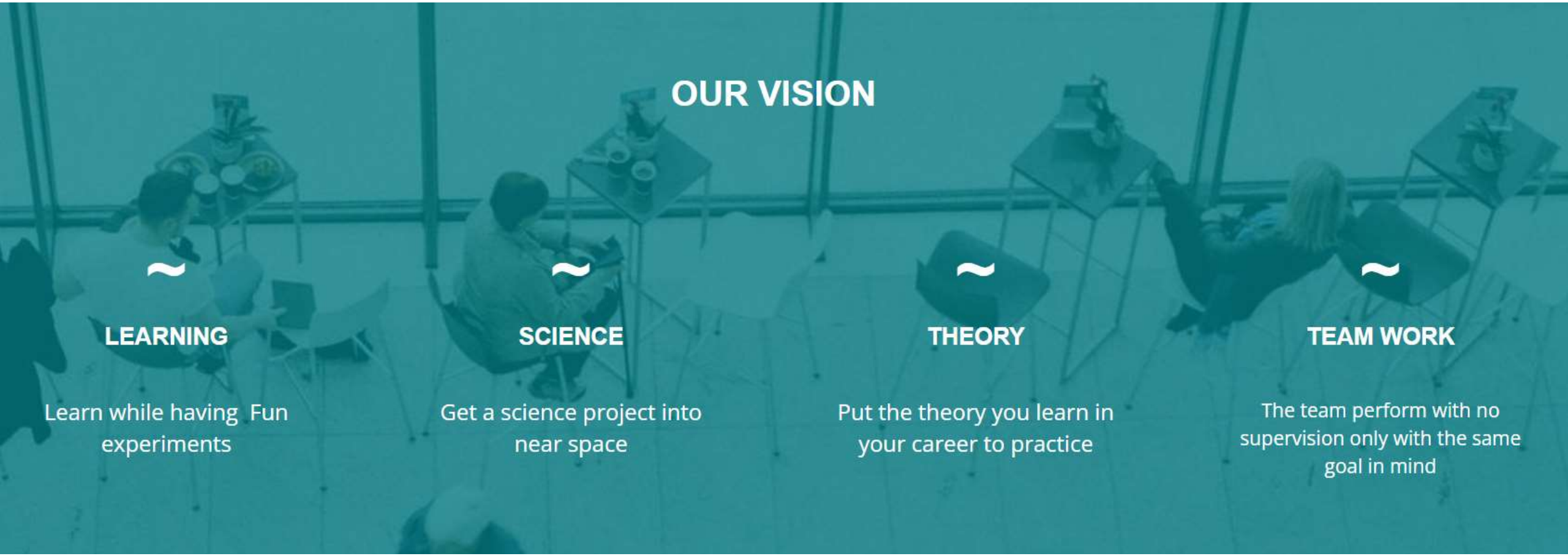

BACAR
By: Secunda Radio Club



OUR VISION

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LEARNING

Learn while having Fun experiments

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SCIENCE

Get a science project into near space

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THEORY

Put the theory you learn in your career to practice

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TEAM WORK

The team perform with no supervision only with the same goal in mind

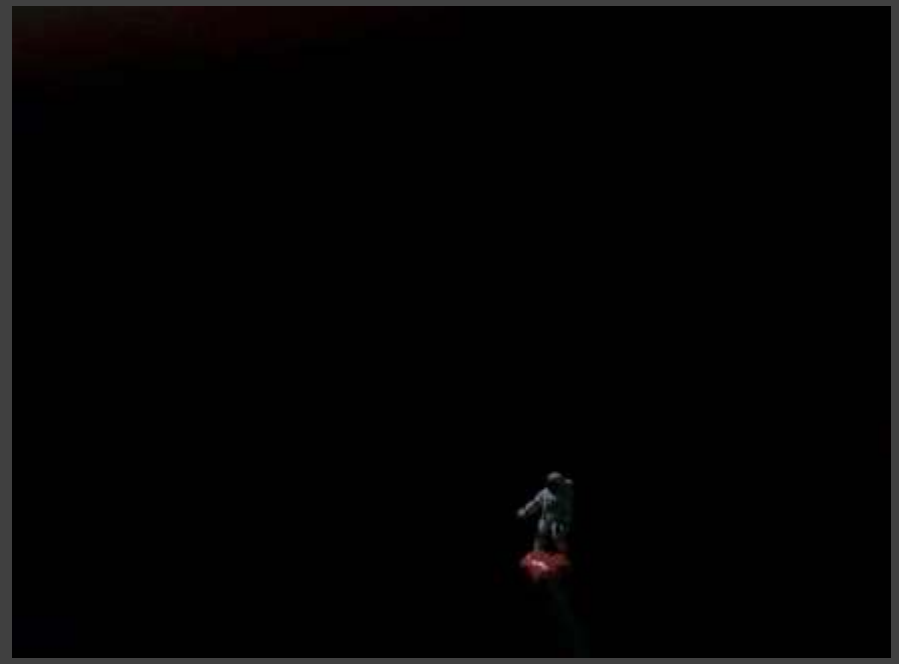
OUR MISSION

Teams without formal leaders is more successful than other, our commitment is your pride while we use our passion for our hobby to learn and let others learn. We turn unsuccessful in successful and never give up.

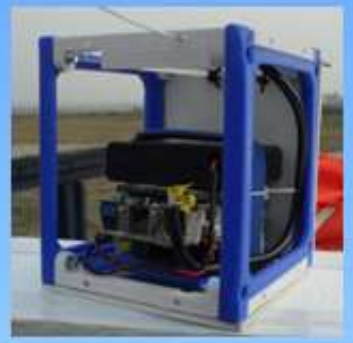
Filling the Balloon

2017



Payloads



The Payload

- Power supply
- Micro Computer
- Sensors
- Experiments
- RF package

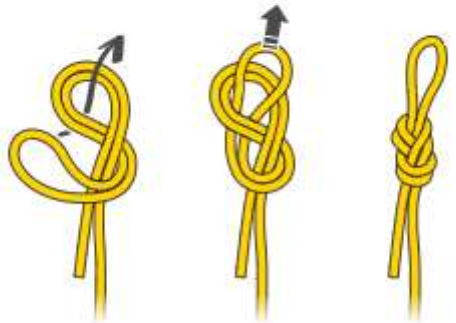
Payload Specifications

1. The completed payload / Balloon Sat mass cannot exceed 500g maximum
2. The payload / Balloon-Sat must fit in a 10cm x 10cm x 10cm cube
3. Isolation and protection material can be placed around the cube mention ,but not exceed 14cm x 14cm x 14 cm

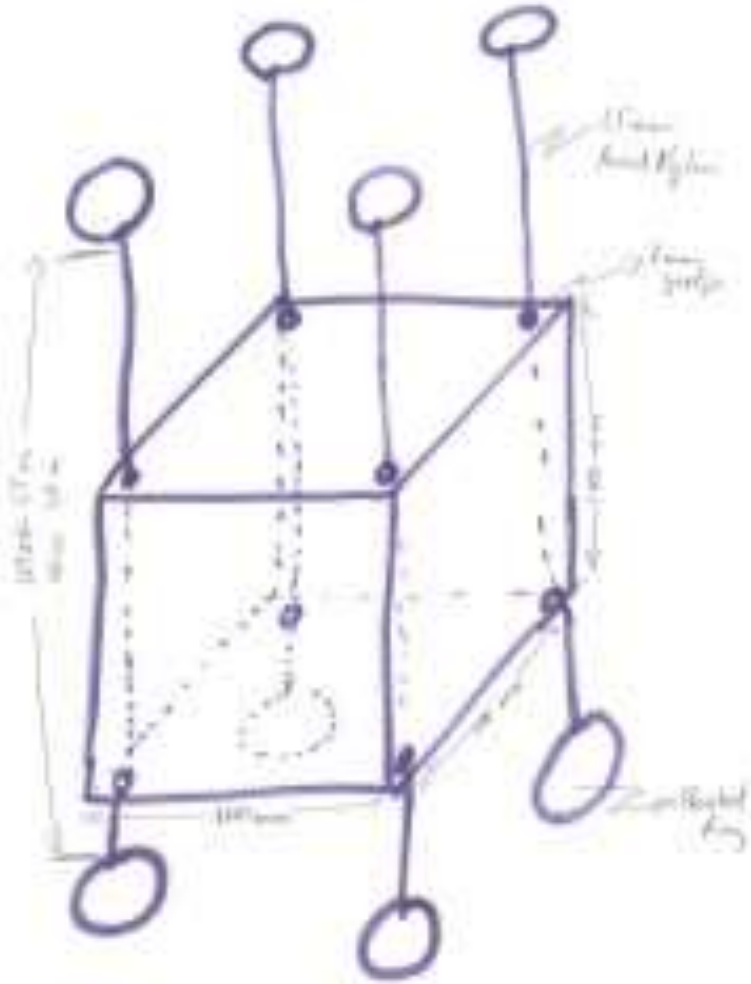
Construction of the payload

Figure-eight knot

For the anchor



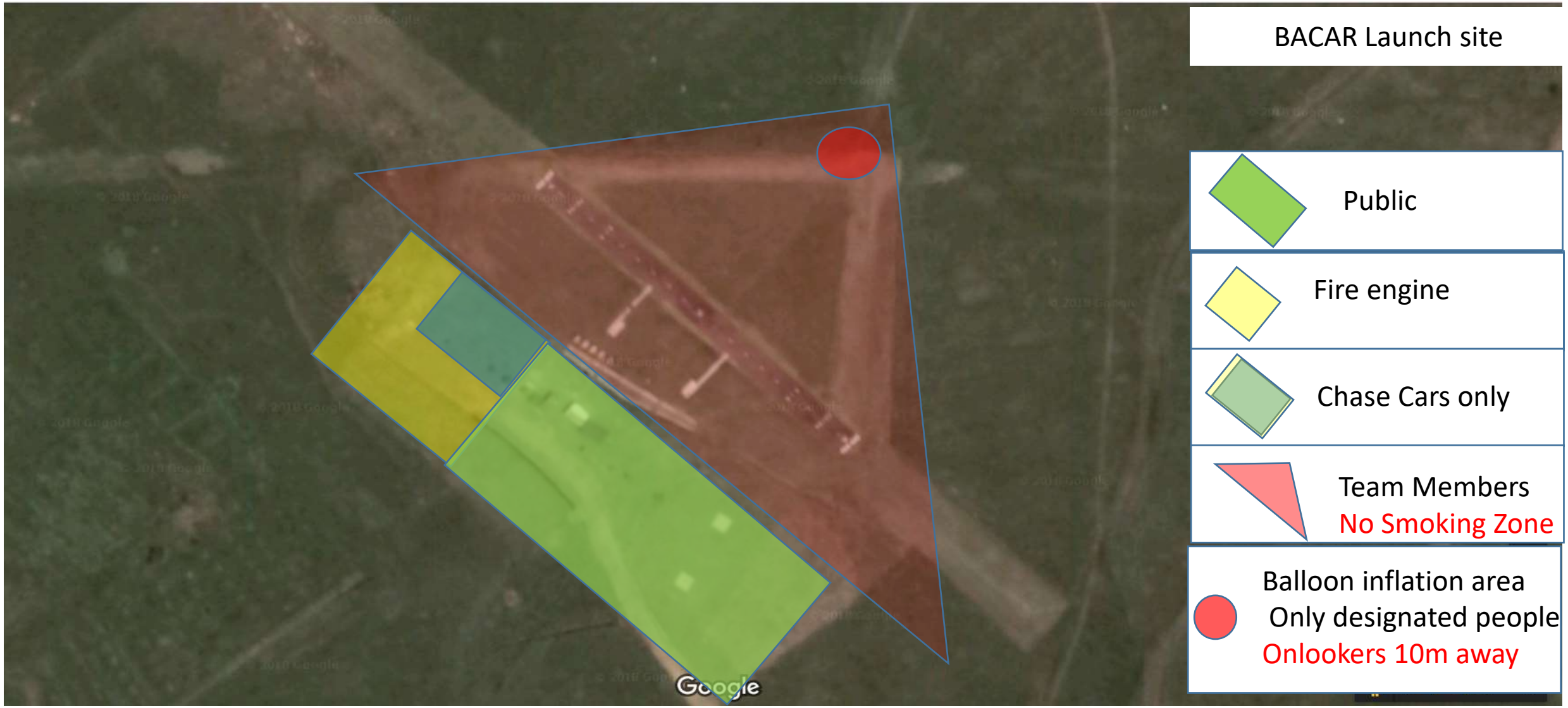
Bowline on a bight



Payload train

No	Mission Name	Description	TX1	TX2	TX3	RX	RX3	Mass(g)	Tx Power (W)	Tx2 Power (W)
1	ZS6SRC	Shuttle	868.4	434.65	GSM		GSM	1300	0.1	0.1
2	ZS6BAM	PiCamera Still & Video payload, ESPCam?						400		
3	ZR6TG	APRS and ax.25 telemetry	144.8	144.91				500	4	
4	GigaCube	Transponder	10352.56	10352.54		435.2		500	5	
5	Jeugland	Telemetry Lora 868	868			868		500	0.2	
6	SPOT	Sattracker	1616.25					500	0.4	
7	AfriCube	Transponder	145.972			435.1		500	5	
8	LaraWan	Tracker	868					200	0.025	
9	ZS6WBT	Camera, Meshtastic Lora, Picaxe,Nano HF SSTV	868	7.06		868		500	0.1	2
10	BACAR	ADSB/ModeS/C Transponder, camera	1090					500	25	
		Miscellanious, ropes rings ducktape cable ties						500		
		Payload mass						**5900**		

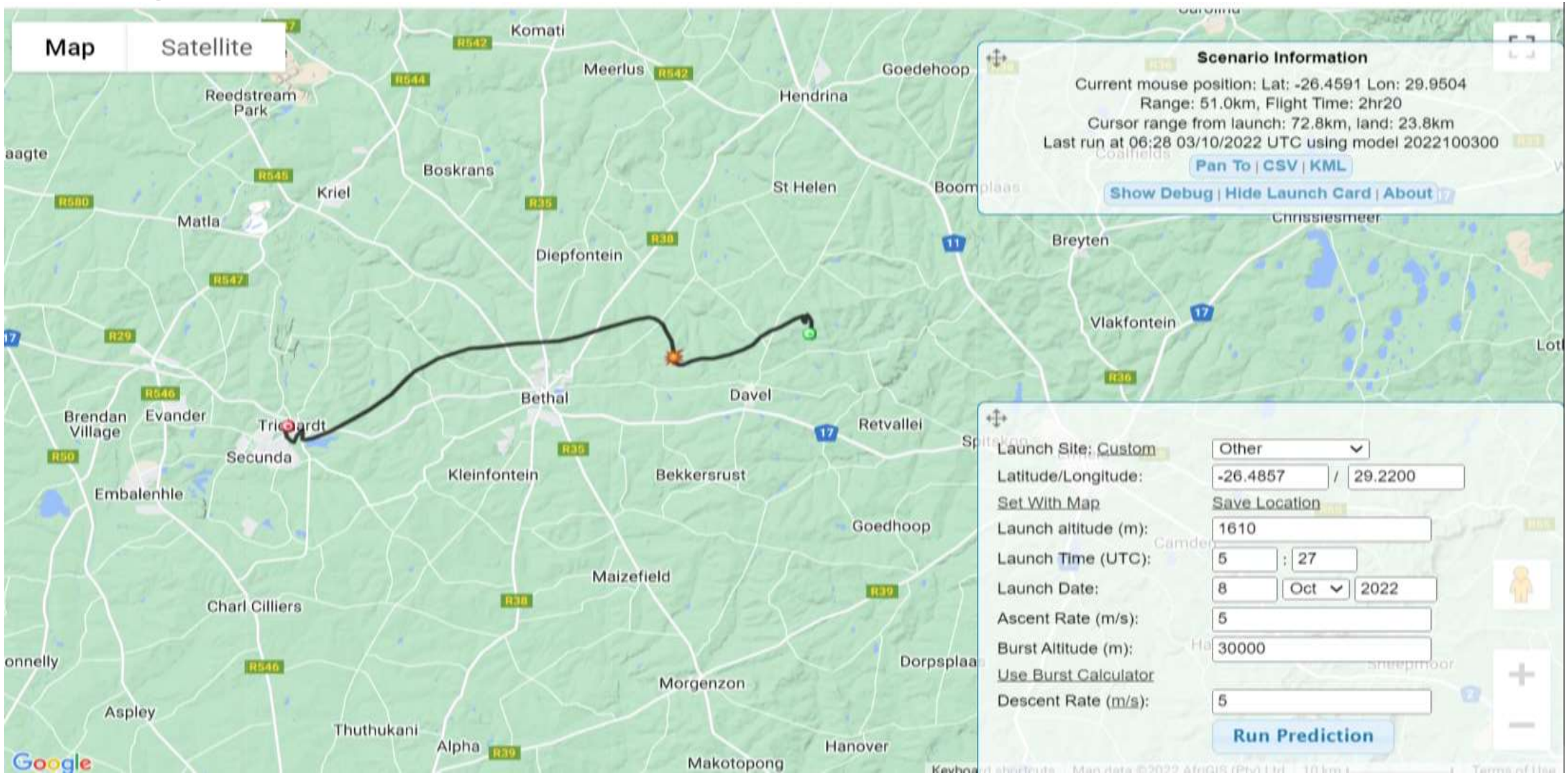
Flight briefing.



Launch day program for BACAR-10 launch.

- 04:30 Arrive at launch site
- 05:00 Flight briefing
- 05:00 Prepare the payloads
- 05:30 Prepare the balloon launch area
- 05:45 Pre-flight checks all payloads
- 06:00 Build the train
- 06:15 ZS6SRC Shuttle and WBT Payload Confirm ready
- 06:30 Testing of All Telemetry Complete
- 06:30 Prepare balloon and inflate
- 06:50 Balloon inflation complete confirm ready
- 06:55 Hook up ZS6SRC Shuttle and train to balloon
- 07:00 Final checks
- 07:05 Launch Balloon
- 07:10 Chase in progress
- 08:00 Balloon burst
- 08:30 Payload recovery start
- 12:00 Arrive with payloads at Base station
- 12:45 Start data download and prepare final presentations
- 14:00 Give Feedback on Payloads at Base station
- 17:00 Bring and Braai at the camping grounds

Flight Prediction



Achievements

Year	Altitude
2022	31.4km
2021	21 Km
2019	26.1 Km
2018	26 Km
2017	31 Km
2016	30 Km
2015	28 Km
2014	29 Km
2013	12 Km

Year	Teams
2022	6
2021	8
2019	7
2018	9
2017	6
2016	5
2015	6
2014	5
2013	1

Year	Payload's
2022	10
2021	10
2019	10
2018	14
2017	9
2016	9
2015	7
2014	5
2013	1