Battery balance charging

* To avoid over or under charging the batteries since they have different mA ratings although nominally, they are the same at 500mA. Happens since in full battery.
* Drain resistance
* Do passive balancing. Don’t turn on more than one relay at a time.
* When relay goes high, you start measuring.
* When dis is high, you can discharge the mosfet.
* Not more than one relay at once.

When you measure voltage from relay, you do it on analogue pin. Can only measure up to 4V, so have to use pd for series.

•Charge batteries.

•Battery charge profile design.

•Battery charge status estimation.

•Battery balancing algorithm.

•PV MMPT algorithm.

•System Integration and Test.

•Rover range estimation

•Prevent explosion/melt.

Store initial voltage value.

Disconnect one.

Measure it again.

Minus them

If it is less than 2.5V or more than 3.6V stop charging

Move on to next ones and check them.

**General smps connections and set up**

**How to connect PV**

Check battery balancing thing.

State of charge integrating thing.

Constant voltage charging

Mppt algorithm

Series vs parallel

Pwm thing

Turn on relay for one

Measure voltage

If higher than 3.6 – discharge does high – but for how long?

Top balancing is easier to diagnose as you can measure how hot they are, or see effects whereas for bottom balancing it just stops charging and there is no going back.

Also unlikely to use them all at once, so bottom balancing is not as useful

Start, check they are all lower than 3.6V.

If not discharge them and put a delay on