

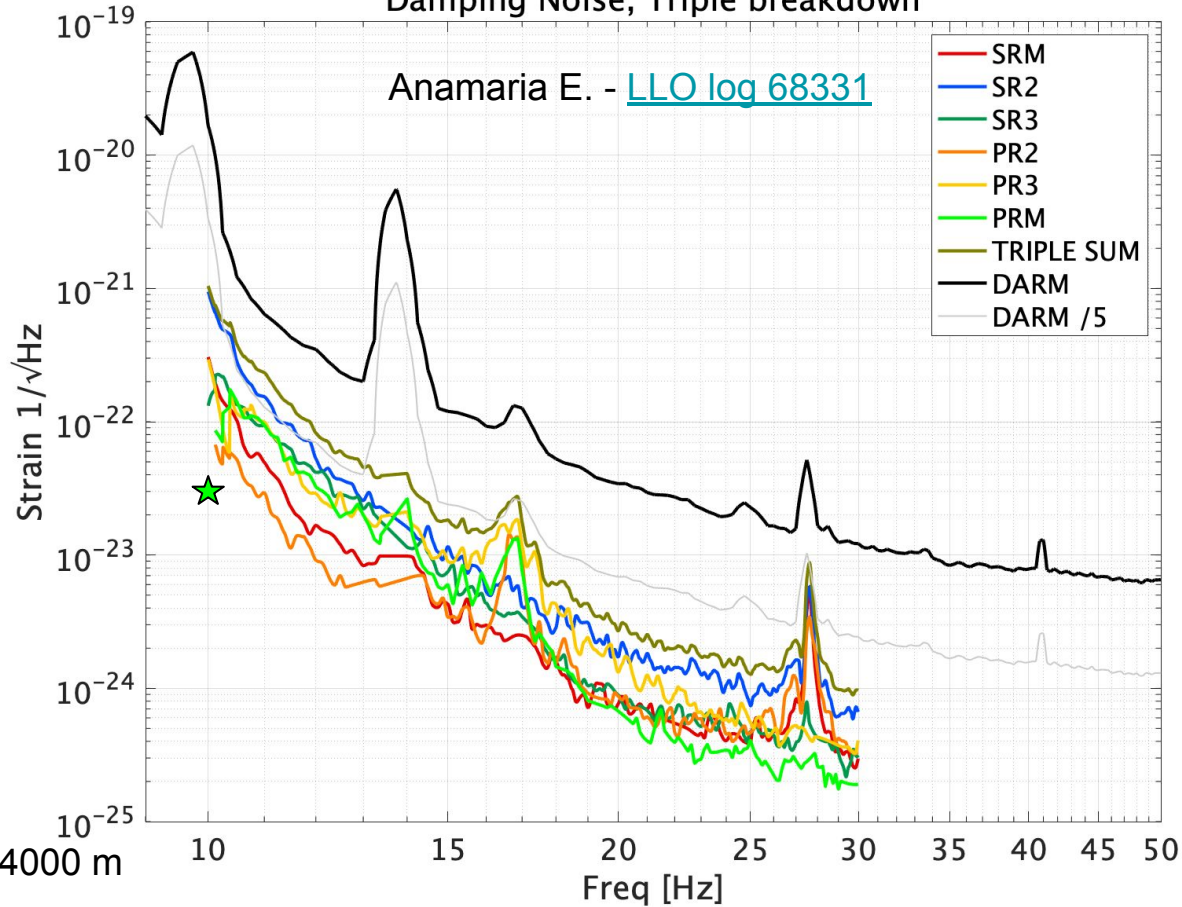
OSEMs on Power Recycling suspensions
need to be ~50-100x lower noise to
achieve A# targets

Brian Lantz, Elenna Capote, Anamaria Effler
[G2402471](#), Dec 3, 2024

Noise of a single BOSEM at 10 Hz is $\sim 4e-11$ m/rHz

OSEMs on the triples - LLO

Damping Noise, Triple breakdown

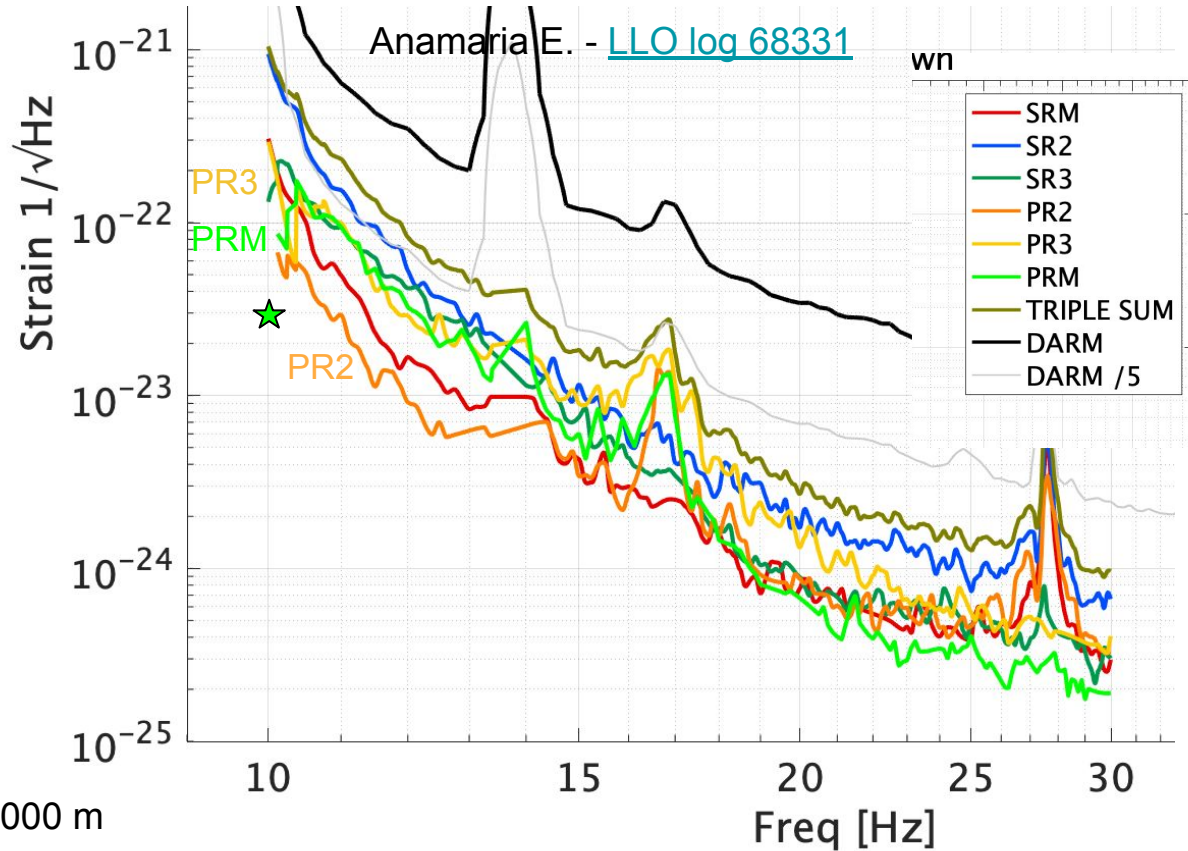


strain target

$h = 6e-20 * \text{sqrt}(4) / 4000 \text{ m}$

★ = $3e-23 \text{ h/rtHz}$

OSEMs on the triples - LLO



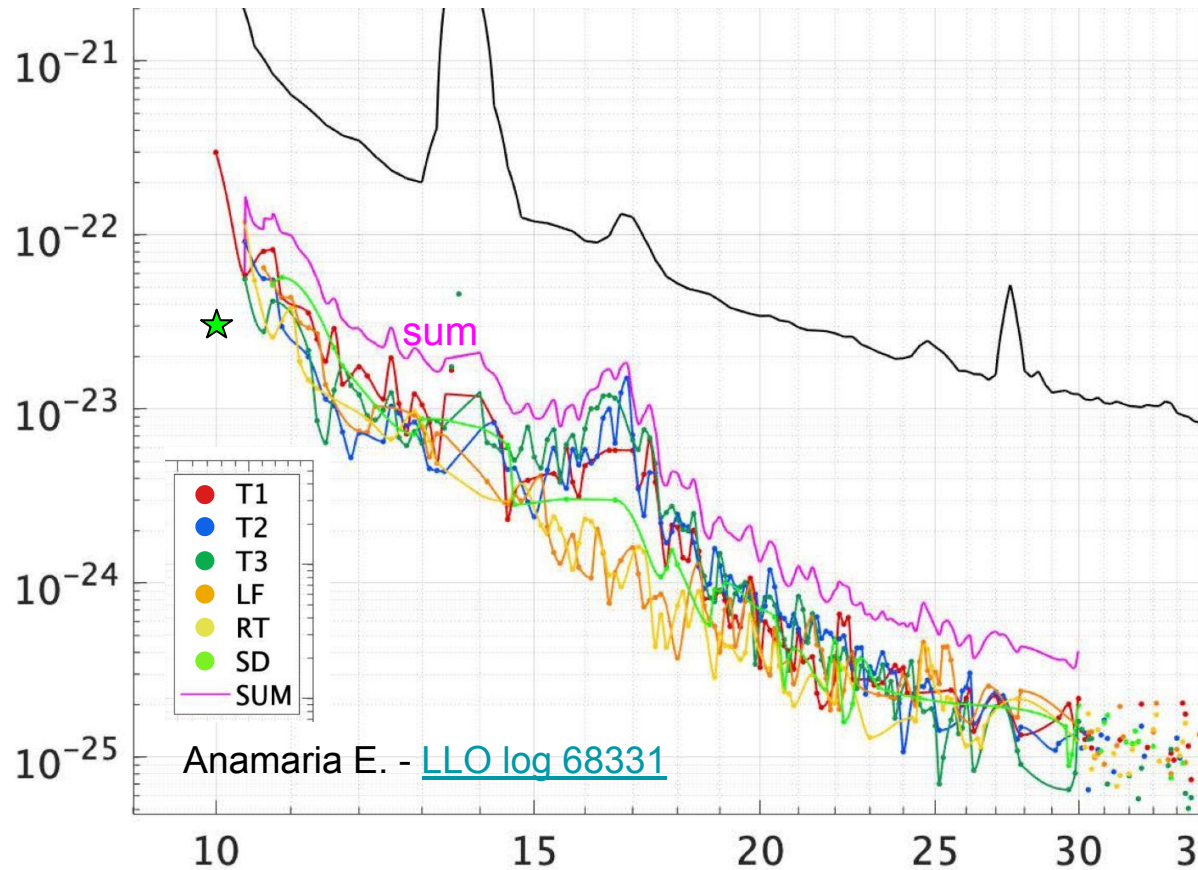
strain target

$h = 6e-20 * \text{sqrt}(4) / 4000 \text{ m}$

★ = $3e-23 \text{ h/rtHz}$

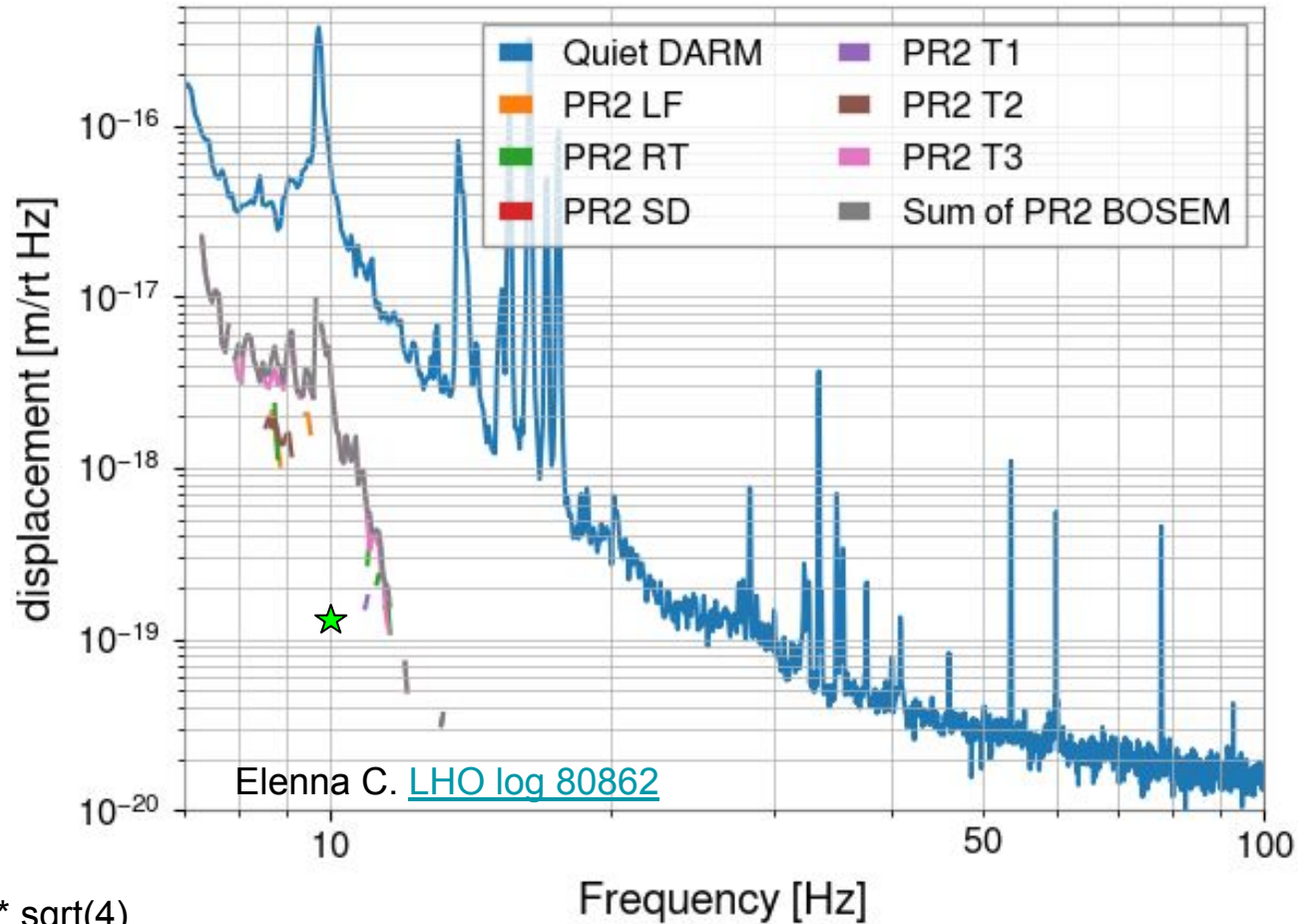
OSEMs on the triples - LLO

Budget for PR3

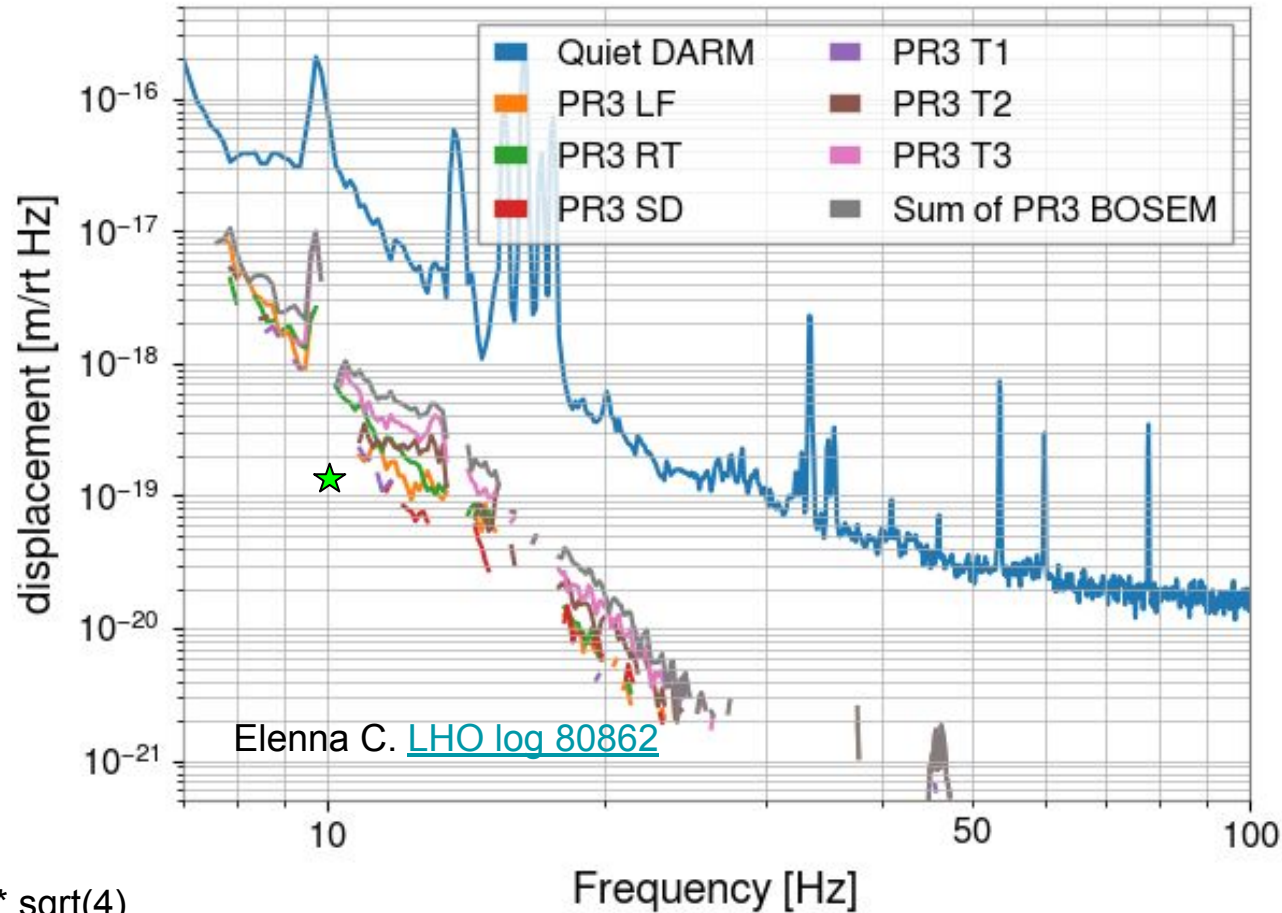


★ = $3e-23$ h/rHz

OSEMs on the triples - LHO - PR2



OSEMs on the triples - LHO - PR3



★ = $6 \times 10^{-20} \cdot \text{sqrt}(4)$