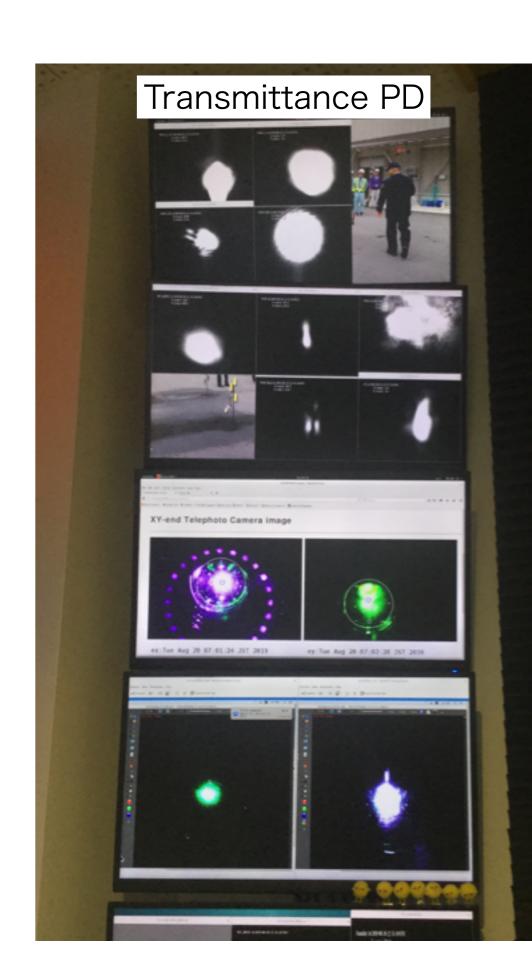
PEM meeting brief reports

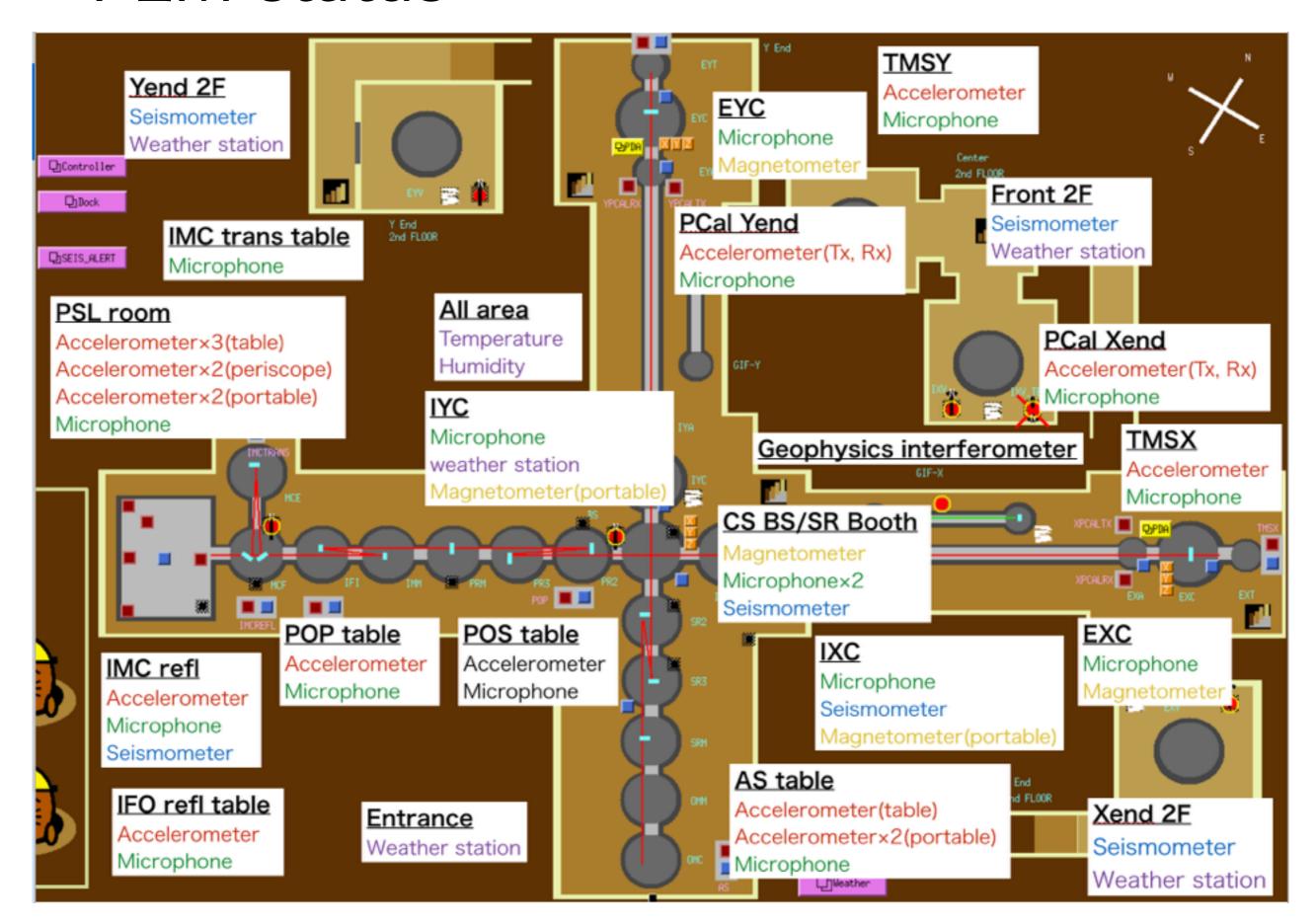
VK PEM meeting 2019/08/20 T.Yokozawa

Detector status

- We are in the commissioning phase of the Fabryperot michelson
- Detector configuration will be determined soon
 - DRFPMI or SRFPMI or FPMI
- Discussing about following tasks and groups
 - Suspension damping
 - Length sensing
 - Alignment sensing
 - Noise hunting
 - Output mode cleaner



PEM status

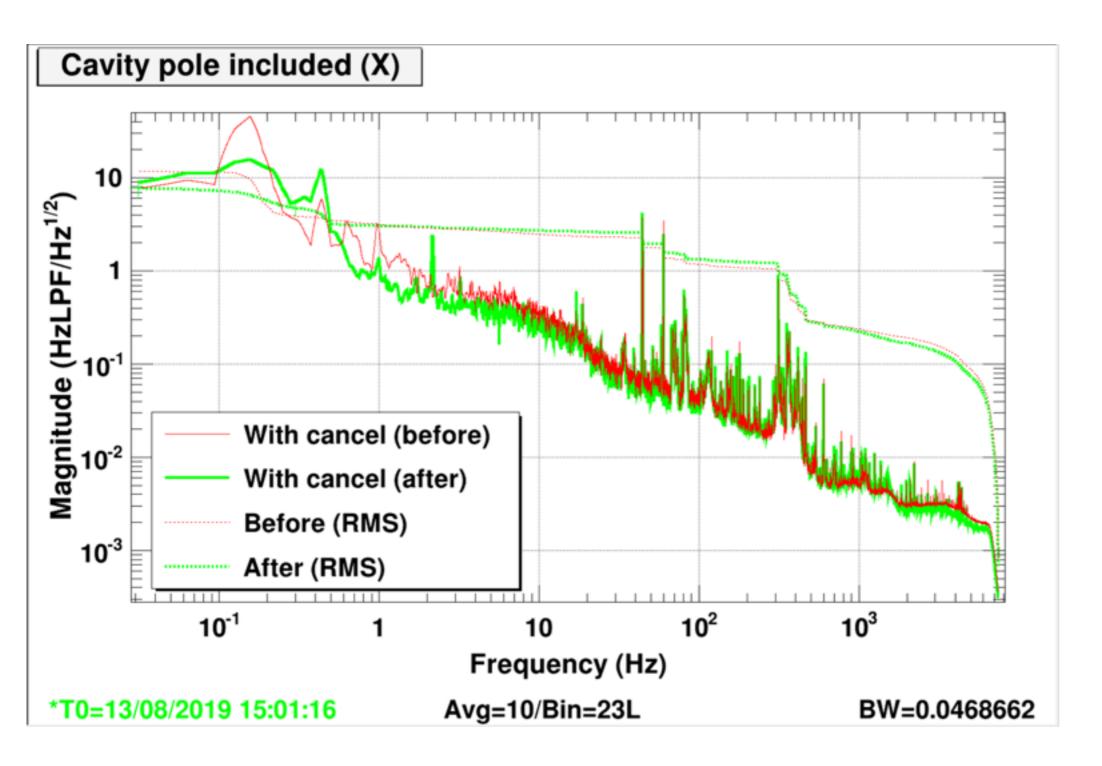


PEM status

http://gwwiki.icrr.u-tokyo.ac.jp/JGWwiki/KAGRA/Subgroups/PEM

- Portable PEM project(Last month meeting)
- Origin of the line noise search(next page)
- Vibration characteristics (Cryo-chamber, Photon calibrator, …)
- Origin of the Glitch search(w/ detchar group)
- Sound reverberation time analysis (Main topic today)
- Seismic motion analysis
- Lock loss analysis using PEMs
- Preparing toward the PEM injection

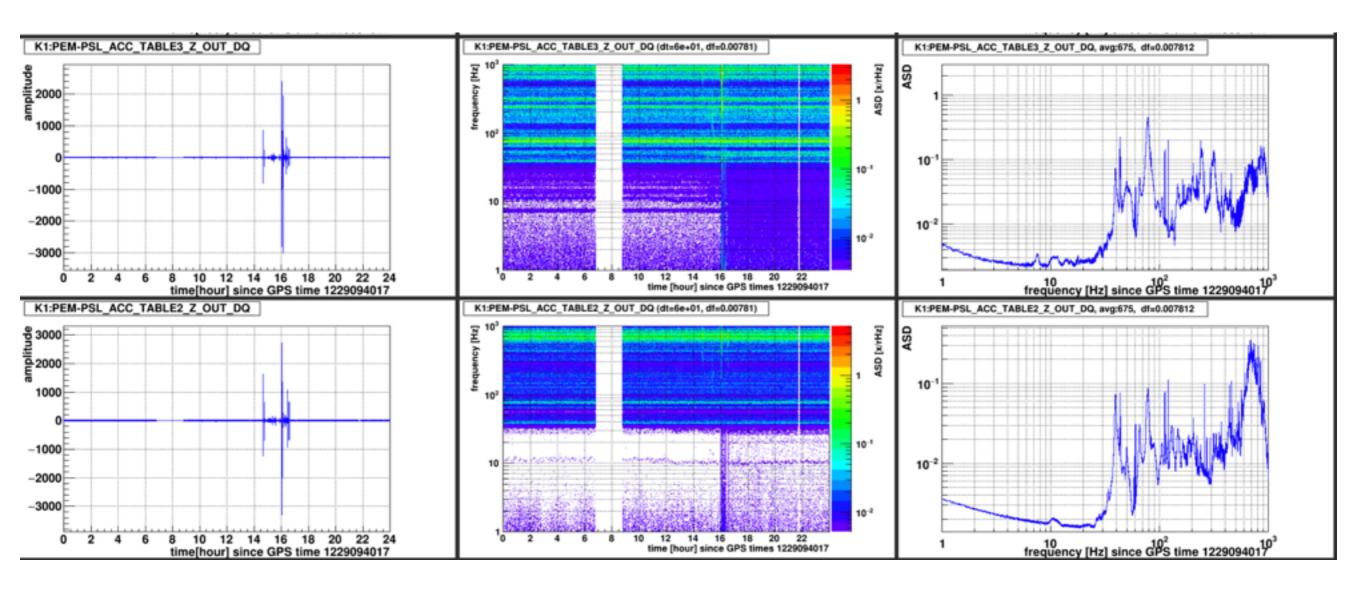
- Today topic
 - Virgo status and October commissioning(Irene)
 - Plan to visit Virgo (Washimi)



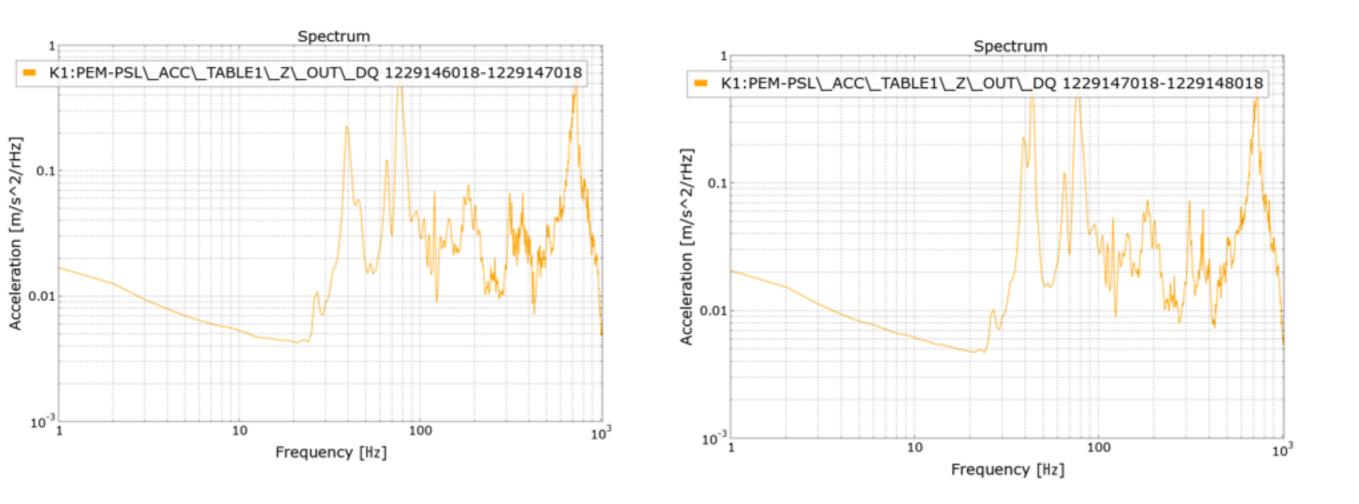
- We found some mysterious peak around 44Hz…

44.09	TABLE POLI LEGITLOS ILOS	PM-AGC-PSL PORTABLE 2.001-00 (100)	PSM-ACC PSI, TABLE PSI,2 J. DOT 20 0 900	CALCELPROS LAMM PREGUENCY LOS E 99)	LABPOW_MG MERLINEE SIG DAYS	MC-CAV-REFL JOUTLONG SCHOOL	FEMANCE, PBL PERE, PBL2 X DUT_DB D-HB	PRM-ACC_PRI_ _PER_PRI_L _P_OUT_DOD _O 971	MEMCE, TM LIGHT J.LINI D.HGI	MC MOL SERVE JOJE DE DOG	MC-CAV-TSM46 -BUT-DO 0-960	CALCELTRIXE ANDMICTER LTTELAGM LTD 100 100 100 100 100 100 100 100 100 10	66, 6000A/ 601, 027, 00 076	LAS-POW PMC DVT. DQ IC 540	PELPING TRANS DC OUT DG DG41	MC-BIPNO BLOW DAG OUT DG 00520	
44.11	TABLE POLI LOUT DO 1.00	PEMAGG PS. PORTABLE 2 (SJT DG 1100)	198 £ 19.2 2.07.59 1.00	PEM-ACC.PS. JEBS PS.1 J. GAIT. DQ	POR PSL2 A OUT. 00 1.00	CALCE PROG ANIM PREGLENCY 20 0.00	LAG-POW, BAG . NEXT, OUT . DQ . D. VIII	MC CAV REFL OUT DQ 0.900	MC-CAV_TRANS OUT_DO 0.00	15 MG, TM - 35 MF (L. IN) - 29 - 0.081	MC-MC, 509/40 -0-17-00 (199)	CAL-CE_PROC _XARM_OBLES _CTRACM _DQ _D 951	PS. 400 LW MAL OLI DO (0.02)	8.0W 0.ff 8.0W 0.ff 8.00 0.74)	0.6 00 0.73	786 5 650 7 0.0 00 0.72)	00 0.5 00 0.5 00 071)
44.12	TABLE 198.1 Z.O.F. 00 1.00	PORTABLE 2 (A)T_DG (100)	PERMACE PER PERME TOUT SEC 11-00]	TABLE PILZ Z. GAIT. DG 1.00)	CALICATION JAMA PROGRESCY 99 1.00	1504-0000,7504 2504-75042 A. Ou'll, 000 (1.00)	LASPONING JULY, OUT JOG 11.00	MC-CAV RUE. OUT-DQ	MCMCS_SERVO .O.E.OX .O.W.	ISMCE,TM SCINE J., NI SQ 1981	MG-CAV TRAVE - SUE_DQ - D HR	CALCS_PROC _XARM_DELTS _CTNL_ACM _DQ D_STI	(0.000) (0.000) (0.000)	12. GET 13. (2. 53)	MOLACE MEE 1642 HOL 2 OUT DO (0.80)	0.0F 00 (0.71)	DC DUE DC DUE DG DG DG
44.14	PORTHUE 2 SAFE DO 11 DO	TABLE POLI Z (AUT DG 1100)	MMACCIPE PREPELL X OUT 20 11-00	TABLE PRZ Z SAIT DO 1 OOI	CALCA PROC JAMM, PROGRAMON SO 1.00)	.46 POW MC .461. O.E .00 (1.00)	PEMACO PR PER PEL2 X.O./L.OG 0.00	MC-CAV. REFL. DUT-DQ DVM	MCMCL SERVO OLT DG O VIII	MC-CAN TRANS CAST_DIG (297)	MEMICE TM ACON L. NO AND (C. 9.7)	CALCELIMOS LAMM DELTA LETILL AGM DG D PSI	196. PMC (PZT (A.CHI) (ALII (MI (D.92)	AL SOLUTION (0.77)	05. 607 CM 10-11. OLD DO 10-711	16 1440 THANS 16 1447 110 (0.74)	TABLE REEL 2 DUT DO C-690
44.16	TABLE POLI Z OUT DO 1 000	PORTUGE 2 IAPLED 11001	PM ACC PR. 348.6 PS.2 2 SAT 20 11001	MM-ACC PSI. JEBL PSI.I J. SMIT. DG (LOX)	ASPONENC BELLOW BO 1.001	CALICE PROC JAPAN PROJENCY JOS (1.00)	MC-CAV-RER. OUT_DQ 11.00	PEM-ACC, PBL PERLPSL2 X, GUT, DB (1.00)	MOMOL SERVO OUT DG 1198	ISMOLTM SCREALNI SG 090	MC-CAV-TRANS AUT-DQ D MT	CALCOLIMOC XARM DELTA CTINLAGM DG D 971	79. PRC PZT -8.0m (AU - 29. (194)	LAS POR PAR SALE US (C.55)	16, FMC TRAIG 16, GUI 166 1684	HILLIAND HVI HILLIANDA DLIE 330 (0.77)	MON OUT DOTS 0.750
44,17	PORTABLE E. SUTLING (1.00)	TABLE PRO LINE PRO LINE DG (100)	148.E PS.2 2.6VT.EG 1100	PEM-ADE PEL PEM-PELI X SUIT DE TLOO	ASPONENC MPL ORI SQ 1.00	PEN-ACC PEN PER-PEN-2 A GUT 109 (1.00)	MC-CAY, FIRTS. OUT, DQ (1.00)	CAL-CS PROC AVM. PREQUENCY DG (1.00)	MC-CRY TEAMS OUT DG 0-00	MC-MOL SETVO OUT_DQ 2.001	ACCOR LL BAS AGG AGG (C SA)	CALCOLITROS LAMM DELTA CTRL AGM DQ D 961	087)	100 50 100 100 100 100 100 100 100 100 1	0.6 10 (0.6)	100 100 100 100 100 100 100 (081)	05 045 06 045 08 060 060
44.19	MMADE PELI JABLE PELI Z.OUT.00 (1.00)	PEM-MOG.PSL PEMEMBLE 2 (AUT. DG (1.00)	PSM-ACC_PSL _34B.E_PSL2 _Z_CV/T_EQ _1.00)	PEM-ADG PSL PEM-PSL1 J. OUTLOG T.OO)	CALICS, PROC JAMM, PREGUNACY 99 1.00	LAG-POW.MC JULIE DUE JULI JULIE JULIE JULIE JULIE JULIE JULIE JULIE JULIE JULIE JULIE JULI JULIE JULI JULI JULI JULI JULI JULI JULI JULI	PEMACE PS. PER PS.2 X.OVT.09 1.00	MC-CAV REFL DUT-00 1 00	MO-CAY TRANS OUT DG 0-10	MC-MCL SERVO GUT DIG 2 901	ARCHE THE SCHOOL LAND SERVICE THE SERVICE THE SERVICE	CALCOLIPHOC JAMM DILTA CTINL AGM DQ 0.961	MC-6231G SLOW DAG SUF DIG DIGITAL	ALFOR DAE BUT ON C-MO	PRANTON MAY, OUT (A) (CAR)	03.895.001 8.68.001 90 (0.87)	SLINK IMME SS DUT SS (205)
44.20	MARE PRO JAME PRO L OUT DO 1 00	PEMAGO PS. PORTAGLE 2 (AUT DG (1 00)	PEMACE PS. PSR. PS. I Y O./T. SQ (100)	PEMACE PRE SAIRE PREZ Z SAIT DO T OO)	CALICS PROC JAMM PROGRANCY 59 1.00	MC-CAV REFL .Out.pg (1.00)	LASPOW INC JEEL OUT JOG 1.00	PEM ACC, PSL PERLPSL2 X, OUT, DG (100)	MCMCL SERVO .Out.og 0.99;	IS MOLTM SCINF L. NI SG 0.00	MO-CAV TRANS -Suit_og -0.9%	CALAST PROC JAMM DELTA CTIL AOM DO 0.00	POLITICAL JAMES OUT DO 1993;	(SLEMC, P21 SLOW, DVT 20 (192)	(AGPON PMC (But in) (087)	0.85)	MC-MG_ SERVE ML MG C-85)
44.22	TABLE POLI Z-OUTLOG ILOG	PORTABLE 2 DUT DG 11001	PSMACE PSL 348.5.76.2 2.07.59 (100)	PEM-ADE PSL PER PSL1 X-OUTLOG (1-00)	MC-CAV-REPL OUT.00 1.00	ASPONENC ASPLOVE 29 0.00	CALICS, PRICE JAPAN, PREGMENCY JOS 1.00	PEM-ACS, PSL PER-PSL2 X-OUT, DQ (100)	MC-CAY TRANS OUT DG 0.97	ISMOLTM SON JUNI 20 099	MCMO, SERVO BUT.DO IDSE	CAL-CS PROC XAPM CRLTA CTRL_AOM .DQ C-87)	PRUMERCAY ARTH, OUT, DO 1006	(346MC, P2T , B.OW, OVT , 202 (0.91)	ALPON FIAG Out DO ONE	00 000 00 000 00 000 0.87)	MALACE MEE MALE MEE, LINE ME CAN
44.23	1504-400-256. 140-2-756.1 2-047-00 1-00	PENHAGO PSI. PORTABLE 2 OUT. DG (100)	PSM-ACC PSL PSM-PSLI -Y-OuT_BQ (100)	PEM-ACC PS. SABLE PS.2 I OUTLOG (100)	GALICE PROC AARM FREGUNINGS EQ 1.00	MC-CAV PEPL 0./1.00 0.70)	FON PSI.2 X DVE.00 0.92	LAS-POW_BAG JACPL_GUT LOG (199)	MGMCE TM MCMF_L_MI .0Q 0.98)	MC-MCL_SERVO OUT_DO COS	MC-CAY_TRANS OUT_CO CAT	CALCE PROC XARM DOUB CTIL AOM .DQ 0.971	PRIMITEN MEL OUT DO 1933	(M. 694), 521 (M. 694) 50 (587)	NAME AND TABLE OFF. ZOLE SO DAY	MC MOL SERVO .NC DO (0.67)	OUT DO (DAS)
44.25	POMACC PS. PORTABLE 2.0/1.00	PENAGO PSL TABLE PSLI Z.OJT DQ	PSMACC PSL TREE PSLE Z OUT DO	95MACC PSL JERL PSL1 JLOUIL DG	CALCS PROC XATM PROGRESSO DQ	LAGEOW MC MEN, DUT DQ	MOGALPES. .OUT.DQ	PEMACE PS. BELEVAL LOJE DO	MONCL SERVO .OUT.DG	MOMOLIM MORELLINI DO	ALCOMOL MON. DEJA STR., AGM	MOCAL DAMA DULDA	PSURFFCAY ANA. OUT DO	ESLENC PZT SLOW DUT DO			

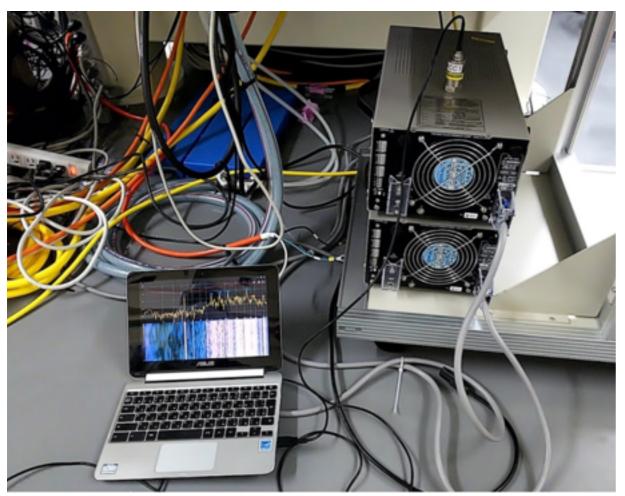
- This 44Hz noise has many coherent channels
- Large coherent channels are accelerometers in the PSL room

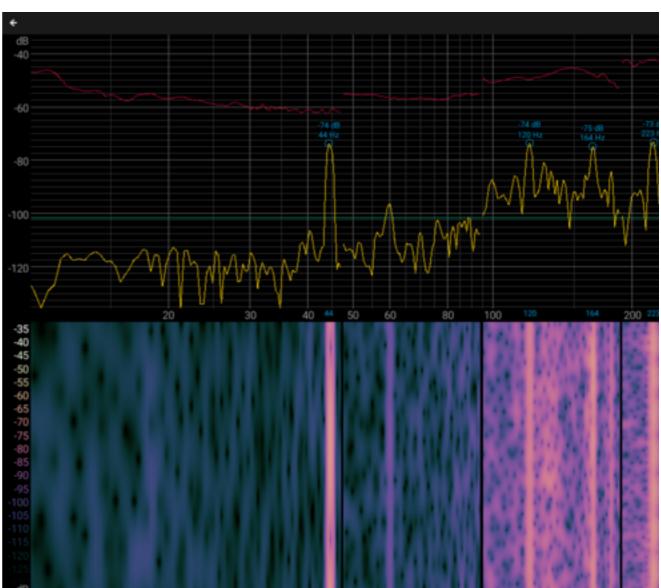


- We found this peak suddenly appeared at the Dec.18th, 2018
- Used Yuzu summary page https://www.icrr.u-tokyo.ac.jp/~yuzu/bKAGRA_summary/html/20181218_PEM.html

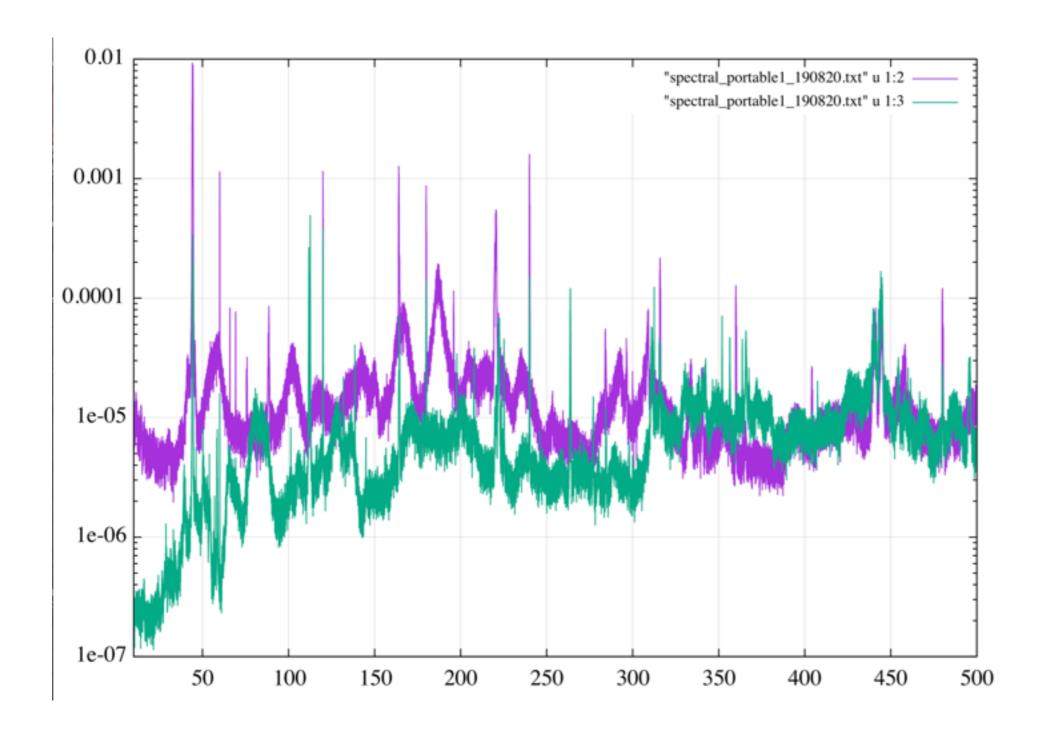


- I can identify this peak suddenly appeared 14:49 18th Dec. 2018
- Used Kozapy spectral
- No specific news from KAGRA klog http://klog.icrr.u-tokyo.ac.jp/osl/





- We found it inside the PSL room
- There is no clear vibration path to the optical table



- Set a portable accelerometer and check lines now