

## **AWAKE Week 15 (12-16 April 2021)**

**WEEK SUMMARY:** Beginning of laser experiments studying behavior of ionizing laser pulse propagation through the Rb vapor source when laser frequency is on/off-resonance with Rb

- **Vapor source:** 3 failed control thermal probes on the vapor source (cause of the failure not known). These probes need to be replaced before going to higher temperature for reaching higher Rb vapor density. The contractor has been notified, and will provide remote support to the AWAKE team to replace these probes during Week 16.

- **Laser/DAQ:** Final setup of all diagnostics for laser propagation experiments completed (triggered USB spectrometer, schlieren imaging diagnostic, single shot autocorrelator, PXI cameras triggered at 0.1 Hz, and energy meters for input and output energy). Data acquisition script fully implemented, with Wigner Research Center for Physics (RCP) team working remotely on data verification and debugging.

- **Laser:** experiments in Rb vapor started, at low Rb density ( $2 \times 10^{14} / \text{cm}^3$ ).

**Next week:** Replace temperature probes on vapor source to be able to continue data taking with higher Rb density in Week 17.

- Giovanni Zevi Della Porta