FIGURE 5 - REAL-TIME QUANTUM COUNTERMEASURE ENGINE REAL-TIME QUANTUM COUNTERMEASURE ENGINE (400) POLICY-DRIVEN RESPONSE FRAMEWORK (501) Threat Level Response Constraint Compliance Assessment Selection Validation Check GRADUATED COUNTERMEASURE DEPLOYMENT (502-510) LEVEL 1 Monitoring Alert Generation Data Retention LEVEL 2 EM Shielding Power Filtering Timing Random LEVEL 3 Key Rotation Zeroization PASSIVE MONITORING **ACTIVE DEFENSIVE EMERGENCY RESPONSE** (516-520) (526-530) (521-525)• Dynamic shielding · Network isolation Sensor sensitivity ↑ • Adaptive filtering · Extended data retention · Physical lockdown • Forensic collection • Jitter protocols • Environmental control Alert escalation • Crypto operations Video surveillance Physical HSM POLICY ENFORCEMENT AI AGENTS (531-535) Security Secure Key Integration Sub-100 μs Response Time Storage (511-515) FIPS 140-3 Sheet 5 of