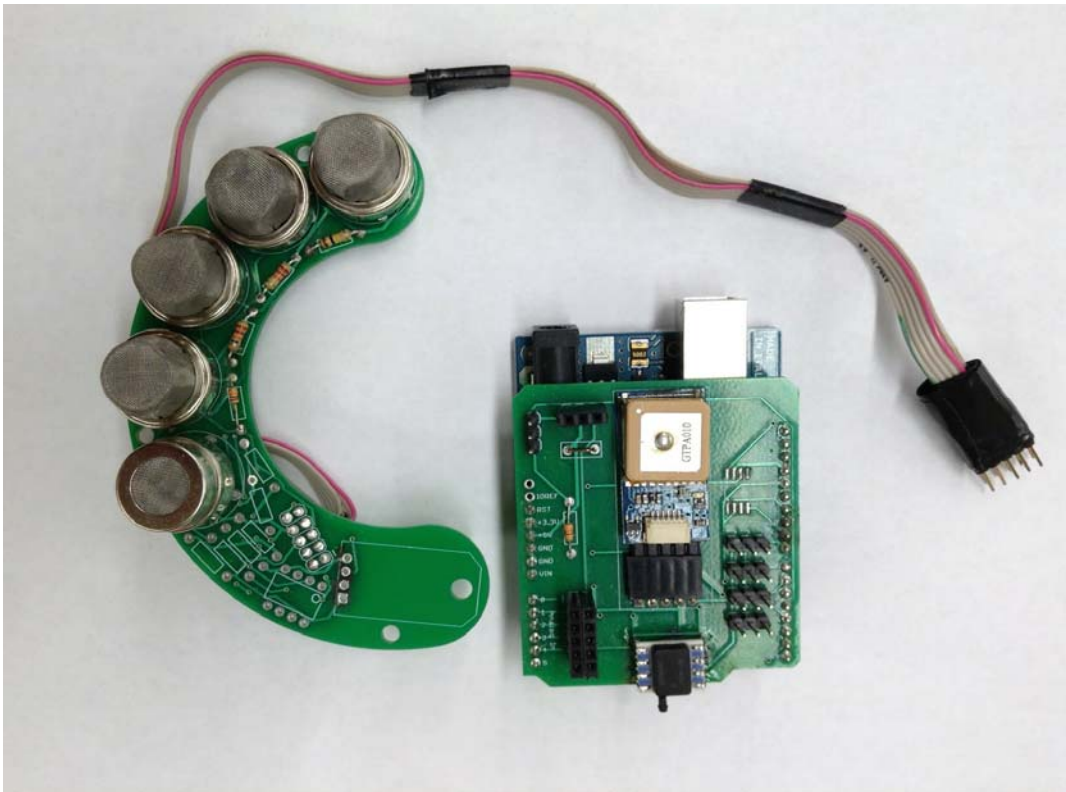# Portfolio

Mat Kaplan

**MASTCAM-Z SCIENCE TEAM PORTRAIT**

Members of the Mastcam-Z Science Team pose for a stereo portrait taken by a system that simulates the rover camera.

Pictured: The Mars 2020 camera mast simulator I built for the Mastcam-Z team. Note the custom mounting hardware, motorized AzAlt controls, and computer interface. (pc: Planetary Society)

Pictured: The payload I built as lead engineer for the Rockets for Schools high school Rocketry competition. This payload measures atmospheric gas vertical profiles, a second measures radiation from lightning, and a third releases atomized chemicals for cloud-seeding research
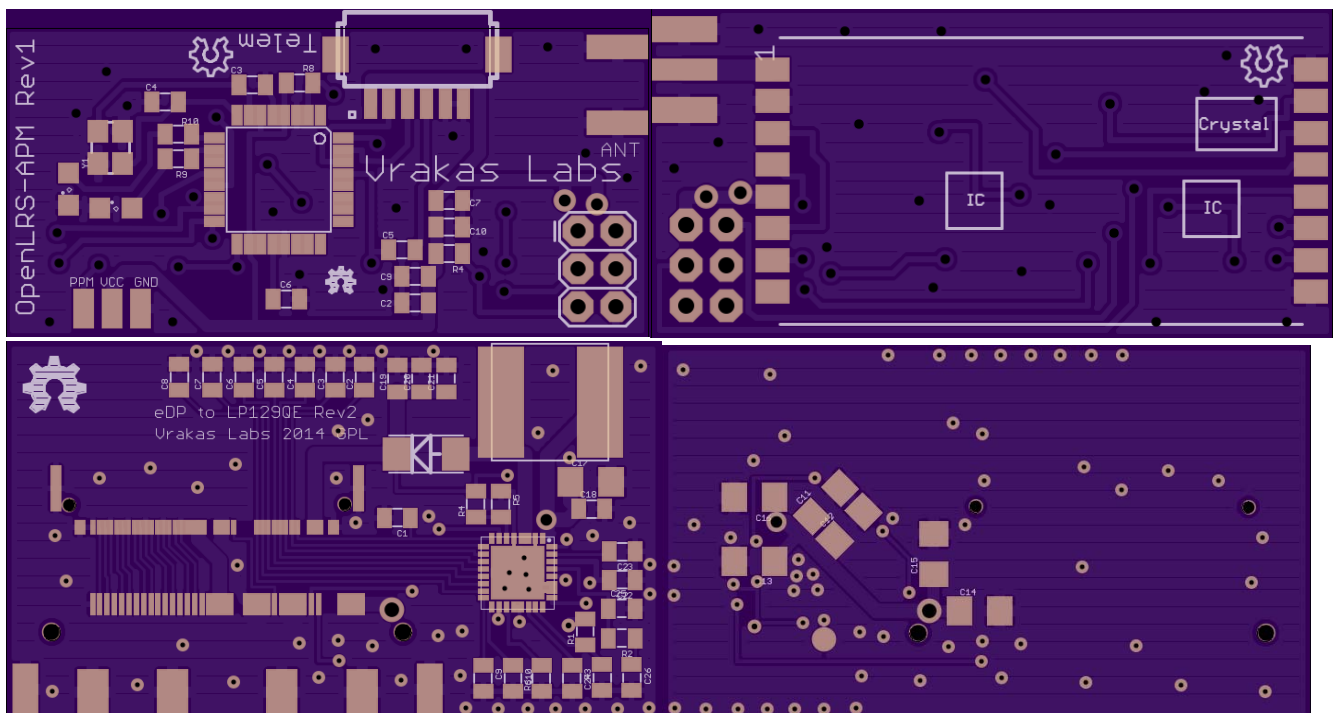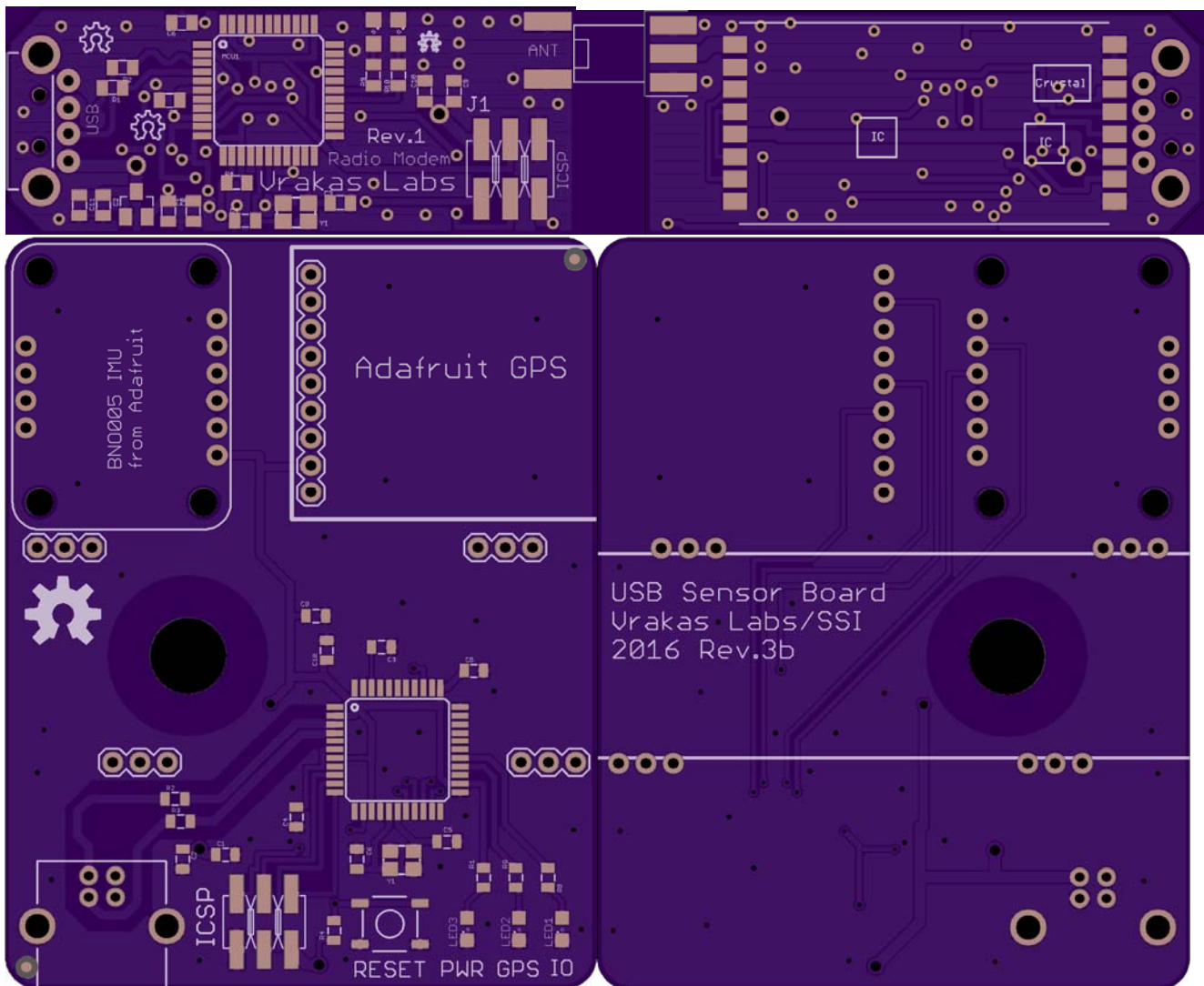
Pictured: A selection of my earlier PCB Design work, including 480Mbit/s USB, and 12.54Gbit/s Embedded Display Port. All of these projects were assembled by hand and functioned correctly, after some revision.

Other Project Links:
https://github.com/Timvrakas/HIDScope --Demodulate ID Cards with an Oscilloscope and Python
https://github.com/Timvrakas/SRADio-GFSK --RF Stack for IREC 2018
https://github.com/Timvrakas/KilnControl --Precisely Control Electric Kiln Heat Profile!
https://github.com/Timvrakas/InstaGraph --Scrape Instagram Data to graph trends in social networks
https://github.com/OpenWifiProject --Instantly deploy free VPN servers with Docker to evade WiFi Censorships