HIPERDIAS	**Teleconference: 20/05/2016 (CEST)** **Purpose to discuss:** 1. **Dimensions of the laser** 2. **Modulation of the laser beam** 3. **The implementation of the modulation scheme** 4. **Any other particular relevant points that need to be clarified /explored further**
Attendees:	➢ **Marwan Abdou-Ahmed (USTUTT)** ➢ **Jan-Philipp Negel (USTUTT)** ➢ **Andreas Michalowski (BOSCH)** ➢ **Clemens Hoenninger (AMP)** ➢ **Jose Ramos De Campos (LASEA)** ➢ **David Bruneel (LASEA)** ➢ **Julie Devall (KITE)**
MAA	• Marwan explained the purpose of the TC and stated that one of the key discussion points is around the size of the lasers /laser boxes and to discuss with LASEA the "installation" of the laser.
JRdC	• This is one of the purposes of our visit to USTUTT in June. • If we have to fit the laser source within our standard machine, then according to the description provided by USTUTT at the stage of the preparation of the proposal this was not be possible. • We have designed a standard design that accepts the sizes of the satsuma sources which is being commercialised at AMP
MAA **JRdC**	• This is very small **(agreement)**
JRdC **DB**	• We were thinking we will fit the "table" with a positioning system as part of the optics because it won't fit the standard • We have some standard dimensions for this and send over the standard dimensions to the USTUTT
MAA	• At USTUTT we already have pre-dimensions for the amplifier • The satsuma box needs to stay on the same table. • The way this will the approached is to make 2 boxes, 1 box for the satsuma itself and the other one for multi-pass amplifier which is more larger • The table for the multi-pass amplifier will have the length **1.8m x 1.2m** • We need to find out is how we can re-arrange the system so that the satsuma, the seed, is on the same table also with all the beam shaping and optics that have to be implemented between the two systems • The amplifier itself – after re-evaluation length - 1.2m - 1.2m Height from the optical table - approx:40/50cm
JRdC	• This seems to be the dimensions we are working with but we would like to confirm with BOSCH
MAA	• It is not possible as part of the Hiperdias project to start to implement a "new design" or concept. It is about incorporating what we have learned so far and make it more simple we must bear this in mind • We need drawings as to what will be placed on the table
DB	• If we place the laser next to the machine we need to be sure that the vibrations cause any issues on the application
MAA	• Beam stabilisation is sometimes added to the machines to counteract this, MAA asks LASEA if they have thought about this

JRdC	- We can look into this - We have produced an Interface Requirement document which will need populating - We have a number of machines and will chose a medium one then this gives up opportunity to make modifications
MAA	- It would be a good idea to clarify the different sizes of machines available as this may effect where it can be housed - We need to discuss where the machine will be placed and where the applications will take place. - We decided at proposal that it could be at USTUTT so BOSCH could do their applications - The application - We need to have a back up to eliminate risk
JRdC	- Space is not an issue at LASEA because a new building
MAA	- We need to proceed in placing an order for the breadboard as soon as possible.
DB	- This will be three tables? (1 for the laser, 1 for the amplifier and the 1 for the system)
MAA	- It will be one breadboard where everything will be put on top; 1 Block – The seed 2 Block – beam shaping optics (to adjust our beam to the multi-pass amplifier) 3 Block –The amplifier itself We don't want to make separate tables, it will be more stable on one
DB	- The Interface document contains a diagram / sketch in regards to the system.
MAA	- The question is which device will control the machine? - We need to clarify this and the interface document will help.
DB	- We have tried to integrate everything from our software
	Joined by: ➥ **Andreas Michalowski (BOSCH)** ➥ **Clemens Hoenninger (AMP)** (technical difficulties prevented joining from the start)
MAA	- In the first part of the TC we discussed dimensions - Provides a summary to the joining partners on what was discussed so far - In terms of the modulation of the beam do we want the possibility of single – pulses? - Marwan explains that we need this information - (Marwan you ask this question but I struggled hearing the response they gave to this)
CH	- In terms of hardware changes it makes sense to do these sooner rather than later - Any additional work needs to be considered
MAA or CH (sorry Marwan unsure who makes this point)	- If you make it a seed Laser the modulation will have a high repetition rate
MAA	- With the 500w / 600w modulator there is an issue with peak power (not sure if you are referring to an existing modulator or this is a general comment about modulators but it is regards to implementing the modulator discussion - We need to "survey" what is available (in terms of modulators) and whether there is a solution
AM	- Asks what is the state of the art? 200w? - 150W, 400fs is possible at Trmpf

	• It may be possible that the modulators can be purchased in 2 years time
MAA	• Provides a summary and reiterates the meeting that is going ahead at USTUTT on the 2nd of June • AMP - Clemens should be available • LASEA – Will attend • BOSCH – Andreas will also attend and states that he will bring Mawuli Ametowobla and Stephanie Karg
	Close of meeting