The equation giving K is based on the following assumptions. (i) The extinction coefficients of the two types of pairs at their respective maxima are equal at all pressures. (ii) The shape of the absorption curve of the loose pairs is independent of pressure and of the nature of cation (whether Li^+ or Na^+). (iii) The absorption curves of the tight pairs derived from the lithium or sodium salts are identical in shape but one is displaced with respect to the other by 6 nm. Moreover, their shape is again assumed not to be affected by pressure. It follows then that r_1 and r_2 are also independent of pressure. A critical examination of these assumptions is given in the appendix.

TABLE 2.—FLUORENYL LITHIUM IN THF AT ~22°C

expt.	pressure atm	O.D. (350)	O.D. (374)	R	K
1	1	0.658	0.988	1.502	2.7
2	1	0.833	1.281	1.538	2.8
3	1	0.818	1.243	1.520	2.7
4	1	0.290	0.431	1.486	2.6
			average	1.509	2.7
1	940	0.617	1.225	1.985	4.9
2	940	0.812	1.679	2.068	5.5
3	940	0.785	1.574	2.005	5.0
4	940	0.288	0.571	1.983	4.9
			average	2.010	5.1
1	1920	0.598	1.423	2.380	8.7
2	1920	0.813	1.986	2.443	9.6
3	1920	0.770	1.886	2.450	9.8
4	1920	0.269	0.638	2.372	8.6
			average	2.406	9.2
1	2920	0.595	1.575	2.647	14.2
2	2920	0.801	2.19	2.734	17.3
3	2920	0.751	2.08	2.770	18.9
4	2920	0.265	0.715	2.698	15.8
			average	2.712	16.5
1	3900	0.578	1.646	2.848	23
2	3900	0.794	2.35	2.960	35
3	3900	0.734	2.19	2.984	38
4	3900	0.261	0.765	2.961	31
			average	2.938	32
3	4900	0.719	2.28	3.17	—
4	4900	0.258	0.793	3.07	—

O.D. corrected for the solvent absorption at the appropriate pressure.

The absorption curve of the sodium salt at 1 atm is assumed to represent the spectrum of the pure tight-pairs. From it we determined r_1 to be 0.24 for the sodium salt and 0.10 for the lithium salt (the latter is given by $O.D._{380}/O.D._{356}$). The validity of these results was confirmed by determining the spectrum of sodium fluorenyl in a flat quartz cell (optical path ~0.01 cm) attached to the storage ampoule. For example, $O.D._{374}/O.D._{356} = 0.242$ in the flat cell while the average of 4 experiments performed in the pressure vessel led to the ratio 0.238 (see table 1). It is assumed