bt	
	704	mafic schist	phengite	6.95	0.14	**79.1**	1.8	Asemi	Olig-Bt	
	620	pelitic schist	phengite	6.91	0.14	**80.8**	1.7	Asemi	Olig-Bt	
	619	pelitic schist	phengite	7.51	0.15	**81.5**	1.8	Asemi	Olig-Bt	
	618	mafic schist	phengite	6.80	0.14	**80.1**	1.7	Asemi	Olig-Bt	
	617	mafic schist	phengite	2.22	0.04	**81.9**	1.9	Asemi	Olig-Bt	
	616	mafic schist	phengite	8.03	0.16	**82.4**	1.9	Asemi	Olig-Bt	
	615	pelitic schist	phengite	7.99	0.16	**81.7**	1.9	Asemi	Ab-Bt	
	511	pelitic schist	phengite	8.24	0.17	**83.6**	1.9	Asemi	Ab-Bt	
	511	pelitic schist	phengite	8.24	0.17	**82.5**	1.7	Asemi	Ab-Bt	
	510	pelitic schist	phengite	7.99	0.16	**83.5**	1.9	Asemi	Ab-Bt	
	510	pelitic schist	phengite	7.99	0.16	**82.5**	1.7	Asemi	Ab-Bt	
	509	mafic schist	phengite	5.73	0.12	**80.8**	1.8	Asemi	Ab-Bt	
	509	mafic schist	phengite	5.73	0.12	**81.1**	1.7	Asemi	Ab-Bt	
	508	mafic schist	phengite	8.32	0.17	**84.0**	1.9	Asemi	Ab-Bt	
	508	mafic schist	phengite	8.32	0.17	**82.4**	1.7	Asemi	Ab-Bt	
	507	pelitic schist	phengite	8.14	0.16	**79.9**	1.8	Asemi	Grt	
	507	pelitic schist	phengite	8.14	0.16	**80.6**	1.7	Asemi	Grt	
	506	mafic schist	phengite	2.20	0.04	**86.0**	2.0	Asemi	Grt	
	506	mafic schist	phengite	2.20	0.04	**84.3**	1.9	Asemi	Grt	

表 4（つづき）

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	Age (Ma)	error (Ma)	area	grade	note			
	505	pelitic schist	phengite	8.02	0.16	**80.4**	1.8	Asemi	Grt				
	505	pelitic schist	phengite	8.02	0.16	**77.7**	1.8	Asemi	Grt				
	501	pelitic schist	phengite	7.60	0.15	**79.7**	1.8	Asemi	Grt				
	501	pelitic schist	phengite	7.60	0.15	**78.5**	1.6	Asemi	Grt				
	502	pelitic schist	phengite	7.44	0.15	**76.9**	1.7	Asemi	Grt				
	502	pelitic schist	phengite	7.44	0.15	**76.5**	1.6	Asemi	Grt				
	503	pelitic schist	phengite	8.03	0.16	**79.8**	1.8	Asemi	Grt				
	503	pelitic schist	phengite	8.03	0.16	**78.2**	1.6	Asemi	Grt				
	504	mafic schist	phengite	1.00	0.02	**80.5**	1.9	Asemi	Grt				
	609	mafic schist	phengite	3.90	0.08	**83.1**	1.9	Asemi	Grt				
	614	pelitic schist	phengite	5.95	0.12	**75.3**	1.7	Asemi	Chl				
	708	pelitic schist	phengite	4.36	0.09	**73.3**	1.7	Asemi	Chl				
	706	mafic schist	phengite	6.33	0.13	**72.2**	1.5	Asemi	Chl				
	706	mafic schist	phengite	6.33	0.13	**72.7**	1.5	Asemi	Chl				
	702	pelitic schist	phengite	5.16	0.10	**75.1**	1.7	Asemi	Chl				
	703	pelitic schist	phengite	5.38	0.11	**77.4**	1.8	Asemi	Chl				
	901	pelitic schist	phengite	6.63	0.13	**77.5**	1.6	Asemi	Chl				
	901	pelitic schist	phengite	6.63	0.13	**77.7**	1.6	Asemi	Chl				
	902	pelitic schist	phengite	6.16	0.12	**76.0**	1.6	Asemi	Chl				
	902	pelitic schist	phengite	6.16	0.12	**76.5**	1.6	Asemi	Chl				
	903	pelitic schist	phengite	5.53	0.11	**76.3**	1.7	Asemi	Chl				
	904	pelitic schist	phengite	6.34	0.13	**74.6**	1.7	Asemi	Chl				
	905	pelitic schist	phengite	4.43	0.09	**77.0**	1.7	Asemi	Chl				
	906	pelitic schist	phengite	4.71	0.09	**76.4**	1.7	Asemi	Chl				
	907	pelitic schist	phengite	5.64	0.11	**79.9**	1.8	Asemi	Chl				
Takasu and Dallmeyer (1990)						total gas				plateau		calc	
	2	pelitic schist	phengite	Ar/Ar		**82.9**	0.5	Asemi	Ab-Bt	**83.0**	0.4		
	3	pelitic schist	phengite	Ar/Ar		**84.3**	0.6	Asemi	Olig-Bt	**84.3**	0.5		
	3	pelitic schist	hornblende	Ar/Ar		**105.6**	3.9	Asemi	Olig-Bt	**93.4**	2.0	**94.1**	0.4
	4	pelitic schist	phengite	Ar/Ar		**84.0**	0.4	Asemi	Grt	**84.0**	0.3		
	5	pelitic schist	phengite	Ar/Ar		**83.7**	0.7	Asemi	Grt	**83.8**	0.5		
	9	pelitic schist	phengite	Ar/Ar		**75.6**	0.6	Asemi	Grt	**76.3**	0.4		
	10	pelitic schist	phengite	Ar/Ar		**79.2**	0.4	Asemi	Grt	**79.6**	0.3		
	11	pelitic schist	phengite	Ar/Ar		**81.6**	0.6	Asemi	Ab-Bt	**81.5**	0.6		
	12	pelitic schist	phengite	Ar/Ar		**81.2**	0.5	Asemi	Ab-Bt	**81.4**	0.4		
	12	pelitic schist	hornblende	Ar/Ar		**111.6**	3.1	Asemi	Ab-Bt	**—**	**—**		
	13A	pelitic schist	hornblende	Ar/Ar		**110.1**	4.2	Asemi	Ab-Bt	**103.9**	3.5	**84.3**	5.1
	13B	pelitic schist	phengite	Ar/Ar		**83.9**	0.6	Asemi	Ab-Bt	**84.2**	0.5		
	14	pelitic schist	hornblende	Ar/Ar		**99.3**	4.8	Asemi	Grt	**105.4**	4.7	**86.8**	2.2
	15	pelitic schist	phengite	Ar/Ar		**83.9**	0.9	Asemi	Ab-Bt	**84.2**	0.4		
	15	pelitic schist	hornblende	Ar/Ar		**118.4**	5.9	Asemi	Ab-Bt	**—**	**—**	**78.4**	0.8
	16	pelitic schist	phengite	Ar/Ar		**83.2**	0.5	Asemi	Grt	**83.4**	0.3		
	18	pelitic schist	phengite	Ar/Ar		**89.2**	0.5	Asemi	Ab-Bt	**89.3**	0.4		
	6	pelitic schist	whole-rock	Ar/Ar		**81.4**	0.8	Oboke	Chl	**84.6**	0.7		
	7	pelitic schist	whole-rock	Ar/Ar		**88.0**	0.7	Oboke	Chl	**93.5**	0.6		
	8	pelitic schist	whole-rock	Ar/Ar		**85.5**	1.1	Oboke	Chl	**87.5**	1.1		
	17	pelitic schist	whole-rock	Ar/Ar		**74.9**	0.7	Oboke	Chl	**76.5**	0.4		
	19	pelitic schist	whole-rock	Ar/Ar		**73.5**	0.8	Oboke	Chl	**74.9**	0.7		
Dallmeyer and Takasu (1991)						total gas				plateau		calc	
	1	eclogite (metagabbro)	hornblende	Ar/Ar		**94.7**	6.5	Sebadani	Ab-Bt	**92.6**	4.4	**93.7**	1.1
	2	eclogite (metagabbro)	hornblende	Ar/Ar		**110.5**	5.7	Sebadani	Ab-Bt	**94.9**	1.4	**96.5**	0.7
	3	eclogite (metagabbro)	hornblende	Ar/Ar		**91.5**	5.3	Sebadani	Ab-Bt	**89.4**	4.1	**84.6**	1.2
	3	eclogite (metagabbro)	paragonite	Ar/Ar		**94.2**	3.4	Sebadani	Ab-Bt	**93.7**	2.7	**96.5**	0.2
	4	eclogite	hornblende	Ar/Ar		**93.5**	1.6	Sebadani	Ab-Bt	**88.6**	1.3	**83.4**	0.3
	4	eclogite	phengite	Ar/Ar		**87.3**	0.4	Sebadani	Ab-Bt	**87.9**	0.3	**88.9**	0.1
	5	mafic schist	hornblende	Ar/Ar		**92.5**	2.5	Sebadani	Ab-Bt	**92.5**	1.4	**83.6**	0.5
	5	mafic schist	phengite	Ar/Ar		**89.2**	0.5	Sebadani	Ab-Bt	**89.3**	0.4	**89.7**	0.2
Hara *et al*. (1992)													
	Na-1	pelitic schist	phengite	4.99	—	**77.2**	3.9	Hijikawa	Chl				
Takeda *et al*. (1993)													
	MP201	pelitic schist	phengite	7.87	0.16	**89.7**	1.9	Mikame	Chl				
	MP205	pelitic schist	phengite	7.62	0.15	**97.1**	2.1	Mikame	Chl				
	MP209	pelitic schist	phengite	7.61	0.15	**88.6**	1.9	Mikame	Chl				
	MP301	pelitic schist	phengite	7.50	0.15	**92.3**	2.0	Mikame	Chl				
	MP303	pelitic schist	phengite	7.91	0.16	**95.4**	2.1	Mikame	Chl				
	MP305	pelitic schist	phengite	7.73	0.16	**92.2**	2.0	Mikame	Chl				
Itaya and Fukui (1994)													
	803(330/400)	pelitic schist	phengite	3.75	0.08	**79.2**	1.7	Eda	Chl				
	804(330/400)	pelitic schist	phengite	5.46	0.11	**79.1**	1.7	Eda	Chl				
	804	pelitic schist	phengite	5.46	0.11	**78.9**	1.7	Eda	Chl				
	805(330/400)	pelitic schist	phengite	3.68	0.07	**85.1**	1.8	Eda	Chl				
	805	pelitic schist	phengite	3.68	0.07	**84.2**	1.8	Eda	Chl				
	807(280/330)	pelitic schist	phengite	1.77	0.04	**78.6**	1.7	Eda	Chl				
	807(330/400)	pelitic schist	phengite	2.11	0.04	**79.3**	1.7	Eda	Chl				
	808(330/400)	pelitic schist	phengite	3.87	0.08	**80.8**	1.8	Eda	Chl				
	808	pelitic schist	phengite	3.87	0.08	**79.6**	1.7	Eda	Chl				
	810(280/330)	pelitic schist	phengite	6.27	0.13	**84.2**	1.8	Eda	Chl				
	810(330/400)	pelitic schist	phengite	6.02	0.12	**86.2**	1.9	Eda	Chl				
	812(330/400)	pelitic schist	phengite	6.05	0.12	**87.1**	1.9	Eda	Chl				

表4（つづき）

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
	814(330/400)	pelitic schist	phengite	2.91	0.09	**89.5**	2.8	Eda	Chl	
	814(330/400 m)	pelitic schist	phengite	5.61	0.11	**93.2**	2.0	Eda	Chl	
	815(330/400)	pelitic schist	phengite	4.60	0.09	**87.5**	1.9	Eda	Chl	
	816(330/400)	pelitic schist	phengite	3.97	0.08	**96.4**	2.1	Eda	Chl	
	817(280/330)	pelitic schist	phengite	6.82	0.14	**108.9**	2.3	Eda	Chl	
	817(330/400)	pelitic schist	phengite	6.18	0.12	**107.9**	2.3	Eda	Chl	
	818(330/400)	pelitic schist	phengite	3.46	0.07	**89.5**	2.0	Eda	Chl	
	819(330/400)	pelitic schist	phengite	6.50	0.13	**89.0**	1.9	Eda	Chl	
	901(280/330)	pelitic schist	phengite	3.18	0.06	**87.1**	2.0	Eda	Chl	
	901(330/400)	pelitic schist	phengite	2.72	0.05	**85.7**	1.9	Eda	Chl	
	902(280/330)	pelitic schist	phengite	2.65	0.05	**87.1**	1.9	Eda	Chl	
	902(330/400)	pelitic schist	phengite	3.15	0.06	**92.7**	2.0	Eda	Chl	
	903(280/330)	pelitic schist	phengite	4.48	0.09	**79.0**	1.8	Eda	Chl	
	903(330/400)	pelitic schist	phengite	4.20	0.08	**79.3**	1.8	Eda	Chl	
	904(280/330)	pelitic schist	phengite	3.44	0.07	**81.7**	1.8	Eda	Chl	
	904(330/400)	pelitic schist	phengite	3.43	0.10	**84.0**	2.6	Eda	Chl	
	905(280/330)	pelitic schist	phengite	3.68	0.11	**89.9**	2.8	Eda	Chl	
	905(330/400)	pelitic schist	phengite	3.82	0.08	**91.4**	2.0	Eda	Chl	
	906(280/330)	pelitic schist	phengite	3.67	0.07	**82.4**	1.8	Eda	Chl	
	906(330/400)	pelitic schist	phengite	3.76	0.08	**81.9**	1.8	Eda	Chl	
	907(280/330)	pelitic schist	phengite	4.57	0.09	**82.6**	1.8	Eda	Chl	
	907(330/400)	pelitic schist	phengite	3.69	0.07	**82.5**	1.8	Eda	Chl	
	908(280/330)	pelitic schist	phengite	5.34	0.11	**78.4**	1.7	Eda	Chl	
	908(330/400)	pelitic schist	phengite	5.41	0.11	**77.0**	1.7	Eda	Chl	
	909(280/330)	pelitic schist	phengite	4.49	0.09	**76.8**	1.7	Eda	Chl	
	909(330/400)	pelitic schist	phengite	4.26	0.09	**78.3**	1.7	Eda	Chl	
Sakakibara *et al*. (1998)										
	920307-6-1	pelitic schist	phengite	3.98	0.08	**87.3**	1.9	Ozu U.	Chl	
	920308-5-1A	pelitic schist	phengite	6.00	0.12	**86.7**	1.9	Ozu U.	Chl	
	920308-5-1B	pelitic schist	phengite	6.00	0.12	**90.1**	2.0	Ozu U.	Chl	
	920308-5-1C	pelitic schist	phengite	5.80	0.12	**88.8**	1.9	Ozu U.	Chl	
	920926-6	pelitic schist	phengite	7.16	0.14	**87.0**	1.9	Ozu U.	Chl	
Watanabe *et al*. (1998)										
	890402-02	ore	hornblende	0.28	—	**92.6**	2.3	Shirataki-Honko		
	890402-02'	ore	phengite	5.46	—	**76.2**	1.7	Shirataki-Honko		
	880513-02	mafic schist	hornblende	0.40	—	**69.7**	1.6	Iyo		
	880513-19	ore	hornblende	0.46	—	**75.9**	1.8	Iyo		
	880513-19'	ore	phengite	7.81	—	**79.2**	1.8	Iyo		
	880512-53	mafic schist	hornblende	0.23	—	**112.2**	3.0	Shiragayama		
	880512-50	ore	phengite	7.67	—	**77.9**	1.7	Shiragayama		
	880512-56	ore	phengite	5.57	—	**79.1**	1.7	Shiragayama		
	880511-SP	large flake	phengite	7.92	—	**79.1**	1.8	Kotsu		
	880511-44	ore	phengite	6.01	—	**79.0**	1.7	Kotsu		
	880511-44'	ore	hornblende	1.63	—	**76.4**	1.7	Kotsu		
	880512-13	ore	sericite	4.62	—	**60.0**	1.3	Hinooku		
Itaya and Fujino (1999)										
	404P	pelitic schist	phengite	8.14	0.16	**75.2**	1.6	Dozan	Ab-Bt	
	004Ps	psammitic schist	phengite	8.12	0.16	**73.7**	1.6	Dozan	Ab-Bt	
	404A	albite schist	phengite	8.69	0.17	**76.0**	1.7	Dozan	Ab-Bt	
	302P	pelitic schist	phengite	7.81	0.16	**82.5**	1.8	Asemi	Ab-Bt	
	302Ps	psammitic schist	phengite	7.37	0.15	**82.5**	1.8	Asemi	Ab-Bt	
	302Q	quartz schist	phengite	7.92	0.16	**83.1**	1.8	Asemi	Ab-Bt	
	702P	pelitic schist	phengite	7.96	0.16	**81.9**	1.8	Asemi	Ab-Bt	
	003Ps	psammitic schist	phengite	7.99	0.16	**80.7**	1.8	Asemi	Ab-Bt	
	702A	albite schist	phengite	7.82	0.16	**83.0**	1.8	Asemi	Ab-Bt	
	604Q2	quartz schist	phengite	6.10	0.12	**83.3**	1.8	Asemi	Ab-Bt	
	604P(30/40)	pelitic schist	phengite	7.34	0.15	**85.5**	1.9	Asemi	Ab-Bt	
	604P(40/60)	pelitic schist	phengite	7.20	0.14	**85.6**	1.9	Asemi	Ab-Bt	
	604P(60/80)	pelitic schist	phengite	8.12	0.16	**83.9**	1.8	Asemi	Ab-Bt	
	604P(80/100)	pelitic schist	phengite	8.11	0.16	**84.2**	1.8	Asemi	Ab-Bt	
	604P(100/150)	pelitic schist	phengite	8.36	0.17	**83.1**	1.8	Asemi	Ab-Bt	
	604P(150/200)	pelitic schist	phengite	8.25	0.17	**83.8**	1.8	Asemi	Ab-Bt	
	604P(200/250)	pelitic schist	phengite	8.24	0.17	**84.5**	1.9	Asemi	Ab-Bt	
	604P(250/300)	pelitic schist	phengite	8.25	0.17	**83.1**	1.8	Asemi	Ab-Bt	
	604Q1(30/40)	quartz schist	phengite	3.66	0.07	**79.3**	1.7	Asemi	Ab-Bt	
	604Q1(40/60)	quartz schist	phengite	4.79	0.10	**76.3**	1.7	Asemi	Ab-Bt	
	604Q1(60/80)	quartz schist	phengite	5.30	0.11	**76.4**	1.7	Asemi	Ab-Bt	
	604Q1(80/100)	quartz schist	phengite	5.46	0.11	**75.3**	1.7	Asemi	Ab-Bt	
	604Q1(100/150)	quartz schist	phengite	6.86	0.14	**77.5**	1.7	Asemi	Ab-Bt	
	604Q1(150/200)	quartz schist	phengite	6.66	0.13	**77.7**	1.7	Asemi	Ab-Bt	
	604Q1(200/250)	quartz schist	phengite	5.21	0.10	**75.2**	1.7	Asemi	Ab-Bt	
	604Q1(250/300)	quartz schist	phengite	4.99	0.10	**76.5**	1.7	Asemi	Ab-Bt	
Yagi (2002)										
	DG4	pelitic schist	phengite	7.85	0.16	**74.6**	1.6	Dozan	Grt	
	DG7	pelitic schist	phengite	7.97	0.16	**75.7**	1.7	Dozan	Grt	
	DA8	pelitic schist	phengite	8.25	0.17	**78.3**	1.7	Dozan	Ab-Bt	
	DA9	pelitic schist	phengite	8.02	0.16	**81.3**	1.8	Dozan	Ab-Bt	
	DtG10	pelitic schist	phengite	7.61	0.15	**75.8**	1.7	Dozan	Grt	
	SG4	pelitic schist	phengite	8.06	0.16	**75.1**	1.6	Saruta	Grt	
	SA5	pelitic schist	phengite	8.20	0.16	**79.2**	1.7	Saruta	Ab-Bt	

表４（つづき）

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
	SA6	pelitic schist	phengite	8.05	0.16	**81.3**	1.8	Saruta	Ab-Bt	
	SA8	pelitic schist	phengite	7.60	0.15	**81.3**	1.8	Saruta	Ab-Bt	
	StG12	pelitic schist	phengite	7.38	0.15	**76.4**	1.7	Saruta	Grt	
	KG8	pelitic schist	phengite	8.07	0.16	**77.7**	1.7	Kamio	Grt	
	KG2	pelitic schist	phengite	8.52	0.17	**76.0**	1.7	Kamio	Grt	
	KA5	pelitic schist	phengite	7.79	0.16	**82.0**	1.8	Kamio	Ab-Bt	
	KA7	pelitic schist	phengite	8.00	0.16	**80.3**	1.8	Kamio	Ab-Bt	
Takeshita *et al*. (*in review*)										
	KA7	pelitic schist	phengite	8.00	0.16	**81.3**	1.8	Kamio	Ab-Bt	
	06112309	pelitic schist	phengite	8.02	0.16	**81.5**	1.8	Dozan	Ab-Bt	
	06112301	pelitic schist	phengite	7.20	0.14	**78.5**	1.7	Saruta	Grt	
	06112302	pelitic schist	phengite	7.93	0.16	**76.0**	1.6	Saruta	Grt	
	06112303	pelitic schist	phengite	8.38	0.17	**75.4**	1.6	Saruta	Grt	
	06112304	pelitic schist	phengite	8.51	0.17	**76.3**	1.7	Saruta	Grt	
	06112305	pelitic schist	phengite	8.48	0.17	**75.2**	1.6	Saruta	Grt	
	06112306	pelitic schist	phengite	8.60	0.17	**77.5**	1.7	Saruta	Grt	
	06112307	pelitic schist	phengite	8.37	0.17	**78.2**	1.7	Saruta	Grt	
	06112308	pelitic schist	phengite	8.29	0.17	**77.3**	1.7	Saruta	Grt	
Itaya and Tsujimori (*in revision*)										
	DSB6	eclogite (metagabbro)	phengite	7.68	0.15	**85.9**	1.9	Sebadani	Ab-Bt	
	ISB8 pg	eclogite (metagabbro)	paragonite	0.725	0.014	**88.7**	2.0	Sebadani	Ab-Bt	
	CSB53	eclogite	phengite	8.10	0.16	**85.8**	1.9	Sebadani	Ab-Bt	
	ESB44	eclogite	phengite	8.45	0.17	**86.5**	1.9	Sebadani	Ab-Bt	
	BSB3	eclogite	phengite	8.32	0.17	**86.9**	1.9	Sebadani	Ab-Bt	
	ESB46	eclogite	phengite	8.13	0.16	**87.5**	1.9	Sebadani	Ab-Bt	
	JSB3	eclogite	phengite	8.55	1.71	**85.0**	1.9	Sebadani	Ab-Bt	
	OSB19	eclogite	phengite	8.43	0.17	**86.1**	1.9	Sebadani	Ab-Bt	
	FSB2	pelitic schist	phengite	6.68	0.13	**86.6**	1.9	Sebadani	Ab-Bt	
	DSB23	pelitic schist	phengite	7.68	0.15	**85.5**	1.9	Sebadani	Ab-Bt	
	RSB34	pelitic schist	phengite	7.49	0.15	**84.3**	1.9	Sebadani	Ab-Bt	
	RSB41	pelitic schist	phengite	8.66	0.17	**83.9**	1.8	Sebadani	Ab-Bt	
	OSB17	pelitic schist	phengite	8.22	0.16	**84.7**	1.9	Sebadani	Ab-Bt	
	QE9605	eclogite	phengite	8.37	0.17	**123.3**	2.8	Gongen	Ab-Bt	
	GO17O016	eclogite	phengite	8.21	0.16	**136.0**	3.1	Gongen	Ab-Bt	
	WK1302b	eclogite	phengite	5.78	0.12	**77.8**	1.9	W.Iratsu	Ab-Bt	
	WK1302b pg	eclogite	paragonite	0.715	0.014	**79.8**	1.9	W.Iratsu	Ab-Bt	
	WK1308 pg	eclogite	paragonite	0.556	0.011	**77.7**	1.9	W.Iratsu	Ab-Bt	
	KKT6	eclogite	phengite	7.94	0.16	**88.2**	1.9	Kotsu	Grt	
	EDD108	eclogite	phengite	7.98	0.16	**87.8**	1.9	Kotsu	Grt	
	EDC10	eclogite	phengite	8.15	0.16	**87.6**	1.9	Kotsu	Grt	
	SKT3 pg	eclogite	paragonite	0.717	0.014	**82.3**	1.9	Kotsu	Grt	
	2014030901	eclogite	phengite	8.16	0.16	**72.9**	1.6	Kotsu	Grt	
	2014030903	eclogite	phengite	7.79	0.16	**79.2**	1.7	Kotsu	Grt	

表５　四万十変成帯（四国地方）から報告されている K–Ar および Ar/Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note	
Itaya and Takasugi (1988)											
	1505	pelitic schist	phengite	1.71	0.03	**68.7**	1.6	Kamio	Chl		
	1505	pelitic schist	phengite	1.71	0.03	**71.2**	1.5	Kamio	Chl		
	1506	pelitic schist	phengite	7.43	0.15	**64.9**	1.5	Kamio	Chl		
	1506	pelitic schist	phengite	7.43	0.15	**63.6**	1.3	Kamio	Chl		
	1606	pelitic schist	phengite	6.44	0.13	**65.3**	1.5	Kamio	Chl		
	1606	pelitic schist	phengite	6.44	0.13	**65.7**	1.4	Kamio	Chl		
	1608	psammitic schist	phengite	2.22	0.04	**62.9**	1.4	Kamio	Chl		
	1608	psammitic schist	phengite	2.22	0.04	**67.8**	1.8	Kamio	Chl		
	1609	pelitic schist	phengite	6.40	0.13	**65.5**	1.4	Kamio	Chl		
	1612	pelitic schist	phengite	7.75	0.16	**65.8**	1.5	Kamio	Chl		
	1612	pelitic schist	phengite	7.75	0.16	**65.7**	1.4	Kamio	Chl		
Takasu and Dallmeyer (1990)					total gas					plateau	
	1	pelitic schist	whole-rock	Ar/Ar		**69.6**	0.6	Oboke	Chl	**70.2**	0.4
Hara *et al*. (1992)											
	Ob-1	pelitic schist	phengite	6.69	–	**63.4**	3.2	Oboke	Chl		
Yagi (2002)											
	DC3	pelitic schist	phengite	7.76	0.16	**69.7**	1.5	Dozan	Chl		
	SC1	pelitic schist	phengite	7.41	0.15	**64.6**	1.4	Saruta	Chl		
	KC11	pelitic schist	phengite	7.96	0.16	**69.5**	1.5	Kamio	Chl		
Aoki *et al*. (2008)											
	KKT11	pelitic schist	phengite	7.44	0.15	**65.0**	1.4	Oboke (Kawaguchi F.)	Chl		
	KKT13	pelitic schist	phengite	6.66	0.13	**61.4**	1.3	Oboke (Kawaguchi F.)	Chl		
	KKT15	pelitic schist	phengite	7.76	0.16	**63.6**	1.4	Oboke (Kawaguchi F.)	Chl		
	KKT2	mafic schist	phengite	7.12	0.14	**64.8**	1.4	Oboke (Kawaguchi F.)	Chl		
	KKT33	mafic schist	phengite	5.28	0.11	**64.4**	1.4	Oboke (Kawaguchi F.)	Chl		

表6 久万層郡中の礫（三波川変成帯由来）の K-Ar および Ar/Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Yokoyama and Itaya (1990)										
	K-1	pelitic schist	phengite	5.73	0.11	**84.0**	1.8	Kuma Pebble	Olig-Bt	
	K-8	pelitic schist	phengite	7.60	0.15	**98.7**	2.1	Kuma Pebble	Ab-Bt	
	K-7	garnet amphibolite	hornblende	0.53	0.02	**118.7**	3.7	Kuma Pebble		
Takasu and Dallmeyer (1992)						total gas				
	1B	garnet amphibolite	hornblende	Ar/Ar		**131.1**	4.9	Kuma Pebble	Olig-Bt	
	1B	garnet amphibolite	phengite	Ar/Ar		**108.8**	0.7	Kuma Pebble	Olig-Bt	
	2	garnet amphibolite	hornblende	Ar/Ar		**156.8**	4.3	Kuma Pebble	Olig-Bt	
	2	garnet amphibolite	phengite	Ar/Ar		**115.7**	0.6	Kuma Pebble	Olig-Bt	
	4	pelitic schist	phengite	Ar/Ar		**78.7**	0.5	Kamegamori	Grt	
Nuong *et al*. (2009)										
	118995	pelitic schist	phengite	7.85	0.16	**83.0**	1.8	Kuma Pebble	Chl	
	118963	pelitic schist	phengite	8.05	0.16	**84.1**	1.8	Kuma Pebble	Chl	
	118969	pelitic schist	phengite	7.62	0.15	**83.3**	1.8	Kuma Pebble	Grt	
	118990	pelitic schist	phengite	7.93	0.16	**83.0**	1.8	Kuma Pebble	Grt	
	120338	pelitic schist	phengite	8.05	0.16	**82.1**	1.8	Kuma Pebble	Grt	
	120330	pelitic schist	phengite	7.80	0.16	**84.3**	1.8	Kuma Pebble	Bt	
	120330bi	pelitic schist	phengite	5.99	0.12	**84.2**	1.9	Kuma Pebble	Bt	
						total gas				
	118955	amphibolite	phengite	Ar/Ar		**117.2**	1.6	Kuma Pebble		
	118995	garnet amphibolite	phengite	Ar/Ar		**102.9**	2.5	Kuma Pebble		
	120330	pelitic schist	phengite	Ar/Ar		**83.8**	1.8	Kuma Pebble		

表7 三波川変成帯（近畿地方および中部地方）から報告されている K-Ar および Ar/Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Ueda *et al*. (1977)										
	KN66121501	pelitic schist	phengite	6.09	—	**70.5**		Iwata	Chl	
	KN66121502	pelitic schist	phengite	5.74	—	**68.6**		Iwata	Chl	
Shibata and Takagi (1988)										
	KSS4	pelitic schist	phengite	5.78	—	**57.8**	1.8	Bungui-toge	Grt	
	KSS8	pelitic schist	phengite	5.67	—	**63.4**	2.3	Bungui-toge	Chl	
	KSS9	pelitic schist	phengite	4.63	—	**63.1**	2.0	Bungui-toge	Chl	
	TIS1	pelitic schist	phengite	6.00	—	**65.9**	2.1	Bungui-toge	Chl	
Takagi *et al*. (1989)										
	87-2207	pelitic schist	phengite	6.38	—	**75.6**	2.7	Iimori	Chl	
	87-2313	pelitic schist	phengite	7.75	—	**74.8**	2.4	Iimori	Chl	
	87-2310	pelitic schist	phengite	4.18	—	**74.6**	2.3	Iimori	Chl	
	87-2308	pelitic schist	phengite	5.30	—	**73.6**	2.3	Iimori	Chl	
Hara *et al*. (1992)										
	Ki-3	pelitic schist	whole-rock	3.11	—	**65.5**	3.3	Kii	Chl	
	Ki-4	pelitic schist	phengite	4.48	—	**72.9**	2.3	Kii	Chl	
	Ki-4	pelitic schist	whole-rock	3.10	—	**71.1**	2.2	Kii	Chl	
Kurimoto (1993)										
	GSJ R57592	pelitic schist	phengite	4.95	0.10	**69.0**	1.5	Iimori F.	Chl	Non-spotted
	GSJ R57592	pelitic schist	phengite	4.95	0.10	**68.3**	1.5	Iimori F.	Chl	Non-spotted
	GSJ R57593	pelitic schist	phengite	4.67	0.09	**70.9**	1.6	Iimori F.	Chl	Non-spotted
	GSJ R57593	pelitic schist	phengite	4.67	0.09	**70.0**	1.5	Iimori F.	Chl	Non-spotted
	GSJ R57594	pelitic schist	phengite	5.01	0.10	**71.7**	1.6	Iimori F.	Chl	Non-spotted
	GSJ R57594	pelitic schist	phengite	5.01	0.10	**72.1**	1.6	Iimori F.	Chl	Non-spotted
	GSJ R57595	pelitic schist	phengite	6.71	0.13	**72.2**	1.6	Iimori F.	Chl	Non-spotted
	GSJ R57595	pelitic schist	phengite	6.71	0.13	**71.9**	1.6	Iimori F.	Chl	Non-spotted
	GSJ R57596	pelitic schist	phengite	5.77	0.12	**72.2**	1.6	Iimori F.	Chl	Non-spotted
	GSJ R57596	pelitic schist	phengite	5.77	0.12	**73.0**	1.6	Iimori F.	Chl	Non-spotted
	GSJ R57597	pelitic schist	phengite	5.25	0.11	**78.8**	1.7	Iimori F.	Chl	Non-spotted
	GSJ R57597	pelitic schist	phengite	5.25	0.11	**78.4**	1.7	Iimori F.	Chl	Non-spotted
	GSJ R57598	pelitic schist	phengite	7.22	0.14	**72.8**	1.6	Iimori F.	Grt	Spotted
	GSJ R57598	pelitic schist	phengite	7.22	0.14	**72.7**	1.6	Iimori F.	Grt	Spotted
	GSJ R57599	pelitic schist	phengite	7.15	0.14	**72.0**	1.6	Iimori F.	Grt	Spotted
	GSJ R57599	pelitic schist	phengite	7.15	0.14	**72.0**	1.6	Iimori F.	Grt	Spotted
	GSJ R57600	pelitic schist	phengite	6.50	0.13	**73.8**	1.6	Iimori F.	Grt	Spotted
	GSJ R57600	pelitic schist	phengite	6.50	0.13	**73.3**	1.6	Iimori F.	Grt	Spotted
Kurimoto (1995)										
	GSJ R59761	pelitic schist	phengite	4.92	0.10	**74.6**	1.6	Ryumon F.	Grt	Spotted
	GSJ R59761	pelitic schist	phengite	4.92	0.10	**74.8**	1.6	Ryumon F.	Grt	Spotted
	GSJ R59762	pelitic schist	phengite	6.18	0.12	**74.9**	1.7	Ryumon F.	Grt	Spotted
	GSJ R59762	pelitic schist	phengite	6.18	0.12	**75.0**	1.6	Ryumon F.	Grt	Spotted
	GSJ R59758	pelitic schist	phengite	4.85	0.10	**73.6**	1.6	Iimori F.	Grt	Spotted
	GSJ R59758	pelitic schist	phengite	4.85	0.10	**74.5**	1.6	Iimori F.	Grt	Spotted
	GSJ R59760	pelitic schist	phengite	2.81	0.06	**72.4**	1.6	Shibuta F.	Grt	Spotted
	GSJ R59760	pelitic schist	phengite	2.81	0.06	**74.7**	1.6	Shibuta F.	Grt	Spotted

表 7（つづき）

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note	
	GSJ R59750	pelitic schist	phengite	3.40	0.07	**73.2**	1.6	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59750	pelitic schist	phengite	3.40	0.07	**74.8**	1.7	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59755	pelitic schist	phengite	2.73	0.06	**76.8**	1.7	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59755	pelitic schist	phengite	2.73	0.06	**78.4**	1.7	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59764	pelitic schist	phengite	2.65	0.05	**79.6**	1.8	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59764	pelitic schist	phengite	2.65	0.05	**80.4**	1.8	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59765	pelitic schist	phengite	3.70	0.07	**76.2**	1.7	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59765	pelitic schist	phengite	3.70	0.07	**77.7**	1.7	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59767	pelitic schist	phengite	4.01	0.08	**95.8**	2.1	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59767	pelitic schist	phengite	4.01	0.08	**97.6**	2.1	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59768	pelitic schist	phengite	2.97	0.06	**82.5**	1.8	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59768	pelitic schist	phengite	2.97	0.06	**83.0**	1.8	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59766	pelitic schist	phengite	3.28	0.07	**83.7**	1.8	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59766	pelitic schist	phengite	3.28	0.07	**85.1**	1.9	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59770	pelitic schist	phengite	2.84	0.06	**87.3**	1.9	Tomobuchi F.	Chl	Non-spotted	
	GSJ R59770	pelitic schist	phengite	2.84	0.06	**88.2**	1.9	Tomobuchi F.	Chl	Non-spotted	
Takasu *et al*. (1996)						total gas				plateau	
	1	quartz schist	phengite	Ar/Ar		**76.5**	0.3	Iimori	Grt	**76.6**	0.3
	2	quartz schist	phengite	Ar/Ar		**74.9**	0.3	Iimori	Grt	**75.7**	0.3
	3	pelitic schist	phengite	Ar/Ar		**74.6**	0.4	Iimori	Grt	**74.8**	0.2
	4	pelitic schist	phengite	Ar/Ar		**74.9**	0.4	Funaokayama	Ab-Bt	**74.8**	0.4
de Jong *et al*. (2000)						total gas				plateau	
	SAM1	pelitic schist	whole-rock	Ar/Ar		**73.0**	0.4	Iimori	Chl	**73.0**	0.8
Nuong *et al*. (2011)											
	1	pelitic schist	phengite	7.67	0.15	**71.7**	1.6	Shirakura			
	2a	pelitic schist	phengite	5.88	0.12	**74.0**	1.6	Shirakura			
	2b	pelitic schist	phengite	7.72	0.15	**73.2**	1.6	Shirakura			
	3	pelitic schist	phengite	5.26	0.11	**66.5**	1.7	Shirakura			
	4	pelitic schist	phengite	4.44	0.09	**68.5**	1.5	Shirakura			
	5	pelitic schist	phengite	7.97	0.16	**67.2**	1.5	Shirakura			
	6	pelitic schist	phengite	7.78	0.16	**66.0**	1.4	Shirakura			
	7	pelitic schist	phengite	7.76	0.16	**68.2**	1.5	Shirakura			
	8	pelitic schist	phengite	8.16	0.16	**70.3**	1.5	Shirakura			
	9	pelitic schist	phengite	7.98	0.16	**71.5**	1.6	Shirakura			
	10	pelitic schist	phengite	6.28	0.13	**69.8**	1.5	Shirakura			
	11	pelitic schist	phengite	7.96	0.16	**72.3**	1.6	Shirakura			
	12	pelitic schist	phengite	7.12	0.14	**69.7**	1.5	Shirakura			
	13a	pelitic schist	phengite	4.69	0.09	**60.1**	1.3	Sejiri			
	13b	pelitic schist	phengite	3.57	0.07	**58.2**	1.3	Sejiri			
	14	pelitic schist	phengite	4.23	0.09	**56.7**	1.3	Sejiri			
	15	pelitic schist	phengite	6.94	0.14	**54.3**	1.2	Sejiri			
	16	pelitic schist	phengite	5.77	0.12	**57.2**	1.3	Sejiri			
	17	pelitic schist	phengite	6.16	0.12	**56.9**	1.2	Sejiri			
	18	pelitic schist	phengite	5.57	0.11	**54.9**	1.2	Sejiri			
	19	pelitic schist	phengite	6.13	0.12	**55.9**	1.2	Sejiri			
	20	pelitic schist	phengite	4.26	0.09	**52.4**	1.1	Sejiri			
	21	pelitic schist	phengite	5.57	0.11	**53.9**	1.2	Sejiri			
	22	pelitic schist	phengite	6.51	0.13	**51.3**	1.1	Sejiri			
	23	pelitic schist	phengite	3.42	0.07	**52.5**	1.2	Sejiri			
	24	pelitic schist	phengite	5.04	0.10	**50.5**	1.1	Sejiri			
	25	pelitic schist	phengite	6.91	0.14	**51.5**	1.1	Sejiri			
	26	pelitic schist	phengite	7.10	0.14	**50.2**	1.1	Sejiri			
	27	pelitic schist	phengite	6.65	0.13	**47.8**	1.0	Sejiri			

表8 九州地方の高圧変成岩（広義の三波川帯相当）の K-Ar および Ar/Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note	
Miller *et al*. (1963)											
	5001271	quartz schist	phengite	6.85	–	**72**	6	Sonogi			
	5002051	pelitic schist	phengite	5.17	–	**85**	6	Sonogi			
Ueda and Onuki (1968)											
	Kounoura 1	pelitic schist	phengite	5.91	–	**72**		Kounoura			
	Kounoura 2	pelitic schist	phengite	2.27	–	**61**		Kounoura			
	Kounoura 3	pelitic schist	phengite	4.62	–	**60**		Kounoura			
	Kounoura 4	pelitic schist	phengite	5.30	–	**81**		Kounoura			
	Tomachidake a	pelitic schist	phengite	3.25	–	**70**		Tomachidake			
	Tomachidake b	pelitic schist	phengite	3.86	–	**88**		Tomachidake			
	Tomachidake c	pelitic schist	phengite	4.27	–	**85**		Tomachidake			
	Takahama a	pelitic schist	phengite	1.51	–	**83**		Takahama			
	Takahama b	pelitic schist	phengite	3.26	–	**87**		Takahama			
Ueda *et al*. (1977)											
	KN67021302	quartz schist	whole-rock	0.34	–	**95**		Saganoseki	Grt		
	KN67021301	quartz schist	whole-rock	0.77	–	**49**		Saganoseki	Grt		
	KN67021304	quartz schist	whole-rock	1.65	–	**91**		Saganoseki	Chl		
	TN67022301	quartz schist	phengite	5.75	–	**87**		Nonaka	Chl		
Hattori and Shibata (1982)											
	1	pelitic schist	phengite	7.42	–	**61.8**	1.9	Nishisonogi	Chl		
	2	pelitic schist	phengite	5.76	–	**65.5**	2.0	Nishisonogi	Chl		
	3	pelitic schist	phengite	0.614	–	**68.4**	3.4	Nishisonogi	Chl		
	4	pelitic schist	phengite	4.84	–	**76.8**	2.5	Nishisonogi	Chl		
Faure *et al*. (1988)					total gas					plateau	
	JA52	mafic schist	phengite	Ar/Ar		**75.1**	1.7	Nagasaki	Chl	**76.3**	1.7
	JA52	mafic schist	glaucophane	Ar/Ar		**94.5**	5.0	Nagasaki	Chl	**93.2**	4.2
	JA62	pelitic schist	biotite	Ar/Ar		**62.2**	2.5	Nomo	Bt	**69.2**	2.5
	JA64	pelitic schist	phengite	Ar/Ar		**90.6**	2.2	Nomo	Bt	**90.9**	2.2
Nishimura *et al*. (2004)											
	010210-01	pelitic schist	phengite	8.38	0.17	**85.7**	1.9	Mogi	Ab-Bt		
	000326-11	pelitic schist	phengite	8.32	0.17	**87.2**	1.9	Mogi	Ab-Bt		
	010209-22	pelitic schist	phengite	8.43	0.17	**86.7**	1.9	Mogi	Ab-Bt		
	020426-03	pelitic schist	phengite	8.18	0.16	**87.0**	1.9	Mogi	Ab-Bt		
	920520-05	pelitic schist	phengite	8.11	0.16	**80.5**	1.8	Nomo			
	921103-02	pelitic schist	phengite	8.16	0.16	**83.3**	1.8	Nomo			
	920321-07	pelitic schist	phengite	7.95	0.16	**87.8**	1.9	Nomo			
	790923-29	pelitic schist	phengite	7.90	–	**77.8**	3.9	Nomo			
	790924-11	pelitic schist	phengite	7.85	–	**82.2**	4.1	Nomo			
	921215-02	pelitic schist	phengite	8.12	0.16	**82.3**	1.8	Nomo			
	921215-04	pelitic schist	phengite	7.96	0.16	**84.0**	1.8	Nomo			
	940406-02	pelitic schist	phengite	8.16	0.16	**80.9**	1.8	Nomo			
	940407-01	pelitic schist	phengite	8.12	0.16	**82.5**	1.8	Nomo			
	940408-01	pelitic schist	phengite	8.22	0.16	**83.2**	1.8	Nomo			

表９　三波川帯（御荷鉾帯相当）から報告されている K–Ar および Ar/Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Watanabe *et al*. (1982)										
	7472903g	pelitic schist	phengite	4.56	—	**105.4**	6.3	Ina	Chl	
Suzuki *et al*. (1990)										
	N-1	pelitic schist	phengite	7.10	0.14	**114.7**	2.5	Kamikatsu	Chl	
	N-2	pelitic schist	phengite	6.99	0.14	**112.2**	2.4	Kamikatsu	Chl	
	N-3	pelitic schist	phengite	4.61	0.09	**114.5**	2.5	Kamikatsu	Chl	
	N-4	mafic schist	phengite	7.90	0.16	**126.0**	2.7	Kamikatsu	Chl	
	N-5	pelitic schist	phengite	6.86	0.14	**123.8**	2.7	Kamikatsu	Chl	
	N-6	mafic schist	phengite	6.11	0.12	**128.6**	2.8	Kamikatsu	Chl	
	N-7	mafic schist	phengite	4.80	0.10	**120.1**	2.6	Kamikatsu	Chl	
	N-8	pelitic schist	phengite	7.93	0.16	**121.6**	2.6	Kamikatsu	Chl	
	N-9	pelitic schist	phengite	6.80	0.14	**120.8**	2.6	Kamikatsu	Chl	
	N-10	pelitic schist	phengite	7.27	0.15	**123.4**	2.7	Kamikatsu	Chl	
	N-11a	pelitic schist	phengite	7.09	0.14	**124.2**	2.7	Kamikatsu	Chl	
	N-11b	pelitic schist	phengite	4.34	0.09	**122.9**	2.6	Kamikatsu	Chl	
Kawato *et al*. (1991)										
	A-1	pelitic schist	phengite	6.36	0.13	**118.3**	2.5	Tosayama	Chl	
	A-2	pelitic schist	phengite	6.28	0.13	**123.2**	2.6	Tosayama	Chl	
	A-3	pelitic schist	phengite	5.48	0.11	**116.3**	2.5	Tosayama	Chl	
	A-4	pelitic schist	phengite	7.42	0.15	**110.2**	2.4	Tosayama	Chl	
	A-5	pelitic schist	phengite	4.93	0.10	**112.6**	2.4	Tosayama	Chl	
	A-6	pelitic schist	phengite	6.51	0.13	**111.5**	2.4	Tosayama	Chl	
	A-7	pelitic schist	phengite	5.00	0.10	**104.6**	2.3	Tosayama	Chl	
	A-8	pelitic schist	phengite	5.82	0.12	**121.9**	2.6	Tosayama	Chl	
	A-9	pelitic schist	phengite	6.70	0.13	**122.7**	2.6	Tosayama	Chl	
	A-10	pelitic schist	phengite	2.92	0.06	**114.5**	2.5	Tosayama	Chl	
	A-11	pelitic schist	phengite	7.36	0.15	**124.1**	2.7	Tosayama	Chl	
	A-12	pelitic schist	phengite	8.01	0.16	**116.8**	2.5	Tosayama	Chl	
	A-13	pelitic schist	phengite	5.04	0.10	**116.1**	2.5	Tosayama	Chl	
	A-14	pelitic schist	phengite	6.63	0.13	**114.0**	2.5	Tosayama	Chl	
Hirajima *et al*. (1992)										
	TH1401B	pelitic schist	phengite	5.05	0.10	**116.9**	2.7	Kanto Mtns	Chl	
Isozaki *et al*. (1992)										
	Kb-1	pelitic schist	phengite	6.91	0.14	**93.2**	2.4	Kebara F.	Chl	
	Kb-2	pelitic schist	phengite	7.06	0.14	**100.1**	2.5	Kebara F.	Chl	
	Kb-3	pelitic schist	phengite	6.94	0.14	**99.2**	2.5	Kebara F.	Chl	
	Kb-4	pelitic schist	phengite	7.30	0.15	**97.6**	2.5	Kebara F.	Chl	
	Kb-5	pelitic schist	phengite	7.44	0.15	**90.7**	2.3	Kebara F.	Chl	
Kurimoto (1993)										
	GSJ R57601	pelitic schist	phengite	5.95	0.12	**96.8**	2.4	Kebara F.	Chl	
	GSJ R57601	pelitic schist	phengite	5.95	0.12	**97.3**	2.5	Kebara F.	Chl	
	GSJ R57602	mafic schist	phengite	1.10	0.02	**88.8**	2.9	Kebara F.	Chl	
	GSJ R57602	mafic schist	phengite	1.10	0.02	**89.7**	3.1	Kebara F.	Chl	
	GSJ R57603	pelitic schist	phengite	1.49	0.03	**90.9**	2.7	Kebara F.	Chl	
	GSJ R57603	pelitic schist	phengite	1.49	0.03	**91.4**	2.8	Kebara F.	Chl	
	GSJ R57604	pelitic schist	phengite	4.83	0.10	**91.8**	2.3	Kebara F.	Chl	
	GSJ R57604	pelitic schist	phengite	4.83	0.10	**92.1**	2.3	Kebara F.	Chl	
Suzuki and Itaya (1994)										
	N-12	pelitic schist	phengite	5.83	0.12	**104.7**	2.3	Okawara U.	Chl	
Kurimoto (1995)										
	GSJ R59776	psammitic schist	phengite	4.43	0.09	**96.8**	2.1	Oishi F.	Chl	Non-spotted
	GSJ R59776	psammitic schist	phengite	4.43	0.09	**99.6**	2.2	Oishi F.	Chl	Non-spotted
	GSJ R59771	pelitic schist	phengite	3.46	0.07	**90.2**	2.0	Oishi F.	Chl	Non-spotted
	GSJ R59771	pelitic schist	phengite	3.46	0.07	**92.2**	2.0	Oishi F.	Chl	Non-spotted
	GSJ R59775	pelitic schist	phengite	3.38	0.07	**124.6**	2.7	Numata F.	Chl	Non-spotted
	GSJ R59775	pelitic schist	phengite	3.38	0.07	**125.6**	2.7	Numata F.	Chl	Non-spotted
Sakakibara *et al*. (1998)										
	920718-14	pelitic schist	phengite	3.31	0.07	**108.6**	2.4	Hijikawa U.	Chl	
	920719-10-1A	pelitic schist	phengite	5.15	0.10	**101.1**	2.2	Hijikawa U.	Chl	
	920719-10-1B	pelitic schist	phengite	7.82	0.16	**98.8**	2.2	Hijikawa U.	Chl	
	920719-10-1C	pelitic schist	phengite	4.38	0.09	**98.4**	2.2	Hijikawa U.	Chl	
	920926-3B	pelitic schist	phengite	5.24	0.11	**105.4**	2.3	Kanogawa U.	Chl	
	920926-3C	pelitic schist	phengite	5.44	0.11	**103**	2.3	Kanogawa U.	Chl	
	920308-7B	pelitic schist	phengite	6.35	0.13	**89.3**	2	Kanogawa U.	Chl	
	920308-7C	pelitic schist	phengite	4.09	0.23	**91.4**	5.1	Kanogawa U.	Chl	
	920926-5	pelitic schist	phengite	3.14	0.06	**97.9**	2.1	Kanogawa U.	Chl	
	To-3	pelitic schist	phengite	3.90	0.08	**173.1**	3.7	Kanogawa U.	Chl	
de Jong *et al*. (2000)						total gas				plateau		calc	
	KEB1	pelitic schist	whole-rock	Ar/Ar		**97.0**	0.5	Kebara F.	Chl	**102.9**	1.0	**103.0**	3.0
	KEB2	pelitic schist	whole-rock	Ar/Ar		**93.9**	0.5	Kebara F.	Chl	**96.4**	1.0	**96.0**	0.6

表10 広義の三波川変成帯（関東地方）から報告されている K-Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Ueda *et al*. (1977)										
	TN66050901	quartz schist	phengite	5.65	—	**70**		Kanto Mtns	Grt	
	TN66050903	quartz schist	phengite	3.98	—	**66**		Kanto Mtns	Grt	
	TN66050904	quartz schist	phengite	5.28	—	**87**		Kanto Mtns	Chl	
Hirajima *et al*. (1992)										
	TH1404A	psammitic schist	phengite	7.93	0.20	**78.1**	1.7	Kanto Mtns	Grt	
	TH1404B	pelitic schist	phengite	5.92	0.12	**72.9**	1.6	Kanto Mtns	Grt	
	TH1405	pelitic schist	phengite	7.58	0.15	**71.9**	1.6	Kanto Mtns	Grt	
	TH1406	pelitic schist	phengite	5.62	0.11	**61.4**	1.3	Kanto Mtns	Ab-Bt	
	TH1409	psammitic schist	phengite	2.91	0.06	**61.4**	1.4	Kanto Mtns	Ab-Bt	
	TH1410	mafic schist	phengite	1.26	0.06	**53.1**	2.7	Kanto Mtns	Ab-Bt	
	TH100	pelitic schist	phengite	5.89	0.12	**61.6**	1.4	Kanto Mtns	Ab-Bt	
	TH1411	psammitic schist	phengite	5.52	0.11	**68.5**	1.5	Kanto Mtns	Grt	
	TH1412	psammitic schist	phengite	0.84	0.02	**67.4**	1.5	Kanto Mtns	Grt	
	TH1413	pelitic schist	phengite	4.95	0.10	**66.4**	1.5	Kanto Mtns	Grt	
	TH99	psammitic schist	phengite	7.34	0.15	**73.9**	1.6	Kanto Mtns	Grt	
	TH98	pelitic schist	phengite	4.21	0.08	**67.4**	3.1	Kanto Mtns	Grt	
	TH106	pelitic schist	phengite	1.90	0.04	**84.0**	1.8	Kanto Mtns	Chl	
	TH107B	pelitic schist	phengite	3.97	0.08	**75.6**	1.7	Kanto Mtns	Chl	
	TH108A	psammitic schist	phengite	5.93	0.12	**71.6**	1.6	Kanto Mtns	Chl	
	TH108B	psammitic schist	phengite	6.04	0.12	**72.2**	1.6	Kanto Mtns	Chl	
	TH103A	mafic schist	phengite	7.57	0.15	**61.4**	1.5	Kanto Mtns	Ab-Bt	
	TH103B	pelitic schist	phengite	7.19	0.14	**67.2**	1.5	Kanto Mtns	Ab-Bt	
Miyashita and Itaya (2002)										
	120p	pelitic schist	phengite	7.83	0.16	**60.5**	1.3	Kanto Mtns	Bt	
	02p	pelitic schist	phengite	7.58	0.15	**62.9**	1.4	Kanto Mtns	Bt	
	42p	pelitic schist	phengite	8.09	0.16	**62.5**	1.4	Kanto Mtns	Bt	
	05p	pelitic schist	phengite	8.18	0.16	**65.3**	1.4	Kanto Mtns	Grt	
	07p	pelitic schist	phengite	6.44	0.13	**59.8**	1.3	Kanto Mtns	Grt	
	09p	pelitic schist	phengite	8.06	0.16	**61.5**	1.3	Kanto Mtns	Grt	
	39p	pelitic schist	phengite	7.60	0.15	**57.5**	1.3	Kanto Mtns	Grt	
	41p	pelitic schist	phengite	7.85	0.16	**63.7**	1.4	Kanto Mtns	Bt	
	73p	pelitic schist	phengite	7.88	0.16	**67.3**	1.6	Kanto Mtns	Grt	
	74p	pelitic schist	phengite	7.99	0.16	**63.9**	1.4	Kanto Mtns	Grt	
	75p	pelitic schist	phengite	7.89	0.16	**67.1**	1.5	Kanto Mtns	Grt	
	49p	pelitic schist	phengite	7.11	0.14	**65.9**	1.4	Kanto Mtns	Bt	
	97p	pelitic schist	phengite	6.51	0.13	**65.1**	1.4	Kanto Mtns	Bt	
	17p	pelitic schist	phengite	6.21	0.12	**67.3**	1.5	Kanto Mtns	Grt	
	18p	pelitic schist	phengite	6.65	0.13	**64.6**	1.4	Kanto Mtns	Grt	
	19p	pelitic schist	phengite	7.41	0.15	**72.8**	1.6	Kanto Mtns	Grt	
	23p	pelitic schist	phengite	6.77	0.14	**74.4**	1.6	Kanto Mtns	Grt	
	25p	pelitic schist	phengite	6.28	0.13	**71.4**	1.6	Kanto Mtns	Grt	
	60p	pelitic schist	phengite	7.32	0.15	**81.2**	1.8	Kanto Mtns	Grt	
	29p	pelitic schist	phengite	5.53	0.11	**82.1**	1.8	Kanto Mtns	Grt	
	32p	pelitic schist	phengite	5.40	0.11	**80.1**	1.8	Kanto Mtns	Chl	
	100p	pelitic schist	phengite	4.62	0.09	**81.7**	1.8	Kanto Mtns	Chl	

表 11　秩父帯（弱変成付加体）から報告されている K–Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Isozaki *et al*. (1990)										
	Jou	pelitic schist	phengite	4.49	0.09	**137.4**	2.9	Jou	Chl	
	Kuishi-2	pelitic schist	phengite	6.43	0.13	**142.6**	3.0	Jou	Chl	
	Kuishi-6	pelitic schist	phengite	6.43	0.13	**142.4**	3.0	Jou	Chl	
	Torikubi	pelitic schist	phengite	3.76	0.08	**141.3**	3.0	Torikubi	Chl	
Isozaki and Itaya (1991)										
	NK-1	pelitic schist	phengite	4.51	0.09	**116.5**	2.5	Nakatsuyama	Chl	
	NK-2	pelitic schist	phengite	5.79	0.12	**120.0**	2.6	Nakatsuyama	Chl	
	NK-3	pelitic schist	phengite	6.33	0.13	**133.7**	2.9	Nakatsuyama	Chl	
	NK-4	pelitic schist	phengite	2.30	0.05	**125.3**	2.7	Nakatsuyama	Chl	
Kawato *et al*. (1991)										
	T-1	pelitic schist	phengite	4.54	0.09	**158.7**	3.4	Tosayama	Chl	
	T-2	pelitic schist	phengite	5.68	0.11	**135.0**	2.9	Tosayama	Chl	
	T-3	pelitic schist	phengite	3.71	0.07	**142.6**	3.1	Tosayama	Chl	
	T-4	pelitic schist	phengite	4.49	0.09	**137.4**	2.9	Tosayama	Chl	
	T-5	pelitic schist	phengite	6.43	0.13	**142.4**	3.0	Tosayama	Chl	
	T-6	pelitic schist	phengite	6.43	0.13	**142.6**	3.0	Tosayama	Chl	
	T-7	pelitic schist	phengite	7.07	0.14	**131.1**	2.8	Tosayama	Chl	
	T-8	pelitic schist	phengite	3.80	0.08	**136.4**	2.9	Tosayama	Chl	
	T-9	pelitic schist	phengite	5.72	0.11	**128.1**	2.7	Tosayama	Chl	
	T-10	pelitic schist	phengite	5.21	0.10	**137.2**	2.9	Tosayama	Chl	
	T-11	pelitic schist	phengite	4.97	0.10	**127.7**	2.7	Tosayama	Chl	
Suzuki and Itaya (1994)										
	U-1	pelitic schist	phengite	4.61	0.09	**151.5**	3.3	Umenoki U.	Chl	
	U-2	pelitic schist	phengite	4.60	0.09	**164.8**	3.5	Umenoki U.	Chl	
	U-3	pelitic schist	phengite	5.21	0.10	**138.8**	3.0	Umenoki U.	Chl	
	U-4	pelitic schist	phengite	6.14	0.12	**158.5**	3.4	Umenoki U.	Chl	
Saito *et al*. (2005)										
	GSJ R76504	pelitic schist	phengite	3.43	—	**144**	7	Gokanosyo	Chl	
	GSJ R76505	pelitic schist	phengite	5.27	—	**182**	9	Gokanosyo	Chl	
	GSJ R76506	pelitic schist	phengite	4.04	—	**149**	7	Gokanosyo	Chl	

表12 黒瀬川帯（四国地方および九州地方）の高圧変成岩類から報告されている K-Ar および Ar/Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Maruyama and Ueda (1974)										
	71071401	quartz schist	phengite	7.62	—	**445**	—	Kitomyo	Bt	
	71071401	quartz schist	phengite	7.62	—	**440**	—	Kitomyo	Bt	
	73040305	psammitic schist	phengite	7.95	—	**402**	—	Kitomyo	Bt	
Maruyama *et al*. (1978)										
	SM75011116	pelitic schist	phengite	3.84	—	**208**	—	Engyoji	Chl	
	SM74110202	pelitic schist	phengite	7.60	—	**240**	—	Engyoji	Chl	
Ueda *et al*. (1980)										
	75121308	pelitic schist	phengite	8.04	—	**352**	—	Ino F.	Chl	
	75050001	pelitic schist	phengite	8.95	—	**317**	—	Ino F.	Bt	
	75053114	pelitic schist	phengite	3.35	—	**394**	—	Ino F.	Chl	
	75072413	pelitic schist	phengite	8.17	—	**376**	—	Ino F.	Chl	
	75051705	pelitic schist	phengite	5.74	—	**327**	—	Ino F.	Grt	
	75050804	pelitic schist	phengite	6.86	—	**377**	—	Ino F.	Chl	
Isozaki and Itaya (1990)										
	Kk	pelitic schist	phengite	3.96	0.08	**195.2**	4.2	Agekura F.	Chl	
	Kr	pelitic schist	phengite	4.05	0.08	**189.5**	4.0	Agekura F.	Chl	
	Yk	pelitic schist	phengite	3.76	0.08	**220.2**	4.6	Agekura F.	Chl	
	Tk	pelitic schist	phengite	4.10	0.08	**208.3**	4.4	Agekura F.	Chl	
	Sh	pelitic schist	phengite	3.70	0.07	**206.4**	4.3	Agekura F.	Chl	
	Tz	pelitic schist	phengite	3.63	0.07	**196.3**	4.1	Agekura F.	Chl	
	Tr	pelitic schist	phengite	4.08	0.08	**228.5**	4.8	Agekura F.	Chl	
	Ys	pelitic schist	phengite	4.20	0.08	**185.7**	3.9	Agekura F.	Chl	
	Hg	pelitic schist	phengite	2.99	0.06	**199.2**	4.2	Agekura F.	Chl	
	Ta-1	pelitic schist	phengite	2.81	0.06	**225.0**	4.7	Kii Peninsula	Chl	
	Ta-2	pelitic schist	phengite	4.26	0.09	**208.6**	4.4	Kii Peninsula	Chl	
	Ta-3	pelitic schist	phengite	3.19	0.06	**209.0**	4.4	Kii Peninsula	Chl	
Suzuki *et al*. (1990)										
	S-1	pelitic schist	phengite	5.56	0.11	**205.6**	4.4	Kamikatsu	Chl	
	S-2	pelitic schist	phengite	6.88	0.14	**198.7**	4.3	Kamikatsu	Chl	
	S-3	pelitic schist	phengite	6.35	0.13	**206.2**	4.7	Kamikatsu	Chl	
	S-4	pelitic schist	phengite	4.13	0.08	**207.9**	4.4	Kamikatsu	Chl	
	S-5	pelitic schist	phengite	3.07	0.06	**225.3**	4.7	Kamikatsu	Chl	
	S-6	pelitic schist	phengite	6.06	0.12	**194.2**	4.4	Kamikatsu	Chl	
Isozaki and Itaya (1991)										
	AG-1	pelitic schist	phengite	4.52	0.09	**184.5**	3.9	Nakatsuyama	Chl	
	AG-2	pelitic schist	phengite	5.11	0.10	**178.7**	3.8	Nakatsuyama	Chl	
	AG-3	pelitic schist	phengite	7.61	0.15	**232.8**	4.9	Nakatsuyama	Chl	
Hara *et al*. (1992)										
	Ku-1	pelitic schist	phengite	3.94	—	**174.3**	5.3	Nakatsuyama	Chl	
	Ku-2	pelitic schist	phengite	1.77	—	**183.8**	5.6	Nakatsuyama	Chl	
Isozaki *et al*. (1992)										
	SHR	pelitic schist	phengite	5.26	0.11	**271.3**	5.6	Kurosegawa	Chl	
	Sh-1	pelitic schist	phengite	3.17	0.06	**186.5**	3.9	Kurosegawa	Chl	
	Sh-2	pelitic schist	phengite	6.49	0.13	**191.0**	4.0	Kurosegawa	Chl	
	Sh-3	pelitic schist	phengite	5.90	0.12	**193.0**	4.1	Kurosegawa	Chl	
	Sm-1	pelitic schist	phengite	6.28	0.13	**195.1**	4.6	Kurosegawa	Chl	
	Sm-2	pelitic schist	phengite	6.25	0.13	**207.9**	4.9	Kurosegawa	Chl	
	Sm-3	pelitic schist	phengite	5.36	0.11	**185.8**	4.5	Kurosegawa	Chl	
	Swd	pelitic schist	phengite	3.95	0.08	**210.7**	5.1	Kurosegawa	Chl	
	Sk-1	pelitic schist	phengite	4.52	0.09	**189.3**	4.6	Kurosegawa	Chl	
	Sk-2	pelitic schist	phengite	3.95	0.08	**216.5**	5.2	Kurosegawa	Chl	
	Sk-3	pelitic schist	phengite	4.15	0.08	**208.5**	5.0	Kurosegawa	Chl	
	Ry-1	pelitic schist	phengite	4.44	0.09	**195.8**	4.7	Kurosegawa	Chl	
	Ry-2	pelitic schist	phengite	3.89	0.08	**202.2**	5.0	Kurosegawa	Chl	
	Ty-1	pelitic schist	phengite	4.44	0.09	**208.7**	5.0	Kurosegawa	Chl	
	Ty-2	pelitic schist	phengite	6.13	0.12	**209.8**	5.0	Kurosegawa	Chl	
	Ty-3	pelitic schist	phengite	3.01	0.06	**192.0**	4.8	Kurosegawa	Chl	
Kurimoto (1993)										
	GSJ R57605	pelitic schist	phengite	3.43	0.07	**211.1**	5.1	Sakaigawa F.	Chl	
	GSJ R57605	pelitic schist	phengite	3.43	0.07	**209.7**	5.2	Sakaigawa F.	Chl	
Takeda *et al*. (1993)										
	KG523	amphibolite	hornblende	0.30	0.01	**442.4**	16.0	Mikame		
Suzuki and Itaya (1994)										
	S-7	pelitic schist	phengite	5.81	0.12	**194.5**	4.1	Uguisu U.	Chl	
de Jong *et al*. (2000)						total gas				
	JK09	pelitic schist	whole-rock	Ar/Ar		**210.2**	0.3	Sakaigawa U.		
	JK40	pelitic schist	whole-rock	Ar/Ar		**209.6**	0.3	Sakaigawa U.		
	JK49	pelitic schist	whole-rock	Ar/Ar		**204.9**	0.5	Sakaigawa U.		
	JK57	pelitic schist	whole-rock	Ar/Ar		**224.2**	0.8	Sakaigawa U.		
	JK61	pelitic schist	whole-rock	Ar/Ar		**228.2**	0.5	Sakaigawa U.		

表 12（つづき）

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Saito *et al*. (2004)										
	GSJ R76502	amphibolite	hornblende	0.18	—	**371**	19	Tomochi		
	GSJ R76503	amphibolite	hornblende	0.32	—	**405**	20	Tomochi		

表 13　四万十帯（弱変成付加体）から報告されている K–Ar 年代値.

ref	sample No.	rock type	mineral	K (wt%)	error (wt%)	**Age (Ma)**	error (Ma)	area	grade	note
Mackenzie *et al*. (1990)										
	U2	phyllite	illite	5.11	—	**48.4**	1.1	Urashiro F.	Chl	Shimanto AC
Kurimoto (1993)										
	GSJ R57591	pelitic schist	phengite	5.31	0.11	**66.6**	1.5	Hanazono F.	Chl	Kii
	GSJ R57591	pelitic schist	phengite	5.31	0.11	**66.9**	1.5	Hanazono F.	Chl	Kii
Hara and Hisada (2005)										
	NP1	phyllite	illite	3.66	—	**76.2**	1.9	Nippara F.	Chl	S-Chichibu AC
	NP1	phyllite	illite	3.68	—	**74.3**	1.9	Nippara F.	Chl	S-Chichibu AC
	NP2	phyllite	illite	3.08	—	**74.1**	1.9	Nippara F.	Chl	S-Chichibu AC
	NP2	phyllite	illite	3.07	—	**74.0**	1.9	Nippara F.	Chl	S-Chichibu AC
	NP3	phyllite	illite	3.00	—	**71.3**	1.8	Nippara F.	Chl	S-Chichibu AC
	NP3	phyllite	illite	2.99	—	**70.3**	1.8	Nippara F.	Chl	S-Chichibu AC
	FT1	phyllite	illite	3.22	—	**64.5**	3.2	Otaki G.	Chl	Shimanto AC
	FT1	phyllite	illite	3.25	—	**64.6**	3.2	Otaki G.	Chl	Shimanto AC
	FT2	phyllite	illite	3.02	—	**75.0**	1.9	Otaki G.	Chl	Shimanto AC
	FT2	phyllite	illite	3.01	—	**76.4**	1.9	Otaki G.	Chl	Shimanto AC
	FT3	phyllite	illite	4.65	—	**50.0**	2.5	Otaki G.	Chl	Shimanto AC
	FT3	phyllite	illite	4.65	—	**49.8**	2.5	Otaki G.	Chl	Shimanto AC
	KW1	phyllite	illite	3.19	—	**49.2**	2.5	Otaki G.	Chl	Shimanto AC
	KW1	phyllite	illite	3.27	—	**49.1**	2.5	Otaki G.	Chl	Shimanto AC
Hara and Kurihara (2010)										
	KB-01	phyllite	illite	4.63	0.09	**40.3**	0.9	Kobotoke G.	Chl	Shimanto AC
	KB-01	phyllite	illite	4.63	0.09	**40.1**	0.9	Kobotoke G.	Chl	Shimanto AC
	KB-02	phyllite	illite	4.02	0.08	**48.4**	1.1	Kobotoke G.	Chl	Shimanto AC
	KB-02	phyllite	illite	4.02	0.08	**48.2**	1.1	Kobotoke G.	Chl	Shimanto AC
	KB-03	phyllite	illite	3.97	0.08	**38.3**	0.9	Kobotoke G.	Chl	Shimanto AC
	KB-03	phyllite	illite	3.97	0.08	**38.5**	0.9	Kobotoke G.	Chl	Shimanto AC

付録 K-Ar（および，Ar/Ar）年代値を収集した文献（アルファベット順）．和文の文献については英語情報で記した．

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