

## Eclogite from Myanmar

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Biotite-bearing eclogite was found from the Katha-Gangaw Range in northern Myanmar. This is probably the first report of eclogite from the southeastern extension of the Yarlung-Tsangpo suture. The eclogite is mainly composed of garnet (Alm58-59Prp11-16Sps1Grs14-30), omphacite (Aug53-65Jd34-44Aeg0-7), biotite, hornblende/pargasite, quartz and albite with accessory minerals of phengite (Si = 3.33-3.39 pfu, Na = 0.04-0.05 pfu), ilmenite, rutile, titanite and apatite. Garnet is strongly zoned and is compositionally divided into the Ca-poor inner core, Ca-rich outer core and Ca-poor mantle parts. The inner core of garnet contains omphacite, biotite, albite, quartz and phengite as inclusions. The outer core and mantle include omphacite and quartz. Omphacite, biotite and quartz occur as isolated grains in the matrix. Omphacite in the matrix is partly rimmed by symplectite of albite and sodic augite. The textural and compositional characteristics of minerals indicate the prograde change of equilibrium assemblage from garnet + omphacite + biotite + phengite + albite + quartz to garnet + omphacite + quartz + biotite (?) during prograde stage. A combination of garnet-clinopyroxene geothermometer and pyroxene geobarometer gives equilibrium P/T conditions of 1.0-1.1 GPa/480-530 C for the inner core of garnet and its inclusions. The outer core and mantle of garnet probably formed at albite-unstable conditions, and their equilibrium temperature was estimated at 560-600 C. The inferred equilibrium pressure-temperature conditions of the Myanmar eclogite are lower than those of other common eclogites, and are roughly equivalent to lower pressure-temperature limit of the eclogite facies equilibrium. The occurrence of biotite in the Myanmar eclogite supports the estimated lower pressure-temperature conditions.