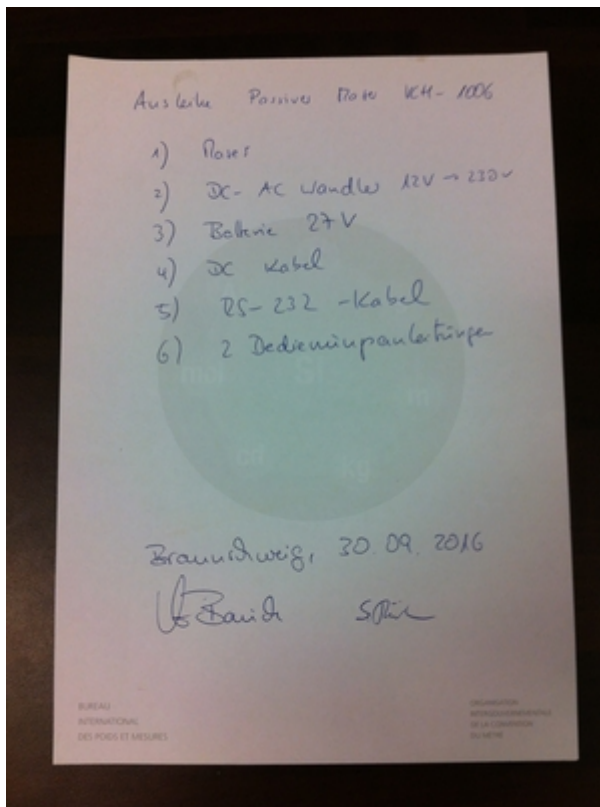


HMaser (PHM-H7)

Information

- Herr Bauch steht **jederzeit für Fragen parat** und würde auch nach Hannover kommen, falls es Probleme mit dem Maser geben sollte!
- Drift des Masers kann nur gegen das PTB-Link-Licht vermessen werden!!! Daraus kann dann eine Drift des Masers berechnet werden. Messdauer: > ~1 Woche
 - Anschließend kann man im internen Synthesizer des Masers die Drift einstellen!
- Niemals eine Referenz an den Maser anschließen!
- Niemals die Temperatur des Masers verändern!
- **NICHTS AM MASER einstellen!**
- Regelmäßig (einmal im Jahr) die "history.dat" Dateien Herrn Bauch zukommen lassen, dieser sendet sie weiter nach Russland und die checken dann den PHM
- borrowed from PTB:



- Maser-Software [Monitor VCH-1006](#) installed on ResLab-Maser-Laptop
- Maser has a AC (rechargeable battery) and DC (Schuko) port
- Maser manual:
[h-maser_maintenance_and_service_manual.pdf](#)
- Maser software manual:
[h-maser_program_monitor_vch-1006.pdf](#)

12.2020

Qstat und D2h sind anders zu den anderen Werten zuvor.

VCH-1006 [COM3, device #69]

File Command Window

Parameters [Pump alarm] [Accumulator switched off]

Uacc = 0.392 V	U5M1 = 1.15 V	Upump = 0.0146 kV
Uext = 27.9 V	U5M2 = 1.02 V	Ipump = 1.95 mA
U+27 = 27.4 V	U5M3 = 0.693 V	Upur = 1.06 V
U+15 = 15.4 V	U10M = 0.664 V	Ipur = 0.613 A
U-15 = -15 V	U100M = 0.852 V	Uhfo = 27 V
U+5 = 4.99 V	U20.405 = 3.85 V	Ihfo = 0.542 A
U+3.3 = 3.29 V	Uif = 1.82 V	Udisch = 2.54 V
Uac/dc = 28 V	U2h = 0.842 V	CPUtemp = 39.5

Thermostats

Side	-1
Bottom	-1
Hydr	0
Pressure	2.55 Atm

FLL system [No synchronization] [DAC overflow]

Rctl = 4095	Rstat = 21819	R1h = 489	Pumping = 3400
Qctl = 1812	Qstat = 3	Q1h = -1242	ModIndx = 5000
kRez=2	P_QTZ=8	D2h=2515	QuartzLoop ON
kQtz=7	phi=6, cor=0	DDSerr=2560	CavityLoop ON
F = 6392e-14	Rdet = -500	rsv = 500	

15:03:51 - time to Read data 51 s

17.12.2020 15:03:02 Data read(COM3)

02.2020

IG Pump Wert ist blau (!?!)

VCH-1006 [COM3, device #69]

File Command Window

Parameters [Pump alarm] [Accumulator switched off]

Uacc = 0.49 V	U5M1 = 1.15 V	Upump = 0.0146 kV
Uext = 27.9 V	U5M2 = 1.02 V	Ipump = 2.44 mA
U+27 = 27.4 V	U5M3 = 0.693 V	Upur = 1.07 V
U+15 = 15.4 V	U10M = 0.945 V	Ipur = 0.613 A
U-15 = -15 V	U100M = 0.862 V	Uhfo = 27.3 V
U+5 = 5.01 V	U20.405 = 3.86 V	Ihfo = 0.559 A
U+3.3 = 3.3 V	Uif = 1.98 V	Udisch = 2.52 V
Uac/dc = 28.1 V	U2h = 0.84 V	CPUtemp = 39.7

Thermostats

Side	0
Bottom	0
Hydr	0
Pressure	2.88 Atm

FLL system

Rctl = 4095	Rstat = 21802	R1h = 1797	Pumping = 3400
Qctl = 1812	Qstat = 32226	Q1h = -572	ModIdx = 5000
kRez=2	P_QTZ=8	D2h=-10331	QuartzLoop ON
kQtz=7	phi=6, cor=0	DDSerr=2560	CavityLoop ON
F = 6392e-14	Rdet = -500	rsy = 500	

15:06:33 - time to Read data 63 s

18.02.2020 15:05:56 Data read(COM3)

2019

Der Wert der blau ist, ist weil der interne Akku nicht mehr geladen werden kann. → ist Herrn Bauch bekannt

VCH-1006 [COM3, device #69]

FileCommandWindow

Parameters

Uacc = 0.572 V

Uext = 27.9 V

U+27 = 27.4 V

U+15 = 15.4 V

U-15 = -15 V

U+5 = 4.99 V

U+3.3 = 3.3 V

Uac/dc = 28 V

U5M1 = 1.15 V

U5M2 = 1.02 V

U5M3 = 0.693 V

U10M = 0.801 V

U100M = 0.864 V

U20.405 = 3.86 V

Uif = 1.99 V

U2h = 0.842 V

Upump = 3.5 kV

Ipump = 25.9 mkA

Upur = 1.07 V

Ipur = 0.61 A

Uhfo = 27.3 V

Ihfo = 0.557 A

Udisch = 2.53 V

CPUtemp = 39.9

Thermostats

Side0

Bottom0

Hydr0

Pressure3 Atm

FLL system

Rctl = 4095

Qctl = 1812

kRez=2

kQtz=7

F = 6352e-14

Rstat = 21720

Qstat = 32352

P_QTZ=8

phi=6, cor=0

R1h = 1988

Q1h = 793

D2h=-10508

DDSerr=0

Rdet = -500

Pumping = 3400

ModIndx = 5000

QuartzLoop ON

CavityLoop ON

rsv = 500

11:02:12 - time to Read data 90 s

18.11.2019 11:02:03: Debug FLL mode is off

2018

- Hannover → PTB

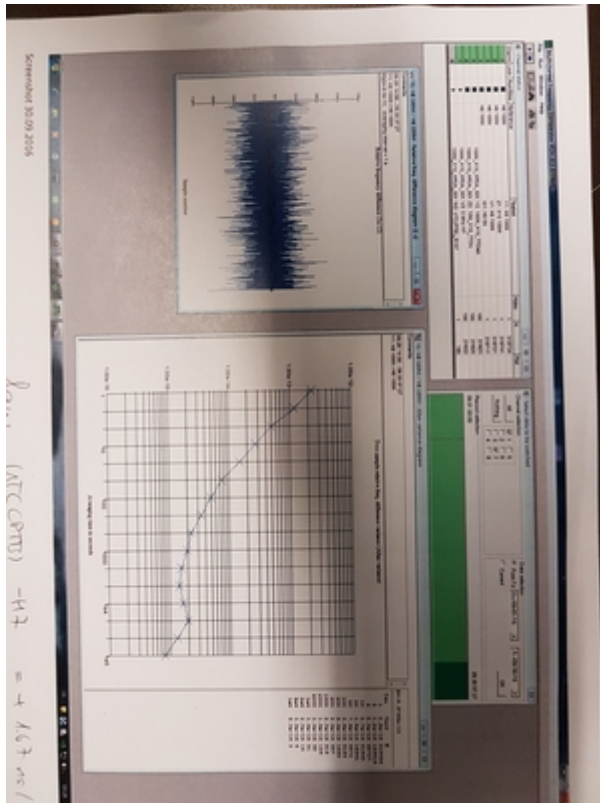
2016

- Maser Measurement by PTB:

[h-maser_stability.pdf](#)

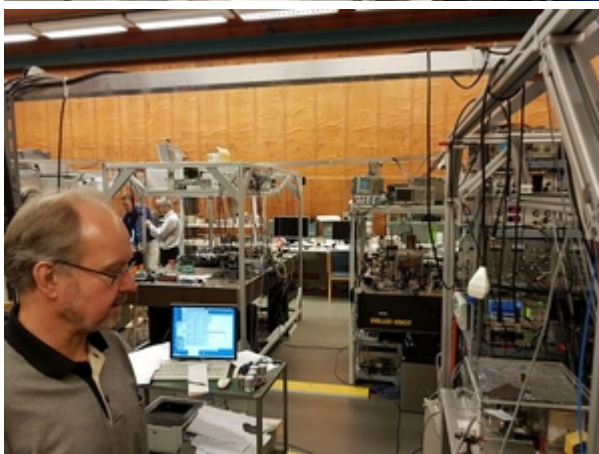
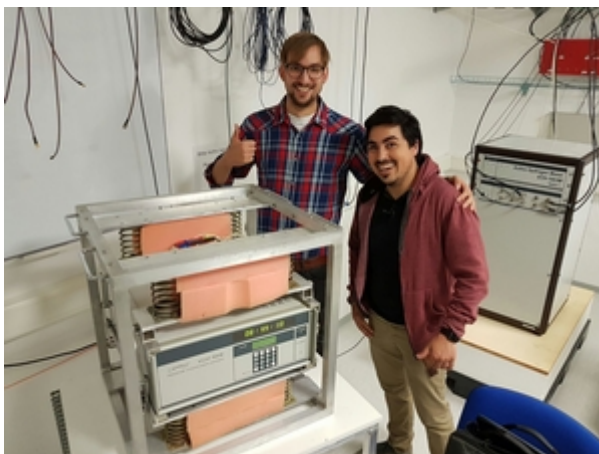
<https://iqwiki.iqo.uni-hannover.de/>

Printed on 2025/07/04 10:18



- Maser & Software work at IQ
- PTB → Hannover





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Last update: 2020/12/17 14:08

