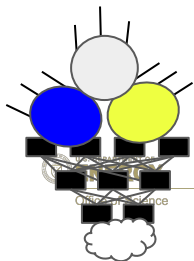


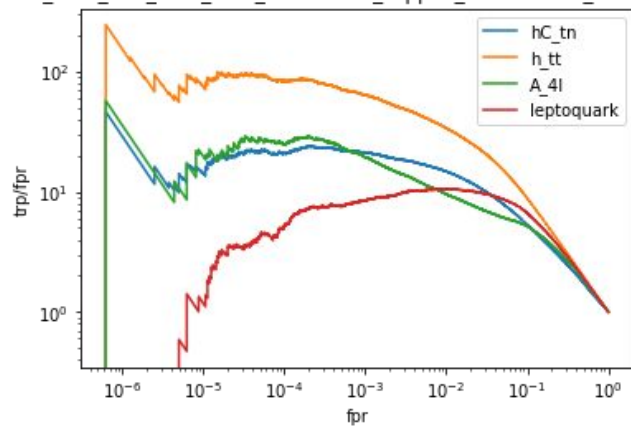


# GELATO Update 2/16/24

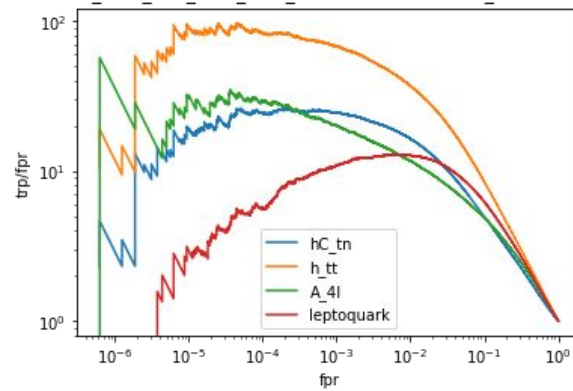
Liam Sherman



40\_MHZ\_VAE\_beta\_0.83\_batchnorm\_clipped\_KI CKL Loss\_Sensitivity



40\_MHZ\_VAE\_beta\_0.83\_batchnorm CKL Loss\_Sensitivity



## Rate 10Hz Background (CKL Loss)

| Model           | hC_tn                | h_tt                 | A_4l | Leptoquark |
|-----------------|----------------------|----------------------|------|------------|
| CKL trained     | 0                    | 0                    | 0    | 0          |
| Full KL trained | $1.45 \cdot 10^{-6}$ | $6.58 \cdot 10^{-6}$ | 0    | 0          |

## Rate at 40Hz Background (CKL Loss)

| Model           | hC_tn                 | h_tt                  | A_4l                  | Leptoquark |
|-----------------|-----------------------|-----------------------|-----------------------|------------|
| CKL trained     | $2.893 \cdot 10^{-5}$ | $1.64 \cdot 10^{-4}$  | $3.573 \cdot 10^{-5}$ | 0          |
| Full KL trained | $4.339 \cdot 10^{-5}$ | $1.841 \cdot 10^{-5}$ | $3.573 \cdot 10^{-5}$ | 0          |

## Rate at 100KHz Background (CKL Loss)

| Model           | hC_tn  | h_tt   | A_4l   | Leptoquark |
|-----------------|--------|--------|--------|------------|
| CKL trained     | 0.0466 | 0.1275 | 0.0363 | 0.02367    |
| Full KL trained | 0.0551 | 0.142  | 0.0413 | 0.0307     |

