

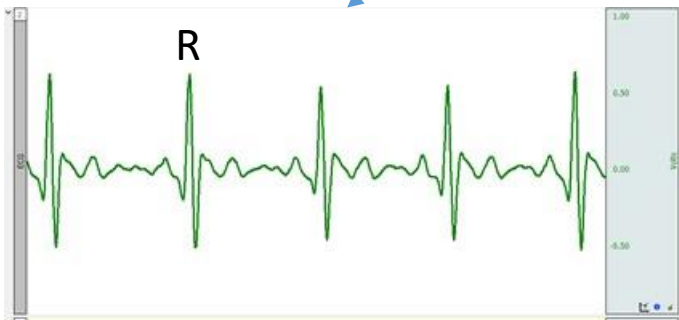
ECG – improving R waves' identification

- Depending on the electrodes placement, T and R waves of the ECG may be similar in amplitude.
- This could be problematic to detect R waves and quantify Inter Beat Interval (IBI) since employed algorithms may not differentiate between the two.
- Fortunately, T and R waves' frequencies are not equivalent
 - Use a high pass filter > 6-7 Hz to keep R waves, or
 - Uses a low pass filter < 6-7 Hz to keep T waves.

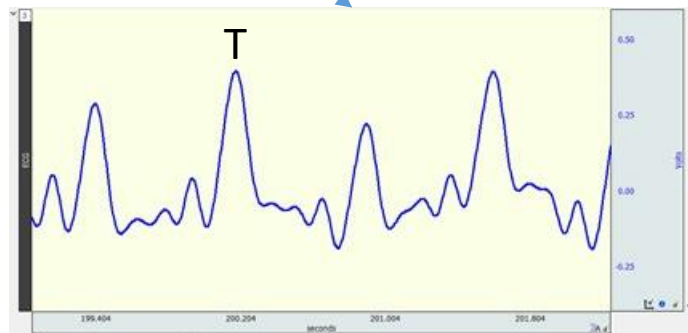
Note that it is advisable to confirm filter's cut-off by checking the ECG frequencies using FFT or power spectral density



Blackman -92dB
High-pass Filter
Cutoff frequency = 6Hz



Blackman -92dB
Low-pass Filter
Cutoff frequency = 6Hz



• WARNING:

- May influence R and T amplitudes
- May/should be adjusted as a function of signal quality and participant