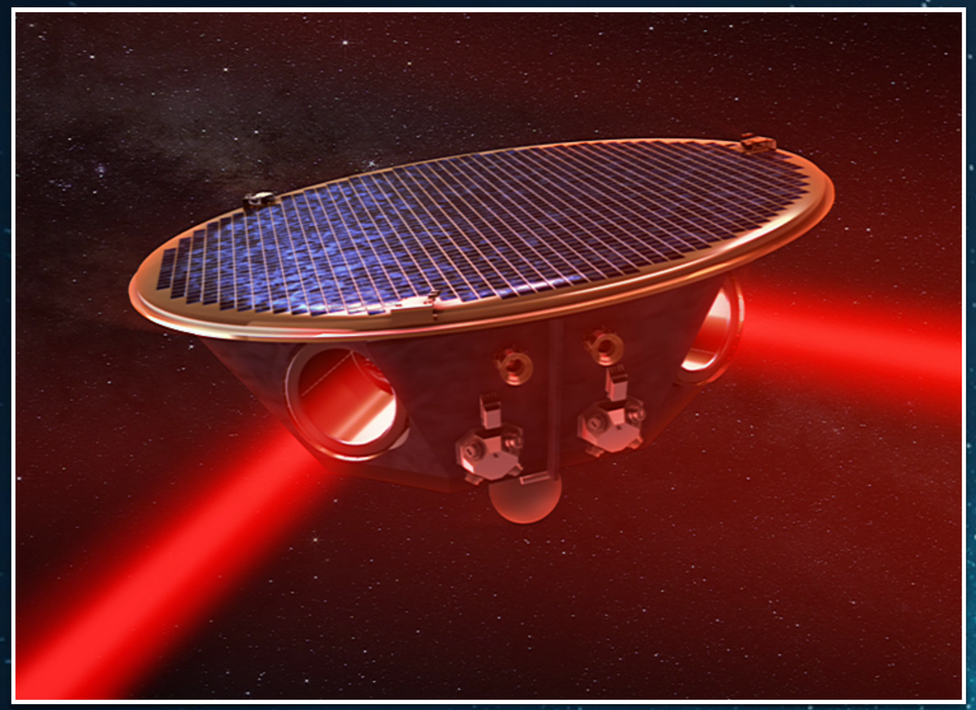
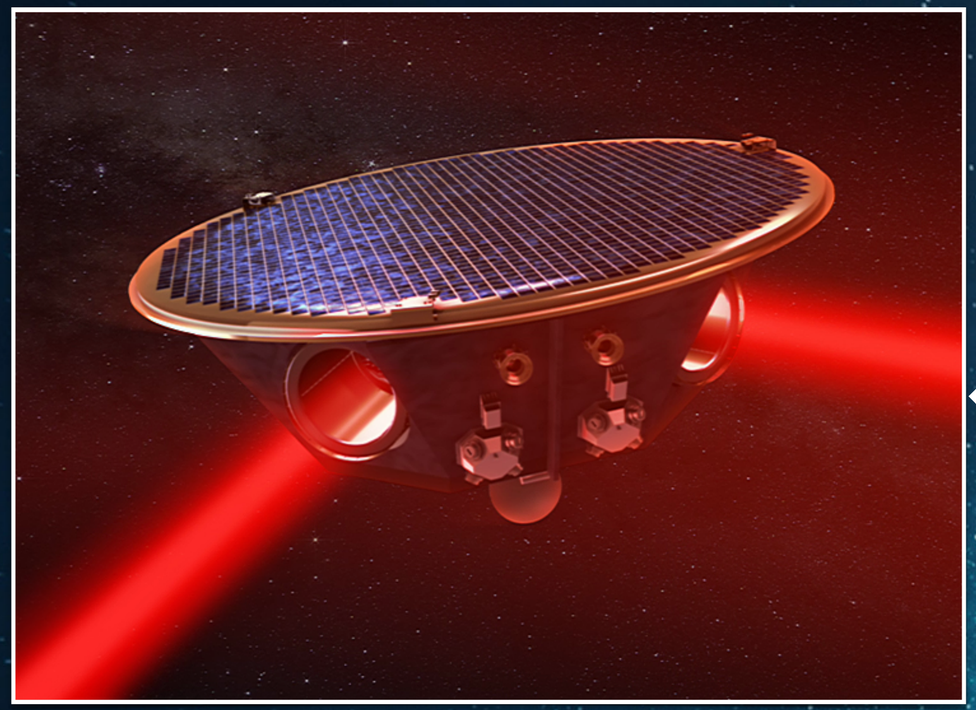
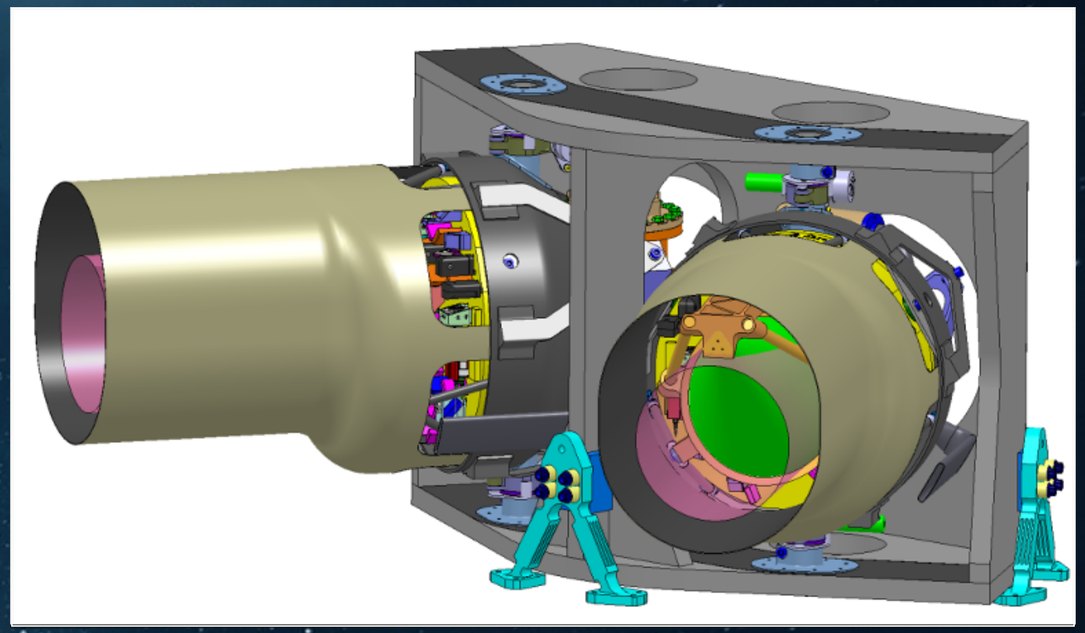
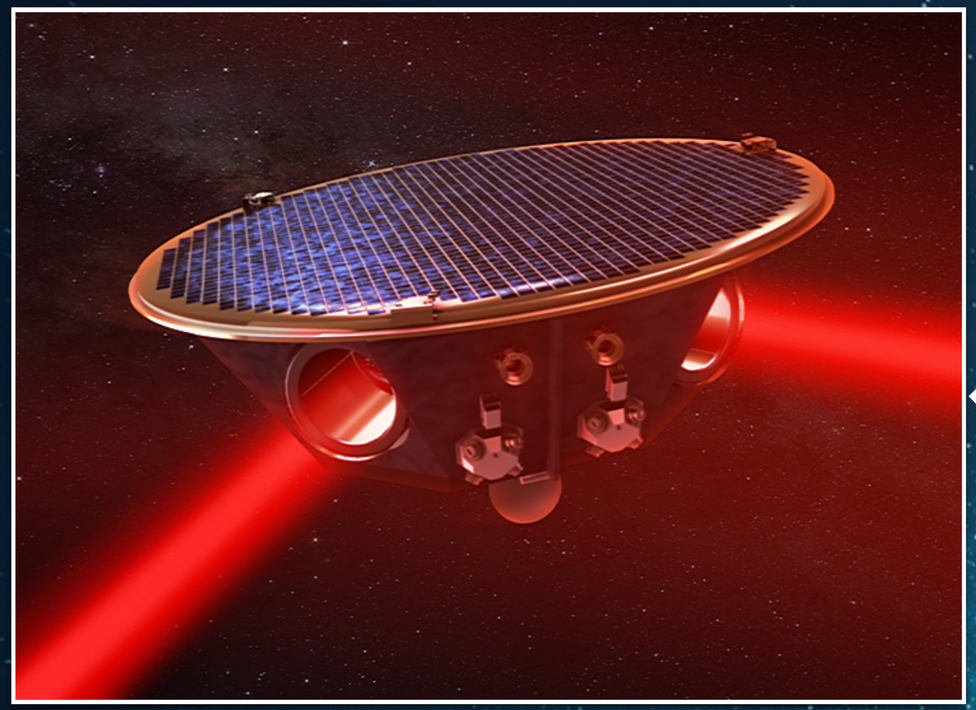
Validation expérimentale des bancs de caractérisation optique pour LISA

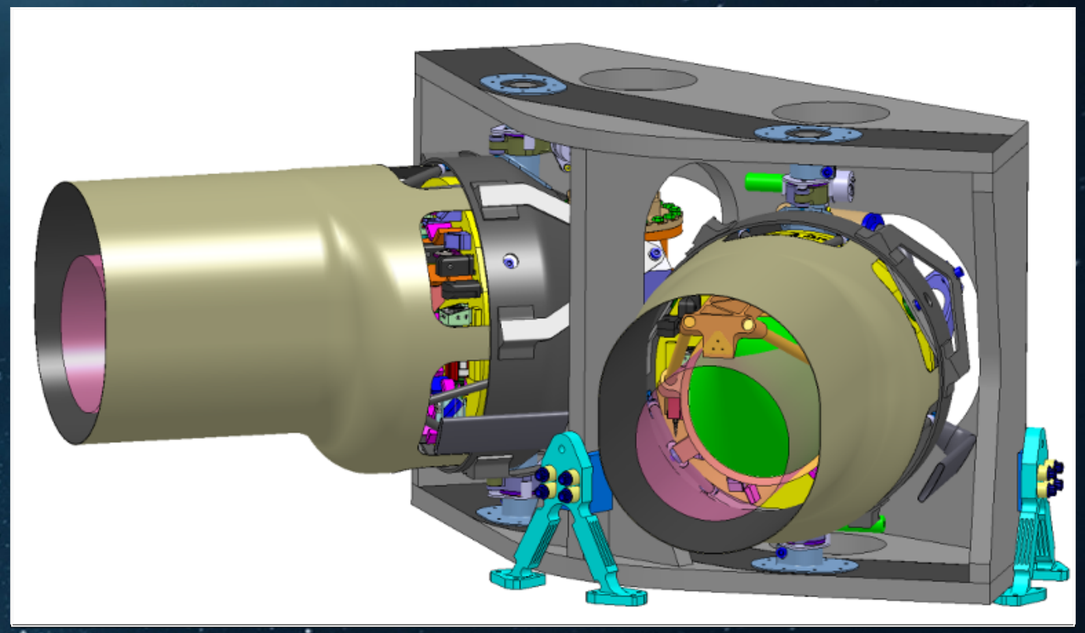
Maxime Vincent
Nouvel entrant depuis Avril 2022
Directeur de thèse : Hubert Halloin
Thèse CNES - IN2P3

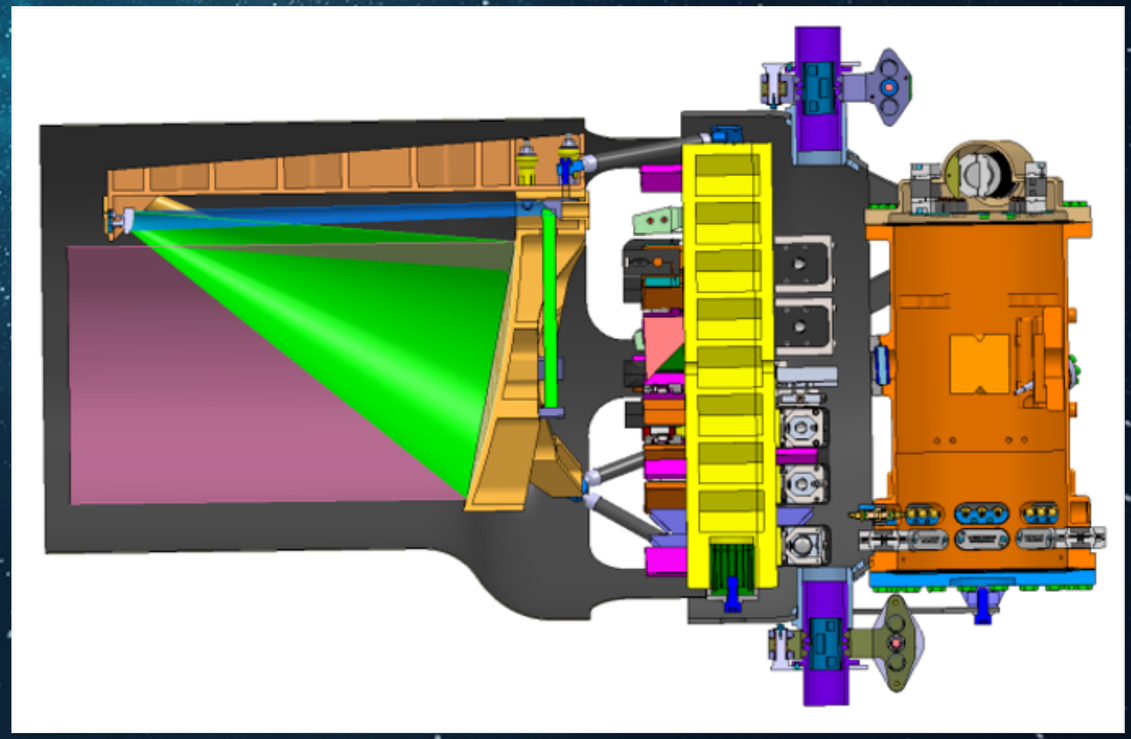


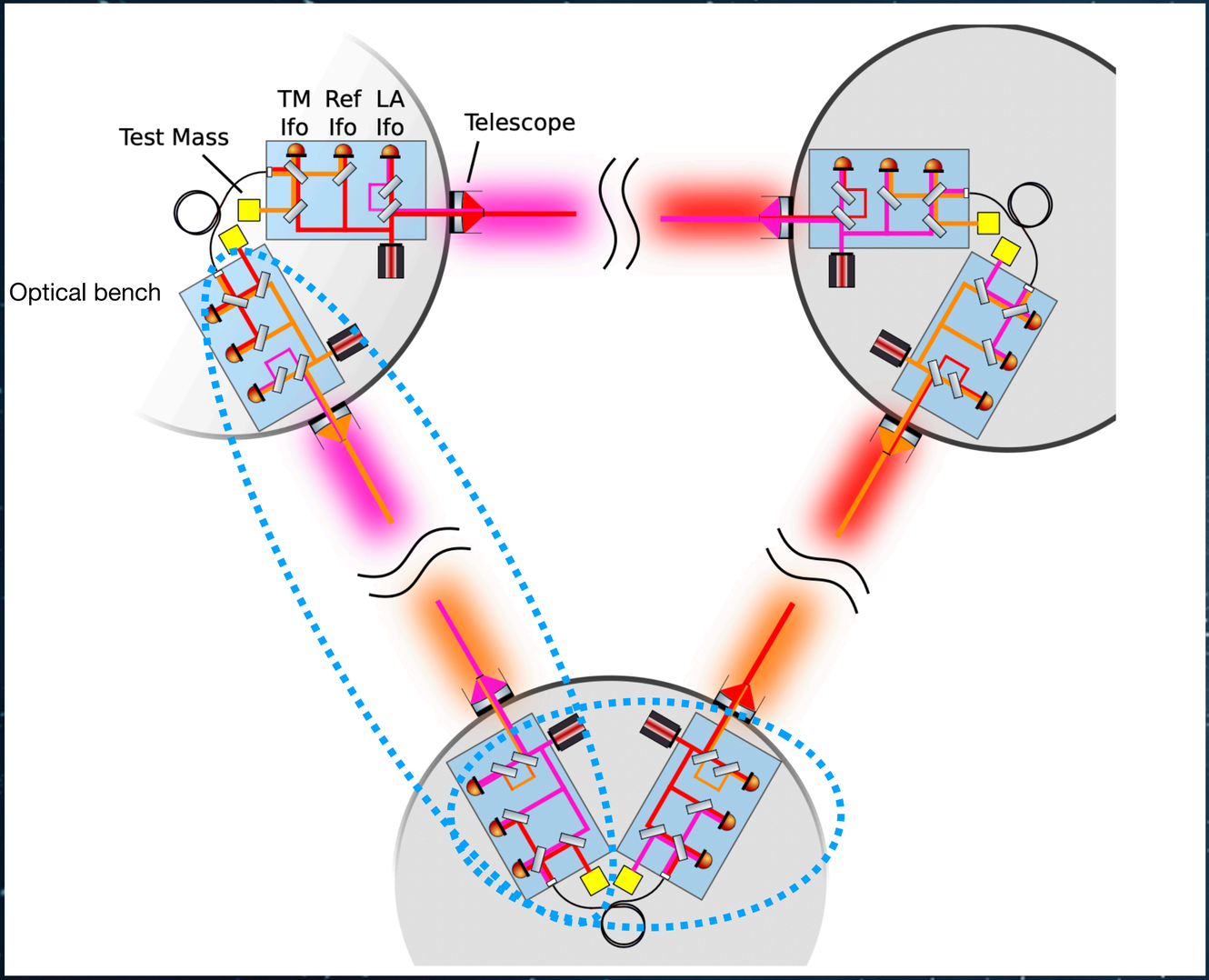


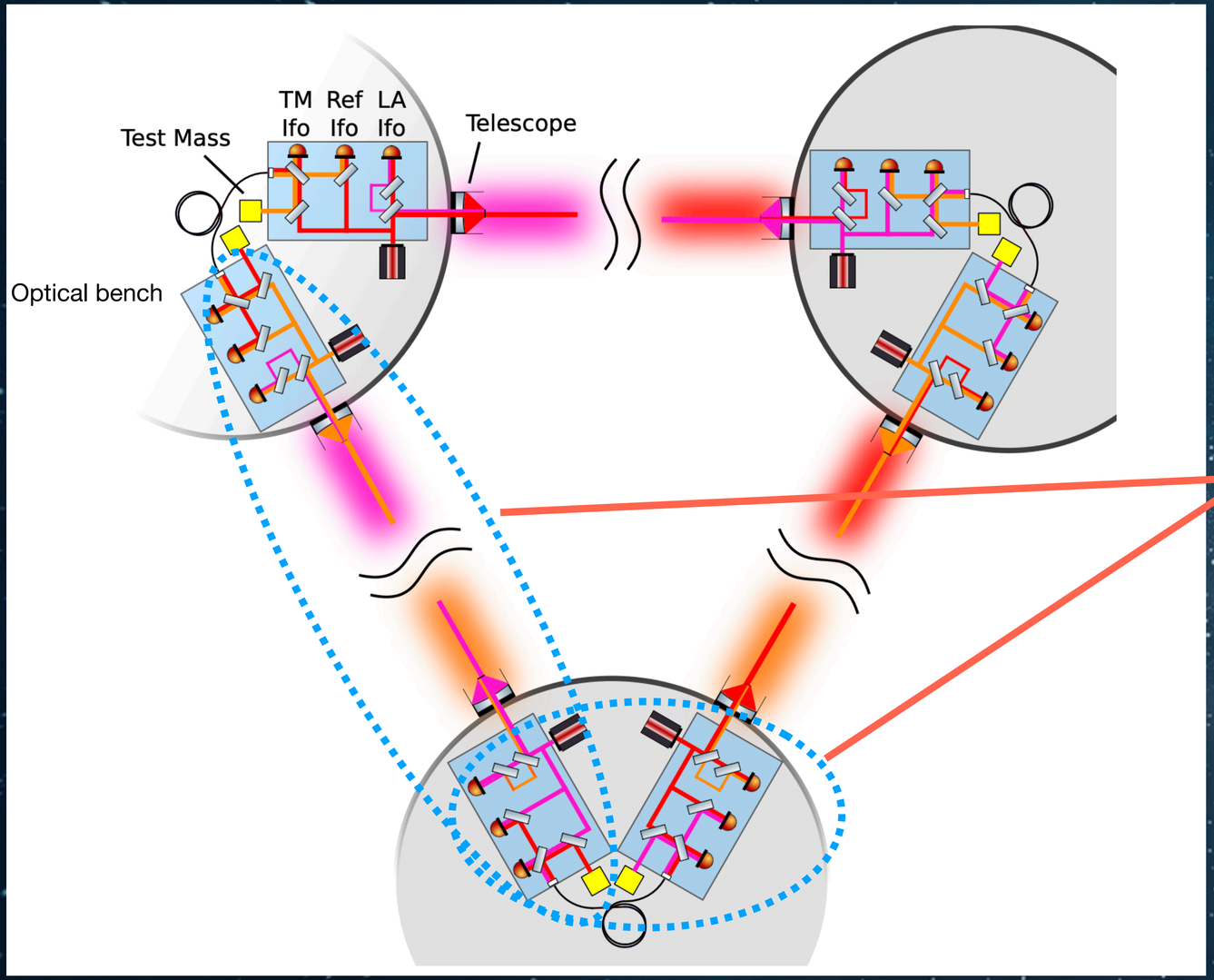









TM Ifo
Ref Ifo
LA Ifo
Test Mass
Telescope
Optical bench



TM Ifo
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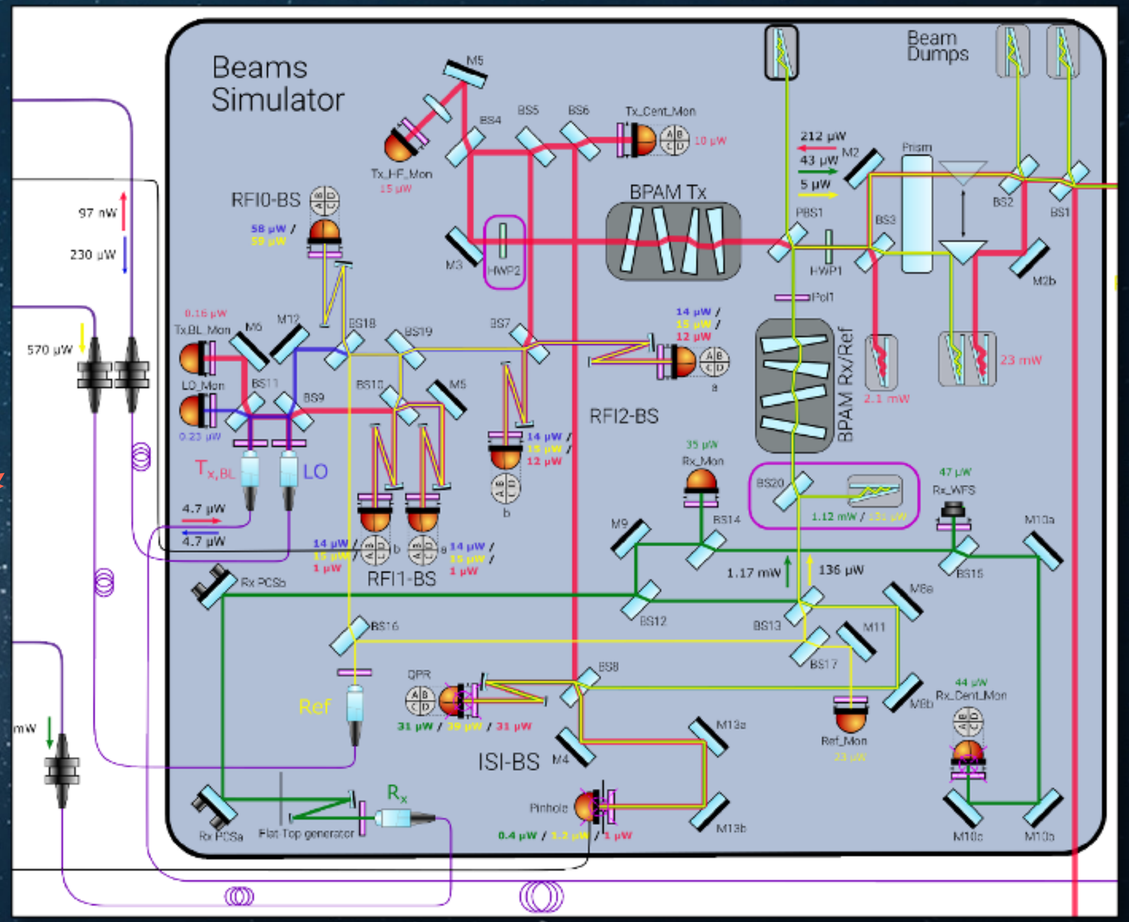
Optical bench



Beams Simulator
Beam Dumps
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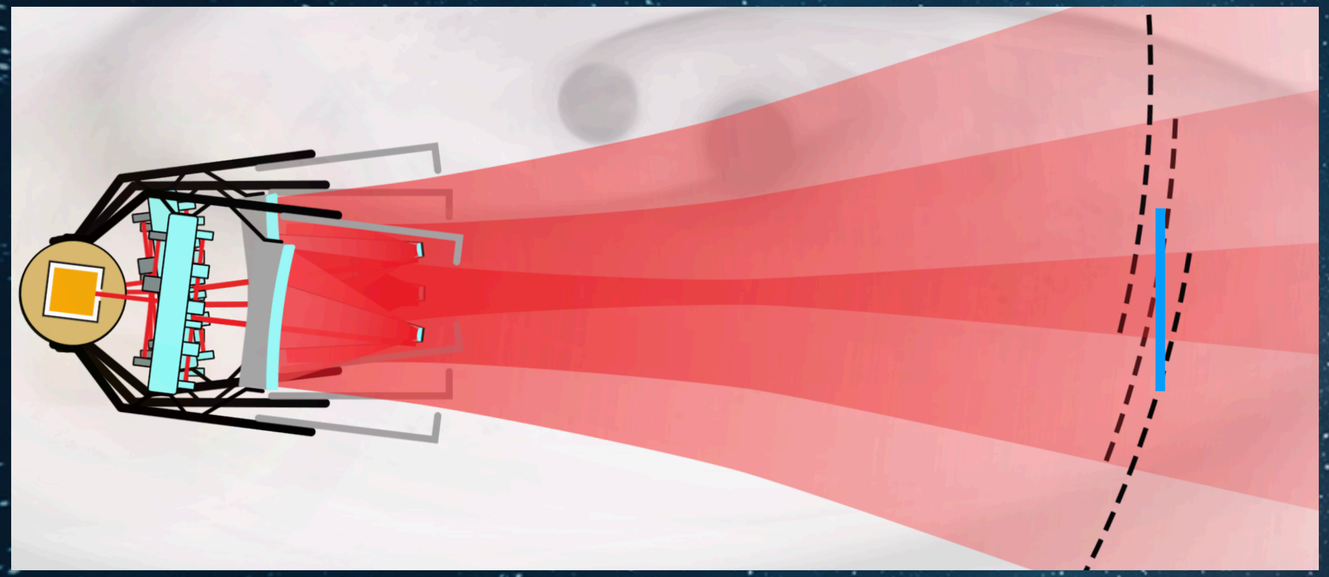
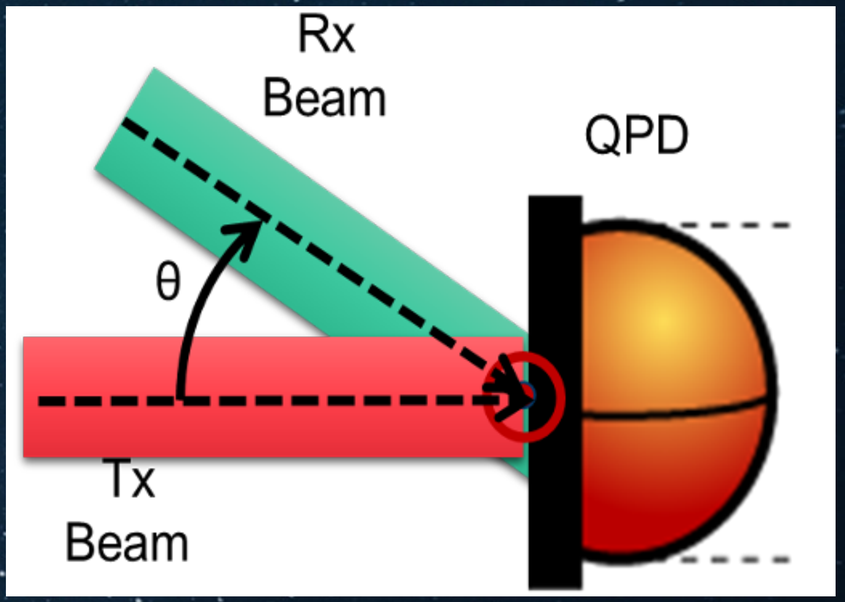
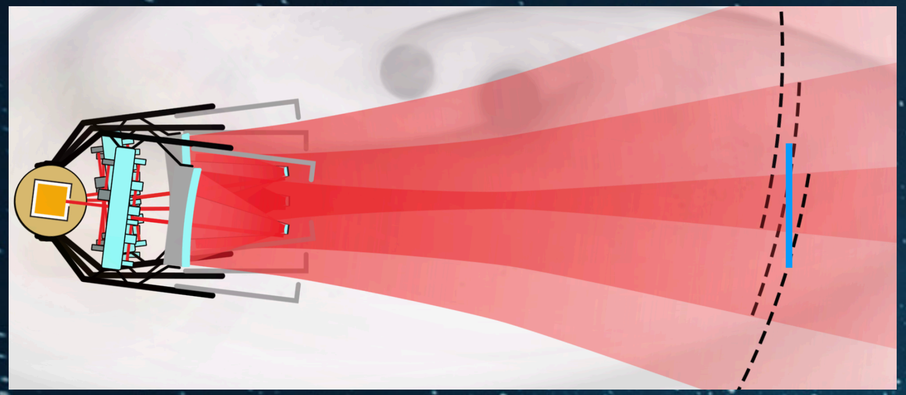
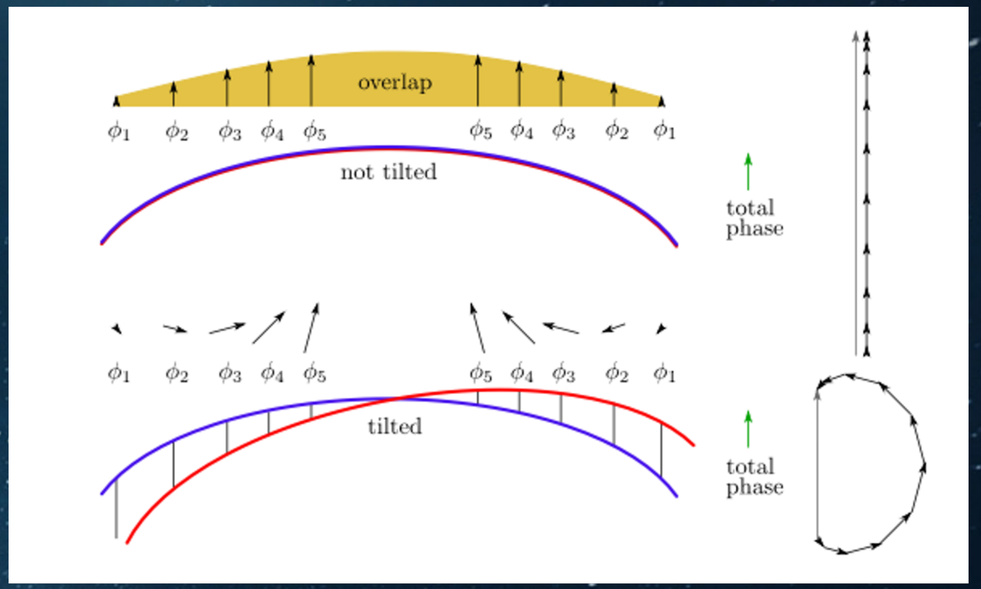
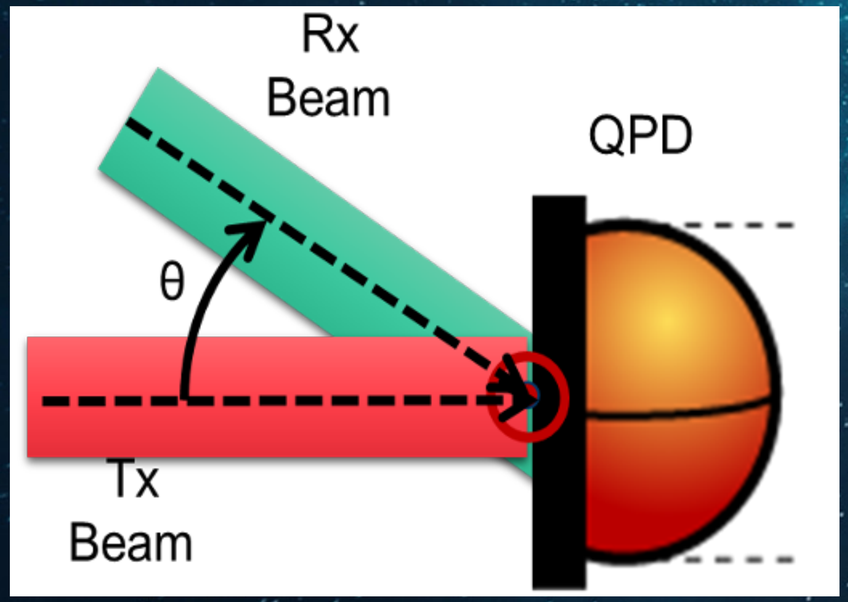
BPAM Tx
RFI2-BS
BPAM Rx/Ref
RFI1-BS
ISI-BS
LO
Ref
Rx

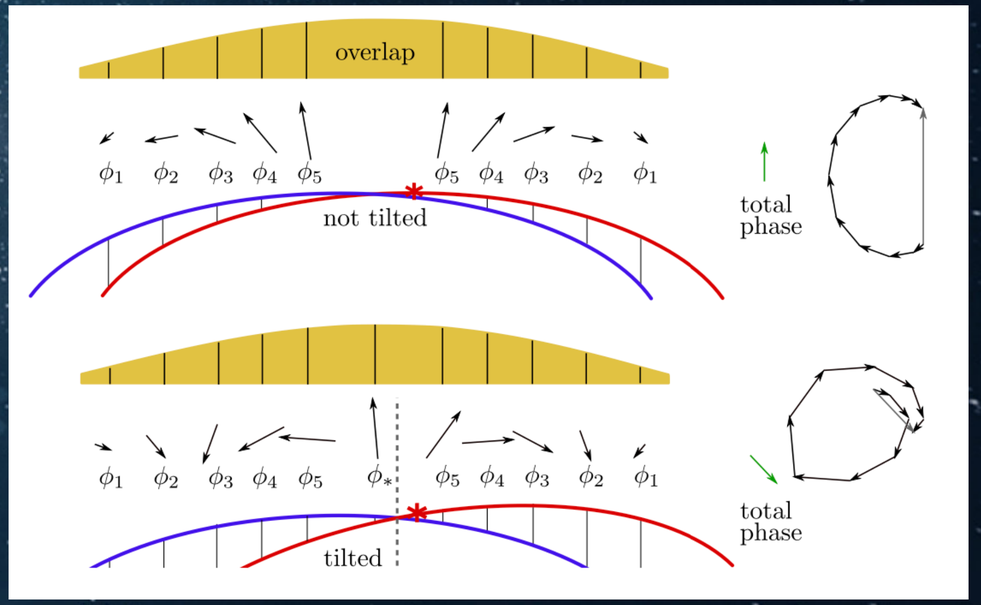



Rx
Beam
QPD
θ
Tx
Beam




overlap
ϕ_1 ϕ_2 ϕ_3 ϕ_4 ϕ_5 ϕ_5 ϕ_4 ϕ_3 ϕ_2 ϕ_1
not tilted
total phase
ϕ_1 ϕ_2 ϕ_3 ϕ_4 ϕ_5 ϕ_5 ϕ_4 ϕ_3 ϕ_2 ϕ_1
tilted
total phase


Rx
Beam
QPD
θ
Tx
Beam


overlap
ϕ_1 ϕ_2 ϕ_3 ϕ_4 ϕ_5 ϕ_5 ϕ_4 ϕ_3 ϕ_2 ϕ_1
not tilted
total phase
ϕ_1 ϕ_2 ϕ_3 ϕ_4 ϕ_5 ϕ_* ϕ_5 ϕ_4 ϕ_3 ϕ_2 ϕ_1
tilted
total phase