

Neogenski magmatizam Panonskog bazena



Panonski bazen



Panonski bazen



Vulkanski tereni Istočnih Karpata



Istočni Karpati, Hargita Mt., Rumunjska

Vulkanski tereni Središnjih Karpata



Carpathian Dawn Overlooking Mizhhirya

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Alkalijski bazaltni magmatizam



Maar tip vulkana

Blatno jezero, Tihany, Mađarska

Vulkanski tereni Nograda, Zapadni Karpati



Nograd, Zapadni Karpati, Mađarska

Južna Tisia



Papuk, Hrvatska

Vulkanski tereni Hrvatskog Zagorja



Ravna gora, Hrvatska

Vulkanski tereni Apusena, Transilvanija



Debljina terciarnog pokrova u Panonskom bazenu

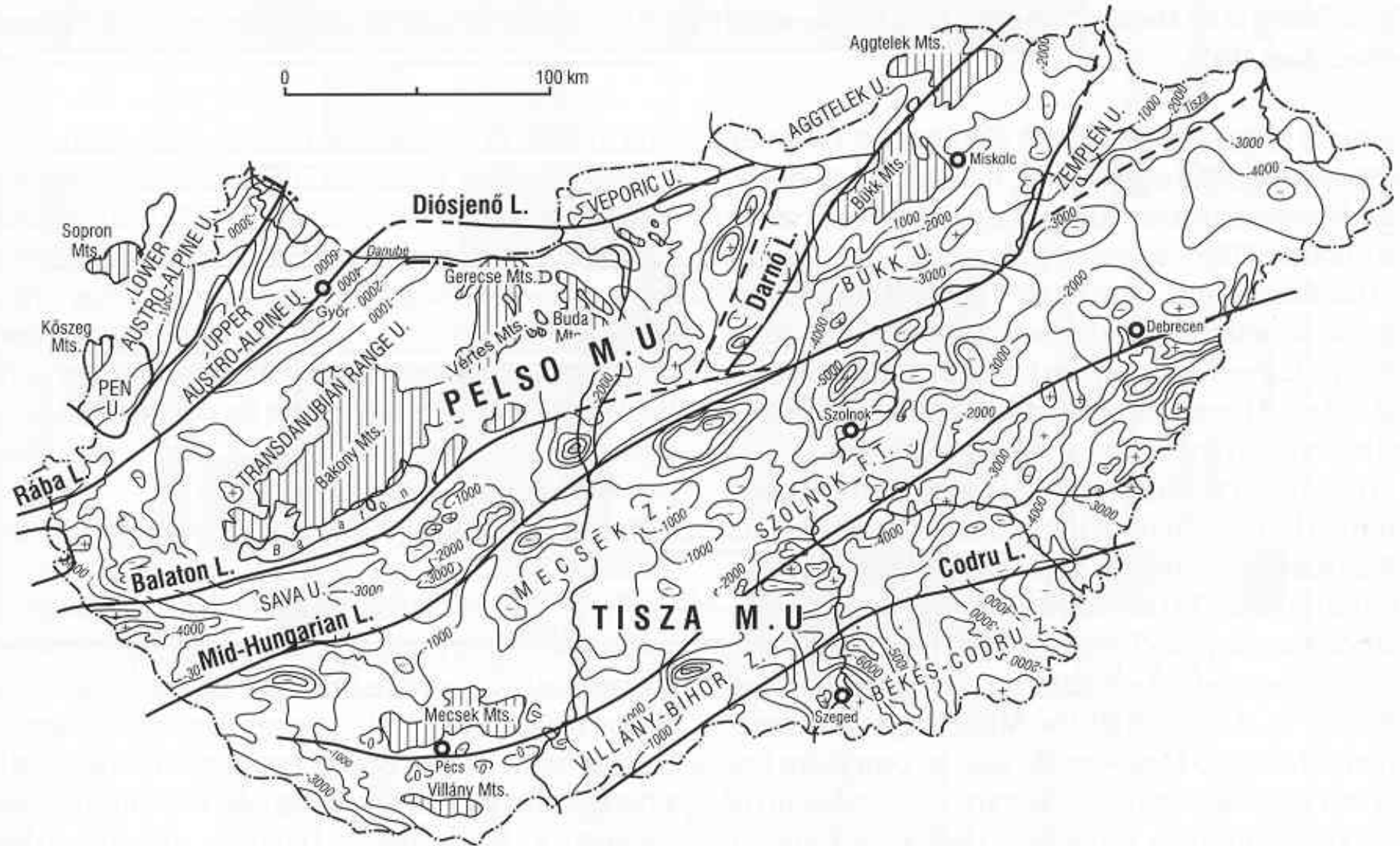
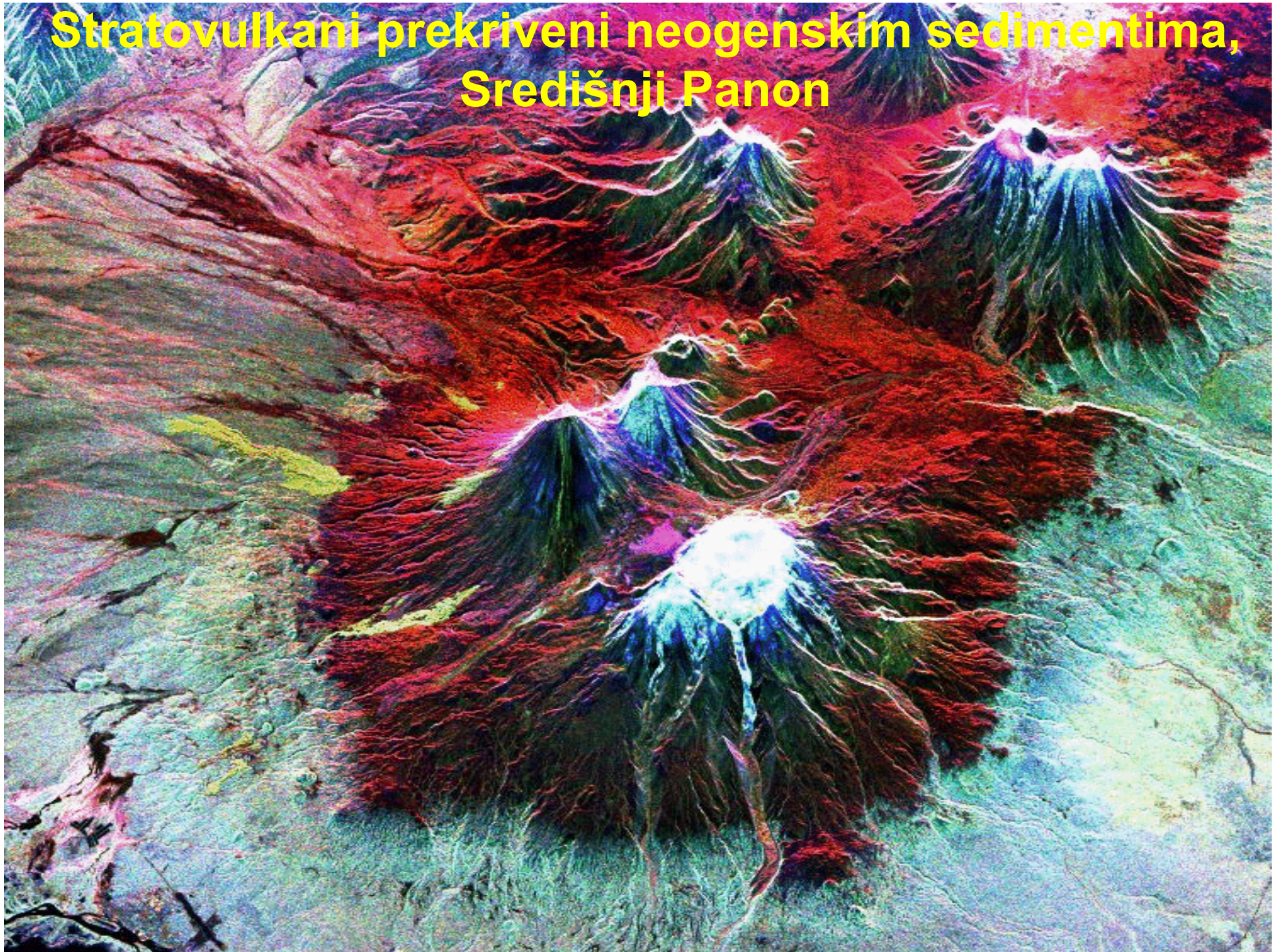


Fig. 4: Pre-Tertiary structural units of Hungary and depth of the pre-Tertiary basement (after Fülöp et al., 1987b, modified).

**Stratovulkani prekriveni neogenskim sedimentima,
Središnji Panon**



Tipovi vulkanskog djelovanja u Panonskom bazenu



Kaldera

Plinijski vulkanizam - stratovulkani

Tipovi vulkanskog djelovanja u Panonskom bazenu

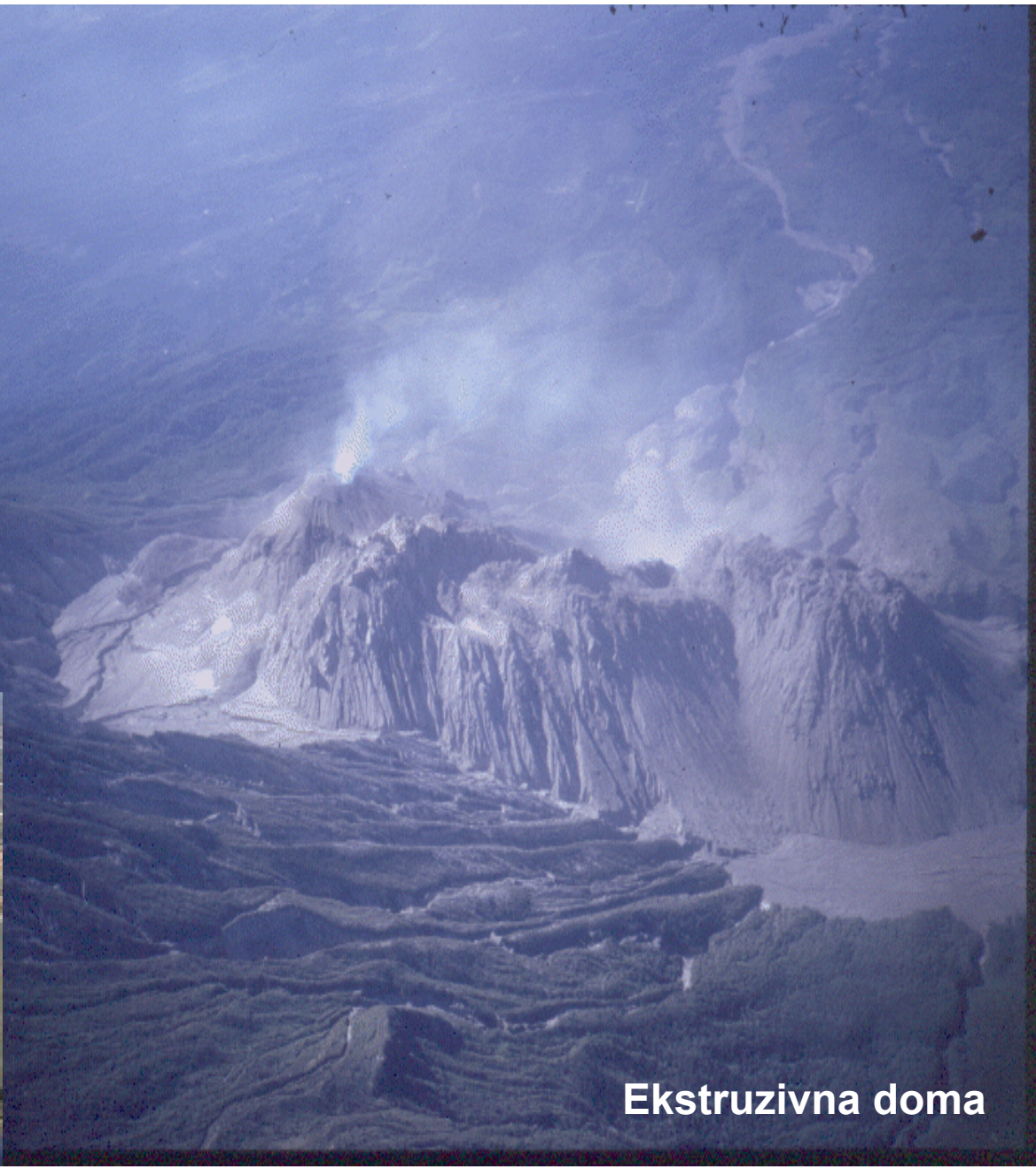
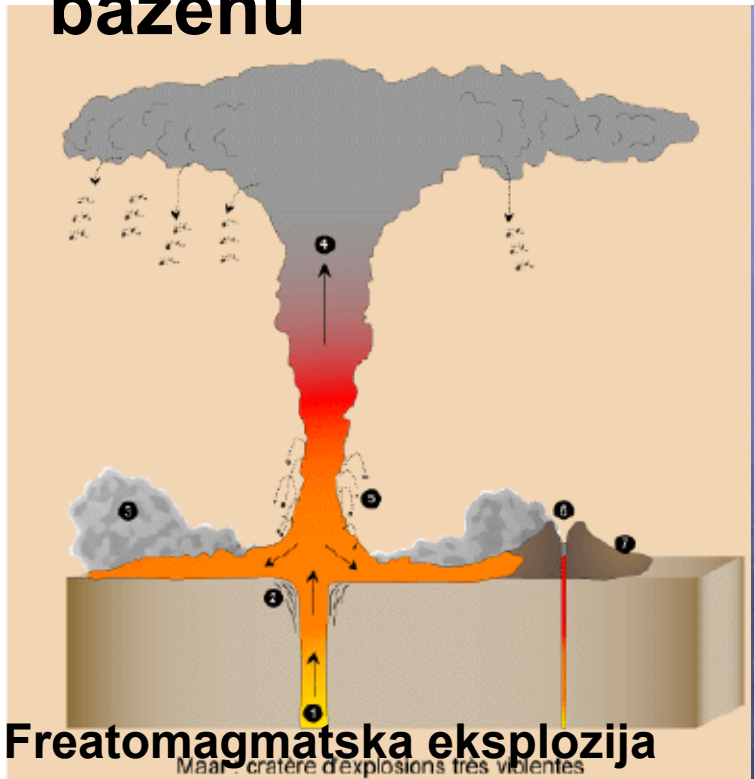


Piroklastični vulkani

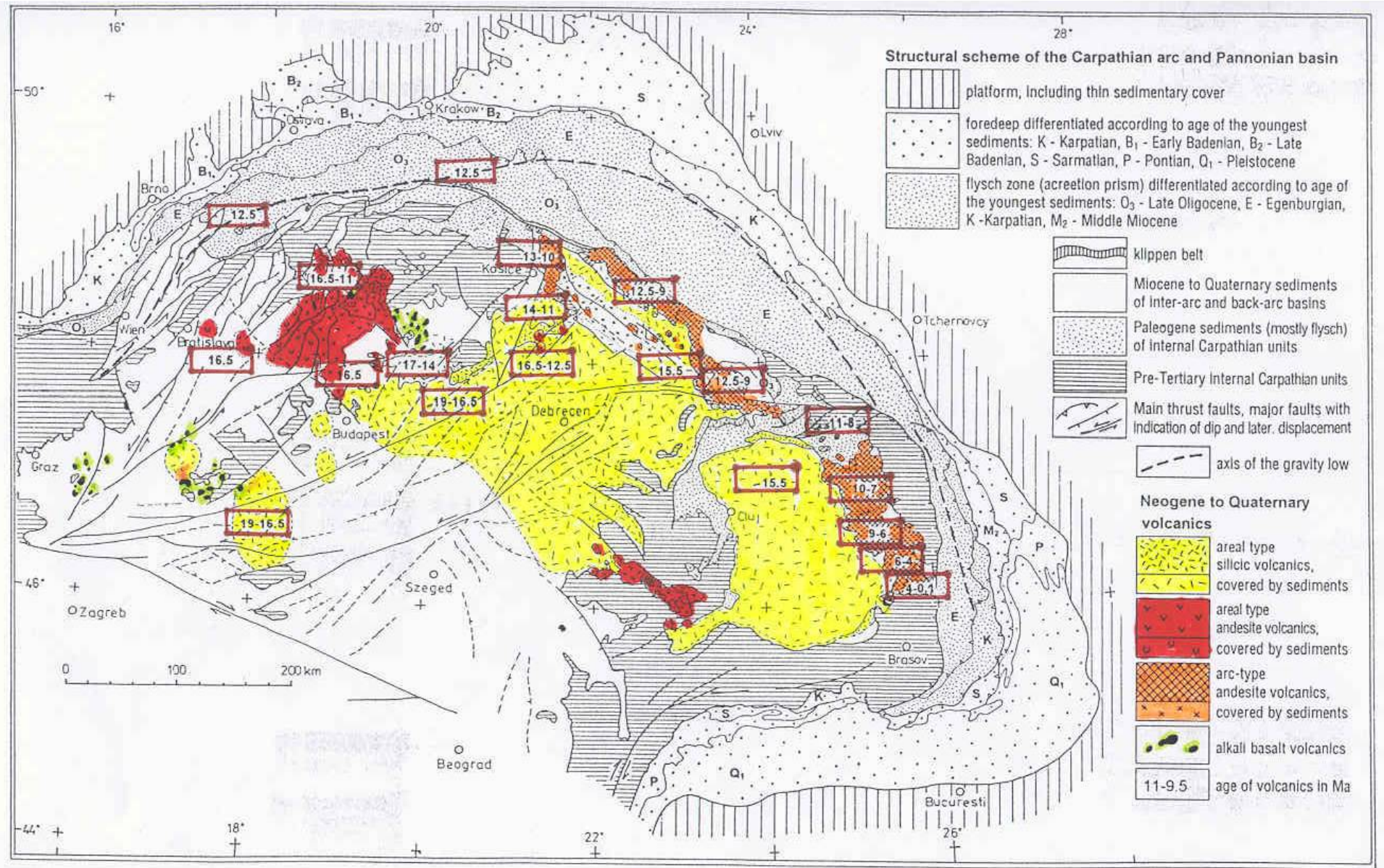


Bazalni tokovi

Tipovi vulkanskog djelovanja u Panonskom bazenu



Prostorno-vremenska raspodjela vulkanskih stijena u Karpato-panonskom području (*Pecskay i dr., 1995*)



Alpsko-himalajski orogen u cirkum-mediteranskom području

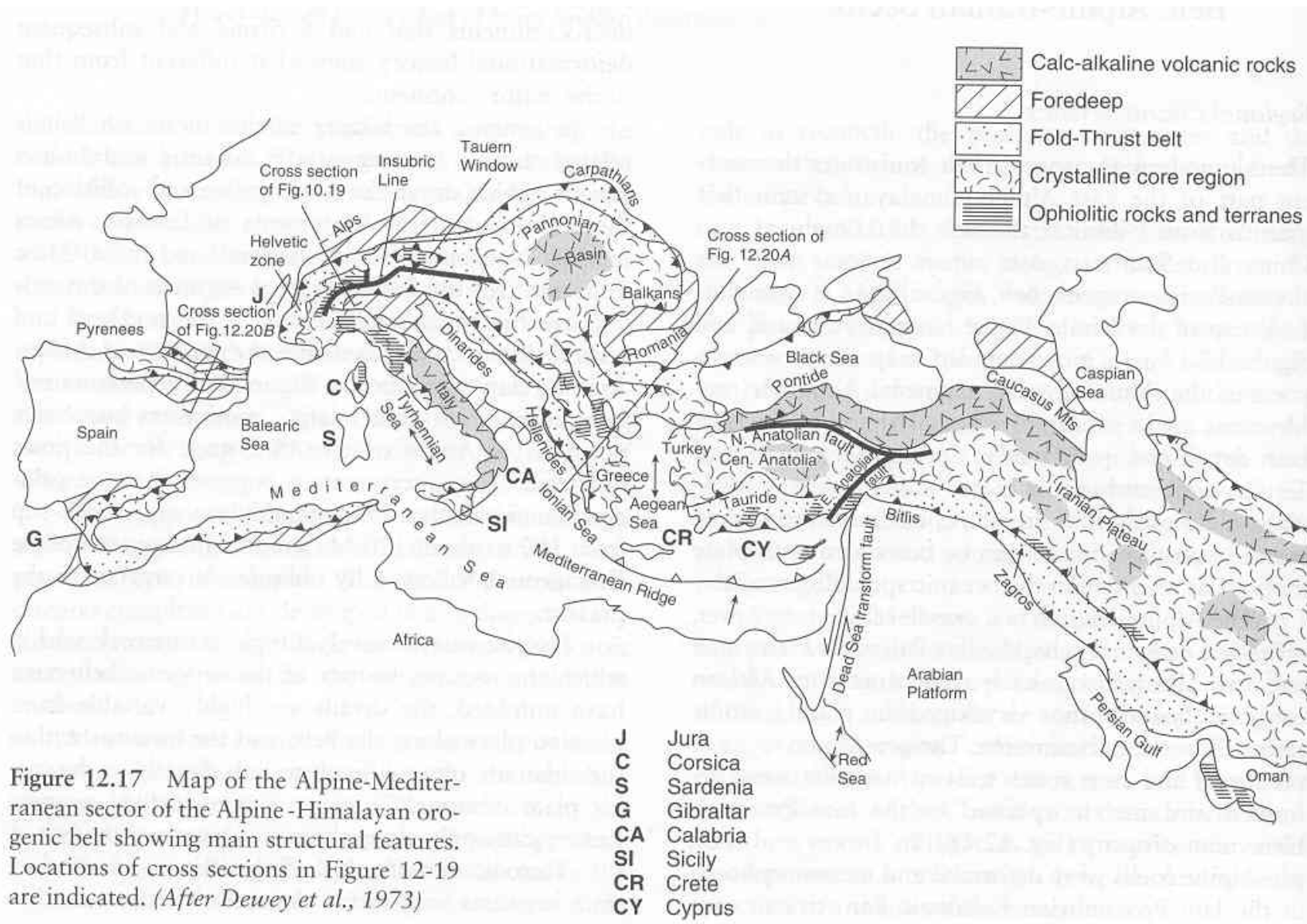
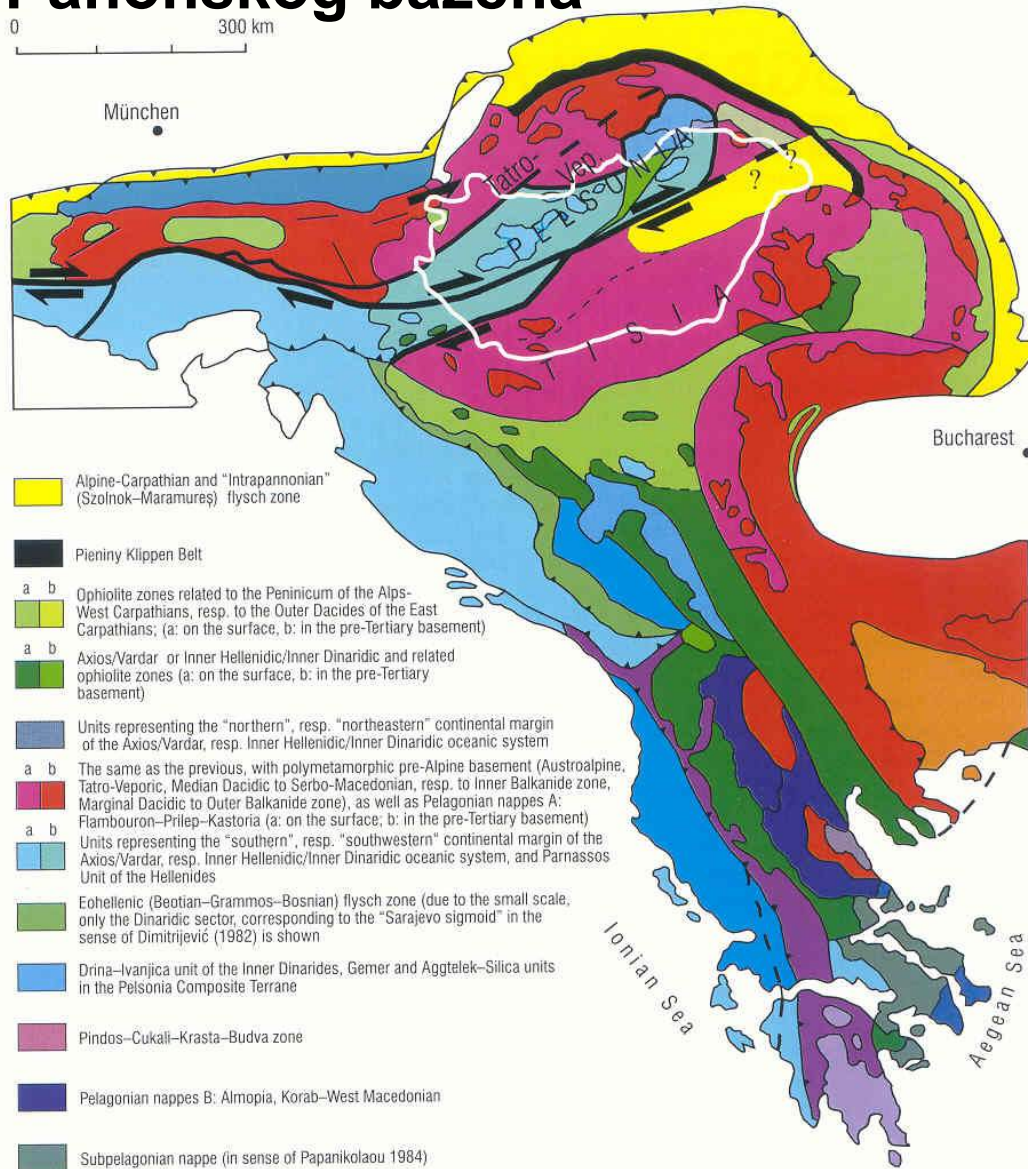


Figure 12.17 Map of the Alpine-Mediterranean sector of the Alpine-Himalayan orogenic belt showing main structural features. Locations of cross sections in Figure 12-19 are indicated. (After Dewey et al., 1973)

Preneogenska osnova Panonskog bazena

0 300 km

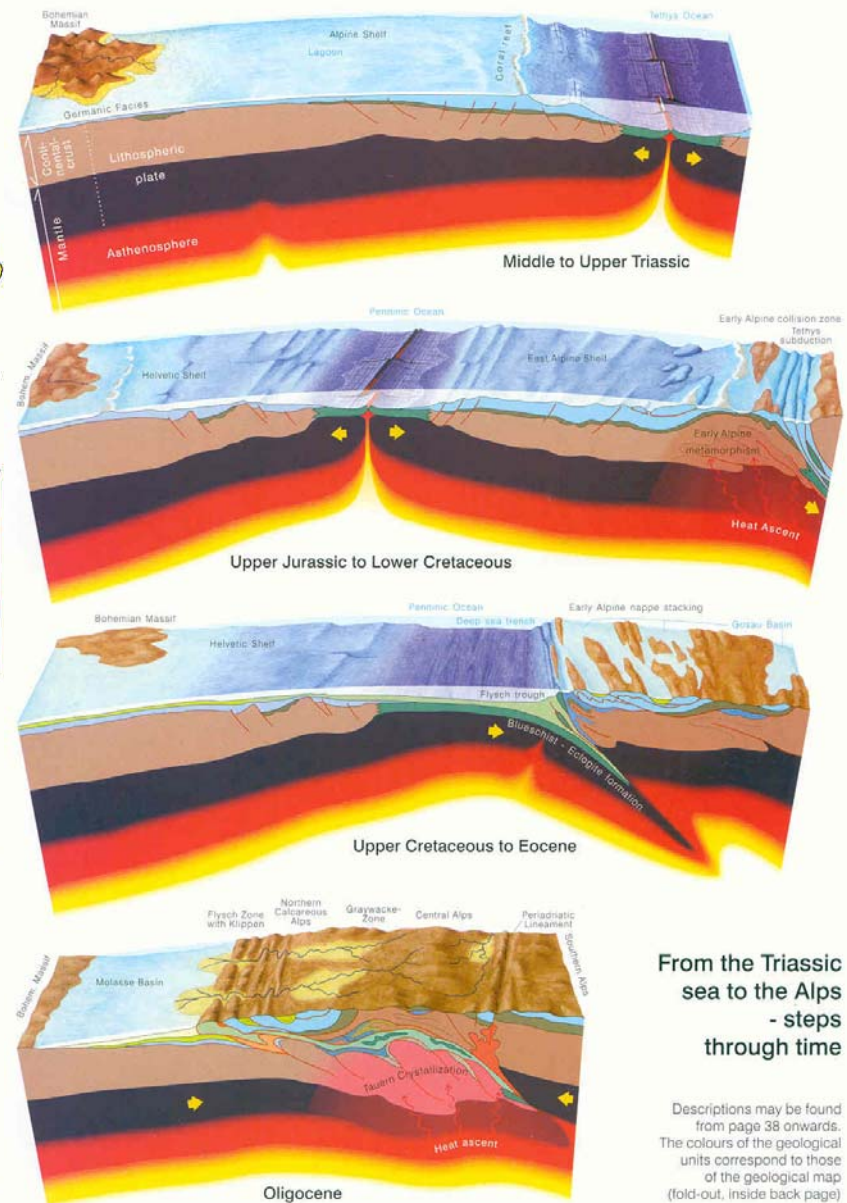


- Alpine-Carpathian and "Intrapannonian" (Szolnok-Maramures) flysch zone
- Pieniny Klippen Belt
- a b Ophiolite zones related to the Peninicum of the Alps-West Carpathians, resp. to the Outer Dacides of the East Carpathians; (a: on the surface, b: in the pre-Tertiary basement)
- a b Axios/Vardar or Inner Hellenidic/Inner Dinaridic and related ophiolite zones (a: on the surface, b: in the pre-Tertiary basement)
- Units representing the "northern", resp. "northeastern" continental margin of the Axios/Vardar, resp. Inner Hellenidic/Inner Dinaridic oceanic system
- a b The same as the previous, with polymetamorphic pre-Alpine basement (Austroalpine, Tatro-Veporic, Median Dacidic to Serbo-Macedonian, resp. to Inner Balkanide zone, Marginal Dacidic to Outer Balkanide zone), as well as Pelagonian nappes A: Flambouron-Prilep-Kastoria (a: on the surface, b: in the pre-Tertiary basement)
- a b Units representing the "southern", resp. "southwestern" continental margin of the Axios/Vardar, resp. Inner Hellenidic/Inner Dinaridic oceanic system, and Parnassos Unit of the Hellenides
- Eohellenic (Beotian-Grámmos-Bosnian) flysch zone (due to the small scale, only the Dinaridic sector, corresponding to the "Sarajevo sigmoid" in the sense of Dimitrijević (1982) is shown)
- Drina-Ivanjica unit of the Inner Dinarides, Gemer and Aggtelek-Szilca units in the Pelsonia Composite Terrane
- Pindos-Cukali-Krasta-Budva zone
- Pelagonian nappes B: Almopia, Korab-West Macedonian
- Subpelagonian nappe (in sense of Papanikolaou 1984)
- HP/LT metamorphosed Internal Hellenidic units and Olympos Unit
- Metamorphosed External Hellenidic (Mani-"Plattenkalk") unit
- Rhodope Unit

⇌ Major strike-slip faults

— Major nappe fronts

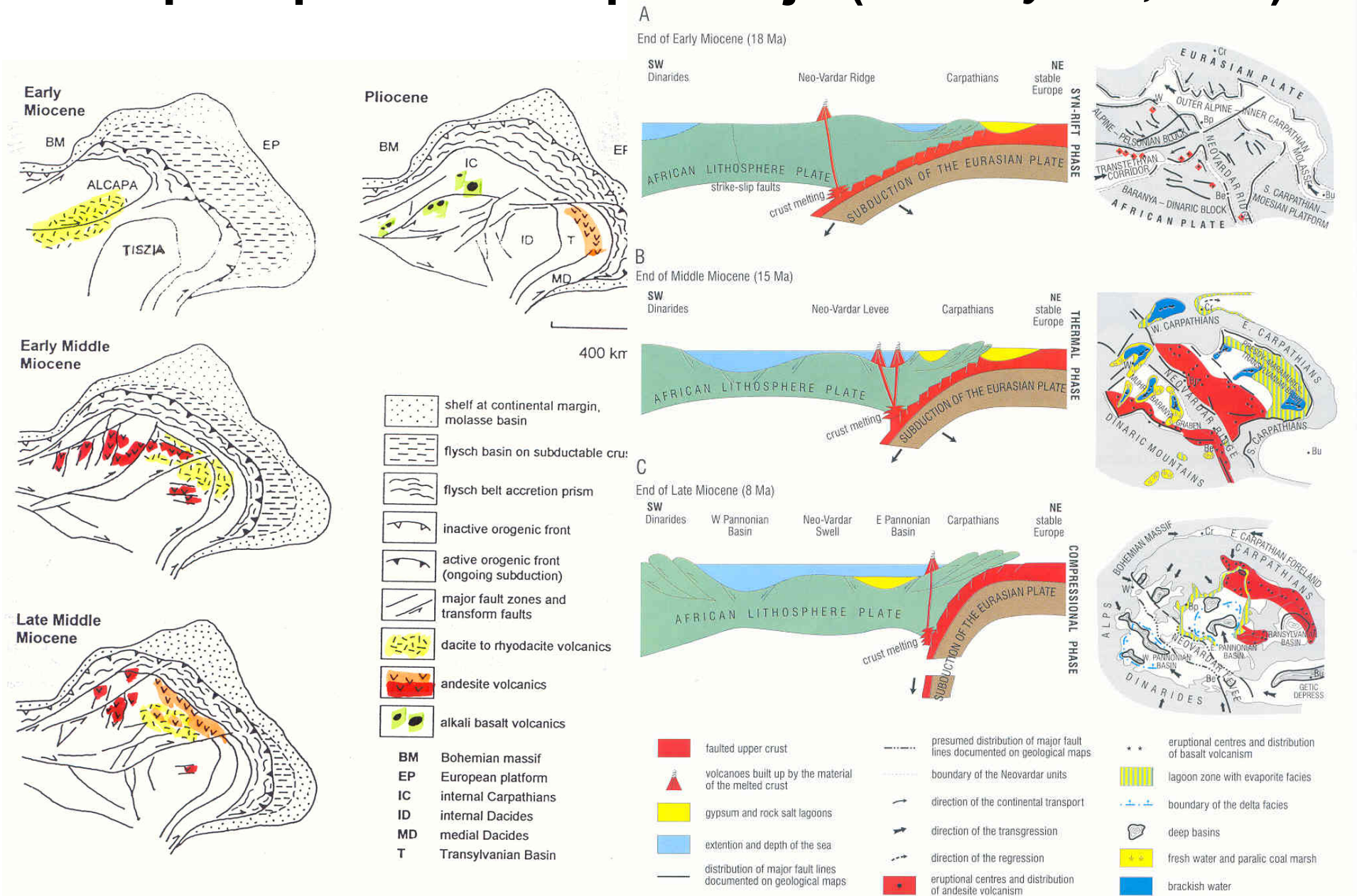
Razvoj Alpa od trijasa do neogena



From the Triassic sea to the Alps - steps through time

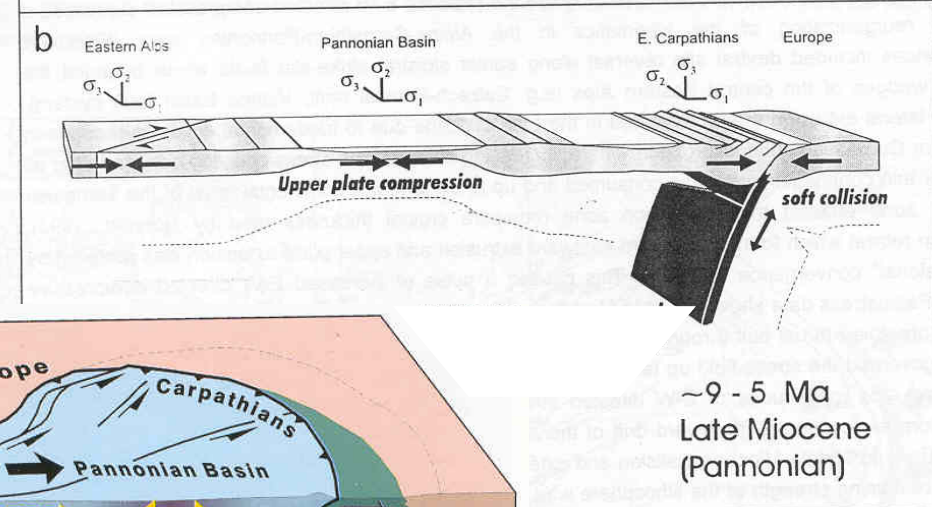
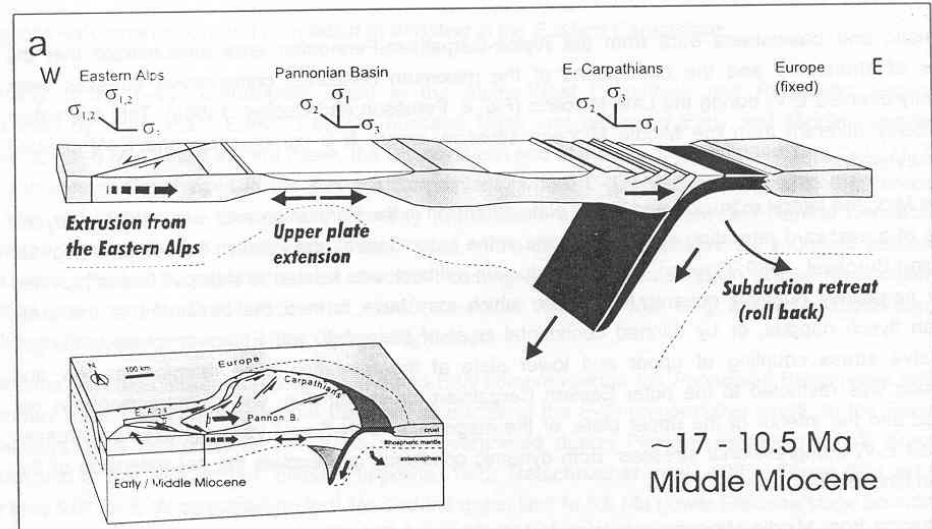
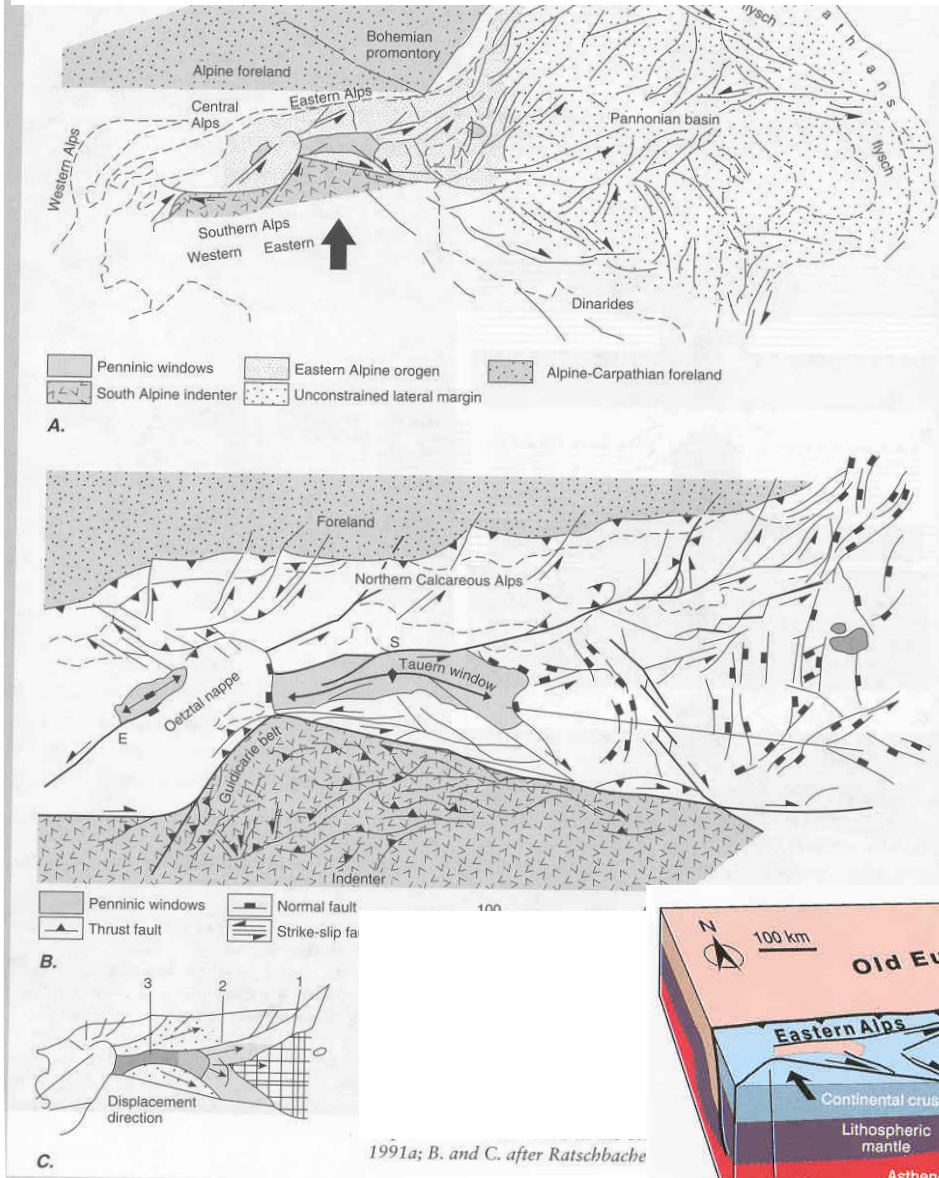
Descriptions may be found from page 38 onwards. The colours of the geological units correspond to those of the geological map (fold-out, inside back page)

Prostorno-vremenska raspodjela vulkanskih stijena u Karpato-panonskom području (*Pecskay i dr., 1995*)



Razvoj strukturne građe Istočnih Alpa u neogenu

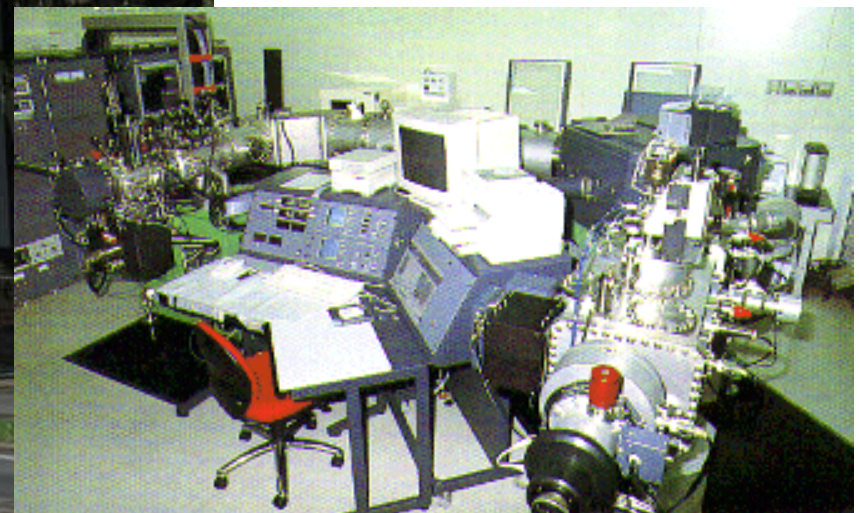
- ekstruziona tektonika



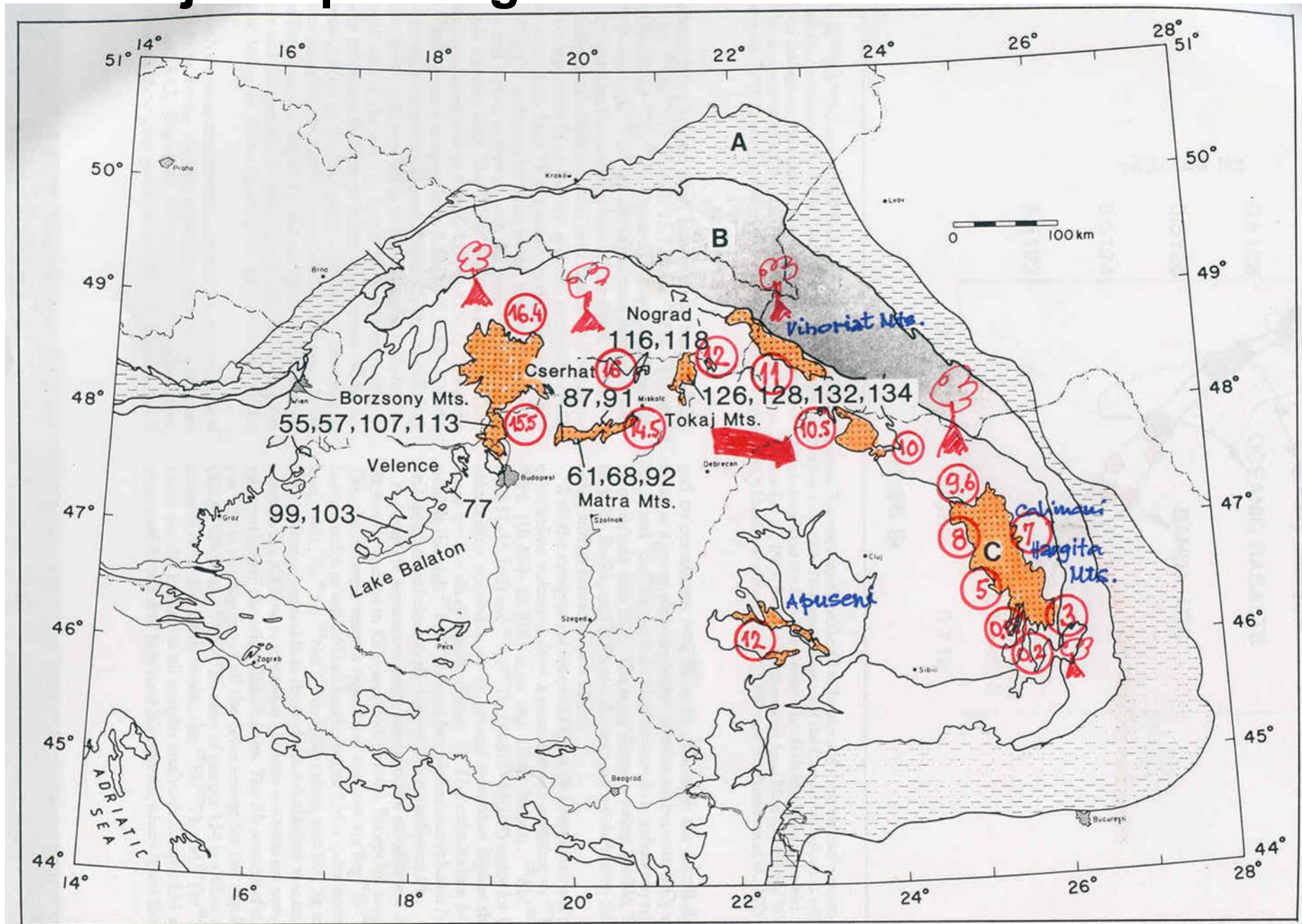
Space and time distribution of Neogene-Quaternary volcanism in the Carpatho-Pannonian Region

Z. Pecskay¹, J. Lexa², A. Szakács³, **K. Balogh**⁴, I. Seghedi³, V. Konečný², M. Kovács⁴,
E. Márton⁵, M. Kaličiak⁶, V. Széky-Fux⁷, T. Póka⁸, P. Gyarmati⁷, O. Edelstein⁴, E. Rosu³, B. Žec⁶

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of the Hungarian
Academy of Sciences
Debrecen, Hungary

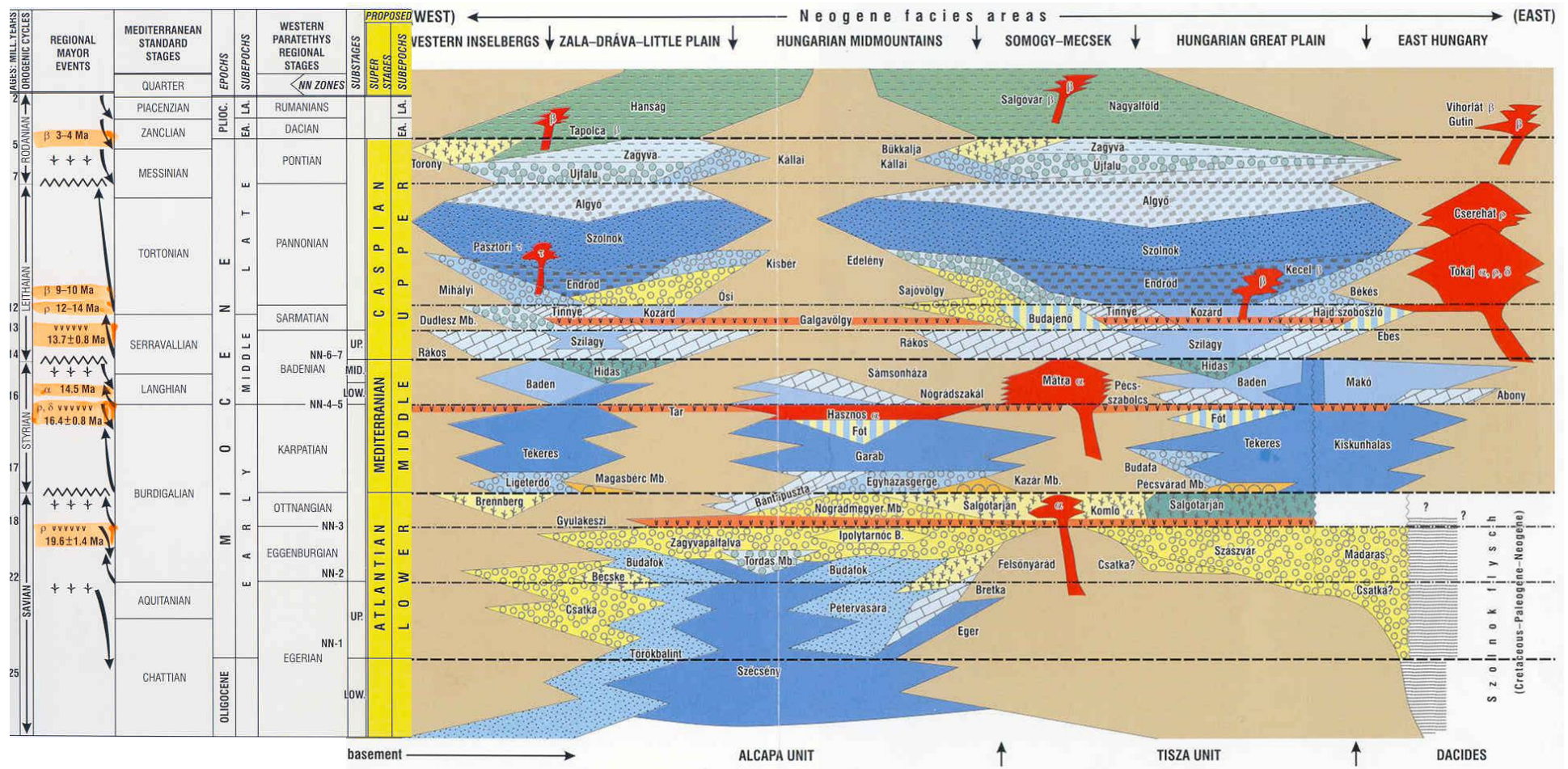


Datiranje karpatskog vulkanizma



Neogenske litostratigrfske jedinice Panonskog bazena

Paleogeografska i facijalna evolucija Panonskog bazena



PROBLEMS AND SOLUTIONS OF CARPATHIAN SUBDUCTION

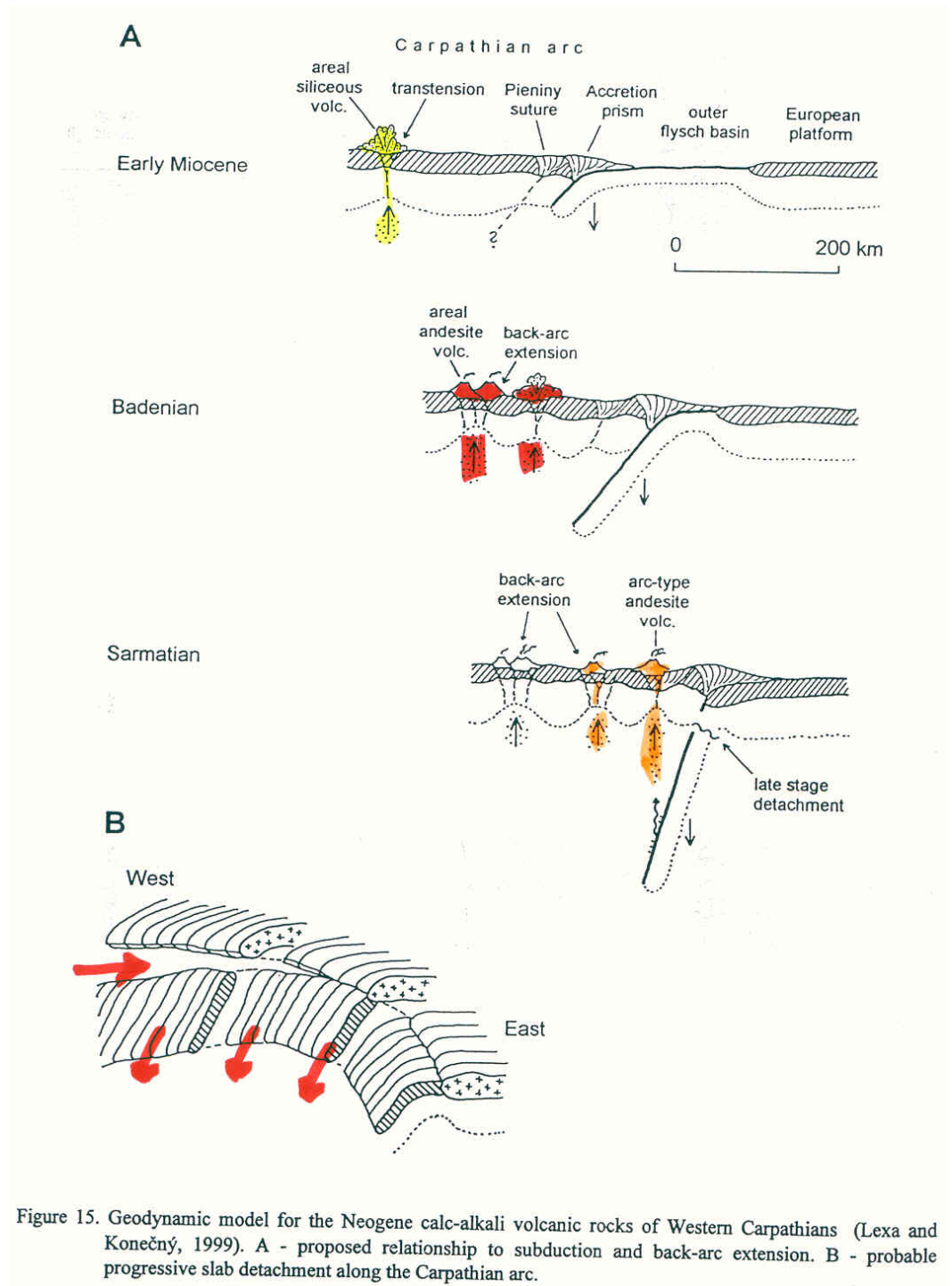
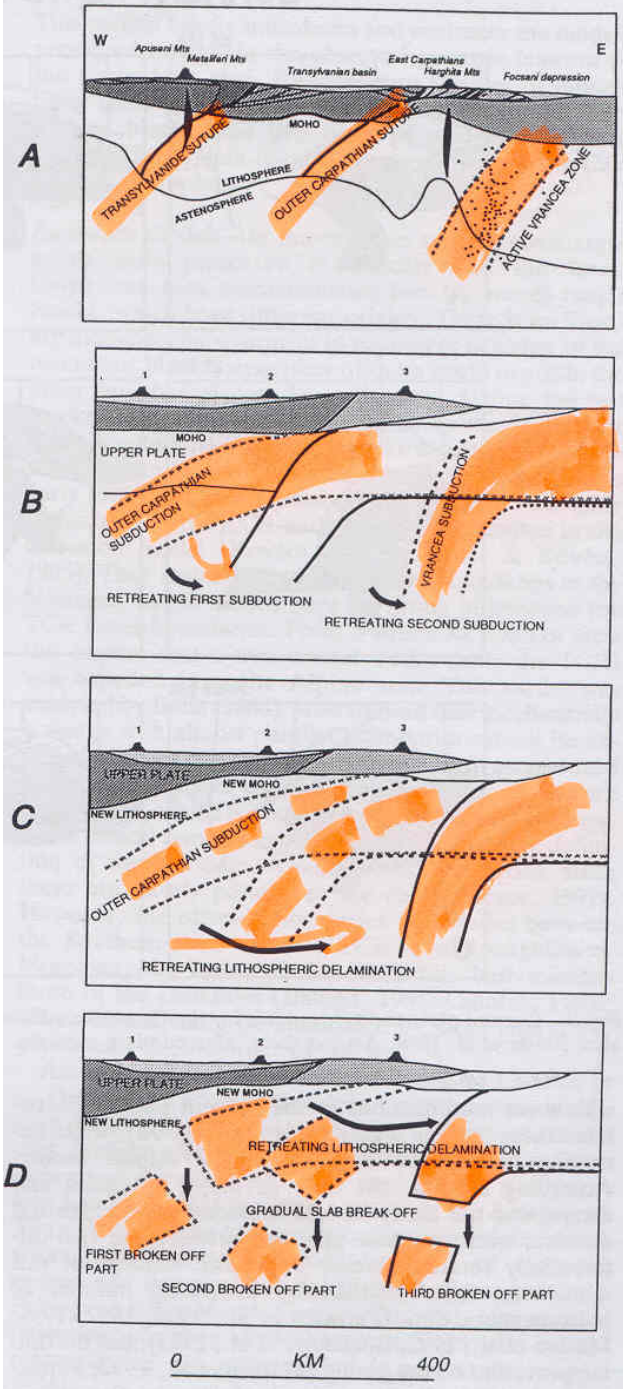
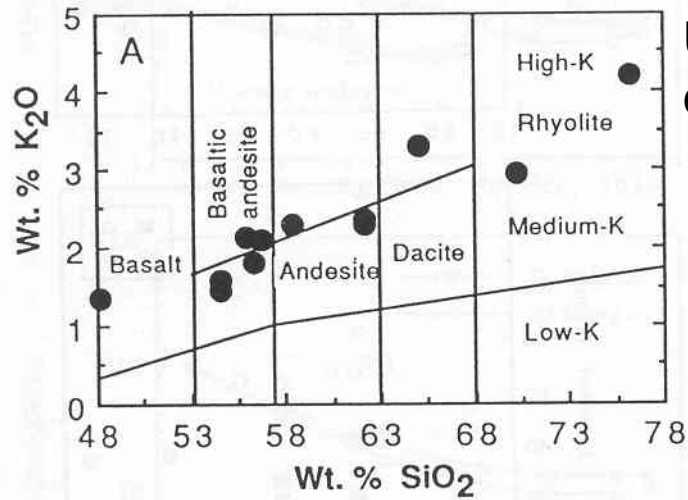


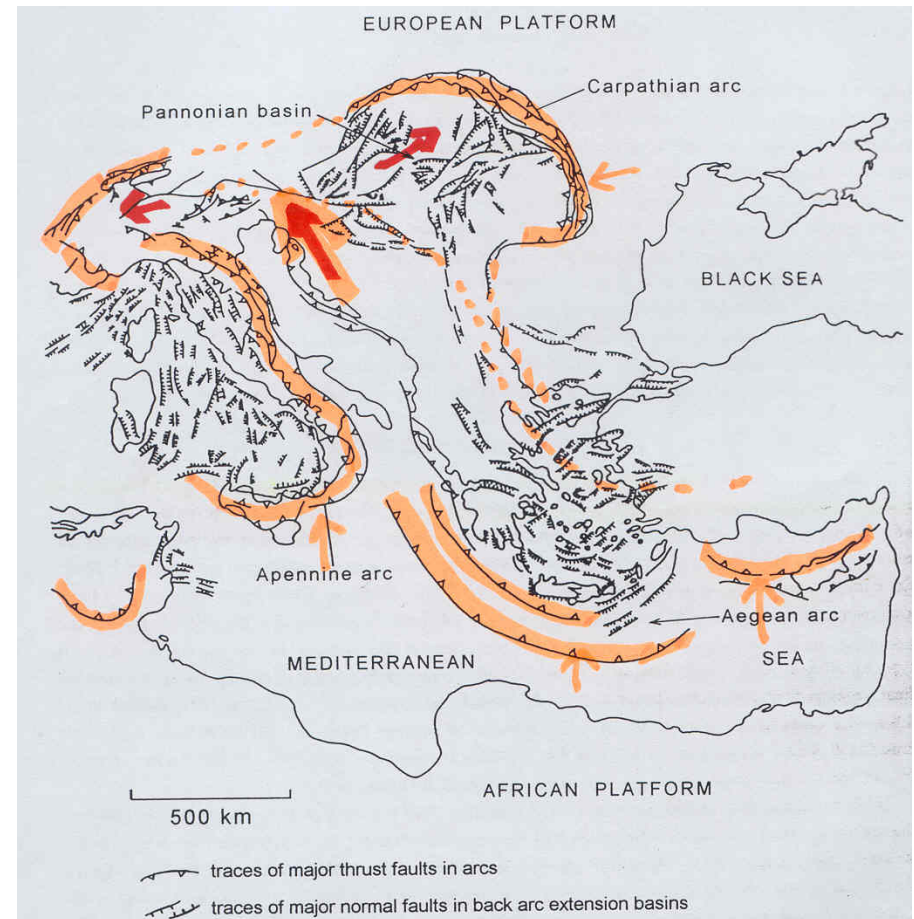
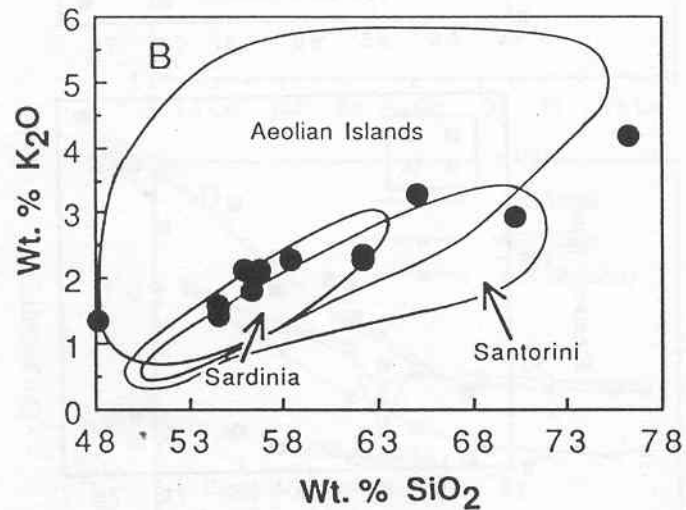
Figure 15. Geodynamic model for the Neogene calc-alkali volcanic rocks of Western Carpathians (Lexa and Konečný, 1999). A - proposed relationship to subduction and back-arc extension. B - probable progressive slab detachment along the Carpathian arc.

Calc-alkaline volcanics of the Inner Carpathian arc, Northern Hungary: new geochemical and oxygen isotopic results

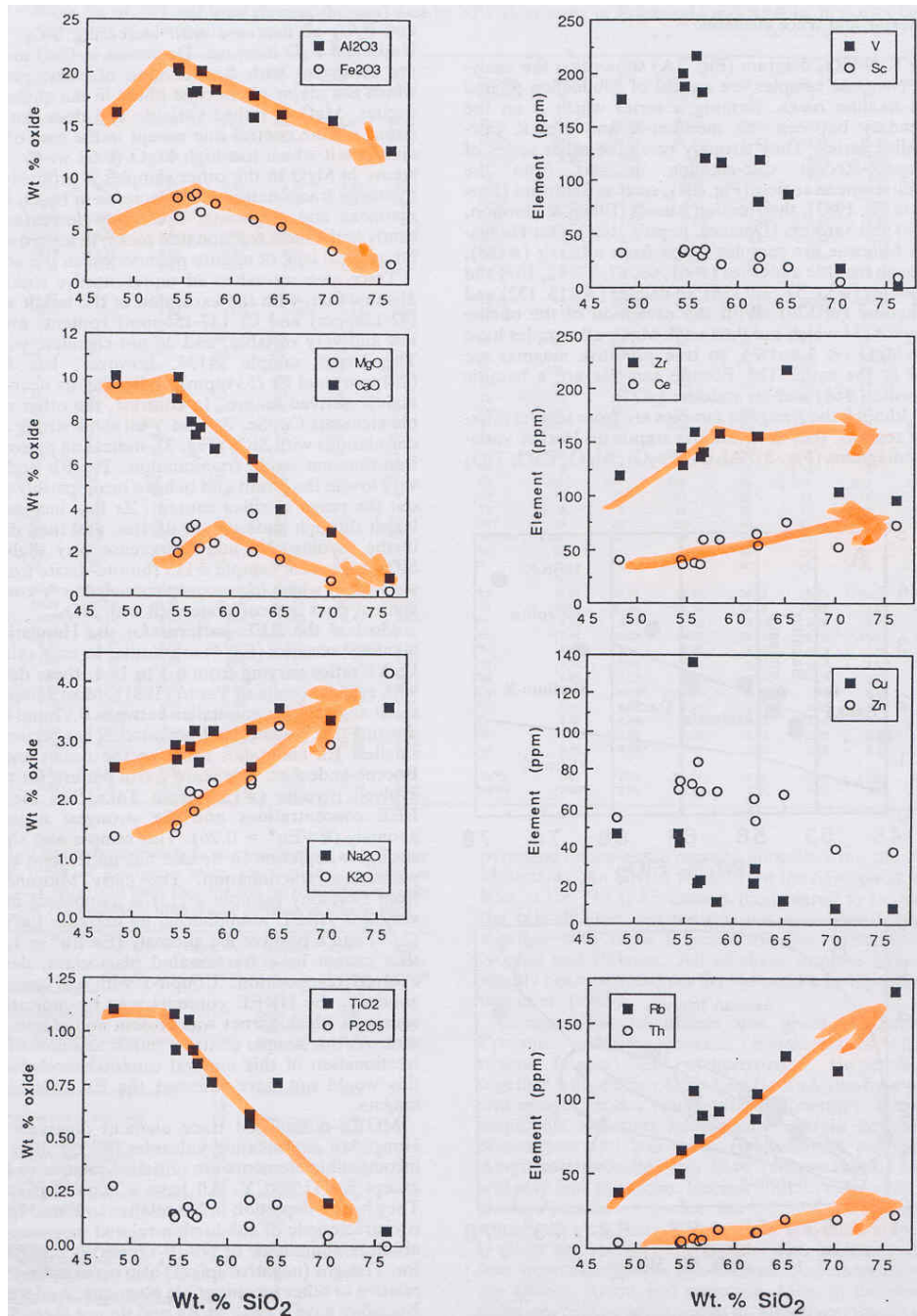
H. Downes¹, Gy. Pantó², T. Póka², D. P. Mattey³, P. B. Greenwood⁴



Usporedba karpato-panonskih vulkanita s vulkanitima cirkum-mediteranskog neogenskog vulkanizma

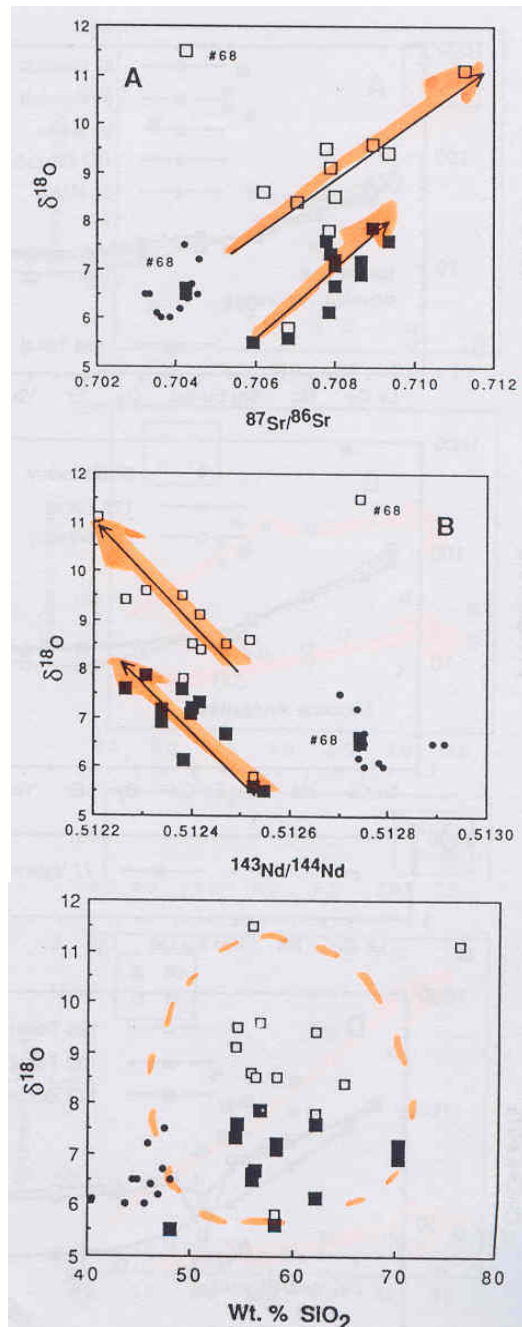


Harkerovi dijagrami kalk-alkalnog vulkanizma Sjeverne Mađarske



- Harkerovi dijagrami ukazuju na normalnu frakcionaciju magme, ali ne ukazuju na porijeklo izvorišne magme

Izotopna geokemija kalk-alkalnog vulkanizma Sjeverne Mađarske

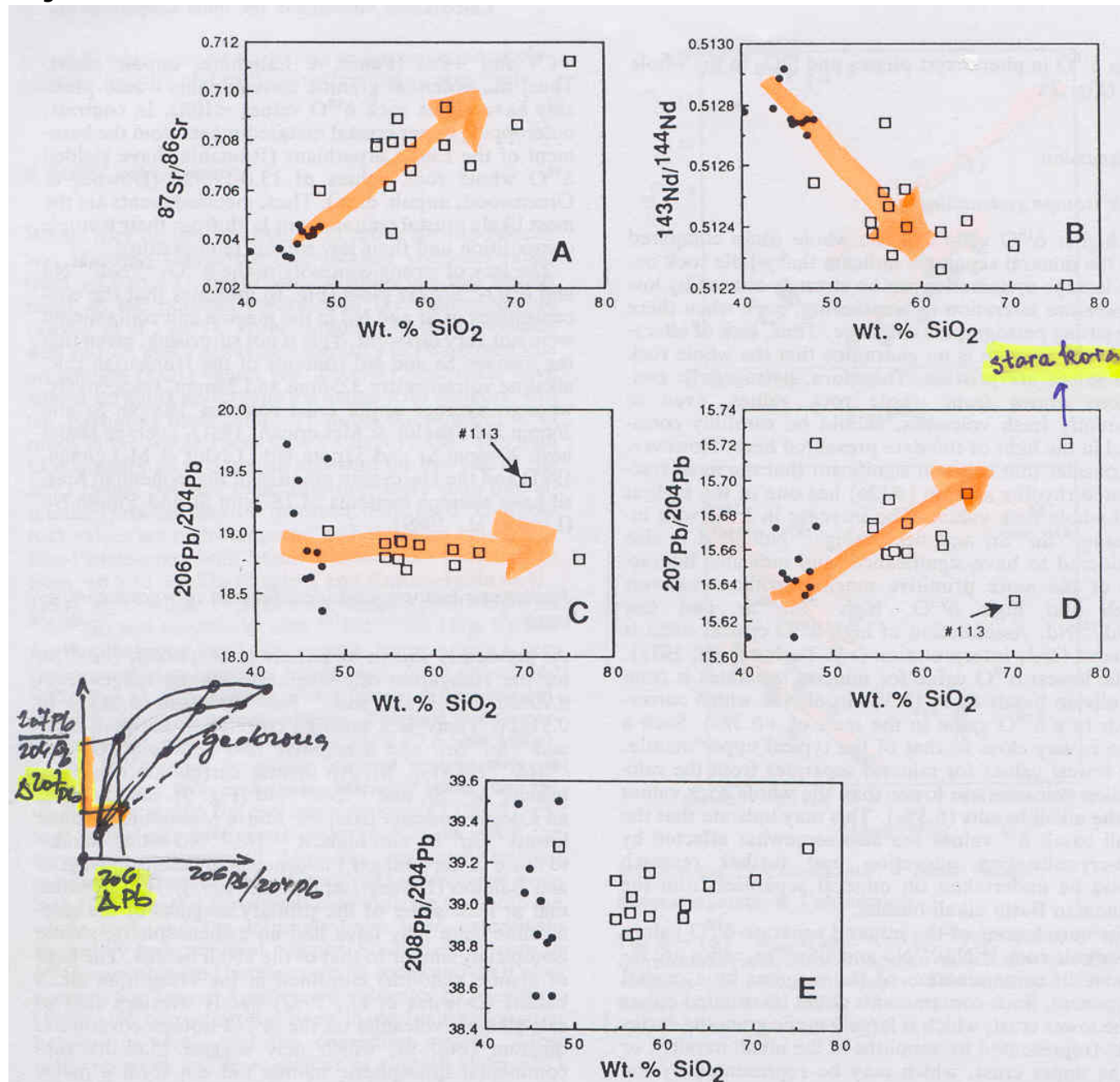


- $^{87}\text{Sr}/^{86}\text{Sr}$ vs. $\delta^{18}\text{O}$ ukazuje na alteracione procese u cjelokupnoj stijeni. Mineralni separati zbog toga imaju niže vrijednosti $\delta^{18}\text{O}$.
- pozitivna korelacija inicijalnog $^{87}\text{Sr}/^{86}\text{Sr}$ vs. $\delta^{18}\text{O}$ je posljedica utjecaja rezervoara s višim $\delta^{18}\text{O}$ na primitivnu magmu.
- negativna korelacija $^{143}\text{Nd}/^{144}\text{Nd}$ vs. $\delta^{18}\text{O}$ je posljedica utjecaja rezervoara s višim $\delta^{18}\text{O}$ na primitivnu magmu.
- izostanak frakcionacije kisikovih izotopa tijekom frakcionacije kalk-alkalne magme također ukazuje na različit stupanj utjecaja alteracionih procesa.
- niske vrijednosti $\delta^{18}\text{O}$ za alkalne bazalte se približavaju vrijednostima gornjeg plašta. Više vrijednosti ukazuju na kontaminaciju s meta-sedimentima, a ne s hercinskim granitima (od +6,4 do +9‰, hercinski graniti, *Pamić & Lanphere, 1991*).
- linearni trend u dijagramima ukazuje na slični sadržaj Sr i Nd u vulkanitima i meta-sedimentima.

Radiogeni izotopi i identifikacija komponente izvora kalk-alkalnog vulkanizma Sjeverne Mađarske

- jasan trend miješanja dva kontrastna izvora izotopa.

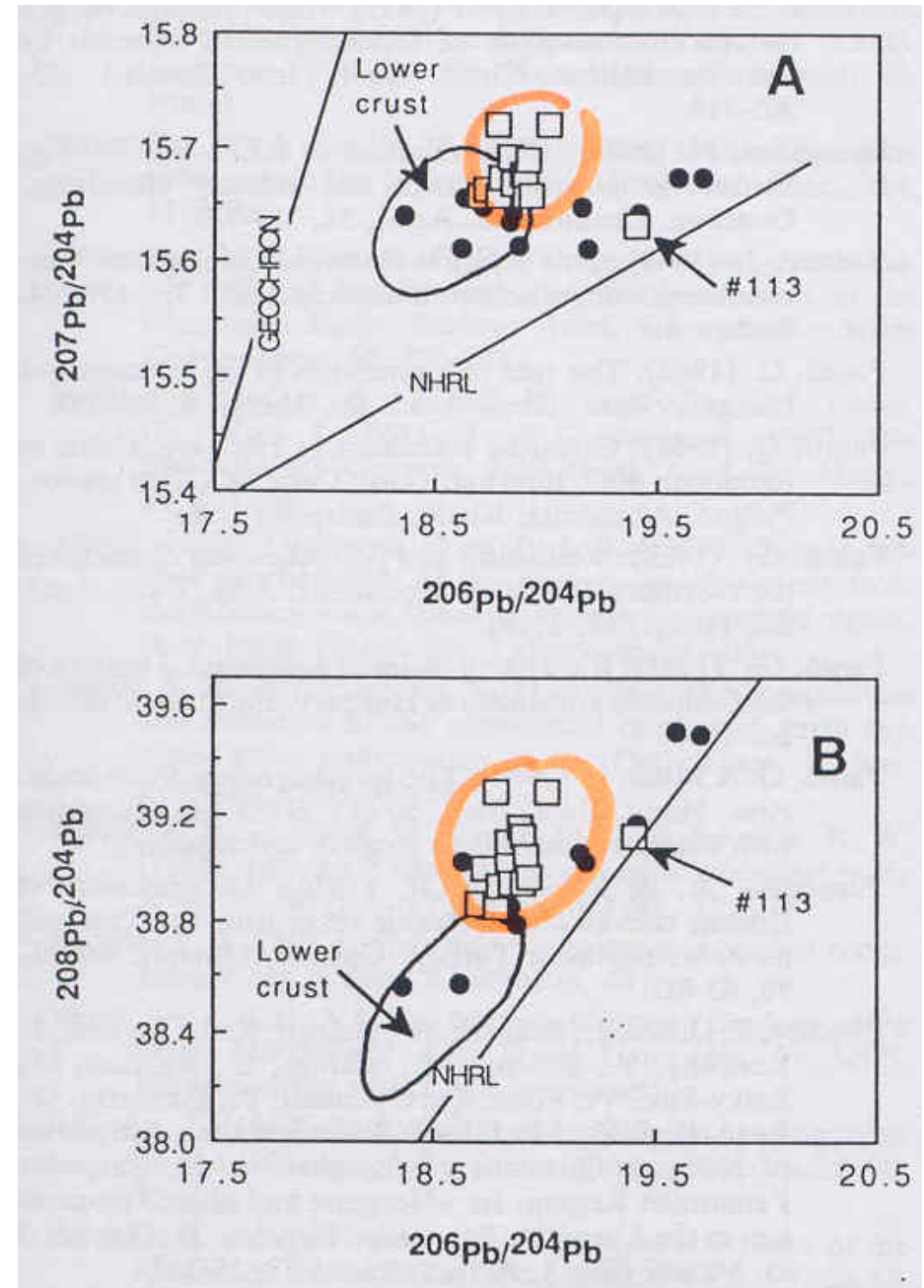
- pozitivna korelacija $^{207}\text{Pb}/^{204}\text{Pb}$ sa SiO_2 i konstanta vrijednost $^{206}\text{Pb}/^{204}\text{Pb}$ ukazuju na veliku starost krustalnog kontaminanta.



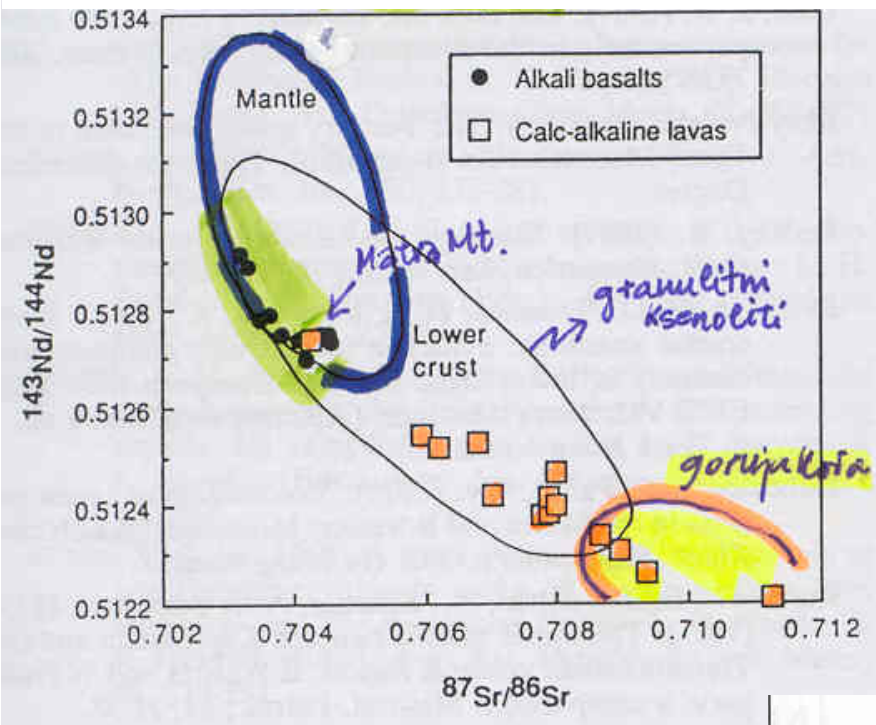
Radiogeni izotopi i identifikacija komponente izvora kalk-alkalnog vulkanizma

Sjeverne Mađarske

- ksenoliti granulitnog facijesa donje kore prekrivaju se s izotopnim sastavom alkalnih bazalta pa se donja kora isključuje kao kontaminant.

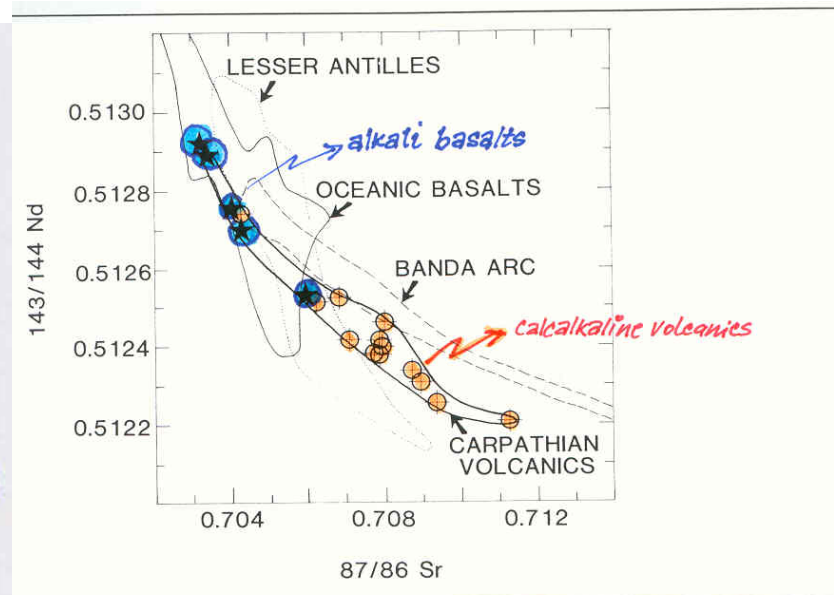


Radiogeni izotopi i identifikacija komponente izvora kalk-alkalnog vulkanizma Sjeverne Mađarske

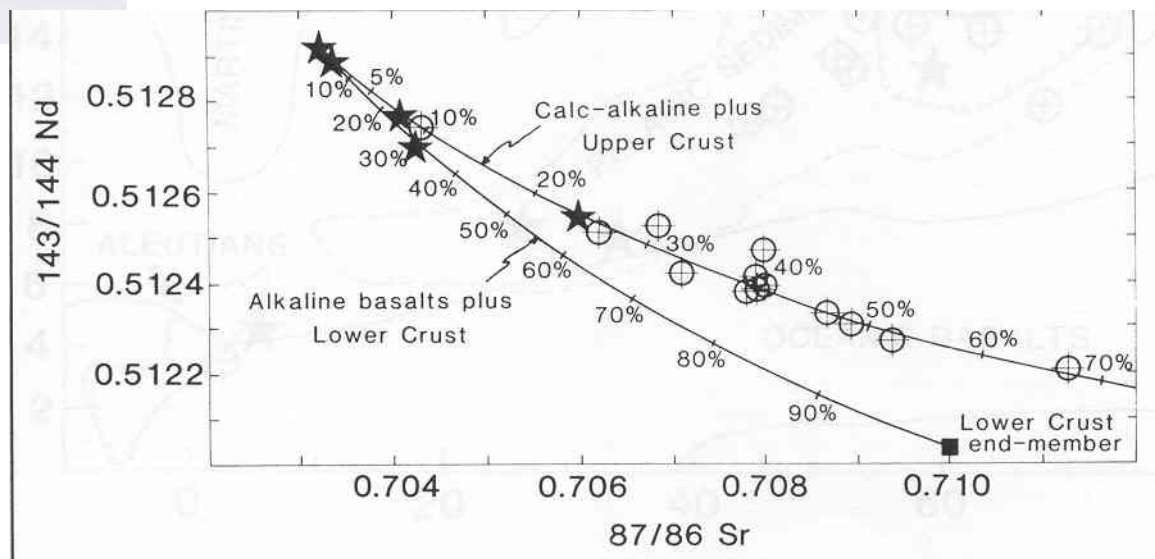


Downes i dr., 1995

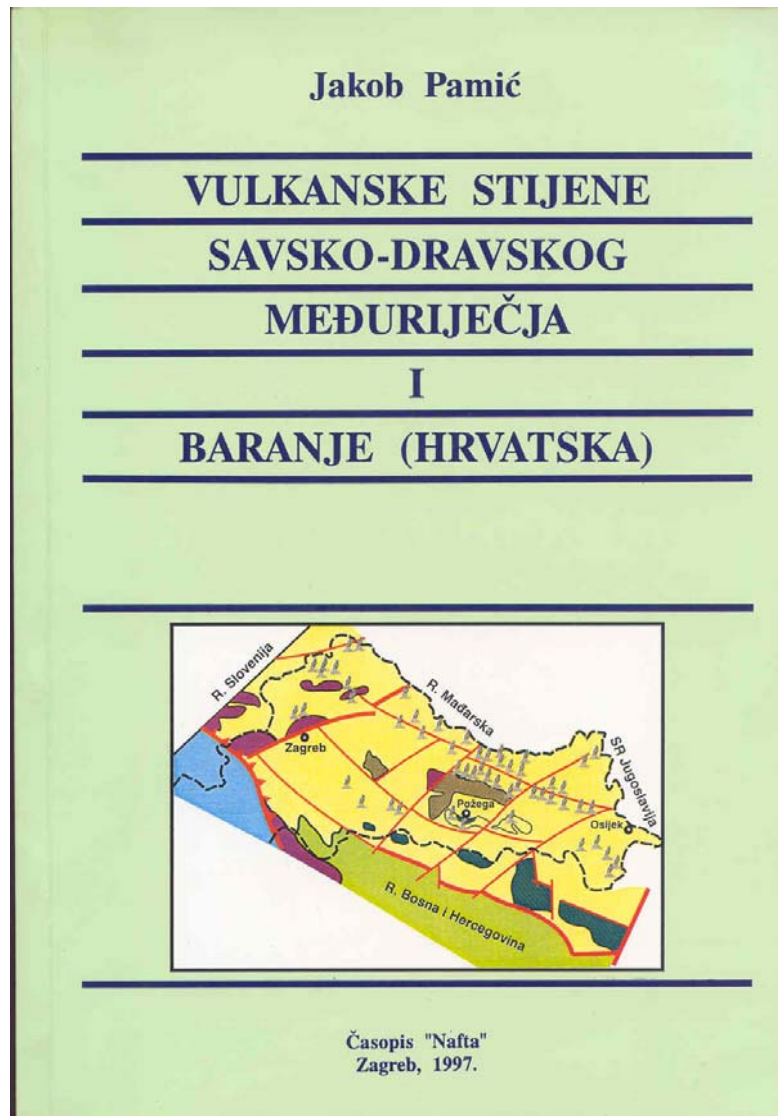
- dijagrami isključuju mogućnost utjecaja donje kore što se jasno vidi na modelu miješanja danom od *Salters & Panto (1988)*.



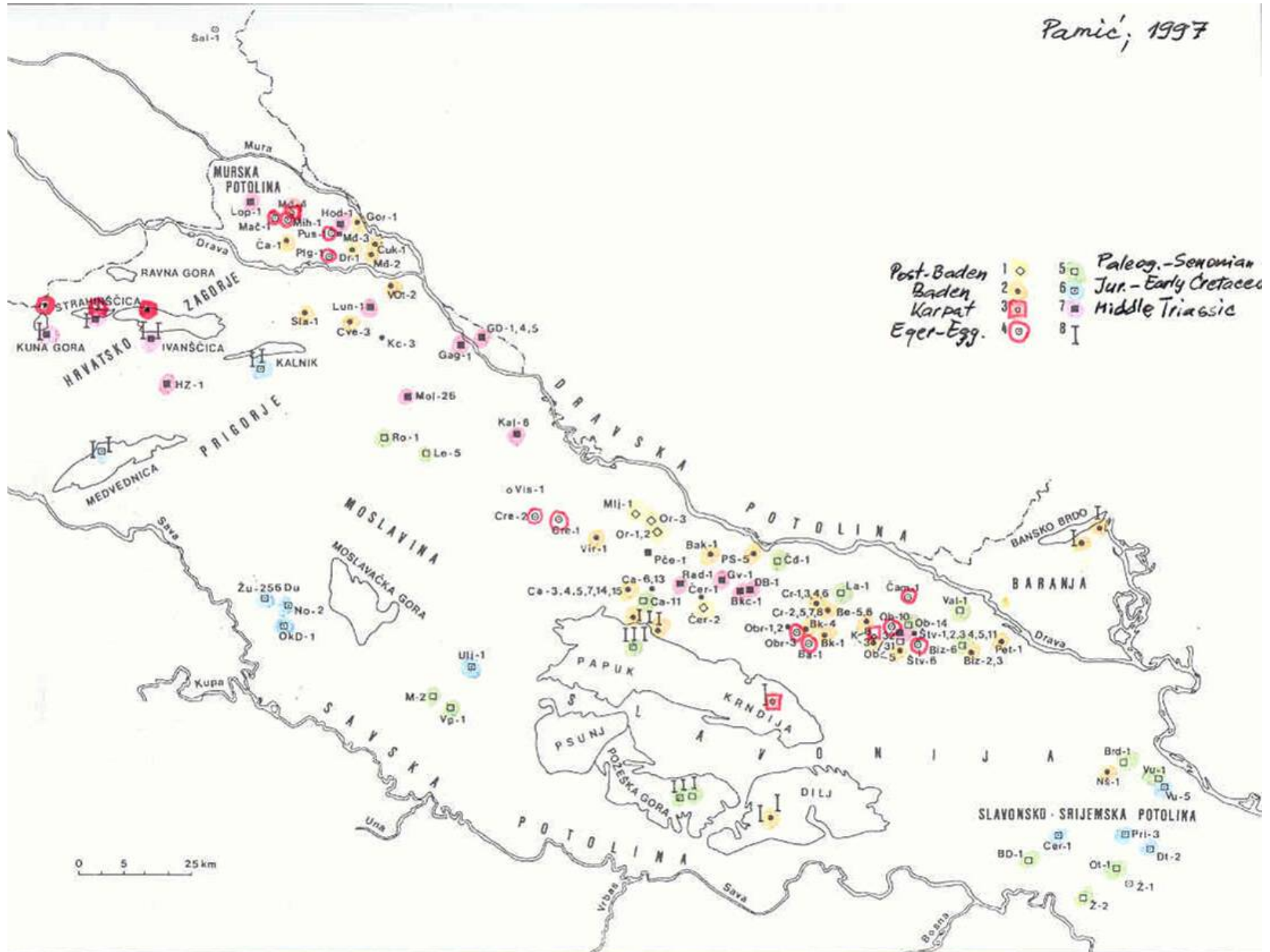
Salters & Panto, 1988



Neogenski magmatizam u južnom Panonskom bazenu



Pamić, 1997



Tertiary Volcanic Rocks from the Southern Pannonian Basin, Croatia

JAKOB J. PAMIĆ,

Institute of Geology, Sachsova 2, Zagreb, Croatia

EDWIN H. MCKEE, THOMAS D. BULLEN, AND MARVIN A. LANPHERE

U.S. Geological Survey, Menlo Park, California 94025

*the period
 of Pamić*

TABLE 1. K-Ar Ages and Analytical Data for Tertiary Volcanic Rocks of the Southwestern and Southern Pannonian Basin¹

Number	Locality and area	Rock type	K ₂ O, %	⁴⁰ Ar*, mol/g, ×10 ⁻¹¹	⁴⁰ Ar*, % total	Age, ± σ
Egerian and Eggenburgian						
2. (ZL3)	Lepoglava, Hrv. Zagorje	Hy-Cpx-Pl basaltic andesite	2.387	7.8913	64	22.8 ± 0.7
1. (ZL1)	Lukovcak, Hrv. Zagorje	Pl-Cpx basaltic andesite	0.996	2.8373	59	19.7 ± 0.6
4. (ZL4)	Rogatec, Hrv. Zagorje	Bi-Cpx-Pl andesite	0.592	7.5240	25	8.8 ± 0.3
8. (Cam1)	Camagajevci, Drava Depression	Qz-Bi-Pl dacite	3.43	9.0627	64	18.3 ± 0.5
8a. (Ob1)	Obod, Drava Depression	Cpx-Pl andesite	1.028	4.2218	25	28.3 ± 0.5
Ottngian and Karpathian						
12. (L559)	Mt. Krndija, Slavonia	Ol-Ph-Cpx-Sd-Pl trachyandesite	3.79	9.2110	40	16.8 ± 0.5
13. (L39)	Mt. Krndija, Slavonia	Hy-Cpx-Ph-Pl-Sd trachyandesite	3.80	9.0052	51	16.4 ± 0.5
14. (L35)	Mt. Krndija, Slavonia	Ph-Cpx-Sd-Pl trachyandesite	3.68	8.1869	40	15.4 ± 0.5
9. (Vis1)	Vis, Drava Depression	Cpx-Sd-Pl trachyandesite	2.902	2.5670	31	6.1 ± 0.2
Badenian						
23. (Ba1)	Begovac, Baranja	Cpx-Pl basaltic andesite	1.535	3.3140	31	14.5 ± 0.4
24. (Ba5)	Veliko Brdo, Baranja	Ol-Cpx-Pl basaltic andesite	1.928	3.8377	28	13.8 ± 0.4
26. (Med)	Goricani-Domisanec, Medimurje	Cpx-Ho andesite	0.276	3.8818	4.2	14.7 ± 1.7
25. (Cak1)	Cakovec, Medimurje	Cpx-Pl andesite	0.470	8.5723	1.3	12.6 ± 2.6
21. (Pp8)	Mt. Papuk, Slavonia	Ho-Pl basalt	0.435	5.3775	25	8.6 ± 0.3
Post-Badenian						
28. (Ce2)	Ceralije, Drava Depression	Ophitic-Cpx basalt	0.191	2.5853	6.1	9.4 ± 0.9
29. (Vr1)	Virovitica, Drava Depression	Ophitic-Cpx basalt	1.372	1.4649	16	7.4 ± 0.5

¹Abbreviations: Bi = biotite; Cpx = clinopyroxene; Ho = hornblende; Hy = hypersthene; Ol = olivine; Ph = phlogopite; Pl = plagioclase; Qz = quartz; Sd = sanidine. Sample numbers correspond to those presented in Table 3. All measurements performed at the U.S. Geological Survey, Menlo Park, California.

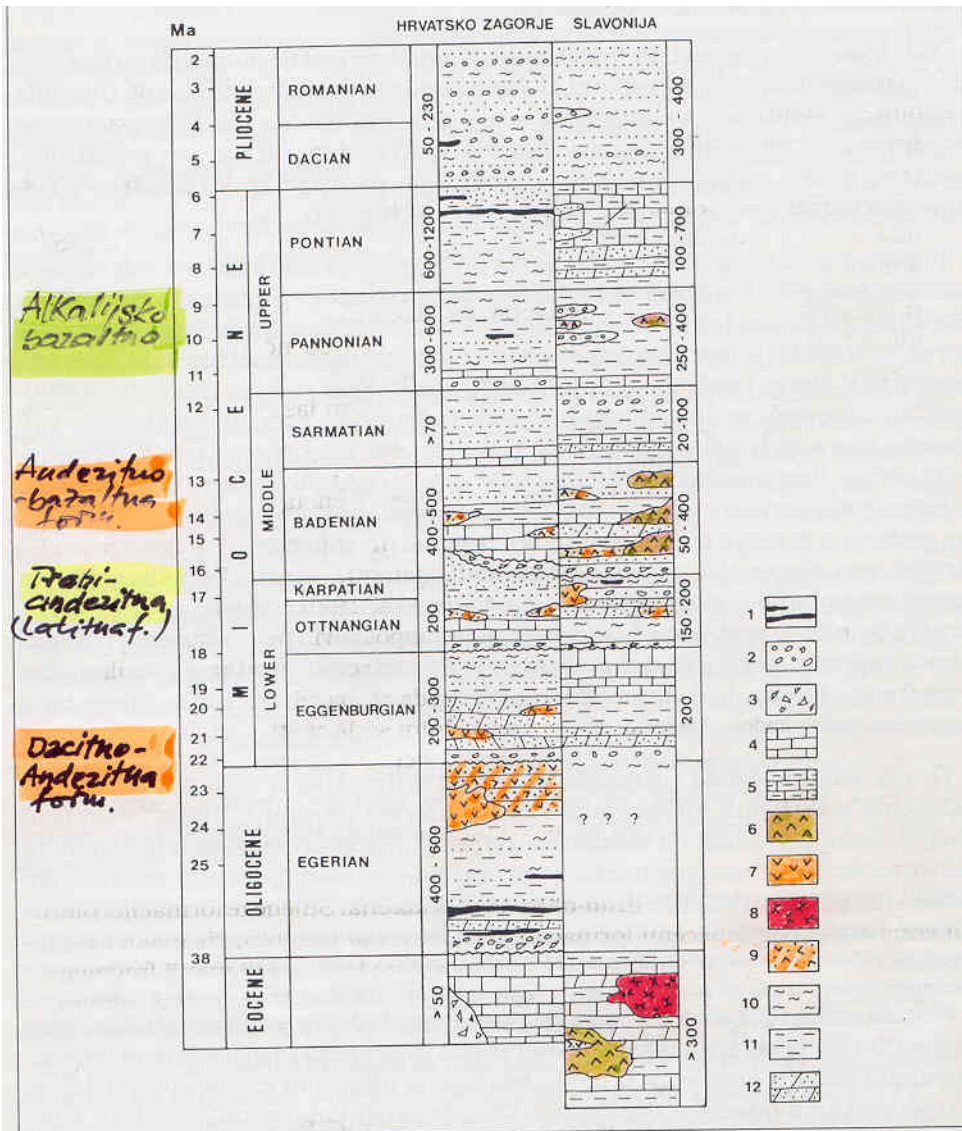
3. Hrvatski geološki kongres Opatija 2005

K-Ar dating of glauconitic sediments in Macelj Mt. (NW Croatia)

Radovan Avanić¹, Zoltán Pécskay², Lara Wacha¹ & Ladislav Palinkaš³

Table 1. Ages of glaucony of the Macelj formation yielded by K-Ar method

No. of sample	K (%)	⁴⁰ Ar rad (%)	⁴⁰ Ar rad (cc/STP/g)	K-Ar (Ma)
6b/1	6.44	44.3	5.696x10 ⁻⁶	22.62 +/- 0.86
6b/2	6.67	61.4	5.005x10 ⁻⁶	19.21 +/- 0.64
Mac6	5.18	55.1	4.535x10 ⁻⁶	22.38 +/- 0.77
Mac7	4.63	51.2	4.189x10 ⁻⁶	23.14 +/- 0.82



Sl. 2. Geološki stupovi koji pokazuju položaj vulkanita u terciarnim sedimentima Panonskog bazena Savsko-dravskog međuričja. Geokronološka skala preuzeta od Steininger et al. (1990).

Fig. 2. Geological columns illustrating positions of volcanic rocks in the Tertiary of the Pannonian Basin in the Sava-Drava interfluvium and Baranja. Geochronological scale taken from Steininger et al. (1990).

Urađeno na temelju podataka (Prepared on data published by): Aničić i Juriša (1985); Basch (1983); Brkić et al. (1989); Galović i Marković (1981); Jamičić et al. (1987 i 1989); Korolija i Jamičić (1989); Korolija et al. (1986); Marković (1986); Šikić et al. (1979); Šimunić (1992); Šimunić et al. (1981); Šparica et al. (1984 i 1987) i drugi.

1 slojevi uglja (coal seams); 2 konglomerat (conglomerate); 3 breča (breccia) 4 vapnenac (limestone); 5 laporovit vapnenac (marly limestone); 6 bazalt (basalt); 7 andezit (andesite); 8 rilit (rhyolite); 9 piroklastiti (pyroclastics) 10 glina (clay, claystone); 11 lapor (marl); 12 pješčenjak (sandstone).

Pamić, 1997



Ravna gora, Hrvatsko Zagorje

Podrijetlo neogenskog magmatizma

- Downes i dr. (1995): Kalk-alkalni magmatizam Panonskog bazena od eocena do kraja neogen-kvartara je subdukcijskog podrijetla uzrokovan subdukcijom europske litosferne ploče pod Tisiu.
- Lexa & Konečný (1998): Neogenski magmatizam Panonskog bazena posljedica je istanjivanja litosfere i uzdizanja astenosfernog plašta zbog ekstenzije panonskog prostora. Pravi subdukcijski magmatizam je badenske i post-badske starosti i vezan je za središnju i istočnu prikarpatску zonu.
- Pamić (1997): Neogenski magmatizam ima iste geokemijske, izotopne i geokronološke karakteristike kao i njegovi ekvivalenti u Panonu i Karpatima.

Koja subdukcija je uzrokovala magmatizam u našem, južnom dijelu Panonskog bazena?

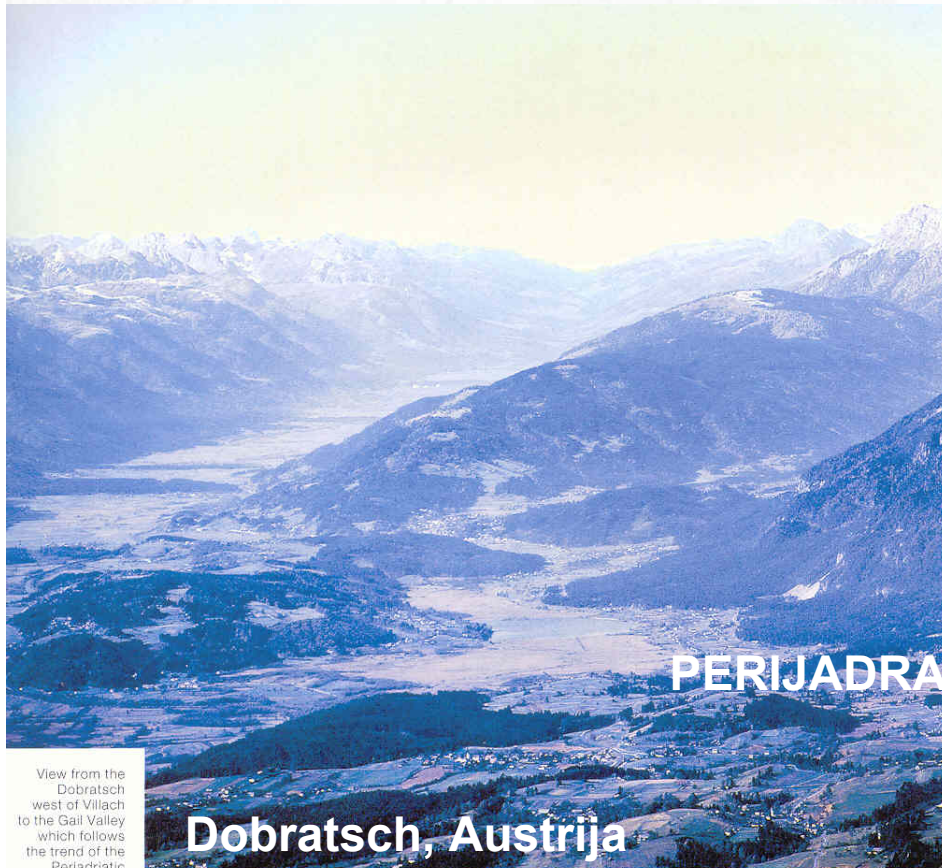
Podrijetlo magmatizma uzduž Perijadranske linije

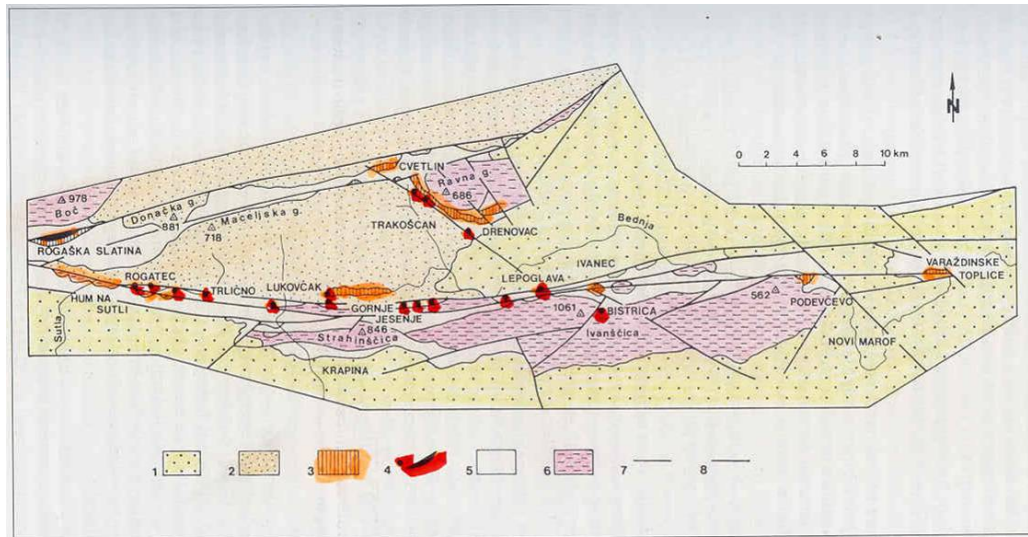
SCHWEIZ. MINERAL. PETROGR. MITT. 78, 55–66, 1998

Dedicated to Prof. Dr. Rudolf H. Steiger on the occasion of his retirement

The origin of Alpine plutons along the Periadriatic Lineament

by F. von Blanckenburg¹, H. Kagami², A. Deutsch³, F. Oberli⁴, M. Meier⁴, M. Wiedenbeck⁵, S. Barth⁶ and H. Fischer⁷





Sl. 8. Geološka karta koja pokazuje pojave egersko-egenburških vulkanih i piroklastičnih stijena u sjevernim dijelovima Hrvatskog zagorja (Šimunić & Pamić, 1993).
 Fig. 8. Geological map showing locations of Egerian-Eggenburgian volcanic and pyroclastic rocks from the northern part of Hrvatsko Zagorje (Šimunić & Pamić, 1993).

1 gornjobadske do pontske sedimentne stijene (Upper Badenian to Pontian sedimentary rocks); 2 egerske do karpatске klastične stijene (Egerian to Karpatian clastic rocks); 3 egerski piroklastiti (Egerian pyroclastics); 4 egersko-egenburški vulkanih i piroklastičnih stijena (Egerian-Eggenburgian volcanic and pyroclastic rocks); 5 egerski klastiti (Egerian clastic rocks); 6 mezozojski, pretežno trijaski dolomiti i vapnenici (Mesozoic, mostly Triassic dolomites and limestones); 7 granica (contact line); 8 rasjed (fault).

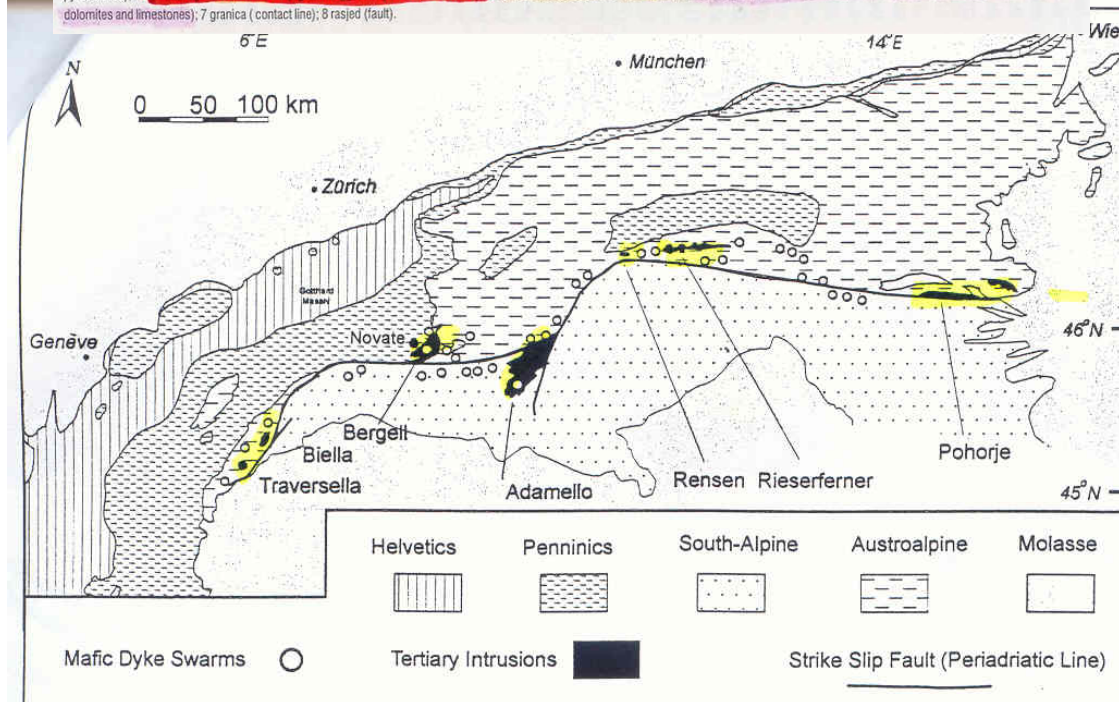
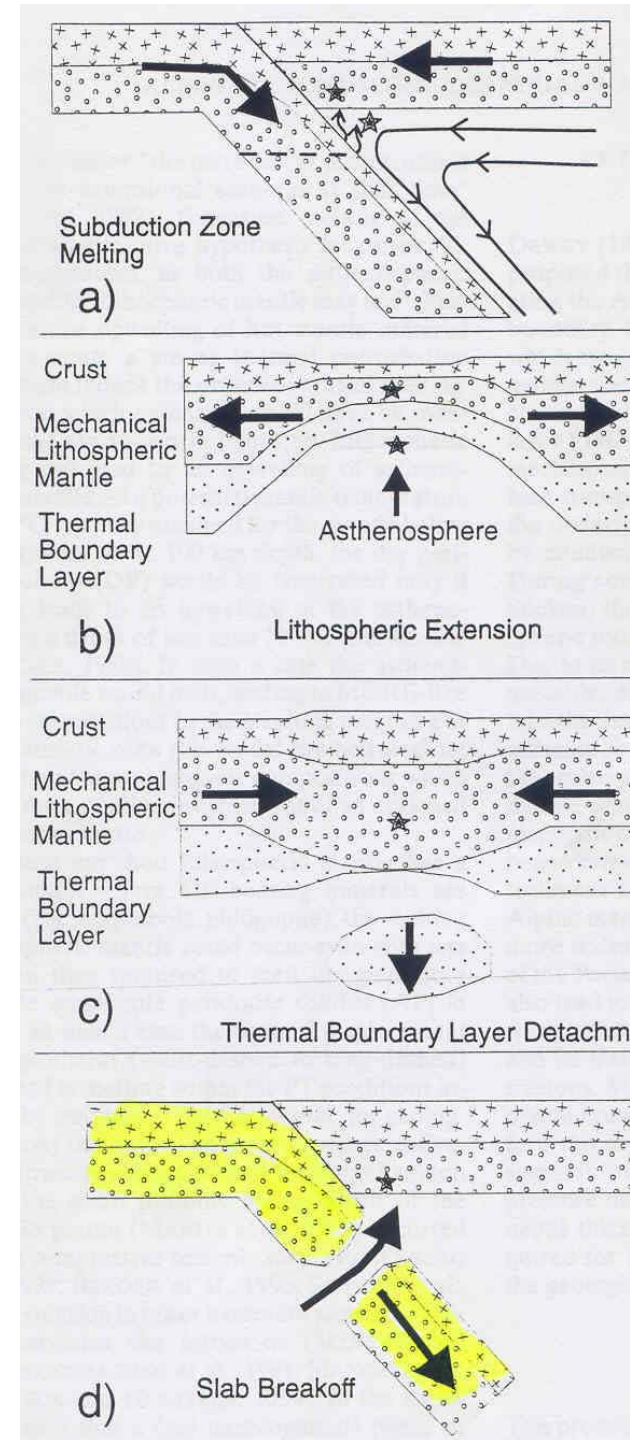


Fig. 1 Tectonic map of the Alps showing the alignment of Tertiary intrusions along the Periadriatic Lineament.



Geochemical evolution of Oligocene and Miocene magmatism across the Easternmost Periadriatic Lineament

L.A. Palinkaš¹, J. Pamić²

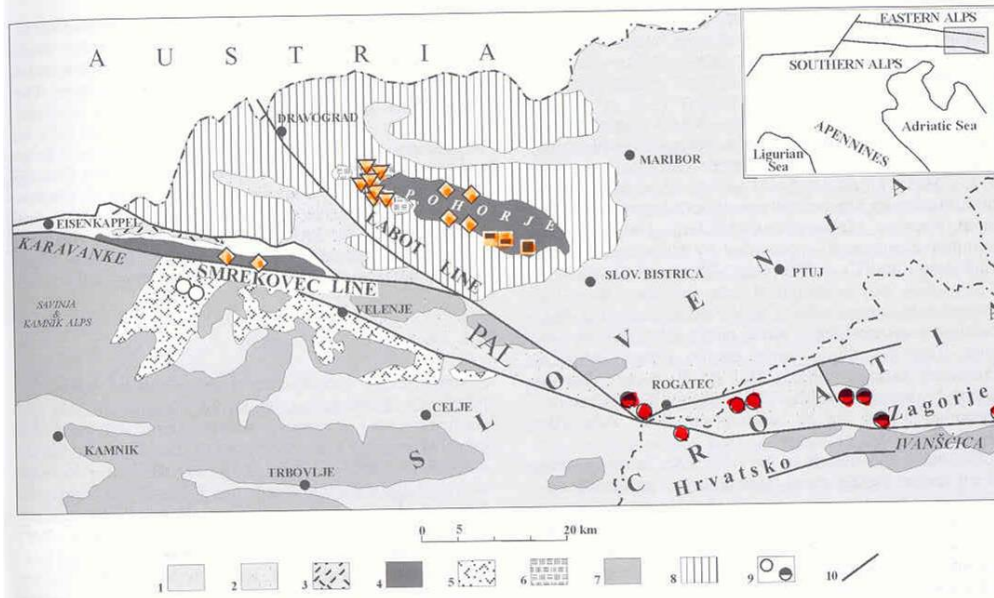
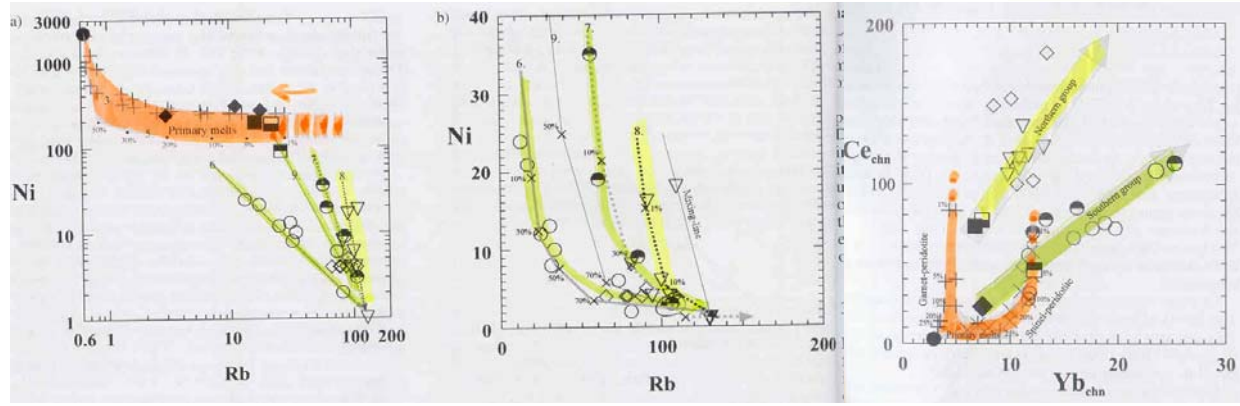
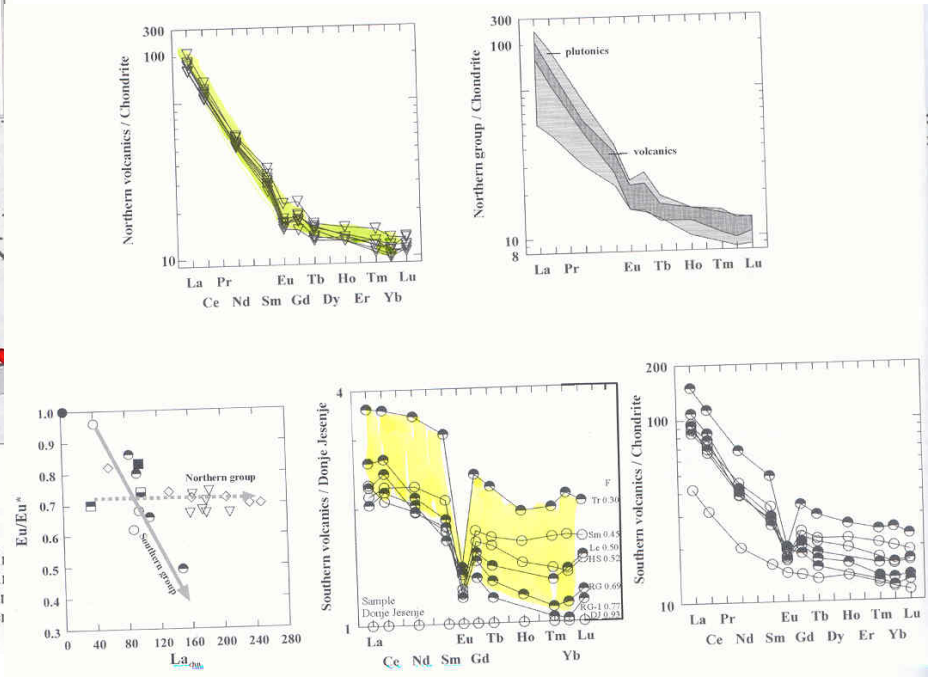
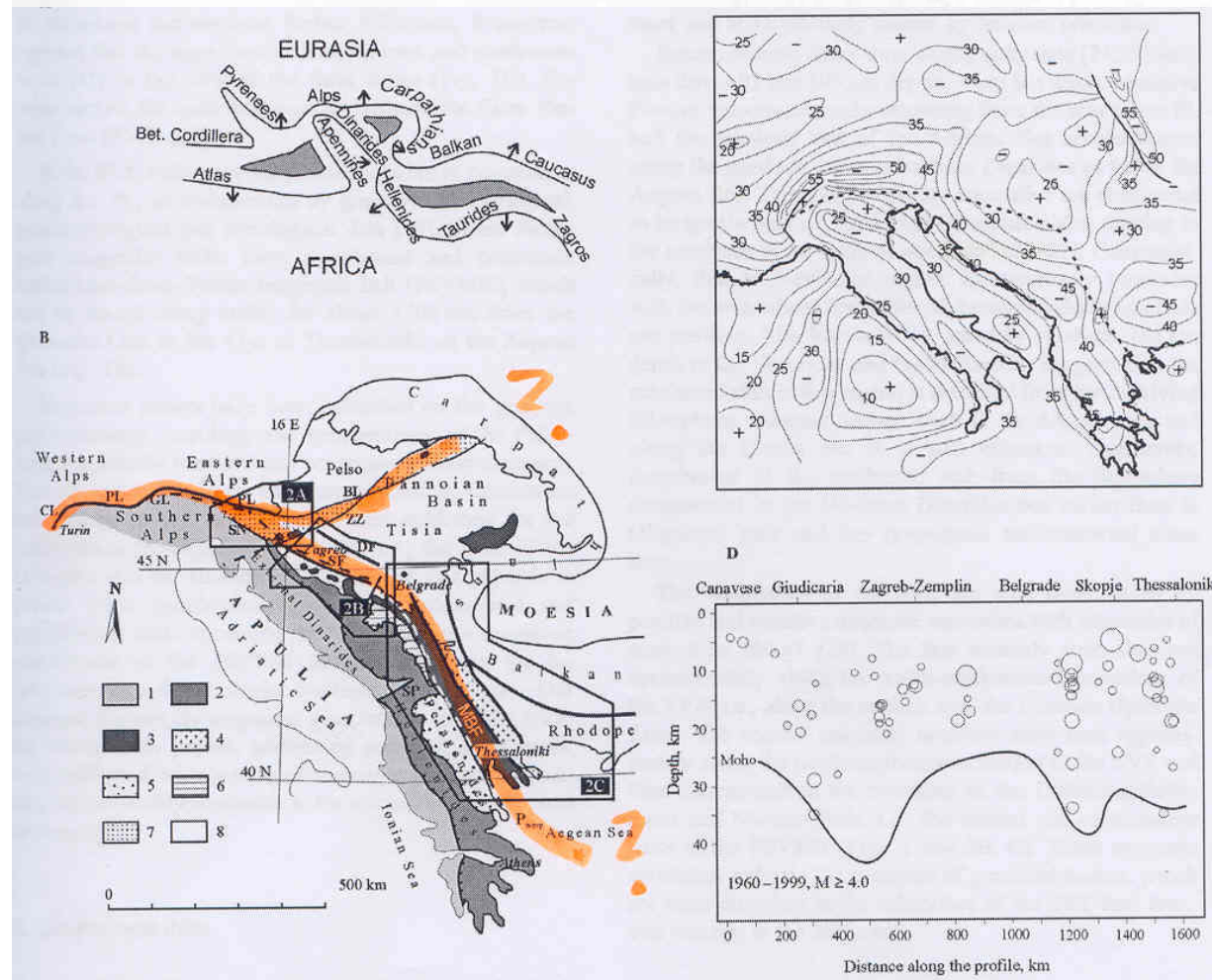


Fig. 1 – Simplified geological map of the adjoining area of the easternmost Periadriatic Line and southwesternmost Pannonian Basin 1-mainly Neogene sediments of the Pannonian Basin, 2-mainly Egerian-Eggenburgian sediments of the Southern Pannonian Basin 3-Permian-Triassic granitoids, 4-Oligocene Periadriatic tonalites, 5-Egerian-Eggenburgian volcanics and pyroclastics of the Southern group, 6-Badenian volcanics of the Northern group, 7-Paleozoic-Triassic formations of the Sava nappe, 8-Austroalpine domain (Eastern Alps), 9-Outcrops of Egerian-Eggenburgian volcanics of the Southern group, 10-fault.



Origin and geodynamic evolution of Late Paleogene magmatic associations along the Periadriatic–Sava–Vardar magmatic belt

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Priča o Moslovačkoj gori



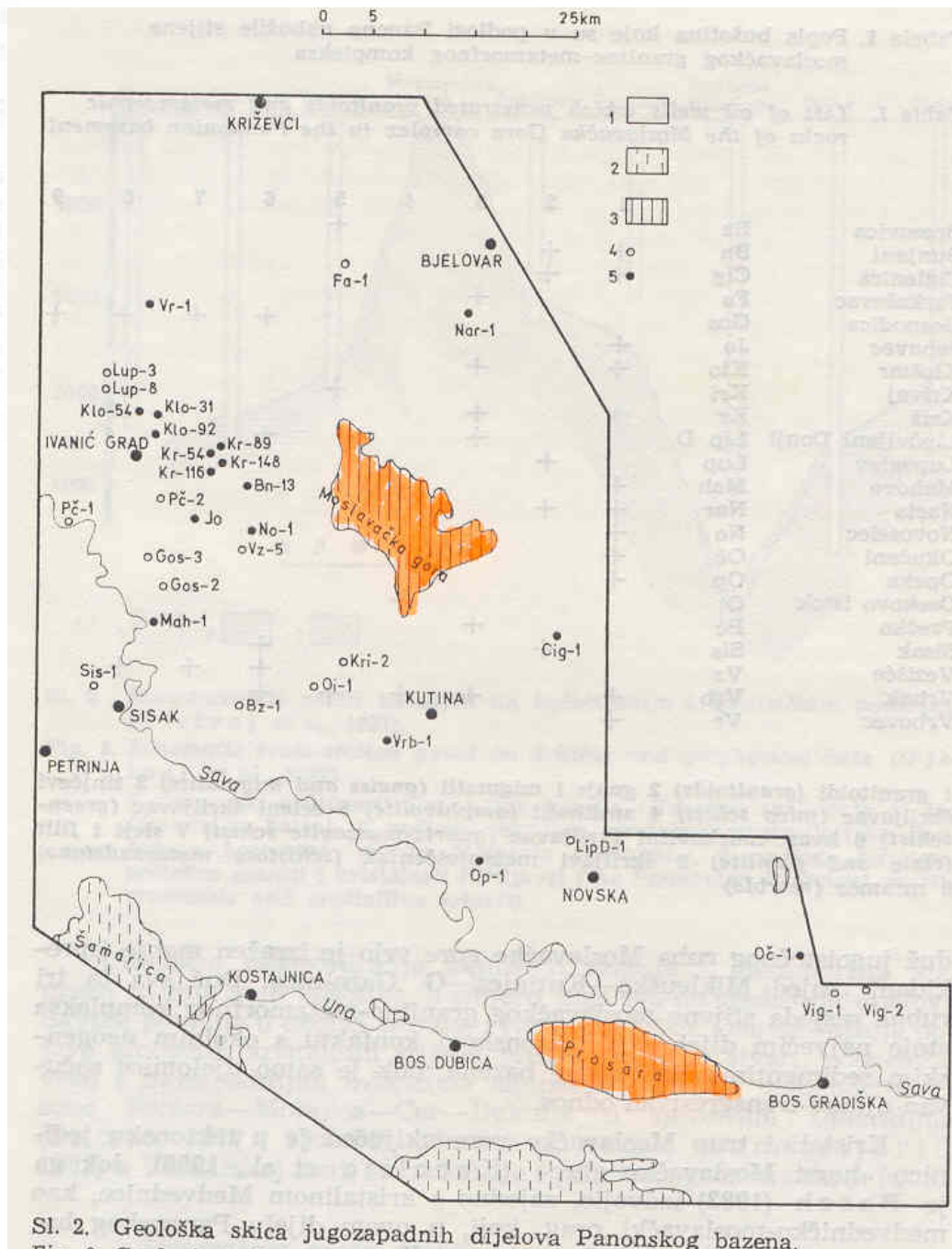
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JUGOSLAVENSKA AKADEMIJA
 ZNANOSTI I UMJETNOSTI
 RAZRED ZA PRIRODNE ZNANOSTI
 INSTITUT ZA GEOLOŠKA ISTRAŽIVANJA, OOUR ZA
 GEOLOGIJU

JAKOB PAMIĆ

ALPINSKI GRANITOIDI, MIGMATITI
 METAMORFITI MOSLAVAČKE GORE
 I OKOLNE PODLOGE PANONSKOG
 BAZENA (SJEVERNA HRVATSKA,
 JUGOSLAVIJA)

ZAGREB
 1990.



Sl. 2. Geološka skica jugozapadnih dijelova Panonskog bazena.

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K-Ar AND Rb-Sr AGES OF ALPINE GRANITE-METAMORPHIC COMPLEXES IN THE NORTHWESTERN DINARIDES AND THE SOUTHWESTERN PART OF THE PANNONIAN BASIN IN NORTHERN CROATIA

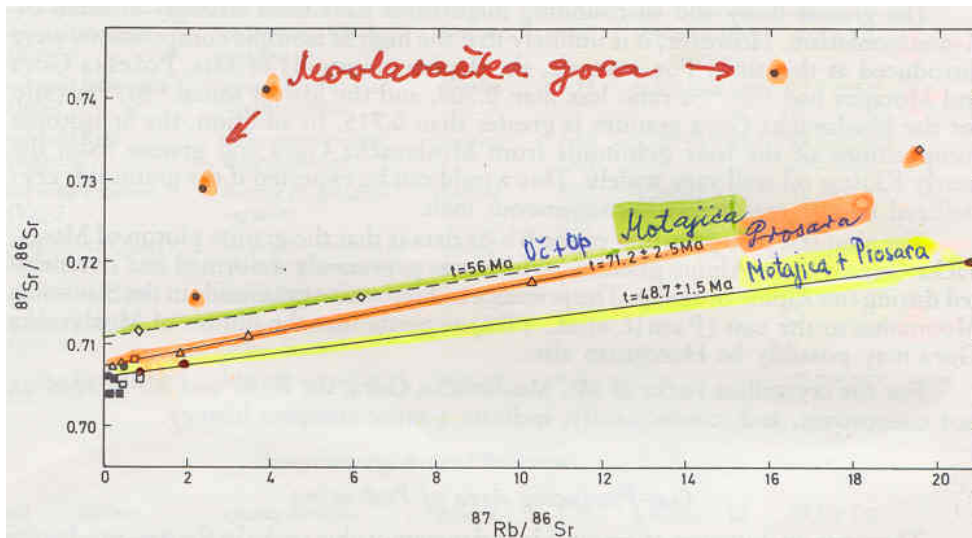


Table 2. K-Ar Ages and Analytical Data for Alpine Igneous and Metamorphic Rocks of the Adjoining Area of The Northern Dinarides and Pannonian Basin

Tabela 2. K-Ar starosti i analitički podaci za alpske magmatske i metamorfne stijene dodirnog područja sjevernih Dinarida i Panonskog bazena

Metamorphic Rocks, Migmatites and Granitoid Rocks of the Area of Moslavina

NUMBER	LOCALITY	ROCK TYPE	MINERAL	K ₂ O	⁴⁰ Ar mol/g	Age ± Ma
1.	oil well Bunjani (Bn)-59	muscovite-biotite granite	biotite	9.60	9.9285 × 10 ⁻¹⁰	70.4 ± 2.2
2.	oil well Johavec (Jo)-2	muscovite-biotite-granodiorite	biotite	9.23	9.85812 × 10 ⁻¹⁰	72.7 ± 2.2
3.	oil well Križ (Kr)-147	muscovite-biotite-quartz diorite	biotite	7.69 7.64	8.80755 × 10 ⁻⁹	64.87 ± 4.0 61.0 ± 2.0
4.	oil well Vrbovec (Vr)-2	biotite migmatite-granite	biotite	7.07 7.00	4.29381 × 10 ⁻¹⁰	34.69 ± 4.0 27.0 ± 2.2*
5.	Mikleuška Quarry MG	stromatic muscovite-biotite migmatite	biotite	9.17	9.48996 × 10 ⁻¹⁰	70.5 ± 2.2
6.	Garić Grad, MG	amphibolite	hornblende	0.33		88.0 ± 3.0*
7.	Velika Sredska MG	muscovite-biotite-granodiorite	biotite	8.12		70.0 ± 2.0*
8.	Velika Kamenica MG	biotite pegmatite	biotite	8.71		57.0 ± 2.0*

Gas-producing Area of Podravina

9.	oil well Molve (Mol)-9	quartz-biotite-schist	biotite	8.70	4.97983 × 10 ⁻¹⁰	39.3 ± 1.0
10.	oil well Molve (Mol)-3	garnet-biotite-muscovite-quartz schist	biotite	7.25	2.93057 × 10 ⁻⁹	66.2 ± 5.2
11.	oil well Kalinovac (Kal)-3	flaser biotite-muscovite gneiss	biotite	6.56	1.16766 × 10 ⁻⁹	99.83 ± 2.4
12.	oil well Stari Gradec (Stg)-1	flaser garnet-biotite-muscovite gneiss	biotite	6.00	1.75290 × 10 ⁻⁹	161.07 ± 92
13.	oil well Murska Sobota (Ms)-4	muscovite-biotite-gneiss	biotite	8.85	1.68712 × 10 ⁻¹⁰	13.2 ± 0.4

The Area of Posavina

14.	oil well Visoka Greda (Vig)-1	biotite-amphibolite schist	hornblende	0.45 0.37	3.84029 × 10 ⁻¹¹	48.55 ± 1.2 43.00 ± 2.0*
15.	the same oil well	the same rock sample	biotite	6.84	4.61509 × 10 ⁻¹⁰	38.50 ± 1.0 27.0 ± 2.2*
16.	Jambrovac Creek, PG	phyllite	whole rock	4.59	3.27150 × 10 ⁻¹⁰	48.8 ± 1.2
17.	Trnakovac village, south of Psunj Mt.	biotite-cordierite quartz schist	biotite	7.30		74.3 ± 1.5*
18.	Motajica Quarry	biotite granite	biotite	9.48	2.47751 × 10 ⁻¹⁰	18.1 ± 0.6

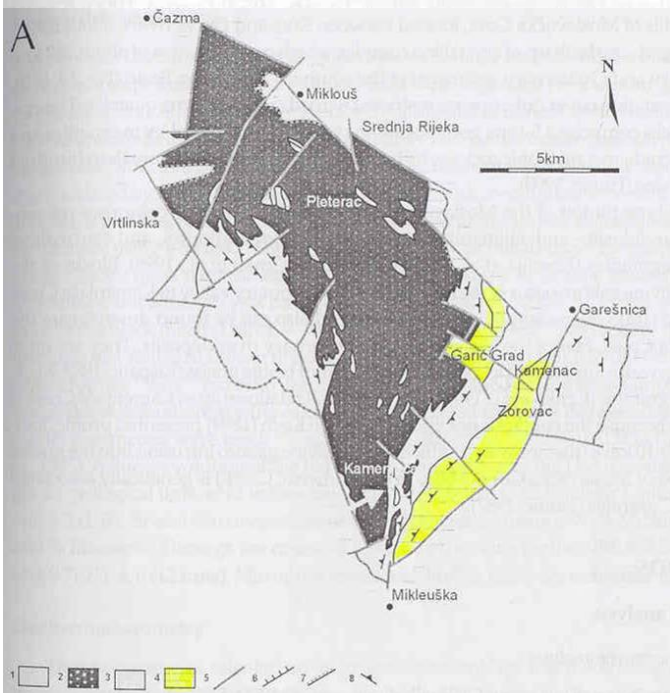
MG Moslavačka Gora; PG Požeška Gora

* K-Ar ages obtained in the Isotope Geochemical Laboratory of the Ukrainian Academy of Sciences in Kiev.

... biotite from stromatic migmatite from the zone around the granite pluton. The

The Kamenjača olivine gabbro from Moslavačka Gora (South Tisia, Croatia)

Dražan Balen¹, Ralf Schuster², Vesnica Garašić³ & Vladimir Majer³



Sample	Nd [ppm]	Sm [ppm]	¹⁴⁷ Sm/ ¹⁴⁴ Nd	IC Nd ^{143/144}	2Sd(m)	Alter [Ma]	ε(110)Nd(Chur)	TNdDM
MG-GB WR	2,692	0,865	0,194	0,512918	0,000004	110	5,50	1,08E+09
MG-GB CPx2	5,681	2,311	0,246	0,512932	0,000004			
MG-GB CPx	3,974	1,746	0,266	0,512968	0,000005			
MG-GB PI	1,002	0,173	0,104	0,512853	0,000007			

Sample	Material	Rb [ppm]	Sr [ppm]	⁸⁷ Rb/ ⁸⁶ Sr	⁸⁷ Sr/ ⁸⁶ Sr	+/-2s _m	Ma	t ₀
MG-GB	WR	1,193	244,745	0,0141	0,70295	0,00005	110	0,70359

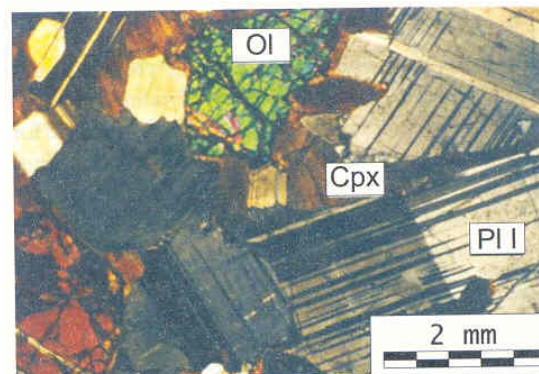


Fig. 2A. Magmatic assemblage of olivine gabbro; Cpx clinopyroxene; Ol olivine, Pl plagioclase;

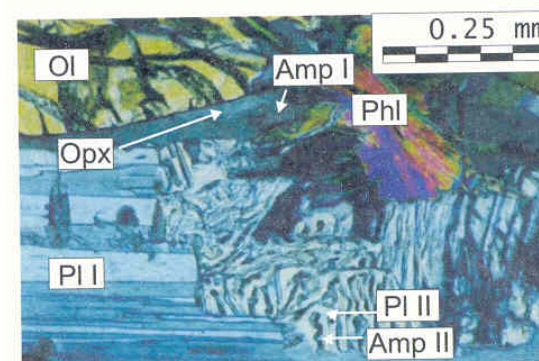
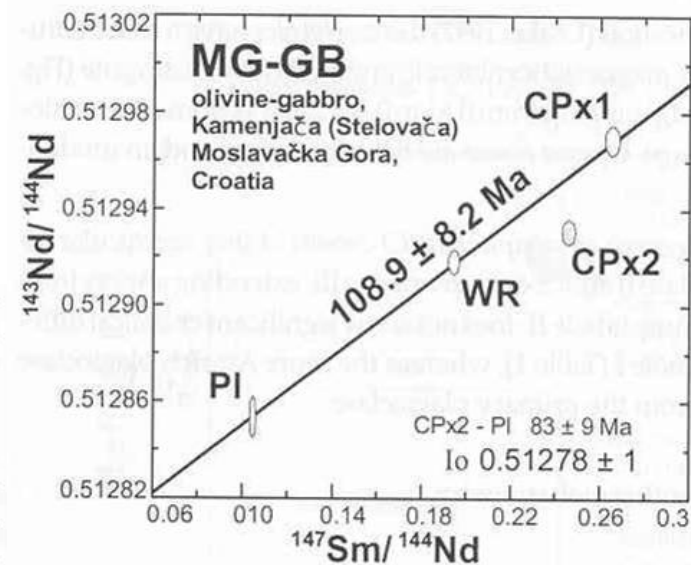


Fig. 2B. Reaction parageneses; Amp amphibole; Ol olivine; Opx orthopyroxene; Phl phlogopite; Pl plagioclase; for details inside symplectite see Fig. 2 C.



ORAL

Ar/Ar dating and fluid inclusion study of muscovite, from the pegmatite of Srednja Rijeka, within granitoids of Moslavačka gora Mt., North Croatia

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Muscovite from Moslavačka gora pegmatite

Plateau age: 73.2 ± 0.8 Ma

