Goals and milestones:

Year 1:

* Triplet polarimeter (GlueX):
  + By October 2019, new backup amplification board for the triplet polarimeter will be built.
  + By November 2019, all of the 2018 data from the triplet polarimeter for the GlueX collaboration will be analyzed.
  + By January 2020, Graduate student Brandon Sumner will have obtained hands-on experience with the triplet polarimeter.
  + By September 2020 Sebastian and I will have upgraded the triplet polarimeter.
* Hybrid meson analysis (GlueX):
  + Currently, graduate student Sebastian Cole has signals for his initial *K*\* *K* analysis (see: draft of presentation to be given tomorrow <https://userweb.jlab.org/~dugger/glueX/tmp/KStarKTmp1.pdf> )
  + By January 2020, Sebastian is expected to have binned his *K*\* *K* data in kinematic bins of |*t*| and *E*γ, normalized the data using the incident photon flux and performed a Monte Carlo simulation for determination of the detector efficiency. He will have create cross sections in preparation of performing a PWA of the data.
  + By September 2020, Sebastian will have performed a PWA of his *K*\* *K* cross section measurements.
* Cascade analysis (GlueX):
  + By January 2020 Brandon Sumner and the PI will have investigated all of the common cascade decay channels (*Ξ\* → Ξ π*, *Ξ\* → Λ K*, *Ξ\*→Σ K*, *Ξ\* → Ξ*(1530) *π*) and Brandon Sumner will have taken over the cascade analysis (see <https://userweb.jlab.org/~dugger/glueX/tmp/glueXAnaV2c.pdf> for a recent talk from the PI).
  + By August 2020 Brandon will have created cross sections binned in cos*ϑ*cm and Eγ for at least one *Ξ*\* decay.
* Search for strangeness (CLAS12)
  + The PI will attend meeting of the Very Strange Group and assist in the determination of *Λ*, *Σ* and *Ξ* baryons. The determination of the *Λ* baryons will the highest priority and is crucial for the future success of the Very Strange Group.

Year 2:

* TPOL (GlueX):
  + By January 2021, Brandon Sumner will have written software for the determination of polarization that takes into account the new angular resolution capabilities of the TPOL device.
* Hybrid meson analysis (GlueX):
  + By the end of the Fall semester of 2020, Sebastian will have successfully defended his dissertation on the PWA of *γ p* → *p* *K*\* *K*.
  + In January of 2021, a new graduate student will have entered the group to work on *K\* K* data that includes DIRC data.
  + By January 2022, the new student will have helped others in the GlueX collaboration with reconstruction and efficiency studies suitable for reliable use of DIRC data in GlueX analyses.
* Cascade analysis (GlueX):
  + By January 2021 Brandon will have cross section data for all of the *Ξ*\* decay chains and started his PWA analysis.
* Search for strangeness (CLAS12)
  + The PI will continue to assist in analysis issues that arise regarding strangeness production using CLAS12 and will help coordinate the efforts of the Very Strange Group.

Year 3:

* Hybrid meson analysis (GlueX):
  + By September 2022 cross sections for all the DIRC data, available by this time, for *K*\* *K* states will be produced and a PWA will have begun.
* Cascade analysis (GlueX):
  + By January 2022 Brandon will have finished his PWA analysis.
  + By May 2022 Brandon will have successfully defended his dissertation on the PWA of *Ξ*\* states.
* Search for strangeness (CLAS12)
  + The PI will continue to assist in analysis issues that arise regarding strangeness production using CLAS12 and will help coordinate the efforts of the Very Strange Group.