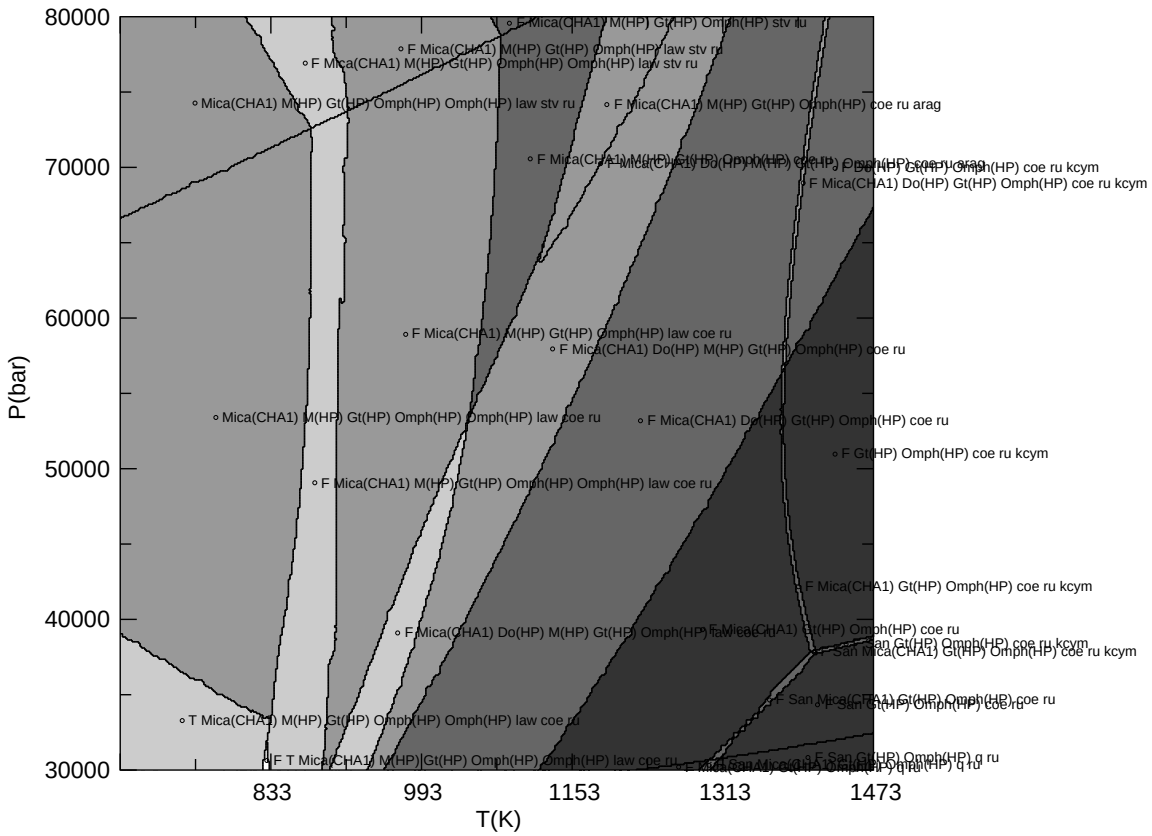staudigel closed system model