Some points to keep in mind during operation

1. Make sure that after the shift everything is in the same state as before the shift except for the necessary changes (for measuring, scanning or conditioning) during the shift.
2. If you made any changes during the shift in the main parameters controlling the RF, gun and booster water temperature, the electron beam or… Please write down what you did (parameter from→to) in the logbook in the control room.
3. During the shift check the radiation level around the facility at least twice and write elevated (normal value 3~6 μs/h) values in the logbook.
4. Check the vacuum conditions during the shift operation.
5. Check the laser shutter frequently and the laser properties should have the same values as required for operation.
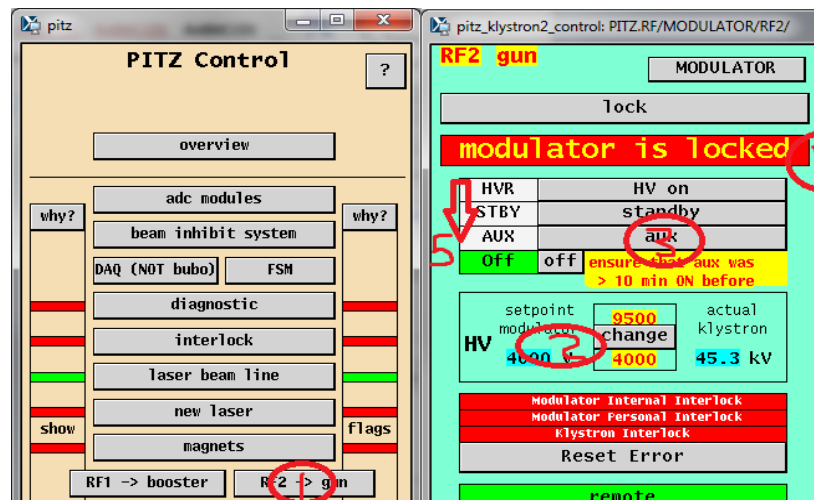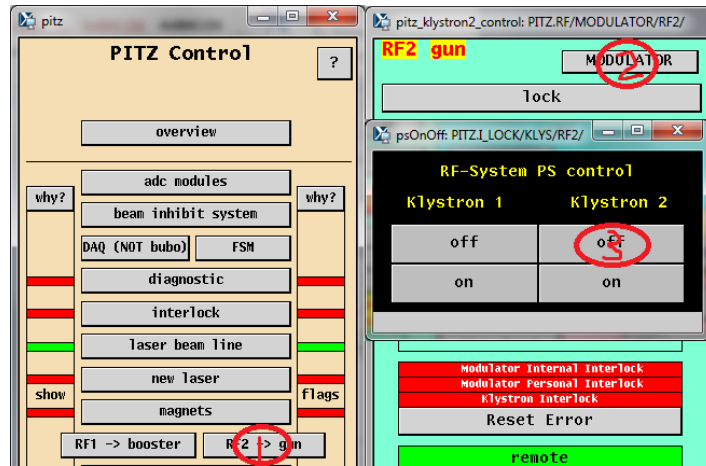
PITZ Shut-down procedure

For Gun:

1- From PITZ control →RF2 Gun [1]→ FPGA [2]→change the following values:
   a. Feedback gain → 1.0 then Switch off Feedback [3]
   b. SP Pfor→ 10 MV [4]
   c. Push the Feed forward button to off state [5]
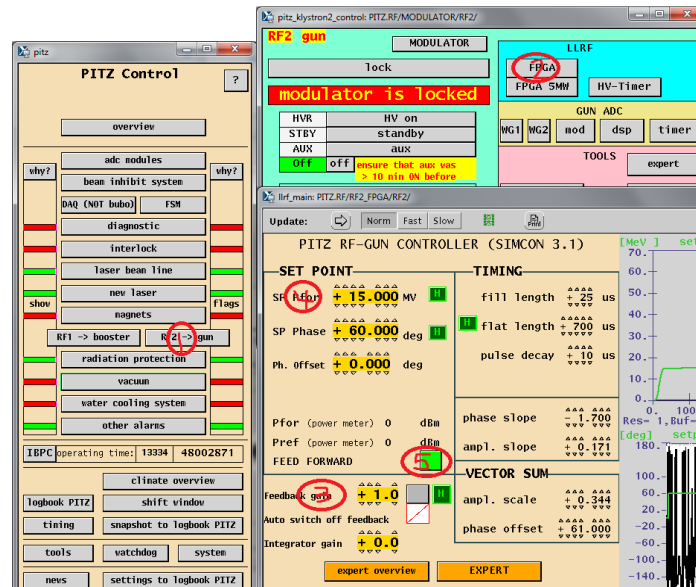
2- From PITZ control → RF2 Gun [1]→ set Modulator voltage to the minimal value (4000V) by pushing the change button, change the value, then wait until it reaches that voltage [2]
   a. Push the button AUX [3]
   b. Push the button STOP TRIGGER [4]
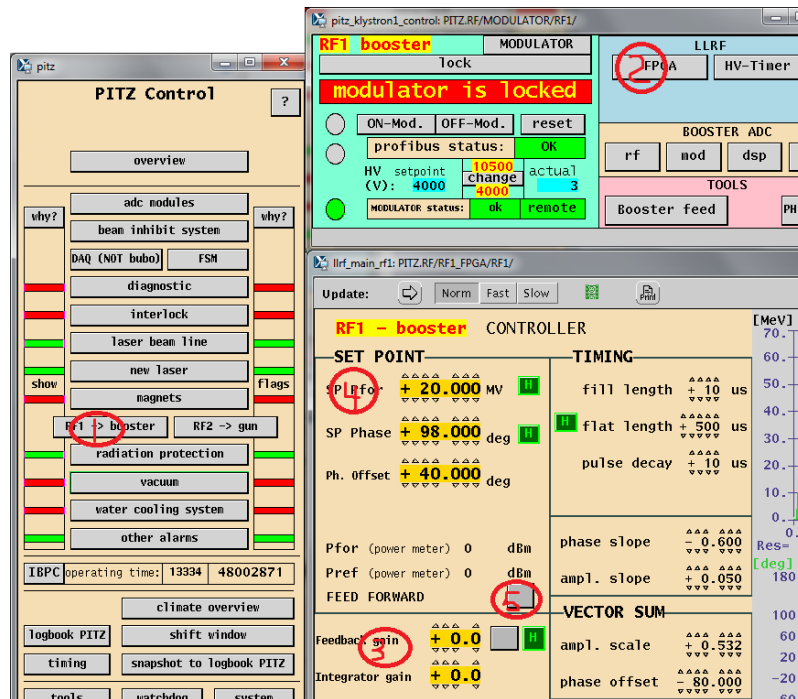   c. Wait until traffic light move from HVR to AUX [5]

3- From PITZ control → RF2 Gun [1] → Modulator [2] → Klystron 2

    a. Push the button under klystron 2 → off [3]

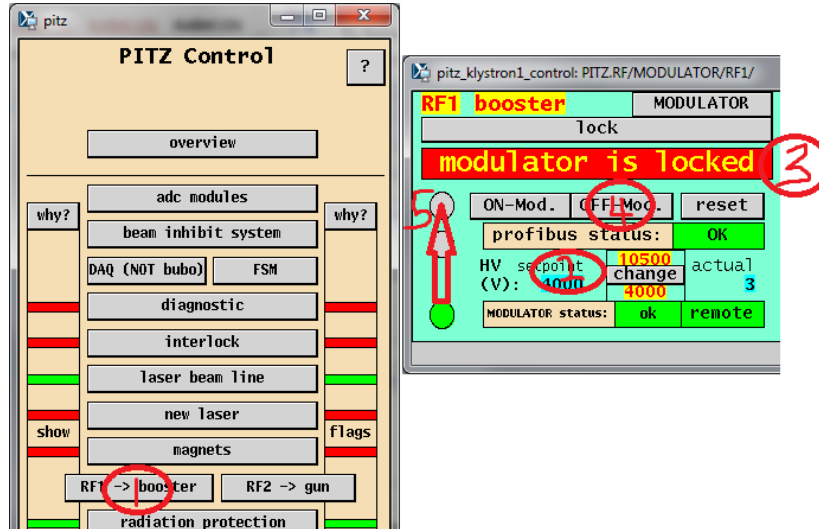   This step will put the klystron to the standby mode.

For Booster:

1- From PITZ control→RF1 booster [1]→ FPGA [2]→ change the following values:

    a. Feedback gain → 1.0 then switch off Feedback [3]

    b. SP Pfor→ 10 MV [4]

    c. Push the Feed forward button to off state [5]

2- From PITZ control→ RF1 booster [1] → set Modulator voltage to the minimal value (4000V) by pushing the change button, change the value, then wait until it reaches that voltage [2]

      b. Push the button STOP TRIGGER [3].

      c. Push the button OFF-MOD [4].

      d. Wait until traffic light becomes green [5].


3- From PITZ control → RF1 booster [1] → Modulator [2] → Klystron 1

      a. Push the button under klystron 1 → off [3].

         This step will put the klystron to the standby mode.
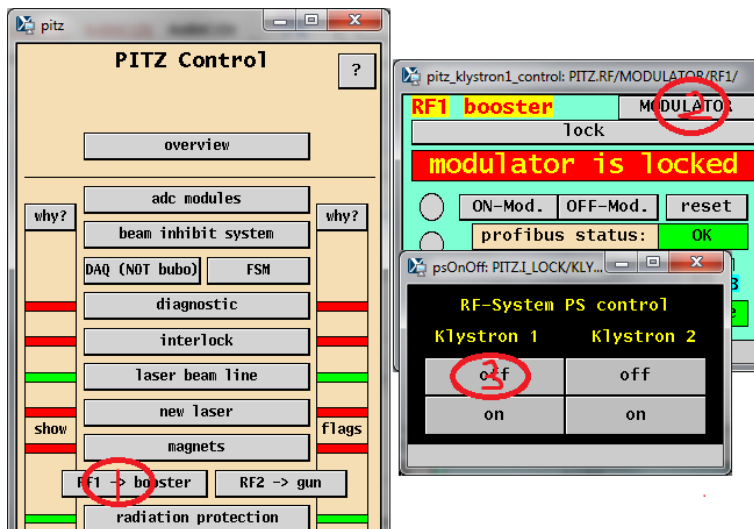
4- Close the laser shutter from PITZ control→ New laser [1]
   a. In the page end (Shutter) → push the button close [2]
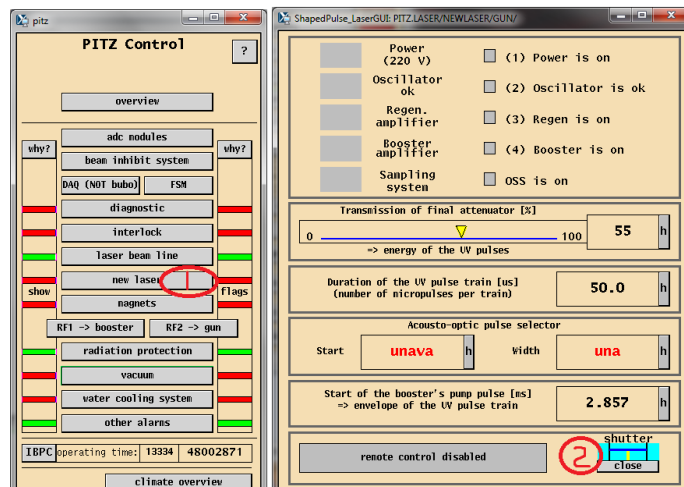
6. Switch off lamps, cameras, magnets, move out diagnostics screens,
   a. from PITZ control → system [1]
   b. Switch off all lamps and cameras [2]
   c. switch off all magnets [3]
   d. move out all diagnostics screens [4]
   e. Switch off laser   (You have to do or not?)
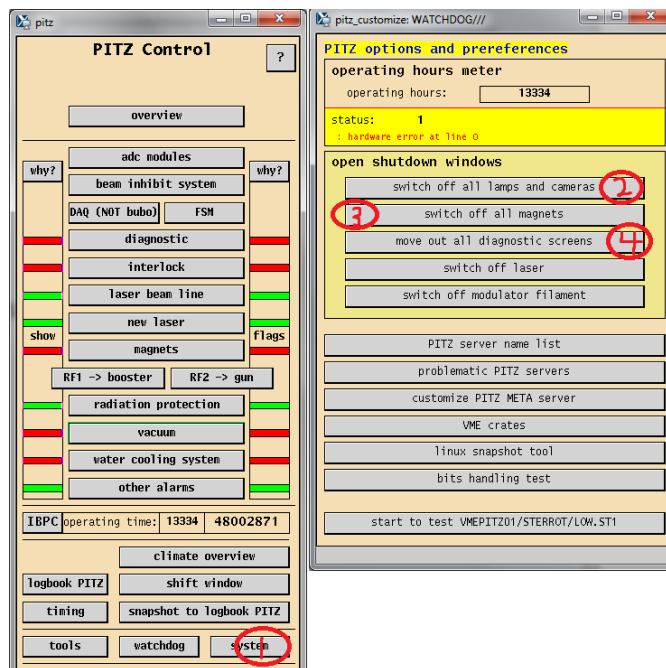
7. In case of automatic conditioning   (what you have to do?)
8. In case of long time shut down (what you have to do?)
9. In case of emergency during the shift (what you have to do?).