Energy of Each Each Energy of Energy				Milesto	ne Review	Flyshe	eet 2018-	-2019			
Total Length (in) Diameter (in) S.15 Mox/average Thrust (ib.) As 12/ 323.87 Gross Lift Off Weigh (ib.) Airframe Material(s) Fin Material and Thickness (in) 37/16" G10 FG Fin Material and Thickness (in) 38.12/17 Mass Before/After Burn (ib.) 38.12/17 Material Material Material Material Material Material Material Material Material Mass Before/After Burn (ib.) 38.12/17 Material Mater	Institution	tution Purdue University					Milestone		CDR		
Total Length (in) 5.15 Motors Frand/Designation Aerotech L1520-T Dismeter (in) 5.15 Max/Average Throst (ib.) 381.2/ 323.87 Total Imputes (bit-s) 881.55 Mass Before/After Burn (ib.) 881.2/ 323.87 Total Imputes (bit-s) 881.55 Mass Before/After Burn (ib.) 88.65/4.09 Lift off Throst (ib.) 355.2 Coupler Length/Shoulder Length(s) (in) 12" Motors Retention Method Aeropack Motor Retainer Stability Analysis Accord Analysis Accord Analysis Accord Analysis Accord Analysis Accord Analysis Accord Frestore (in from nose) 88.221 Masimum Weldotty (tr/s) 601 Masimum Mach Number 0.54 Masimum Mach Number 0.54 Masimum Acceleration (tr/s-2) 2.79 Statis Stability Margin (at rail exit) 3.5 Predicted Apogee (From Sim.) (it) 4850 Throst-to-Weight Ratio 11.84 Recovery System Properties Overall Rail Ste/Type and Length (in) 1.5.144 Total Descent Time (s) 92.19 Total Drift in 20 mph winds (tt) 1594.17 Total Drift	Vehicle Properties					Motor Properties					
Diameter (In) S.15 Max/Average Thrust (Ib.) 38.1.2 / 323.67							Mater Drand / Designation				
Total Impulse (Ibf-s) Airtrame Material(s) FWFG JYFG J	- ' '			5.15			NA/A				
Fin Material and Thickness (in) 3/16° G10 FG Coupler Length/Shoulder Length(s) (in) 12" **Stability Analysis** Center of Pressure (in from nose) 88.221 Center of Pressure (in from nose) 69.317 Static Stability Margin (on pad) 3.67 Static Stability Margin (on pad) 3.67 Static Stability Margin (ar aile siri) 3.5 Thrust-to-Weight Ratio 11.84 Rail Size/Type and Length (in) 1.5, 144 Rail Size/Type and Length (in) 1.5, 144 Rail Size/Type and Length (in) 1.5, 144 Rail Esit Velocity (R/2) 81.25 **Recovery System Properties** **Drogue Parachute** Manufacturer/Model Skyangel Cert-3 Drouge Size/Diameter (in or ft) 24" Allitude at Deployment (ft) Apogee Allitude at Deployment (ft) 100" Allitude at Deployment (ft) Apogee Allitude at Deployment (ft) 125 Terminal Velocity (R/2) 8.11 Terminal Velocity (R/3) 8.11 Terminal Velocity (R/3) 12.5 Recovery Harness Length (ft) 2 Recovery Harness Length (ft) 3 Recovery System Properties - Recovery Electronics - Section (Ft-Ibs) 1082-64 Recovery System Properties - Recovery Electronics - Section (Ft-Ibs) Altimeter Make/Model Altus Metrum Telemetrum Additional Locators (if applicable) N/A Figeton N/A Figet	Gross Lift Off Weigh (lb.)			30			Total Impulse (lbf-s)			•	
Coupler Length/Shoulder Length(s) (in) 12" Motor Retention Method Aeropack Motor Retainer Stability Analysis Center of Pressure (in from nose) 88.221 Center of Gravity (in from nose) 69.317 Static Stability Margin (not paid) 3.67 Static Stability Margin (not paid) 3.67 Maximum Macceleration (ft/s*2) 2.79 Static Stability Margin (not paid) 3.5.5 Predicted Apogee (From Sim.) (ft) 4850 Recovery System Properties Rail Esit Velocity (ft/s) 81.25 Total Descent Time (s) 9.2.19 Reliability Margin (not paid) 1.5.144 Rail Size/Type and Length (in) 1.5.144 Rail Size/Type and Length (in) 1.5.144 Rail Size/Type and Length (in) 1.5.144 Rail Esit Velocity (ft/s) 81.25 Total Drift in 20 mph winds (ft) 1594.17 Recovery System Properties Drogue Parachute Manufacturer/Model Skyangel Cert-3 Drouge Size/Diameter (in or ft) 24" Size/Diameter (in or ft) 100" Altitude at Deployment (ft/s) 8.6 Velocity at Deployment (ft/s) 8.11 Terminal Velocity (ft/s) 1.5.5 Recovery Harness Size/Thickness (in) 1/2" tribular mylon Recovery Harness Size/Thickness (in) 1/2" tribular mylon Recovery Harness Length (ft) 2 Recovery Harness Length (ft) 40" Harness/Airframe Interfaces Recovery System Properties - Recovery Electronics Recovery System Properties - Recovery Electronics Primary Altimeter Make/Model Altus Metrum Telemetrum Additional Locators (if applicable) N/A Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Recovery System Properties - Recovery Electronics Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Rocket Locator (Make/Model) Altus Metrum Telemet	A	Airframe Material(s)		FWFG			Mass Before/After Burn (lb.)				
Stability Analysis Center of Pressure (in from nose) Recovery System Properties Briggian Properties Bridlide and Deployment (ft/s) Bridlide at Deploym	Fin Ma	aterial and Thick	ness (in)	3/16" G10 FG			Liftoff Thrust (lb.)			355.2	
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Rail Size/Type and Length (in) Rail Exit Velocity (ft/s) Recovery System Properties Recovery System Properties Drogue Parachute Manufacturer/Model Skyangel Cert-3 Drouge Manufacturer/Model Skyangel Cert-3 Drouge Altitude at Deployment (ft) Apogee Altitude at Deployment (ft) Velocity at Deployment Setting Velocity at Deployment (ft/s) Recovery Harness Size/Thickness (in) Terminal Velocity (ft/s) Recovery Harness Size/Thickness (in) 1/2" tubular nylon Recovery Harness Size/Thickness (in) 1/2" tubular nylon Recovery Harness Size/Thickness (in) 1/2" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads Kinetic Energy of Each Section (Ft-lish) Recovery System Properties Recovery Harness Size/Thickness (in) 1/2" Thick Recovery Harness Size/Thickness (in) 1/2" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads Recovery Harness Fire Section (Ft-lish) Kinetic Energy of Each Section (Ft-lish) Recovery System Properties - Recovery Electronics Recovery System Properties - Recovery Electronics Recovery System Properties - Recovery Electronics Recovery Altimeter Make/Model Missileworks RRC3* Sport (Make/Model) Altus Metrum Telemetrum Secondary Altimeter Make/Model Altus Metrum Telemetrum Additional Locators (if applicable) N/A Rocket Locators (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Recovery Beigens (In Altus Metrum Telemetrum (In Down Additional Locators (if applicable) N/A Recovery Beigens (In Altus Metrum Telemetrum (In Down Additional Locators (if applicable) N/A Recovery Beigens (In Altus Metrum Telemetrum (In Down Additional Locators (In Age) (In Altus Metrum Telemetrum (In Down Additional Locators (In Age) (In Altus Metrum Telemetrum (In Down Additional Locators (In Age) (In Altus Metrum Telemetrum (In Down Additional Locators (In Age) (In Altus Metrum Telemetrum (In Down Add	Static Sta	ability Margin (a	t rail exit)	3.	.5		Predicted	Apogee (Fron	n Sim.) (ft)	48	50
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Velocity at Deployment (ft/s) Terminal Velocity (ft/s) Terminal Velocity (ft/s) Terminal Velocity (ft/s) Recovery Harness Material Tubular Kevlar Recovery Harness Size/Thickness (in) Recovery Harness Length (ft) Recovery Harness Length (ft) Tubular Kevlar Recovery Harness Size/Thickness (in) 1/2" tubular nylon Recovery Harness Size/Thickness (in) Recovery Harness Length (ft) Tubular Kevlar Recovery Harness Size/Thickness (in) 1/2" Thick Recovery Harness Length (ft) Tubular Kevlar Recovery Harness Size/Thickness (in) 1/2" Thick Recovery Harness Length (ft) Terminal Velocity (ft/s) Recovery Harness Material 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads Thing I was and 1/4" SS I-bolts through looped tether ends and 1/4" SS I-bolts through bulkheads Kinetic Energy of Each Section Fore Section Mid Section Aft Section Section 4 Section (Ft-Ibs) Recovery System Properties - Recovery Electronics Primary Altimeter Make/Model Altus Metrum Telemetrum Altus Metrum Telemetru	Altitu	ude at Deployme	ent (ft)	Аро	gee		Altitude at Deployment (ft)		7(00	
Terminal Velocity (ft/s) Recovery Harness Size/Thickness (in) 1/2" Thick Recovery Harness Length (ft) A0' Harness/Airframe Interfaces 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads Rinetic Energy of Each Section (Ft-Ibs) Fore Section Mid Section Aft Section Section 4 Energy of Each Section (Ft-Ibs) Recovery System Properties - Recovery Electronics Primary Altimeter Make/Model Altus Metrum Telemetrum Secondary Altimeter Make/Model Missileworks RRC3+ Sport Other Altimeters (if applicable) N/A Additional Locators (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Ejection System Energetics Black Powder	Backup Alt	timeter Deploym	ent Setting	Apogee + 1 second			Velocity at Deployment (ft/s)		8	6	
Recovery Harness Size/Thickness (in) 1/2" Thick Recovery Harness Size/Thickness (in) Recovery Harness Size/Thickness (in) 1/2" Thick 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads Rinetic Energy of Each Section (Ft-Ibs) Fore Section Mid Section Aft Section Section 4 Energy of Each Section (Ft-Ibs) Recovery System Properties - Recovery Electronics Primary Altimeter Make/Model Altus Metrum Telemetrum Secondary Altimeter Make/Model Missileworks RRC3+ Sport Other Altimeters (if applicable) N/A Recovery System Energetics Recovery Electronics Rocket Locators (Make/Model) Altus Metrum Telemetrum Rocket Locators (Make/Model) Altus Metrum Telemetrum Fransmitting Frequencies (all - vehicle and payload) Rocket Locators (Make/Model) Rocket Locator	Veloci	ity at Deploymer	nt (ft/s)	8.11			Terr	ninal Velocity	(ft/s)	13	3.5
Recovery Harness Length (ft) 1/4" SS quick link through looped tether ends and 1/4" SS l-bolts through bulkheads	Te	rminal Velocity (ft/s)	6.57			Recov	ery Harness M	aterial	Tubula	r Kevlar
Harness/Airframe Interfaces 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads Section 1 Section 2 Section 3 Section 2 Section 3 Section 1 Section 2 Section 3 Section 3 Section (Ft-lbs) 1/4" SS quick link through looped tether ends and 1/4" SS I-bolts through bulkheads Section 1 Section 2 Section 3 Section 3 Section 6 Section 1 Section 2 Section 3 Section 3 Section 6 Section 1 Section 6 Section 1 Section 2 Section 3 Section 3 Section 6 Section 1 Section 6 Section 1 Section 6 Section 1 Section 2 Section 3 Section 1 Section 6 Section 1 Section 6 Section 1 Section 6 Section 2 Section 3 Section 1 Section 6 Section 2 Section 3 Section 6 Section 6 Section 1 Se	Recovery	Harness Size/Th	ickness (in)	1/2" tubular nylon			Recovery Harness Size/Thickness (in)		1/2"	Thick	
Harness/Airframe Interfaces and 1/4" SS I-bolts through bulkheads Kinetic Energy of Each Section (Ft-lbs) Fore Section (Ft-lbs) Recovery System Properties - Recovery Electronics Primary Altimeter Make/Model Altus Metrum Telemetrum Other Altimeters (if applicable) Additional Locators (if applicable) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Kinetic Energy of Each Section 1 Energy of Each Section (Ft-lbs) Recovery System 1 Section 2 Section 3 Section 3 Section 2 Energy of Each Section (Ft-lbs) Altus Metrum Telemetrum Missileworks RRC3+ Sport N/A Transmitting Frequencies (all - vehicle and payload) Additional Locators (if applicable) N/A Primary (Altimeter Bake/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Ejection System Energetics Black Powder	Recov	ery Harness Len	gth (ft)	2			Recove	ry Harness Ler	ngth (ft) 40'		0'
Fore Section Mid Section Aft Section	Harness/Airfr	-larnacc/Airtrama Intartacac I ' '		0 1						l 1/4" SS I-bolts	•
Recovery System Properties - Recovery Electronics Primary Altimeter Make/Model Altus Metrum Telemetrum Other Altimeters (if applicable) Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Recovery Electronics Recovery Electronics Rocket Locators (Make/Model) Altus Metrum Telemetrum Altus Metrum Telemetrum Fransmitting Frequencies (all - vehicle and payload) Altus Metrum Telemetrum Figure 1 Figure 1 Figure 1 Figure 1 Figure 2 Figure		Fore Section	Mid Section	Aft Section	Section 4			Section 1	Section 2	Section 3	Section 4
Recovery System Properties - Recovery Electronics Primary Altimeter Make/Model Altus Metrum Telemetrum Secondary Altimeter Make/Model Missileworks RRC3+ Sport Other Altimeters (if applicable) N/A Rocket Locators (if applicable) N/A Transmitting Frequencies (all - vehicle and payload) Additional Locators (if applicable) N/A Ejection System Energetics Black Powder	Each Section (Ft-	1560.61	1082.64	2405.7	N/A		Each Section	34.65	24.04	53.42	N/A
Primary Altimeter Make/Model Altus Metrum Telemetrum Secondary Altimeter Make/Model Missileworks RRC3+ Sport (Make/Model) Other Altimeters (if applicable) Rocket Locators (Make/Model) N/A Transmitting Frequencies (all - vehicle and payload) Additional Locators (if applicable) N/A Ejection System Energetics Black Powder	IDS)			2.33.7	.,,		. ,				
Primary Altimeter Make/Model Altus Metrum Telemetrum Secondary Altimeter Make/Model Missileworks RRC3+ Sport Other Altimeters (if applicable) N/A Transmitting Frequencies (all - vehicle and payload) Additional Locators (if applicable) N/A Ejection System Energetics Black Powder	Re <u>cove</u> ı	ry Sys <u>tem P</u>	roper <u>ties - I</u>	Recov <u>ery El</u>	ectronics			Reco	very Electro	onics	
Secondary Altimeter Make/Model Missileworks RRC3+ Sport (Make/Model) Altus Metrum Telemetrum Other Altimeters (if applicable) N/A Transmitting Frequencies (all - vehicle and payload) Additional Locators (if applicable) N/A Ejection System Energetics Black Powder			•				Rocket I				
Other Altimeters (if applicable) Rocket Locator (Make/Model) Altus Metrum Telemetrum Additional Locators (if applicable) N/A Transmitting Frequencies (all - vehicle and payload) Telemetrum Ejection System Energetics Black Powder	·							Altus M	etrum Tele	metrum	
Additional Locators (if applicable) N/A Ejection System Energetics Black Powder	Other <i>i</i>	Altimeters (if ap	plicable)	N/	/A						
Primary 4		·							rgetics	Black F	owder
Transmitting Frequencies (all - vehicle and		, ,		14,					Ť		
payload) Likely to be 70cm ham band Chute (grams) Backup 4	Transmitting		- vehicle and	Likely to he 70	ocm ham band			•			

Describe Redu (batteries, sw Pad Stay Tir Configu	me (Launch	with individual l	•	ndent systems ches, wires, and		-	Mass - Main (grams)	Primary	3.2	
(batteries, sw Pad Stay Tir	witches, etc.) me (Launch	with individual l	batteries, swit	ches, wires, and			(8)			
Pad Stay Tir	me (Launch	е	jection charge					Backup	3.2	
				25.	-	•	asses - Other	Primary	N/A	
			3 hours			(grams) - If	Applicable	Backup	N/A	
			Milesto	one Revie	w Flyshe	et 2018	-2019			
stitution		Purc	due Univer	rsity			Milestone		CDR	
					Davidand					
					Payload					
ŀ					Overvie	N				
Payload 1 (official payload)	upon landing and must drive at least 10 feet away from any part of the rocket. The rover will consist of two large wheels on either side of a chassis. The chassis will hold the control unit, power system, motion unit, as well as the object detection method needed for navigation. The soil collection apparatus will be deployable from the rear of the chassis. Once the payload bay has landed completely, a signal will be sent to deploy the rover. When the payload bay receives the signal, a black powder charge will ignite, launching a fairing capsule out of the payload bay. The fairing will oper via spring loaded hinges, and the rover will deploy.									
Ţ					Overvie	N				
Payload 2 non-scored payload)					N/A					
				Test Plans,	Status, and	Results				
Ejection harge Tests	avionics bay. Ea the chagre we ensure safe sending electi We will then	ach half will be a Il thus allowing u deployment of b rical charges to th turn on the altin	ttached to the is to measure a both the drogu he e-match. Th meters as we v	st will have each e avionics bay and accuracy of how he and main para his testing will be would for final fli altitude. Our ligh	d a manual elect much black pov chutes. A secor conducted by v ght and place th	rical signal wi der we use. T dary test will viring both av e two system:	Il be sent the to his test will be be conducted ionics systems is in a vacuum.	he e-matches, ig conducted seve on the altimeters to their own ligh In the vaccum w	niting the black ral times on eit s to verify that it (rather than e e will then decr	powder in the po
Sub-scale -est Flights	altimeter and verify that ou altitude of 884	for redundancy t r max altitude wa ft. The main rea	the JollyLogic A as accurate. O ason that these	d has been succe AltimeterOne. Th n the RRC3+ Spo e are slightly off i n for the differen	is allowed assur rt the altimeter s that the Altim	rance that the reached a ma eterOne was a	team understo x altitude of 89 attached to the	ood how the RRC 95 ft and the Altin shock cord at a	3+ Sport opera meterOne reac lower resting h	ted and t hed a max eight tha

Vehicle Demon- stration Flights	a fin mount jig	g, as well as indi	vidual avionic a and holes are b	icle fully constru nd payload bays eing drilled. The ry Inc. Launch Da	are beginning current plan is	to go together to launch our	. For example full scale rocke	sleds are being et on Feburary	g printed for av	vionics bays,
Payload Demon- stration Flights		er contained in	a separate vess	ayload on the ful le inside the pay will be tested fo	load bay. Upoi	n safe landing (of the full-scale	, the vessle wi	ill eject from th	
			Milesto	ne Revie	w Flyshe	et 2018	-2019			
			Milesto	ne Revie	w Flyshe	et 2018-	-2019			
Institution		Pur	Milesto		w Flyshe	et 2018	-2019 Milestone		CDR	
Institution		Pur			w Flyshe	et 2018-			CDR	
				sity	w Flyshe				CDR	
	cation of transmi		due Univers	sity Tran	smitter #1		Milestone	active retentio		e in flight.
Loc	ration of transmi	tter:	due Univers Transmitte	Tran	n the rover, co	ntained within	Milestone the payload's		on system while	e in flight.
Loc	rpose of transmi	tter:	due Univers Transmitte	Tran r #1 is located on	n the rover, co	ntained within	Milestone the payload's	t the rover fro	on system while	
Loc	rpose of transmi Brand	tter:	due Univers	Tran r#1 is located or Transmitter #1 r	n the rover, co	ntained within nal sent from t RF C	Milestone the payload's the RDO to ejectoutput Power (n	et the rover fro	n system while om the rocket.	50
Loc	rpose of transmi	tter:	Transmitte Pro Transmitte	Transmitter #1 rx Xbee Series 1 (802.15	n the rover, coneceives the sign.	ntained within nal sent from t RF C Specific Frequit addresses in	the payload's the RDO to eject output Power (uuency used by the manufactu	et the rover fromW) team (MHz) uring process.	on system while om the rocket. 6 24 Each transmitt	50 100 er will be
Loc	rpose of transmi Brand Model	tter:	Transmitte Pro Transmitte	Tran r #1 is located of Transmitter #1 r Xbee Series 1 (802.15	n the rover, coreceives the sign assigned 64-b receive data f	ntained within nal sent from t RF C Specific Frec it addresses in rom the other	the payload's the RDO to ejectoutput Power (injuency used by the manufactutransmitter. In	et the rover fromW) team (MHz) uring process.	on system while om the rocket. 6 24 Each transmitt	50 100 er will be
Loc Pur Handshake or	Prose of transmi Brand Model r frequency hopp	tter: tter: ping? (explain)	Transmitte Pro Transmitte	Transmitter #1 rx Xbee Series 1 (802.15	n the rover, coreceives the sign assigned 64-b receive data f	ntained within nal sent from t RF C Specific Free sit addresses in rom the other between each	the payload's the RDO to ejectoutput Power (injuency used by the manufactit transmitter. In transmitter.	et the rover fromW) team (MHz) uring process.	on system while om the rocket. 6 24 Each transmitt	50 100 er will be
Loc Pui Handshake oi Distance to cl	Brand Model r frequency hopposest e-match o	tter: tter: ping? (explain) r altimeter (in)	Transmitte Pro Transmitte	Transmitter #1 rx Xbee Series 1 (802.15	n the rover, coreceives the sign (4) eassigned 64-bit receive data f	ntained within nal sent from t RF C Specific Free it addresses in rom the other between each	the payload's the RDO to ejectoutput Power (injuency used by the manufactitransmitter. In transmitter.	t the rover fromW) team (MHz) uring process. I	on system while om the rocket. 6 24 Each transmitt	50 100 er will be
Loc Pui Handshake oi Distance to cl	Prose of transmi Brand Model r frequency hopp	tter: tter: ping? (explain) r altimeter (in)	Transmitte Pro Transmitte	Transmitter #1 rx Xbee Series 1 (802.15	n the rover, coreceives the sign (4) eassigned 64-bit receive data f	ntained within nal sent from t RF C Specific Free it addresses in rom the other between each	the payload's the RDO to ejectoutput Power (injuency used by the manufactit transmitter. In transmitter.	t the rover fromW) team (MHz) uring process. I	on system while om the rocket. 6 24 Each transmitt	50 100 er will be
Loc Pui Handshake oi Distance to cl	Brand Model r frequency hopposest e-match o	tter: tter: ping? (explain) r altimeter (in)	Transmitte Pro Transmitte	Transmitter #1 rx Xbee Series 1 (802.15	n the rover, coreceives the sign (4) eassigned 64-bit receive data f	ntained within nal sent from t RF C Specific Free it addresses in rom the other between each	the payload's the RDO to ejectoutput Power (injuency used by the manufactitransmitter. In transmitter.	t the rover fromW) team (MHz) uring process. I	on system while om the rocket. 6 24 Each transmitt	50 100 er will be
Handshake or Distance to cl	Brand Model r frequency hopp osest e-match o iption of shieldir	tter: tter: ping? (explain) r altimeter (in) ng plan:	Transmitte Pro Transmitte	Tran r #1 is located or Transmitter #1 r Xbee Series 1 (802.15 ers #1 and #2 are to only send and	n the rover, coreceives the sign (4) eassigned 64-bit receive data f	ntained within nal sent from t RF C Specific Free sit addresses in rom the other between each 29.9 Ided boxing, sh	the payload's the RDO to ejectoutput Power (injuency used by the manufactitransmitter. In transmitter.	t the rover fromW) team (MHz) uring process. I	on system while om the rocket. 6 24 Each transmitt	50 100 er will be
Handshake or Distance to cl	Brand Model r frequency hopposest e-match o	tter: tter: ping? (explain) r altimeter (in) ng plan: tter:	Transmitte Pro Transmitte	Tran r #1 is located or Transmitter #1 r Xbee Series 1 (802.15 ers #1 and #2 are to only send and	smitter #1 In the rover, coreceives the sign and services with the rover and services	ntained within nal sent from t RF C Specific Frec it addresses in rom the other between each 29.9	the payload's the RDO to ejectoutput Power (injuency used by the manufactitransmitter. In transmitter.	tt the rover fromW) team (MHz) uring process. I this way, a base	on system while om the rocket. 6 24 Each transmitt	50 100 er will be

Xbee

Pro Series 1 (802.15.4)

RF Output Power (mW)

Specific Frequency used by team (MHz)

60

2400

Brand

Model

		it addresses in the manufacturing process. I				
Handshake or frequency hopping? (explain)	programmed to only send and receive data from the other transmitter. In this way, a basic handshake will be between each transmitter.					
Distance to closest e-match or altimeter (in)	29.9					
Description of shielding plan:	Shie	Ided boxing, short connections				
Description of shielding plan.	Silic	ded boxing, short connections				
	Transmitter #3					
Location of transmitter:	Transmitter #3 is l	ocated in the Telemetrum in the Avionics Ba	NV			
Purpose of transmitter:						
	Transmitter #3 is responsible for recording t	he altitude of the rocket and to trigger the ϵ	ejection of the parachutes			
Brand	TI	RF Output Power (mW)	40			
Model	CC1120	Specific Frequency used by team (MHz)	435			
landshake or frequency hopping? (explain)	The transmitter will utilize a basic handshake rocket and d	between the altimeter and laptop on groui eploy the parachutes when necessary.	nd to track the flight of th			
Distance to closest e-match or altimeter (in)		1.25				
Description of shielding plan:	Shie	lded boxing, short connections				
	Transmitter #4					
Location of transmitter:						
Purpose of transmitter:	Transmitter #4 is l Transmitter #4 is responsible for recording t	ocated in the RRC3 Sport in the Avionics Bay				
rui pose oi transmitter.	· · · · · · · · · · · · · · · · · · ·	as a redundancy to the Telemetrum.	ejection of the parachutes			
Brand	ΤΙ	RF Output Power (mW)	40			
Model	MSP430	Specific Frequency used by team (MHz)	16			
landshake or frequency hopping? (explain)	The transmitter will utilize a basic handshake		nd to track the flight of th			
	TOCKET AND C	eploy the parachutes when necessary.				
Distance to closest e-match or altimeter (in)	Chi-	1.25				
Description of shielding plan:	Shielded boxing, short connections					
	Milestone Review Flyshe	et 2018-2019				
	The second review rayons	CT 2010 2013				
nstitution Puro	due University	Milestone	CDR			
istitution Full	due Offiversity	Milestone	CDR			
	Transmitter #5					
Location of transmitter:	Hallstilleter #3					
		N/A				
Purpose of transmitter:						
Brand		RF Output Power (mW)				
Model		Specific Frequency used by team (MHz)				
landshake or frequency hopping? (explain)		, , , , , , , , , , , , , , , , , , , ,				
Distance to closest e-match or altimeter (in)						
Description of shielding plan:						

Transmitter #6							
Location of transmitter: N/A							
Purpose of transmitter:							
Brand		RF Output Power (mW)					
Model		Specific Frequency used by team (MHz)					

Handshake or frequency hopping? (explain)		· · · · · ·	 -
Distance to closest e-match or altimeter (in)			
Description of shielding plan:			
	Additional (Comments	
	N/	A	