COMMENTS P1

* Is the STC the maximum power that can be obtained from the PV panel? In the report we call Pmax at the max power under STC and Pmpp for all the other conditions.
* Does the inverter have a MPPT controller if there is no MIC?
* Switching frequency of the system selected to be 50kHz so learn the pros and cons of high/low switching frequency.
* CCM/DCM explain this
* Limitations of buck and boost converters regarding number of panels (equations 2.1 and 2.2)
* R\_limiting what is it used for?
* Why do we need filtering in the sensors if the capacitors have been selected to have low voltage ripple?? To avoid high frequency noise.
* Input range of the RT box we say it is 0-5V but we have used -10-10V in the lab. Maybe Tamas will say something about this because he told us to define the range to -10-10V
* 80kHz cut-off frequency for the current sensor
* Assuming continuous conduction mode,the average PV current is...(eq 4.18-4.20). How would this be in DCM? Try to calculate minimum value of average current in the inductor in CCM.
* Why it takes more time to reach the MPP in boost mode?
* Consider including the thermal test in the presentation but not in the report.
* As in buck mode the current is higher than in boost it would be the worst case for the converter’s efficiency. This is what we will say in the exam if they ask why we didn’t measure the efficiency in boost mode. Consider deleting it from the report and including it in the presentation.
* Look for some references of commercial MPPTs to compare the tracking time with the results we obtained.
* What’s the difference on using a lower/higher frequency for the MPPT?
* Software filter: calculate the frequency.

Boundary between modes:

* 10 panels 4.3ohms 🡪 299.67W, 1.2seconds, Dbuck = 0.9805, Vin= 36.625, Vout = 35.9 V
* 9 panels 5.3 ohms 🡪 299.82W, 1.5seconds, Dboost=0.079 , Vin=36.7V , Vout=39.88