

ID	Date Initiated	Date Resolved	Description	Participants	Option	Risk Type	Resolution	Justification	
R17	04/12/2025	04/12/2025	GPS not connected	Lance	debug if due to cube. change to black and orange cube, and perform modular test	Hardware & Technical	It was due to cube. The RAM is damaged, which means related settings cannot be stored		
R16	04/07/2025	-	Drone crashed during test flight at NREC drone cage. This is due to ~3m deviation of GPS, and the cage was a bit slow. 2 legs broken, 3 props replaced, gimbal mount fall apart, gimbal cable broken, battery box fall apart, wires fell off, compass loose.	Lance, Gwen	replace compass, 3d-print landing gear (legs), gimbal mount, props. zip tie everything, and quick solder wire with mobile solder. look for t	Hardware & Technical	replace compass, 3d-print landing gear (legs), gimbal mount, props. zip tie everything, and quick solder wire with mobile solder.	temporary response for upcoming flight test. order spare parts	
R15	03/14/2025	04/02	footage collected has around 30% time image quality is off (motion blur occurred as well)	Lance, Jet, Josh	rtsp IR stream, taking IR snapshot every 0.5 sec	Technical			
R14	03/10/2025	est. 04/10/2025	DJI batteries used are more than 2 years at least	Gwen, Lance, Josh, Jet	filter out old battery by battery serial number, as well as the swelling ones; and perform voltage testing	Hardware/Operational Risk	ordered new one. waiting for delivery		
R13	03/10/2025	03/20	inconvenient to transport the drone	Jet, Gwen, Josh	put payload underneath and not as much on top	Technical	Update Mechanical Overhaul, leaving only Rajant Radio, RFD 900, and GPS compass on top	safe because we protect orin and other components from rain, robust since we keep compass and radio systems on top for connection and GPS location	
R12	03/10/2025	03/28	drone fly time too short ~ 15min (25min competition).	Gwen, Josh	reduce weight (current is 3.55 which uses battery fast) by removing prop shield and plate and switching to smaller antenna system;	Resource	remove led lights, cuts unnecessary wires, switch to lighter & shorter cables	simple resolution without other mechanical components redesign	
R11	03/10/2025	/	unexpected competition scene setup - smoke, dark, collaborate / guide spots	All	sticking with the original white-hot mode and focusing on isotherms (isolating the temperature range to 0°C to 50°C)	Programmatic	working on it. decision making by AirLab		
R10	03/10/2025	/	something that covers on human body causing model confusion	Lance, Wuyi	Use isotherms to isolate the temperature range of the human body (e.g., 30°C to 40°C) and ignore anomalies caused by coverings	Technical	working on it. decision making by AirLab		
R9	03/02/2025	03/07/2025	NREC not available for Test Flight until 4PM	All	Test flight after 4PM; Book Flight Test at Mill19; Ask for availability a week before flight test	Resource	Test flight after 4PM	More familiar with NREC facility and Mill19 flight test area does not have power outlet	
R8	03/01/2025	03/08/2025	JETI package arrived late	Gwen, Jet	Wait and ask Chris Downey for help; Order a new one	Resource	ask Chris for tracking number, and work on safety test flights while waiting for the package	Ordering a new one requires more time	
R7	02/24/2025	02/24/2025	motor rewiring failed	Jet, Yufan, Josh	redo wiring based on prev doc image;	Technical	redo wiring based on prev doc image;	only available solution	
R6	02/23/2025	02/23/2025	GPS not detected	Yufan	reassemble the drone; test different GPS location & height	Technical	test GPS outside & relocate GPS	inconvenient but fast solution	
R5	02/23/2025	03/08/2025	Gimbal micro-coaxial cable broken (one pin deattached)	All	fix by techspark; fix by ECE expertise at CMU; borrow one from AirLab; order new one	Technical	order new one	only available solution and fast	
R4	02/05/2025	02/23	Doodle Labs radio system signal too weak	Yufan, Jet	order new NDAA-compliant radio; borrow one from airLab; leave it and fix after workshop in March	Technical	order RFD 900x radio system while using doodle labs	safe	
R3	02/05/2025	02/20/2025	Teledyne FLIR camera video&imgs cannot stream	Gwen, Yiwu, Jet	recheck wiring; redo tutorials of installation;	Technical	combined options	reduce risks of unsafe flight and delayed test	
R2	01/10/2025	01/15/2025	propellers broken during test flight	Josh	Get backup prop from airLab; order backup prop online; mount Mechanical components for further protection	Technical	combined options	reduce risks of unsafe flight and delayed test	
R1	01/10/2025	01/15/2025	legs broken during test flight	Josh, Jet	order backup legs & legs extension & rubbers	Technical	order backup legs & legs extension & rubbers	reduce risks of unsafe flight and delayed test	