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23-May-2016 23:17:43

Torsion Suspension (suspTorpedo3.m)

- torsion suspension wire material: Silicon
- torsion suspension wire loss angle:  $2e-09$
- torsion suspension wire temperature: 293 K
- torsion wire diameter (single wire, safety factor 1x): 500  $\mu\text{m}$
- torsion suspension wire length: 0.686 m
- torsion spring constant (2 wire):  $0.0065528+6.5528e-12i$  Nm/rad
- torsion bar inertia:  $0.6508\text{kg}\cdot\text{m}^2$
- torsion resonance:  $0.01597+7.9851e-12i$  Hz

You are not injecting squeezing..loozer!

- Seismic Isolator: MinusK
- Seismic Ground Motion: LL0
- Seismic Isolator: MinusK
- Seismic Ground Motion: LL0

Laser Power: 0.003 Watt  
SRM Detuning: 0.00 degree  
SRM transmission: 1.0000  
ITM transmission: 0.0213  
PRM transmission: 1.0000

Warning: Ignoring extra legend entries.]

> In legendHGUsingMATLABClasses>set\_children\_and\_strings (line 650)

In legendHGUsingMATLABClasses>make\_legend (line 313)

In legendHGUsingMATLABClasses (line 241)

In <a href="matlab:matlab.internal.language.introspective.errorDocCallback('legend', '/Applications/MATLAB\_R2015a.app/toolbox/matlab/scribe/legend.p', 118)" style="font-weight:bold">legend</a> (<a href="matlab:opentoline('/Applications/MATLAB\_R2015a.app/toolbox/matlab/scribe/legend.p',118,0)">line 118</a>)

In <a href="matlab:matlab.internal.language.introspective.errorDocCallback('gwinc', '/Users/slagmolen/ownCloud/Research/ANU-Torsion/matlab/gwincT0BA/gwinc.m', 261)" style="font-weight:bold">gwinc</a> (<a href="matlab:opentoline('/Users/slagmolen/ownCloud/Research/ANU-Torsion/matlab/gwincT0BA/gwinc.m',261,0)">line 261</a>)

In <a href="matlab:matlab.internal.language.introspective.errorDocCallback('nomm\_anu\_pType1\_v2', '/Users/slagmolen/ownCloud/Research/ANU-Torsion/matlab/gwincT0BA/nomm\_anu\_pType1\_v2.m', 334)" style="font-weight:bold">nomm\_anu\_pType1\_v2</a> (<a href="matlab:opentoline('/Users/slagmolen/ownCloud/Research/ANU-Torsion/matlab/gwincT0BA/nomm\_anu\_pType1\_v2.m',334,0)">line 334</a>)]

Finesse: 294.71

Power Recycling Factor: 1.00

Arm power: 0.00 kW

Power on beam splitter: 0.00 W

Thermal load on ITM: 0.000 W

Thermal load on BS: 0.000 W

Required TCS efficiency: 1.000 (estimate, see IFOModel.m for definition)

BNS Inspiral Range: 0.000 Mpc

BBH Inspiral Range: 0.002 Mpc

Stochastic Omega:  $2e+01$  Universes

New Nebulous Range: 0.855 Mpc

TORPEDO Configuration (nomm\_anu\_pType1\_v2.m)

- Reference Cavity Length: 0.2 m
- Arm Lengths: 0.368 m
- Bar length and diameter: 0.6 m x 0.06 m.
- Bar material: Aluminium
- Bar material loss angle:  $1.13e+06$

- Bar temperature: 293 K
- Bar mass: 4.5804 kg
- Bar Inertia: 0.13741 kg\*m<sup>2</sup>