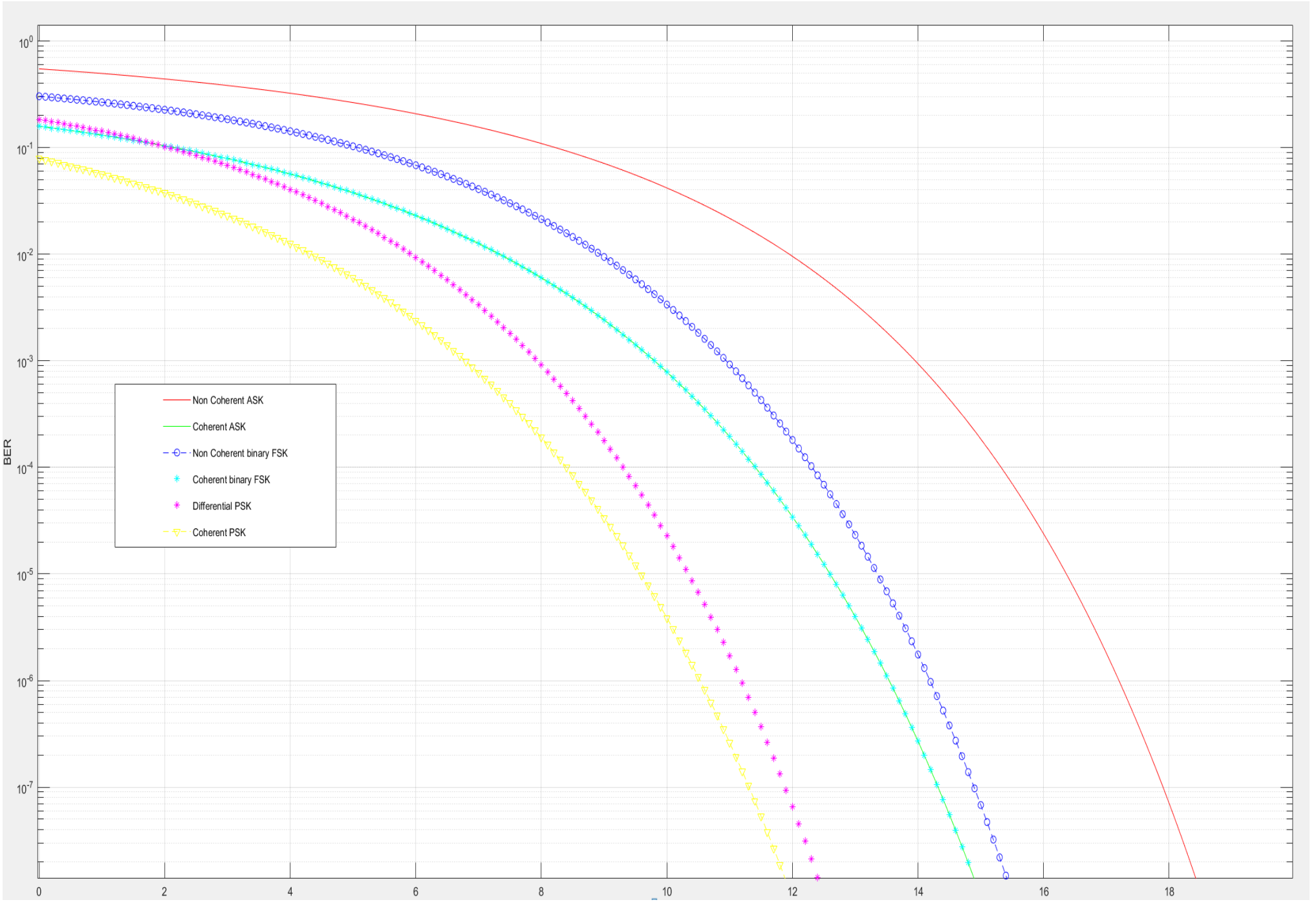
Non Coherent ASK	>> EbN0_dB = 0:0.1:20; EbN0 = 10.^(EbN0_dB/10); BER = 1/2.*erfc(sqrt(EbN0/2))+1/2.*exp(-1/4.*EbN0); semilogy(EbN0_dB,BER) grid on ylabel('BER') xlabel('E_b/N_0 (dB)') title('Bit Error Rate for NC ASK')
Coherent ASK	>> EbN0_dB = 0:0.1:20; EbN0 = 10.^(EbN0_dB/10); BER = 1/2.*erfc(sqrt(EbN0/2)); semilogy(EbN0_dB,BER) grid on ylabel('BER') xlabel('E_b/N_0 (dB)') title('Bit Error Rate for C ASK')
Non Coherent binary FSK	>> EbN0_dB = 0:0.1:20; EbN0 = 10.^(EbN0_dB/10); BER = 1/2.*exp(-1/2.*EbN0); semilogy(EbN0_dB,BER) grid on ylabel('BER') xlabel('E_b/N_0 (dB)') title('Bit Error Rate for NC FSK')
Coherent binary FSK	>> EbN0_dB = 0:0.1:20; EbN0 = 10.^(EbN0_dB/10); BER = 1/2.*erfc(sqrt(EbN0/2)); semilogy(EbN0_dB,BER) grid on ylabel('BER') xlabel('E_b/N_0 (dB)') title('Bit Error Rate for C FSK')
Differential PSK	>> EbN0_dB = 0:0.1:20; EbN0 = 10.^(EbN0_dB/10); BER = 1/2.*exp(-1.*EbN0); semilogy(EbN0_dB,BER) grid on ylabel('BER') xlabel('E_b/N_0 (dB)') title('Bit Error Rate for Differential PSK')
Coherent PSK	>> EbN0_dB = 0:0.1:20; EbN0 = 10.^(EbN0_dB/10); BER = 1/2.*erfc(sqrt(EbN0)); semilogy(EbN0_dB,BER) grid on ylabel('BER') xlabel('E_b/N_0 (dB)') title('Bit Error Rate for Coherent PSK')

```
>> EbN0_dB = 0:0.1:20;
y=1:0.1: 10^7;
EbN0 = 10.^(EbN0_dB/10);
y0= 1/2.*erfc(sqrt(EbN0/2))+1/2.*exp(-1/4.*EbN0);
y1 = 1/2.*erfc(sqrt(EbN0/2));
y2 =  1/2.*exp(-1/2.*EbN0);
y3 = 1/2.*erfc(sqrt(EbN0/2));
y4 = 1/2.*exp(-1.*EbN0);
y5 = 1/2.*erfc(sqrt(EbN0));
semilogy(EbN0_dB,y0,'r',EbN0_dB,y1,'g',EbN0_dB,y2,'b--
o',EbN0_dB,y3,'c*',EbN0_dB,y4,'m*',EbN0_dB,y5,'y--v');
ylabel('BER');
xlabel('E_b/N_0 (dB)');
grid on;
zoom yon
```


BER
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
0
2
4
6
8
10
12
14
16
18
Non Coherent ASK
Coherent ASK
Non Coherent binary FSK
Coherent binary FSK
Differential PSK
Coherent PSK