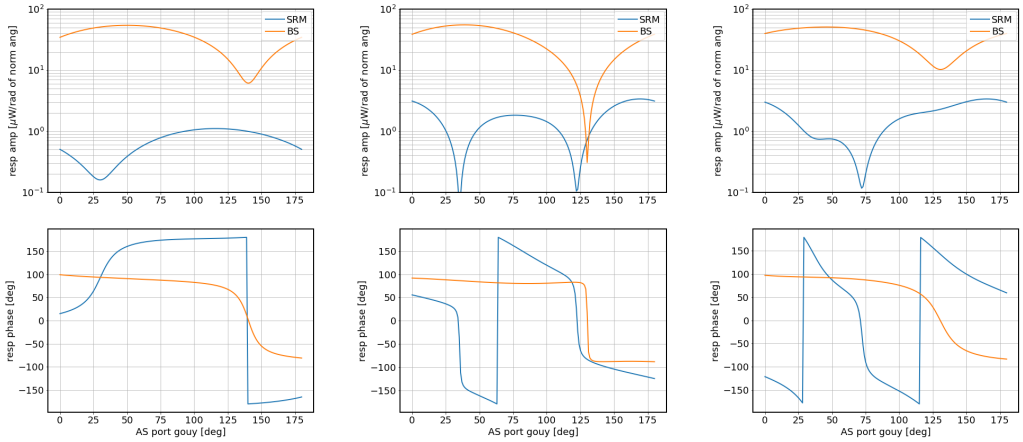
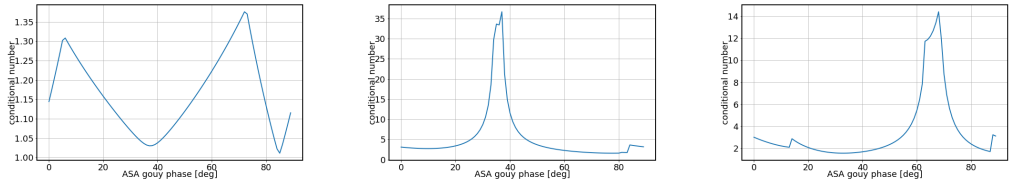


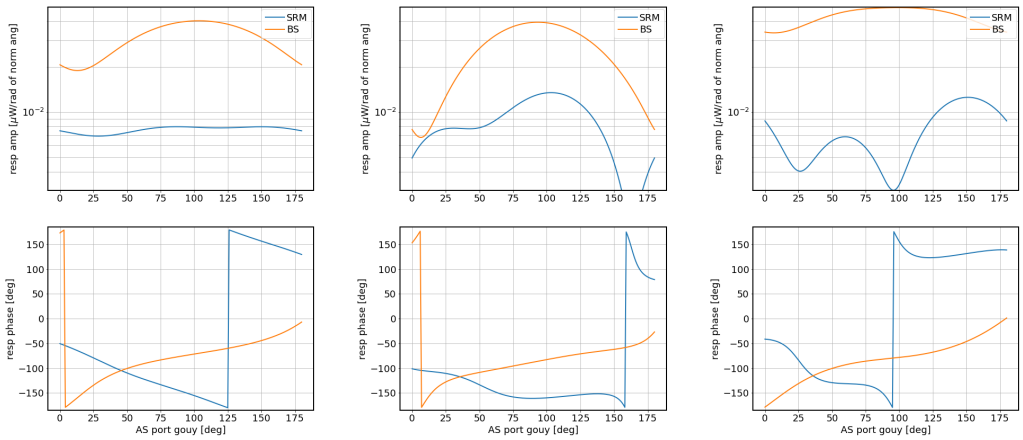
(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 1: RF36.4 MHz SRM/BS ASC response as a function of the gouy phase of the ASA sensor, for the new SRM with $T_{\text{srm}} = 0.3235$ and RoC $= -5.675$m, and one-way SRC gouy phase of 17.5°. From left to right: no extra thermal lens, extra 100km of thermal lens on ITMX, extra 100km of thermal lens on ITMY, respectively.



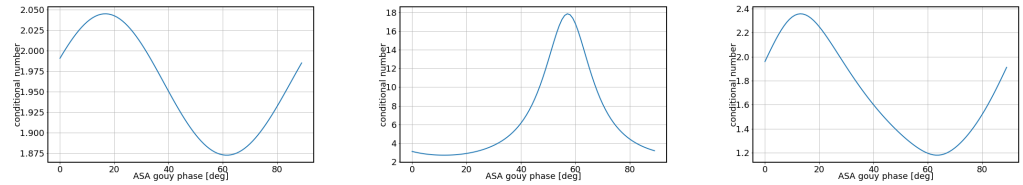
(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 2: Conditional number of the sensing matrix for AS36, for the new SRM with one-way SRC gouy phase of 17.5° under different configurations of differential ITM lens.



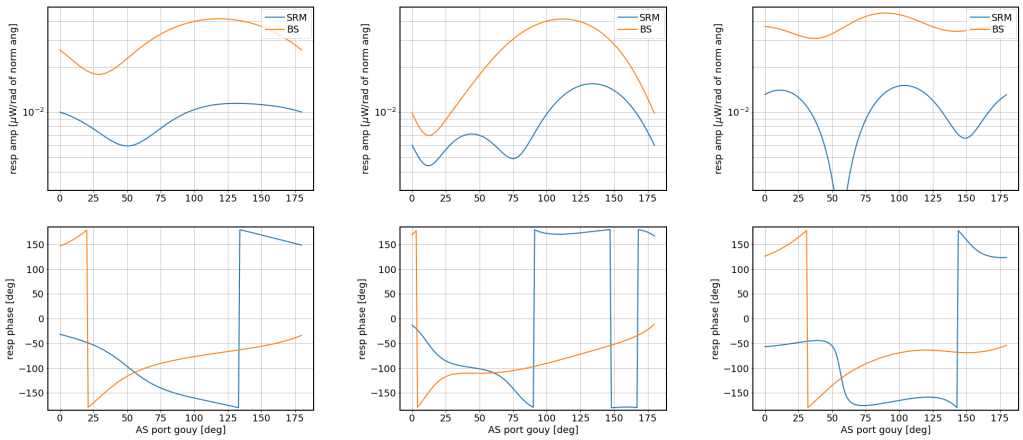
(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 3: RF72.8 MHz SRM/BS ASC response for the new SRM with one-way SRC gouy phase of 17.5°. Assuming the modulation depth of the 118.3MHz sideband is 0.001 of the modulation depth of the RF9.1MHz one.



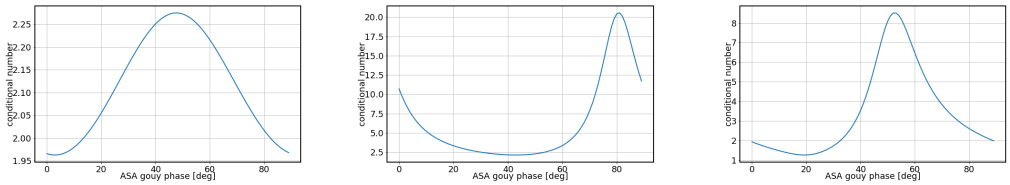
(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 4: Conditional number of the sensing matrix formed by the two Q-phase signals separated by 90° gouy phase, for the new SRM with one-way SRC gouy phase of 17.5° under different configurations of differential ITM lens.



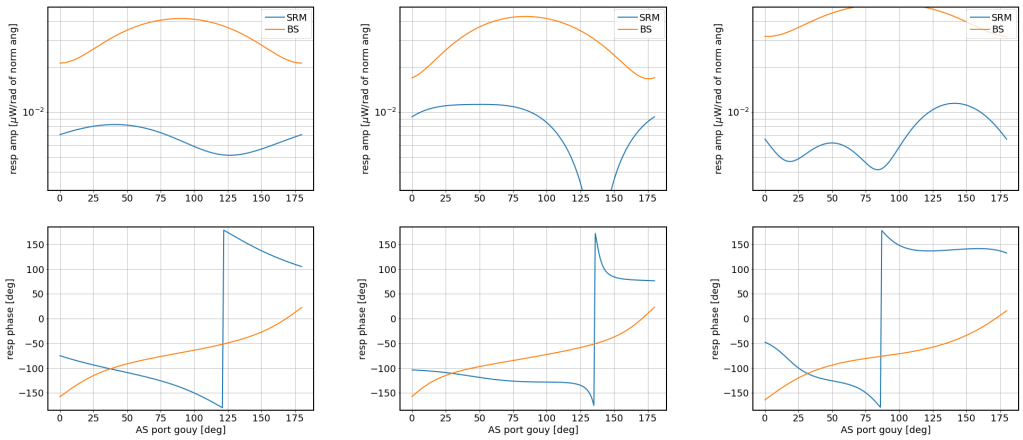
(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 5: RF72.8 MHz SRM/BS ASC response for the new SRM with one-way SRC gouy phase of 14°.



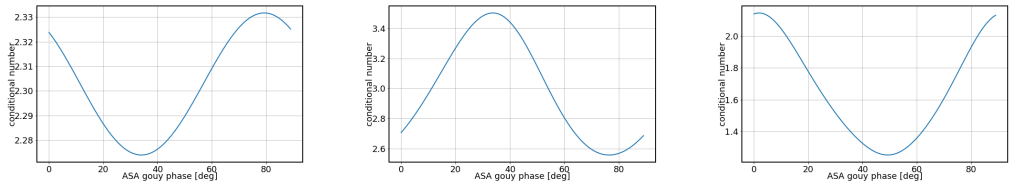
(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 6: Conditional number of the sensing matrix formed by the two Q-phase signals separated by 90° gouy phase, for the new SRM with one-way SRC gouy phase of 14° under different configurations of differential ITM lens.



(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 7: RF72.8 MHz SRM/BS ASC response for the new SRM with one-way SRC gouy phase of 22°.



(a) Nominal (b) 100km ITMX thermal lens (c) 100km ITMY thermal lens

Figure 8: Conditional number of the sensing matrix formed by the two Q-phase signals separated by 90° gouy phase, for the new SRM with one-way SRC gouy phase of 22° under different configurations of differential ITM lens.