

# EMC Status and meeting introduction

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LNF-INFN

Mu2e INFN Italian meeting

3-September-2020



# Progresses .. Independently from COVID (1)

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- ❑ Work on crystals continues → all crystals received!
- ❑ In the meantime we are working on preparing the SiPM gluing @ LNF
  - Anna has shipped all toolings back to LNF and they have been received
  - 100 SiPMs are in our hands
  - glue is being kept on hold from the producer
  - new freezer just arrived → see later on presentations
- ❑ **Progresses on FEE**
  - first 80 FEE boards arrived
  - first 7 FEE-MB cables in our hands and tested in vacuum + HV
  - CRR recommendations replied on Monday (docdb# xxxxx)
- ❑ **Test of Light Tightness**
  - done with the FEE-plate prototype, OK
- ❑ **Test of rad-hardness for Laser fibers**
  - 10 (out of 110) fibers from the bundle prototype irradiated at 100 krad, no changes on rel. uniformity. Needle length tested. Updating drawing for prod.

# Progresses .. Independently from COVID (2)

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Today we will have few presentations on mechanics and electronics

- most of the pieces built or being built  
(CF ring, front-plate, IR steps, crates)  
interaction with Source piping to be re-evaluated.
- Test of FEE plate in Pisa + test of light-tightness @ LNF
- measurement of load test and stress on crystals in Pisa
- producer of Faraday Cage identified, tender in progress
- drawings of IFB flange
- Outgassing tooling @ LNF
- Status of DIRAC project
- Status of DIRAC firmware
- Status of TRAD

□ Although we managed to interact with the firms, COVID made a large hit on us. Dates for delivery have been adjusted.

→ **Our best estimate today is that the Peek plate and the CF rings will be ready for December**

# Interactions INFN-FNAL with COVID

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- ❑ *In order to complete the assembly we need to have INFN team back to US*
- ❑ Ron has asked me to evaluate two options:
  - Opt-1. revise the schedule assuming INFN team will be back in the fall
  - Opt-2. revise the schedule assuming this cannot be done and if there is any work to be done from other teams (FNAL techs/engineers, Caltech Postdocs) and in case evaluate the cost or delay the arrival of the INFN team.

I have done a first revision on schedule for Opt.1

I am still working on Opt-2. However if INFN team cannot be back to US in the Fall we cannot conclude the preparatory jobs for SiPM-gluing and FEE assembly so that it will be important to decide how to handle this operation first.

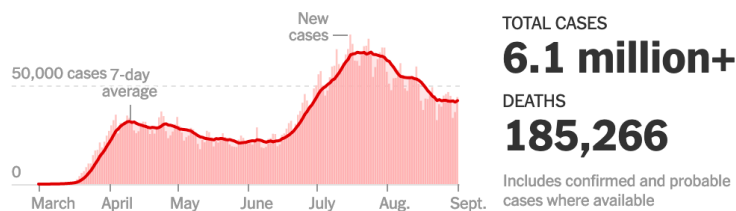
We are working to setup everything at LNF if we see that INFN cannot go there to see if it is possible to make some valid option for n.2

- ❑ INFN has clearly stated that travelling outside CERN is discouraged. It is not forbidden but we should prove it to go to safe places and act with all possible Covid-19 safety measures. Discussion with INFN upper management needed.

**I am still waiting to make proposals watching was going on from now to Sept.1.**

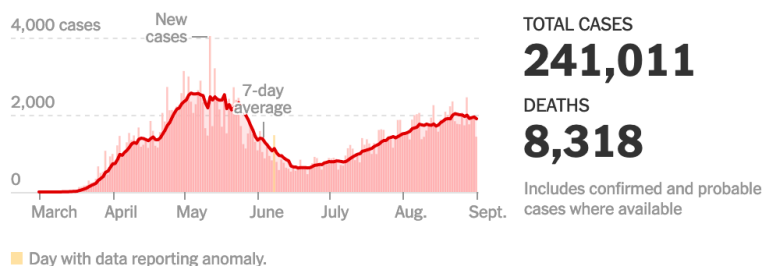
# Covid-19 situation in US

Received by Julie few links to NY-Times and other sites to get information for US Covid-19 status and also for regional and local situation.



- Map
- Cases by state
- Hot spots
- Clusters
- Latest news »

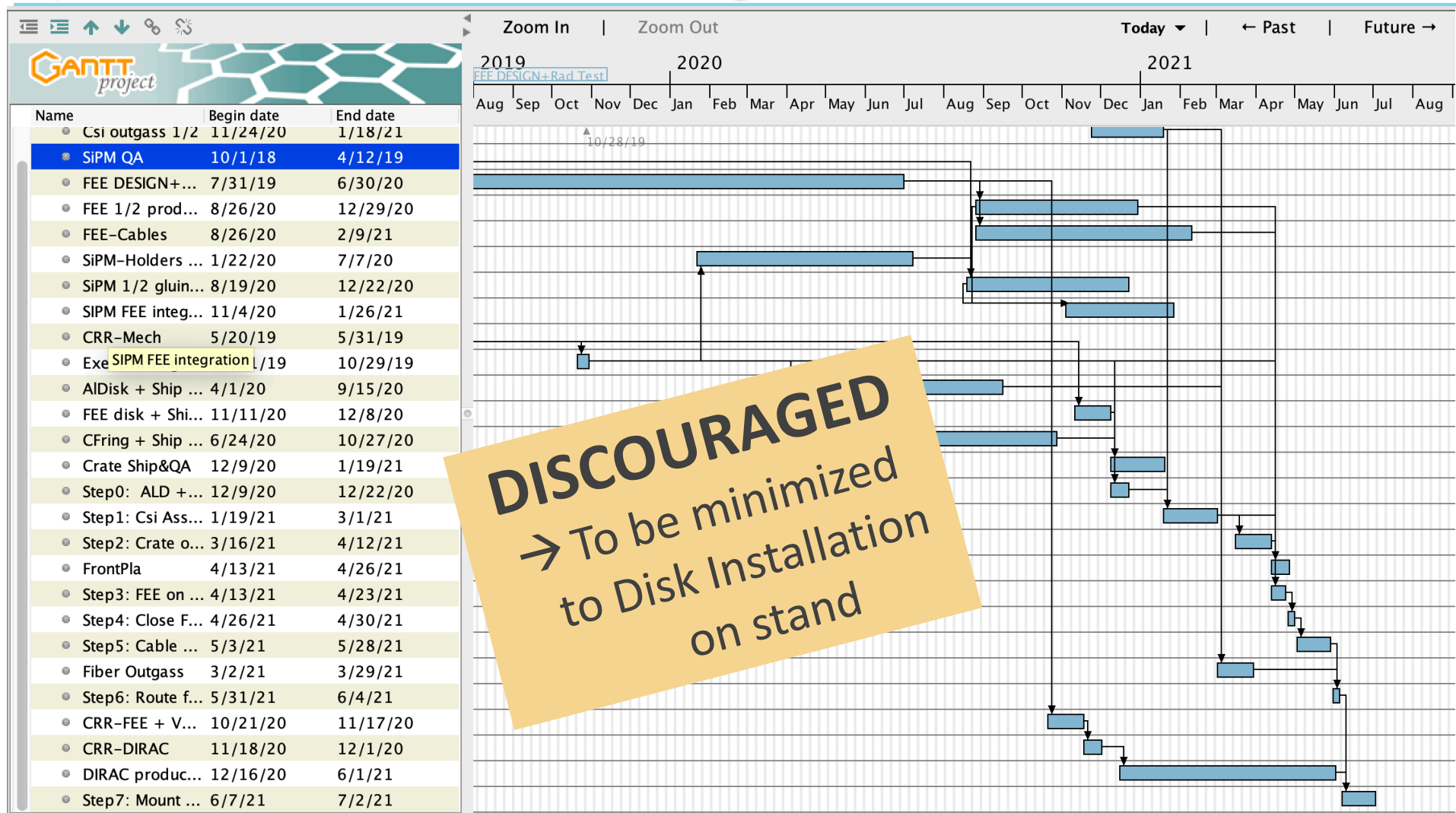
By The New York Times Updated September 2, 2020, 4:15 P.M. E.T.



	Total. cases	Weekly cases	Weekly Cases/100000 ab
Cook	127,616	2,478	4,569
Marion	286	769	33
White	128	946	12
Lake	14,697	2,110	603
Adams	786	1,201	56
Mercer	103	667	13
Grundy	501	981	42
Iroquois	310	1,143	22
Woodford	289	751	31
Montgomery	254	894	22
Lee	244	716	26
Brown	23	350	5
Livingston	207	581	27
Kane	11,354	2,133	394
DuPage	14,770	1,600	678

- Covid-situation in other US states are worse than in Illinois but the status is not yet as flat as it should be. Increase of new cases is still evident. Also locally near to FNAL (Cook/DuPage counties) the situation is better but not calm.
- We have to discuss about the flights and find a team that accept to travel. Then in case stay for a long term (at least 1 month). Travelling up to FNAL look to me as the riskiest part.

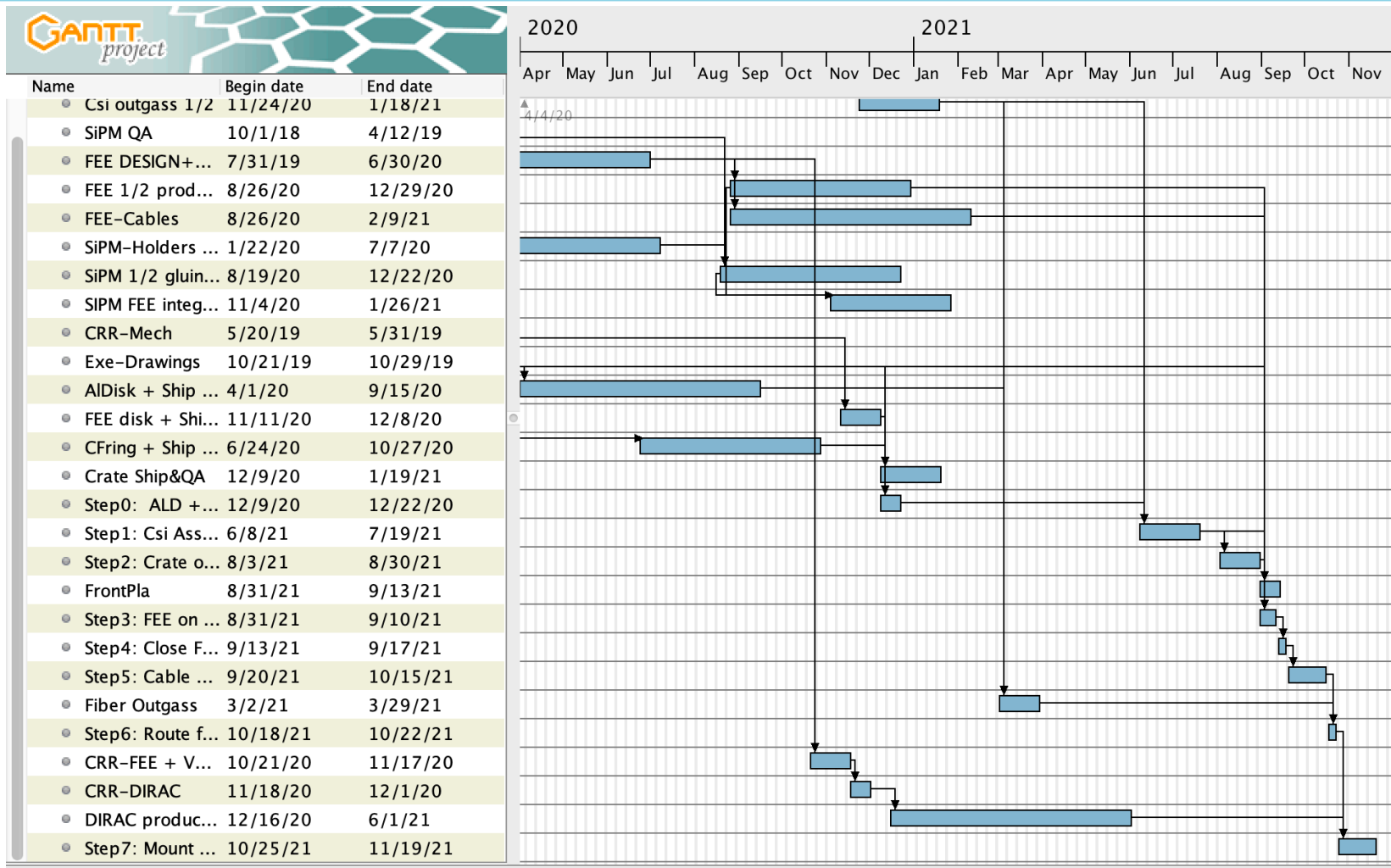
# Updated schedule assuming INFN team in the Fall



Assumes: we can make SipM-gluing and FEE at FNAL in the Fall. FEE-plate and Ring in December.

Csl mounting end-2020/beginning 2021

# Updated schedule assuming NO INFN team in the Fall



Assumes: we make SipM-gluing and FEE at LNF in the Fall. FEE-plate and Ring in December.  
 Csi mounting is shifted to May 2021. We guess that is very "difficult" to mount mechanics w/o our team  
 We get a hit of additional 4 months. This goes OK in within 2 months with official schedule



# What we need to do in the next months ?

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## 0. Complete production of all mech. parts

### 1. Complete CRR for electronics

- a. PCB review for DIRAC
- b. PRE-CRR
- c. CRR for MB+DIRAC

### 2. Start FEE production

- schedule under preparation.
- expect to start Set.15, complete for Xmas

### 3. Assembly the FEE-SIPM units

### 4. Start FEE-MB and service cables production

### 5. Complete VS test at Module-0 + DCS layout

### 6. Complete Laser integration

### 7. Start up MB+DIRAC production

### 8. Prepare CRR for cooling station

WE ARE REALLY BUSY  
ALREADY!

- All of these tasks can be done in Italy and it is a lot of effort!!!
- If we succeed to do this for the spring 2021 it will be a great progress