

Supplemental Experimental Procedures

Section S.1: MOXIE O₂ production on Mars

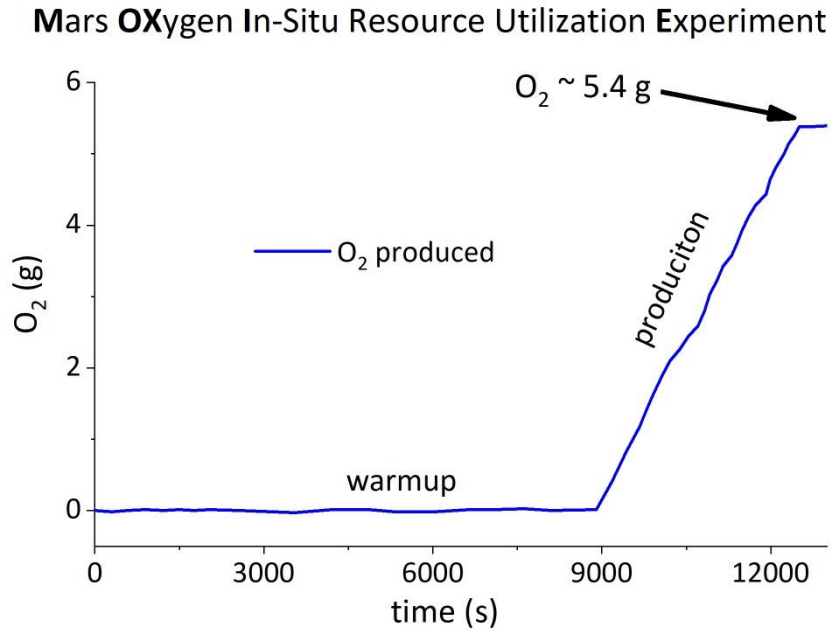


Figure S1: Mars Oxygen In-situ Experiment (MOXIE) data – released, April 2021 – the historic first generation of O₂ on Mars.

The historic first generation of O₂ on Mars is shown in **figure S1**, presenting results from the Mars Oxygen In-situ Experiment (MOXIE)¹ which were released on 21st April 2021. Note the data used in **figure S1** is sourced from a MIT Haystack observatory press release².

REFERENCES

1. Hecht, M., Hoffman, J., Rapp, D., McClean, J., SooHoo, J., Schaefer, R., Aboobaker, A., Mellstrom, J., Hartvigsen, J., Meyen, F., et al. (2021). Mars Oxygen ISRU Experiment (MOXIE). *Space Science Reviews* 217, 9. 10.1007/s11214-020-00782-8.
2. MIT(Massachusetts Institute of Technology), p.r. (2021). Aboard NASA's Perseverance rover, MOXIE creates oxygen on Mars, <https://news.mit.edu/2021/aboard-nasa-perseverance-mars-rover-moxie-creates-oxygen-0421>.