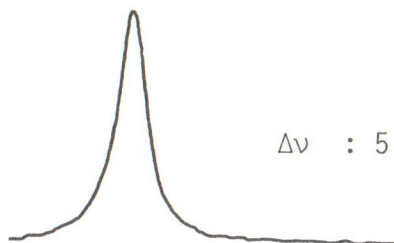


# COBALT Z 27

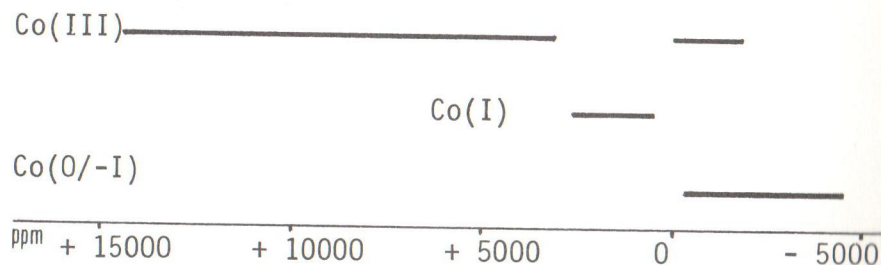
Sample :  $K_3Co(CN)_6$       Lock :  $^2H$   
 Solvent :  $D_2O$               Bo : 2.114  
 Concentration : saturated      Temperature :  $27^\circ$

$^{59}Co$       Spin : 7/2      Resonance Freq. (MHz) referred  
 Nat. abund (%) : 100      to  $^1H$  TMS resonance at 100MHz  
 Receptivity /  $^{13}C$  : 1570  
 Gyromagnetic ratio : 6.3472      23.727<sub>1</sub>  
 Quad. moment : 0.40



Spectral width (Hz) : 600  
 Number of data points : 8 K  
 Pulse : 3  $\mu s$  /  $15^\circ$   
 Number of scans : 1  
 Repetition rate (s) : -  
 $^1H$  decoupled : -  
 Exp. filter (Hz) : 0.5

CHEMICAL SHIFTS : reference  $K_3Co(CN)_6$



COUPLING CONSTANTS : typical values (Hz)

	$^1H$	$^{19}F$	$^{31}P$	$^{13}C$	Homo
$ 1J $	-	-	414	125	-
	to	to	to	to	to
	-	-	1227	287	-

RELAXATION :

$T_1$  typical values (s) : 0.1 and below

LITERATURE :

B. 12 p. 225

R.G. Kidd, "Nuclear Shielding of the Transition Metals", B. 21, Vol. 10 A, (1980)

Y. Yamasaki, Report of the University of Electrocommunication, 27, 291 (1977) and 29, 69 (1978)

REMARKS : Only Co III, I, 0, -I lead to high resolution NMR. Small concentration effect < 20 ppm. Large solvent effect (100 ppm). Very large temperature effect (- 1.5 to - 3 ppm/ $^\circ K$ ).