[2] HPE. Hpe spaceborne computer. https://www.hpe.com/us/en/compute/hpc/supercomputing/spaceborne.html.

[3] Z. Towfic, D. Ogbe, J. Sauvageau, D. Sheldon, A. Jongeling, S. Chien, F. Mirza, E. Dunkel, J. Swope, V. Cretu, and M. Ogut. Benchmarking and testing of qualcomm snapdragon system-on-chip for jpl space applications and missions. *IEEE Aerospace Conf*, 2022.

[4] Jason Swope, Faiz Mirza, Emily Dunkel, Zaid Towfic, Damon Russell, Joe Sauvageau, Doug Sheldon, Steve Chien, Mark Fernandez, and Carrie Knox. Benchmarking remote sensing image processing and analysis on the snapdragon processor onboard the international space station. In *International Geoscience and Remote Sensing Symposium (IGARSS 2022)*, Kuala Lumpur, Malaysia, July 2022.

[5] William Whitaker. Sabertooth: Integrated avionics for small spacecraft missions. In *IEEE Space Computing Conference (SCC)*. IEEE, 2019. URL https://trs.jpl.nasa.gov/bitstream/handle/2014/51550/CL%2319-4553.pdf?sequence=1&isAllowed=y.

[6] Rad750. https://en.wikipedia.org/wiki/RAD750.

[7] NVIDIA Jetson Nano. https://developer.nvidia.com/embedded/jetson-nano-developer-kit.

[8] Ocean Worlds Life Surveyor Web Site. https://https://ml.jpl.nasa.gov/projects/owls/owls.html.

[9] Jack Lightholder, David R Thompson, Julie Castillo-Rogez, and Christophe Basset. Near earth asteroid scout cubesat science data retrieval optimization using onboard data analysis. In *2019 IEEE Aerospace Conference*, pages 1–7. IEEE, 2019.

[10] Tiffany Russell Lockett, Julie Castillo-Rogez, Les Johnson, Joe Matus, Jack Lightholder, Anne Marinan, and Alexander Few. Near-earth asteroid scout flight mission. *IEEE Aerospace and Electronic Systems Magazine*, 35(3):20–29, 2020. doi: 10.1109/MAES.2019.2958729.

[11] Stunning images of Fagradalsfjall volcano in Iceland, Earhthsky.org. https://earthsky.org/earth/fagradalsfjall-volcano-eruption-images-march-2021-iceland/.

[12] Kilauea Setepmber 2021 Eruption, United States Geological Survey. https://www.usgs.gov/volcanoes/kilauea/recent-eruption#:~:text=K%C4%ABlauea%20volcano%20began%20erupting%20on,Hawai'i%20Volcanoes%20National%20Park.

[13] A. Davies, S. Chien, V. Baker, T. Doggett, J. Dohm, R. Greeley, F. Ip, R. Castano, B. Cichy, R. Lee, G. Rabideau, D. Tran, and R. Sherwood. Monitoring active volcanism with the autonomous sciencecraft experiment (ase). *Remote Sensing of Environment*, 101 (4):427–446, April 2006.

[14] Steve A. Chien, Ashley G. Davies, Joshua Doubleday, Daniel Q. Tran, David Mclaren, Wayne Chi, and Adrien Maillard. Automated volcano monitoring using multiple space and ground sensors. *Journal of Aerospace Information Systems (JAIS)*, 17:4: 214–228, 2020. URL https://doi.org/10.2514/1.I010798.

[15] S. Chien, J. Boerkoel, J. Mason, D. Wang, A. G. Davies, J. Mueting, V. Vittaldev, V. Shah, and I. Zuleta. Leveraging space and ground assets in a sensorweb for scientific monitoring: Early results and opportunities for the future. In *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, September 2020.

[16] S. Chien, D. Silverman, A. Davies, and D. Mandl. Onboard science processing concepts for the hyspiri mission. *IEEE Intelligent Systems*, 24 (6), November/December 2009.

[17] S. Chien, D. Mclaren, D. Tran, A. G. Davies, J. Doubleday, and D. Mandl. Onboard product generation on earth observing one: A pathfinder for the proposed hyspiri mission intelligent payload module. *IEEE JSTARS Special Issue on the Earth Observing One (EO-1) Satellite Mission: Over a decade in space*, 2013.

[18] S. Chien, J. Doubleday, D. R. Thompson, K. Wagstaff, J. Bellardo, C. Francis, E. Baumgarten, A. Williams, E. Yee, E. Stanton, and J. Piug-Suari. Onboard autonomy on the intelligent payload experiment (ipex) cubesat mission. *Journal of Aerospace Information Systems (JAIS)*, April 2016.

[19] Direct Readout Web Site. https://directreadout.sci.gsfc.nasa.gov/.

[20]

[21] L. Hamlin, R. O. Green, P. Mouroulis, M. Eastwood, D. Wilson, M. Dudik, and C. Paine. Imaging spectrometer science measurements for terrestrial ecology: Aviris and new developments. In *2011 Aerospace Conference*, pages 1–7, 2011. doi: 10.1109/AERO.2011.5747395.

[22] Gregg A. Swayze, Roger N. Clark, Alexander F.H. Goetz, K. Eric Livo, George N. Breit, Fred A. Kruse, Stephen J. Sutley, Lawrence W. Snee, Heather A. Lowers, James L. Post, Roger E. Stoffregen, and Roger P. Ashley. Mapping Advanced Argillic Alteration at Cuprite, Nevada, Using Imaging Spectroscopy. *Economic Geology*, 109(5): 1179–1221, 08 2014.

[23] M. Troesch, F. Mirza, K. Hughes, A. Rothstein-Dowden, R. Bocchino, A. Donner, M. Feather, B. Smith, L. Fesq, B. Barker, and B. Campuzano. Mexec: An onboard integrated planning and execution approach for spacecraft commanding. In *Workshop on Integrated Execution (IntEx)*

/ Goal Reasoning (GR), International Conference on Automated Planning and Scheduling (ICAPS IntEx/GP 2020), October 2020. URL https://ai.jpl.nasa.gov/public/papers/IntEx_2020_MEXEC.pdf. Also presented at International Symposium on Artificial Intelligence, Robotics, and Automation for Space (i-SAIRAS 2020) and appears as an abstract.

[24] D. Wang, J. A. Russino, C. Basich, and S. Chien. Using flexible execution, replanning, and model parameter updates to address environmental uncertainty for a planetary lander. October 2020. URL https://ai.jpl.nasa.gov/public/papers/europa_lander_icaps2020_workshop.pdf. Also presented at Proceedings of the International Symposium on Artificial Intelligence, Robotics and Automation for Space. Also presented at Proceedings of ESA-CLAIRE Workshop on Space and AI, European Conference on Artificial Intelligence. Also presented at the Planning and Robotics (PlanRob) Workshop, ICAPS.

[25] A. Yelamanchili, J. Agrawal, S. Chien, J. Biehl, A. Connell, U. Guduri, J. Hazelrig, I. Ip, K. Maxwell, K. Steadman, and S. Towey. Ground-based automated scheduling for operations of the mars 2020 rover mission. In *Proceedings Space Operations 2021*, May 2021. URL https://spaceops.iafastro.directory/a/proceedings/SpaceOps-2021/SpaceOps-2021/6/manuscripts/SpaceOps-2021,6,x1385.pdf.

[26] Joshua R. Doubleday. Three petabytes or bust: Planning science observations for nisar. In *SPIE 9881*, New Delhi, India, May 2016. doi: 10.1117/12.2223893. URL https://ai.jpl.nasa.gov/public/papers/doubleday_spie2016_petabytes.pdf.

[27] S. Chien, A. Yelamanchili, and J. Doubleday. Policy-based automated science coverage scheduling for earth science mission analysis and operations (nisar, ecostress, oco-3, and emit). In *Earth Science Technology Forum (ESTF 2019)*, Moffett Field, California, USA, June 2019. URL https://ai.jpl.nasa.gov/public/presentations/chien_estf2019_overview.pdf.

[28] A. Yelamanchili, S. Chien, K. Cawse-Nicholson, and D. Freeborn. Scheduling and operations of the ecostress mission. In *Proceedings Space Operations 2021*, May 2021. URL https://spaceops.iafastro.directory/a/proceedings/SpaceOps-2021/SpaceOps-2021/6/manuscripts/SpaceOps-2021,6,x1381.pdf.

[29] A. Yelamanchili, C. Wells, S. Chien, A. Eldering, R. Pavlick, C. Cheng, R. Schneider, and A. Moy. Scheduling and operations of the orbiting carbon observatory-3 mission. In *Proceedings Space Operations 2021*, May 2021. URL https://spaceops.iafastro.directory/a/proceedings/SpaceOps-2021/SpaceOps-2021/6/manuscripts/SpaceOps-2021,6,x1382.pdf.

[30] A. Yelamanchili, C. Wells, S. Chien, J. Russino, R. Green, B. Oaida, and D. R. Thompson. Using automated scheduling for mission design: A case study for emit. In *Proceedings Space Operations 2021*, May 2021. URL https://spaceops.iafastro.directory/a/proceedings/SpaceOps-2021/SpaceOps-2021/13/manuscripts/SpaceOps-2021,13,x1383.pdf.