



October 25, 2018

Exhibit 8: Explanation for Revised ODAR

We are submitting the revised ODAR to address two points:

1. After completing further design analysis, we were able to refine the design of our satellite. We therefore needed to update our satellite geometry, and rerun the DAS. The differences in the area-to-mass ratio were minor (.0007 m²/kg for stowed and .0002 m²/kg for deployed)
2. Our initial ODAR contained a non-zero casualty area for our solar arrays. We have addressed this by providing a more granular component input list.

Since the time of original submission, our engineering team has worked to improve the satellite layout. The overall mass of the satellite has not changed (19.9 kg), but the geometry has changed slightly. In our previous layout, the container for the deployable antenna was fixed to the nadir-facing wall of the satellite. Now, the deployable-antenna container is fully housed within the satellite's 12U structure, and only the antenna extends from the base of the satellite. The impact of this optimization on orbital life is presented in Table 1.

Table 1. Difference in DAS Orbital Lifetime Outputs for the original and revised geometry

Configuration	Cross Sectional Area (m ²)	Area-to-Mass Ratio (m ² /kg)	Orbital Lifetime (years)
Stowed – original	0.1268	0.0064	4.068
Stowed – revised	0.1131	0.0057	4.375
Deployed – original	0.5552	0.0279	2.075
Deployed - revised	0.5511	0.0277	2.086

Additionally, in our original submission, the solar arrays were modeled entirely as GaAs, when in fact only a small portion of the solar array mass is GaAs, the rest being structural. This update removed the non-zero casualty area that was output in our original ODAR submission.