



Laboratoire d'Anecy-le-Vieux  
de Physique des Particules

# WP7 report

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In2p3



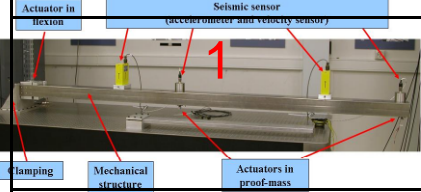
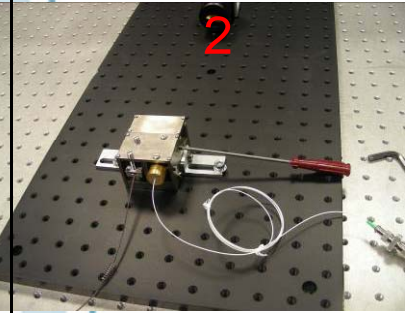
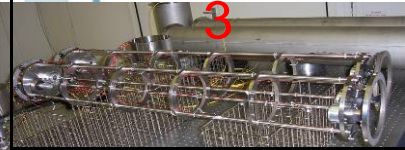
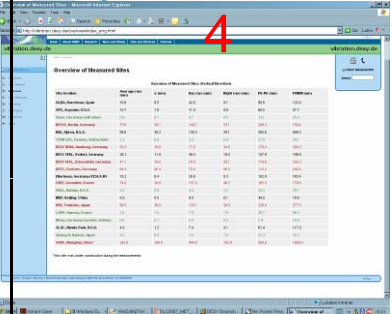
# WP 7 milestones

<b>N°</b>	<b>Milestone Name</b>	<b>Lead Contractor(s)</b>	<b>Planned</b>	<b>Achieved</b>
1	Detailed scope and planning report to first Workshop	5	6	6
2	Presentation of results and detailed implementation at Second Workshop	5	18	25
3	Presentation of results and detailed implementation at Third Workshop	5	30	30
4	LICAS RTRP prototype test programme complete	21	48	48
5	Evaluation of mechanical stabilisation techniques complete.	5	48	44
6	Site ground vibration characterisation programme complete	1	48	36

# WP7 Deliverables

No	Deliverable Name	Lead Contractor	Planned	Achieved
1	Prototype mechanical stabilization system	5	48	42
2	Prototype laser-based stabilization system	21	48	48
3	3 and 5 car prototypes of laser-based RTRS system	21	48	48
4	Database (with public web interface) of catalogued and characterized ground vibration spectra	1	48	36

# WP7 deliverables

Deliverable number	Deliverables	Corresponding EUROTeV Report number
	<p>1</p> <p>Prototype mechanical stabilisation system.</p>	<p>EUROTeV-Report-2008-006</p>
	<p>2</p> <p>Prototype laser-based stabilisation system.</p>	<ul style="list-style-type: none"> <li>•EUROTeV-Report-2008-008</li> <li>EUROTeV-Report-2008-031</li> </ul>
	<p>3 and 5 car prototypes of laser-based RTRS system.</p>	<p>EUROTeV-Report-2008-011</p>
	<p>4</p> <p>Database (with public web interface) of catalogued and characterised ground vibration spectra.</p>	<p>EUROTeV-Report-2007-011</p> <p>EUROTeV-Report-2007-024</p>

# Some program changes with International Context changes

- **PGMS:** In the original UK LC-ABD simulation task, it was proposed to do ground motion modelling for the linear collider, which was shown as contribution to the EUROTeV WP7 and no EU resources were requested for this task. LC-ABD project started in April'2004 before the linac technology decision was announced (August'2004). **The ground motion modelling task was not continued due to the request to study tolerances and to develop tuning procedures for ATF2**, which was thought to be more urgent by the international collaboration developing the ATF2 proposal. STFC is continuing on developing different tuning procedures to address the challenging tuning requirements to achieve around 35nm beam spot size at the ATF2.
- **RTRS:** The 5-car prototype of the RTRS was intended to be used for long distance survey in the tunnels of the European XFEL project. Its design and construction would only be possible and useful if the UK program for ILC survey had continued into the period where the XFEL tunnels were complete. **Due to circumstances beyond our control the UK program was terminated prematurely and the LiCAS program had to ramp down rapidly.** This was announced in December 2007. We have adapted to the new circumstances and the reduced resources by focussing our efforts on a more complete program of work with the 3-car prototype and more simulations of the performance of other RTRS configurations. Our studies have shown that a 4-car RTRS with 25 m car separation would be sufficient as the sole instrument for the survey of the ILC reference network.

# Conclusion for WP7

- All deliverables have been met
- Some minor redefinition of some work due to UK funding crisis in 2007 and ILC priority changes