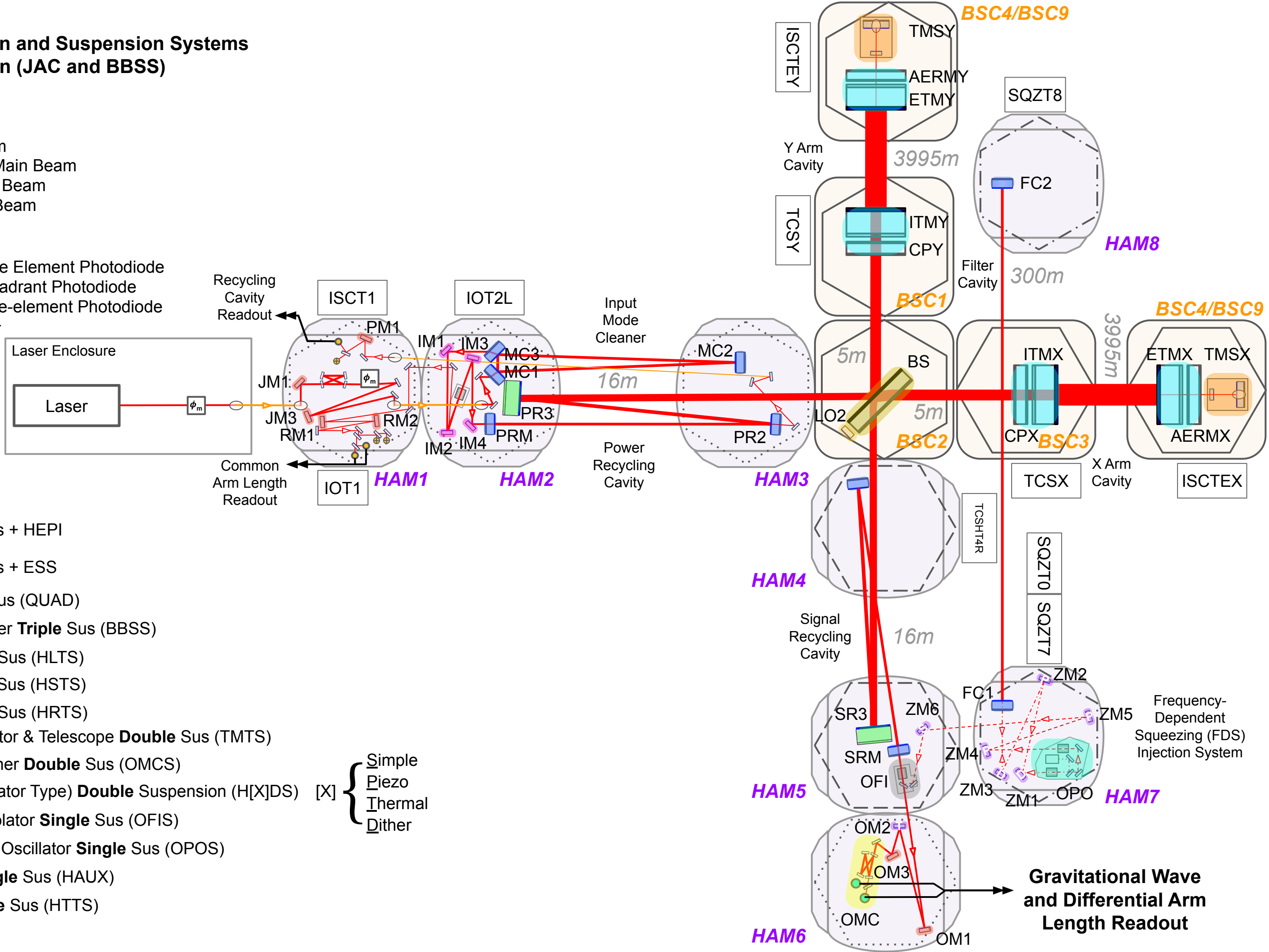


LIGO Optical Layout
With Seismic Isolation and Suspension Systems
H1 2026 Configuration (JAC and BBSS)
G1200071-v11
J. Kissel Dec 22 2025

- Main Beam
- Elevated Main Beam
- Squeezed Beam
- Collinear Beam
- Periscope
- Fixed Optic
- Radio-Frequency Single Element Photodiode
- Radio-Frequency 4-Quadrant Photodiode
- Audio-Frequency Single-element Photodiode
- Electro-optic Modulator

- BSC ISI + HEPI
- HAM ISI + HEPI
- HAM ISI + FF L4Cs + HEPI
- HAM ISI + FF L4Cs + ESS
- Test Mass **Quad** Sus (QUAD)
- Bigger Beam Splitter **Triple** Sus (BBSS)
- HAM Large **Triple** Sus (HLTS)
- HAM Small **Triple** Sus (HSTS)
- HAM Relay **Triple** Sus (HRTS)
- Transmission Monitor & Telescope **Double** Sus (TMTS)
- Output Mode Cleaner **Double** Sus (OMCS)
- HAM (X = M2 Actuator Type) **Double** Suspension (H[X]DS)
- Output Faraday Isolator **Single** Sus (OFIS)
- Optical Parametric Oscillator **Single** Sus (OPOS)
- HAM Auxiliary **Single** Sus (HAUX)
- HAM Tip-Tilt **Single** Sus (HTTS)

- Simple
- Piezo
- Thermal
- Dither



LIGO Optical Layout
With Seismic Isolation and Suspension Systems
L1 2026 Configuration (BBSS, BHD Phase A)
G1200071-v11
J. Kissel Dec 22 2025

- Main Beam
- Elevated Main Beam
- Squeezed Beam
- Collinear Beam
- Periscope
- Fixed Optic
- Radio-Frequency Single Element Photodiode
- Radio-Frequency 4-Quadrant Photodiode
- Audio-Frequency Single-element Photodiode
- Electro-optic Modulator

- BSC ISI + HEPI
- HAM ISI + HEPI
- HAM ISI + FF L4Cs + HEPI
- HAM ISI + FF L4Cs + ESS
- Test Mass **Quad** Sus (QUAD)
- Bigger Beam Splitter **Triple** Sus (BBSS)
- HAM Large **Triple** Sus (HLTS)
- HAM Small **Triple** Sus (HSTS)
- HAM Relay **Triple** Sus (HRTS)
- HAM Alignment **Triple** Sus (HATS)
- Transmission Monitor & Telescope **Double** Sus (TMTS)
- HAM (X = M2 Actuator Type) **Double** Suspension (H[X]DS)
- Balanced Homodyne **Single** Suspension (BHSS)
- Output Faraday Isolator **Single** Sus (OFIS)
- Optical Parametric Oscillator **Single** Sus (OPOS)
- HAM Auxiliary **Single** Sus (HAUX)
- HAM Tip-Tilt **Single** Sus (HTTS)

- Simple
- Piezo
- Dither
- Combined Piezo & Dither

