

Collapsible Light Concentrator Questions

Does the mirror have to go inside or on top of the rover?

You can put the light concentrator wherever you think it is most valuable and where it will get the least amount of dust. Initially I had said collapsing mirror but it is also possible that it could be some kind of lens to concentrate the light

What is the expected lifetime of the mirror?

That's a great question but I don't think I have a requirement yet. I do think that we will need to replace parts as they fail or get old

How often will astronauts have to interact or repair the rover?

Of course it would be easier if the astronauts do not have to interact with it at all but I suspect that they will need to replace parts on some kind of a regular basis. Some parts will need to be replaced maybe as often as every month or two whereas other parts may last much longer

What is the maximum weight for the mirror?

There is no requirement on the maximum weight but keeping it low weight is a preference and should be taken seriously

Can we use hydraulics?

I'm not opposed to hydraulics however there are many complications with a fluid that is encased in materials that will expand and contract and may allow for loss of the fluid and then contaminate the soil.

There are no teams working on the solar tracking software at our school, do we need to design our own or will the rover position itself and the mirror in the best possible spot?

You do not need to design the solar tracker. But you should have some kind of interface on your mirror so that somebody else's solar tracker could hook up to it in some fashion

You can make recommendations as to how you think it may need to be moved