

Event	Day	Time		Title of presentation	Duration mins	Company(ies)
		Start	End			
Tribology Forum	Thursday 12/02/2009	9.30	9.45	Introduction - TEC-MMM	15	ESA/ESTEC/TEC-MMM
		9.45	10.25	New developments in self-lubricating bearing cages: • The dependence of cage wear on bearing load • An evaluation of thermally pre-conditioned PGM-HT cage material	40	ESRT (UK)
		10.25	10.55	Gear tribology: • Further assessments of compact harmonic drives	30	ESRT (UK)
		10.55	11.30	High friction devices: • The behaviour of piezo-electric linear actuators in thermal-vacuum • High-friction interfaces for hold-down-and-release mechanisms	35	ESRT (UK)
		11.30	11.45	Coffee Break	15	All participants
		11.45	12.30	Advances in space lubricants and their assessment: • A spin-orbit-tribometer study of space lubricants • The performance of tungsten disulphide coatings produced by sputtering and particle impingement processes	45	ESRT (UK)
		12.30	13.00	A resume of other and future ESTL activities: • Superlubricity – a review • A lead-replacement study • Space Tribology Handbook and Course • Future activities	30	ESRT (UK)
		13.00	14.00	Lunch Break	60	All participants
		14.00	14.30	Journal Bearing for Turbopumps	30	Snecma (F) Avio (I) MTA (D) Ulg (B)
		14.30	15.00	TEC-MMM presentation / Info to industry	30	ESA/ESTEC/TEC-MMM
		15.00	15.30	Ion Thruster Pointing Mechanism	30	RUAG Aerospace Austria (A)
		15.30	16.00	Ultra Light Mechanism for Advanced Antenna Systems	30	RUAG (CH), HTS (D)
		16.00	16.20	Coffee Break	20	All participants
		16.20	16.50	Study of a Reaction Sphere for Attitude Control	30	CSEM (CH)
	16.50	17.20	Development of a Rotary Joint for a High-Temperature SADM - Update	30	Schleifring und Apparatebau GmbH (D) Austrian Research Centers Seibersdorf (A) Kongsberg Defence & Aerospace (N) ESTL - ESR Technology (GB)	
	17.20	17.50	Development of a High Load Low Shock Release Unit	30	Astrium GmbH (D)	
	17.50	18.00	Wrap up day 1	10	ESA/ESTEC/TEC-MMM	
	18.00	18.30	Hardware presentation	30	All participants	
	Friday 13/02/2009	9.00	9.15	Introduction - TEC-MMM	15	ESA/ESTEC/TEC-MMM
		09.15	09.45	Mechanical Re-shaping of Antenna Reflector Shells	30	TU Muenchen (D)
		09.45	10.15	Self Contained Deployment System	30	KDA (N)
		10.15	10.45	LARES Separation Mechanism Assessment	30	Sapienza Universita' di Roma - Dipartimento di Ingegneria Aerospaziale e Astronautica (I)
		10.45	11.15	Development of a Sealed Brushed Gear Motor for deployment Mechanisms	30	SOTEREM (F) RUAG (CH)
		11.15	11.30	Coffee Break	15	All participants
		11.30	12.00	Compatibility of the RIT-22 grid ion engine with the new generation of electric propulsion pointing mechanism (EPPM)	30	Astrium GmbH
		12.00	12.30	Self Compensating Hall Effect Contactless Angular Encoder (SCHECAE)	30	Carlo Gavazzi Space SpA (I)
12.30		13.00	Contactless Angular Position Sensor	30	RUAG Aerospace Nyon (CH)	
13.00		14.00	Lunch Break	60	All participants	
14.00		14.30	Ultra-sonic Drill Tool: Design Development & EM Testing.	30	Magna Parva (UK)	
14.30		15.00	Ultra-sonic Rock Abrasion Tool (RAT): Design and BB Testing	30	Magna Parva (UK)	
15.00	15.30	High Temperature High Gain Antenna System for the Mercury Planetary Orbiter of Bepi Colombo	30	RUAG (CH)		
15.30	16.00	Limited Angle Torque actuators for accurate pointing	30	CEDRAT TECHNOLOGIES SA (F)		
16.00	16.15	Wrap up FPDs 2009	15	ESA/ESTEC/TEC-MMM		
Mechanisms Final Presentation Days						