Minutes of PITZ Physics Seminar, 07.05.2020

Project: PITZ
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Agenda:

1) AoB
2) Talk by Matthias – Information of shift work and on-call duty
3) Talk by Guan – Update on thermal analysis of gun4.2 for green cathode operation
4) Talk by Raffael – Scaling factor for slice emittance

Results:

1) AoB
    a. PPS only group contact in Corona times – take it seriously. If you cannot make it, send email to Frank, Anne, Matthias, Mikhail and Houjun beforehand
    b. If you need a headset for online meetings: Email to Daniel Neubert
    c. TDS news: No booster operation on Monday, run will continue as foreseen
    d. Collaboration Meeting: Keep in mind, to prepare your contribution
    e. Matthias got feedback from MBI: New set of Pockels cells in approx. three months
    f. MBI laser: 100 pulses are maximal. Laser timing to be optimised, so that all laser pulses create bunches
    g. TUV checking of crane: Issues found, to be solved by crane-installing company
    h. Berlin has a public holiday tomorrow, but not in Brandenburg. You have to work
2) Talk by Matthias
    a. Shift on weekend to be compensated by taking off a shift during the week (= ‘day off’)
    b. When people start within the year, the 22 shift limit for payment is reduced
    c. Schichtabsicherung is paid as part of shift payment
    d. Why do late shifts have 3 hours? Matthias: You have to have a 30 min break, when you work more than 6 hours, therefore late shift goes until 11:30 pm, i.e. 3 hours after 9 pm
3) Talk by Guan
    a. Power in cavity based on cathode gradient. Factor used to be 0.00185, but is now even 0.0015. That is very strange
    b. Can you simulated fixation of cathode plug? Not possible
    c. Further simulations proposed, with different gun cavity fixations

d. Houjun: Simulations underestimate stress and cavity detuning. Thus, cavity operation is more complicated than assumed. To be kept in mind, for operation of Gun5
e. Frequency sensitivity of Gun5 (according to simulations of V. Paramonov)? 2.3 kHz/deg.
f. Houjun: Simulations can be benchmarked in experiment, to get better picture
g. Frank: Is there experience, of people, which operate cavities with more than 61 MPa stress (in simulations)
h. Did anyone contact Joerg, to realise a different cooling of the current gun? Houjun: No.
i. Frank: We should get in contact with him, to realise it easily. Guan should get in contact with Sebastian and Joerg. Worst case, is we destroy the (old) cavity in the last run, which we would like to avoid.
j. Mikhail: You assumed, that q factor does not depend on gun power. Could it depend on it? Guan: Yes

4) Talk by Raffael

Next steps:

What is to be done?	By whom?	Until when?	Done on

Protocol prepared by
R. Niemczyk, 07th May 2020
(Name, Date)