



Fig. 1.11 $P(e)$ performance of M -ary PSK, QAM, QPSK, and M -ary APK coherent systems. The rms C/N is specified in the double-sided Nyquist bandwidth.

Figure showing offset for QPSK (4-PSK) modulation C/N offset (14 dB).
 (Obtained from DIGITAL COMMUNICATIONS: Microwave Applications, by
 Kamilo Feher, Prentice-Hall Inc., 1981)