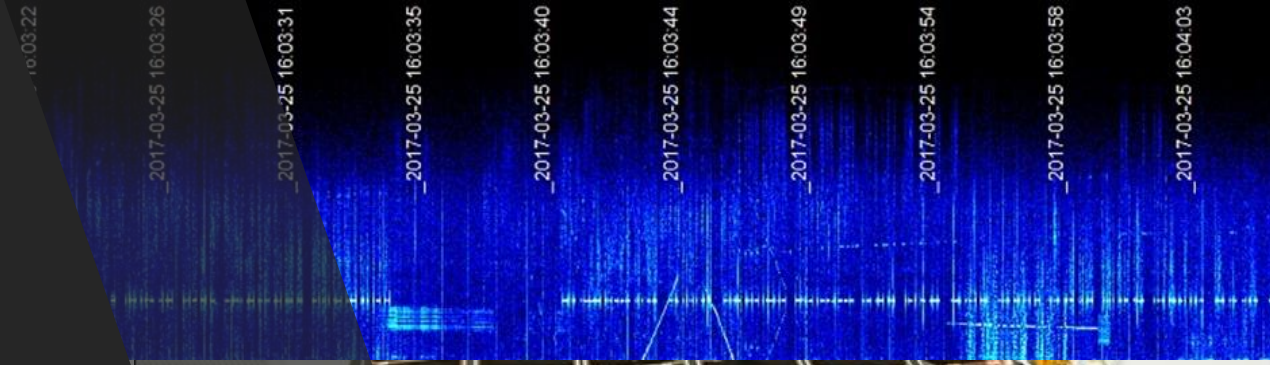
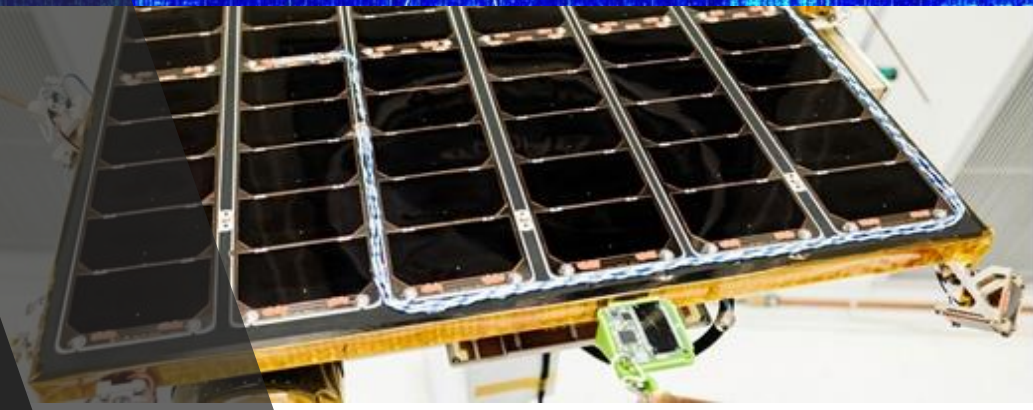


Aktuelle Übersicht aktiver Satelliten auf 2m/70cm

DK3WN – Mike Rupprecht



Amateurfunkdienst über Satellit «Mission Control bei sich zu Hause»

AMSAT-DL

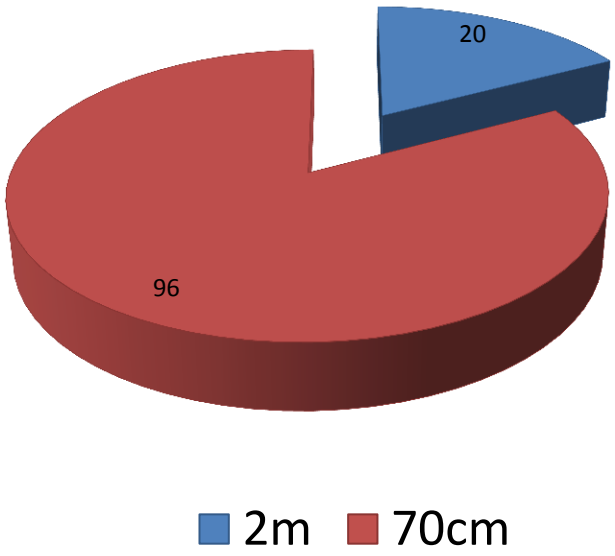
International Satellites for Communication, Science and Education

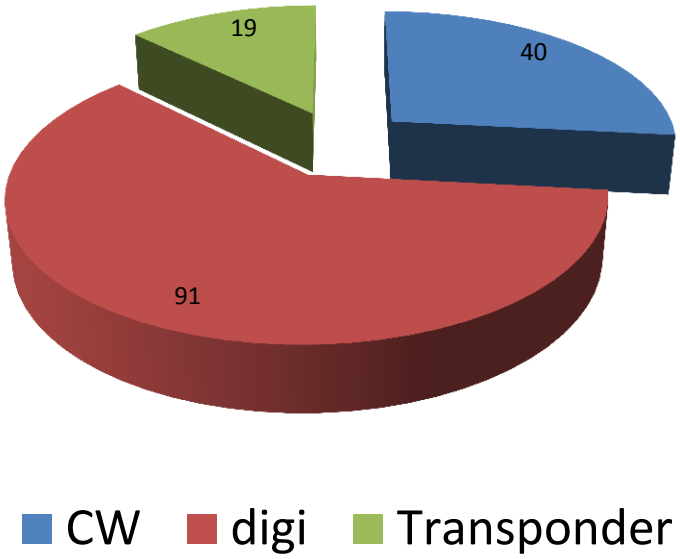
Aktive Satelliten auf 2m/70cm

AALTO-1 * AAUSAT-4 * AAUSAT-II * AENEAS * AIST-2D * ALSAT-1N * AO-7 * ATLANTIS * BEEAGLESAT * BEESAT-2 * BEESAT-4 * BEESAT-4 * BIRD-B (BRAC ONNESHA) * BIRD-J (TOKI) * BIRD-M (MAZAALAI, NUMSAT-1) * BIRD-N (EDUSAT-1) * BISONSAT * BUGSAT-1 * CAS-3G * CAS3-I * CAS-4A * CAS-4B * CHALLENGER * CHUBUSAT-2 * CHUBUSAT-3 * COLUMBIA * CSUNSAT1 * CUBEBUG-1 * CUBEBUG-2 * CUTE1.7+APDII * CUTE-I * DELFI-C3 * D-SAT * DUCHIFAT * DX-1 * E1P-U2 * E-ST@R-II * EX-ALTA1 * FIREBIRD-II FU3 * FIREBIRD-II FU4 * FIRST MOVE * FOX-1A * FUNCUBE-1 * FUNCUBE-2 (ON UKUBE-1) * GOMX-1 * GRIFEX * HAVELSAT * HOOPOE * HORYU-2 * INSPIRE-2 * ISS * ITF-2 * ITUPSAT-1 * JAS-2 FO-29 * LAPAN-A2/ORARI * LAPAN-A3 * LILACSAT-1 * LILACSAT-2 * LINK * LITUANICASAT-2 * MAX VALIER SAT * MCUBED-1 * MCUBED-2 * MINXSS-1 * MOZHAYETS RS-22 * NAYIF-1 * NIUSAT * NJFA-1 (TW1-C) * NJUST-1 * NSIGHT-1 * NUDTSAT * NUSAT-1 * NUSAT-2 * O/OREOS * PARKINSONSAT * PCSAT (NO-44) * PEGASUS * PHOENIX * PRISM (HITOMI) * ROBUSTA-1B * SAUDISAT-1C * SEEDS-II * SHANGKEDA-2 (TW1A) * SKCUBE * SOMP * SPACECUBE * SPROUT * STARS-C DAUGHTER * STARS-C MOTHER * STRAND-1 * SUCHAI * SWISSCUBE-1 * TANUSHA-1 (RS-6S) * TECHNOSAT * TIGRISAT * UCLSAT * UNISAT-6 * UNSW-EC0 * UOSAT-2 UO-11 * URSA MAIOR * UWE-3 * VELOX-III * VZLUSAT-1 * X-CUBESAT * XI-IV * XI-V * XW-2A * XW-2B * XW-2C * XW-2D * XW-2F * YUBILEINIY RS-30 * ZA-AEROSAT * ZACUBE-1

116 aktive Satelliten

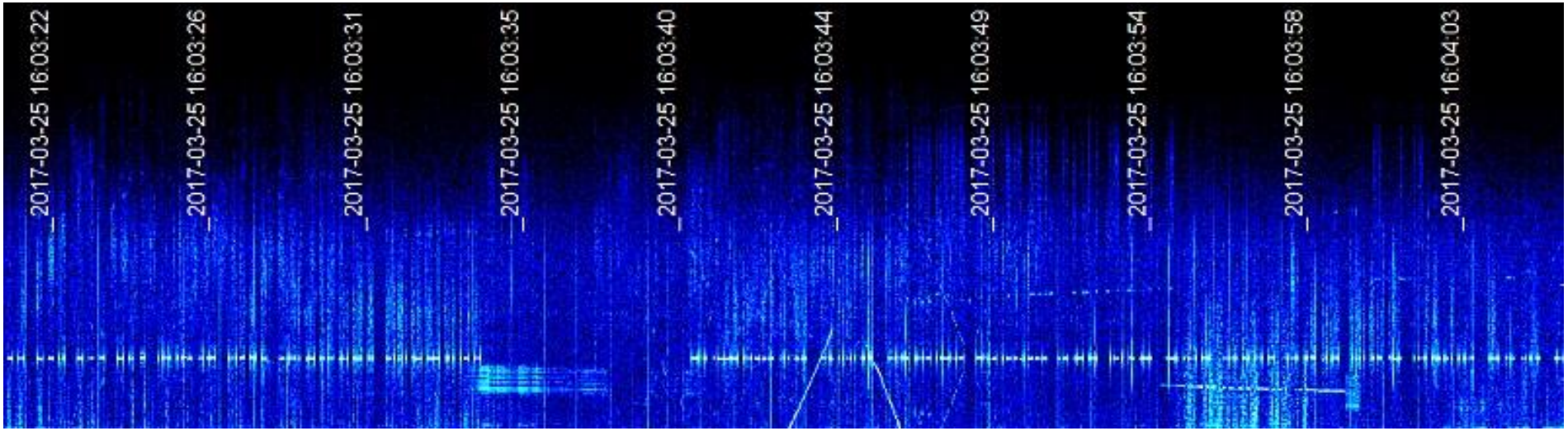
Stand: 01. November 2017





CW

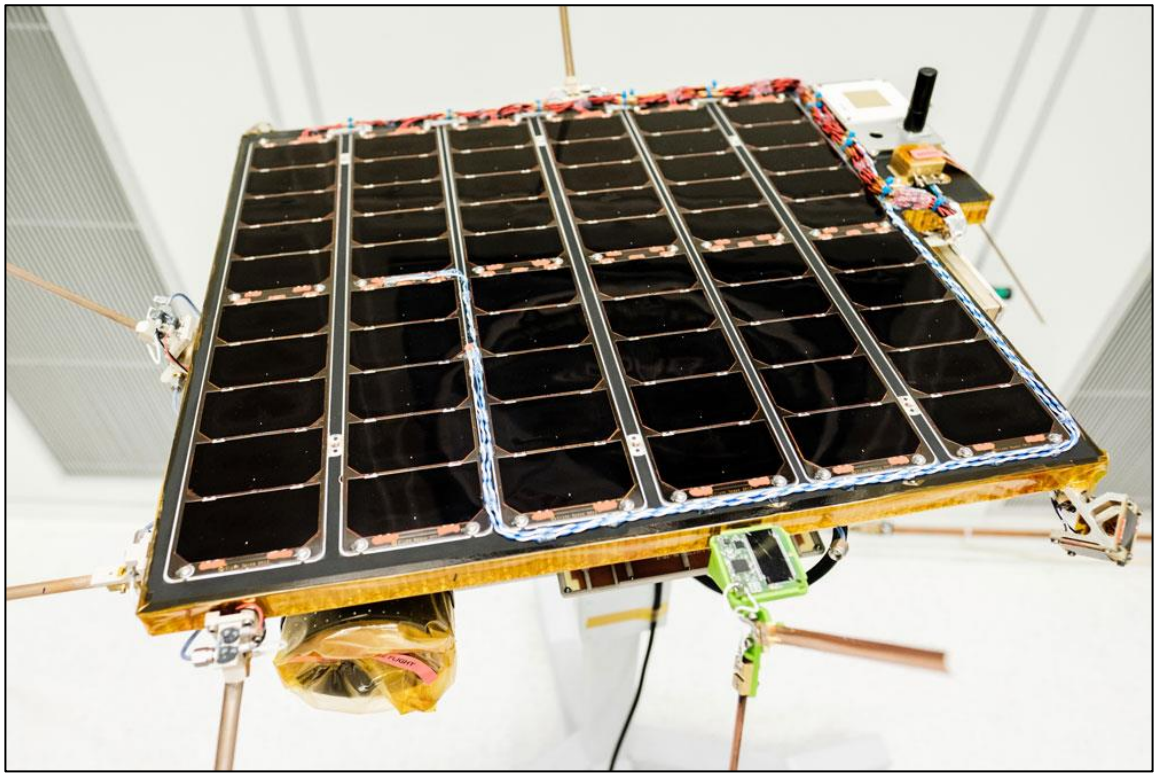
AALTO-1 * BEEAGLESAT * BIRD-B (BRAC ONNESHA) * BIRD-J (TOKI) * BIRD-M (MAZAALAI, NUMSAT-1) * BIRD-N (EDUSAT-1) * CAS-3G * CAS3-I * CAS-4A * CAS-4B * CHUBUSAT-2 * CHUBUSAT-3 * CSUNSAT1 * CUTE-I * DUCHIFAT * FIRST MOVE * HAVELSAT * HORYU-2 * ITF-2 * ITUPSAT-1 * JAS-2 FO-29 * **MAX VALIER SAT** * MOZHAYETS RS-22 * PRISM (HITOMI) * SEEDS-II * SOMP * SPROUT * STARS-C DAUGHTER * STARS-C MOTHER * SUCHAI * VELOX-III * VZLUSAT-1 * **XI-IV** * XI-V * XW-2A * XW-2B * XW-2C * XW-2D * XW-2F * YUBILEINIY RS-30



CW - MAX VALIER SAT

- Zusammenarbeit des OHB System AG mit Lehrern und Schüler der Technologischen Fachoberschule (TFO) Bozen
- Mini-Röntgenteleskop des Max-Planck-Institut für Extraterrestrische Physik (MPE)

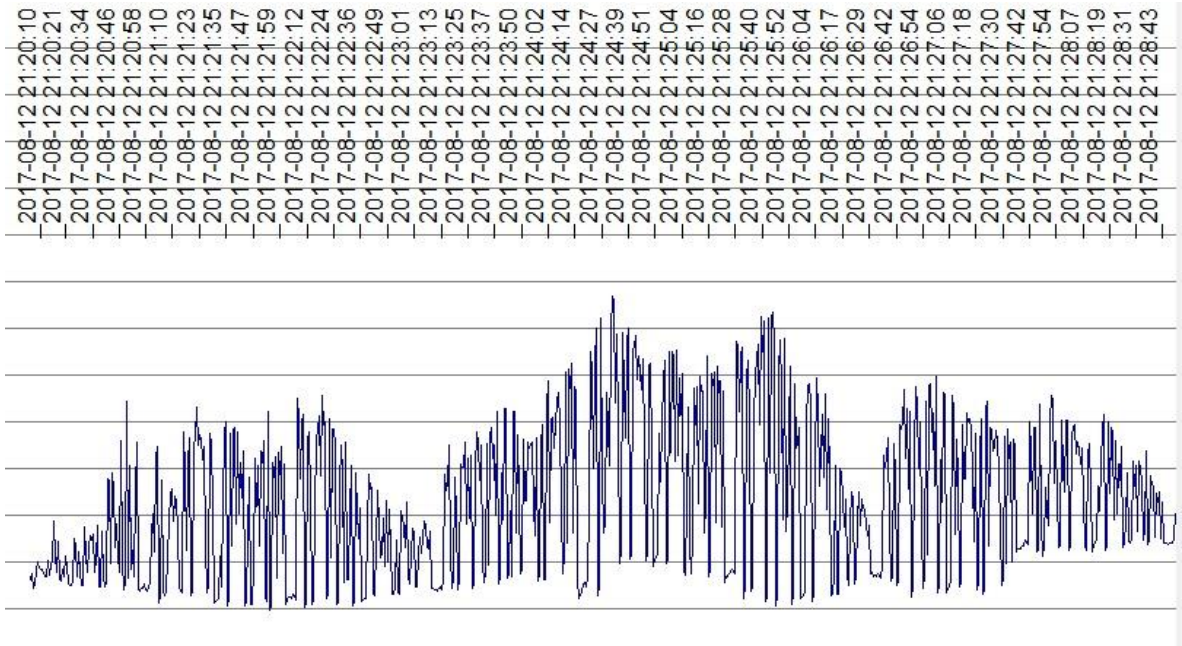
- Start: 23. Juni 2017
- CW Bake 145.860 MHz
- Rufzeichen: II3MV

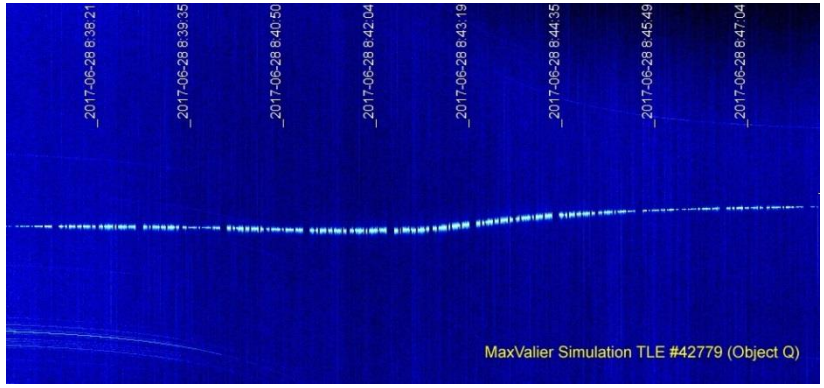


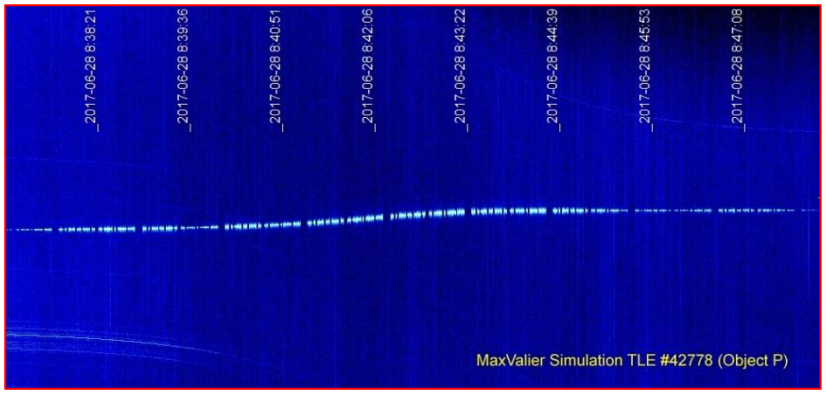
73 de ii3mv max valier sat tnx manfred es christa fuchs
73 de ii3mv max valier sat tnx manfred es christa fuchs
73 de ii3mv max valier sat tnx manfred es christa fuchs …

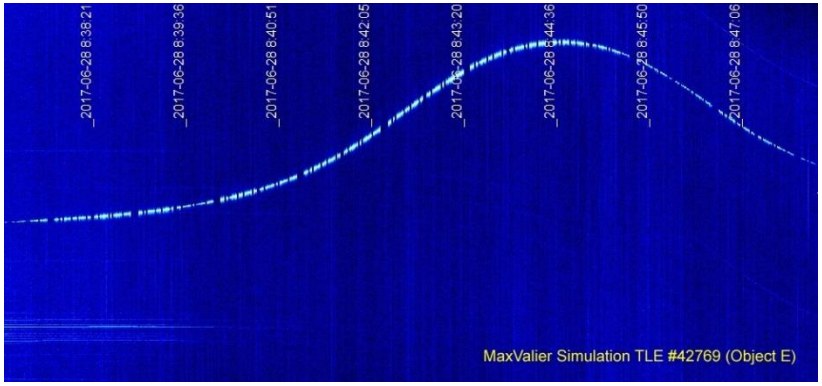
CW Bake - aber keine Telemetrie ???

- TLE Bestimmung nach Start
- Spin Rate ermitteln







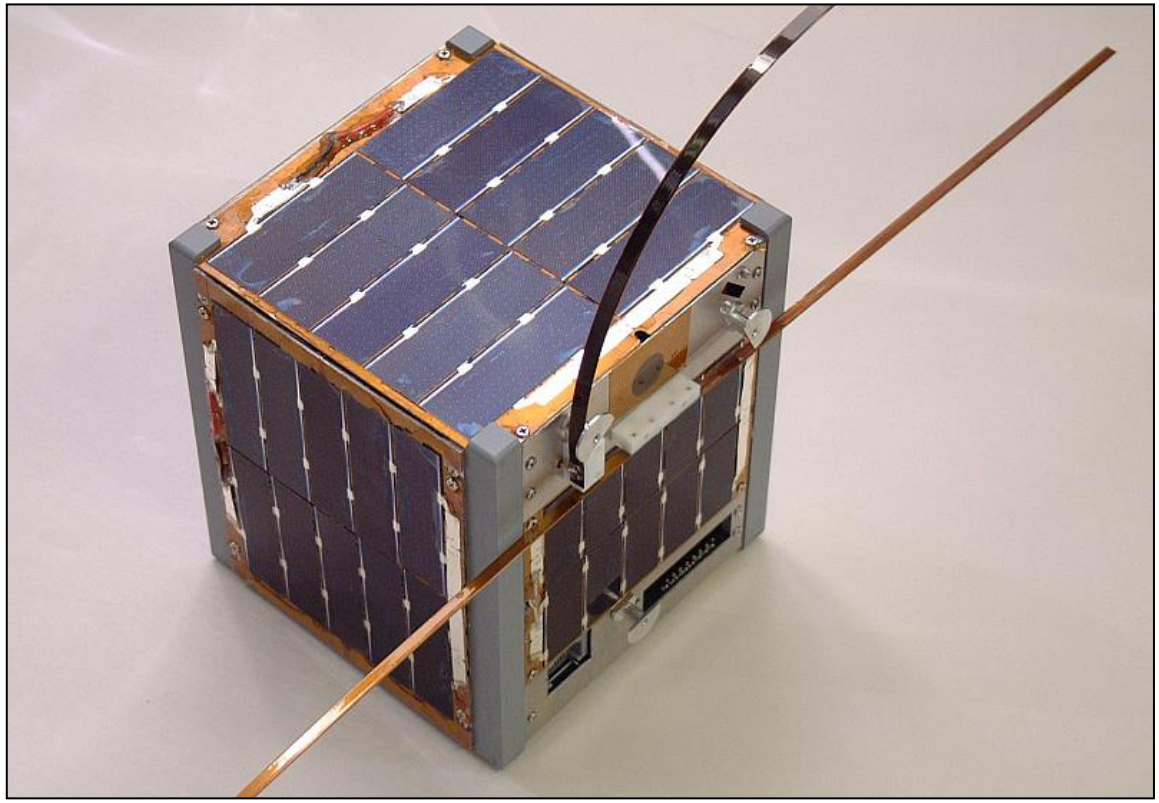


CW – XI-IV

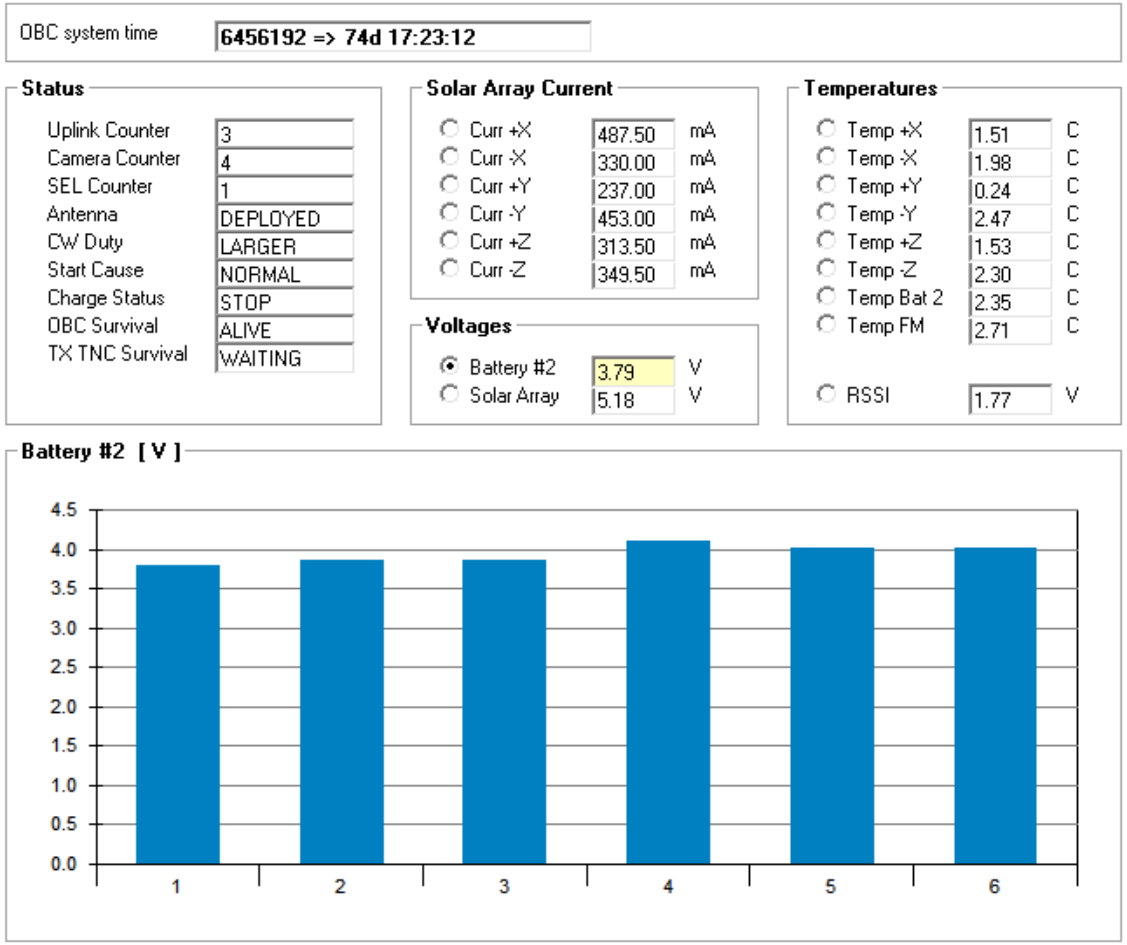
- Einer der ersten Cubesats, entwickelt von ISSL Universität Tokio

- CUBESAT-OSCAR 57
- 80mW, 50 wpm

- Start: 30. Juni 2003
- CW Bake 436.848 MHz
- Rufzeichen: JQ1YCW



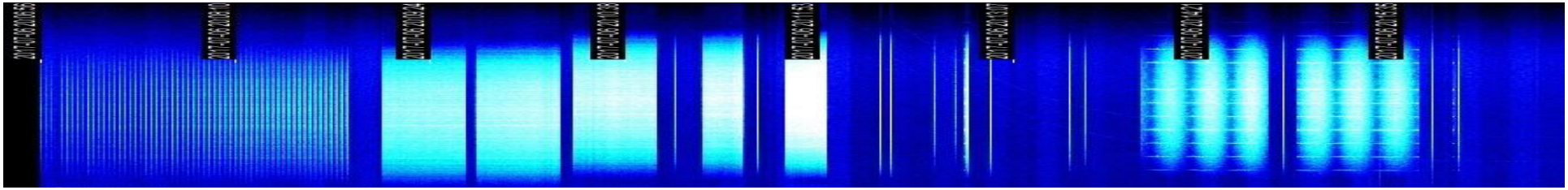
- CW Telemetrie



ut1 www.space.t.u-tokyo.ac.jp ut2 628380 ut3 83b9005e ut4 314335 ut5 ffffff ut6 777777775f
ut1 www.space.t.u-tokyo.ac.jp ut2 6283ee ut3 83b90066 ut4 324302 ut5 ffffff ut6 8777778763
ut1 www.space.t.u-tokyo.ac.jp ut2 628457 ut3 83b90068 ut4 324206 ut5 ffffff ut6 7777767763

digi

AALTO-1 * BEEAGLESAT * CAS-3G * CAS3-I * CAS-4A * CAS-4B * CHUBUSAT-2 * CHUBUSAT-3 * DUCHIFAT * HAVELSAT * HORYU-2 * SPROUT * SUCHAI * VZLUSAT-1 * XW-2A * XW-2B * XW-2C * XW-2D * **XW-2F** * AAUSAT-4 * AAUSAT-II * AENEAS * AIST-2D * ALSAT-1N * ATLANTIS * BEESAT-2 * BEESAT-4 * BEESAT-4 * BISONSAT * BUGSAT-1 * CHALLENGER * COLUMBIA * CUBEBUG-1 * CUBEBUG-2 * CUTE1.7+APDII * DELFI-C3 * D-SAT * DX-1 * E1P-U2 * E-ST@R-II * EX-ALTA1 * FIREBIRD-II FU3 * FIREBIRD-II FU4 * FOX-1A * FUNCUBE-1 * FUNCUBE-2 (ON UKUBE-1) * GOMX-1 * GRIFEX * HOOPOE * INSPIRE-2 * ISS * LAPAN-A2/ORARI * LAPAN-A3 * LILACSAT-1 * LILACSAT-2 * LINK * LITUANICASAT-2 * MCUBED-1 * MCUBED-2 * MINXSS-1 * NAYIF-1 * NIUSAT * NJFA-1 (TW1-C) * NJUST-1 * NSIGHT-1 * NUDTSAT * NUSAT-1 * NUSAT-2 * O/OREOS * PARKINSONSAT * PCSAT (NO-44) * PEGASUS * PHOENIX * ROBUSTA-1B * SHANGKEDA-2 (TW1A) * SKCUBE * STRAND-1 * SWISSCUBE-1 * TANUSHA-1 (RS-6S) * TECHNOSAT * TIGRISAT * UCLSAT * UNISAT-6 * UNSW-EC0 * UOSAT-2 UO-11 * URSA MAIOR * UWE-3 * X-CUBESAT * ZA-AEROSAT * ZACUBE-1



digi

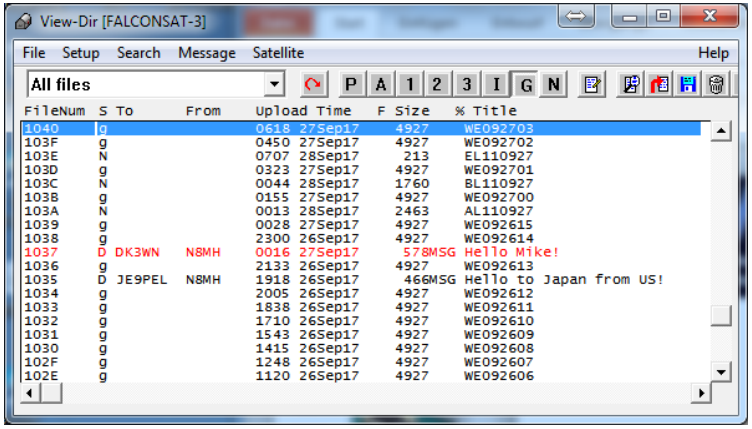
Klassiker:	1k2 AFSK AX.25, 9k6 FSK AX.25
Modulationsarten:	PSK / BPSK / FSK / MSK / GMSK / PSK31 / SSTV
Geschwindigkeiten:	0k2, 1k2, 2k4, 4k8, 9k6, 19k2
Protokolle:	AX.25, Cubesat Space Protocol, Mobitex
Dekoder:	Software (soundmodem, direwolf, gr-satellites) Hardware (TNC)
Telemetriedekoder:	Software der Cubesat-Teams Linux: EA4GPZ gr-satellites Windows: DK3WN software
Datenbanken:	PE0SAT SatNOGS

digi - Modulationsarten

AFSK	1k2	ISS, NO-44, PSAT, SwissCube, AENEAS
FSK	9k6	MCubed-2, STRaND-1, UWE-3, GRIFEX, UniSat-6
GMSK	4k8	BEESAT-4, TechnoSat, GOMX-1, D-SAT
BPSK	1k2	DELFI-C³, DUCHIFAT, NUDTSat, ExAlta-1
PSK31		PSAT
SSTV		ISS

digi - Anwendungen

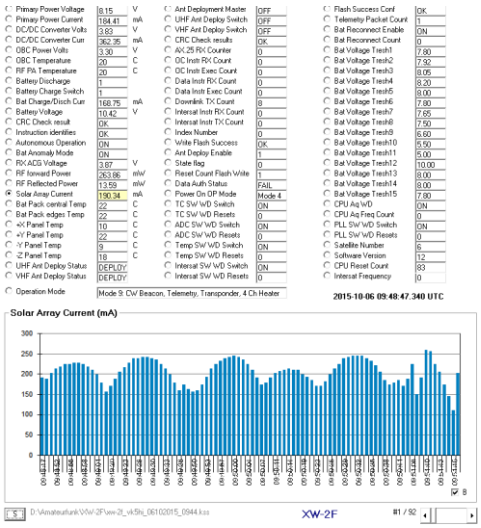
Telemetrie	diverse
S&F-Mailbox	UO-22, KO-23, KO-25, AO-51, XW-1, FalconSat-3
Digipeater	ISS, PCSAT-1, PSAT, skCube, FalconSat-3
Digitalker	FO-20, FO-29, SPROUT, Tancredo-1, ANDE-1
SSTV	ISS, SPROUT, SEEDS, ANTELSAT, We-Wish

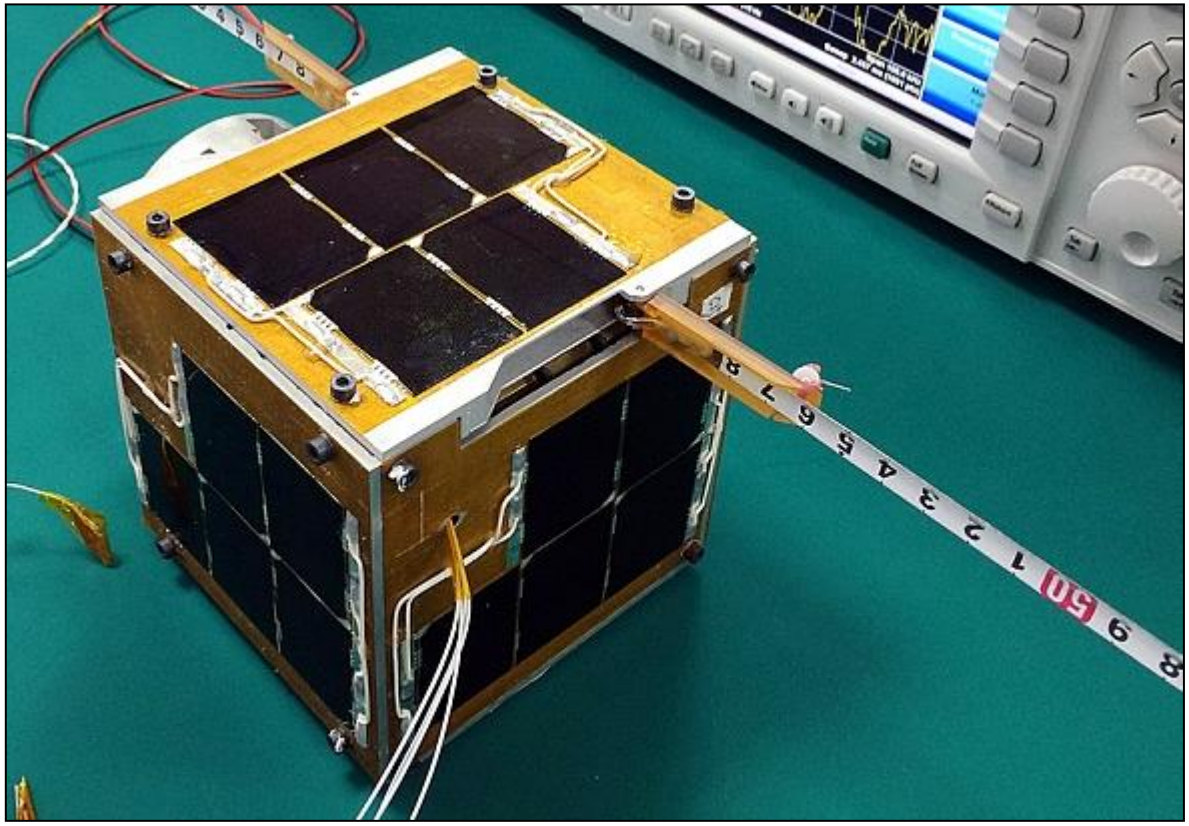


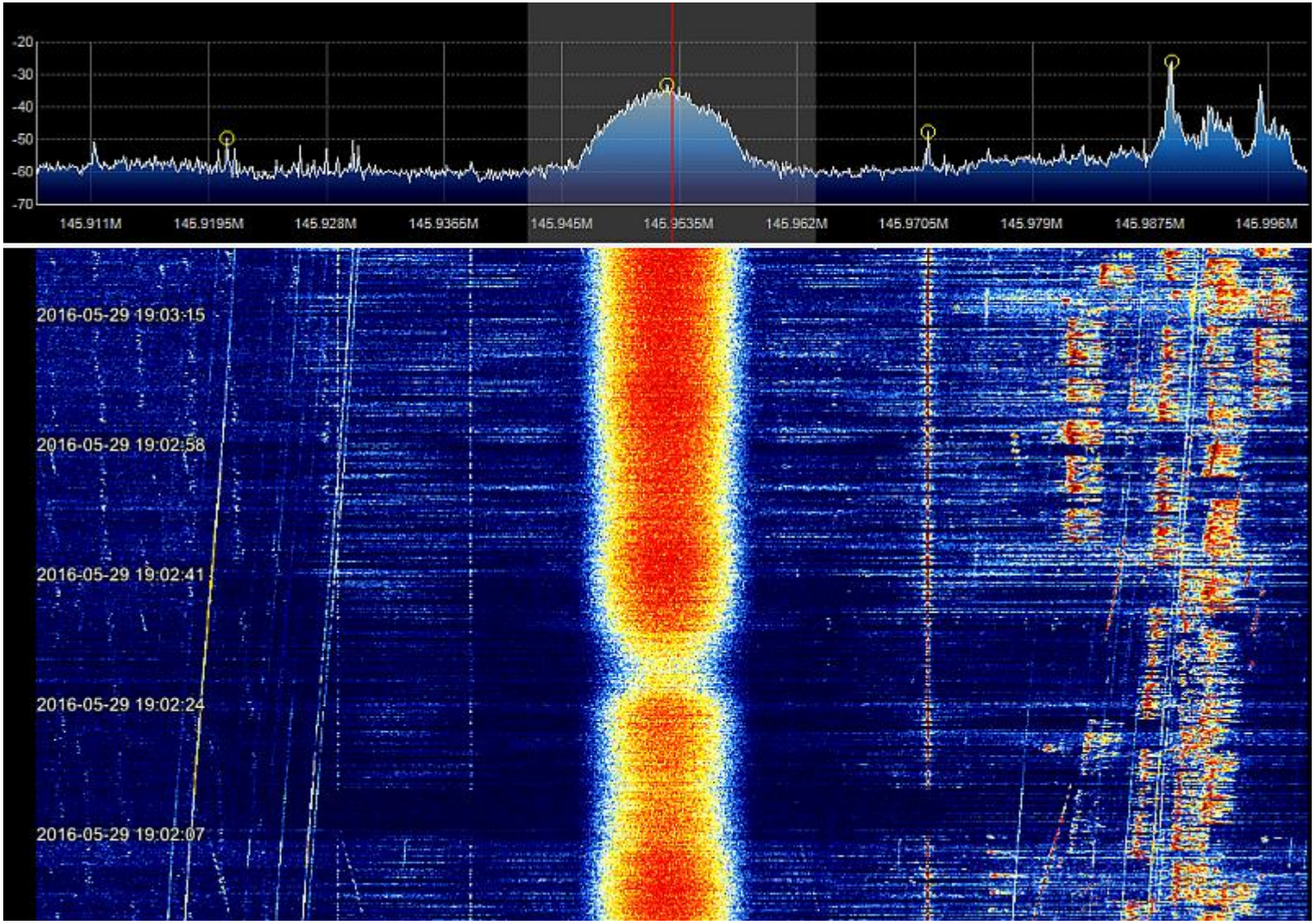
digi – XW-2F (Xiwang-2, CAS-3A-F)

- 9k6 FSK AX.25

- Start: 19. September 2015
- Bake 145.955 MHz
- Rufzeichen: BJ1SG

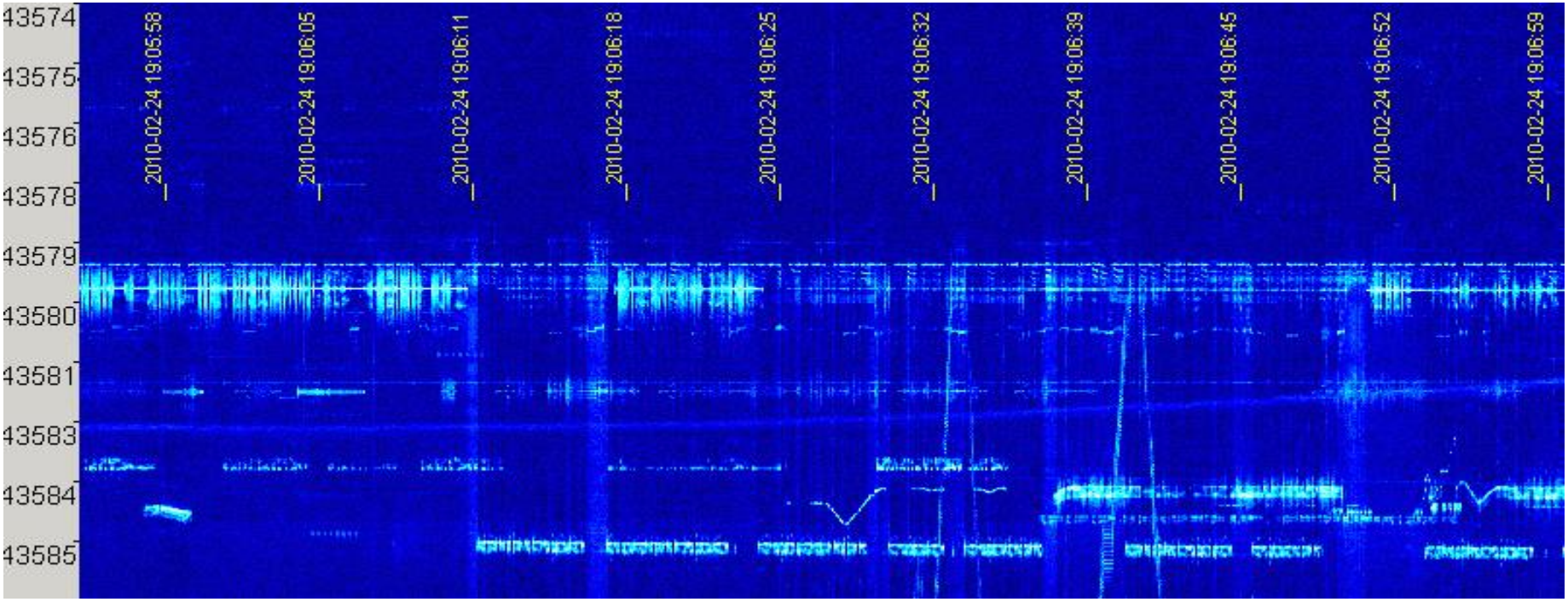





-20
-30
-40
-50
-60
-70
145.911M
145.9195M
145.928M
145.9365M
145.945M
145.9535M
145.962M
145.9705M
145.979M
145.9875M
145.996M
2016-05-29 19:03:15
2016-05-29 19:02:58
2016-05-29 19:02:41
2016-05-29 19:02:24
2016-05-29 19:02:07

Transponder

CAS-3G * CAS3-I * CAS-4A * CAS-4B * XW-2A * XW-2B * XW-2C * XW-2D * XW-2F * FOX-1A * FUNCUBE-1 * FUNCUBE-2 (ON UKUBE-1) * LILACSAT-1 * LILACSAT-2 * NAYIF-1 * JAS-2 FO-29 * AO-7 * SAUDISAT-1C



Transponder

- Lineartransponder AO-7, FO-29, CAS-4x, CAS-3x, Funcube-x, Nayif-1
- FM transponder SaudiSat-1C, LAPAN-ORARI, FOX-1A, LILACSAT-2*
- PSK transponder PSAT **
- mixed transponder
  - Uplink FM / Downlink SSB AO-16
  - Uplink FM / Downlink SSB Codec2 1300bps LILACSAT-1

* Uplink 144.350 MHZ – Region 1 Problem
** CW möglich

PSAT - PSK-31 Transponder

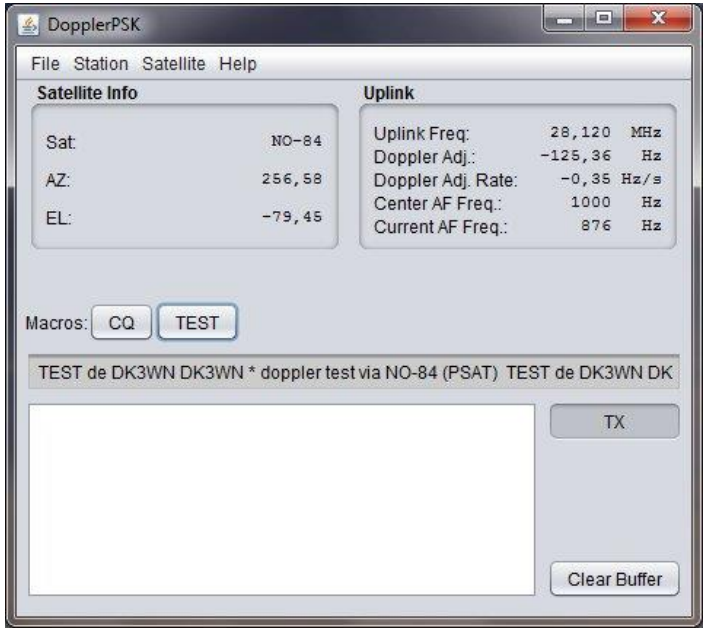
Brno University of Technology

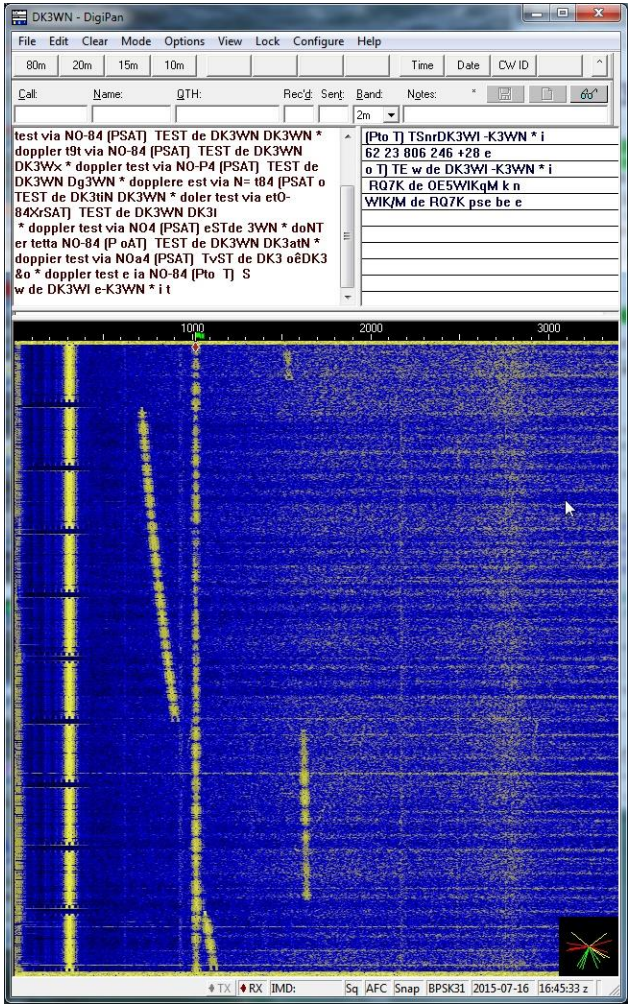
Uplink: 28.120 MHz, USB, BPSK31
Downlink: 435.350 MHz, FM, BPSK31

by Andrew Flowers K0SM

- experimental program to compensate the doppler shift on PSK31 uplinks
- its a PSK31 transmitter that is merged with an orbital propagator to cause your the transmitted signal to drift exactly opposite to uplink doppler effect

http://www.frontiernet.net/~aflowers/dopplerpsk/dopplerpsk.html



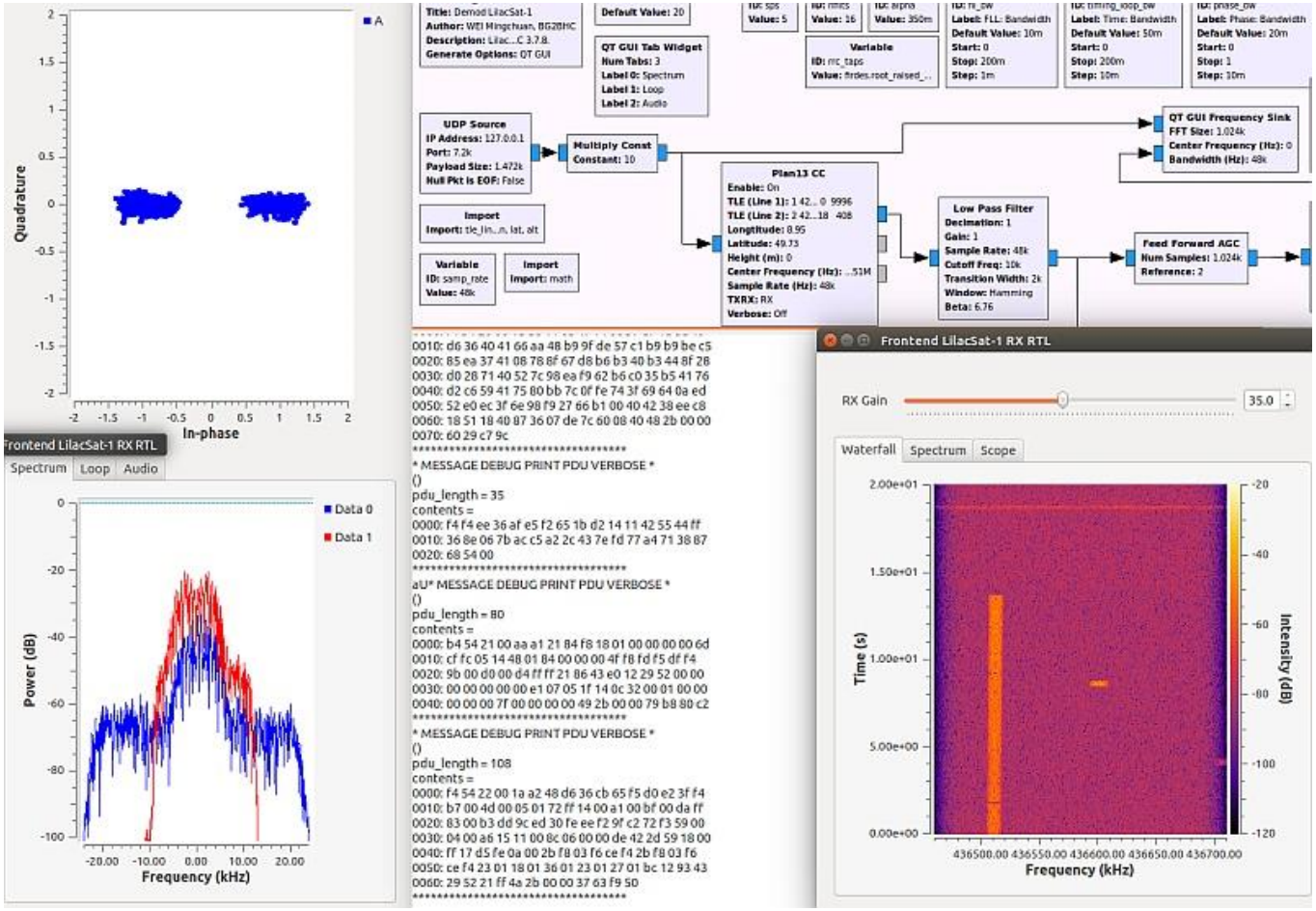


LILACSAT-1 Transponder

31. Mai 2017
erstes Europa QSO
mit GI7UGV

Uplink: 145.985MHz FM
+ 67Hz PL, ca. 5W

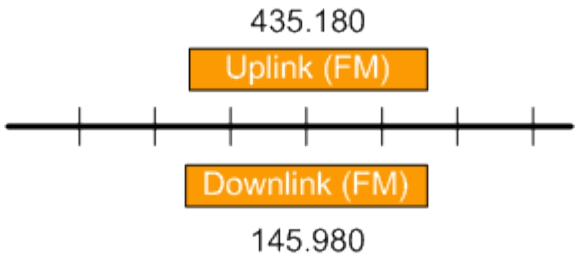
Downlink: 436.510 MHz
9k6 BPSK USB,
Codec2 1300bps

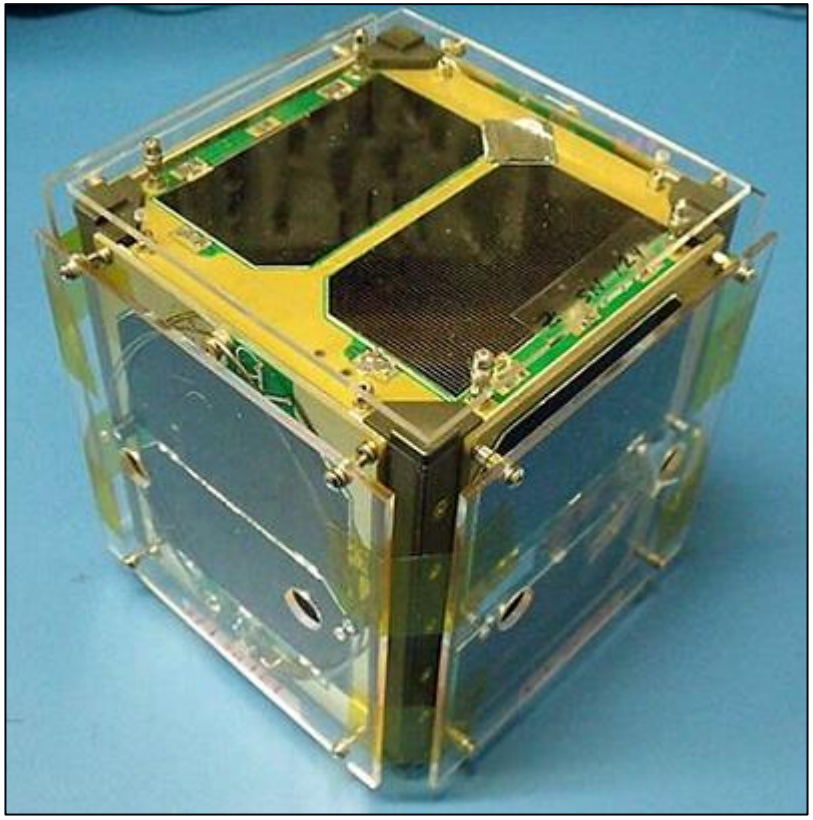


FOX-1A Transponder

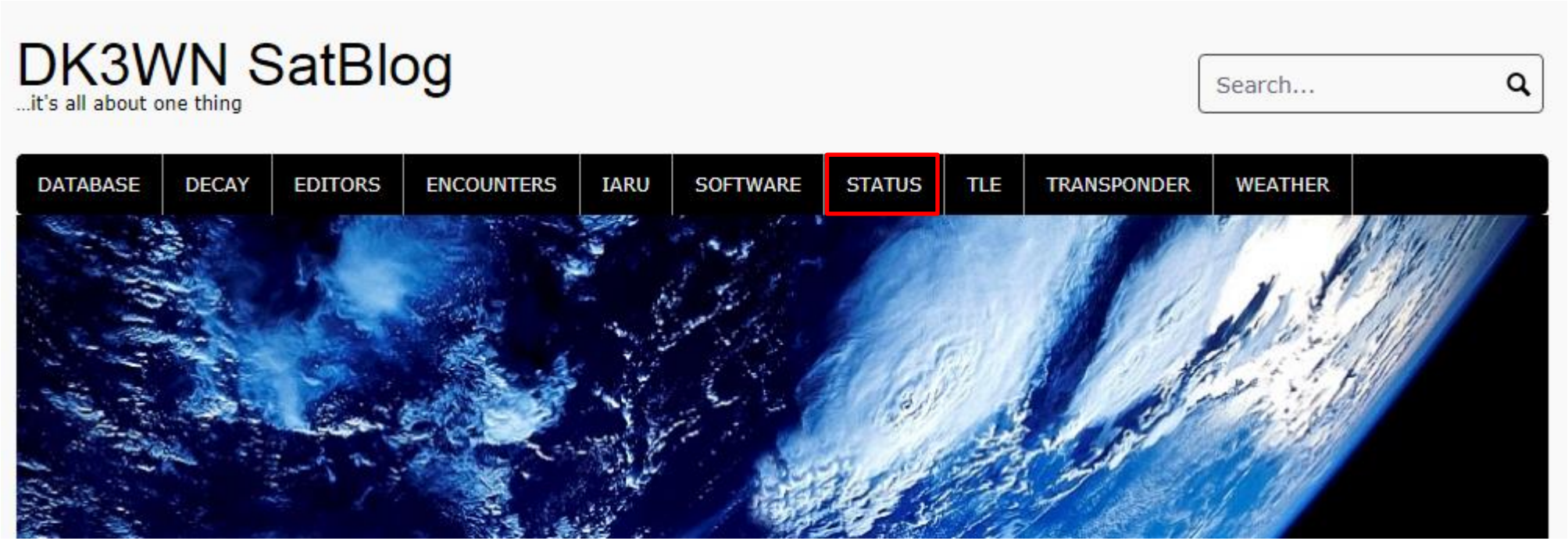
- AMSAT OSCAR 85

- Start: 08. Oktober 2015
- FM transponder 400 mW
- 16 KHz Bandbreite
- Uplink: 435.180 MHz, 67 Hz PL/CTCSS
- Downlink: 145.980 MHz





www.dk3wn.info/p



Status of active Satellites on Amateur Radio Frequencies

last update: October 26, 2017

Satellite	Status	NORAD	Uplink	Downlink	Beacon	Mode	Callsign	Reports	Info	Telemetry Decoder
QIKCOM-1	INACTIVE	42983	145.825	145.825	.	1k2 AFSK	QIKCOM-1	latest report	details	
TPU-120	INACTIVE	42910	.	.	437.025	FM	RS4S	latest report	details	
TechnoSat	ACTIVE	42829	435.950	435.950	.	FM CW 4k8 GMSK	DP0TBA	latest report	details	
Tanusha-1 (RS-6S)	ACTIVE	42911			437.050	9k6 FSK digital Voice	RS6S	latest report	details	
Tanusha-2 (RS-7S)	INACTIVE	42912			437.050	9k6 FSK digital Voice	RS7S	latest report	details	
BIRD-B (BRAC Onnesha)	ACTIVE	42823			437.372 437.375	CW 1k2 AFSK/9k6 FSK/digital Voice	JG6YJS	latest report	details	
BIRD-G (GhanaSat-1, ANUSAT-1)	INACTIVE	42821			437.372 437.375	CW 1k2 AFSK/9k6 FSK/digital Voice	JG6YJP	latest report	details	
BIRD-J (Toki)	ACTIVE	42820			437.372 437.375	CW 1k2 AFSK/9k6 FSK/digital Voice	JG6YJO	latest report	details	
BIRD-M (Mazaalai, NUMSAT-1)	ACTIVE	42822			437.372 437.375	CW 1k2 AFSK/9k6 FSK/digital Voice	JG6YJQ	latest report	details	
BIRD-N (EduSat-1)	ACTIVE	42824			437.372	CW	JG6YJR	latest	details	