Substrate, Beamsplitter, 40M RSE Experiment: ***BS –01***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	BS011.opd BS011.gif	R = 11.0 km
Surface 2: figure	Interferometry	100%	None	R = 21.3 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	BS011SLE.gif	Rms = 0.3 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.5 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.18nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The BS011.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, p64 ; Wyko6000 LLN/0389, p36

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Beamsplitter, 40M RSE Experiment: ***BS –02***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	BS021.opd BS021.gif	R = -18.3 km
Surface 2: figure	Interferometry	100%	None	R = 15.6 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	BS021SLE.gif	Rms = 0.5 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.4 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.13nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The BS021.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, p65 ; Wyko6000 LLN/0389, p37

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Signal Recycling Miror, 40M RSE Experiment: ***SRM - 01***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	SRM011.opd SRM011.gif	R = 370 m
Surface 2: figure	Interferometry	100%	None	R = 8.4 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	SRM011SLE.gif	Rms = 1.4 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 1.0 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.14nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The SRM011.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, pp 67, 71; Wyko6000 LLN/0389, pp39,41

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Signal Recycling Miror, 40M RSE Experiment: ***SRM - 02***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	SRM021.opd SRM021.gif	R = 380 m
Surface 2: figure	Interferometry	100%	None	R = -6.6 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	SRM021SLE.gif	Rms = 1.1 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.5 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.13nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The SRM021.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, pp 69, 70; Wyko6000 LLN/0389, pp40,41

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Signal Recycling Miror, 40M RSE Experiment: ***SRM - 03***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	SRM031.opd SRM031.gif	R = 380 m
Surface 2: figure	Interferometry	100%	None	R > 33 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	SRM031SLE.gif	Rms = 2.8 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.6 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.17nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The SRM031.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, pp 66, 71; Wyko6000 LLN/0389, pp38,41

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Power Recycling Miror, 40M RSE Experiment: ***PRM - 01***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	PRM011.opd PRM011.gif	R = 353 m
Surface 2: figure	Interferometry	100%	None	R = 10.5 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	PRM011SLE.gif	Rms = 1.0 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.4 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.14nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The PRM011.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, pp 66, 71; Wyko6000 LLN/0389, pp38,42

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Power Recycling Miror, 40M RSE Experiment: ***PRM - 02***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	PRM021.opd PRM021.gif	R = 356 m
Surface 2: figure	Interferometry	100%	None	R = -5.7 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	PRM021SLE.gif	Rms = 0.8 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 1.6 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.15nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The PRM021.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, pp 68, 70; Wyko6000 LLN/0389, pp39,40

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Power Recycling Miror, 40M RSE Experiment: ***PRM - 03***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	PRM031.opd PRM031.gif	R = 368 m
Surface 2: figure	Interferometry	100%	None	R = 10.9 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	PRM031SLE.gif	Rms = 3.1 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.6 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.14nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The PRM031.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, pp 67, 72; Wyko6000 LLN/0389, pp39,42

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Power Recycling Miror, 40M RSE Experiment: ***PRM - 04***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	PRM041.opd PRM041.gif	R = 342 m
Surface 2: figure	Interferometry	100%	None	R = 11.3 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	PRM041SLE.gif	Rms = 1.1 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.6 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.16nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The PRM041.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : E. Pavlovic

Logbook References: Topo LLN/0332-02, pp 68, 71; Wyko6000 LLN/0389, pp40,42

Certified by: B.F. Oreb

Date certified: 5 April 2002
Date revised: 8 May 2002

Substrate, Input Test Mass, 40M RSE Experiment: ***ITM - 01***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	ITM011.opd ITM011.gif	R = 8.0 km
Surface 2: figure	Interferometry	100%	None	R = 24 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	ITM011SLE.gif	Rms = 0.4 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.4 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms = .08nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The ITM011.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : K. Green

Logbook References: Topo LLN/0332-02, p 78; Wyko6000 LLN/0389, pp 44-45.

Certified by: B.F. Oreb

Date certified: 29 April 2002
Date revised: 8 May 2002

Substrate, Input Test Mass, 40M RSE Experiment: ***ITM - 02***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	ITM021.opd ITM021.gif	R = 6.6 km
Surface 2: figure	Interferometry	100%	None	R = - 64 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	ITM021SLE.gif	Rms = 0.4 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.4 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.10nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The ITM021.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : K. Green

Logbook References: Topo LLN/0332-02, p 77; Wyko6000 LLN/0389, pp 43, 45.

Certified by: B.F. Oreb

Date certified: 29 April 2002
Date revised: 8 May 2002

Substrate, Input Test Mass, 40M RSE Experiment: ***ITM - 03***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	ITM031.opd ITM031.gif	R = 7.8 km
Surface 2: figure	Interferometry	100%	None	R = 77 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	ITM031SLE.gif	Rms = 0.4 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.3 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.09nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The ITM031.opd map is Wyko Vision 32 data format and is a map of the entire side 1 surface with pixel size in X direction = 0.2890 mm

Measured by : K. Green

Logbook References: Topo LLN/0332-02, p 79; Wyko6000 LLN/0389, pp 44 - 45

Certified by: B.F. Oreb

Date certified: 29 April 2002
Date revised: 8 May 2002

Substrate, End Test Mass, 40M RSE Experiment: ***ETM -01***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	ETM011.opd ETM011.gif	R = 57.3 m
Surface 2: figure	Interferometry	100%	None	R = - 60 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	ETM011SLE.gif	Rms = 0.5 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.8 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.07nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The ETM011.opd map is Wyko Vision 32 data format and is a map of the central ~ 47.4 mm diameter aperture of side 1 surface with pixel size in X direction = 0.120997 mm.

Measured by : E. Puhanic

Logbook References: Topo LLN/0332-02, pp 86, 90; Wyko6000 LLN/0389, pp 55, 58

Certified by: B.F. Oreb

Date certified: 29 April 2002
Date revised: 8 May 2002

Substrate, End Test Mass, 40M RSE Experiment: ***ETM -02***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	ETM021.opd ETM021.gif	R = 57.1 m
Surface 2: figure	Interferometry	100%	None	R = 28 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	ETM021SLE.gif	Rms = 0.7 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.8 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.07nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The ETM021.opd map is Wyko Vision 32 data format and is a map of the central ~ 47.4 mm diameter aperture of side 1 surface with pixel size in X direction = 0.120997 mm.

Measured by : E. Puhanic

Logbook References: Topo LLN/0332-02, pp 84, 90; Wyko6000 LLN/0389, pp 56, 58.

Certified by: B.F. Oreb

Date certified: 29 April 2002
Date revised: 8 May 2002

Substrate, End Test Mass, 40M RSE Experiment: ***ETM -03***

Specification	Test Method	Frequency of Inspection	Data Delivered	Certification & Comments
Physical Dimensions	Visual inspection	100%	None	OK
Side and Bevel polish	Visual inspection	100%	None	OK
Scratches and point defects	Visual inspection	100%	None	OK
Surface 1: figure	Interferometry	100%	ETM031.opd ETM031.gif	R = 57.3 m
Surface 2: figure	Interferometry	100%	None	R = 39 km
Surface 1: surface errors – low spatial frequency	Interferometry	100%	ETM031SLE.gif	Rms = 1.5 nm
Surface 2: surface errors – low spatial frequency	Interferometry	100%	None	Rms = 0.8 nm
Surface 1: surface errors – high spatial frequency	High resolution surface map	100%	None	Rms =0.05nm
Surface 2: surface errors – high spatial frequency	High resolution surface map	100%	None	OK

Note: The ETM031.opd map is Wyko Vision 32 data format and is a map of the central ~ 47.4 mm diameter aperture of side 1 surface with pixel size in X direction = 0.120997 mm.

Measured by : E. Puhanic

Logbook References: Topo LLN/0332-02, pp 86, 90; Wyko6000 LLN/0389, pp 57, 59.

Certified by: B.F. Oreb

Date certified: 29 April 2002
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