

# Science Objectives Assessment for EMRIInr8

Automated Report

April 19, 2025

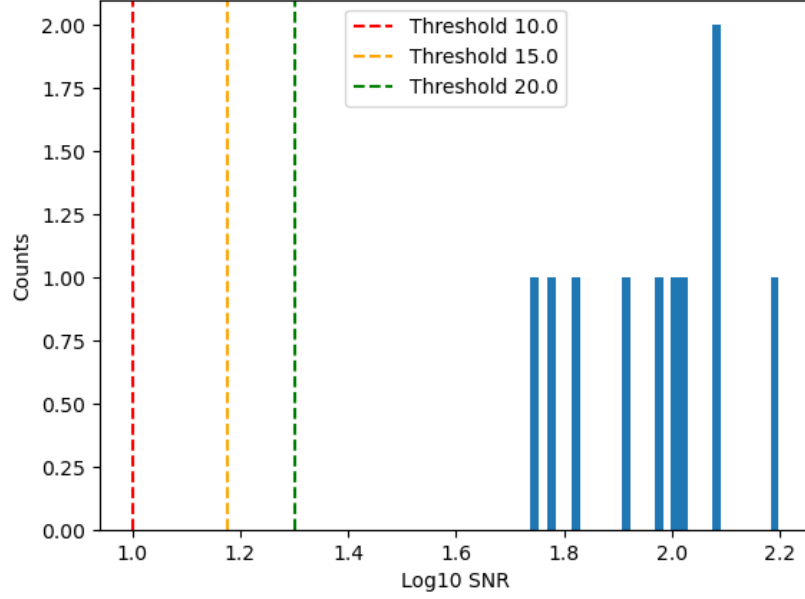
## 1 Summary

**Source:** EMRIInr8

**SNR Status:** PASS (SNR > 20.0) (Mean SNR = 96.42)

Parameter	Source Frame Value	Detector Frame Value
M central black hole mass	500000.0	625000.0
mu secondary black hole mass	10.0	12.5
a dimensionless central object spin	0.95	0.95
$p_{finalsemi} - latusrectum$	2.437237878139662	2.437237878139662
$e_{finaleccentricity}$	0.0	0.0
z redshift	0.25	0.25
dist luminosity distance in Gpc	1.3150370404994973	1.3150370404994973
T inspiral duration in years	4.0	4.0
nr power-law index	8.0	8.0

Parameter	Detector Frame Value Realization
M	500000.0
mu	10.0
a	0.95
p0	13.730479623045571
dist	1.3150370404994973
qS	2.6739022554219387
phiS	1.0081534230027849
qK	1.038999595784635
phiK	4.744043567102033
$\Phi_{phi0}$	3.153931405339285
A	0.0



## 2 Parameter Relative Errors

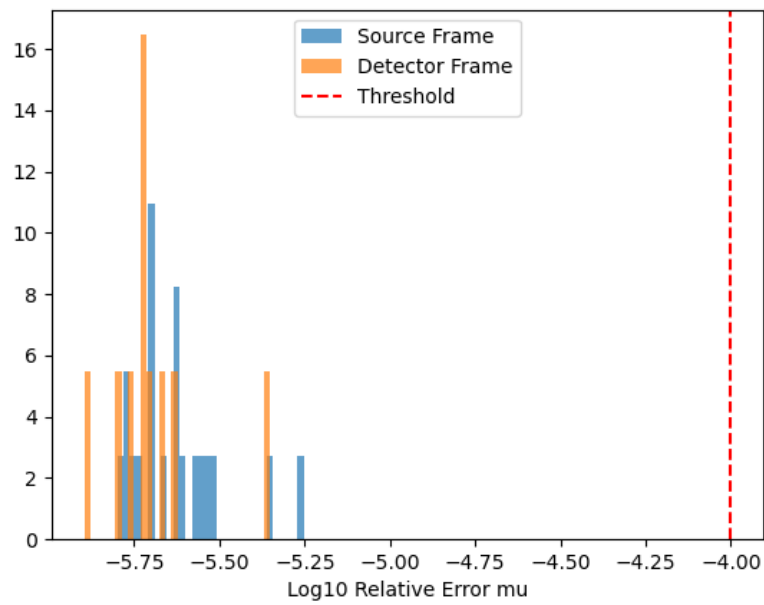
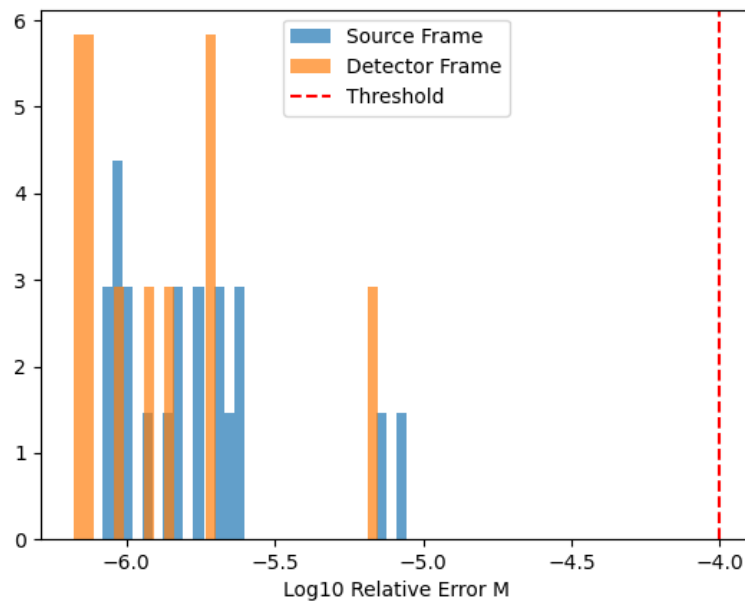
**M:** PASS (Mean Error = 2.13e-06, Threshold = 1.00e-04)

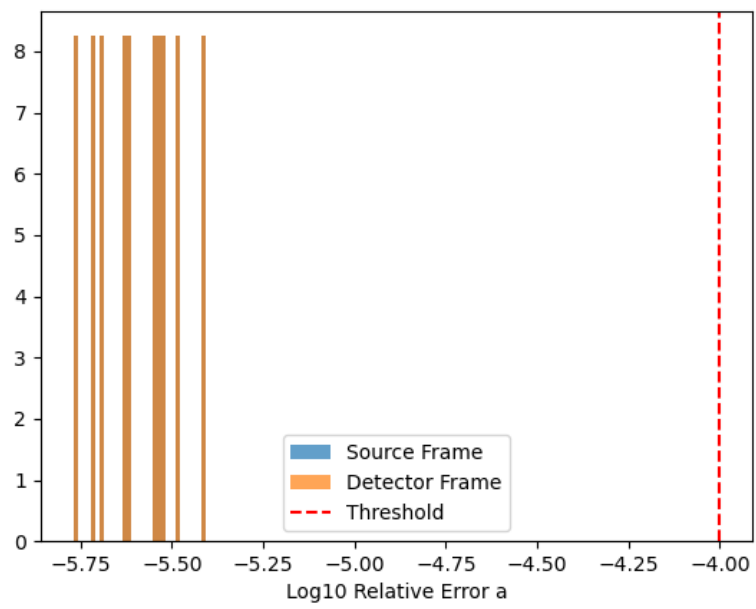
**mu:** PASS (Mean Error = 2.48e-06, Threshold = 1.00e-04)

**a:** PASS (Mean Error = 2.64e-06, Threshold = 1.00e-04)

**dist:** FAIL (Mean Error = 2.08e-02, Threshold = 1.00e-04)

**Sky Localization:** FAIL (Mean Error = 9.85e-01, Threshold = 1.00e-01)







EMRInr8/relative\_errors\_histogram\_e0.png

