Checklist after power failure

Check both IGP Controller for the resonators R1 + R2

- Current should be below 2 mA (both should show "HV ON" (green LED on)
- Check both USV for IGP´S

Turn on the computers

Check Meerstetter TEC for R1 + R2 + ECDL

- Green LED on?
- Check in the software *TEC Service v2.70 - R1*, *TEC Service v2.70 - R2* and *TEC Service v2.70 - ECDL Baseplate* on the ResLab-PC:
    - How is the behavior of the temperature?
- Check both USV for TEC´s

Check the air conditioner for the entire room

- Is the air-conditioning system switched on?
    - Is the V-belt (=Keilriemen) broken?
- What is the temperature of the draft (=Zugluft)? → should be >10 °C
    - Check the electric fuse (=Sicherung) on the third floor

Check the H-Maser

- All LED are green?
- Check in the Software *VCH* on the ResLabMobil:
    - All values except for D2h must be green!

Check the 914nm-laser

- Light is on? Powermodule is on?
- TA stabilization is ok?
- Laserdiode is on?
- How much power is in front of the resonator? → should be 70-100 µW
- What wavelength does the Wavemeter display?

Check the 10 MHz reference and set all frequencies in the lab

- GPS-Receiver is working?
    - LED flashes orange/yellow?
        - If not Turn on the PWR switch until LED flashes
        - Start the software *Net View* and connect the receiver (COM Port2)
- Rb-clock is working?

- Check the LED´s:
    - *Power*-LED and *Locked*-LED have to be green
    - *1 pps sync*-LED has to be green
    - *1 pps input*-LED has to flash
- Check the 10 MHz-frequency output with an spectrum analyzer, if there is 10 MHz.
- Check the 10 MHz distributor synthesizer
    - Ext refernce *10 MHz direct* is working?
    - Set correct values
- Check all other synthesizer
    - Ext refernce *10 MHz direct* is working?
    - Set correct values

Check frequency comb

- Laser and amplifier are on?
    - Check LED´s
- Do the software *fiber laser* and *fiber comb control* work?
    - Can you speak with the comb?

Check the counter

- Does the software *FXQE80* work?

Check the fiber Link to PTB

- Turn everthing on, like ther spectrum analysizer
- Restart the PC in the Atom Lab
- Call them!

If the temperature is normal again, then…

1. Stabilize the laser of R1
    1. Turn on the Laserdiode
    2. Turn on the TA
    3. Couple the light into the TA
    4. Turn on the TA stabilization
    5. Lock R1
2. Stablize the frequency comb
    1. Lock Ceo
    2. Lock Rep
3. Measure the frequencies with the counter:
    1. 914nm
    2. frep
    3. 10 MHz

4. virtuel beat