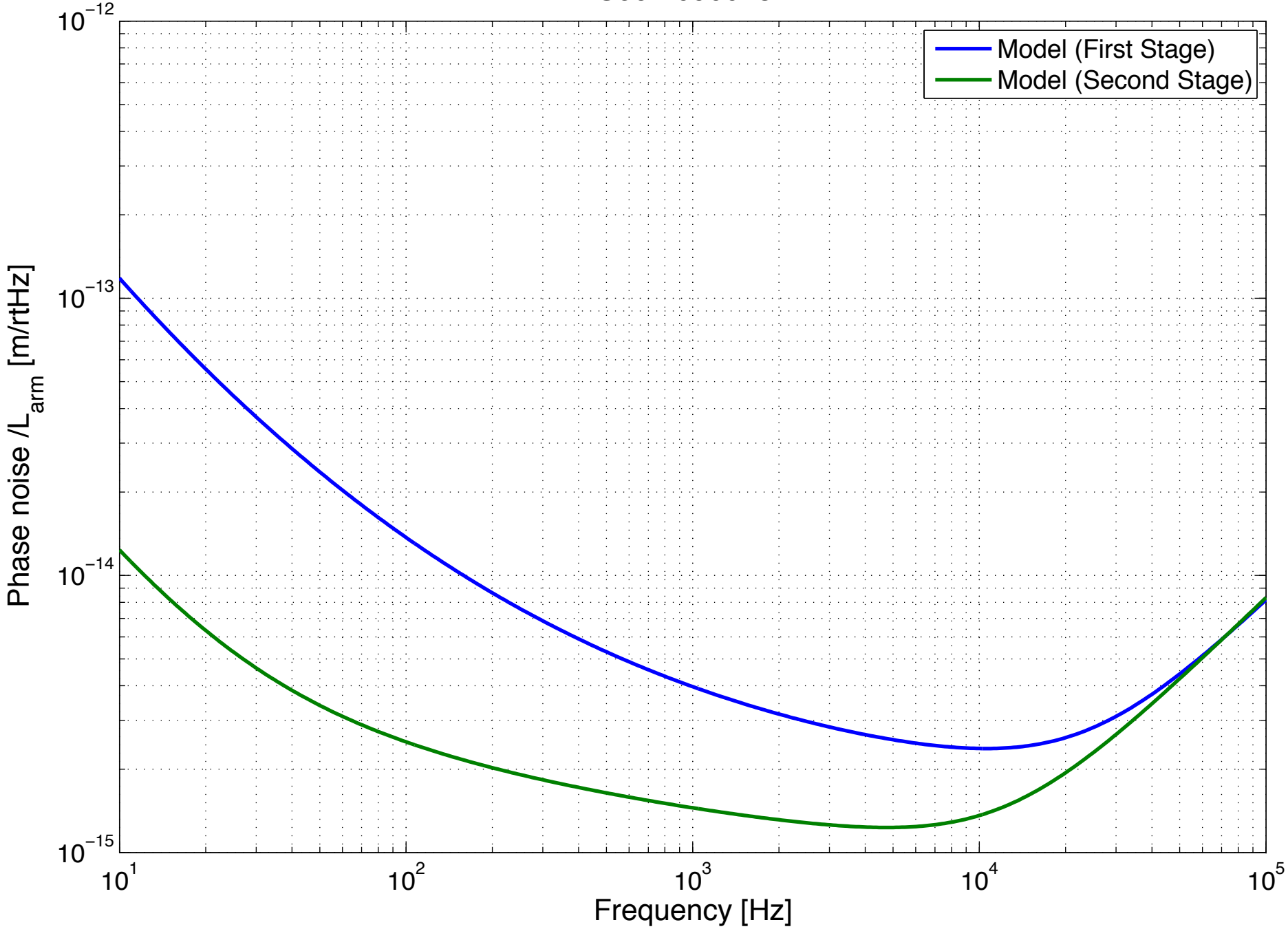
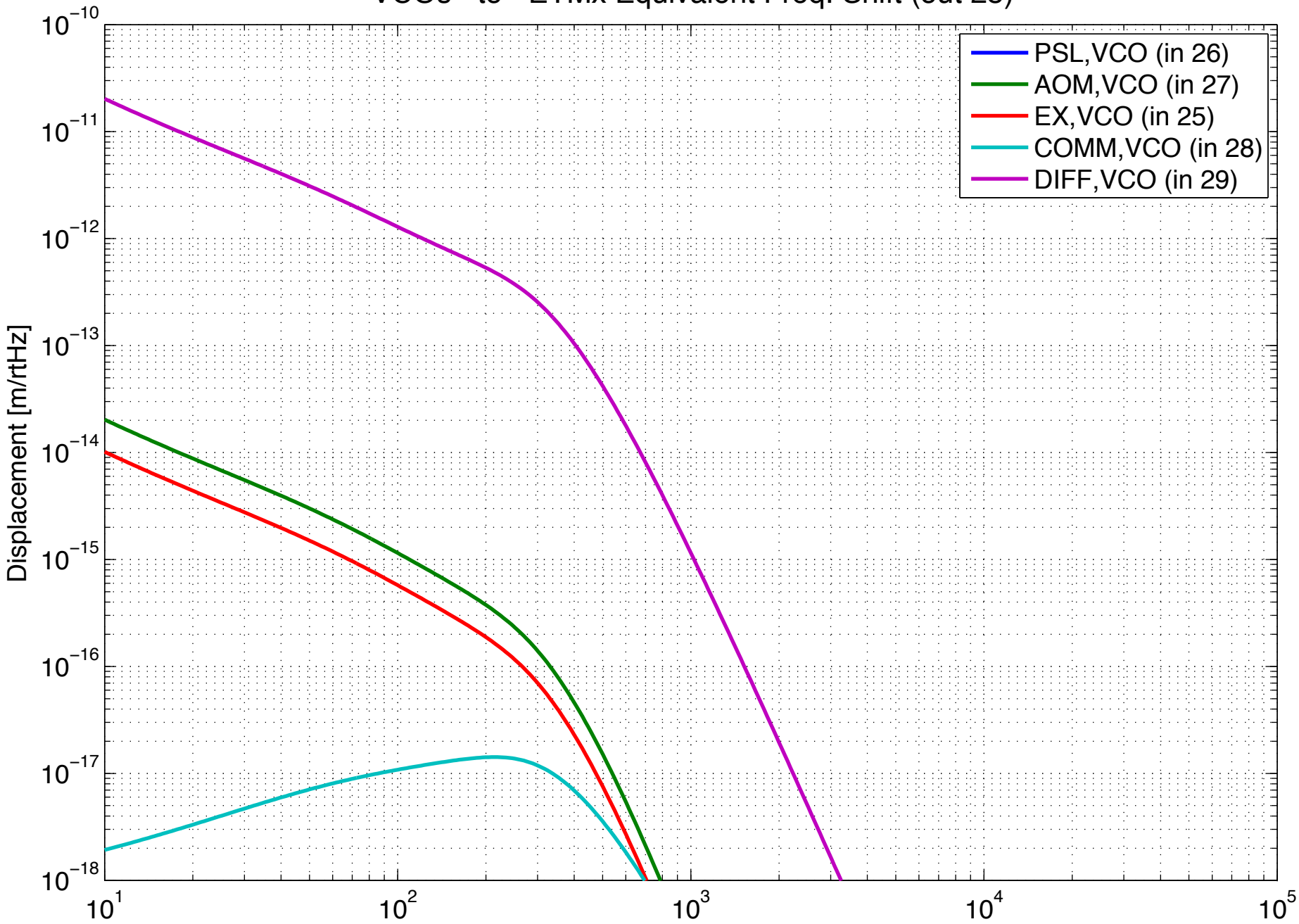
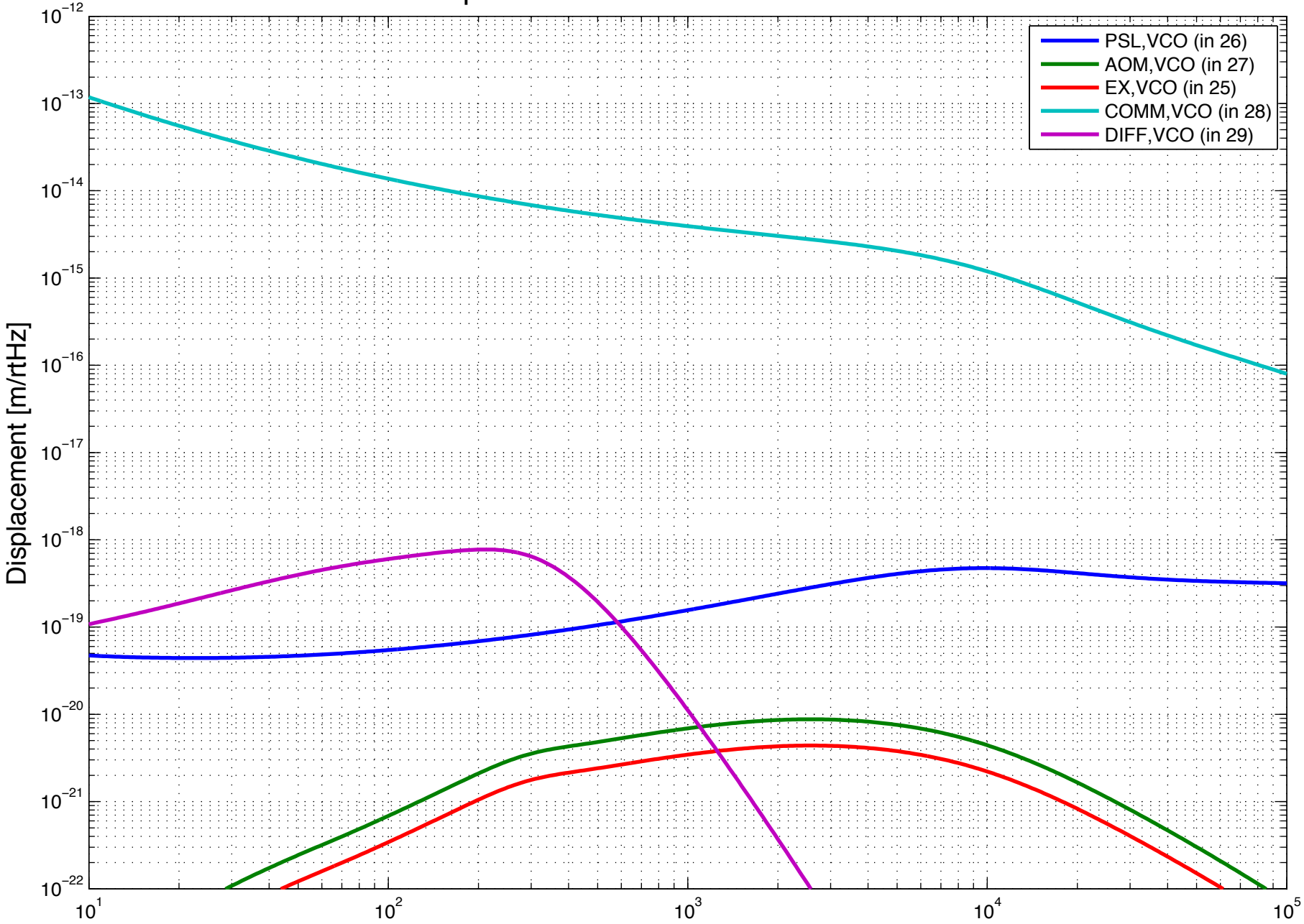
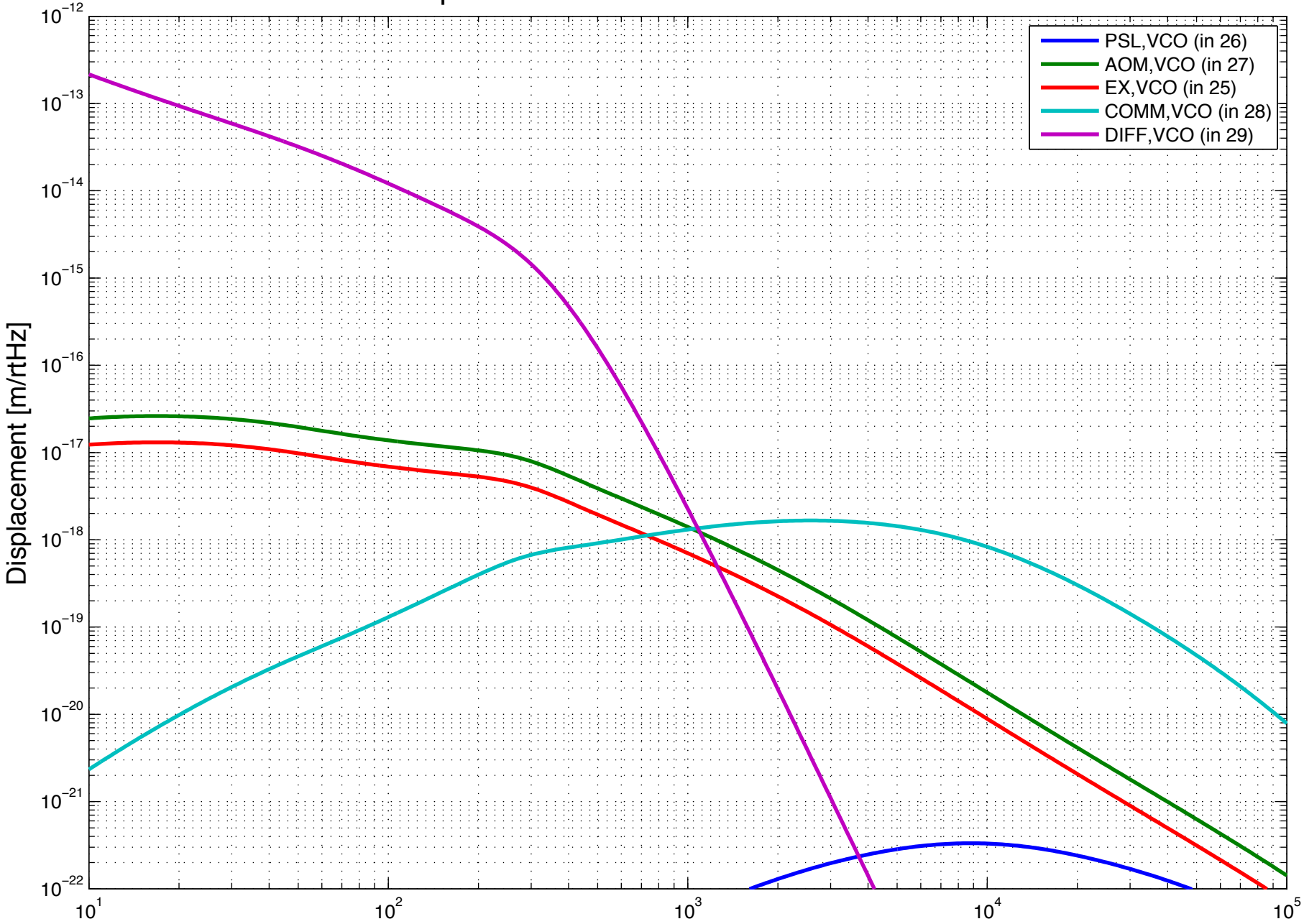
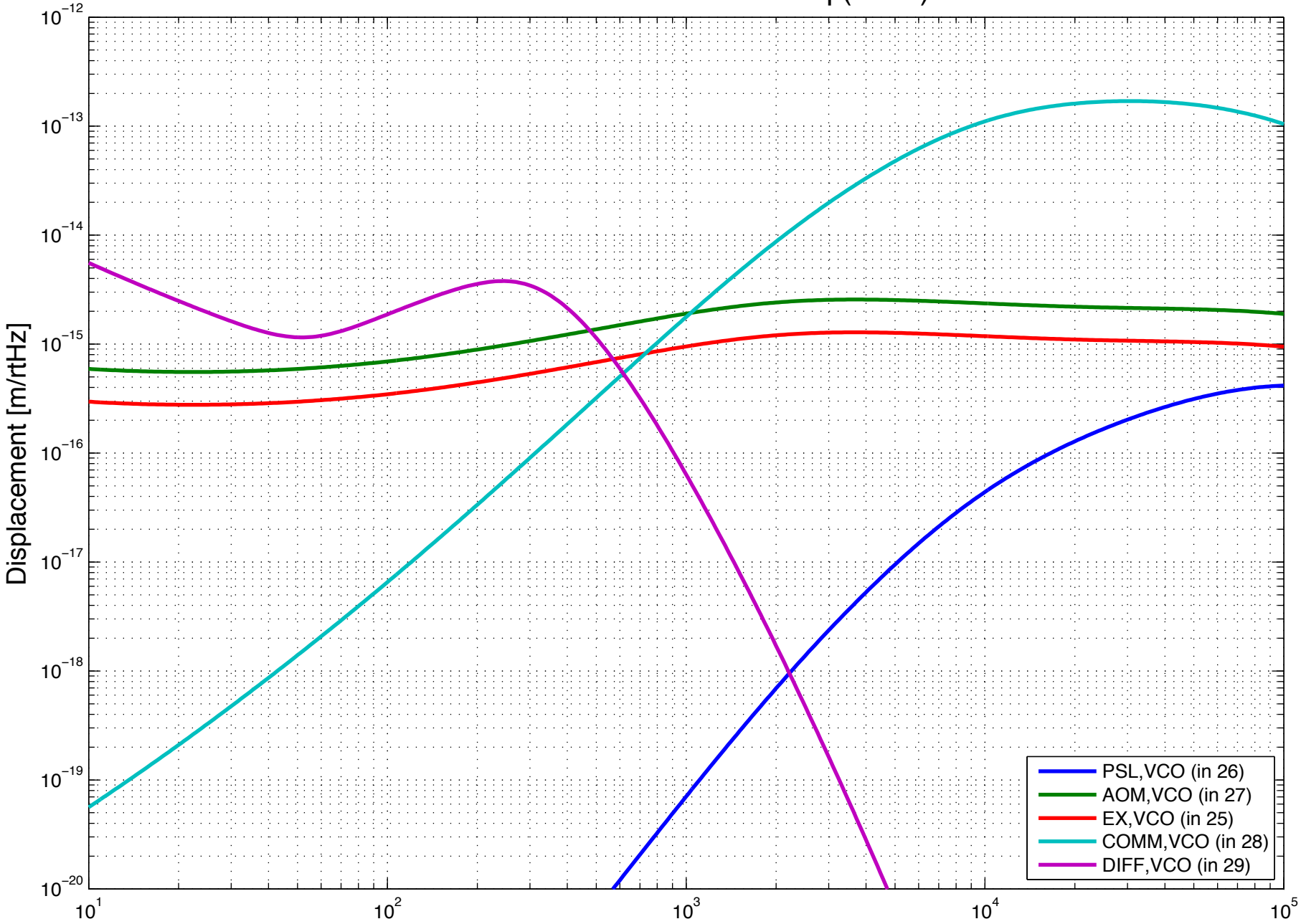
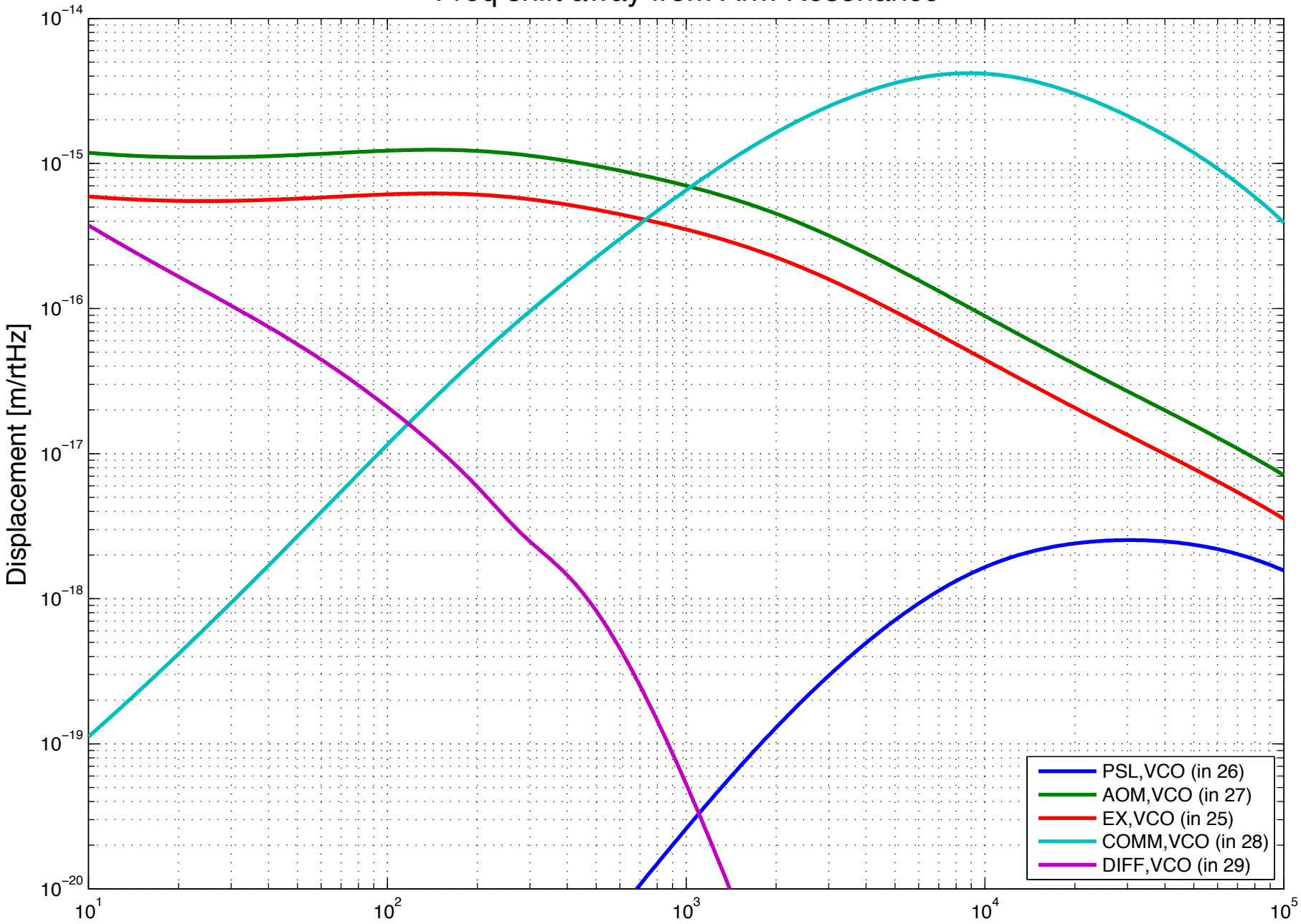

VCO Noise (SSB)
See T0900451
Model (First Stage)
Model (Second Stage)
Phase noise /L_arm [m/rtHz]
Frequency [Hz]
10^-12
10^-13
10^-14
10^-15
10^1
10^2
10^3
10^4
10^5


VCOs –to– ETMx Equivalent Freq. Shift (out 25)
Displacement [m/rtHz]
10^{-10}
10^{-11}
10^{-12}
10^{-13}
10^{-14}
10^{-15}
10^{-16}
10^{-17}
10^{-18}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
PSL,VCO (in 26)
AOM,VCO (in 27)
EX,VCO (in 25)
COMM,VCO (in 28)
DIFF,VCO (in 29)


VCOs –to– Common Mode Freq. Shift (out 34)
Freq shift between PSL and X–arm Laser
Displacement [m/rtHz]
PSL,VCO (in 26)
AOM,VCO (in 27)
EX,VCO (in 25)
COMM,VCO (in 28)
DIFF,VCO (in 29)
10^{-12}
10^{-13}
10^{-14}
10^{-15}
10^{-16}
10^{-17}
10^{-18}
10^{-19}
10^{-20}
10^{-21}
10^{-22}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}


VCOs –to– Differential Mode Freq. Shift (out 35)
Freq shift between X–arm and Y–arm Lasers
Displacement [m/rtHz]
PSL,VCO (in 26)
AOM,VCO (in 27)
EX,VCO (in 25)
COMM,VCO (in 28)
DIFF,VCO (in 29)
10^-12
10^-13
10^-14
10^-15
10^-16
10^-17
10^-18
10^-19
10^-20
10^-21
10^-22
10^1
10^2
10^3
10^4
10^5


VCOs –to– Local Laser Freq (out 4)
Displacement [m/rtHz]
10^{-12}
10^{-13}
10^{-14}
10^{-15}
10^{-16}
10^{-17}
10^{-18}
10^{-19}
10^{-20}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
PSL,VCO (in 26)
AOM,VCO (in 27)
EX,VCO (in 25)
COMM,VCO (in 28)
DIFF,VCO (in 29)


VCOs –to– PDH Freq Shift (out 10)
Freq shift away from Arm Resonance
Displacement [m/rtHz]
10^{-14}
10^{-15}
10^{-16}
10^{-17}
10^{-18}
10^{-19}
10^{-20}
10^{1}
10^{2}
10^{3}
10^{4}
10^{5}
PSL,VCO (in 26)
AOM,VCO (in 27)
EX,VCO (in 25)
COMM,VCO (in 28)
DIFF,VCO (in 29)