

Subject: [Fwd: Re: SOS1 Meeting minutes 17.8.2007]
From: Camille Ginsburg <ginsburg@fnal.gov>
Date: Mon, 17 Sep 2007 13:33:47 -0500
To: Phil Pfund <pfund@fnal.gov>

----- Original Message -----

Subject: Re: SOS1 Meeting minutes 17.8.2007
Date: Mon, 17 Sep 2007 20:32:32 +0200 (CEST)
From: Lutz Lilje <lilje@mail.desy.de>
Reply-To: Lutz.Lilje@desy.de
To: Camille Ginsburg <ginsburg@fnal.gov>
References: <46C984FC.3030606@desy.de> <46EE9BCA.6050307@fnal.gov>

Thanks for the corrections. Please proceed as you suggested.
Lutz

On Mon, 17 Sep 2007, Camille Ginsburg wrote:

Dear Lutz,

Two corrections to your notes from this meeting a month ago:

There was no problem with the Vertical Test Stand vacuum system, because it doesn't exist yet. The cavity venting happened somewhere in between JLab and the Fermilab cleanroom. Also, the next planned test was of AES01 not AES04. The former is important because we should understand and improve cavity transport for S0. The latter, not so important.

I would like to ask Phil to update these two items in the minutes on his webpage, if you agree:

1) Instead of "leaks have been observed in the VTA vacuum system, the cavity had an accidental venting to the 10-1mbar level due to a leak. "

<>substitute: "Sometime during transport between JLab and the Fermilab cleanroom, the cavity was vented to 10-1 mbar. Active cavity pumping on the test stand is not available yet."

2) AES04 -> AES01

Best wishes,
Camille

Lutz Lilje wrote:

> Dear colleagues,
>
> please find the minutes of the meeting last week below.
> Please feel free to add comments and corrections.

>
> Best regards,
> Lutz

>
>
>
> S0 Meeting minutes
> 16th and 17th of August
> KEK Meeting
>

> Update for the plan with exchange of data
> =====
>
> 1. US data - Camille (slides attached)
>
> The first vertical test was successfully performed. A single-cell
> cavity on loan from Jlab achieved 27 MV/m with some field emission.
> Generally the test went smoothly. Some improvements are still needed:
> - the magnetic shielding of the cryostat needs completion (lower Q0
> observed)
> - leaks have been observed in the VTA vacuum system, the cavity had an
> accidental venting to the 10-1mbar level due to a leak.
> Next test will be the AES4 with equator thermometry on the cells
> identified to be limiting in the mode measurement at JLab.
>
>
> 2. KEK Facilities - Hayano
>
> The STF infrastructure is delayed due to problems with the HPR
> pump. The new pump will be available in October.
> The EP setup is under commissioning with water. The PLC software is
> being debugged and the over leak tightness is being checked.
> The full STF infrastructure for cavity treatment should be available
> by November.
>
>
> 3. KEK Cavities - Kenji
>
> With the infrastructure being set up, some reduced activity is being
> done within the KEK ILC WG5.
> Tests on single-cell cavities with IS endgroups indicate that
> - the Indium seal location is critical.
> - both IS single-cell test cavities with the straight large beam tube
> (108mm) and large tube with the end taper show a lot of
> xrays, possibly due to Multipacting
> - the cavity with new IS end shape (80mm diameter) seem to be less
> problematic
>
> Degreasing a la Jlab or an H2O2-rinse on single center-cell test
> cavities
> yields lower xrays, this could be an indication that there is less
> multipacting
>
> Another IS nine-cell without HOMs has been tested (IS9#5). The cavity
> reached 22 MV/m before a field emitter switched on, limiting the
> cavity below this value.
>
>
> 4. DESY nine-cells - Lutz
>
> An evaluation of the 4th DESY production by D. Reschke is
> presented. Main results are:
> EP with alcohol rinse
> - increases the FE onset level
> - does not fully remove the spread on the maximum field
> - performs better than EP without ethanol and similarly to BCP as a
> final treatment (slightly higher average, larger spread)
>
> Some part of the performance spread in the maximum is due to quenches
> at the
> equator (especially in two bad cavities) or to strong field emission.
>
>
> 5. Cornell- Hasan
>
> A nine-cell test at Cornell yielded a Q-slope without X-rays after EP
> and bake. It seems that the high temperature of the EP acid could be
> the cause for this.

>
> In a second test, the cavity A9 has been tested with 27 MV/m and some
> FE. No Q-slope has been observed.
>
>
> Actoin items:
> -----
> - DESY data should be checked whether there is a gradient dependence
> on the amount of removal for the final EP. A long EP could potentially
> produce more sulphurus (KS) -> Lutz, Detlef, Camille
>
> - Single-cell data check for Cornell and Jlab data:
> Do there exist measurements on cavities with a quench field changing
> by several MV/m with an additional surface treatment. If so do their
> exists Tmaps? -> Camille (Points of contact: Hasan and Gigi Ciovati).
>
> - More regular t-maps on multi-cells are needed at DESY (->Lutz). The
> other labs should bring T-map systems into operation as soon as
> possible. A joint effort would be beneficial, as workload could be
> shared. It is not clear how this could be triggered in the labs.
>
>
> S0 Schedule
> =====
> The plan can be found under:
> http://tdserver1.fnal.gov/project/ILC/S0/S0_coord.html
>
> A rough assessment shows that we are at least 10 tests behind of what
> we promised. There are different reasons for this both technical and
> organisational.
>
> So far it is clear that degrease and alcohol rinse have been
> successfully to multi-cells. For the fresh Ep so far only pomising
> single-cell data exists.
>
> Due to the unavailability of the KEK setup, the cavity exchange is
> currently stuck. It is proposed to turn the concept around: We could
> first do different treatments at the same place until the exchange can
> start.
>
> One of the next cavities to be treated is the A8 (from Cornell to
> Jlab). This cavity should get the standard tight-loop with degrease.
> The other two cavities (A6 and A7) could be treated with a fresh EP,
> provided this is technically feasible.
>
> Action items:
> -----
> - Crosscheck with Jlab-FNAL people on possibility of a fresh acid
> treatment at JLab (Phil, Camille)
> - Prepare a S0 talk for FNAL meeting (draft by Lutz)
>
>
>
> Preparation of documents for each of the major S0 participating labs
> =====
> These documents concern mostly Desy, Fermilab, KEK, Jefferson. It
> should allow those labs to understand what we would propose for their
> contribution. This is most important for Desy, following a request
> from Reinhard Brinkmann last month.
> Marc would like to present an S0 plan to Reinhard in mid September.
>
> The old document from October last year (given via EC and Barry to
> A. Wagner) will be updated as some request have been fulfilled already
> and e.g. several modules have been measured snce.
>
> Action items:
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> - Lutz to provide updated draft.

