

# QuantumBCI Analysis Report

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## Session Information

Filename:	S108R14.edf
Upload Time:	2025-10-06 19:54:15
Original Channels:	64
Selected Channels:	20
Processing Status:	processing

## Brain Metrics Analysis

Brain State:	Deep Sleep (Stage 3-4 NREM)
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## Frequency Band Powers

Band	Absolute Power (uV^2)	Relative Power (%)
Delta	0.0000	68.98%
Theta	0.0000	18.90%
Alpha	0.0000	6.54%
Beta	0.0000	4.23%
Gamma	0.0000	1.35%

## Model Predictions

Model	Prediction	Accuracy	Time (s)
Brain State Classifier (SciNet)	Deep Sleep (Stage 3-4 NREM)	100.00%	0.050
Quantum SVM (QSVM)	Low Neural Activity	87.50%	21.900

## Summary & Recommendations

- Best performing model: Brain State Classifier (Scientific) with 100.00% accuracy
- Detected brain state: Deep Sleep (Stage 3-4 NREM)
- Dominant frequency band: Delta
- Total spectral power: 0.0000  $\mu\text{V}^2$

### **Clinical Recommendations:**

- Low alpha activity - may indicate stress or active cognitive processing
- Continue monitoring for trend analysis
- Consult with neurologist for clinical interpretation