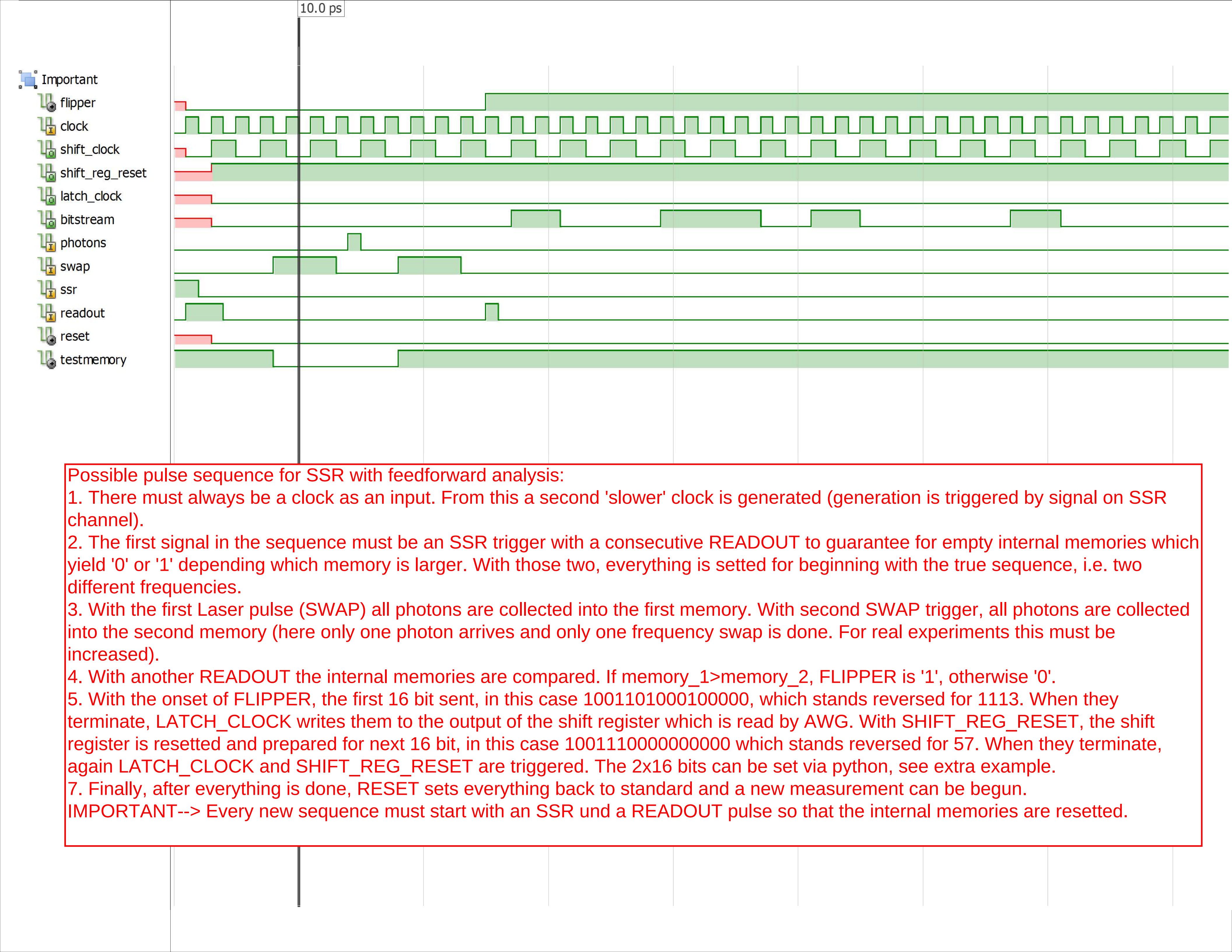
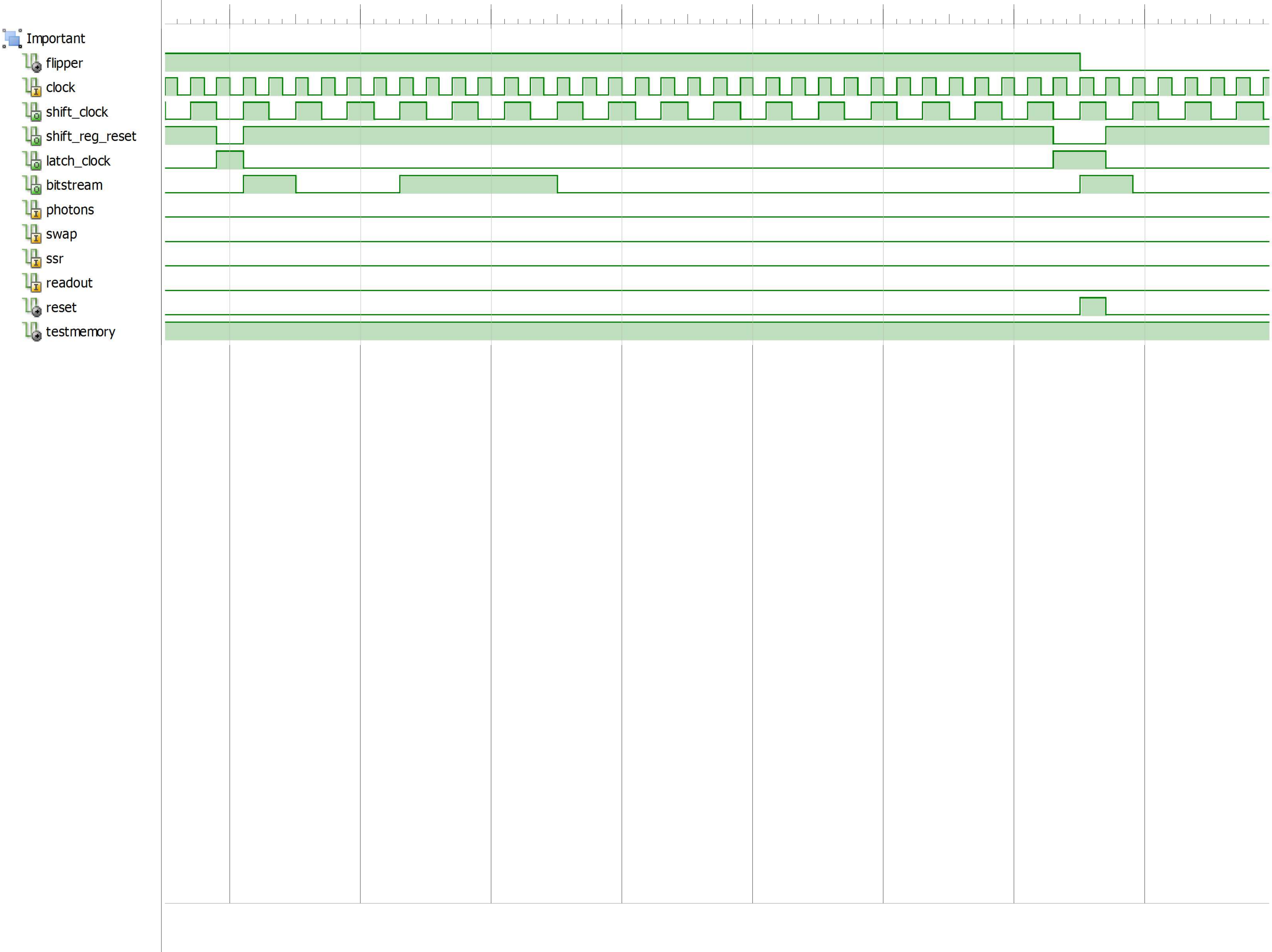


Possible pulse sequence for SSR with feedforward analysis:

1. There must always be a clock as an input. From this a second 'slower' clock is generated (generation is triggered by signal on SSR channel).
2. The first signal in the sequence must be an SSR trigger with a consecutive READOUT to guarantee for empty internal memories which yield '0' or '1' depending which memory is larger. With those two, everything is setted for beginning with the true sequence, i.e. two different frequencies.
3. With the first Laser pulse (SWAP) all photons are collected into the first memory. With second SWAP trigger, all photons are collected into the second memory (here only one photon arrives and only one frequency swap is done. For real experiments this must be increased).
4. With another READOUT the internal memories are compared. If memory_1>memory_2, FLIPPER is '1', otherwise '0'.
5. With the onset of FLIPPER, the first 16 bit sent, in this case 1001101000100000, which stands reversed for 1113. When they terminate, LATCH_CLOCK writes them to the output of the shift register which is read by AWG. With SHIFT_REG_RESET, the shift register is resetted and prepared for next 16 bit, in this case 1001110000000000 which stands reversed for 57. When they terminate, again LATCH_CLOCK and SHIFT_REG_RESET are triggered. The 2x16 bits can be set via python, see extra example.
7. Finally, after everything is done, RESET sets everything back to standard and a new measurement can be begun.

IMPORTANT--> Every new sequence must start with an SSR und a READOUT pulse so that the internal memories are resetted.


Important
flipper
clock
shift_clock
shift_reg_reset
latch_clock
bitstream
photons
swap
ssr
readout
reset
testmemory