

Requirements Summary



CCAT

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Radiometry



	Requirement	Goal	remark
Wavelength	350 – 1400	200 – 2500	μm
Aperture	25 m		
Field of view	10'	20'	
Half WFE	< 12.5 μm	< 9.5 μm	rms
Site condns.	< 1.0 mm	< 0.7 mm	median pwv
Polarization	0.2%	0.05%	after cal.
Emissivity	<10% @ >300 μm	< 5% @ >800 μm	
	<20% @ 200 μm		

Pointing and Scanning



	Requirement	Goal	remark
Pntg, blind	2"	0.5"	rms
Pntg, offset	0.3"	0.2"	within 1°
Pntg, repeat.	0.3"	0.2"	rms, 1 hour
Scanning rate	0.2° s ⁻¹	1° s ⁻¹	slow/fast
Scan. accel.	0.4° s ⁻²	2° s ⁻²	short/long λ
Pointing knowledge	0.2"	1"	rms
M2 nutation	±2.5' @ 1 Hz		azimuth only

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Instrument



- ◆ Symmetric Nasmyth foci, 3 instr. each
 - Bent Cassegrain for smaller instruments
- ◆ Short and long wavelength cameras
 - SWCam: 350–650 μm 5' × 5'
 - LWCam: 750–2000 μm 15' × 15'
- ◆ f/8, 20' unvignetted diameter
- ◆ No facility instruments or field rotators

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Environmental



	Operations	Survival	remark
Wind	10	65	m s^{-1}
Temperature	-20 to +15	-30 to +25	$^{\circ}\text{C}$
Rel. Humid.	0% – 95%		
Snow load		100	kg m^{-2}
Ice build up		25	mm
Precipitation		25	mm hr^{-1}
Seismic		Zone 4	UBC
Daytime operations			If no sun on dish

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