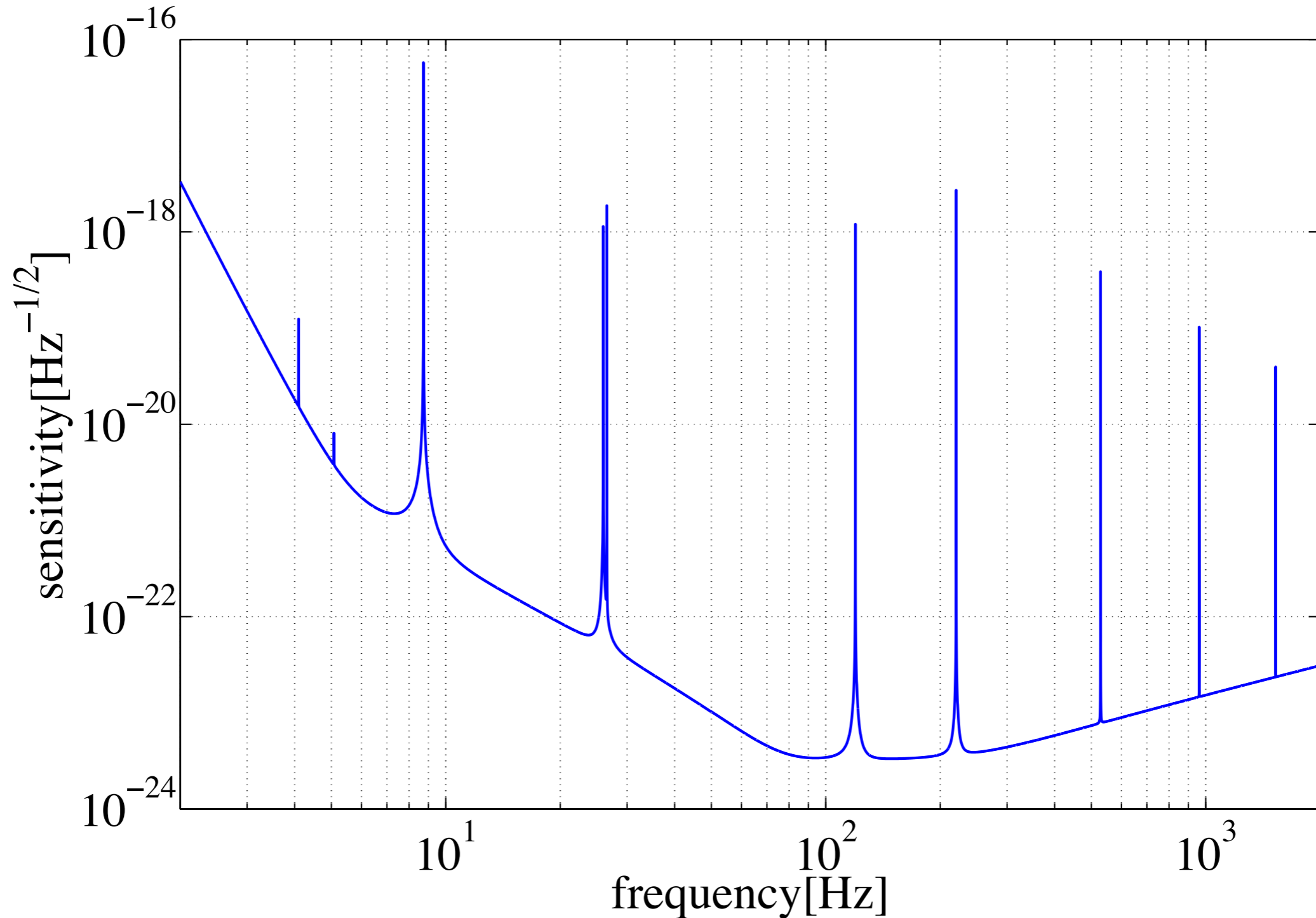


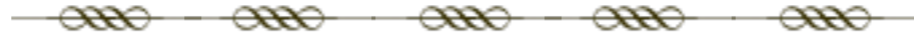
KAGRA Sensitivity



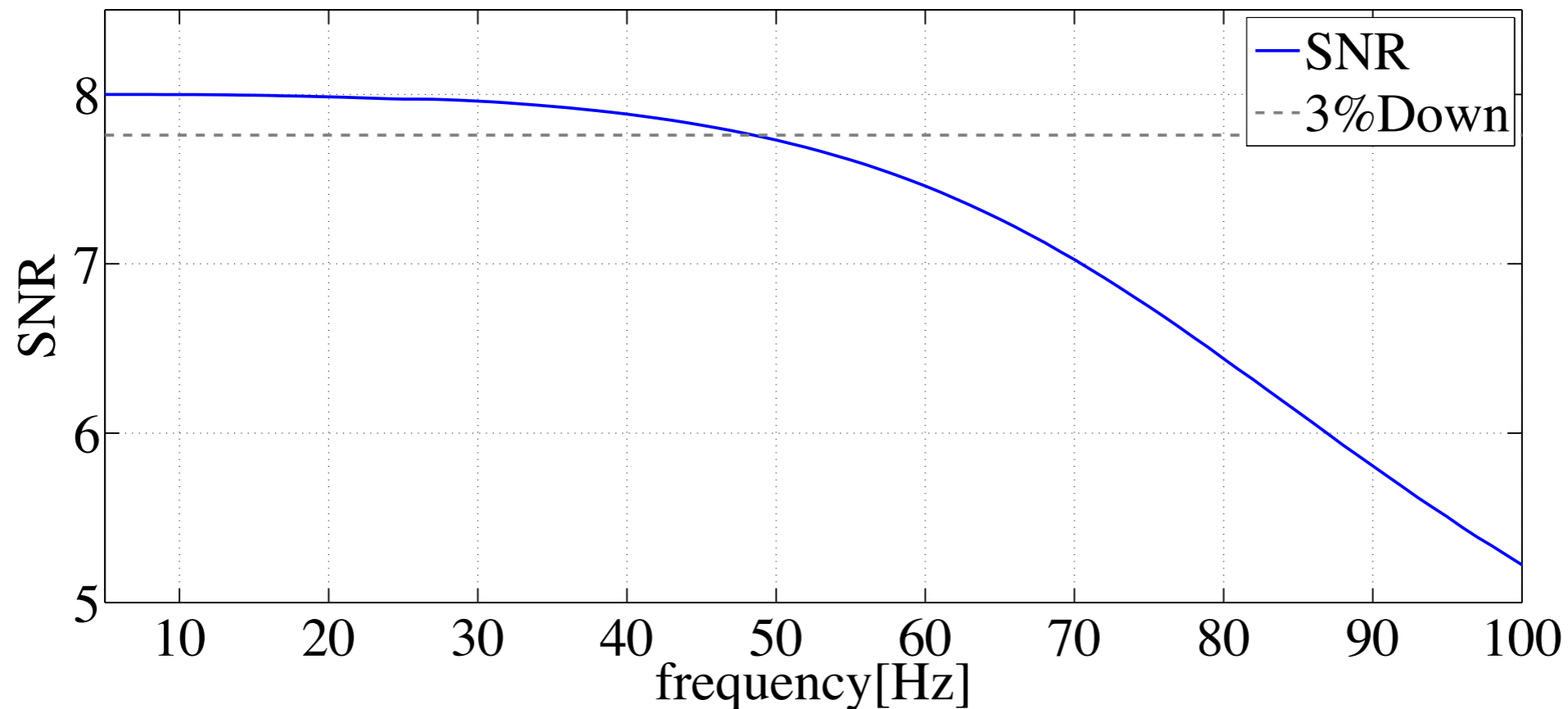
- Using bKAGRA130718.m output for QN, h_seis, h_mirror and suspension thermal noise calculated by Sekiguchi in April 2013



Compact binary coalescence



- **1.4M_⊙-1.4M_⊙NS-NS merger. SNR is calculated with f_{end} of 1.5kHz, f_{start} [5 100]Hz. SNR becomes 3% worse below the dot line. Which means 9% of searchable volume is lost.**
- **Resonance appearing in 10-20Hz does not affect the search for the CBC.**



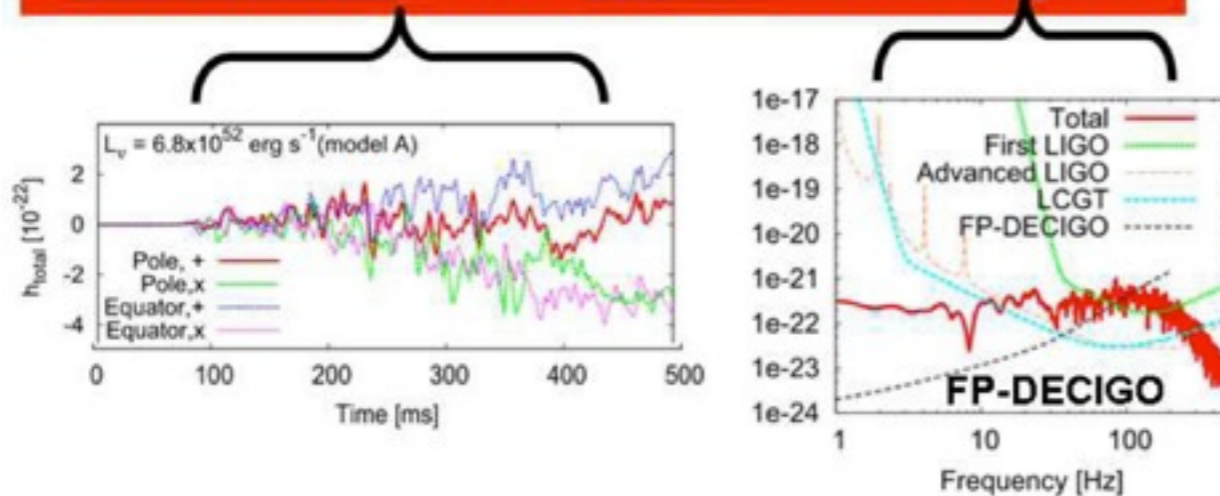
Burst (Supernova)



- Detection will not be affected by 10-20Hz, but the extraction of physics may be affected.
- Among SN models, models that are affected are SASI+convection (3D)、MHD explosion(2D)
- SASI+convection : The characteristic frequency of SASI is 100Hz, therefore I don't find any big problem.
- MHD explosion : If a core with strong magnetic field rotates, a jet due to the magnetic field will be generated. The component of a gravitational wave originated by the jet appear in low frequency. The detection of the component will be affected.

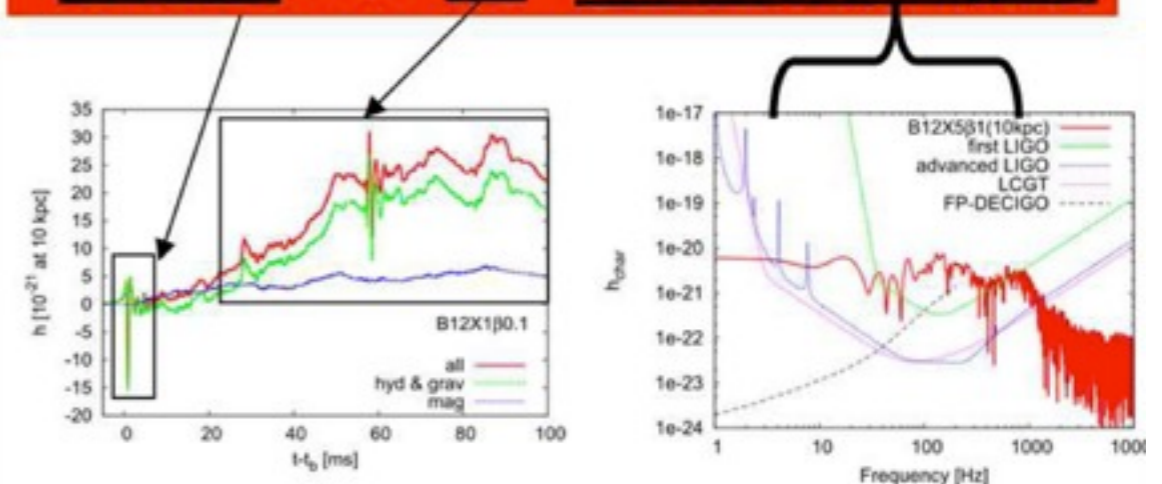
SASI & Convection

“stochastic” and broad-band signal



Bounce & MHD Outflows

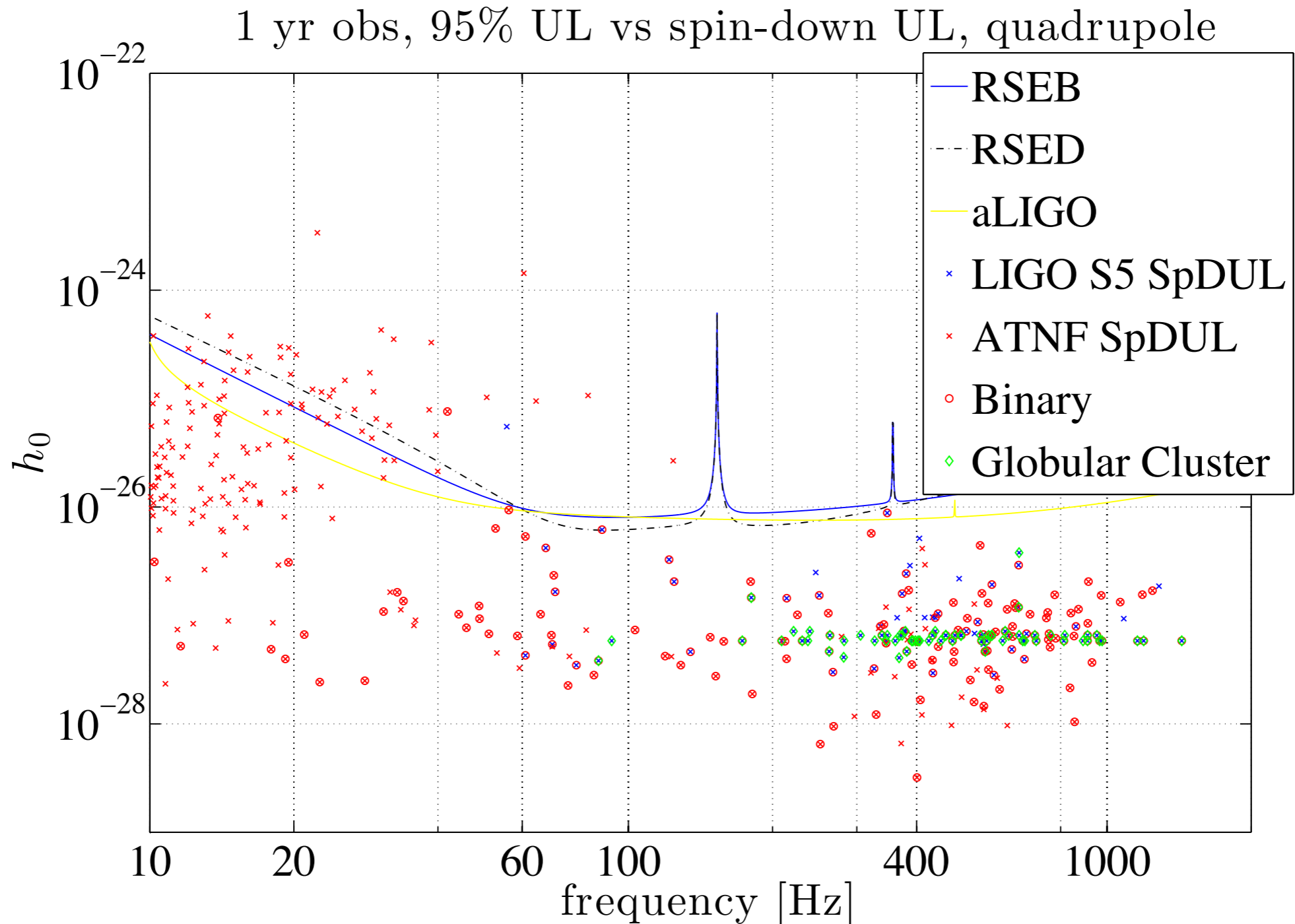
“Bounce with “tail” broad-band signal



Pulsar



- **Plot of 1year integration. If 10Hz region becomes x10 worse, some pulsars are hopeless. But considering current upper limit of ellipticity, the gravitational waves from pulsar in low frequency will be $\sim 10E-29$, so not affected.**





以下ができればさけてほしい周波数です。
無理な場合は、1, 2, 6のパルサーの2倍周波数(2F0)は
きれいだとうれしいです。

N	Jname	F0(Hz)	4F0/3 (Hz)	2F0 (Hz)	Dist (kpc)
1	J0633+1746	4.217639624	5.623519498	8.435279247	0.25
2	J1932+1059	4.414667316	5.886223089	8.829334633	0.31
3	J1908+0734	4.709147214	6.278862952	9.418294429	0.58
4	J1732-3131	5.08794112	6.783921493	10.17588224	0.8
5	J0700+6418	5.110620788	6.814161051	10.22124158	0.48
6	J0835-4510	11.19464994	14.92619992	22.38929988	0.28
7	J1528-3146	16.44135695	21.92180927		0.99
8	J1829+2456	24.38440141			0.74
9	J1518+4904	24.42897938			0.7

N: 通し番号

Jname : J-Name

F0 : 回転および重力波 (wobbling mode) 周波数

4F0/3 : 重力波 (r-mode) 周波数

2F0 : 重力波 (四十極モード) 周波数

伊藤