

Linac3 Week 21

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Week Report – Including Oxygen

- Measure neutron production with oxygen at 4.2 MeV/u to assess for the LHC oxygen run.
- The linac was scaled to O^{2+} operation, which has a rigidity difference of about 11%. Stripping was made to O^{8+} to remove as much as possible Pb contamination into the beam in the ITFS line.
- A very high intensity of O^{2+} could be produced, but this saturated the beam current measurements, the pulse intensity was therefore reduced. This is not considered an issue for later oxygen runs.
- It is reminded that this is not the operation mode that will be used for an LHC run.
- Al, W, Fe, Cu and Ni targets were tested. Results in line with expectation, but being further analysed.
- After the radiation measurements, it was decided to keep the oxygen beam permit to allow measurements of the transmission into the ITFS line (planned for Wednesday) before changing back to Pb.
- At the beginning of last week the Pb was refilled with *used Pb* in the oven ready for the next Pb operation test.
- Source vacuum gauges switched off, for an unknown reason.
- RFQ amplifier failed at the weekend – several components failed, repaired on Monday morning.
- A document for ABP control rooms is released (<https://edms.cern.ch/document/2568448/>)

150ms Test in Week 20

MFC = Faraday Cup

MSG = SEMgrid

MSF = SEMfil

MTR = Beam Transformer

MPHPS = Phase Probe (4-section)

CRFBU = Buncher

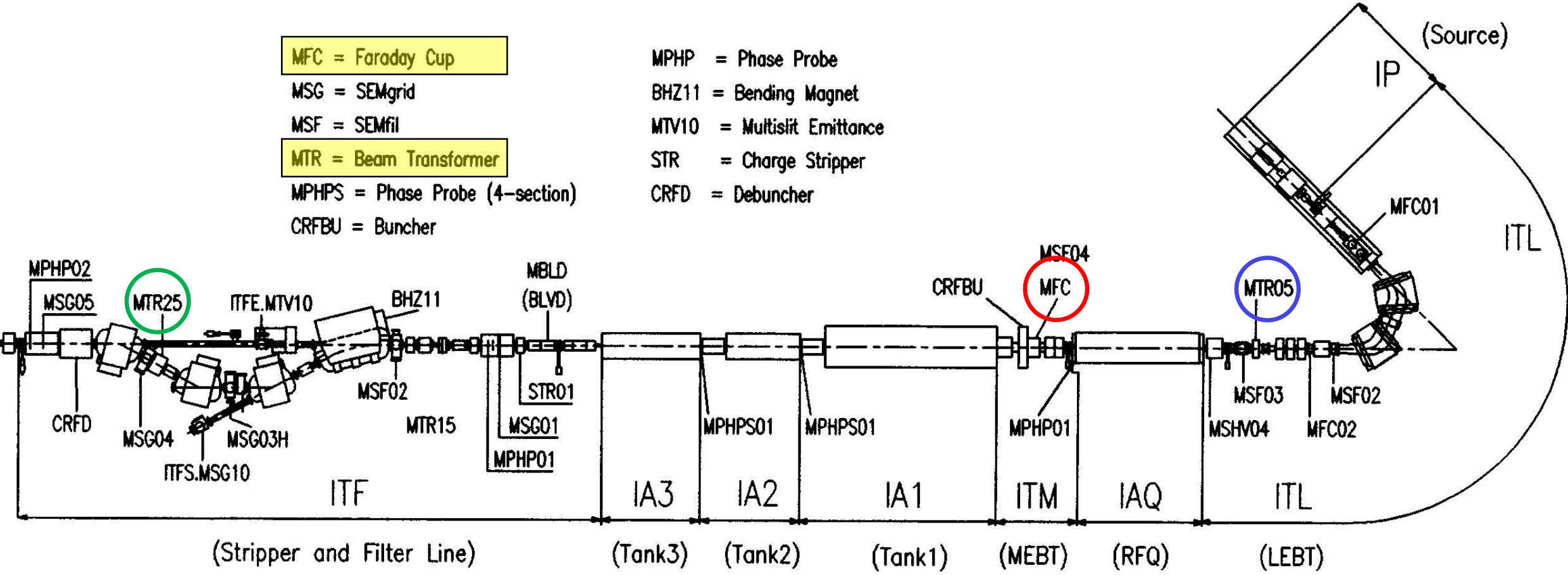
MPHP = Phase Probe

BHZ11 = Bending Magnet

MTV10 = Multislit Emittance

STR = Charge Stripper

CRFD = Debuncher



150ms Test in Week 20

