

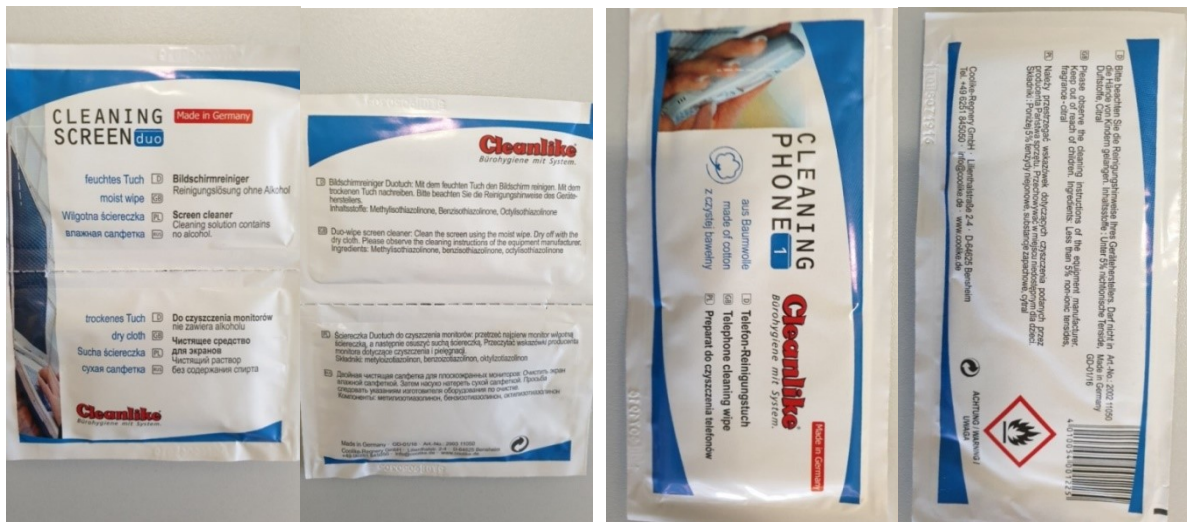
Action items to reduce spreading of virus for shift operation at PITZ:

Collection from PITZ group, status: 30.4.2020

- ⇒ First of all, we have to have a well motivated, well defined, well prepared and clear running schedule to justify the shift operation (e.g. we finally should do valuable measurements with 3D laser shaping once the necessary preparations are done, measurements with the newly installed cathodes, once TDS klystron is installed we finally have to do plasma and slice emittance measurements, ... → the scientific program and schedule is unchanged !)
- ⇒ If you feel ill and maybe even have symptoms of a cold then stay at home and do not come to DESY.
- ⇒ Second we have to have a list in the control room to document who is there with whom and when

cleaning of control room mice, keyboards, screens, chairs, arm rests and tables at the beginning and end of each shift. The corresponding cleaning tools will be provided in the control room (see next item). Keyboards and computer mice will be connected to the computer by USB extension cables **and two sets of keyboards and computer mice will be available for each computer in use.** This will allow to exchange the keyboards and computer mice at each shift transition, clean the old ones by the previous shift crew at the end of their shift and let them dry on the central table in the control room. At the same time we have active keyboards and computer mice connected to the control computers in order to have full control over the machine at any time.

- ⇒ Up to now I had the following pieces for cleaning screens, keyboards, mouse:



- ⇒ Since the above tissues are without alcohol they probably can't reliably remove viruses from surfaces in short time. **We are prepared to use a solution of about 75% Isopropanol and 25 % water to do the disinfection of the keyboards, computer mice, control desks, chairs and their arm rests. For this we provide paper towels and gloves. After doing the disinfection you should NOT wear gloves since regular use of gloves can cause skin problems.**

- ⇒ **Don't use too much disinfection and do it directly on the object to be cleaned. Inhalation of disinfection is not healthy.**
- ⇒ **Separate the keyboard and mice that are newly cleaned from the other ones, e.g. by placing them in a suitable box.**
- ⇒ **Start using self-made disinfection and if it get empty tell to Sebastian Philipp and Stefan Maschmann and ask for refill. In that time use commercial disinfection.**
- ⇒ Grygorii Vashchenko ordered for USB extension cables, keyboards, mice and tried to order keyboard covers (see next point) which have to 1:1 fit to the keyboards. The keyboards, mice and USB extensions were delivered. Keyboard covers are delayed.

For shift crew, the risk area include social distancing between two persons during the shift and during the shift transition, it's difficult to avoid. **Maybe mask is a must, because of a lot of talking are included.** Mouse cleaning is relatively easier, keyboard is difficult, maybe use cover on the keyboard for each person, or each shift? (<https://www.amazon.com/Chromebook-Keyboard-Protective-CB5-132T-CB5-312T/dp/B07632PR2C>)

- ⇒ We have simple paper masks available. But the most important measure is to keep a large distance between persons. Since we only can provide simple masks it will be important that you do **not touch mouth and nose.**
- ⇒ Better masks are in the cupboard in the control but are reserved for close work that is really needed for a time shorter than 15 minutes, e.g in the specific regions of the laser hutch. You are not allowed to work in close distance for more than 15 minutes !

Hand sanitizer dispenser must be available in the control room and at least in the rack room. Also dispensers of hand moisturizer should be added (FS: moisturizer might not be needed if sanitizer proposed by Frank is used).

- ⇒ Hand sanitizer dispensers (currently same stuff as used in toilets up to now) is installed in control room and rack room

Shift leader and operator: **keep at least 1.5 m distance, better 2 m**

- ⇒ Use two different areas: one on the **left**, the other on the **right** side of control room. Ttry to use VNC in order to share important panels
- ⇒ **Shift transition** using computer and large monitor **at discussion table** → larger separation of first and second shift → **Use gloves for working with the shift transition computer**

Keep the whole **control room and kitchen tidy.** Plates have to be are cleaned, dried and put away. Also microwave oven has to be cleaned regularly (before and after usage, which in any case should be exceptional).

- ⇒ **The control room central table and the control desks have to be completely tidy, so that you can wipe them at the start and end of each shift !**
- ⇒ **The control room area should only be used by shift crew personnel and technical personnel which really has to go there ! This was communicated to all persons in Zeuthen**
- ⇒ **The kitchen is closed !!! The usage of the kitchen from someone outside of the current shift crew is strictly forbidden !!! If possible try to prevent to eat in the control room.** Bring you stuff (to eat and drink) from home and do not use the kitchen to prevent touch the same surfaces by different people !

A person making shifts interacts with at least five other persons per day (his/her own shift partner + 4 other shift takers during shift transitions). 6 people per week is the bare minimum for the operation, but with the current rolling schedule more people involved each week. In the already cancelled week 13 schedule I have counted 11 people. It does not mean that each person sees another 10, but they still can “cross-pollinate” each other. So I propose to **cancel the rolling schedule and have only six persons taking shifts in one particular week** with fixed morning/late/night shifts for particular persons. I believe it will be relatively easy to organize now as no one makes trips.

- ⇒ **Yes, cancel rolling schedule. We discussed several options, e.g. fixed teams of shift leader and operator, fixed schedule with 5+5+4 shifts, partially fixed schedule with rolling after one shift gap. Since the system can be changed later we planned the next shift period with a 5+6 fixed schedule for the next coming 11 days of shift.**

Liquid soap and paper towels stock in the control room kitchen

- ⇒ **Liquid soap and towels are provided.**

Bring your own pencils

- ⇒ **Yes, why not !**
- ⇒ **Complete opening of windows at beginning of shift (rush airing - Stoßlüftung)**

The risk not avoidable is travel from home to Zeuthen by public transportation. For people who has a car, it's easier.

- ⇒ If possible use bicycle, car, foot, use public transport only outside rush hour. If have to use public transport t is recommended to wear a mask and especially to keep distance to others.