



Al Conrad <aconrad@lbto.org>

Summary Document for fiber distance measurement

Alessandro Cavallaro <acavallaro@lbto.org>

Tue, Feb 27, 2024 at 12:24 PM

To: "Crass, Jonathan" <crass.7@osu.edu>

Cc: Patrick Hartley <phartley@lbto.org>, Mark Smithwright <msmithwright@lbto.org>, LeRoy Durham <ldurham@lbto.org>, Riccardo Ansaldi <rgansaldi@lbto.org>, Al Conrad <aconrad@lbto.org>

Notes from today:

(Let me know if you have additions/changes.)

On Tue, Feb 27, 2024 at 10:21 AM Alessandro Cavallaro <acavallaro@lbto.org> wrote:

Here is the link to the zoom channel:

<https://arizona.zoom.us/j/5758255421>

And a brief agenda:

- Status of i-Locater fiber routing (start, end and 3L route)

On 3L we can run the fibers straight rather than along the wall. This should save a few meters of length.

We will use distribution panels on both sides (on the gallery on top of pepsi feed, under LBT1 and in CRA/CRB location tbd, close to rack 15)

There's an option to go to CRA and then to CRB but that will add about 20m, not a good option.

Another option will be to go through a hole in the wall close to the ceiling of level 2, central pier, to see if it goes to CRB.

If that hole is used, fibers can go down close to the main telescope glycol lines between 2 and 3L.

- Concerns about tight turns of the fibers

Take a look at the hole right below the ceiling on 2, central pier, to see if it goes to CRB.

Take a look at the glycol holes on the floor in 3L.

- Selection of the fiber

LeRoy did some research and put details on the IT. Arto should be contacted too since he gave some suggestions.

Keep in mind lightning safety and grounding when running the fibers with aluminum shielding.

Keep in mind the USB/Fibers converters, but that's for a future time.

Next steps:

Take a look at the connection 3L - 2 and central pier on 2 and CRB.

Reassess and discuss best routing and remeasure route going straight on 3L and through the hole, if necessary.

- Light source for i-Locater

Supercontinuum laser of i-Locater is in the LBT building and could be used from a safe place in a lower level.

It can be dangerous because of the density energy that the spikes have, an integration sphere may solve this problem.

- Is there a source already?

See above.

- Plan forward

Talk to instrument users/Pis and ask for light source requirements.

Install the Y fiber at the ARGOS light source output on Monday and see how much attenuation we get.

Track the fiber installed from the C-Ring Extension to a lower level (Gallery/Pier). This is the blue fiber.

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