



# EEG Checklist for EcoSleep Participants

Created by: Laura Hainke & Nayab Fatima, edited by Anna M Biller

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## In the evening 🌙

1. Complete your sleep routine, including all you usually do before going to bed (changing clothes, brushing hair / teeth, removing lenses, washing face...).  
**Please *avoid* using skin cream on your face.**
2. Have your EEG package ready for use, which includes:
  - a. The EEG device (= little black box with cables)
  - b. Sticky electrodes
  - c. Headband
  - d. Alcohol swabs, cotton pads, cotton swabs, abrasive gel



3. If you have longer hair, tie it in a low-hanging ponytail and use a hair clip behind your ears



4. Now, prepare the skin and attach an electrode to each position. This is what it should look like at the end. We need:
  - a. 3 electrodes on the forehead. One vertically over each eye, in the middle of the forehead, plus one between these two.
  - b. 1 electrode on the lower left outer corner of the left eye, and 1 electrode on the upper right outer corner of the right eye.
  - c. 2 electrodes on the chin, vertically below the mouth corners, on the chin bone. If you have facial hair where the chin electrodes should go, choose the nearest spot on your cheek without hair.
  - d. 1 electrode behind each ear, on the bone. Try to avoid hair.



5. Procedure for each electrode:

- a. Clean the position with an alcohol swab.
- b. Clean the same spot with abrasive gel and a cotton swab, like a peeling. Remove the gel, e.g., with a cotton pad or towel.
- c. Peel the cover off the disposable electrode and stick it to the position you cleaned.

6. For your comfort:

- a. For easier removal, electrode latches should face the outer side of the face.
- b. For positions near the eyes, be especially gentle when scrubbing the skin.
- c. Behind the ears, scrub a little more intensely.
- d. Avoid spots with hair / beard.
- e. Don't place electrodes too close to the eyes or mouth corners, where your skin is most sensitive.

7. Put on the headband first before covering your ears and forehead.



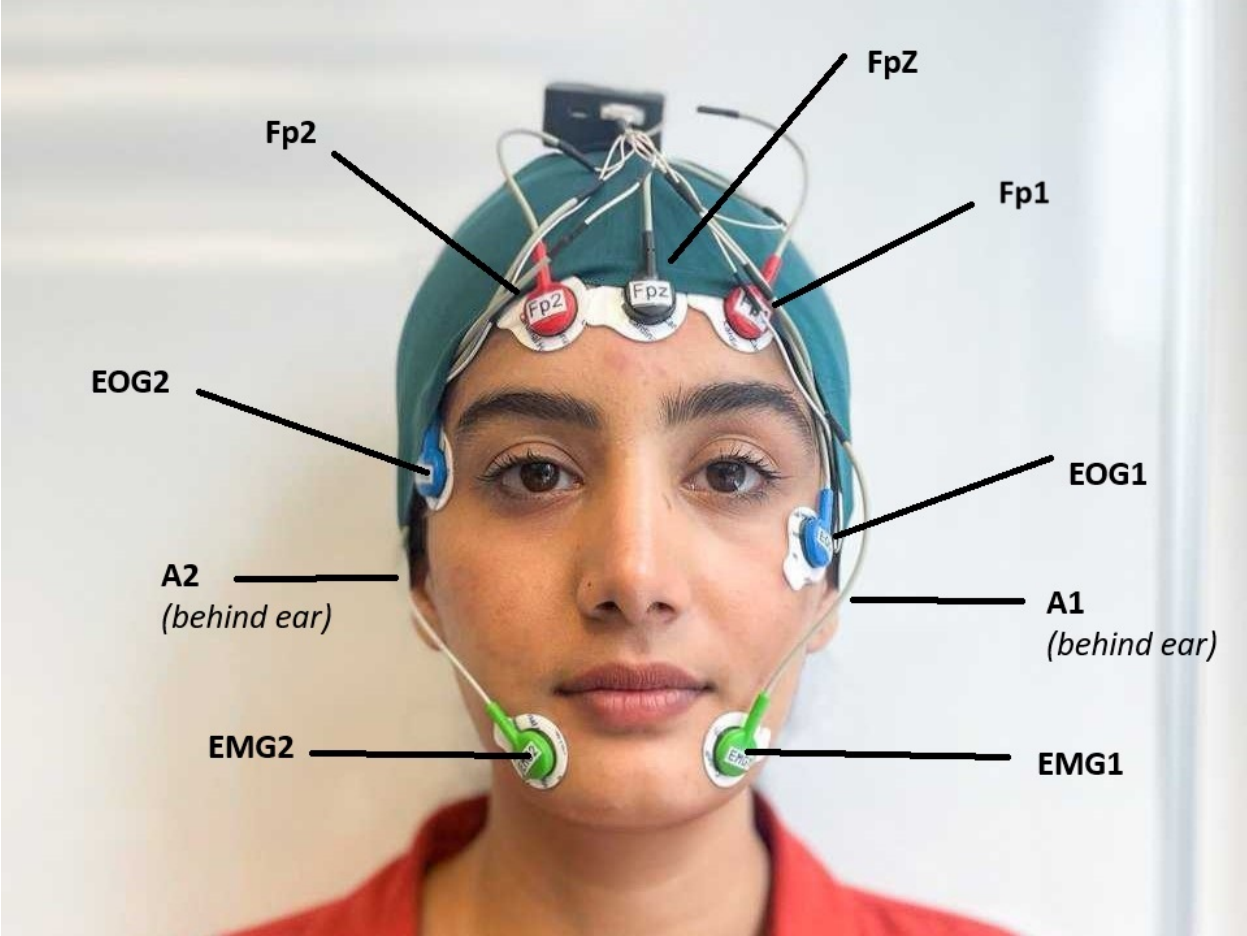
8. Take the EEG device and press its button once. It should react with a **green** light, then **blue** blinks; now it's **on and recording**. 👍 Attach the EEG device to the velcro strap with the cables toward your face.

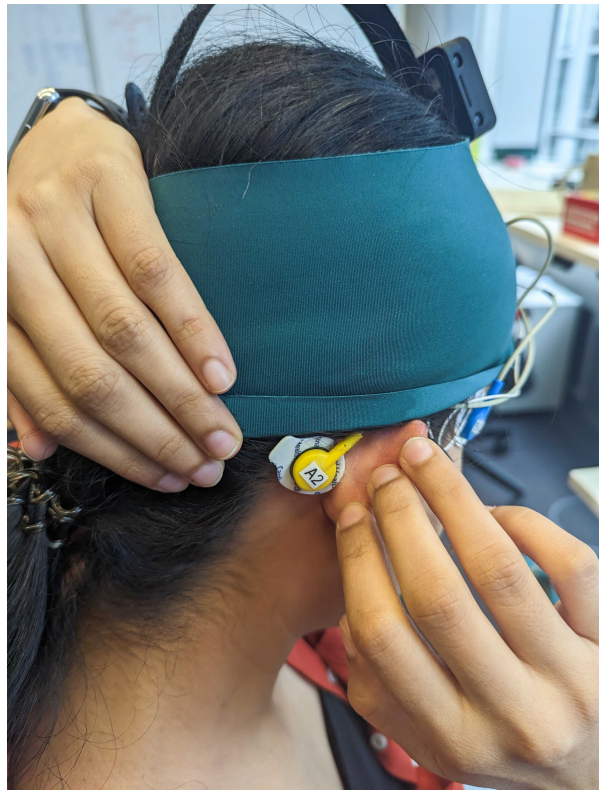
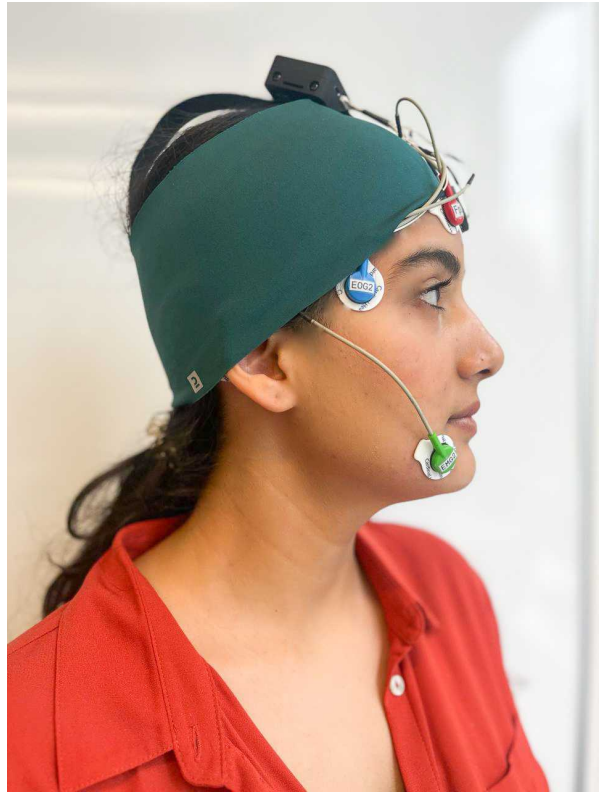


9. Attach the cable buttons to the electrodes. This table shows where to put each one:

Button label	Where to put (left/right <i>from your own perspective</i> )
A1	Bone behind left ear
A2	Bone behind right ear
Fp1	Vertically above left eye, in the middle of forehead
Fp2	Vertically above right eye, in the middle of forehead
EOG1	Lower left corner of the left eye (45° diagonally)
EOG2	Upper right corner of the right eye (45° diagonally)
EMG1	Vertically below the left mouth corner, on chin bone
EMG2	Vertically below the right mouth corner, on chin bone
FpZ	Between the two electrodes on the forehead

This is what it should look like:



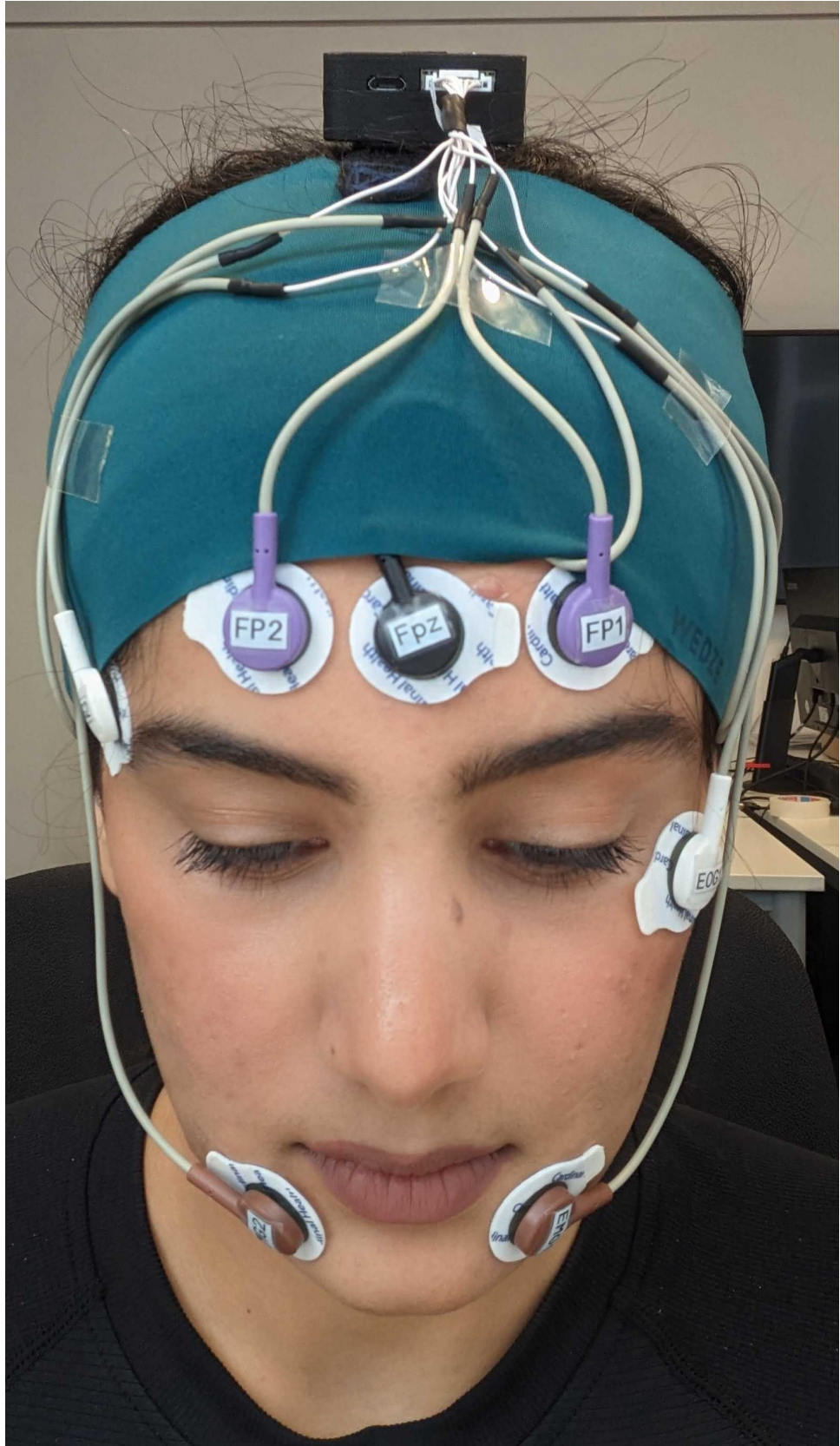




10. Double-check if the numbers are correct (uneven numbers on the left side of your face, even numbers on your right side). **Take a selfie from all sides of your head 🤖 and send it to [tum.ecosleep@gmail.com](mailto:tum.ecosleep@gmail.com)**
11. Readjust the headband to cover your ears. Readjust the EEG device so that the cables move as little as possible, but without too much strain on them. Tape the cables to the headband to keep them away from your face.



Make sure all cables are in the right place.





Alternative wearing position of the headband.



Another alternative wearing position of the headband.

12. **IMPORTANT:** as soon as you're in bed and try to fall asleep, **press the button on the actimeter.** Congrats, you made it - good night! 🧠 😊 zzz



**In the morning** ☀️

1. Detach all buttons from the electrodes.
2. Detach the EEG device from the velcro strap.
3. Press the EEG button for about 3 seconds, until the light blinks in **red** 3 times.  
●●● Now the EEG is **off**. 👍



4. Remove the headband and electrodes; throw the electrodes away.
5. Connect the device to a PC with the USB - microUSB cable. It opens a folder like a USB stick would.
6. !!Copy all data to a dedicated folder on your own computer, then **transfer the data to the silver USB** stick that we gave you. **Create 2 folders and add all files in the correct folder: !!**
  - **Night 1**
  - **Night 2**
7. **Only when you are absolutely sure that the data has been saved,** both on your computer and the USB stick, eject the EEG device and disconnect it from the computer.

8. Turn the device on again and as soon as it blinks in pink , double-click the button. This will delete the data in the system memory, which is needed for the next recording.



9. Turn the device off again by pressing the button for 3 seconds, until the light blinks in red 3 times → ●●●
10. Charge the device by connecting it to a power source (or your a PC but it might charge less quickly) for at least 3 hours.