

# Gemini LLP Meeting Notes 20210309

**Chair:**

Adam Miller

**Context:**

2020B Gemini LLP: Cover the remainder of ZTF-II with Gemini spectroscopy.

The boundary condition is tough, since Gemini does not allow large programs to require rapid ToO / "band 1" observations. Trigger response time can be a week.

**Selling point:**

Rubin observatory is unable to deliver the science for rapid young transient spectroscopy.

Therefore, we will say that Rubin is not going to work in the same fashion that other wide-field optical surveys have been working. As such, we will use systematic collection of long light curves as a preliminary test for how triggering should occur during the Rubin era.

**Challenge:**

(1) The ZTF team has lots of spectral resources. If the response is a week, why don't we use our existing resources.

(2) 8-meter might be an overkill for, e.g., a 19.5 mag transient.

**Solution:**

All spectra are immediately made public to the community. Reduced spectra will be made available within 48 hours on TNS of the time of data taken.

Now we need to address, scientifically, what is going to happen with the sample.

**Discussion:**

Mansi: We should not say that Rubin cannot do fast transient stuff, but agree with Adam that more automatic/systematic science needs to be emphasized here.

SRK: Rubin has deep drilling fields. It can do fast transient science. We really need Gemini, since SEDM has the cut at 19 mag.

Jakob: we can invite the machine learning folks to join this proposal, increasing the impact of this proposal. Or simply develop an interface for machine learning people to use.

Suvi: within Gemini, we can achieve spectroscopic completeness down to 19.5 mag for TDE. This is very important to measure down the luminosity function. We have simulation to show that by doing this the # of TDEs discovered every year can be increased by a factor of two.

Christoffer & Jesper: last time we propose Gemini to observe strangely behaving SNe. This time, we need to specify what we will learn from these spectra (show modeling plan).

**Final remarks:**

Adam: now we will form sub-teams. The sub-teams should discuss the following two points and we will meet again next week to present the thinking.

**(1) How will you do a systematic collection?**

**(2) What is the physics that we will learn from the systematic sample?**

Stripped envelope SNe: Christoffer, Jesper, Yashvi

SNe Ia: Adam, Kate, Abi, Jakob

Neutrino follow up group: Robert, Mansi

SLSNe: Dan, Ragglin, Lin

TDE: Yuhan, Suvi, SRK,

(?) Hydrogen-rich: Steve