



## Spiez HPE Laboratory

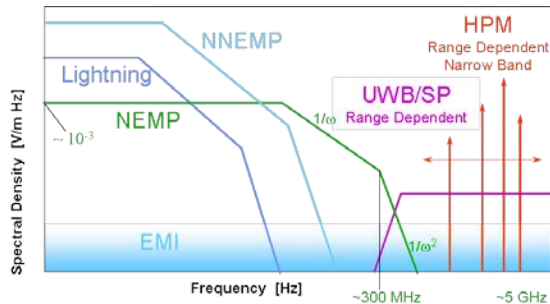
The “High Power Electromagnetic“ (HPE) Laboratory in Spiez features modern facilities for NEMP simulations. In addition to these simulators there are further facilities and generators with equipment suited to simulate and measure lightning, NEMP and HPE environments.



HEMP Simulator Verify

### Technical data

- Maximum E-field up to 100 kV/m
- Rise time of E-field ~1 ns
- Test volume l x w x h: 8 m x 8 m x 4 m
- Typical measuring instruments:
  - Fast digital oscilloscope for single-shot measurements
  - Fibre optic link with short rise time of 150 ps
  - Large range of E- and H-field sensors, all kinds of transducers
  - CW- facility (Continuous Wave) up to 9 GHz, including 100 W amplifier up to 4 GHz



Spectral content of various HPE threat forms

### Characteristics / description

- Security-relevant immunity tests and investigations both in military and civilian applications against strong electromagnetic fields;
- Test of protective measures and measurement of shielding effectiveness
- Evaluation of EMC protective measures in the form of site surveys



SWIRA (Swiss IRA): Ultra-wide-band antenna with frequency range 100 MHz - 4 GHz