

Control

Stepping motor

and

Displacement sensor

and

Actuators

Dan Chen

2013/11/19 Cryo-payload meeting

Test of stepping motor in cryogenic temperature

➔ For initial alignment on platform

101	Stepping motor	117日	13/12/05 (木)	14/03/31 (月)	0%		1.5.3
102	Candidate list	27日	13/12/05 (木)	13/12/31 (火)	0%	Sekiguchi Takanori, Takahas R.	1.5.3.1
103	Procurement of candidates	31日	14/01/01 (水)	14/01/31 (金) 102	0%	Takahashi R., Yamamoto Kazuhiro	1.5.3.2
104	Preparation for candidates test	28日	14/02/01 (土)	14/02/28 (金)	0%	To be determined	1.5.3.3
105	Test at cryo temp	1.03月	14/03/01 (土)	14/03/31 (月) 103,104	0%	To be determined (ICRR), Small	1.5.3.4

Status

Candidate list: Now we have two candidates. Stepping mortor and Picomotor

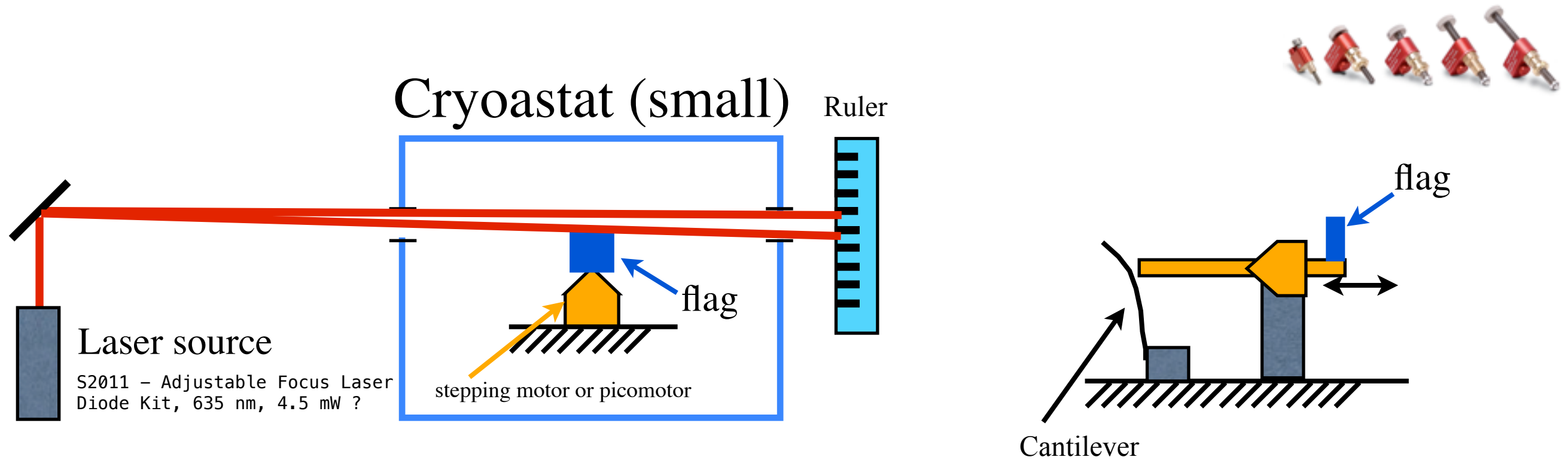
We have a picomotor for low temperature test now. -> We are prepareing the cooling test.

Candidate list	Now we have two candidates: Stepping mortor and Picomotor
Procurement	Stepping motor: derivery time=2.5month Picomotor: we have one.
Preparation for test	Now in progress
Cryo test	Not yet

Shall we order the stepping motor for test?

Test of stepping motor in cryogenic temperature

➔ For initial alignment on platform



Purpose	Check the stepping motor works in cryogenic temperature with load.
Who	Dan, Gerald, and so on
Where	Small cryostat (ICRR)
Status	We have a picomotor. We are preapreing other stuffs.

Test of Displacement sensor and actuators (OSEM) in cryogenic temperature

OSEM is a local control system which has a shadow sensor and a coil actuator

➔ (Between Intermediate Mass and Intermediate Recoil Mass)

90	Candidate list of light sources and photo diodes	12日	13/11/04 (月)	13/11/15 (金)	0%	Suzuki T, Takahashi R., Yamamoto Kazuhiro, Chen Dan	1.5.1.1
91	Procurement of candidates of light sources and photo diode	26日	13/11/16 (土)	13/12/11 (水) 90	0%	Chen Dan	1.5.1.2
92	Preparation of test for the candidates of light sources and photo diode	12日	13/11/29 (金)	13/12/10 (火)	0%	Chen Dan	1.5.1.3
93	Test for the candidates of light sources and photo diode	20日	13/12/12 (木)	13/12/31 (火) 92,91	0%	Chen Dan, Small cryostat	1.5.1.4
94	Preparation for test of sensor	31日	14/01/01 (水)	14/01/31 (金) 93	0%	To be determined	1.5.1.5
95	Test of sensor at cryogenic temperature	59日	14/02/01 (土)	14/03/31 (月) 94	0%	To be determined	1.5.1.6

Status

Candidate list	LED:OP224,OP232 PD:S1223-01(HamaPhoto)
Procurement	Not yet. But we have FGA21.
Preparation	Apparatus for FGA21 are OK.
Cryo test	FGA21 are in progress.

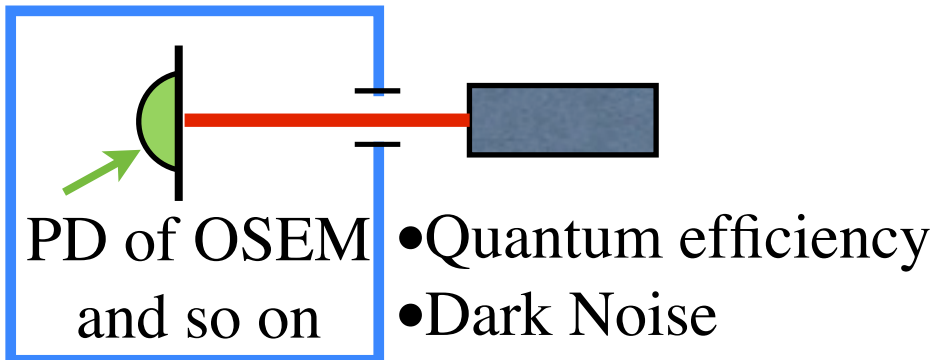
Test of Displacement sensor and actuators (OSEM) in cryogenic temperature

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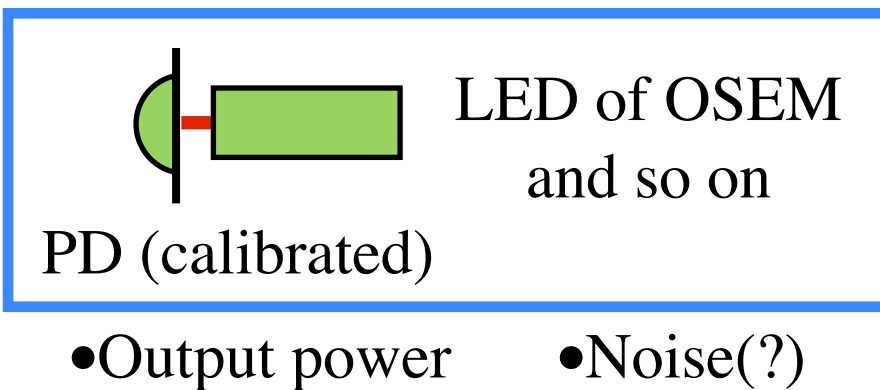
1st step

Cryoastat (small)



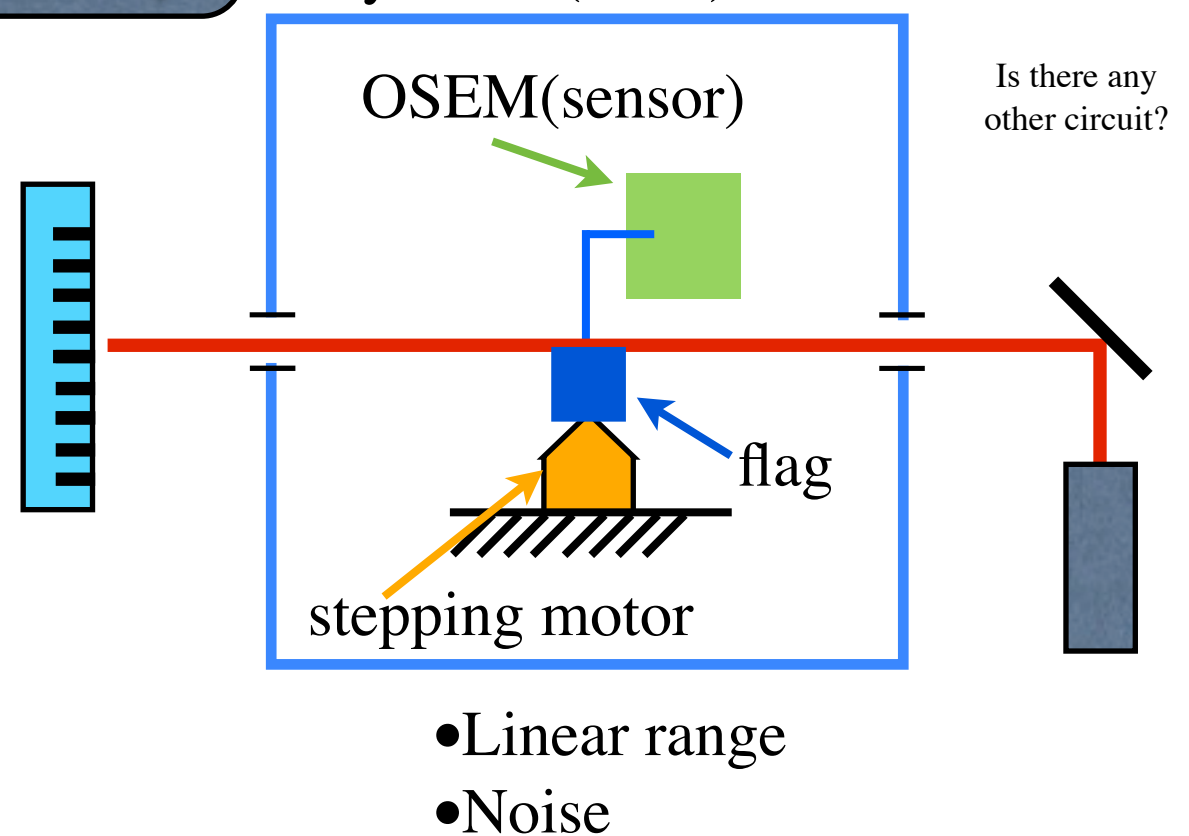
2nd step

Cryoastat (small)



3rd step

Cryoastat (mid?)



Purpose	Check the performance of OSEM in cryogenic temperature. (Linear range and noise of sensor)
Who	Dan, Gerald, and so on
Where	Small cryostat and mid-cryostat? (ICRR)
Status	We are measure the quantum efficiency of FGA21.

Actuator