

Alignment Overview

The following table summarises the achievable alignment results (based on FEM analysis) and compares the results with the requirement.

Instruments w.r.t. Telescope (95% Confidence Level)

	PACS	SPIRE	HIFI	Telescope	Remarks
Achievable X Direction System Level	5.1mm	5.0mm	7.4mm		w/o margin
Requirement					
• H-EPLM Requirement Specification	7.0mm	7.7mm	8.5mm		
• HIFI			8.5mm		2)
Instruments / Telescope Contribution					
• Uncertainty	1.0mm	0.5mm	2.7mm	4.3mm	
• Bias	0mm	0mm	2.0mm	3)	
• Thermoelastic	0.1mm	0.1mm	0.1mm	3)	
Achievable Lateral System Level	3.8mm	4.2mm	16.3mm		1)
Requirement					
• H-EPLM Requirement Specification	7.0mm	9.5mm	24mm		
• HIFI			24mm		2)
Instruments / Telescope Contribution					
• Uncertainty	0.5mm	1.3mm	10mm	1.14mm	
• Bias	0.5mm	0mm	1mm	3)	
• Thermoelastic	0.1mm	0.1mm	0.1mm	3)	

1) Pupil mismatch in M2 Plane

2) Proposed by HIFI

3) Uncertainty value includes bias and thermoelastics as agreed during HOWG Meeting, dated 11./12.06.02