it of separate batholiths intruded in sedimentary stratums. There were analyzed non-altered basalts, altered basalts, tuffs. Identification of the PAH have been carried out in Biosphere's Carbonaceous substances Laboratory of Lomonosov Moscow State University (Russia) by "spectroscopy of E. Shpolsky" using a "Fluorat-Panorama" spectrofluorometer (LUMEX, Russia).

GOLAN HEIGHTS.

There are 16 associations of PAH. 4 associations form 51, 5% all samples. Most spread associations are: 1) Naphthalene/ Phenanthrene / Pyren (SUM of PAH from 28,3 to 117,5 ng/g, Naphthalene from 51,2 to 80,9%).Presents in Basalts and Tuffs. Locate in West, Center, South /West and South of North Batholith. 2) Phenanthrene/ Naphthalene/, Pyren. (SUM of PAH from 52, 6 to124, 5 ng/g, Phenanthrene from 47 to 60, 2 %). Presents in Basalts. Locate in West, Center, South /West and South of North Batholith. 3) Naphthalene/Phenanthrene/ Benzo(ghi)perylene (SUM of PAH from 53,3to87,5 ng/g, Benzo(ghi)perylene from 1,9 to10,5 %). Presents in Basalts. Locate in West and South/West of North Batholith. 4) Naphthalene/ Pyren/ Chrysene (SUM of PAH from 81, 1 to 95, 5 ng/g, Chrysene from 0, 25 to 0, 52, Pyren from 4, 6 to 57, 3). Presents in Basalts. Locate in the Center of North Batholith. All 4 associations belong to higher temperature formations (Naphthalene and Phenanthrene). And Pyren and Benzo (ghi) perylene belong to lower temperature formations. In the same time existence such components as Phenanthrene, Chrysene, and Pyrene probably pointed on migrations of Hydrocarbons from depth.

BASALT WEST.

There are 8 associations. 3 associations form 70% all samples. Most spread associations are: 1) Naphthalene/ Phenanthrene/ Pyren. Presents in Basalts. Locate in: West of North Batholith; West of South Batholith; West of separate dyke. 2) Naphthalene/ Phenanthrene. Presents in Basalts. Locate in: West of North Batholith ; West and South of South Batholith ; West of Separated dyke. 3) Naphthalene/ Pyren. Presents in Basalts and Tuffs. Locate in: West of North Batholith ; West of South Batholith ; in West of separated dyke.

All 3 associations belong to higher temperature formations (Naphthalene and Phenanthrene). And Pyren and Benzo (ghi) perylene belong to lower temperature formations. In some samples Phenanthrene, Chrysene, Pyrene was identified.

Presence of diverse groups of PAH in the rocks of highly fractured and secondary basalts alterated, point at migrations of Hydrocarbons through faults from possible deep reservoirs/source of Dead Sea Rifts.

Upper Triassic (Norian) sedimentary evolution of the Slovenian Basin (eastern Southern Alps, W Slovenia)

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The Slovenian Basin represents a Mesozoic deep-water sedimentary environment, located on the south Tethyan passive continental margin. Its history can be divided into two parts: from the initial opening during late Anisian/Ladinian to progressive shallowing in the Carnian, and from a marked deepening, which started in late Triassic/early Jurassic, to the final closure at the end of Cretaceous. Upper Triassic deposits comprise Carnian "Amphiclina beds", followed by Norian-Rhaetian "Bača Dolomite", which in the northernmost part of the basin laterally passes into non-dolomitized Slatnik Formation.

The "Bača Dolomite" due to strong late-diagenetic dolomitization represents a very poorly investigated segment in the history of the Slovenian Basin. In order to resolve its depositional characteristics, an incompletely dolomitized succession outcroping on Mt. Slatnik (south-eastern Julian Alps, W Slovenia) has been studied in details. The Mt. Slatnik section structurally belongs to the Tolmin Nappe, which is a part of easternmost Southern Alps. The Norian age of the "Bača Dolomite" in this section has been established on the basis of superposition, foraminifers and conodont data.

The Mt. Slatnik section starts with 75 m of mud-supported massive channelized slump breccias with laminated intraclasts and chert clasts, indicating an inner apron environment. They are followed by 19 m of medium-thick amalgamated, partly bioturbated beds of marly dolomite with parallel lamination and chert nodules. Non-dolomitized parts are represented by spiculite packstone. Slump breccias are rare. Deposition took place in an outer apron. The following 10 m of the succession are composed of several up to 1 m thick sedimentary cycles starting with thin-bedded cherty limestone and ending with more prominent marlstone layer. Limestone is texturally thin-shelled bivalve coquina pack- or wackestone, or very fine-grained peloidal and fine-grained peloidal-bioclastic packstone. In the latter grains are mostly of shallow-water origin. These beds are interpreted as distal turbidites intercalated within basin plain deposits. In the next 23 m the marly content markedly decreases. Beds are thicker. Among dolomite, limestone beds are preserved, texturally being mudstone or wackestone, with intercalated very fine peloidal and fine-grained peloidal-bioclastic packstone. Amalgamation is common as well as chert nodules and sedimentary structures, namely normal and inverse grading, parallel, cross and convolute lamination, geopetal structures and load casts. These beds were deposited in the outer apron. Massive clast-supported slump breccias in the next 13 m contain laminated dolomitic intraclasts and chert clasts. The first are concentrated near the lower bed-boundary and sometimes imbricated. Breccias indicate an inner apron environment. Next 20 m of medium-thick dolomite beds with subordinate laminated limestone with wackestone to packstone textures again mark the outer apron. They are followed by 17 m of dolomite with chert nodules, indicating deposition on a basin plain. Dolomite beds in the next 80 m thick interval in places exhibit convex lower boundaries, indicating occasional slumping in the lower part of this interval. Upwards, limestone predominates. Amalgamated beds show parallel, cross and convolute lamination, and grading. Texturally they are wacke- to packstone. This interval shows deposition in an outer apron. Mudstone in the uppermost part could indicate the beginning of the next deepening phase.

In summary, the bulk sedimentation of the Norian “Bača Dolomite” took place via slumps and sediment gravity flows. Two “retrogressive-progressive” (?) cycles can be deciphered, each with shifting of the place of deposition from an inner apron to basin plain environment.

Neoproterozoic and Paleozoic suprasubduction regional metamorphism, granitoid magmatism and geodynamics of the Caucasus

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The Caucasus represents complicated polycyclic geological structure involving mountain fold systems of the Greater and Lesser Caucasus and adjacent foredeeps and intermountain troughs. Paleomagnetic, paleokinematic and traditional geological data indicate that within the oceanic area of Tethys in geological past relatively small continental or subcontinental plates (terranes) were situated having various geodynamic nature and characterized by specific lithologic-stratigraphic section and magmatic, metamorphic and structural features. During the Neoproterozoic, Paleozoic and Early Mesozoic they underwent horizontal displacement in different directions within the oceanic area of Proto-, Paleo-and Mesotethys (Neothetys) and as a result of Variscan, Early Kimmerian, Bathonian and Austrian orogeny underwent mutual accretion and ultimately joined the Eurasian continent. South of the Scythian platform (Sp) the Greater Caucasian (GC), Black Sea-Central transcaucasian (BC), Baiburt-Sevanian (BS) and Iran-Afghanian (IA) terranes are identified in the Caucasian segment of the Mediterranean mobile belt, which in geological past represented island arcs or microcontinents.

In modern structure they are separated by ophiolite sutures of different age, which mark the location of small or large paleooceanic basins. All terranes of the East order