PROJECT: SPIRE	**MINUTES OF MEETING**	**Doc. No:** **Date: 31 OCT 2000** **No. of Sheets: 5**
Subject: SPIRE AIV – integration, vibration and test baseplates		
Meeting Place: RAL Date/Time: 31-OCT-2000 10:30 Agenda Dated:		Chairman: D.L.Smith Secretary: Close of Meeting: 14:00
PARTICIPANTS		**ADDITIONAL DISTRIBUTION**
D.L.Smith (RAL) M.Harman (RAL) J.Coker (MSSL) B.Winter (MSSL) B.Swinyard (RAL) – part time		

Action / Comment Number	Short Title	Action (A), Recommendation (R), Decision (D), Observation (O)	Action / Ref. with:	Action Deadline
A-01	**Overview of cryostat.** **Discussion**	Mark Harman gave an overview of the cryostat design and the proposed method for integrating the instrument into the cryostat. John Coker to provide Mark Harman details of hydraulic trolley with parallel lifting capability (as used by model engineers) that could be used to move the instrument and support frame/structure. It was proposed that a solid aluminium baseplate be used for mounting the instrument. Berend suggested that it would be nice to use the same plate for • Integration • Calibration • Transportation • Vibration There followed a discussion about the pros and cons of using a common baseplate for vibration and calibration. The vibration requirements are not known at present. The JFETS will be vibrated with the FPU.	JC	

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		The design of the instrument should mean that disconnecting the JFETS from the FPU should not affect the instrument's calibration. It was decided that it would not be practical to use a common baseplate for calibration and vibration. The main reasons are: • The requirements for the vibration plate and cryostat plate are not compatible. Vibration needs a thick (~50mm) very rigid baseplate. Calibration requires a thin, low mass baseplate. • To design such a multi-function baseplate would be more complex and more expensive. • The interface to the vibration fixture is not known. • The vibration levels are not known. A separate vibration and calibration fixture will be made. We will have to accept that there is a risk that there may be changes in optical alignment when transferring between fixtures. The calibration baseplate can still be multi-purpose. • Integration • Calibration • Transportation		

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A-02		MSSL already have a work package to produce an optical integration jig, vibration fixture and transportation container. Mark Harman to pass on completed initial design of support frame and baseplate to MSSL. MSSL will assess its suitability for integration of the optical bench.	MH	
	Conclusions	The following main components of MGSE are required • Optical Integration Jig – (MSSL) – the optical bench and mounting brackets will be integrated on this at MSSL and then transported to RAL to complete the optical and mechanical integration. • Calibration Baseplate – (RAL) – this will be used for system integration, calibration testing and transportation of the FPU and JFET boxes. • Vibration Fixture – MSSL? • Transportation container – MSSL – this could be made to accommodate both the optical alignment jig and calibration baseplate.		

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		• Wheels to move instrument between RAL clean rooms – RAL This now means that the calibration baseplate will be required in readiness for the instrument integration. At least 2 baseplates will be required to ensure that at least one is always available. For example two will be needed when the SPIRE STM and calibration cryostats are being integrated. Other items of MGSE are • Rig for rolling the baseplate and instrument into the correct orientation for calibration. • General lifting rig for SPIRE MSSL and RAL to work closely on the design and integration procedures.		

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	Action Items			
A-01		John Coker to provide Mark Harman details of hydraulic trolley with parallel lifting capability (as used by model engineers) that could be used to move the instrument and support frame/structure.	JC	
A-02		Mark Harman to pass on completed initial design of support frame and baseplate to MSSL.	MH	