

**Summary:**

Celine updated on work progress, project timeline, and availability in coming weeks

**Actionable Items:**

- Alex will finish CAD design to hold breadboard and check with Mark
- Paul send email to James Webb requesting meeting time and questions to ask

**Attendance:**

Steve (S), Paul (P), Brian (B), Alex (A), Chris Leow (CL), Celine d'Orgeville (CD)

**Apologies:**

Wenjie (W) – exam

**Agenda:**

Item	Discussion	Actions + Responsibilities
Meeting Open	2:06pm	
Update	<p>A: C talked to Mark last week to redo the frame. Redoing the frame CAD model, that will house the breadboards. 2 breadboards will be the most likely after talking to James Webb last week. Perspex to prevent dust from settling on it.</p> <p>CD: Consider the laser safety aspects. Beam containment that would otherwise cause safety issues. Talk to James about safety.</p> <p>P: Lasers in the telescope already?</p> <p>CD: Telescope is the enclosure. So, no one is in there when it is happening. Make it opaque, depending on James' requirements, but they will be class 4 lasers.</p> <p>A: Additional changes such as cross-beams. Will talk to mark about it</p> <p>CD: Agrees that we should go to him about it. Access doors for the walls if it is opaque. Typically, the panels are removable, or access traps and doors depending on James.</p> <p>P: Vibration analysis</p> <p>S: Key thing. James said that the oscillator is being moved to the clean room (laser lab), in the email. Decision is to be made in time.</p>	

	<p>CD: use that as the baseline</p> <p>P: Johnathan said that we can put other stuff into the cleanroom, but wiring things will be hard for it to happen</p> <p>A+P: Clean room + base of telescope</p> <p>CD: Distance in possible cabling length for the clean room vs basement</p> <p>S: 40m limitation?</p> <p>CD: very long</p> <p>S: ANU laser will have dampening on the box for the oscillators?</p> <p>CD: Optical bench holding the laser, isolation from vibration source dunno yet, but use it as a starting point that it's not mounted to the exterior. Bolted straight to the telescope.</p> <p>S: doesn't need dampening on dampening from the breadboard and the ANU laser</p> <p>CD: The breadboard would be considered good enough for lasers to work on</p> <p>S: Vibration on breadboard caused by coolers</p> <p>P: Coolers mounted externally</p> <p>CD: ANU laser cause vibrations that will cause EOS laser issues</p> <p>P: Vibrations will cause changes in wavelength and not just power</p> <p>CD: if it is than yes, but they will deal with that on the laser side. If it loses power, or shift wavelength than it's not our problem.</p> <p>P: Understanding that the vibrational sensitive components will be in the ANU laser black box.</p> <p>CD: There will be electrical components on the bench that will</p> <p>P: Accelerometers used to measure the vibrational issues. Who do we talk to? Trying to measure the vibration in the basement and clean room.</p> <p>CD: Ask Francis Bennet best option. Ask around otherwise. More quiet than telescope, so I wouldn't be worried.</p>	
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	<p>S: Someone tapping table, jumping and running</p> <p>CD: That report is the worst-case scenario that caused them to move back to the lab and improve vibrational specs. Slight vibration in those environments. Vibration environment will still be the same and transfer to the frame</p> <p>P: Dampening on the frame</p> <p>P: Passing on questions on ANU laser to CD</p> <p>CD: Going through questions for the laser construction team. All good questions. Hopefully I can get some to you before the end of your project. Other option is to give constraints and she can pass them onto the laser people. Then they can tell her if they are worried.</p> <p>S+P: Clarification on question for James Webb re EOS laser</p> <p>B: ethernet cables does to electrical cabinet on lv 1.</p> <p>CD: Is there room to add stuff?</p> <p>B: There is still room in the cabinet. There are limited ethernet cables on the top level (3). 1.8m extended from the side for controlling the coolers and the lasers. If there aren't enough we could use canvass to come out of there to enter the electrical cabinet. Cooler cables can be through the plate or outside.</p> <p>CD: Connector plate is on the frame, communication, water air. Connectors on both sides so you can easily move the enclosure without moving all the external equipment with it.</p> <p>B: Functional diagram. Control and power supply. Blue/red are one of two methods. Turn on coolers on and off. Integrated commercial coolers. Ask James whether you need to use 1 of each of the lasers, or 2 of a single one.</p>	
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	<p>CD: Ask James whether what he is using in the lab right now is what he plans to use in the telescope</p> <p>B: Single phase laser? Ask James Webb regarding it.</p> <p>CD: Good to know that you are working on this and questioning, but I'm not an expert so you should ask someone else.</p> <p>Recommend a list of questions and send it to James via email.</p> <p>CL: Reading reports and making templates having created a template for the CoDR deliverable at the end of the project</p> <p>CD: system requirements definitely a part of it. Subsystem can be had or subset of that.</p> <p>Concept design mainly CAD, works around it would be good, but information in it would be helpful.</p> <p>A: Big table in appendix saying everything there is</p> <p>CD: Good. component design wouldn't need that more for final design. Vibration is a high issue than start with that then move to other issues. Highest risk items and list them as they go.</p> <p>Timeframe you are working with.</p> <p>Welcome to look at any of the documents, just don't leave with them. Lots of photos and tables.</p> <p>P: Papers in project background had GSL demonstrator?</p> <p>CD: SERC had an AO GSL demonstrator. It was to have a long-term project with SERC.</p> <p>S: Repository guides pointing to folders</p> <p>CD: Found that very useful and when I found the files they were very helpful. Comparison between documents from previous team.</p> <p>Very organised</p> <p>S: Salty that Chris told us not to do that</p>	
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	<p>CD: Really? Concern is using a lot of the time interfacing with the auditors.</p> <p>S: Minimise process completely.</p> <p>CD: Even if you didn't have auditors it was still very useful and I had experience with the previous team. If you are taking too much time on it than don't bother. I'll write the submission with the audit after this. I'll be explicit about the repo being organised.</p>	
Plan for the break	<p>CD: Next week is the break are you still planning on coming</p> <p>A+P+S+B: Everyone is planning on coming</p> <p>CD: I will take a break on the first school holidays last week of September.</p> <p>C: IAC 2017 will be September</p> <p>CD: ah right a lot of other people will be going away</p>	
Plan for the coming weeks	<p>CD: Plan for the coming weeks</p> <p>P: Getting more information with James Webb. 2 pages of questions</p> <p>S: Rough</p> <p>CD: recommend booking an appointment with him. Take him to lunch if you need to. Coffee, or a laser lab but no coffee in there.</p> <p>A: W has been working on the cooling system just a heads up</p> <p>CD: James is still the contact for that.</p>	
Meeting Close	2:50pm	