

TABLE III
Results of Experiments with Andalusite and Sillimanite

Run No.	Starting Material	Temp (°C)	Pressure (atm) x 10 ³	Time (min)	Heater	Phases Present
1609	Andalusite	1000	15	80	G*	Andal, corundum
1629	Andalusite	1820	35	7	G	Mullite, glass, trace corundum
1630	Sillimanite	1790	35	5	G	Glass, corundum
1672	Sillimanite	1700	50	13	G	Kyanite, corundum, coesite (?), glass
1673	Sillimanite	1670	25	20	G	Glass, corundum

*G = Graphite

TABLE IV
Results of Experiments with Gel Mixtures and Others

Run No.	Starting Material	Temp (°C)	Pressure (atm)	Time (min)	Heater	Phases Present
1613	Gel	1000	20	120	G*	Quartz, corundum
1614	Gel	>1000 <1300	20	180	Ni	Kyanite, corundum
1620	Gel	1025	25	180	Ni	Quartz, corundum
1623	Gel	1900	30	2	G	Corundum, glass
1650	Gel + H ₂ O	1300	35	60	G	Corundum, glass
1658	Gel	1800 1500	50 50	5 30	G	Kyanite, corundum, glass
1660	Gel + H ₂ O	1900	50	15	G	Corundum, glass
1664	Gel	1300	25	40	Ni	Corundum, glass
1669	Gel	1000	20	300	Ni	Corundum, glass
1667	Kaolin and Gibb†	1700	35	15	G	Corundum, glass
1668	Kaolin and Gibb†	1700	20	15	G	Corundum, glass

*G = Graphite

†Gibb = Gibbsite

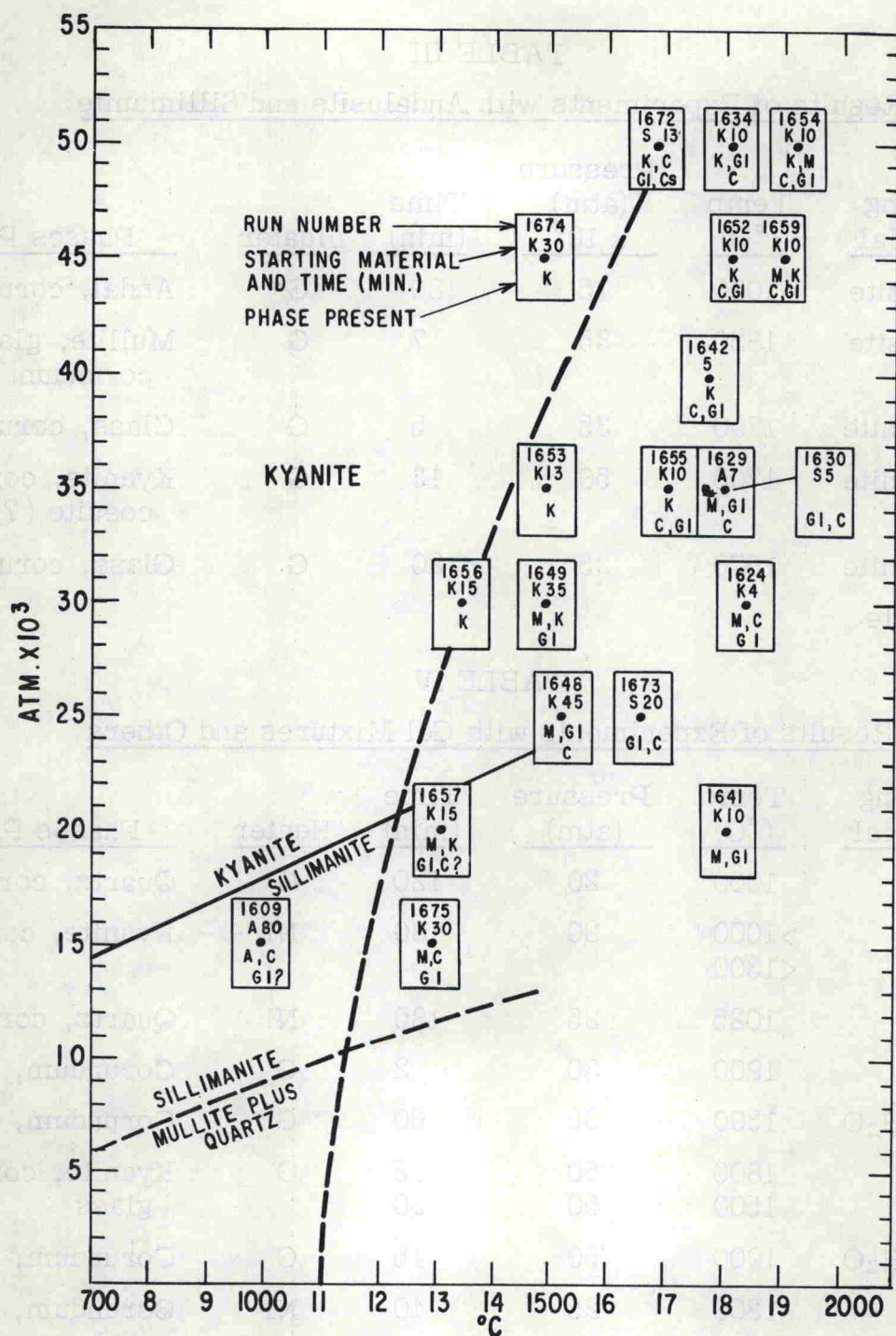


Fig. 3 Decomposition of kyanite as function of temperature and pressure (heavy dashed line). The solid line and the light dashed line are taken from Clark *et al.* (1). To the right of the curve above about 20,000 atm, there is evidence that the equilibrium assemblage may be corundum plus glass. Kyanite is stable to the left of the curve. The rectangle represents the precision of the temperature and pressure measurement. K = kyanite; S = sillimanite; A = andalusite; C = corundum; M = mullite; Gl = glass; Cs = coesite.