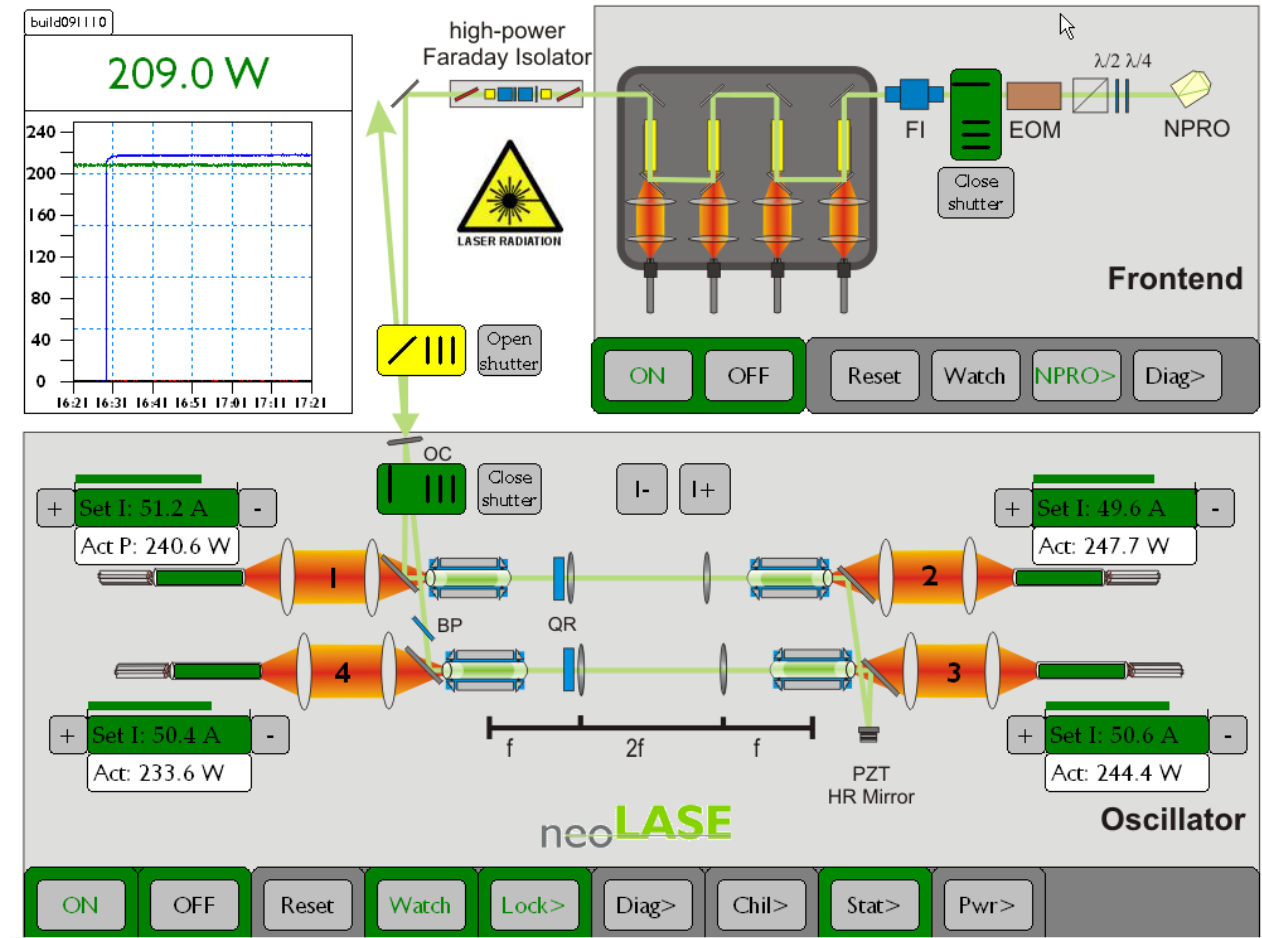
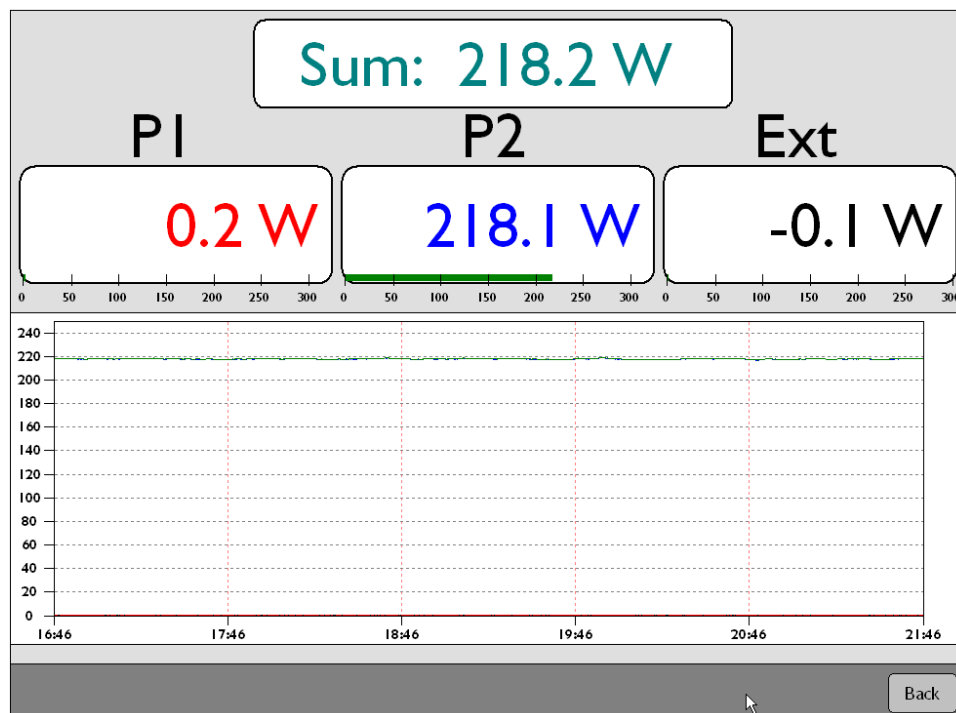


LLO PSL MEDM and Beckhoff screens after installation

Beckhoff screens (high power mode)





System status

<p>Beckhoff-COM</p> <p>IL DB1 DB2 DB3 DB4 FE CB1 CB2</p> <p>Beckhoff COM</p> <p>Interlock</p> <p>Interlock OK</p> <p>Software event</p> <p>Diode temp guards OSC</p> <p>Diode temp guards FE</p> <p>TEC power supplies</p> <p>Diode chiller flow</p> <p>Xtal chiller flow</p> <p>LDR facility interlock</p> <p>LDR safety keylock</p> <p>LDR emergency stop</p> <p>LVEA facility interlock</p> <p>LVEA safety keylock</p> <p>LAE emergency stop</p> <p>TwinSafe FB error</p>	<p>Frontend</p> <p>NPRO temp guard error</p> <p>NPRO switchoff during run</p> <p>Flow error (WD)</p> <p>Diodes temp error</p> <p>Power error (WD)</p> <p>DB heatsink overtemp</p> <p>Xtal heatsink overtemp</p> <p>Frontend lid open</p> <p style="text-align: center;">Warnings</p> <p>frontend flow</p> <p>Epics Alarm</p> <p>Service mode</p> <p>FE lid violation error</p> <p>OSC lid violation error</p>	<p>Oscillator</p> <p>Head 1-4 flow error</p> <p>Power meter flow error</p> <p>Pressure error</p> <p>Diodes temp error</p> <p>Power error (WD)</p> <p>DB heatsinks overtemp</p> <p>Oscillator lid open</p> <p>head 1-4 flow</p> <p>power meter flow</p> <p>LRA out of range</p> <p>VB program online</p> <p>check diode chiller</p> <p>check Xtal chiller</p>
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Diode Chiller

Set temp:	18.0 °C
Act temp:	18.0 °C
Flow:	24.8 lpm
Conduct:	6.3 uS
Status:	ON
Hours:	2829 h

Diode chiller

Xtal chiller

Set temp:	18.0 °C
Act temp:	17.9 °C
Flow:	16.0 lpm
Conduct:	4.5 uS
Status:	ON
Hours:	2828 h

Xtal chiller

Sensors

pressure 1: 6.0 bar	flow head 1: 0.6 lpm	flow head 3: 0.6 lpm	flow frontend: 1.5 lpm
pressure 2: 1.9 bar	flow head 2: 0.6 lpm	flow head 4: 0.6 lpm	flow pwrmt: 1.4 lpm

Injection Locking

PD Locking DC: Act: 2.134 V Mean: 2.141 V

PZT voltage: Act: 5.08 V

RelockCounter: 93

Actuator position: Act: 4498.0 um

set servo gain: + Set: -8.90 V -

set reference level: + Set: -1.20 V -

set error signal offset: + Set: -1.50 V -

set ref. point: Set: 4500.0 um

set step size: Set: 2.0 um

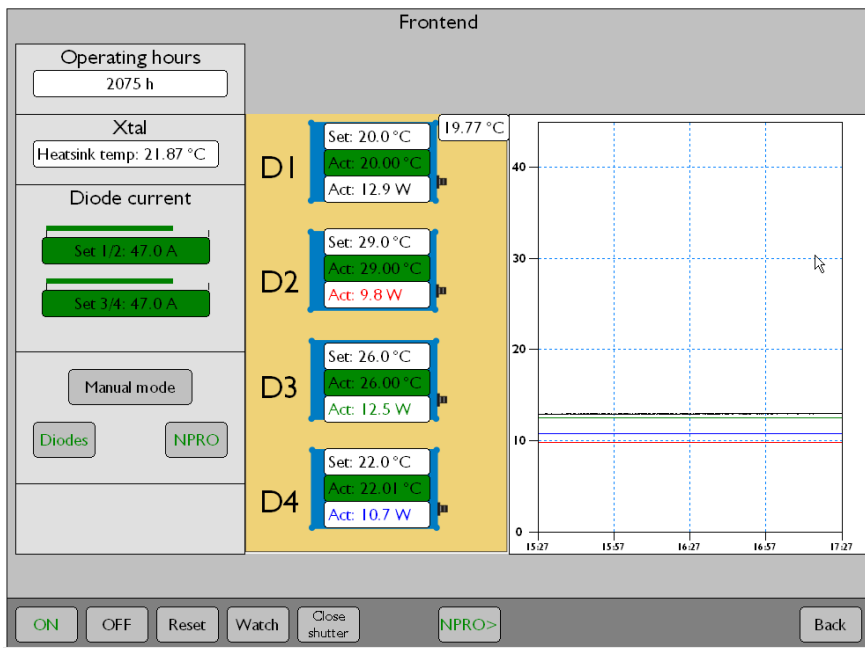
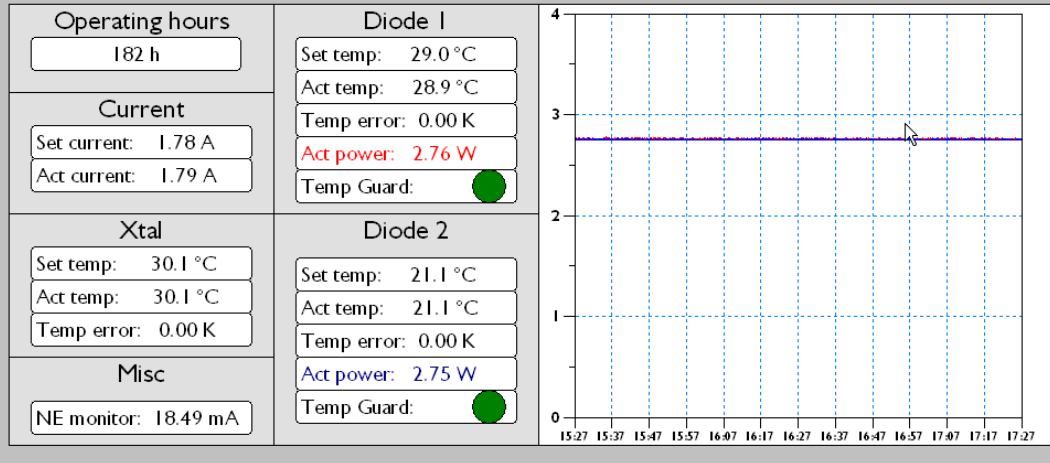
set max range: Set: 50.0 um

set PZT max voltage: Set: 6.5 V

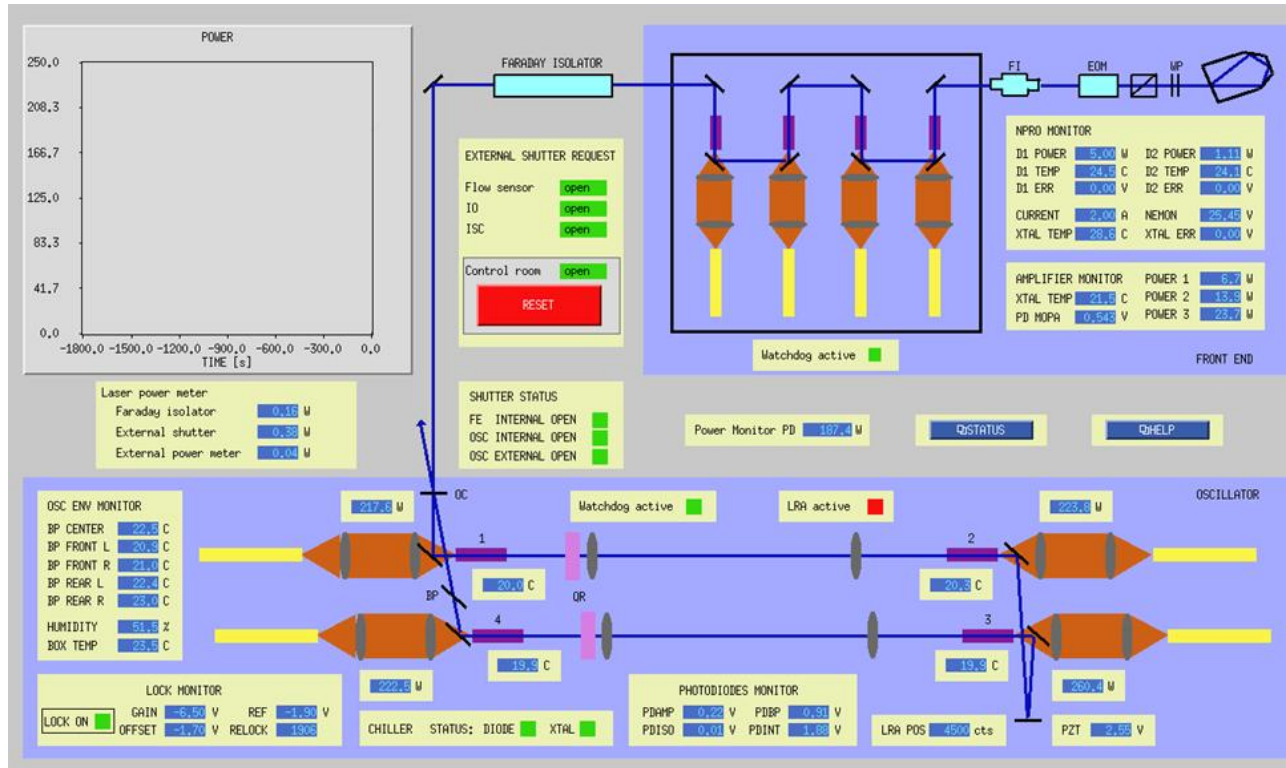
set PZT min voltage: Set: 1.5 V

Lock on
Ramp
TFin
LRA
ref point
home
Back

NPRO



MEDM screens



SYSTEM STATUS

Interlock OK	■
Diode temp guards OSC	■
Diode temp guards FE	■
TEC power supplies	■
Diode chiller flow	■
Xtal chiller flow	■
LDR facility interlock	■
LDR safety keylock	■
LDR emergency stop	■
LVEA facility interlock	■
LVEA safety keylock	■
LAE emergency stop	■
TwinSafe FB error	■

FRONTEND

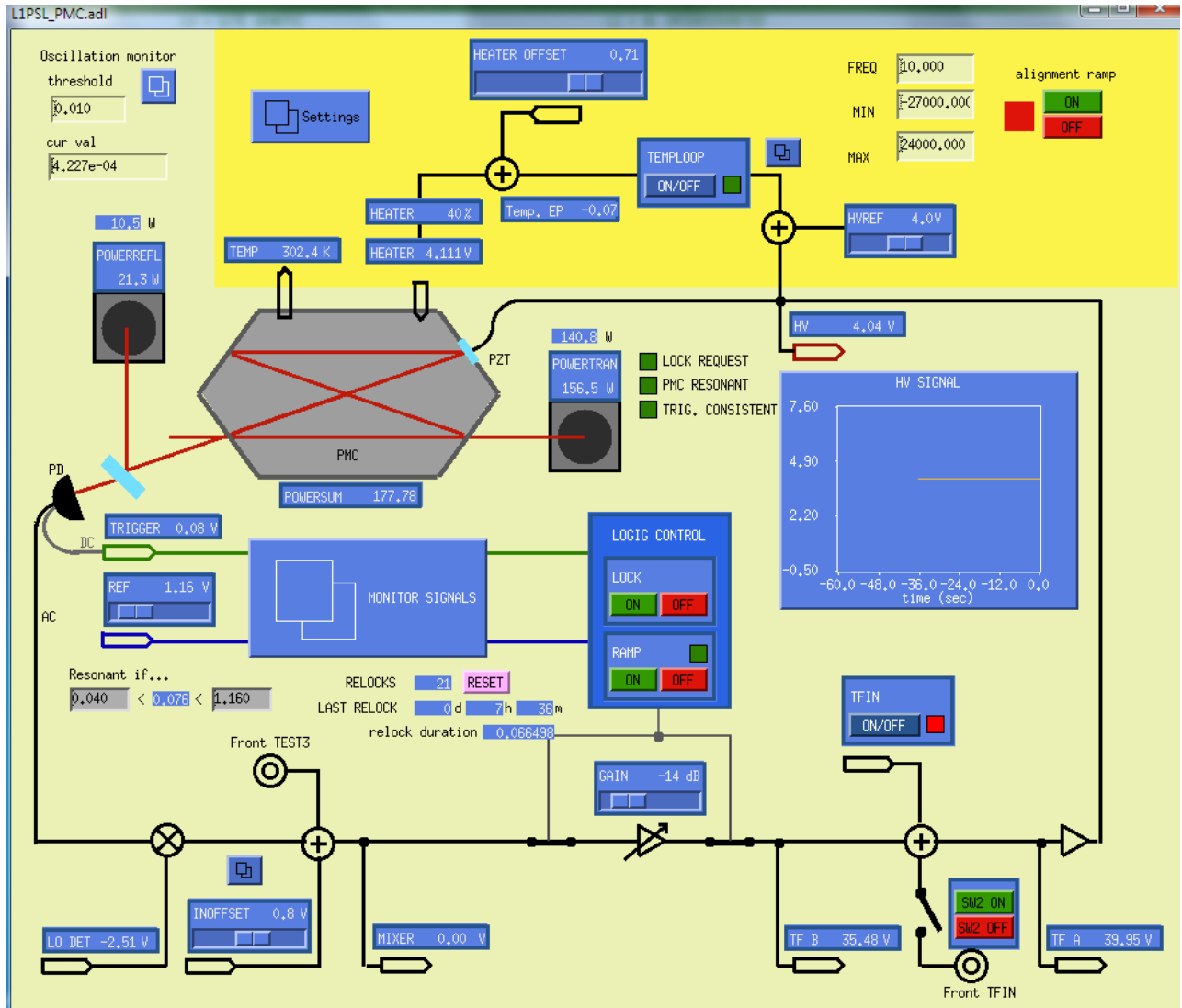
NPRO temp guard error	■
NPRO running	■
Flow error (WD)	■
Diodes temp error	■
Power error (WD)	■
DB heatsink overtemp	■
Xtal heatsink overtemp	■
Frontend lid open	■

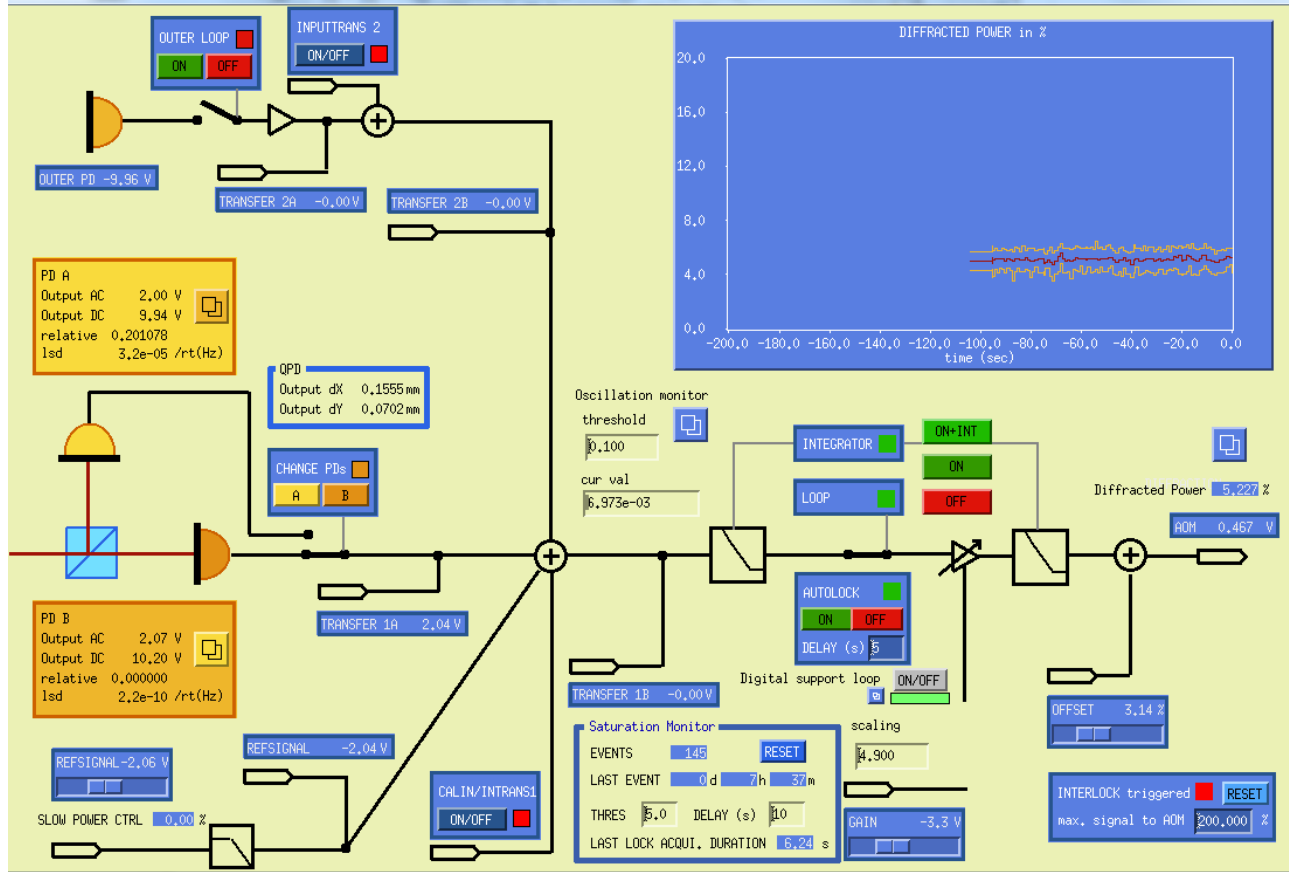
OSCILLATOR

Head 1-4 flow error	■
Power meter flow error	■
Pressure error	■
Diodes temp error	■
Power error (WD)	■
DB heatsinks overtemp	■
Oscillator lid open	■

WARNINGS

Frontend flow	■	Head 1-4 flow	■
Epics Alarm	■	Power meter flow	■
Service mode	■	LRA out of range	■
FE lid violation error	■	VB program online	■
OSC lid violation error	■	check diode chiller	■
		check Xtal chiller	■





NPRO crystal temperatur [K] 0,0475
L1:PSL-FSS_TEMP

MIN [K]: -0,2500
MAX [K]: 0,2500
DUR [s]: 500,0000

MANUAL
RAMP
SEARCH

LOOP ON
PZT RAMP
OFF

PZT ramp
Loop closed

LO MON [%]: -88,9

RESONANT THRESHOLD [V]: 0,0500

TPD [V]: 0,5012
TPD [Vpp]: 0,0069

PZT RAMP
MIN [V]: -8,0000
MAX [V]: 8,0000
FRQ [Hz]: 10,0000
PHASE [deg]: 130,0000

MODEPOS [1]: 10000000
PHASEPOS [deg]: 270,0549

MODE FOUND
4: REFCAV IS RESONANT

TEMP SEARCH RAMP
MIN [K]: -0,1500
MAX [K]: 0,1500
DUR [s]: 90,0000

AUTOLOCK STATE: 4,0000
DELAY [s]: 5,0000

TEST1 INPUT
TEST2 INPUT
Temp loop

RFPD DC [V]: -0,0192
MIXR [V]: 0,0037
MIXR [Vpp]: 0,0036

OSCILLATION THRESHOLD [V]: 4,0000

L1:PSL-FSS_COMMON_GAIN
L1:PSL-FSS_FAST_GAIN

LOCK ACQUISITIONS: 299
LOCKED SINCE: 0d 4h 58m
LAST LOCK ACQUI. DURATION [s]: 0,200

WIDEBAND INPUT

EOM MON (PCM) [V]: -110,906
[Vpp]: 0,2716

The interface contains two main graphs. The top graph shows temperature in Kelvin (K) on the y-axis (ranging from -1.0 to 1.0) against time on the x-axis (ranging from -60.0 to 0.0). The bottom graph shows oscillation amplitude on the y-axis (ranging from -10.0 to 10.0) against time on the x-axis (ranging from -60.0 to 0.0). Both graphs show a sharp signal at time 0.0.

L1PSL_STATUS.adl

LASER

FRONTEND

NPRO AMPLIFIER
 WATCH WARNINGS

HPO

LOCKED RELOCKS 1940
 LRA LRA POS 4498
 WATCH WARNINGS
 External Shutter
 Output Power 187.8 W

CHILLER

DIODE XTAL

[LASER MONITOR SCREEN](#)

PMC

LOCKED TEMPLOOP
 RELOCKS 21

LOCKED SINCE 0 d 15 h 33 m
 LAST LOCK ACQUI. DURATION 0.066 s

POWER IN REFLECTION 21.8 W
 + POWER IN TRANSMISSION 155.7 W
 TOTAL POWER AT PMC 177.5 W

[PMC CONTROL SCREEN](#)

ISS

LOOP CLOSED INTEGRATORS
 AUTOLOCK OUTER LOOP

AOM Diffracted Power 5.659 %
 SATURATION EVENTS 145
 last Event 0 d 15 h 33 m
 LAST LOCK ACQUI. DURATION 6.239 s

[ISS CONTROL SCREEN](#)

FSS

LOOP CLOSED TEMPLOOP
 AUTOLOCK **REFCAV IS RESONANT**

LOCK ACQUISITIONS 300
 LOCKED SINCE 0 d 7 h 49 m
 LAST LOCK ACQUI. DURATION 10 s

[FSS CONTROL SCREEN](#)

DATA ACQUISITION

L11OPPSLO
 L1PSLISS
 L1PSLFSS
 L1IPSLPMC
 L1IPSLDBB

ENVIRONMENT

LASER ROOM

TEMP 73.0 F HUMIDITY 45.0 %
 # PARTICLES >= 0.3 um 0
 # PARTICLES >= 1 um 0

close high power laser shutter

20.07.2011 13:20