庆祝地球环境研究所建所20周年系列学术报告

# Kadyrbek Sakiev博士和 Rustam Orozbaev博士学术报告

应中国科学院地球环境研究所一带一路气候环境研究中心谭亮成

研究员和宋友桂研究员邀请， 吉尔吉斯斯坦国家科学院地质所

Kadyrbek Sakiev博士和Rustam Orozbaev博士来我所进行学术交流。

**报告题目**： High density Na-rich aqueous fluids in metamorphic rocks, Kyrgyz Tien-Shan - originally trapped at high-pressure conditions with implications for fluids activity at great depths (50-100 km)

**报告时间**：2019年5月8日（周三）15:20

**报告地点**：地环所11楼1102视频会议室

**报告简介：** Multiphase-solid inclusions (MSI) studies in metamorphic rocks represent one of the direct ways to study the nature of fluids at high- to ultrahigh pressure conditions at great depths.

We interpret that MSI in the Aktyuz eclogites could be formed by infiltration of Na-rich aqueous fluids at garnet mantle-rim forming stage during prograde metamorphism. These Na-rich aqueous fluids may react with the pre-existing Al-rich minerals (e.g. St) in garnets and produce Na-mica rich MSI.

We have performed LA-ICP-MS trace element analysis on these MSI and host garnets. We have used 75 μm spot size for bulk MSI + host garnet and 35 μm for analyzing single constituent minerals of MSI. Our results show that fluid mobile elements (Cs, Rb, Ba, Pb, Li and Sr) and LREE are enriched in MSI compare to host garnet, whereas HREE are depleted. Trace element characteristics of minerals in MSI indicate that staurolite is main host for Li, Cs and Rb, whereas paragonite controls Ba and Sr concentrations in MSI. These can provide crucial information on the original trace element characteristics and behavior of the fluids activity at high-pressure conditions.

***欢迎感兴趣的老师和同学参加！***