



Design Optimization for Mounts within the Velocity Interferometer for Any Reflector (VISAR) System

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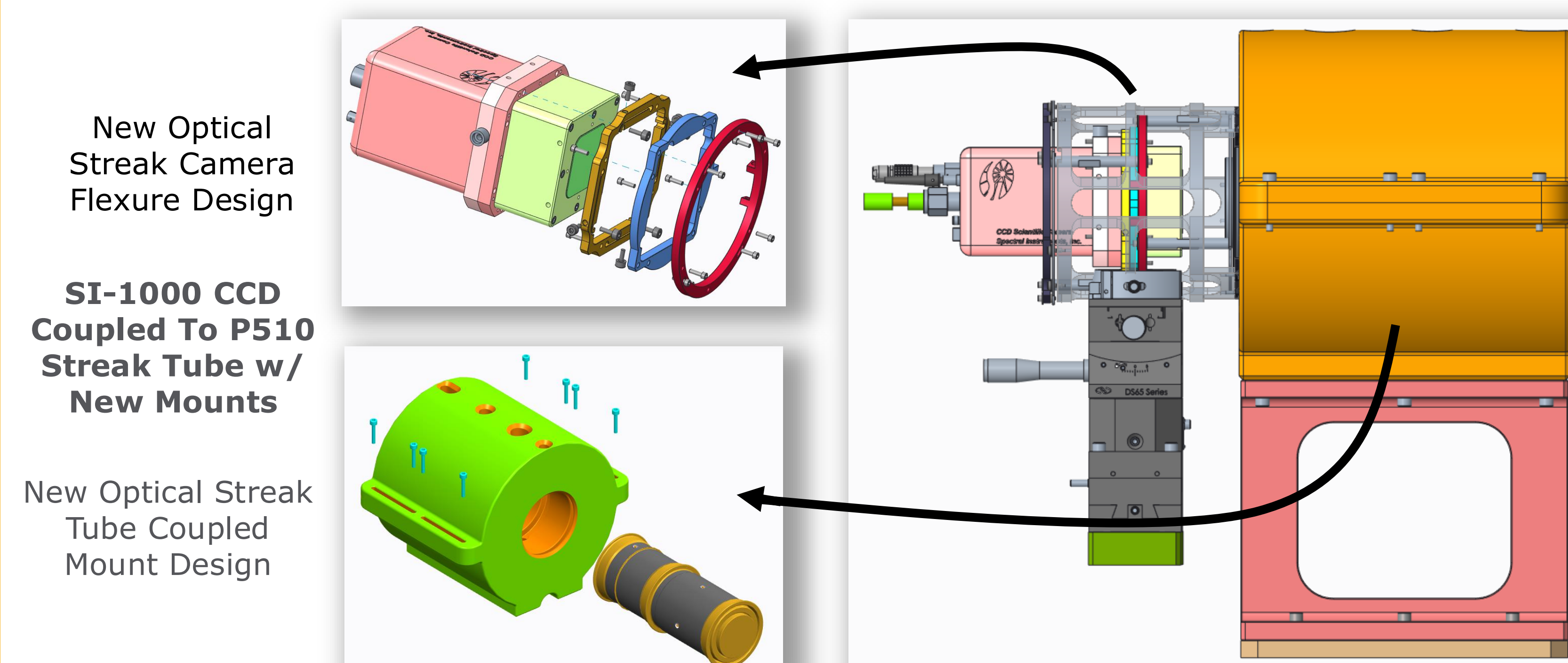
ABOUT ME

- Mechanical Engineering Major, Mechanical/Aerospace Engineering Minor
- My goals is to provide the skills and experiences I gained to build a sustainable environment as well as mentor those in need of support.
- My interests are in traveling, providing service to others, and hiking.
- As someone who loves STEM and the betterment of the world, LLNL has the capabilities and technology to do so!



SUMMER RESEARCH

- Abstract: The ROSS-5100 VISAR system measures shock-induced surface motion and velocity using reflected laser light, with a streak camera recording interference fringes over time to reconstruct target motion. This project will redesign the SI-1000 CCD and P510 Streak Tube mounts to improve build efficiency and data quality.
- Methods: The design method was guided by mentor-defined constraints and project requirements. Iterative concept development and refinement were used to translate those constraints into a functional design solution.
- Results: With the new design implementations, the optical streak camera flexure allows up to 10° of rotation and 1 mm of X-Y displacement. Additionally, the optical streak tube mount features a two-part coupled mount system rather than a multi-part assembly.



LLF AWARD

- LLF funds have supported my housing, groceries, and transportation this summer, while also helping me purchase a new 3D printer and enjoy local foods during my time in the Bay Area. They have also allowed me to save money for my transfer from community college.
- I am very grateful to be a part of the Livermore Lab Foundation! The fellowship has expanded my understanding of what it means to be a researcher and engineer, while also encouraging me to explore different STEM concentrations and learn many new ideas and topics.



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