

Job opening:

Lead Optomechanical Engineer

Wyvern is making something big. Our vision is to provide actionable intelligence from space, anywhere in the solar system. To achieve this we need to entirely reimagine how satellite Earth observation is done.

We're a rapidly growing space company in Western Canada, powered by humans who are passionate about space and are redesigning the satellite to enable a sustainable future for humanity. Wyvern has just finished Y Combinator's Winter 2022 batch and has acquired >\$9M in pre-seed, seed, and grant funding. If you're excited by the prospect of creating a step increase in the capability of space-based cameras, we want you on our team.

What we're workin' on

Wyvern is developing unfolding space telescopes to capture high-resolution hyperspectral imagery from space.

Hyperspectral images contain more colors than other types of imagery, meaning these images capture the spectral signature of your crop or forest, for example. With hyperspectral imagery, however, it's hard to get quality images with a high signal-to-noise ratio and resolution. To mitigate this, we're designing telescopes that are compact on launch and deploy in space, meaning we pack better performance in a smaller, cheaper-to-launch package. Our increased light collecting area will allow for more light in more bands while maintaining <5 m resolution.

We have prototypes of our deployable telescope on the lab bench, but we need a Lead Optomechanical Engineer to take these instruments from the lab and evolve them to engineering models ready for environmental and performance testing. You will play a key role in getting the design to space as quickly as possible.

Who you are

- You can explain technical concepts about your work to non-technical people and keep them engaged as you explain.
- You are able to independently solve engineering problems and have a solid critical thinking process.
- You have experience with optical systems & know how to make design decisions based on optical tolerance.
 - The ideal candidate has experience with imaging systems, like telescopes, and their performance criterion.
- You have experience in thermal/structural modeling & analysis as well as CAD design, preferably in SolidWorks.
- You have experience developing hardware for space, vacuum and/or similar harsh environments.
- You have experience aligning imaging systems during assembly, integration, and test (AIT).



- The ideal candidate has environmental testing & verification experience.
- You must have a Bachelor's degree in mechanical, aerospace, or optical engineering, applied science, or equivalent.
- An ideal candidate may have a Master's degree in mechanical, aerospace, or optical engineering, applied science, or equivalent
- You must have 4+ years of direct experience in a role similar to that described above.

What you will be doing

You will:

- Work with our Research & Development team (hybrid, in Edmonton; team of 6),
- Apply creativity and a solid knowledge of mechanical engineering and manufacturing principles to develop new solutions,
- Conduct trade studies on optical and structural components of our deployable telescopes, evaluating the merits and risks of alternative design concepts.
- Use CAD tools to develop detailed mechanical designs,
- Identify and recommend optimum design solutions for the engineering and space-ready models of our deployable optics telescope,
- Utilize simulation tools to predict stress states of optomechanical subsystems subjected to thermal and mechanical loads, including dynamic behaviour within a structural, thermal, and optical (STOP) analysis workflow,
- Design structures and optical supports such that the imaging performance of the telescope is not degraded over the entire lifetime of the satellite,
- Procure equipment for structural, thermal, and other environmental testing,
- Design testing plans for the telescope, in concert with our optical designer,
- Create a standard RFP process for external manufacturers and suppliers,
- Correspond with external vendors and project partners,
- Supervise engineering and science interns and co-op students,
- Contribute to our IP strategy and support basic research activities (paper writing, attending conferences),
- and likely more! As part of a small startup team you'll find yourself working across the board to support Wyvern's activities.

What to expect from Wyvern

- We have all the best aspects of startup culture including flexible working hours & support from across the team whenever you need it.
- We give ample vacation time and a stellar health benefits package.
- We're small but rapidly growing. The systems you craft will be foundational to Wyvern's success and you will get the unique opportunity to grow *with* the company.
- This is a full-time, permanent, hybrid position based in Edmonton, Alberta, Canada. Remote work is an option for exceptional candidates with remote work experience.

To apply for this opening, send your resume & cover letter to [hiring@wyvern.space](mailto: hiring@wyvern.space).