

TELBE beamtime: 06.12.2018 night shift (from the LAB)

Notebook: Old TELBE Notebook (1)

Created: 06.12.2018 22:01

Updated: 09.12.2018 00:15

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10:00 realigned the EOS,

file:002 - 2 mm ZnTe at EOS position, WG at 120 degs, gain 1, used det36 detectors

aborted - forgote to change the range

started from 50mm position, 150 steps with 100 μ m step

file:003

put 2100 GHz filter while the second loops was still running

set gain 10, removed the WG polarizer

file:004

Rearranged the green overlapping as the opening angle was too big to aligned beams inside cryostat.

put sample in, room temperature,

power BDA - 117 mW

file:005_sample_RT_EOS_2mm_ZnTe_gain10

00:15 started cooling the samples

Temperature set to 80 K

00:50

power - 117 mW, lockin 101 mV

file:006_sample_80p8K_EOS_2mm_ZnTe_gain10

temperature at the end of the scan: 80.1K

01:10

power - 117-118 mW, lockin - 102 mV

set temperature to 65K

file:007_sample_65p7K_EOS_2mm_ZnTe_gain10

01:45

temperature at the end of the scan: 64.5 K

power BDA - 103 mW, lockin 101 mV

set temperature to 50 K, scan range: 48 mm to 42 mm, -0,1 step size, 3 loops

file:008_sample_50p4K_EOS_2mm_ZnTe_gain10

aborted after 1 loop and repeated again with proper range, start 48, 60 steps, 0,1 mm step size

file:009_sample_50p4K_EOS_2mm_ZnTe_gain10

temperature - 49,9K

power- 105 mW, lockin 101 mV

set temperature 35 K

file:010_sample_34p8K_EOS_2mm_ZnTe_gain10

power- 106 mW, lockin 102 mV
set temperature 15 K
file:011_sample_17p2K_EOS_2mm_ZnTe_gain10

Power dependence

power- 105 mW, lockin 101 mV (polarizer angle 50)
set temperature 50 K
file:012_sample_50p9K_EOS_2mm_ZnTe_gain10

power- 105 mW, lockin 101 mV (polarizer angle 70)
set temperature 50 K
file:013_sample_52p0K_EOS_2mm_ZnTe_gain10

power- 104 mW, lockin 101 mV (polarizer angle 85)
set temperature 50 K
file:014_sample_52p0K_EOS_2mm_ZnTe_gain10

power- 104 mW, lockin 101 mV (polarizer angle 75)
set temperature 50 K
file:015_sample_52p0K_EOS_2mm_ZnTe_gain10

power- 105 mW, lockin 101 mV (THz power full)
set temperature 100 K
file:016_sample_100p6K_EOS_2mm_ZnTe_gain10

power- 105 mW, lockin 101 mV (THz power full)
set temperature 125 K
file:017_sample_125p4K_EOS_2mm_ZnTe_gain10

power- 117 mW, (mirror was tilted!)

lockin 101 mV (THz power full)

+++++detailed temperature dependence+++++

set temperature 150K, power - 116 mW, lock in 101 mV
2 loops, start 48, 60 steps, -0.1 step size
file:018_sample_149p7K_EOS_2mm_ZnTe_gain10
power - 115 mW

set temperature 130K, power - 115 mW, lock in 101 mV
file:019_sample_130p5K_EOS_2mm_ZnTe_gain10
2 loops, start 48, 60 steps, -0.1 step size

power - 115 mW
Set temperature to 110K
power 115 mW, lockin - 100 mV
file:020_sample_110pK_EOS_2mm_ZnTe_gain10

power- 116 mW

set temperature to 100K.
file:021_sample_100p6K_EOS_2mm_ZnTe_gain10
power BDA:115 mW
6:30

set temperature to 97K.
file:022_sample_97p3K_EOS_2mm_ZnTe_gain10
97.1 K at end of measurement

