

# S6 Detector Characterization

April 13, 2011

## H1 parameters

<i>parameter</i>	<i>sym.</i>	<i>value</i>	<i>ilog link</i>	<i>method</i>
arm cavity phase gain	<i>rcp</i>	137		
arm cavity pole	fc			
carrier recycling gain	<i>gr</i> <sup>2</sup>	66	2008-12-15	
		$59 \pm 6$	2008-12-15	
			2007-10-19	scatterometer
RSB modulation depth	$\Gamma_1$	0.341	2008-11-18	bounce into omc
NSRSB modulation depth	$\Gamma_2$	0.147	2008-11-18	
IOO eff (PSL to RM)		0.776	2008-07-23	
arm to OMC MM		$0.803 \pm 0.002$	2010-09-09	single-bounce
		0.702	2010-07-19	full ifo, 20W
OMC MM		$0.57 < MM < 0.84$	2009-04-17	mode scan, full ifo
AS DC/RF BS		0.97		<i>nominal value</i>
output FI eff		?		
OMC transmission				
OMC PD QE	$\eta$			
MC PWR IN calibration		unity		<i>nominal value</i>

## L1 parameters

<i>parameter</i>	<i>sym.</i>	<i>value</i>	<i>ilog link</i>	<i>method</i>
arm cavity phase gain	$rcp$	137		
arm cavity pole	$fc$	85.1, 82.3 Hz	2010-06-24	
carrier recycling gain	$gcr^2$	36		
		39	2007-10-10	PODC
RSB modulation depth	$\Gamma_1$	0.329 rad	2009-06-09	bounce into OMC
	$\Gamma_1$	$0.324 \pm 0.001$	2009-02-13	OSA on PSL
NRSB modulation depth	$\Gamma_2$	$0.078 \pm 0.006$	2009-02-13	OSA on PSL
33 MHz mod depth	$\Gamma_{MC}$	$0.089 \pm 0.010$	2009-02-13	OSA on PSL
arm to OMC MM		0.89 - 0.93	2009-07-14	full ifo, CDREFL
Ifo modematching		0.93	2008-10-11	
IOO efficiency			G080490	
OMC modematching				
output FI trans		$0.9805 \pm 0.0028$	2008-08-17	
AS DC/RF BS		0.972	2009-05-11	
OMC transmission				
OMC visibility		0.947	2009-09-18	
OMC QE * (1 - L)		0.954	2009-09-18	
MC PWR IN calibration		1.17 W/count	2010-04-21	