

# Balloon Tracking

John Pratt, KC4RSN

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VK3YT/VK3ANH

Kensington, Victoria, Australia

- High altitude balloon carrying HF payload
- First balloons used APRS (limited range on VHF)
- To extend range began using HF transmitter (CW, RTTY, Olivia, and JT-65)
- Flights since Pico Space - 24 have been WSPR and JT-9



Search... 32.6454 -85.3782



RIA-20 ▲

PS-57 ▼

**0.0 m/s 0.0 m/s**  
RATE V/H

**9,178 m (9,770 m)**  
ALTITUDE (MAX)

**2015-12-20 19:32:00**  
DATETIME (LOCAL)

**-16.368, -105.773**  
COORDINATES

**4.122 V**  
BATTERY

**400 0163 i9**  
**10.1387Mhz**  
DEBUG

**3**  
GPS LOCK

**9**  
SATELLITES

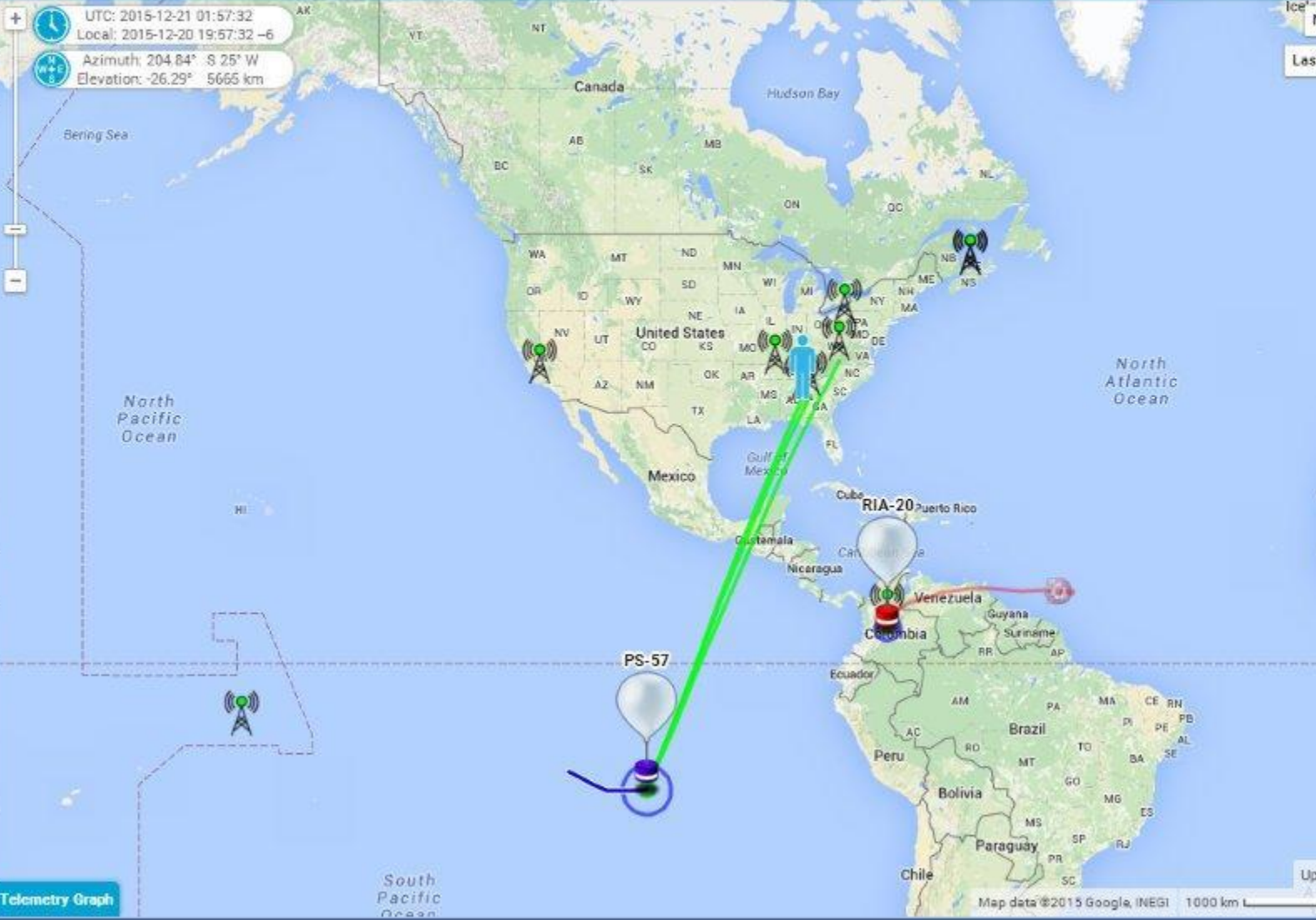
**-5.0°C**  
TEMPERATURE

Recieved 23m ago via:  
WX4F, K4COD, AK4AT, KC4RSN

UBSEDS12 ▲

SP6NVB-11 ▲

DL4MDW-11 ▲



UTC: 2015-12-21 01:57:32  
Local: 2015-12-20 19:57:32 -6

Azimuth: 204.84° S 25° W  
Elevation: -26.29° 5665 km

Telemetry Graph

Search  32.6454  
-85.3782



PS-57

0.0 m/s 0.0 m/s  
RATE V/H

9,136 m (9,407 m)  
ALTITUDE (MAX)

2015-12-24 18:02:00  
DATETIME (LOCAL)

9.609, -60.498  
COORDINATES

3.84 V  
BATTERY

0 0189 j t9 10.1387Mh  
HYSPLIT

3  
GPS LOCK

8  
SATELLITES

-30.0°C  
TEMPERATURE

Recieved 1m ago via:  
KC4RSN, VE1VDM/1



UTC: 2015-12-25 00:05:42



Local: 2015-12-24 18:05:42 -6

Azimuth: 129.5° S 50° E  
Elevation: -16.12° 3570.3 km



Path

HYSPLIT

DEBUG

VE2WMG-11



ria-20a\_chase



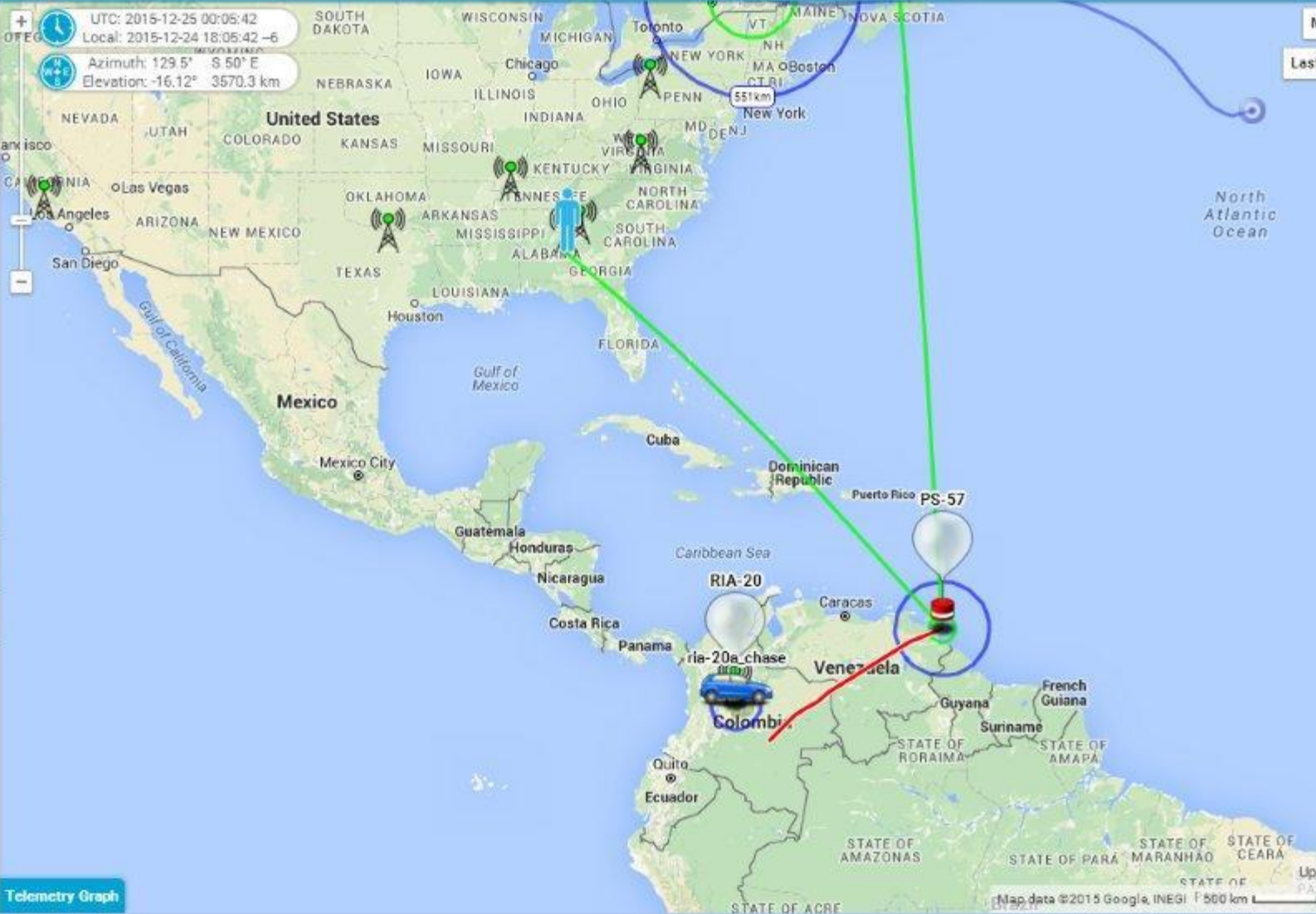
HORUSLORA



RIA-20



Telemetry Graph



Search... 32.6454 -85.3782

PS-57

0.0 m/s 0.0 m/s  
RATE VIH

5,000 m (9,397 m)  
ALTITUDE (MAX)

2015-12-27 22:32:00  
DATETIME (LOCAL)

-10.683, -30.171  
COORDINATES

3.756 V  
BATTERY

0 0103 jt9 10.1387Mh  
DEBUG

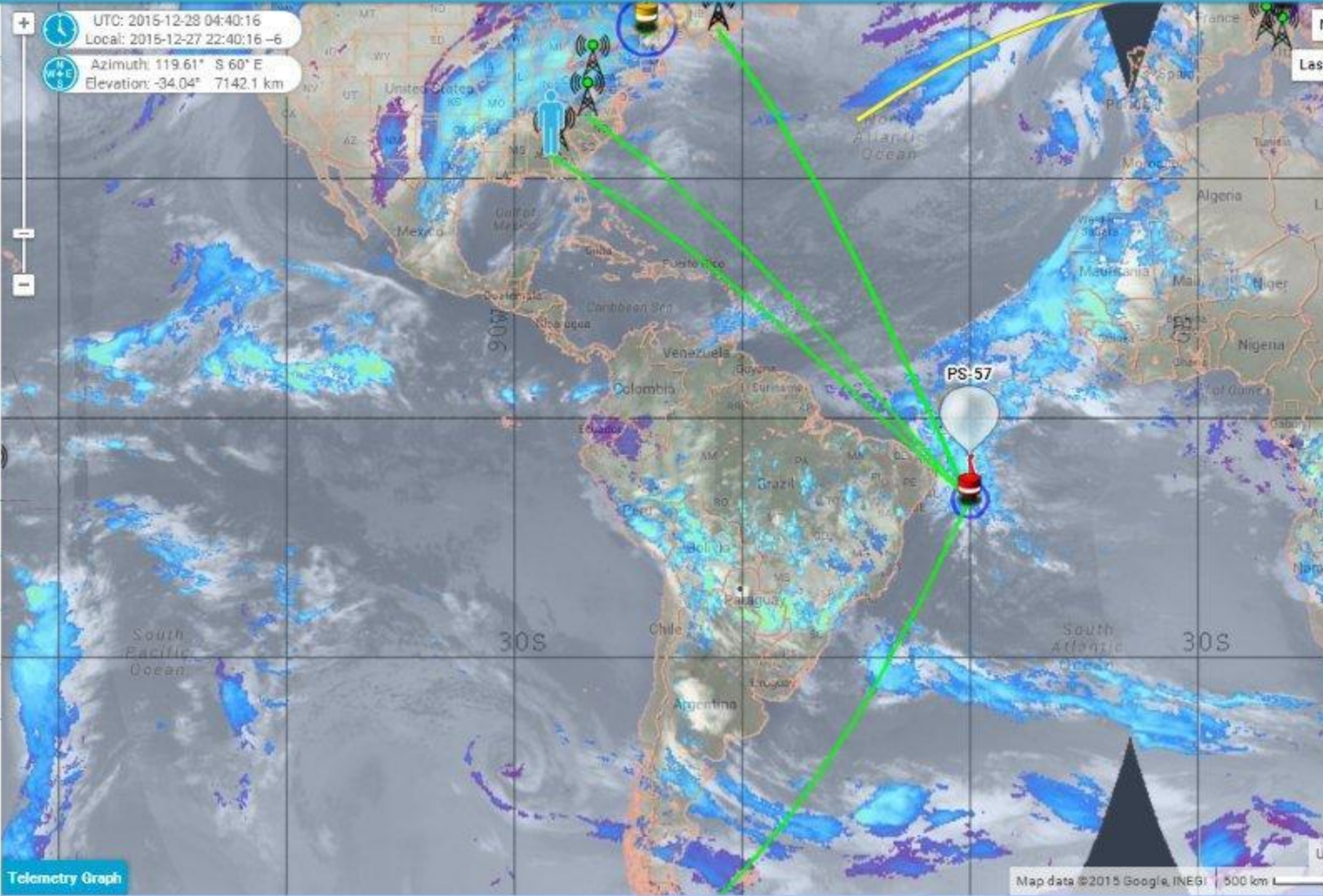
3  
GPS LOCK

6  
SATELLITES

0.0°C  
TEMPERATURE

Recieved 6m ago via:  
VE1VDM, AK4AT, ZL1RS,  
VE1VDM/1, KC4RSN

- VK5ARG-1 ▲
- HORUSLORA ▲
- PYSY ▲
- DC2EH-6 ▲
- VE2WMG-11 ▲



Telemetry Graph

Band Activity

UTC	dB	DT	Freq	Message
2232	-22	0.1	1108	@ VK3YT1E53CV60
2233	-22	0.3	1108	@ 057I411F57 7I
2302	-20	0.1	1108	@ VK3YT1E53CU 0
2303	-23	0.1	1108	@ 05B441C054985
2332	-21	0.1	1108	@ VK3YT1E63CUH0
2333	-20	0.3	1108	@ 05E+41MN5BX8X
0002	-24	0.1	1108	@ VK3YT1E83CUK0
0003	-25	0.1	1108	@ 05IX41X057M9F

Rx Frequency

UTC	dB	DT	Freq	Message
2232	-22	0.1	1108	@ VK3YT1E53CV60
2233	-22	0.3	1108	@ 057I411F57 7I
2302	-20	0.1	1108	@ VK3YT1E53CU 0
2303	-23	0.1	1108	@ 05B441C054985
2332	-21	0.1	1108	@ VK3YT1E63CUH0
2333	-20	0.3	1108	@ 05E+41MN5BX8X
0002	-24	0.1	1108	@ VK3YT1E83CUK0
0003	-25	0.1	1108	@ 05IX41X057M9F

Log QSO Stop Monitor Erase Decode Enable Tx Halt Tx Tune

30m



10.138 700

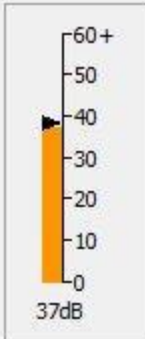
Telemetry

Generate Std Msgs

Next	Now
<input type="radio"/>	<input checked="" type="radio"/> Tx 1
<input type="radio"/>	<input type="radio"/> Tx 2
<input type="radio"/>	<input type="radio"/> Tx 3
<input type="radio"/>	<input type="radio"/> Tx 4
<input type="radio"/>	<input type="radio"/> Tx 5
<input type="radio"/>	<input type="radio"/> Tx 6

CQ KC4RSN EM72

Pwr



DX Call DX Grid

Lookup Add

2015 Dec 25  
00:08:12

Tx JT9 @  Tx even  Location  
 Tx 1108 Hz Tx<Rx  
 Rx 1108 Hz Rx<Tx  
 Lock Tx=Rx Report -15

Receiving JT9 Tx-Enable Armed 24%





# WSPRnet

Weak Signal Propagation Reporter Network

## Frequencies

USB dial (MHz): 0.136, 0.4742, 1.8366, 3.5926, 5.2872, 7.0386, 10.1387, 14.0956, 18.1046, 21.0946, 24.9246, 28.1246, 50.293, 70.091, 144.489, 432.300, 1296.500

## Spot Count

353,348,773 total spots  
372,734 in the last 24 hours  
15,280 in the last hour

## Navigation

- ▶ Add content
- ▶ Chaos Tools AJAX Demo
- ▶ Forums

## Who's online

There are currently 86 users online.

- KE7KRF
- K7UV
- NA7US
- kd2jul
- DG4FBC
- VK5GF
- N6SPP
- WB7A ID

## Map



Go! Reset

How can I automa

Date	Call	Frequency	SNR	Drift	Grid	Power		Reported		Distance	
						dBm	W	by	loc	km	mi
2016-01-08 00:30	VK3YT	10.140163	-25	0	MF76	+30	1.000	KC4RSN	EM72hp	18183	11298
2016-01-07 01:00	VK3YT	10.140162	-24	0	MF77	+30	1.000	KC4RSN	EM72hp	18175	11293
2015-12-31 22:00	VK3YT	10.140158	-24	1	IG16	+30	1.000	KC4RSN	EM72hp	9563	5942
2015-12-30 05:30	VK3YT	10.140159	-24	2	HG87	+30	1.000	KC4RSN	EM72hp	9019	5604
2015-12-28 03:54	VK3YT	10.140161	-22	1	HH49	+13	0.020	KC4RSN	EM72hp	7495	4657
2015-12-28 03:44	VK3YT	10.140161	-24	0	HH59	+13	0.020	KC4RSN	EM72hp	7658	4758
2015-12-28 02:30	VK3YT	10.140160	-25	2	HH59	+27	0.501	KC4RSN	EM72hp	7658	4758
2015-12-27 03:30	VK3YT	10.140160	-23	1	HI55	+27	0.501	KC4RSN	EM72hp	7226	4490
2015-12-27 03:00	VK3YT	10.140162	-19	1	HI55	+23	0.200	KC4RSN	EM72hp	7226	4490
2015-12-27 02:30	VK3YT	10.140161	-25	1	HI56	+23	0.200	KC4RSN	EM72hp	7156	4447
2015-12-26 03:30	VK3YT	10.140160	-22	1	HJ54	+27	0.501	KC4RSN	EM72hp	6616	4111
2015-12-26 03:00	VK3YT	10.140158	-23	0	HJ45	+27	0.501	KC4RSN	EM72hp	6372	3959
2015-12-25 11:00	VK3YT	10.140163	-21	0	GJ59	+30	1.000	KC4RSN	EM72hp	4528	2814
2015-12-23 22:40	VK3YT	10.140160	-21	0	FJ31	+30	1.000	KC4RSN	EM72hp	3698	2298
2015-12-23 22:30	VK3YT	10.140160	-21	0	FJ31	+30	1.000	KC4RSN	EM72hp	3698	2298
2015-12-23 22:20	VK3YT	10.140161	-22	0	FJ31	+30	1.000	KC4RSN	EM72hp	3698	2298
2015-12-22 23:30	VK3YT	10.140159	-20	1	FI14	+30	1.000	KC4RSN	EM72hp	4334	2693
2015-12-22 22:50	VK3YT	10.140160	-25	0	FI14	+30	1.000	KC4RSN	EM72hp	4334	2693
2015-12-20 03:30	VK3YT	10.140159	-27	0	DH25	+30	1.000	KC4RSN	EM72hp	6120	3803
2015-12-20 01:50	VK3YT	10.140160	-22	0	DH15	+30	1.000	KC4RSN	EM72hp	6232	3872
2015-12-20 01:30	VK3YT	10.140160	-25	0	DH16	+30	1.000	KC4RSN	EM72hp	6138	3814
2015-12-19 02:20	VK3YT	10.140160	-27	0	CI70	+30	1.000	KC4RSN	EM72hp	6297	3913
2015-12-19 02:00	VK3YT	10.140160	-26	0	CI70	+30	1.000	KC4RSN	EM72hp	6297	3913
2015-12-18 12:30	VK3YT	10.140160	-22	2	CI43	+30	1.000	KC4RSN	EM72hp	6498	4038
2015-12-18 02:20	VK3YT	10.140159	-26	1	CI23	+30	1.000	KC4RSN	EM72hp	6816	4235

CSV/XML download disabled until fixed

# Websites

- <http://picospace.net> (Andy's website)
- <http://spacenear.us> (balloon tracking site)