



Timing and style of tectonic events, crustal-scale structure, in the Central Asian Orogenic Belt (Kyrgyzstan)

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Our commencing project is focused on the northern structure of the Tian-Shan - Pamir orogen, namely the Central Asian Orogenic Belt (CAOB) as to elucidate the timing and style of main tectonic-geodynamic events in that area. We expect to establish the timing and processes of assemblage of terranes of different ages that accreted and collided with each other farther north to form the CAOB, which is one of the largest but least understood orogenic systems on Earth. The field-based study in Kyrgyzstan CAOB has allowed sampling rocks from the crystalline basement in order to undertake geochronological investigations of the CAOB, which tectonic and metamorphic evolution are largely unconstrained. Its age is supposedly Precambrian, but most preliminary investigations point to a mainly Palaeozoic (mostly Ordovician) assembly of crustal blocks. Main suture zones are featured by High-Pressure, eclogite facies rocks, which underwent High-Temperature retrogression in oblique tectonic motions. Tectonic transport is always dominated by strongly transcurrent strain. Further, a major crustal-scale fault, the Talas-Fergana shear zone has been active during the Late Paleozoic to the Tertiary, so its kinematic and geochronological analysis will help constrain the Paleozoic to Present evolution of Kyrgyzstan. This fault connects to intra-continental basins, and will give constraints into the timing of basin opening during this long period. Ongoing tectonics in the area appear to invert most of these structures.