

TERMS AND CONDITIONS FOR PARTICIPATION IN ESA DROP TOWER CAMPAIGNS

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reference/ <i>référence</i>	DT-ESA-TN-001
issue/ <i>édition</i>	1
revision/ <i>révision</i>	2
date of issue/ <i>date d'édition</i>	10/03/2009
status/ <i>état</i>	Final
Document type/ <i>type de document</i>	Technical Note
Distribution/ <i>distribution</i>	

A P P R O V A L

<i>Title</i>	TERMS AND CONDITIONS FOR PARTICIPATION IN ESA DROP TOWER CAMPAIGNS	<i>issue</i> 1	<i>revision</i> 0
<i>titre</i>		<i>issue</i>	<i>revision</i>

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<i>approved by</i>	Josef Winter (HSF-GP)	<i>date</i>
<i>approuvé by</i>		<i>date</i>

C H A N G E L O G

<i>reason for change /raison du changement</i>	<i>issue/issue</i>	<i>revision/revision</i>	<i>date/date</i>
Update of applicable document	1	1	08-01-2008
Change of directorate acronym	1	2	10-03-2009

C H A N G E R E C O R D

Issue: 1 Revision: 1

<i>reason for change/raison du changement</i>	<i>page(s)/page(s)</i>	<i>paragraph(s)/paragraph(s)</i>
User Manual Update AD1	1	Chapter 3.1
Directorate acronym updated	1	Chapter 1

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ANNEX: ESA TERMS AND CONDITIONS ACCEPTANCE FORMS

1 INTRODUCTION

The Drop Tower at the ZARM FAB in Bremen offers in the traditional “Drop Mode” about 4.7 sec. microgravity time and a bit less than double that time in the “Catapult Mode”. The Catapult is a rather newly available feature of the drop facility in Bremen and has been commercially offered since about June 2007.

The HSF directorate of ESA is procuring drop campaigns in Bremen on behalf of its scientific and industrial partners. As a basic principle, ESA is making drop campaigns available for positively peer reviewed projects, which partly use the Drop Tower as major microgravity research facility, or as a tool to complement other microgravity platforms in the achievement of scientific results or to support the development of microgravity experiment hardware.

The here addressed contractual agreement between ESA and the ZARM FAB in Bremen refers exclusively to the provision of Drop Tower Campaigns. Experiment hardware development activities are to be regarded separately and have to be arranged in other Contracts.

2 SCOPE

The present document is issued to address the terms and conditions applicable to participate in ESA supported Drop Tower Campaigns. Each potential participant is requested to carefully read the present document and to declare his acceptance of these terms and conditions by signing the annexed form. The acceptance of the present terms and conditions is mandatory and a prerequisite condition to participate in an ESA campaign and conduct ground preparatory activities and in-flight operations.

3 APPLICABLE DOCUMENTS

3.1 *Applicable Documents*

Technical and safety requirements for the preparation of experiments and for the safe conduct of ground and in-flight operations shall be found in the following applicable documents:

	Issue date	Title
AD 1	02/10/2007	ZARM Drop Tower Bremen, User Manual
AD 2	14/03/2005	“Kapsel-Boden” Software Package Description
AD 3	14/03/2005	“Experiment VI” Software Package Description
AD 4	28/04/2000	ZARM Drop Tower Bremen, General Information

Experimenters are encouraged to regularly review the ZARM FAB’s web site for possible document updates.

4 DEFINITIONS

4.1 *Relevant Institutions*

4.1.1 ESA

The European Space Agency (ESA), or in short the Agency, is the institution who invites selected research teams and other participants to participate in ESA supported Drop Tower Campaigns organized on a case by case basis. The Agency is represented by its Technical Officer being in charge of ESA's Drop Tower Utilisation Contract. His task is not including the experiment selection, hardware preparation and testing or experiment execution.

The organization of ESA supported Drop Tower Campaigns is made through a contractual relation with the ZARM FAB Bremen.

4.1.2 ZARM FAB

ZARM FAB is the Drop Tower operating institution based in Bremen, Germany near the University Facilities. The ZARM FAB is in charge through a contractual relation with ESA to implement schedule wise ESA supporting campaigns, to provide the experimenters with technical advise, supervise experiment equipment handling upon arrival at ZARM's premises during flight preparations as well as during the experiment execution. Moreover, the ZARM FAB is fully responsible for experiment and facility safety relevant matter.

The ZARM FAB has issued the Applicable Documents listed in chapter 3.1 that are applicable to all campaign participants with requirements for designing experiment equipment and conducting safe ground and in-flight operations.

During ESA campaigns, the ZARM FAB Campaign Manager is the person responsible for all campaign preparation and performance aspects. The ZARM FAB Safety Manager is the person responsible for all safety aspects on site.

Access to the ZARM FAB's premises has to be clarified with the ZARM FAB directly.

4.2 *Drop Tower Campaign Participants*

The Drop Tower Campaign Participants, or in short the Participants, are members of selected experiment teams and other individuals invited by ESA or ZARM to take part in a specific Drop Tower Campaign.

Participants are grouped in the following categories.

4.2.1 EXPERIMENT PRINCIPAL COORDINATOR

The Experiment Principal Coordinator is the person who has the overall responsibility of the selected experiment or test. He is usually the person who submitted the experiment proposal and received the ESA letter of acceptance of his proposal. In case of a joint experiment between several research institutions, he assumes the lead role in his contacts with ESA and ZARM FAB.

He is requested to sign the first “ESA Terms and Conditions Acceptance” form (see Annex 1).
He may or may not be attending the experiment ground and in-flight operations at the ZARM FAB’s premises.

4.2.2 EXPERIMENT LOCAL COORDINATOR

The Experiment Local Coordinator is the responsible person in charge of a team of scientists and/or engineers who will conduct the experiment ground and in-flight operations, in co-operation with the ZARM FAB experts. He may or may not be the same person as the Experiment Principal Coordinator.

He is requested to sign the second “ESA Terms and Conditions Acceptance” form (see Annex 2).

4.2.3 EXPERIMENT TEAM MEMBER

The experiment team member is the person belonging to an experiment team and reporting directly to the Experiment Local Coordinator. He is usually either a professional researcher, or a scientist, or a technical expert such as his expertise is needed for successful ground and in-flight operations. He can operate the experiment hardware and equipment at the ZARM FAB’s remises in an unsupervised mode only if the ZARM FAB has inspected the equipment and explicitly expressed its endorsement. Ph.D. students must not handle experiment equipment unsupervised.

Undergraduate students cannot perform experiments during ESA campaigns. In exceptional cases, experimenters may be assisted by undergraduate students affiliated to the institute of the Experiment Principal Coordinator. In this case, an undergraduate student shall never be allowed to operate the experiment hardware and equipment without supervision of the Experiment Local Coordinator or another qualified Experiment Team Member of the same team.

The Experiment Team Member is usually fully affiliated to the institution conducting the research or, in case of a joint experiment between several research institutions, to one of the institutions conducting the research. In case of being detached from his home institution or company, he may also be temporary affiliated to the institution conducting the research.

He is requested to sign the second “ESA Terms and Conditions Acceptance” form (see Annex 2).

4.2.4 EXTERNAL OBSERVER

The Agency may invite at its discretion other participants to attend ESA supported Drop Tower Campaigns, having recognized the importance of the participation of this person to the campaign, either in his position as media representative or as a political, managerial, scientific or safety authority. The External observer can be associated to one of the experiments manifested for a Drop Tower Campaign.

He is requested to sign the second “ESA Terms and Conditions Acceptance” form (see Annex 2).

4.2.5 ESA TEAM

During ESA supported campaigns, the Agency may provide a team to support and document the ground and in-flight operations. The ESA team is coordinated by ESA’s Technical Officer for the

Drop Tower Utilisation Contract. In the case the Technical Officer does not participate personally in a Drop Tower Campaign he may delegate the coordinator function to another team member. ESA Staff members and contractors are also requested to sign the second “ESA Terms and Conditions Acceptance” form (see Annex 2) as appropriate.

4.3 Campaign Organisation and Operations

4.3.1 EXPERIMENT SELECTION AND CAMPAIGN ORGANISATION

Once an experiment proposal has been received, it is by the Agency reviewed and evaluated for scientific merits.

Technical feasibility investigations as well as experiment-hardware development are to be arranged in separated contractual agreements.

The Experiment Principal Coordinator of an ESA selected experiment has the possibility to apply at the ZARM FAB directly for a Drop Campaign schedule, after prior approval of ESA’s Technical Officer.

In doing so, the Experiment Principal Coordinators are requested to verify that:

- the proposed campaign dates, flight schedule and gravity levels are adequate to guarantee a successful performance of the experiment;
- the experiment equipment would be ready and available in time for the foreseen campaign;
- adequate funding is available in time to support the preparation and the performance of the experiment during the campaign^(*);
- all co-investigators are made aware and agree to the selected experiment participation to the ESA campaign;
- there is no confusion on which experiment is selected for the coming ESA campaign.

Once the confirmation has been received by the ESA Technical Officer, the technical preparation activities for the coming ESA campaign can be initiated.

4.3.2 GROUND OPERATIONS

During ESA campaigns, ground operations mean and include sequentially:

- the reception by the ZARM FAB of the incoming experiment equipment at the ZARM FAB’s premises,
- the verification by the ZARM FAB of conformity of the experiment equipment to
 1. the configuration possibly agreed prior the campaign
 2. to the applicable documents AD 1, AD 2, AD 3, AD 4.

^(*) In this context it has to be noted that ESA will financially cover for the Drops or Catapult utilisation and for some limited technical support through the ZARM FAB (as to be decided by the ZARM FAB), but ESA will not participate in the costs of the experiment preparation and transport, and of the mission, travel and accommodation of campaign participants; funding to cover these costs must be obtained separately, such as privately or through national or international institutions.

3. to the safety requirements applicable for the preparation and performance of experiments in the ZARM FAB's premises under the responsibility of the ZARM FAB.
 - the assembly and integration into the Drop Capsule of the experiment equipment,
 - the on-ground first power-up of the experiment equipment under the supervision of the ZARM FAB,
 - the demonstration of the proper and safe functioning of the experiment equipment to the ZARM FAB Campaign Manager,
 - the loading of the experiment equipment into the Drop or Catapult Facility,
 - the briefing prior to the first Drop,
 - the Post-Drop debriefings,
 - the experiment equipment un-loading from the Drop Facilities after a Drop or Catapult "Shot",
 - the repetition of the steps listed in this chapter for technical or scientific changes of the experiment before a consecutive Drop or Catapult "Shot" within the same campaign.

The on-ground first power-up of the experiment equipment shall be authorized by the ZARM FAB Experiment Manager after verification of the experiment-equipment's appropriate configuration. The loading of the experiment equipment into the Drop or Catapult Facility shall be authorized by the ZARM FAB Campaign Manager after verification of the experiment equipment's proper and safe functioning.

The experiment team members will be authorized to work on the experiment equipment on ground before the first Drop and between the Drops according to the ground safety rules and procedures of the ZARM FAB (see also AD 1, AD 2, AD 3, AD 4).

4.3.3 IN-FLIGHT OPERATIONS

In-Flight Operations shall mean the execution of a Drop or Catapult Shot with the integrated experiment. During ESA campaigns these in-flight operations are placed under the authority of the ZARM FAB Campaign Manager.

The ZARM FAB can interrupt or terminate a Drop Tower Campaign in the case of justified reasons, such as of safety concerns regarding the experiment equipment or inappropriate behaviour of campaign participants. ESA's Technical Officer for the Drop Tower Utilisation Contract shall be informed about such situations as soon as possible.

4.3.4 ESA LIABILITY RELEASE AND INSURANCE COVERAGE

Safety in all ESA campaign preparatory activities and operations is of paramount importance. Due to the fact that Drop and Catapult experiments are always considered as test campaigns and due to the very nature of the experimental work conducted, ground and in-flight operations during ESA campaigns involve always a certain part of risk. To cover this risk in general, all campaign participants must be covered by an adequate insurance.

Firstly, all Experiment Principal Coordinators must verify with their employer or home institution their insurance coverage first, for civil liability for the performance of their experiment outside the

home institution, and second, for individual insurance to cover their experiment team members during all phases of ground and in-flight operations of their experiment. All Experiment Principal Coordinators, or the authorized legal responsible of their home institutions, must obtain from the insurance institution of their employer or home institution a waiver of subrogation rights against ESA related to an ESA Drop Tower Campaign.

Secondly, all campaign participants must verify their individual insurance coverage with their employer or their home institution and must obtain from the insurance institution of their employer or home institution a waiver of subrogation rights against ESA related to a Drop Tower Campaign. In case of participation to another experiment during the campaign, the campaign participant must also verify with the Experiment Coordinator the specific insurance coverage for the experiment in which he will participate.

Thirdly, all campaign participants are informed that ESA takes **no additional** insurance coverage for Drop Tower Campaign participants. All campaign participants are also invited to consider taking an additional personal individual insurance coverage to cover themselves and their heirs from any accident that could happen during ESA campaigns.

All campaign participants are requested to sign the second “ESA Terms and Conditions Acceptance” form in annex 2 before being authorized to participate in an ESA campaign. In signing this second “ESA Terms and Conditions Acceptance” form, the campaign participant declares explicitly that :

- he releases the liability of ESA and that he will not make any claim against ESA in case of injury, accident or damage to his equipment resulting from his participation to the ESA campaign;
- he has verified his insurance coverage, taken note that there is no ESA insurance coverage for Drop Tower Campaigns and been encouraged to take an additional insurance coverage.

The participants shall not claim against ESA in case his experiment has not been flown or has not been successful.

Campaign participants must be aware of the fact that refusing to agree to and sign the second “ESA Terms and Conditions Acceptance” form in annex 2 would not allow them to participate to the ESA campaign.

5 ROLE OF ORGANIZING INSTITUTIONS AND COMPANIES

5.1 *ESA*

5.1.1 BEFORE THE CAMPAIGN

Prior to a campaign, the prime role of ESA in a best effort approach is:

- to solicit from the scientific community experiment proposals through Announcements of Opportunities;

- to organize for the review of submitted experiment proposals for their scientific or technical research merits and to inform the selected submitters of the acceptance or rejection of their proposal;
- to invite the Experiment Principal Coordinators of selected experiments to confirm their participation in the foreseen campaign;
- to provide for Drop Tower Utilisation opportunities for selected experiments as far as the available budget allows.

5.1.2 DURING THE CAMPAIGN

During an ESA Drop Tower Campaign no ESA support is provided unless specifically agreed upon in exceptional cases or in Contractual Agreements separated from the Drop Tower Utilisation Contract between ESA and the ZARM FAB.

5.1.3 AFTER THE CAMPAIGN

After an ESA campaign, the prime role of ESA is:

- to collect experiment and campaign reports and to ensure that performed drops are correctly booked budget wise.

5.2 ZARM FAB

During an ESA campaign preparation, the ZARM FAB interfaces to the following institutions:

- the experimenter and experiment hardware developer via the Experiment Principle Coordinator to ensure proper preparation of experiments;
- ESA for the overall campaign organisation according to the Drop Tower Utilisation Contract.

5.2.1 BEFORE THE CAMPAIGN

Prior to an ESA Drop Tower Campaign the role of the ZARM FAB is:

- to review the scientific and technical data provided to the selected experiments and if needed, to contact the selected scientific teams to obtain from them additional experiment technical and safety details in order to have the experiments safety wise correctly prepared;
- to contact the selected scientific teams and other participants to obtain from them the lists of all campaign participants;
- to provide a limited technical support in the definition and preparation of the experiment equipment, as well as technical advices and safety recommendations on experiment equipment set-up and procedures;
- to collect all technical and safety documentation (list of equipment, list of potentially hazardous products, Material Safety Data Sheets (MSDS), ...) from the Experiment Principle Coordinators;
- to check with respect to the applicable law that the needed authorisations/licences to handle and store the materials listed in the MSDS are in its possession.

5.2.2 DURING THE CAMPAIGN

During an ESA Drop Tower Campaign, the role of the ZARM FAB is:

- to nominate a ZARM FAB Campaign Manager/Responsible;
- to liaise with the ESA Technical Officer and all Experiment Local Coordinators for all matters pertaining to the ESA campaign organisation and operations;
- to accept after review and inspection with the Experiment Local Coordinator all incoming experiment equipment in the ZARM FAB's premises for ground preparation activities;
- to verify with the Experiment Local Coordinator that the work area and storage facilities put at his disposal comply with the experiment equipment, the type and quantity of products and the experiment activities that will be conducted during the campaign;
- to perform a ground safety briefing to all arriving participants and to verify to which extent Experiment Team Members have the adequate expertise to conduct the required ground preparatory activities;
- to provide the adequate ground facilities in terms of technical, logistics and safety aspects for participants to prepare their experiments;
- to support experimenters and participants in the ground experiment preparation and in the in-flight experiment operation as far as technically possible;
- to deliver after satisfactory inspection of the set-up and assembled experiment equipment the authorization for the on-ground first power-up of the experiment equipments;
- to deliver after satisfactory and successful demonstration of the proper and safe functioning on ground of the experiment equipment the authorization for the integration of the experiment equipment into the Drop or Catapult Facilities;
- to integrate the experiment into the Drop or Catapult Facilities;
- to review, and if acceptable, eventually approve or propose to the Experiment Team with copy to ESA's Technical Officer, requests of modifications or deviations to the agreed equipment working configuration, procedures, and/or product use prior to modifications or deviations implementation by Experiment Team Members;
- to review with Experiment Local Coordinators the list of potential experiment participants and the status of their insurance coverage;
- to conduct and participate in a safety briefing on the experiment;
- to participate and take the minutes of each post-drop debriefing and ensure that experiment data are made available to the experimenters.

5.2.3 AFTER THE CAMPAIGN

After an ESA Drop Tower Campaign, the role of the ZARM FAB is:

- to distribute all experiment data of interest to the campaign participants;
- to report to ESA's Technical Officer for the Drop Tower Utilisation Contract the number of performed Drops or Catapult Shots and the related schedule followed together with the success rate of the Drops.

6 ROLES AND RESPONSIBILITIES OF DROP TOWER CAMPAIGN PARTICIPANTS

6.1 *Experiment Principal Coordinator*

In general, the Experiment Principal Coordinator shall be and stay responsible at all time before, during and after the ESA campaign to report to the ZARM FAB any safety relevant items of his experiment, including ground preparatory activities and in-flight operations and for all potential experiment equipment configurations. In case no Experiment Local Coordinator is named, the Experiment Principal Coordinator shall fulfil the Experiment Local Coordinator obligations.

6.1.1 BEFORE THE CAMPAIGN

Prior to the ESA campaign, the Experiment Principal Coordinator shall :

- be the contact person with ESA and the ZARM FAB during the experiment preparation period prior to the arrival at the ZARM FAB's premises;
- nominate during his absence a deputy and inform ESA and the ZARM FAB accordingly;
- nominate, if needed, an Experiment Local Coordinator and inform ESA and the ZARM FAB accordingly;
- receive, read, approve, comply with, and ensure that his team members have received, read, approved and will comply with the present "Terms and Conditions for Participation in ESA Drop Tower Campaigns" document;
- be responsible to design, develop, manufacture, assemble, test, pack and transport to and from the ESA campaign location his experiment equipment according to applicable national laws and regulations, the ZARM FAB's User Manual and recommendations of the ZARM FAB's experts;
- submit in time all necessary technical and safety documentation requested by the ZARM FAB for the proper preparation of his experiment;
- submit in time all necessary personnel data requested by the ZARM FAB to access the ZARM FAB's premises and to prepare the list of experiment participants;
- verify, and if necessary subscribe, the insurance coverage for civil liability of his home institution for all his team members, and in case of a joint experiment, the insurance coverage by the other participating institutions for team members affiliated to these other institutions, for his and their participation to the ESA Drop Tower Campaign, including travel of personnel to and from the campaign location, transport of his experiment equipment to and from the campaign location, on site ground preparatory activities and in-flight experiment operations;
- be informed and ensure that his team members are informed of the fact that the Agency takes no insurance coverage for campaign participants and, if deemed necessary, take an additional insurance coverage by themselves;
- read, approve and sign the first "ESA Terms and Conditions Acceptance" form in annex 1 for the participation of his experiment as a whole to the ESA Drop Tower Campaign and, in case of a joint experiment, to have it reviewed and co-signed by co-investigators and contracted companies if any.

6.1.2 AFTER THE CAMPAIGN

After the ESA campaign, the Experiment Principal Coordinator shall:

- make all efforts to analyze and process the data obtained during the ESA campaign in order to obtain good results in due time;
- inform ESA's Technical Officer for the Drop Tower Utilisation Contract on the number and schedule of performed drops together with explanations on the success rate
- inform ESA's Technical Officer for the Drop Tower Utilisation Contract on experiences gained during the campaign related to the usefulness of the drop facility and the technical support provided by the ZARM FAB.

6.2 *Experiment Local Coordinator*

In general, the Experiment Local Coordinator shall jointly with the Experiment Principal Coordinator be and stay responsible at all time during the campaign to inform the ZARM FAB on any safety relevant items of his experiment, including ground preparatory activities and in-flight operations and for all potential experiment equipment configurations.

6.2.1 BEFORE THE CAMPAIGN

Prior to the ESA campaign, the Experiment Local Coordinator shall :

- receive, read, approve, comply with, and ensure that his team members have received, read, approved and will comply with the present "Terms and Conditions for Participation in ESA Drop Tower Campaigns" document;
- verify, and if necessary upgrade, the insurance coverage of his home institution and ensure that his team members have verified, and if necessary upgraded, their insurance coverage for civil liability by their home institution, for his and their participation to the ESA Drop Tower Campaign, including travel of personnel to and from the campaign location, transport of his experiment equipment to and from the campaign location, on site ground preparatory activities and in-flight experiment operations;
- be informed and ensure that his team members are informed of the fact that the Agency takes no insurance coverage for campaign participants and, if deemed necessary, take an additional insurance coverage himself;
- read, approve, sign, and ensure that his team member have read, approved and signed the second "ESA Terms and Conditions Acceptance" form in annex 2 for his and their participation to the ESA Drop Tower Campaign;
- ensure that all technical and safety documentation (list of equipment, list of potentially hazardous products, Material Safety Data Sheets (MSDS), ...) are delivered to the ZARM FAB Campaign Manager.

6.2.2 DURING THE CAMPAIGN

During the ESA campaign, the Experiment Local Coordinator shall:

- be responsible to pack and transport his experiment equipment according to applicable national laws and regulations to and from the ESA campaign location;

- be the contact person with ESA and the ZARM FAB during all the experiment ground and in-flight operations at the ZARM FAB's premises;
- nominate during his (temporary) absence a deputy and inform ESA and the ZARM FAB accordingly;
- liaise upon arrival with the ZARM FAB Campaign Manager and the Safety Manager and ensure that members of his team are informed of who these contact persons are;
- ensure upon arrival that all technical and safety documentation (list of equipment, list of potentially hazardous products, Material Safety Data Sheets (MSDS), ...) were delivered to the ZARM FAB Campaign Manager;
- review upon arrival with the ZARM FAB Campaign Manager all his equipment and products brought to the ZARM FAB's premises;
- verify with, and confirm to, the ZARM FAB Campaign Manager that the work area and storage facilities put at his disposal complies with his experiment equipment, the type and quantity of products and the activities that he and his team members will conduct during the campaign;
- receive upon arrival the ZARM FAB's ground safety briefing and ensure that all members of his team have received and understood the ground safety briefing;
- ensure that all members of his team have the adequate expertise to conduct the various experiment preparatory tasks on ground and support the experiment in-flight operations in a safe way; in case of doubt on expertise of team members, he shall refer to the ZARM FAB Manager and seek for his/their approval;
- supervise all on-ground preparatory activities of his experiment at the ZARM FAB's premises;
- ensure that his experiment is always attended by at least one team member with adequate expertise and that no under-graduate or PhD students are left unattended or unsupervised for ground operations of his experiment;
- request and obtain the authorization of the ZARM FAB Campaign Manager for the on-ground first power-up of the experiment equipment;
- request and obtain the authorization of the ZARM FAB Campaign Manager for integration of his experiment equipment into the Drop or Catapult Facilities after successful demonstration of the proper and safe functioning on ground of the experiment equipment;
- participate with his team members in his experiment equipment integration and de-integration in/from the Drop and Catapult Facilities, which is to be performed by the ZARM FAB's experts;
- inform the ZARM FAB Campaign Manager about any intended modifications or deviations to the agreed equipment configuration, procedures, and/or product use and obtain the ZARM FAB Campaign Manager's approval prior to proceed with the modifications or deviations;
- inform immediately the ZARM FAB Campaign Manager of any potential risks, hazards or danger that he may have knowledge of and report all issues, anomalies and/or incidents, whether on ground or during in-flight operations;
- review with the ZARM FAB Campaign Manager the list of potential experiment participants among his team members and the status of their insurance documentation as far as appropriate;

- participate in and support, or nominate a member of his team with sufficient expertise to participate in and support the safety inspection of his experiment by the ZARM FAB prior to the first activation and prior to the first Drop;
- receive the flight safety briefing and ensure that all members of his team have received and understood the flight safety briefing;
- participate in each post-drop debriefing or nominate at least one of his team members with sufficient expertise to represent him at the post-drop debriefing;
- comply and ensure that his team members comply with instructions and recommendations of the ZARM FAB Campaign Manager for ground and in-flight operations;
- be responsible in general for the safe and proper conduct of his team members at the ESA campaign location;
- be informed and ensure that his team members are informed that his participation or the participation of his team members to the ESA campaign can be ended by the ESA Technical Officer and by the ZARM FAB Campaign Manager, in case of infringement to applicable Safety and Security regulations made known to him and his team members;
- be informed and ensure that his team members are informed that his experiment can be withdrawn from the ESA campaign by the ESA Technical Officer, possibly upon recommendation of the ZARM FAB Campaign Manager in the case of justified reasons, such as safety concerns with his experiment during ground or in-flight operations.

6.3 *Experiment Team Member / External Observer*

6.3.1 BEFORE THE CAMPAIGN

Prior to the ESA campaign, the Experiment Team Member shall:

- receive, read, approve and comply with the present “Terms and Conditions for Participation in ESA Drop Tower Campaigns” document;
- verify, and if necessary subscribe, the insurance coverage for civil liability of his home institution for his participation to the ESA Drop Tower Campaign, including his travel to and from the campaign location, transport of experiment equipment to and from the campaign location, on site ground preparatory activities and in-flight experiment operations;
- be informed of the fact that the Agency takes no insurance coverage for campaign participants and recommend to take an additional insurance coverage;
- read, approve and sign the second “ESA Terms and Conditions Acceptance” form in annex 2 for his participation to the ESA Drop Tower Campaign.

6.3.2 DURING THE CAMPAIGN

During the ESA campaign, the Experiment Team Member shall:

- be placed under the authority of his Experiment Local Coordinator, support him for, and participate in all ground activities for his experiment preparation;
- be informed upon arrival at the ZARM FAB’s premises of who the ZARM FAB Campaign Manager and the ZARM FAB Safety Manager are;

- receive upon arrival a ZARM FAB ground safety briefing;
- request, if he is an under-graduate student, to be supervised by his Experiment Local Coordinator or by another team member with adequate expertise;
- participate in his experiment equipment integration and de-integration in/from the Drop or Catapult Facilities, which has to be performed by ZARM FAB experts;
- inform his Experiment Local Coordinator about any intended modifications or deviations to the agreed equipment working configuration, procedures, and/or product use and obtain the ZARM FAB Campaign Manager's approval via his Experiment Local Coordinator prior to proceed with the modifications or deviations;
- receive the flight safety briefing;
- comply with instructions and recommendations of the ZARM FAB Campaign Manager for ground operations and in-flight operations;
- be informed that his participation to the ESA campaign can be ended by the ESA Technical Officer and the ZARM FAB Campaign Manager, in case of infringement to applicable Safety and Security regulations made known to him;
- be informed that his experiment can be withdrawn from the ESA campaign by the ESA Technical Officer, possibly upon recommendation of the ZARM FAB Campaign Manager in the case of justified reasons, such as safety issues with his experiment during ground or in-flight operations.

6.3.3 NOTES FOR EXTERNAL OBSERVERS AND ESA STAFF

The External Observer shall follow the same rules as for the Experiment Team Member, under the authority of the ESA Technical Officer if present or the ZARM FAB Campaign Manager instead of the Experiment Local Coordinator.

The ESA Staff Members and ESA Contractors who are participating in an ESA campaign shall follow the same rules as for the Experiment Local Coordinator or the Experiment Team Member, depending on the case. They shall sign the second "ESA Terms and Conditions Acceptance" form in annex 2 as appropriate.

7 EXPERIMENT WITHDRAWAL AND PARTICIPANT EXCLUSION CONDITIONS

7.1 *Experiment Withdrawal Conditions*

Although ESA and the ZARM FAB will undertake all reasonable efforts to provide for the performance of selected experiments in ESA Drop Tower Campaigns, all campaign participants shall be aware of the fact that ESA and the ZARM FAB can withdraw the participation of an experiment or of experimenters from an ESA campaign at any time before or during the campaign.

7.1.1 BEFORE THE CAMPAIGN

The ESA Technical Officer may decide, possibly upon recommendation of the ZARM FAB Campaign Manager, to withdraw or postpone the participation of an experiment foreseen for a specific ESA campaign for one or several of the following reasons:

- the experiment participation to the foreseen campaign is not confirmed in time after the ESA invitation has been sent to the Experiment Principal Coordinator;
- the technical and safety detailed data are not provided in time, as requested by the ZARM FAB;
- the technical and/or safety aspects of the experiment do not guarantee its safe operation;
- the experiment would not be ready in time at the foreseen date of the campaign;
- the ESA Terms and Conditions are not agreed to and/or the first "ESA Terms and Conditions Acceptance" form is not signed by the Experiment Principal Coordinator;
- the conditions for participation are not complied with in terms of adequate insurance coverage and/or compliance with the various conditions listed in the first "ESA Terms and Conditions Acceptance" form;

until the above withdrawal or postponement condition(s) have been fulfilled by the Experiment Principal Coordinator.

In addition the ESA may decide to withdraw an experiment for programmatic reasons, even after the participation confirmation has been received, in favour of other experiments having higher priorities.

As far as possible and depending on availability and on schedule, ESA will undertake in a best effort approach to re-introduce in another ESA campaign the withdrawn or postponed experiment after the specific conditions have been fulfilled.

The ESA Technical Officer or the ZARM FAB shall withdraw or postpone the participation of an experiment foreseen for a specific ESA campaign in the following cases:

- a Safety Board at ZARM concludes that a particular experiment is not found safe for ground and/or in-flight operations during an ESA campaign. The experiment shall then be modified to render it safe according to the standards laid down in the applicable documents (A.D.1, AD 2, AD 3 and A.D.4) and shall be presented again to and accepted by ZARM after recommendation of the ZARM FAB Safety Board before it can be cleared for ground and in-flight operations during an ESA campaign.

7.1.2 DURING THE CAMPAIGN

The ESA Technical Officer and or the ZARM FAB Campaign Manager can decide to withdraw or postpone at any time during the campaign the participation of an experiment from the ESA campaign if the experiment does not comply with the applicable technical and safety standards laid down in the applicable documents (A.D 1, AD 2, AD 3 and AD 4) or if any technical and/or safety issue arise during ground or in-flight operations of the experiment that would create a potential danger to or be potentially harmful for any experimenters, any other campaign participants, any other experiment equipment, any ground facilities or the Drop and Campaign Facilities.

7.2 Participant Exclusion Conditions

The ESA Technical Officer and/or the ZARM FAB Campaign Manager, shall end at any time during the campaign the attendance of a participant to the ESA campaign in case of infringement to any conditions laid down in the present ESA Terms and Conditions document and, in general, if the behaviour of the participant is not appropriate and compatible with a safe and proper conduct of the campaign on ground and in-flight operations.

Depending on the circumstances, the excluded participant shall not be authorized to participate to the campaign ground and/or in-flight operations or shall not be authorized to access the ESA campaign location at the ZARM FAB's facilities.

ANNEX 1

FIRST “ESA TERMS AND CONDITIONS ACCEPTANCE” FORM TO BE SIGNED BY ALL EXPERIMENT PRINCIPAL COORDINATORS

NOTE:

In order to be allowed to participate to an ESA campaign, the ESA Drop Tower Campaign Participants shall sign the latest approved version of the present form.

FIRST “ESA TERMS AND CONDITIONS ACCEPTANCE” FORM

I, the undersigned,
(Name, title and affiliation), hereinafter designated the “Experiment Principal Coordinator”, do give my informed consent to have my experiment “.....” (Title of the experiment) participating and performed in the ESA Drop Tower Campaign organised by ESA through the ZARM FAB at Bremen, from to (campaign dates).

Referring to the document “Terms and Conditions for Participation in ESA Drop Tower Campaigns” (ref. DT-ESA-TN-001, iss. 1, rev. 0), I do understand and fully agree on all of the following points.

1. ESA Terms and Conditions

The Experiment Principal Coordinator :

- has verified that he has the authority to fill in, sign and approve this form or that he has sought and obtained from a legally responsible person within his home institution the authorization to fill in, sign and approve this form;
- has read, understood, approved and will comply with the content of the document “Terms and Conditions for Participation in ESA Drop Tower Campaigns”;
- in case of a joint experiment with other institutions or with industrial contractors, has obtained from the legally responsible persons of these other institutions and/or industrial contractors their approval to have the experiment implemented and performed in the ESA campaign.

2. ESA Liability Release (Not applicable to ESA Staff members)

The Experiment Principal Coordinator:

- consents to release ESA and its parties from any liability, which may arise from the participation of his experiment in the ESA Drop Tower Campaign, its preparatory activities on ground, in-flight operations and post-drop activities;
- shall not make any claim against ESA and/or its parties for damage to, or loss of his or his parties' property, or for injury to his parties' personnel involved in the ESA Drop Tower Campaign activities, which is caused by ESA and/or its parties, whether such damage or injury arises through negligence or otherwise;

ESA shall not make any claim against the Experiment Principal Coordinator and/or its parties for damages to, or loss of his or his parties' property, or for injury to him or his parties' personnel involved in the ESA Drop Tower Campaign activities, which is caused by the Experiment Principal Coordinator's experiment and/or the Experiment Principal Coordinator's parties, whether such damage or injury arises through negligence or otherwise.

"ESA and its parties" shall mean the European Space Agency (ESA), the ZARM FAB, other Participants, all contractors and/or sub-Contractor at every tier of all of the aforementioned (including experiment developers and owners), as well as all the employees of all of the aforementioned. "The Experiment Principal Coordinator and its parties" shall mean the Experiment Principal Coordinator, all contractors and/or sub-Contractor at every tier of all of the aforementioned, as well as all the employees of all of the aforementioned. Damage shall not only mean bodily injuries to or death of any person, damage to or loss of any property, but also loss of revenue or profits or other direct or indirect consequential damages arising thereof.

3. Insurance Coverage (*Not applicable to ESA Staff members*)

The Experiment Principal Coordinator declares that :

3.1 he has verified with his employer's insurance policy or private (life) insurance policy, that his team members, their heirs, and their social security are adequately covered against risk of injury or death which may be caused by the participation of his experiment to the ESA Drop Tower Campaign, and that he has obtained from the above insurer his waiver of subrogation rights against ESA and/or its parties.

(*Reference of insurance policy:.....*)

3.2 he is informed that ESA does not provide insurance coverage for his team members during the Drop Tower Campaign;

3.3 he has / has not (*delete as applicable*) subscribed a complementary insurance coverage, and in case he has subscribed a complementary insurance coverage, he has obtained from the insurer his waiver of subrogation rights against the Agency and/or its parties.

4. Applicable law and Dispute Settlement

4.1 It is agreed that all the provisions of the present ESA Terms and Conditions form shall be given the widest application permissible under the laws of Germany.

4.2 Any dispute, controversy or claim arising out of or in connection with this form, or the breach, termination or invalidity thereof shall be finally settled by arbitration in accordance with the Arbitration Rules of International Chamber of Commerce. The Arbitral tribunal shall be composed of three arbitrators. The language to be used in the arbitral proceedings shall be English.

Read and Agreed

Experiment Principal Coordinator's signature:

Place, date

ANNEX 2

SECOND “ESA TERMS AND CONDITIONS ACCEPTANCE” FORM

TO BE SIGNED BY ALL CAMPAIGN PARTICIPANTS

PRESENT AT THE ESA CAMPAIGN LOCATION

NOTE:

In order to be allowed to participate to an ESA campaign, the ESA Drop Tower Participants shall sign the latest approved version of the present form.

SECOND “ESA TERMS AND CONDITIONS ACCEPTANCE” FORM

I, the undersigned,
(*Name, title and affiliation*), hereinafter designated the “Participant”, do give my informed consent to participate in the ESA Drop Tower Campaign organised by ESA through the ZARM FAB at Bremen, from to (*campaign dates*).

Referring to the document “Terms and Conditions for Participation in ESA Drop Tower Campaigns” (ref. DT-ESA-TN-001, iss. 1, rev. 0), I do understand and fully agree on all of the following points.

1. ESA Terms and Conditions

The Participant has read, understood, approved and will comply with the content of the document “Terms and Conditions for Participation in ESA Drop Tower Campaigns”.

2. ESA Liability Release (*Not applicable to ESA Staff members*)

The Participant:

- consents to release ESA and its parties from any liability, which may arise from his participation in the ESA Drop Tower Campaign, its preparatory activities, on ground and in-flight operations and post-drop activities;
- shall not make any claim against ESA and/or its parties for damage to, or loss of his or his parties' property, or for injury to him or his parties' personnel involved in the ESA Drop Tower Campaign activities, which is caused by ESA and/or its parties, whether such damage or injury arises through negligence or otherwise.

ESA shall not make any claim against the Participant and/or its parties for damages to, or loss of his or his parties' property, or for injury to him or his parties' personnel involved in the ESA Drop Tower Campaign activities, which is caused by the Participant and/or its parties, whether such damage or injury arises through negligence or otherwise.

"ESA and its parties" shall mean the European Space Agency (ESA), ZARM FAB, other Participants, all contractors and/or sub-Contractor at every tier of all of the aforementioned (including experiment developers and owners), as well as all the employees of all of the aforementioned. "The Participant and its parties" shall mean the Participant, all contractors and/or sub-Contractor at every tier of all of the aforementioned, as well as all the employees of all of the aforementioned. Damage shall not only mean bodily injuries to or death of any person, damage to or loss of any property, but also loss of revenue or profits or other direct or indirect consequential damages arising thereof.

3. Insurance Coverage (*Not applicable to ESA Staff members*)

The Participant declares that :

- 3.1 he has verified with his employer's insurance policy or private (life) insurance policy, that he, his heirs, and his social security are adequately covered against risk of injury or death which may be caused by his participation to the ESA Drop Tower Campaign, and that he has obtained from the above insurer his waiver of subrogation rights against ESA and/or its parties.

(*Reference of insurance policy:.....*)

- 3.2 he is informed that there is no insurance provided by ESA to cover him during the campaign.

3.3 he has / has not (*delete as applicable*) subscribed a complementary insurance coverage, and in case he has subscribed a complementary insurance coverage, he has obtained from the insurer his waiver of subrogation rights against the Agency and/or its parties.

4. Applicable law and Dispute Settlement

4.1 It is agreed that all the provisions of the present ESA Terms and Conditions form shall be given the widest application permissible under the laws of German.

4.2 Any dispute, controversy or claim arising out of or in connection with this form, or the breach, termination or invalidity thereof shall be finally settled by arbitration in accordance with the Arbitration Rules of International Chamber of Commerce. The Arbitral tribunal shall be composed of three arbitrators. The language to be used in the arbitral proceedings shall be English.

Read and Agreed

Participant's signature:

Place, date