

HF Campaign June 19
MONDAY 10 Jun 19

(1)

430 Running all night.

8:05 BRTW up HT

8:57 Done with Phases changes, Recomp HV settings for fits

10:00:00 STARTED seg 9-10

=> Bad STARTED 1 sec early - 9:59:59

10:55:05 STOPPED STOPPED

Run prog 9-10 on/off Gen on 6 min off

11:00:00 STARTED 1 second early @ 10:59:59

11:55:00 STOPPED

KLAD

12:00:00 Run Prog 11-12 STARTED 1 sec early
~~12:00:00~~ 11:59:59

12:xx:xx Site lost commercial power. 430 DOWN

12:55: STOPPED [12:00 Dave moved to 11 deg]
[14:12 Back to 1.06 deg]

13:00:00 Run prog 12-13 STARTED 1 sec early
12:59:59

13:37:00 TX 5 switched off for 8 minute to see if enhanced line showed up. - no luck.

TX 5 Phase is 60 Deg high

13:56 - stopped to verify phases using A/B on VVA
- Phases matched except for TX 5 off
by 60°

14:12 - START Prog 13-14

Monday 10 Jun 12 out. (2)

14:12:00 STARTED Bus STARTED 1 sec early @
14:11:59

14:12:36 Done Back to LOG day.

14:55 STOPPED

15:00:00 START Prog 14-15 started 1 sec early
14:59:59

15:24 TX1, 4, 6 TRIPPED Next 2
at 15:28 1, 4
15:31 6 Reset.

15:33 3 TRIPPED again
call 3 dbatten to all @ 15:34-45

15:38 1, 5, 6 TRIPPED RE was off
for 16:17 17.11⁵ cast time with prog 14-15

16:48 switch to prog on off - started 1 sec early.
16:47- 1, 5, 6 TRIPPED when we were off
Reset I saw 120 volt power glitch @ trip.
Trouble with Redd generator?

17:00 START prog 16-17
STARTED 1 sec early.

17:30 Lots of arcing turn TX1-6 off/on to
see if any 1 TX is doing it.

17:55.00 when full arcing only TX 2 will stop it.
off to switch Files

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3

18:00:00 START prog 17-18 chirping
STARTED 1 minute early
15 sec early.

after 6 minutes chirping did not go off.

18:11:03 stopped tried to Restart

18:12:24 started chirping again to test if
the problem was I used 1 for sequence
Rather than 1 3

Leave Running @ 18:12:24 START

18:30:00 turned off.

we had cables wrong.

gen 1 had TX1 TX2 TX3 F0

gen 2 had TX4 TX5 TX6 F0 + D

WANTED

gen 1 TX1 TX3 TX5

gen 2 TX2 TX4 TX6

19:0600 STARTED with covered over top TX
got RID of .3 db atten

~~11:04~~ - ~~RRing up~~

19:55 STOPPED

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8:41

BRING in, up TX.
TX 1

8:51

START ADJUSTING Phased - (see hftest.doc 11 June
did
measured Ampl. installed with TX 1 = α
Probably too high when TX 1 comes back.

10:10:00

STARTED CW - F5.12525
Probably 1 sec rate.

10:24:00

off

10:30:00

MODE 1

5.128, 5.1275 f_{sig} f1

10:47:00

off

wRF=1.5, cit=2

BRING TX 1 up. use mt file we had
before

11:13

Reload new files after Recalibration
only at 80 kW.

- added a few \Rightarrow little atten.

- Need to redo all powers if we do
Power Stepping.

11:24

tested CW on

11:30:00

STARTED MODE 1

TX 1 tripped lowered by .5 dB

11:34:00

BRING 1 down eW at .5 dB.

11:40:00

had to

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11:41

l₅ TRIPPED when turning off.

11:45

chip model with on/off. to 3 min
3 min model

3 min CW - 5.12525

3 min CW off

extra $\left[\begin{matrix} -0.5 & -0.3 & -0.3 & \emptyset & \emptyset & -0.4 \\ 1 & 2 & 3 & 4 & 5 & 6 \end{matrix} \right]$ extra atten.

TX was still down.

12:00

chip model 3 min chip
CW 3 min

TX still down esp.

12:10

TX1 don't reset, crowbar =

12:20

12:40

off to fix TX1 tube.

15:00

BRING BACK up

15:20:30

1/2 db in all came up CW.

~~try twisted at CW, ht~~

tested twist on 10db down after off.

15:32:30

STARTED λ . Probably $L = \emptyset$ 60 sec $L = 1$ 60 sec
for test of visitor center.

15:36:00

Restarted.

16:00

START CW 3 sec 1 sec $h = 1$

atten $\left[-0.5, -1, 0, 0, 0, 0 \right]$

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16:07

off

16:09 } edit CW L1 - to 10sec, 10sec.
2 on with \rightarrow

16:40 STOP

16:45 \Rightarrow Morse Ahh 0-10sec CW
 1-10sec
 0-10sec CW
 -1-10sec

[-.5, -1, 0, 0, 0, -1]

16:44:00 STOP move to
 TX 1, 5 + tripped PASCEN. Backup.
 17:00 off switch to chirp mode I.
 - move I

17:05:00 START [with the 1 sec early as usual.]
 17:24:00 off -

~~WRF .05 Hz.~~ mode I.
 17:33:14 \Downarrow WRF .5 Hz Regular 2 chirp.

17:46:10 atn [-.5, -.5, 90, 0, -1]

[checked + twisted Beam RE at visitor exit
 - Full Power \approx 400KW max real .5 milliwatt/cm²
 18:43:00 STOPPED - worst was CW?

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19:21:50 .16 Hz WRF 6 secs u 5.1265, 5.1280, 5.1295
using 3 sections. Bw 1.5 each 1.5 Hz BW
2 sec it each to f_u, f_f up chirp 5.1280, 5.1225, 5.1210
21:33 looks like we went thru critical.
21:40 STOPPED.

12 JUN 19 WEDS

8

START with cw

attn [-.5, -1, 0, 0, 0, -1]

PCP 5.12525

07:38

- START cw CdB down

[-1.5, -2, -1, -1, -1, -2]

-1, -1.5, -1.5, -1.5, -1, -1.5

[-.5, -1, -.5, -.5, -1, -1]

[-.5, -.5, -.5, -.2, -1, -.2] [use for now]

TX 5 STAYS low \approx 10 kW

test

08:05:20

off - test on Spec Area

slow chirp

- 5.1265, 5.128, 5.1295, 5.131, 5.1325, 5.134, 5.1355, 5.137, 5.1385

5.124 Δ 1.5 KHz down = to 5.112.

CIT each 2 sec WRF .5

8:12:05

turn on middle of slow chirp to test.

[-.5,

-.5, -.5, -.5, -.5, -1, -.6]

~~-.5, -.5, -.8, -.5, -.6~~

8:17:43

8:20:00

- START TX 5 off. 360 kW.

8:44:58

Test new chirp.

9:10:00

- chirp 18 sec dur 6 secs repeat.

TOT BW = 28 KHz.

BAD ARCING!

9:17:00

off.

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14:42:00

sec t=0 | trouble with files
1 L=1

14:55:00

off

15:00:00

1 sec on B L=0 trouble with
3 sec off L=1 seq files.

15:16:30

off

~~test~~

15:19:00

1 sec on L=0 correct seq files
3 sec off L=1

15:37:00

60 sec L=0

-6 dB

~~.028~~

60 sec L=-1

85 KW

.02 CW

~~5 sec~~ [-6, -6, -6, -6, -6, -6]

10.28 L=-1

[-3, -3, -3, -3, -3, -3]

(18.5 KW)

.055 CW

[-1 all] 380K

.097
~~.113~~

.062 L=-1

.113

L=-1

L (430 KW)

(.119) L=0

(.132) L=-1

15:54:00

off

15:55:00

on 1 sec L=0
2 sec L=1

(.32 L=1) 440 KW

16:24

[-2, -2, -2, -2, .5, .3]
[-2, .2, -2, -2, 0, .3]

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16:13

adjust TX5 driver Bias up a little

16:42

STOPPED

16:43

mode change LO, 10 sec ; L-1, 10 sec.

16:57

off TX5 tripped

17:03

28KHZ BU Dual chirp. (1, 5, 6)
18 secs Dual chirp
6 sec Dual chirp 3 times
TRIPPED out again.

17:16

the TX samples for echotek jumping was done
did this earlier. the jumpal back ok.

17:19

TX samples Echotek now ok.

Problem is attenuator on 3MHz Amp upper right.

17:21

- TX 4 tripping.

17:34

- TX 4 Back up.

17:40

- DOWN -

CW @ ~~5.125~~ MHz [was ~~5.125~~ 25]

12 sec chirp.

18:26:00

STARTED HT

18:10:00

6 sec CW 5.125 25

12 sec chirp BW 18 KHZ.

all 18 HTDw was actually 18 (9 up, 9 down)
1 sec up, down

18:30

STOP.

START 12 Jun 19

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18:35:00

12 sec CW 5.125125

12 sec chirp 10KHz BW

~~[.2, .2, .2, .2, 0, .3]~~

~~satellite pass for beam measurement~~

~~4:27:01~~

21:11

STOPPED

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4:27:00

START so STARTED on the second
Beam measurement with Paul's set.

lower Power

$f_0 = 5.125, \text{ CW}$

$[-7, -7, -7, -7, -7, -7]$

$[-7.5, -7, -7.5, -7.3, -7.3, -7]$

$[-7.8, -7, -7.9, -7.6, -7.6, -7]$

$[-7.8, -7, -8.4, -7.8, -7.8, -7.2]$

$[-7.8, -7, -8.7, -7.8, -8.0, -7.2]$ Room for 70.2 kW

$[258, \phi, 13, 303, 292, 57]$ Phases used
for 120

SATellite α for Pass = 70

Should pass at 05:20,

5:20

430 kW @ 70 kW

didn't see the satellite on the oscilloscope.

$AZ = 387.971$ ~~Down~~ AZ

$ZA = 1.06$ de Dome

05:30

STOPPED

TX6 tripped.

05:31.01

- STARTED at 31:00 $L=1$

05:58:41 next pass.

update Power

$[-7.8, -7, -8.7, -7.8, -8.0, -7.2]$

$[-7.8, -7.5, -8.7, -8.3, -8.0, -7.2]$

$[-7.8, -7.9, -8.7, -8.7, -8.0, -8.3]$

$[-7.8, -8.3, -8.7, -9.1, -8.0, -8.4]$ 72 kW

$[258, \phi, 253, 183, 52, 177]$ for $L=1$

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05:58:41 Expected Pass time

SAW the sat at .7 ms? could be aliased.

06:01 - saw something at 2.6 ms.

06:00 STOPP

06:11:01 on the minute CW START TO BRIS

Power Back up

[-.2, -.2, -.2, -.2, 0, -.3] WE WANT
-.2, -.2, -.2, -.5, -.3, -.37 440 kW

06:17:00 STOP

06:18:02 5.125 [0, 20sec] STARTED on the sec
1 20sec
-1 20sec

~~[.5]~~

[-.2, -.5, -.2, -.5, -.3, -.3]

~~[-.2, -.8, -.3, -.8, -.3]~~

06:27:00

06:28:01

06:31

06:56:07

CW → 430 off

off. → more mesh to 8mt site has

[-12, -12, -12, -12, 12, -12] amp = 1

[-10, -12, -10, 12, -10, -10]

[-9, -12, -9, -12, -9, -9.5]

[-8.7, -11.7, -9, -12, -8, -9.2]

[-8.7, -11.7, -9, -12, -7, -9.1]

[-8.7, -11.7, -9, -12.2, -6.2, -9.17] 60 kW each one for

[-8.7, -11.7, -9, -12.2, -6.4, -9.17] one for phase calib.

$[-8.7, -11.7, -9, -12.2, -6.4, -9.1]$ 5mhz (15)
 $[-9.7, -11.7, -9, -11.9, -6.4, -9.1]$ 60 kW use for phase
 ~~$[-8.7, -11.7, -9]$~~
 $[122, 12, 85, 35, \phi, 203]$

07:31- Phases for 8mhz in [see 4101180617]
 now adjust levels for 8mhz
 $[-8.7, -11.7, -9, -11.9, -6.4, -9.1]$
 $[-8, -10.0, -8.6, -11.7, -5.9, 8.7]$
 $[-7.7, -10.6, -8.1, -11.4, -5.6, -8.4]$
 $[-7.7, -10.4, -7.7, -11.4, -5.3, -8.0]$
 $[-7.5, -10.5, -7.4, -11.2, -5.0, -7.7]$
 $[-7.6, -10.5, -7.5, -11.3, -5.0, -7.5]$ 80K"
 $[81.3, 80.4, 79.9, 80.8, 79.2, 81.3]$
 updated Aug Phase

8:10 STOP
 8:11:01 START on minute more vhan
 8mhz FREQ STEP 8.175
 STEP 0, 4, 5, 6, 7, 8, 9, 10, 11, 12, 17

8:45 STOP BACK TO 5mhz.
 BACK TO 5mhz.

9:00:01 5.125 mhz cw 3db down
 STARTED 10mhz hole
 ~~$[-1.2, -0.5, -1.2, -1.2, -1.3, -1.3]$~~
 $[-1.2, -1.5, -1.2, -1.5, -1.3, -1.3]$

9:08 STOP

101 => START on 100

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9:
 9:10:01 3 L=0 5.125 test.
 3 L=1
 Regular [-.2, -.5, -.2, -.5, -.3, -.3] Break down some
 twisted pair => [-.2, -.8, -.2, -.8, -.1, -.4] twisted Brahma
 +1db variation
 10:08 TRIP 5, 1, 5, 6 -
 10:27 ADDED 3db atten to echotek sky cabling.
 10:57 RAIN

11:25 arcing - TX will stop if switched off
 11:55 STOPPED ~~was~~ still understand
 12:00:00 switch to VADS mode -
 FO = 5.125 STEP FREQ 0, 4, 5, 6 ... 15 kHz
 10 sec / STEP.

13:45:00 off switch to 5.125 MHz.
 3se L0
 3se L2

13:46:01 - START on tick, minute.
 x JFF Paul.

16:16:00 TRIP 1, 5, 6 PA SCREEN - Backup.
 16:17:30 1, 5, 6 TRIPPED again PA SCREEN
 16:34 TRIPED 1 generator output power dropped
 16:50 BACK TO 2 generators.

17:07 [-.2, -.8, -.2, -.8, 0, -.6] 1x5 t. 1db.
 18:58 [0, -.8, 0, -.8, 0, -.6]

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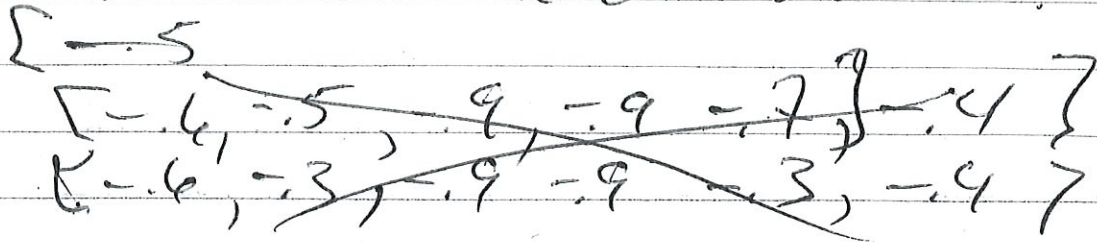
17:55 STOP change to 10 sec on 20

10 sec off 15

18:00:01 START

20:06 when processing plasma in, ship at lower altitudes. Increase height for start of arc threshold. Really stray plasma in - peak careful with arc threshold.

23:05:40 STOPPED still above 5.125 mHz!



~~14:20~~

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(18)

7:18

START TO BRING up TX.

[258, 0, 13, 305, 282, 57], RCP 7 kHz

[0, -.8, 0, -.8, 0, -.6] 5.125 MHz

-8db down STAN

CW

7:21:20

on

~~[-1, -1, -1, -1, -1, -1]~~

[-.5, -.5, -.5, -.5, -.5, -.5]

1 2 3 4 5 6

[-.5, -.5, -1, -.5, -.5, 0]

7:30

426 kW.

7:51

[0, 0, -.5, -.3, -.2, 0] (430 kW)

8:05:XX

[0, 0, -.2, -.3, 0, 0]

8:37:39

HF off STOPPED USPT

10:22

- Restarted

10:26

- added .5 db to Amp levels of 5 MHz
to give more room for auto atten.

10:36:21

- turn on - 8db down

-4db

-2db

[-1, -1, -1.5, -1.5, -1, -1]

[-.6, -.6, -.7, -.7, -.8, -.6]

[-.4, -.3, -.7, -.7, -.8, -.4]

[-.6, -.5, -.8, -.9, -.7, -.4]

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STD. [-.6, -.5, -.9, -.9, -.7, -.4] 440 KW CW

11:05:00 STOPPED

3 min L=0
3 min L=1
3 min L=0
3 min - off -

11:06:00

STARTED 5
[-.6, -.6, -.9, 1.4, -.7, -.9]
[-.6, -.5, -.9, 1.7, 1.7, -.9]

11:16:30 signal goes up 2db during twisted.
1, 5, 6 TRIPPED while off.

twisted values to scale to L=0
C = [1.2, 1.3] add this attenuation.

old
[.207, .168, .248]

Power [0.131, 0.127, 0.183] for twisted Avg Power
Volts [0.164, 0.146, 0.215] For Amplitude - twisted L=1

11:39:00

off
START chirp

11:40:01

10 Hz WRF 25 kHz BW 5.125 MHz

12:45:00

STOPPED.

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test new Amp file for L=1

STA

12:48:17 START CW chip, STOP

with offset late not included

12:49:05 - START CW

CW power [68.5, 65.6, 72.5, 70.9, 61.3, 62.2]
[-.6, -.5, -.9, -.9, -.7, -.4]

12:58:05

13:05 L=1 power [74.5, 62.8, 67.6, 72.4, 65.4, 74.0]

13:02:01 - STARTED

13:05:20 STOPPED

13:11:31 - STARTED L=-1 with amps that L=1 uses
- But need to do on off L=0, L=-1

13:14- STOPPED

13:16:01 - START L=0 3 min, L=-1 3 min
- L=-1 is using new L=1 Amps.

13:40:00 STOPPED

13:41:01 - 1 min L=0, 1 min L=1, 1 min L=-1
55:01

13:56:01 START 10 sec L=0, 10 sec L=1 $f_0 = 5.125$
Running with updated Amps in
twisted seq. file 420kw Both modes.

14:49:00 STOP

14:50:01 L=0 10sec L=-1 10secs $f_0 = 5.125$

14:50 ATTN change
new [-.6, -.5, -.9, -.9, -.7, -.4]
[-.6, -.3, -.9, -.9, -.3, -.4]

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16:35:xx 430 (R00) BAR-

16:36:xx BACK up.

17:20:xx 430 (R00) BAR

17:22:xx BACK up. Power a little less.

$[-.6, -.3, -.9, -.9, -.3, -.4]$

20:28

$[-.4, -.2, -.7, -.7, -.1, -.2]$

$[-.1, 0, -.5, -.4, 0, 0]$ 445 KW

21:50:00 off Done with Campaign

101