

ans =

28-May-2015 14:10:00

ifo =

```
      Bar: [1x1 struct]
      Optics: [1x1 struct]
Infrastructure: [1x1 struct]
      Constants: [1x1 struct]
      TCS: [1x1 struct]
      Seismic: [1x1 struct]
      Atmospheric: [1x1 struct]
      Suspension: [1x1 struct]
      Materials: [1x1 struct]
      Laser: [1x1 struct]
      Squeezer: [1x1 struct]
      OutputFilter: [1x1 struct]
```

Torsion Suspension (suspTorsion.m)

rwire =

7.8416e-04

- torsion suspension wire material: Silica
- torsion suspension wire loss angle:  $1e-10$
- torsion suspension wire temperature: 4 K
- torsion wire diameter (single wire, multiplied safety factor 1.5x): 1568.3193  $\mu\text{m}$
- torsion suspension wire length: 0.6 m
- torsion spring constant (2 wire): 0.027166 Nm/rad
- torsion bar inertia:  $0.6392\text{kg}\cdot\text{m}^2$
- torsion resonance: 0.03281 Hz

You are not injecting squeezing..loozer!

- Seismic Isolator: MultiSAS
- Seismic Ground Motion: LLO
- Seismic Isolator: MultiSAS
- Seismic Ground Motion: LLO

```
Laser Power:      0.100 Watt
SRM Detuning:     0.00 degree
SRM transmission: 1.0000
ITM transmission: 0.0213
PRM transmission: 1.0000
Finesse:         294.71
```

```
Power Recycling Factor: 1.00
Arm power:             0.01 kW
Power on beam splitter: 0.10 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: 0.002 Mpc
BBH Inspiral Range: 0.028 Mpc
```

Stochastic Omega: 0.08 Universes

New Nebulous Range: 16.368 Mpc

TORPEDO Configuration (nomm\_anu\_pType1.m)

- Reference Cavity Length: 6.2 m

- Arm Lengths: 0.368 m
- Bar length and diameter: 0.6 m x 0.06 m.
- Bar material: Aluminium
- Bar material loss angle:  $3.91 \times 10^7$
- Bar temperature: 4 K
- Bar mass: 13.128 kg
- Bar Inertia: 0.6392 kg\*m<sup>2</sup>