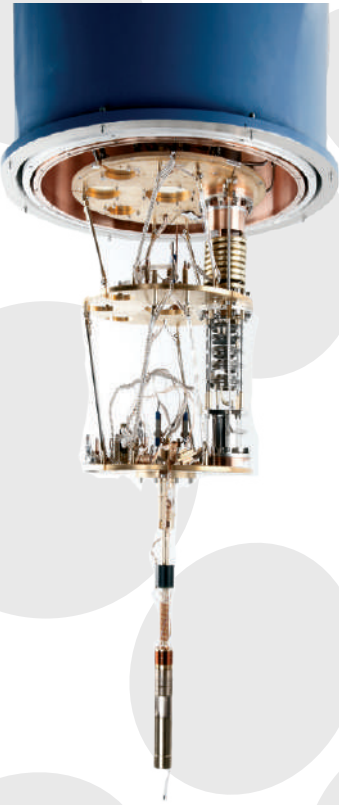


# mK - SPM System

## in Cryogen Free Dilution Refrigerator



### Typical Specification mK - SPM

- Robust design
- Dedicated control electronics, acquisition and analyses software
- Several operation modes, STM, QTF-AFM, SHPM etc.



### Dilution Refrigerator

- Fully integrated Cryofree magnets, up to 20T
- Base temperature:  $\leq 7\text{mK}$  expected
- Cooling power 200/400/600/1000 $\mu\text{W}$  at 100mK
- Automatic control of the dilution refrigerator from RT to base temperature

## System Specifications

**Imaging Modes:** SSRM, PRFM, KPFM, c-AFM, STM, AFM, contact AFM, non-contact AFM, MFM, Quartz/Akiyama AFM, EFM, SNOM

Temperature	Ultra Large Area Scan Head	Large Area Scan Head	Standart Scan Head
300K	200 x 200 x 7.2 $\mu\text{m}$	150x150x7 $\mu\text{m}$	52x52x4.8 $\mu\text{m}$
77K	50 x 50 x 4.8 $\mu\text{m}$	36x36x1.8 $\mu\text{m}$	14x14x1.2 $\mu\text{m}$
4.2K	30 x 30 x 2.4 $\mu\text{m}$	18x18x0.8 $\mu\text{m}$	6x6x0.5 $\mu\text{m}$

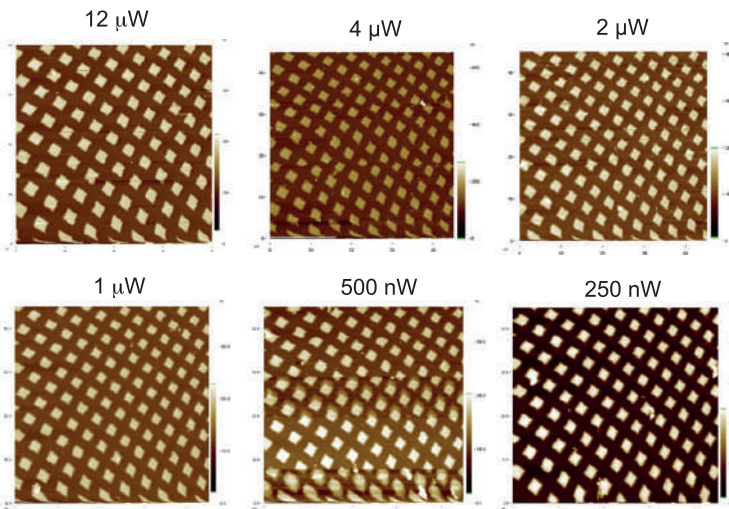
**Sample Approach:** Stick-slip type; 10mm Z,  $\varnothing 3$  mm XY range with 50 - 800nm step size

**Sample Size:** 15x15x5mm maximum

**Temperature Range:** 10mK - 300K (Limited by the cryogenic system)

**Magnetic Field:** up to 20T

**Compatibility:** Competible with most Dilution Refrigerators (DR)



Laser Power

Ultra Low Power Operation  
of Interferometer

