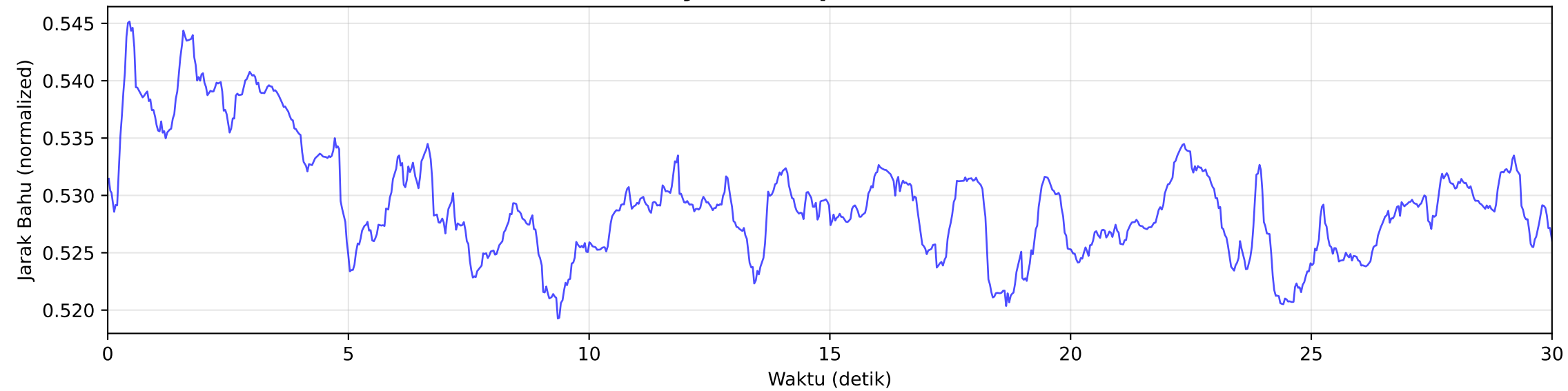
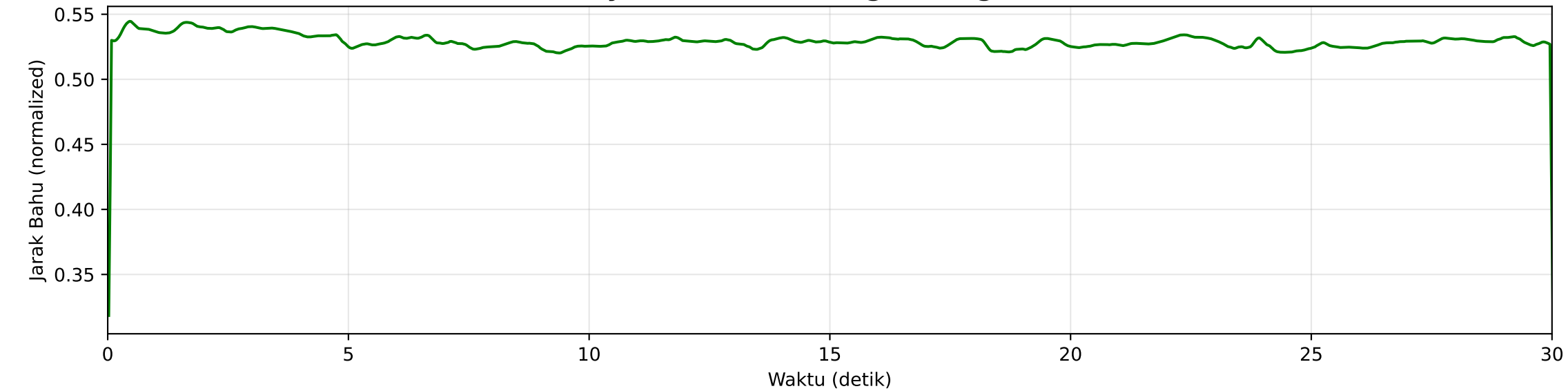


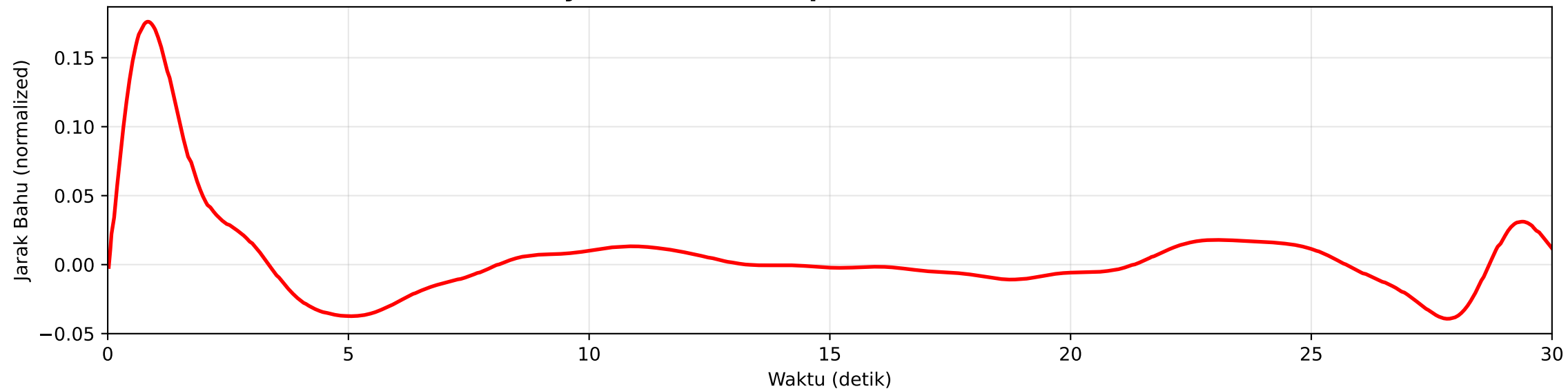
Sinyal Pernapasan Mentah



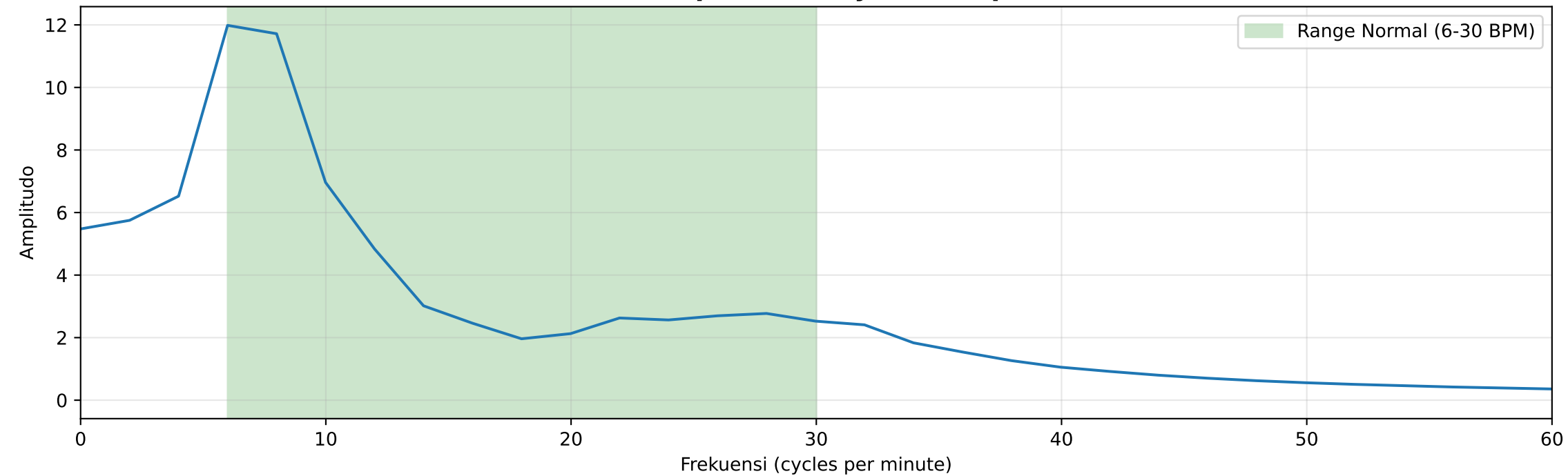
Sinyal Setelah Moving Average Filter



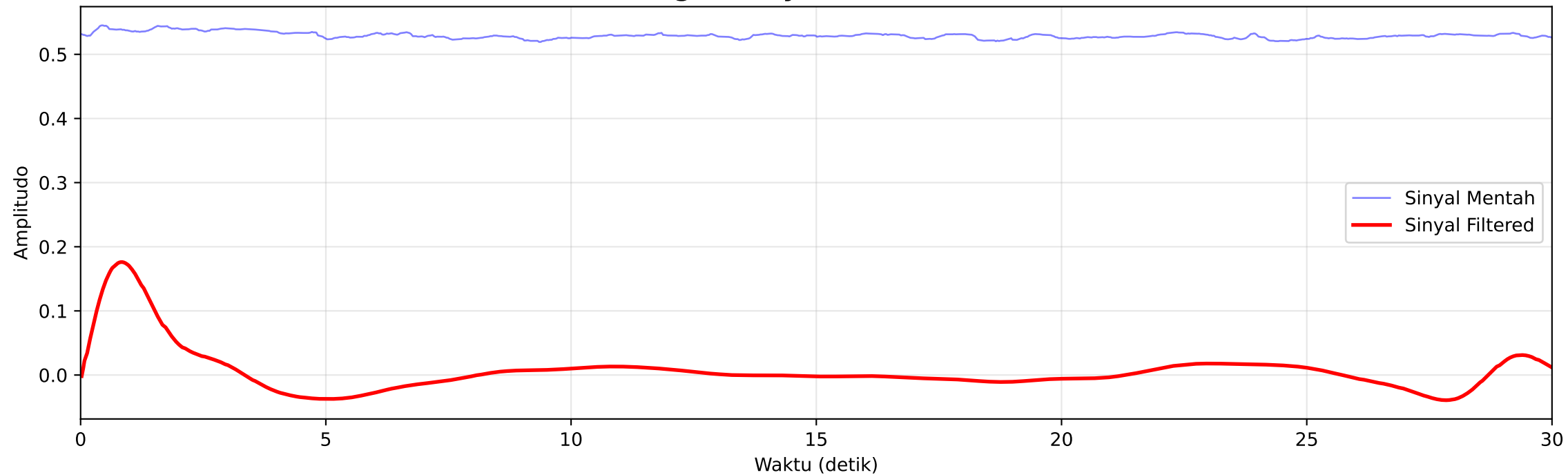
Sinyal Setelah Bandpass Filter (0.1-0.5 Hz)



Analisis Spektral Sinyal Pernapasan



Perbandingan Sinyal Mentah vs Filtered



LAPORAN ANALISIS PERNAPASAN

PARAMETER RECORDING:

- Durasi: 901.0 detik
- Sample Rate: ~30.0 FPS
- Total Samples: 901

ANALISIS SINYAL MENTAH:

- Mean: 0.529358
- Standard Deviation: 0.004860
- Range: 0.519263 - 0.545165

ANALISIS SINYAL FILTERED:

- Mean: 0.006078
- Standard Deviation: 0.035303
- Range: -0.039281 - 0.176099

ESTIMASI LAJU PERNAPASAN:

- Breathing Rate: 8.0 BPM
- Status: Perlu Perhatian

METODE FILTERING:

1. Moving Average Filter (Window: 5)
2. Butterworth Bandpass Filter (0.1-0.5 Hz, Order: 4)

DETEKSI LANDMARK:

- Bahu Kiri (LEFT_SHOULDER): MediaPipe Landmark
- Bahu Kanan (RIGHT_SHOULDER): MediaPipe Landmark
- Sinyal: Jarak Euclidean antara kedua bahu