

1 This supplement shows the results of the search for WAILES as described in
2 Section 2 of the paper "Ducting of incoherent scatter radar waves by field-aligned
irregularities"
3 by M. T. Rietveld and A. Senior
4

5 This supplement should be useful for further studies of the WAILE phenomena
6 using EISCAT UHF radar data.
7

8 We highlight here two dates where WAILES were observed at the unusually low
9 HF frequency of 4.544 MHz for this phenomenon:

10 2013-02-18 15:30-17:00

11 2012-02-12

12 -----

13
14
15 al_heating_all_annotated.log

16 =====

17 # Line format:

18 # YYYY-mm-dd HH min_f_heat max_foF2 status1 status0 statusX notes

19 # status1 is:

20 # X Experiment unsuitable

21 # Q Radar quick-look plot unavailable/unsuitable

22 # Y WAILES observed

23 # N No WAILES observed

24 # U Unclear

25 #

26 # status0 and statusX are (for O- and X-mode respectively):

27 # Y WAILES observed

28 # N No WAILES observed

29 # U Unclear

30 # - polarisation not used

31 # anything else is meaningless

32 #

33 # max_foF2 = NaN indicates no data in the hour

34 #

35 2001-02-16 16 6.2000 NaN Q Q Q

36

37 2001-02-17 16 5.4230 NaN Q Q Q

38

39 2001-02-20 17 6.2000 7.2 Q Q Q

40

41 2001-11-08 15 6.2000 9.1 U U -

42 2001-11-08 16 6.2000 7.9 U U -

43 2001-11-08 17 5.4230 7.0 U U -

44 2001-11-08 18 5.4230 5.4 U U -

45

46 2001-11-09 15 7.9530 8.8 U U -

47 2001-11-09 16 5.4230 7.2 U U -

48 2001-11-09 17 5.4230 6.4 U U -

49

50 2001-11-10 15 6.7700 8.0 U U -

51 2001-11-10 16 6.7700 7.3 U U -

52 2001-11-10 17 5.4230 6.3 U U -

53

54 2001-11-11 15 5.4230 8.7 Y Y -

55 2001-11-11 16 5.4230 7.8 Y Y -

56 2001-11-11 17 5.4230 6.6 Y Y -

57

58 2001-11-12 15 5.4230 8.9 U U -

59 2001-11-12 16 5.4230 8.4 U U -

60 2001-11-12 17 5.4230 7.5 U U - heater scanning

61 2001-11-12 18 5.4230 6.0 U U -

62

63 2001-11-17 10 5.4230 10.6 X X X D-region

64 2001-11-17 11 5.4230 11.6 X X X

65 2001-11-17 12 5.4230 NaN X X X

66

67 2002-03-05 17 5.4230 5.8 U U - disturbed conditions

68 2002-03-05 20 5.4230 5.7 U U -

69

70 2002-03-06 17 5.4230 5.3 U U - disturbed conditions

142	2003-03-06	08	5.4230	6.5	X	X	X	D-region
143	2003-03-06	09	5.4230	7.3	X	X	X	
144	2003-03-06	10	5.4230	7.7	X	X	X	
145	2003-03-06	11	6.7700	7.7	X	X	X	
146	2003-03-06	12	5.4230	7.4	X	X	X	
147	2003-03-06	13	6.2000	7.5	X	X	X	
148	2003-03-06	14	6.2000	5.4	X	X	X	
149	2003-03-06	15	6.2000	7.2	X	X	X	
150	2003-06-20	12	5.4230	6.2	X	X	X	short pulses
151	2003-06-27	08	5.4230	4.9	X	X	X	PMSE?
152	2003-06-27	09	5.4230	5.5	X	X	X	
153	2003-06-30	07	5.4230	NaN	X	X	X	PMSE?
154	2003-06-30	08	5.4230	NaN	X	X	X	
155	2003-06-30	09	5.4230	5.2	X	X	X	
156	2003-06-30	10	5.4230	5.4	X	X	X	
157	2003-07-01	05	5.4230	4.9	X	X	X	PMSE
158	2003-07-01	06	5.4230	5.5	X	X	X	
159	2003-07-01	07	5.4230	5.3	X	X	X	
160	2003-07-01	08	5.4230	5.5	X	X	X	
161	2003-07-01	09	5.4230	5.5	X	X	X	
162	2003-07-01	10	5.4230	5.6	X	X	X	
163	2003-07-01	11	5.4230	5.7	X	X	X	
164	2003-07-02	07	5.4230	5.8	X	X	X	PMSE
165	2003-07-02	08	5.4230	6.2	X	X	X	
166	2003-07-02	09	5.4230	6.3	X	X	X	
167	2003-07-02	10	5.4230	6.5	X	X	X	
168	2003-08-01	10	5.4230	4.9	X	X	X	PMSE?
169	2003-08-04	07	5.4230	5.8	X	X	X	PMSE?
170	2003-08-04	08	5.4230	6.4	X	X	X	
171	2003-08-04	09	5.4230	6.0	X	X	X	
172	2003-08-04	10	5.4230	6.1	X	X	X	
173	2003-08-04	11	5.4230	6.3	X	X	X	
174	2003-11-06	09	5.4230	6.6	X	X	X	short pulses (LT)
175	2003-11-06	11	6.2000	7.9	X	X	X	
176	2003-11-06	12	6.2000	6.9	X	X	X	
177								
178	2003-11-20	20	5.4230	7.7	U	U	-	disturbed conditions
179	2003-11-20	21	5.4230	10.1	U	U	-	
180								
181	2003-11-22	19	5.4230	7.8	U	U	-	disturbed conditions
182	2003-11-22	20	5.4230	7.9	U	U	-	
183								
184	2003-11-24	14	5.4230	5.3	X	X	X	D-region
185	2003-11-24	21	5.4230	6.5	X	X	X	3 Hz
186	2003-11-25	14	5.4230	5.2	X	X	X	D-region
187	2003-11-27	14	5.4230	6.4	X	X	X	no UHF
188	2003-11-27	15	5.4230	5.5	X	X	X	
189	2004-02-26	14	5.4230	6.2	X	X	X	no UHF
190	2004-05-12	12	5.4230	5.4	X	X	X	test
191								
192	2004-06-09	12	5.4230	5.4	U	U	-	radar scanning
193								
194	2004-06-10	21	5.4230	0.0	X	X	X	MARE
195	2004-06-12	13	5.4230	6.1	X	X	X	short pulses
196	2004-06-12	15	5.4230	6.0	X	X	X	
197								
198	2004-06-12	16	5.4230	5.6	U	U	-	radar scanning
199								
200	2004-06-12	17	5.4230	5.7	X	X	X	unsuitable UHF data
201	2004-06-12	18	5.4230	5.5	X	X	X	
202	2004-06-30	10	5.4230	5.8	X	X	X	PMSE
203	2004-06-30	11	5.4230	5.4	X	X	X	
204	2004-06-30	12	5.4230	5.5	X	X	X	
205	2004-06-30	13	5.4230	5.4	X	X	X	
206	2004-07-02	09	5.4230	5.2	X	X	X	PMSE
207	2004-07-02	10	5.4230	5.3	X	X	X	
208	2004-07-02	11	5.4230	5.3	X	X	X	
209	2004-07-02	12	5.4230	5.3	X	X	X	
210	2004-07-05	07	5.4230	5.7	X	X	X	PMSE
211	2004-07-05	08	5.4230	NaN	X	X	X	
212	2004-07-05	09	5.4230	NaN	X	X	X	

213	2004-07-05	10	5.4230	NaN	X	X	X	
214	2004-07-06	08	5.4230	5.7	X	X	X	PMSE
215	2004-07-06	09	5.4230	NaN	X	X	X	
216	2004-07-06	10	5.4230	5.4	X	X	X	
217	2004-07-06	11	5.4230	5.6	X	X	X	
218	2004-07-07	07	5.4230	5.6	X	X	X	PMSE
219	2004-07-07	08	5.4230	5.5	X	X	X	
220	2004-07-07	09	5.4230	5.5	X	X	X	
221	2004-07-07	10	5.4230	6.7	X	X	X	
222	2004-07-07	11	5.4230	5.7	X	X	X	
223	2004-07-08	07	5.4230	5.6	X	X	X	PMSE
224	2004-07-08	08	5.4230	NaN	X	X	X	
225	2004-07-08	09	5.4230	NaN	X	X	X	
226	2004-07-08	10	5.4230	NaN	X	X	X	
227	2004-07-10	07	5.4230	5.4	X	X	X	PMSE
228	2004-07-10	08	5.4230	5.7	X	X	X	
229	2004-07-10	09	5.4230	6.4	X	X	X	
230	2004-07-10	10	5.4230	6.0	X	X	X	
231	2004-07-10	11	5.4230	5.5	X	X	X	
232	2004-07-11	07	5.4230	5.4	X	X	X	PMSE
233	2004-07-11	08	5.4230	5.7	X	X	X	
234	2004-07-11	09	5.4230	6.0	X	X	X	
235	2004-07-11	10	5.4230	5.8	X	X	X	
236	2004-07-12	07	5.4230	5.0	X	X	X	PMSE
237	2004-07-12	08	5.4230	4.8	X	X	X	
238	2004-07-12	09	5.4230	4.9	X	X	X	
239	2004-07-12	10	5.4230	5.1	X	X	X	
240	2004-07-12	11	5.4230	5.3	X	X	X	
241	2004-07-13	07	5.4230	5.1	X	X	X	PMSE
242	2004-07-13	08	5.4230	5.0	X	X	X	
243	2004-07-14	07	6.9600	6.5	X	X	X	PMSE
244	2004-07-14	08	5.4230	6.4	X	X	X	
245	2004-07-14	09	5.4230	6.4	X	X	X	
246	2004-07-14	10	5.4230	6.3	X	X	X	
247	2004-07-15	07	5.4230	5.6	X	X	X	PMSE
248	2004-07-15	08	5.4230	6.2	X	X	X	
249	2004-07-15	09	5.4230	6.7	X	X	X	
250	2004-07-15	10	5.4230	6.0	X	X	X	
251	2004-07-15	11	5.4230	5.6	X	X	X	
252	2004-10-01	14	6.2000	7.2	X	X	X	short pulses
253	2004-10-01	15	5.4230	7.1	X	X	X	unsuitable UHF data
254	2004-10-01	16	5.4230	7.1	X	X	X	
255	2004-10-02	11	6.2000	7.5	X	X	X	short pulses
256	2004-10-02	12	6.2000	7.4	X	X	X	
257	2004-10-02	13	6.2000	7.5	X	X	X	
258	2004-10-05	10	5.4230	5.5	X	X	X	short pulses/unsuitable UHF data
259	2004-10-05	11	5.4230	5.8	X	X	X	
260	2004-10-05	12	5.4230	5.9	X	X	X	
261	2004-10-07	11	5.4230	9.2	X	X	X	unsuitable UHF data
262	2004-10-07	12	5.4230	7.7	X	X	X	no UHF
263	2004-10-07	13	5.4230	6.7	X	X	X	
264	2004-10-07	14	5.4230	6.0	X	X	X	
265	2004-10-07	15	5.4230	6.3	X	X	X	
266	2004-10-07	16	5.4230	10.3	X	X	X	
267	2004-10-08	11	5.4230	5.9	X	X	X	unsuitable UHF data
268	2004-10-08	12	5.4230	6.5	X	X	X	
269	2004-10-08	13	5.4230	6.3	X	X	X	
270	2005-06-01	08	5.4230	0.0	X	X	X	no UHF
271	2005-06-01	09	5.4230	0.0	X	X	X	
272	2005-06-01	10	5.4230	0.0	X	X	X	
273	2005-06-01	11	5.4230	0.0	X	X	X	
274	2005-06-01	12	5.4230	0.0	X	X	X	
275	2005-06-01	13	5.4230	0.0	X	X	X	
276	2005-06-29	08	5.4230	4.9	X	X	X	
277	2005-06-29	09	5.4230	5.3	X	X	X	
278	2005-07-04	07	5.4230	5.5	X	X	X	PMSE
279	2005-07-04	08	5.4230	5.5	X	X	X	
280	2005-07-04	09	5.4230	5.7	X	X	X	
281	2005-07-04	10	5.4230	5.7	X	X	X	
282	2005-07-04	11	5.4230	5.4	X	X	X	
283	2005-07-04	12	5.4230	5.3	X	X	X	

284	2005-07-05	07	5.4230	6.1	X	X	X	
285	2005-07-05	08	5.4230	6.0	X	X	X	
286	2005-07-05	09	5.4230	NaN	X	X	X	
287	2005-07-05	10	5.4230	NaN	X	X	X	
288	2005-07-05	11	5.4230	NaN	X	X	X	
289	2005-07-05	12	5.4230	5.5	X	X	X	
290	2005-07-06	07	5.4230	6.6	X	X	X	
291	2005-07-06	08	5.4230	6.0	X	X	X	
292	2005-07-06	09	5.4230	6.0	X	X	X	
293	2005-07-06	10	5.4230	5.8	X	X	X	
294	2005-07-07	09	5.4230	5.7	X	X	X	
295	2005-07-07	10	5.4230	5.5	X	X	X	
296	2005-07-07	11	5.4230	5.6	X	X	X	
297	2005-07-07	12	5.4230	5.8	X	X	X	
298	2005-07-08	07	5.4230	5.0	X	X	X	
299	2005-07-08	08	5.4230	5.7	X	X	X	
300	2005-07-08	09	5.4230	5.7	X	X	X	
301	2005-07-08	10	5.4230	5.4	X	X	X	
302	2005-07-08	11	5.4230	5.4	X	X	X	
303	2005-07-08	12	5.4230	5.4	X	X	X	
304	2005-07-09	07	5.4230	5.8	X	X	X	
305	2005-07-09	08	5.4230	6.4	X	X	X	
306	2005-07-09	09	5.4230	7.0	X	X	X	
307	2005-07-09	10	5.4230	7.5	X	X	X	
308	2005-07-09	11	5.4230	7.1	X	X	X	
309	2005-07-09	12	5.4230	6.8	X	X	X	
310	2005-07-10	07	5.4230	5.1	X	X	X	
311	2005-10-04	09	5.4230	NaN	X	X	X	D-region
312	2005-10-04	10	5.4230	NaN	X	X	X	
313	2005-10-04	11	5.4230	NaN	X	X	X	
314	2005-10-04	12	5.4230	NaN	X	X	X	
315	2005-10-05	09	5.4230	NaN	X	X	X	No UHF
316	2005-10-05	10	5.4230	NaN	X	X	X	
317	2005-10-05	11	5.4230	NaN	X	X	X	
318	2005-10-05	12	5.4230	NaN	X	X	X	
319	2005-10-05	13	5.4230	NaN	X	X	X	
320	2005-10-05	14	5.4230	NaN	X	X	X	
321	2005-10-07	08	5.4230	NaN	X	X	X	No UHF
322	2005-10-07	09	5.4230	NaN	X	X	X	
323	2005-10-07	10	5.4230	NaN	X	X	X	
324	2005-10-08	08	5.4230	NaN	X	X	X	No UHF
325	2005-10-08	09	5.4230	NaN	X	X	X	
326	2005-10-08	10	5.4230	NaN	X	X	X	
327	2005-10-08	11	5.4230	NaN	X	X	X	
328	2005-10-08	16	5.4230	NaN	X	X	X	
329	2005-10-08	17	5.4230	NaN	X	X	X	
330	2005-10-08	18	5.4230	NaN	X	X	X	
331	2005-10-10	08	5.4230	5.4	X	X	X	No UHF
332	2005-10-10	09	5.4230	5.6	X	X	X	
333	2005-10-10	10	5.4230	5.6	X	X	X	
334	2005-10-10	11	5.4230	6.0	X	X	X	
335	2005-10-10	12	5.4230	5.7	X	X	X	
336	2005-10-10	13	5.4230	5.4	X	X	X	
337	2005-10-11	11	5.4230	6.1	X	X	X	unsuitable UHF data
338	2005-10-12	13	5.3400	5.9	X	X	X	unsuitable UHF data
339	2005-10-12	14	5.3500	6.1	X	X	X	
340	2005-10-12	15	5.3400	5.6	X	X	X	
341	2005-10-13	09	5.4230	6.6	X	X	X	unsuitable UHF data
342	2005-10-13	10	5.4230	6.6	X	X	X	
343	2005-10-13	11	5.4230	6.9	X	X	X	
344	2005-10-13	12	6.2000	6.3	X	X	X	
345	2005-10-13	13	6.2000	6.3	X	X	X	
346	2005-12-07	11	5.4230	5.3	X	X	X	test
347								
348	2006-01-18	12	5.4230	5.9	U	U	-	
349								
350	2006-01-21	13	5.4230	5.4	X	X	X	tune
351	2006-01-21	14	5.4230	5.8	X	X	X	no UHF
352	2006-07-28	16	5.4230	NaN	X	X	X	PMSE
353	2006-07-28	17	5.4230	NaN	X	X	X	
354	2006-07-28	18	5.4230	NaN	X	X	X	

355	2006-07-28	19	5.4230	NaN	X	X	X	
356	2006-07-28	20	5.4230	NaN	X	X	X	
357	2006-07-28	21	5.4230	NaN	X	X	X	
358	2006-07-28	22	5.4230	NaN	X	X	X	
359	2006-07-28	23	5.4230	NaN	X	X	X	
360	2006-07-29	18	5.4230	NaN	X	X	X	PMSE
361	2006-07-29	19	5.4230	NaN	X	X	X	
362	2006-07-29	20	5.4230	NaN	X	X	X	
363	2006-07-29	21	5.4230	NaN	X	X	X	
364	2006-07-29	22	5.4230	NaN	X	X	X	
365	2006-07-29	23	5.4230	NaN	X	X	X	
366	2006-07-30	00	5.4230	4.9	X	X	X	
367	2006-08-03	18	5.4230	5.7	X	X	X	PMSE
368	2006-08-04	18	5.4230	4.9	X	X	X	PMSE
369	2006-08-04	19	5.4230	4.7	X	X	X	
370	2006-08-04	20	5.4230	5.6	X	X	X	
371	2006-08-04	21	5.4230	5.8	X	X	X	
372	2006-08-04	22	5.4230	5.6	X	X	X	
373	2006-08-04	23	5.4230	5.4	X	X	X	
374	2006-08-12	08	5.4230	NaN	X	X	X	PMSE
375	2006-08-12	09	5.4230	NaN	X	X	X	
376	2006-08-12	10	5.4230	NaN	X	X	X	
377	2006-08-13	07	5.4230	NaN	X	X	X	PMSE
378	2006-08-13	08	5.4230	NaN	X	X	X	
379	2006-08-13	09	5.4230	NaN	X	X	X	
380	2006-08-13	10	5.4230	NaN	X	X	X	
381	2006-10-24	10	5.4230	6.0	X	X	X	unsuitable UHF data
382	2006-10-24	11	5.4230	6.4	X	X	X	
383	2006-10-24	12	5.4230	5.9	X	X	X	
384	2006-11-20	19	5.4230	0.0	X	X	X	no UHF
385	2006-11-21	16	5.4230	NaN	X	X	X	no UHF
386	2006-11-21	17	5.4230	NaN	X	X	X	
387	2006-11-21	18	5.4230	NaN	X	X	X	
388	2006-11-24	08	5.4230	NaN	X	X	X	no UHF
389	2006-11-24	09	5.4230	NaN	X	X	X	
390	2006-11-27	10	5.4230	NaN	X	X	X	no UHF
391	2006-12-08	10	5.4230	0.0	X	X	X	PMWE
392	2006-12-08	11	5.4230	0.0	X	X	X	
393	2006-12-08	12	5.4230	0.0	X	X	X	
394								
395	2007-02-23	09	5.4230	5.6	U	U	-	radar scanning
396								
397	2007-06-26	12	5.4230	5.6	X	X	X	Test
398	2007-06-28	06	5.4230	4.8	X	X	X	PMSE
399	2007-06-28	07	5.4230	4.9	X	X	X	
400	2007-06-28	08	5.4230	5.2	X	X	X	
401	2007-06-28	09	5.4230	5.1	X	X	X	
402	2007-06-28	10	5.4230	5.0	X	X	X	
403	2007-06-28	11	5.4230	5.0	X	X	X	
404	2007-07-10	07	5.4230	5.2	X	X	X	PMSE
405	2007-07-10	08	5.4230	5.6	X	X	X	
406	2007-07-10	09	5.4230	5.1	X	X	X	
407	2007-07-10	10	5.4230	5.0	X	X	X	
408	2007-07-12	13	5.4230	4.9	X	X	X	PMSE
409	2007-07-13	07	5.4230	5.0	X	X	X	PMSE
410	2007-07-13	08	5.4230	4.7	X	X	X	
411	2007-07-13	09	5.4230	4.7	X	X	X	
412	2007-07-13	11	5.4230	4.7	X	X	X	
413	2007-07-13	12	5.4230	5.7	X	X	X	
414	2007-07-17	16	7.9530	8.6	X	X	X	Test
415	2007-07-18	07	7.9530	7.3	X	X	X	PMSE
416	2007-07-18	08	7.9530	10.7	X	X	X	
417	2007-07-18	09	7.9530	8.1	X	X	X	
418	2007-07-18	10	5.4230	6.5	X	X	X	
419	2007-07-18	11	5.4230	5.8	X	X	X	
420	2007-07-18	12	5.4230	6.1	X	X	X	
421	2007-07-19	07	5.4230	8.4	X	X	X	PMSE
422	2007-07-19	08	5.4230	4.8	X	X	X	
423	2007-07-19	09	5.4230	4.9	X	X	X	
424	2007-08-29	12	5.4230	4.8	X	X	X	Test
425	2007-10-10	09	5.4230	5.5	X	X	X	D-region

426	2007-10-11	09	5.4230	5.4	X	X	X	D-region
427	2007-10-11	10	5.4230	5.5	X	X	X	
428	2007-10-11	10	5.4230	5.5	X	X	X	
429	2007-10-11	11	5.4230	5.4	X	X	X	
430	2007-10-11	12	5.4230	5.2	X	X	X	
431	2007-10-13	08	5.4230	5.5	X	X	X	D-region
432	2007-10-13	09	5.4230	5.6	X	X	X	
433	2007-10-13	10	5.4230	5.7	X	X	X	
434	2007-10-13	11	5.4230	5.7	X	X	X	
435	2007-10-13	12	5.4230	5.7	X	X	X	
436	2007-10-14	08	5.4230	5.4	X	X	X	D-region
437	2007-10-14	09	5.4230	5.3	X	X	X	
438	2007-10-14	10	5.4230	5.8	X	X	X	
439	2007-10-14	11	5.4230	5.7	X	X	X	
440	2007-10-14	12	5.4230	5.2	X	X	X	
441	2007-10-15	09	5.4230	5.7	X	X	X	D-region
442	2007-10-15	10	5.4230	5.7	X	X	X	
443	2007-10-15	11	5.4230	5.7	X	X	X	
444	2007-10-16	09	5.4230	5.7	X	X	X	D-region
445	2007-10-16	10	5.4230	5.4	X	X	X	
446	2007-10-16	11	5.4230	5.4	X	X	X	
447	2007-10-17	09	5.4230	5.0	X	X	X	D-region
448	2007-10-17	10	5.4230	5.1	X	X	X	
449	2007-10-17	11	5.4230	5.6	X	X	X	
450	2007-10-18	09	5.4230	6.9	X	X	X	D-region
451	2007-10-18	10	5.4230	6.5	X	X	X	
452	2007-10-18	11	5.4230	6.9	X	X	X	
453	2007-10-19	09	5.4230	4.7	X	X	X	D-region
454	2007-10-19	10	5.4230	4.9	X	X	X	
455	2007-10-19	11	5.4230	4.7	X	X	X	
456	2008-02-05	09	5.4230	5.2	X	X	X	PMWE
457	2008-02-05	10	5.4230	5.3	X	X	X	
458	2008-02-05	11	5.4230	NaN	X	X	X	
459	2008-02-06	09	5.4230	4.8	X	X	X	PMWE
460	2008-02-06	10	5.4230	5.3	X	X	X	
461	2008-02-06	11	5.4230	5.3	X	X	X	
462	2008-02-07	09	5.4230	4.8	X	X	X	PMWE
463	2008-02-07	10	5.4230	4.9	X	X	X	
464	2008-02-07	11	5.4230	4.9	X	X	X	
465	2008-02-08	11	5.4230	4.9	X	X	X	PMWE
466	2008-02-11	12	5.4230	4.9	X	X	X	PMWE
467	2008-02-11	13	5.4230	5.2	X	X	X	
468	2008-02-12	11	5.4230	4.6	X	X	X	PMWE
469	2008-02-12	12	5.4230	4.7	X	X	X	
470	2008-03-12	08	5.4230	0.0	X	X	X	PMWE?
471	2008-03-12	09	5.4230	0.0	X	X	X	
472	2008-03-12	10	5.4230	0.0	X	X	X	
473	2008-05-27	09	5.4230	4.7	X	X	X	PMSE
474	2008-05-27	10	5.4230	4.9	X	X	X	
475	2008-05-27	11	5.4230	4.8	X	X	X	
476	2008-05-27	12	5.4230	4.6	X	X	X	
477	2008-05-27	14	5.4230	NaN	X	X	X	Test
478	2008-05-27	15	7.9530	NaN	X	X	X	
479	2008-05-27	16	5.4230	NaN	X	X	X	
480	2008-05-27	17	5.4230	NaN	X	X	X	
481	2008-05-27	18	5.4230	NaN	X	X	X	
482	2008-05-30	09	5.4230	4.8	X	X	X	PMSE
483	2008-05-30	10	5.4230	4.7	X	X	X	
484	2008-05-30	12	5.4230	4.7	X	X	X	
485	2008-05-30	13	5.4230	4.7	X	X	X	
486	2008-06-16	08	5.4230	NaN	X	X	X	PMSE
487	2008-06-17	07	5.4230	NaN	X	X	X	Tune
488	2008-06-17	08	5.4230	NaN	X	X	X	PMSE
489	2008-06-17	09	5.4230	NaN	X	X	X	
490	2008-06-17	10	5.4230	NaN	X	X	X	
491	2008-06-17	11	5.4230	NaN	X	X	X	
492	2008-06-18	07	5.4230	NaN	X	X	X	Tune
493	2008-06-19	10	5.4230	4.8	X	X	X	PMSE
494	2008-06-19	11	5.4230	4.7	X	X	X	
495	2008-06-26	08	5.4230	NaN	X	X	X	PMSE
496	2008-06-26	09	5.4230	NaN	X	X	X	

497	2008-06-26	10	5.4230	NaN	X	X	X	
498	2008-06-26	11	5.4230	NaN	X	X	X	
499	2008-06-28	09	5.4230	NaN	X	X	X	XMOD
500	2008-06-28	10	5.4230	NaN	X	X	X	
501	2008-06-28	11	5.4230	NaN	X	X	X	
502	2008-07-03	11	6.7700	0.0	X	X	X	PMSE
503	2008-09-29	12	5.4230	4.8	X	X	X	Test
504	2008-09-29	13	5.4230	4.9	X	X	X	
505	2008-09-29	14	5.4230	4.9	X	X	X	
506								
507	2008-10-27	13	5.4230	4.9	U	-	U	
508								
509	2008-10-31	11	5.4230	5.3	Q	X	X	QL plot unsuitable
510	2008-10-31	12	6.2000	5.4	Q	X	X	
511	2008-10-31	13	5.4230	5.0	Q	X	X	
512	2008-10-31	14	5.4230	4.8	Q	X	X	
513								
514	2008-11-03	11	6.2000	5.4	U	U	U	
515	2008-11-03	13	5.4230	5.2	U	U	U	
516								
517	2008-11-04	12	6.2000	6.0	Q	X	X	QL plot unsuitable
518								
519	2008-11-08	18	5.4230	5.9	U	U	U	disturbed conditions
520	2008-11-08	20	5.4230	5.8	U	U	U	
521	2008-11-08	21	5.4230	5.6	U	U	U	
522	2008-11-08	22	5.4230	5.8	U	U	U	
523								
524	2008-11-26	10	5.4230	4.8	X	X	X	D-region
525								
526	2009-01-19	12	5.4230	4.9	X	X	X	Test
527	2009-05-15	17	5.4230	4.9	X	X	X	Test
528	2009-05-16	19	5.4230	5.0	X	X	X	Test
529	2009-05-19	09	5.4230	5.2	X	X	X	Test
530	2009-05-19	12	5.4230	5.5	X	X	X	Test
531	2009-07-22	10	5.4230	0.0	X	X	X	PMSE
532	2009-07-22	11	5.4230	NaN	X	X	X	
533	2009-07-23	08	5.4230	0.0	X	X	X	PMSE
534	2009-07-23	10	5.4230	NaN	X	X	X	
535	2009-07-23	11	5.4230	NaN	X	X	X	
536	2009-07-24	09	5.4230	NaN	X	X	X	PMSE
537	2009-07-24	10	5.4230	NaN	X	X	X	
538	2009-07-24	11	5.4230	NaN	X	X	X	
539	2009-07-27	10	5.4230	NaN	X	X	X	
540	2009-07-27	11	5.4230	NaN	X	X	X	
541	2009-07-28	09	5.4230	NaN	X	X	X	PMSE
542	2009-07-28	10	5.4230	NaN	X	X	X	
543	2009-07-28	11	5.4230	NaN	X	X	X	
544	2009-07-29	09	5.4230	NaN	X	X	X	Partial refl.
545	2009-07-30	09	5.4230	NaN	X	X	X	PMSE
546	2009-07-30	10	5.4230	NaN	X	X	X	
547	2009-07-30	11	5.4230	NaN	X	X	X	
548	2009-07-31	07	5.4230	4.7	X	X	X	Tune
549	2009-07-31	09	5.4230	NaN	X	X	X	PMSE
550	2009-07-31	10	5.4230	NaN	X	X	X	
551	2009-07-31	11	5.4230	NaN	X	X	X	
552	2009-08-01	09	5.4230	NaN	X	X	X	Partial refl.
553	2009-08-01	10	5.4230	NaN	X	X	X	
554	2009-08-09	09	5.4230	4.7	X	X	X	PMSE
555	2009-08-09	10	5.4230	4.7	X	X	X	
556	2009-08-09	11	5.4230	4.8	X	X	X	
557	2009-08-11	12	5.4230	4.6	X	X	X	PMSE
558	2009-08-11	13	5.4230	4.7	X	X	X	
559	2009-08-12	09	5.4230	4.9	X	X	X	PMSE
560	2009-08-12	10	5.4230	4.8	X	X	X	
561	2009-08-12	11	5.4230	4.9	X	X	X	
562	2009-08-12	12	5.4230	4.9	X	X	X	
563	2009-12-13	06	7.9530	0.0	X	X	X	D-region
564								
565	2010-03-02	12	5.4230	6.2	U	U	-	
566	2010-03-02	13	5.4230	6.2	U	U	-	
567	2010-03-02	14	5.4230	5.2	U	U	U	

568
569 2010-03-12 10 5.4249 5.4 U U -
570 2010-03-12 12 5.4249 5.7 U U -
571
572 2010-03-14 09 5.4249 6.0 U U -
573 2010-03-14 10 5.4249 5.6 U U -
574 2010-03-14 11 5.4249 5.5 U U -
575 2010-03-14 12 5.4249 5.3 U U -
576 2010-03-14 13 5.4249 5.4 U U -
577
578 2010-06-01 08 7.9530 0.0 X X X Tune
579 2010-06-01 09 7.9530 0.0 X X X PMSE
580 2010-06-09 08 7.1000 6.8 X X X PMSE
581 2010-06-09 10 7.1000 10.6 X X X
582 2010-06-18 08 7.1000 8.9 X X X PMSE
583 2010-09-13 09 5.4230 5.9 X X X Test
584
585 2010-09-13 10 5.4230 5.9 U U - radar scanning
586 2010-09-13 11 5.4230 6.0 U U -
587 2010-09-13 12 5.4230 6.0 U U -
588
589 2010-09-14 10 5.4230 7.9 U U - radar scanning
590 2010-09-14 11 5.4230 7.1 U U -
591 2010-09-14 12 5.4230 6.2 U U -
592
593 2010-11-27 21 7.9530 0.0 X X X MARE
594 2010-11-28 19 7.9530 8.5 X X X MARE
595 2010-11-28 23 7.9530 0.0 X X X MARE
596 2010-12-06 22 7.9530 8.9 X X X MARE
597 2010-12-06 23 7.9530 8.0 X X X MARE
598 2010-12-07 17 7.9530 0.0 X X X MARE
599 2010-12-07 19 7.9530 0.0 X X X MARE
600 2010-12-16 10 3.9500 5.2 X X X Actually A2
601 2010-12-16 11 3.9500 5.5 X X X
602 2010-12-16 12 3.9500 5.2 X X X
603
604 2011-03-07 12 6.1988 7.0 Y Y -
605 2011-03-07 13 6.9588 6.8 U - U
606 2011-03-07 14 6.9588 7.2 U U -
607
608 2011-05-07 10 6.2000 6.9 U U - radar scanning
609 2011-05-07 11 6.2000 6.6 U U -
610 2011-05-07 12 6.2000 6.5 U U -
611
612 2011-05-09 10 6.2000 6.8 U U - radar scanning
613 2011-05-09 11 6.2000 6.0 U U -
614
615 2011-05-10 09 6.2000 6.9 X X X test
616 2011-05-10 10 6.2000 7.5 U U -
617 2011-05-10 11 6.2000 7.4 U U -
618 2011-05-10 12 6.2000 6.3 U U -
619
620 2011-07-04 11 5.3000 5.8 U U - HF initially 6 S
621 2011-07-04 12 5.3000 6.0 U U -
622
623 2011-10-05 12 5.4230 7.3 U U - disturbed conditions
624 2011-10-05 13 5.4230 0.0 U U U
625
626 2011-10-06 13 5.4230 7.0 U U -
627 2011-10-06 14 5.4230 5.8 U U -
628
629 2011-10-07 13 6.1980 6.2 U U -
630 2011-10-07 14 6.1980 6.5 Y Y -
631 2011-10-07 15 6.7651 7.0 Y Y -
632 2011-10-07 16 6.7700 6.4 Y - Y
633 2011-10-07 17 6.2000 5.7 Y Y -
634
635 2011-10-08 13 7.1000 7.7 Y Y -
636 2011-10-08 14 7.9530 7.2 Y - Y
637 2011-10-08 15 6.2000 6.5 Y - Y
638 2011-10-08 16 5.4230 5.0 U - U

639
640 2011-10-09 12 6.2000 6.2 X X X tune
641
642 2011-10-09 14 5.4230 5.6 Y Y - radar scanning
643 2011-10-09 15 5.4230 5.4 Y Y U
644
645 2011-10-10 13 6.2000 nan U U - radar scanning
646 2011-10-10 14 6.2000 nan Y U Y
647 2011-10-10 15 7.1000 nan Y - Y
648 2011-10-10 16 6.2000 nan Y - Y
649 2011-10-10 17 5.4230 nan Y - Y
650 2011-10-10 18 5.4230 nan Y - Y
651
652 2011-10-11 12 7.1000 7.5 X X X CW tune-up
653
654 2011-10-11 13 7.1000 7.7 Y Y Y
655 2011-10-11 14 7.9530 7.5 Y - Y
656 2011-10-11 15 7.1000 7.2 Y - Y
657 2011-10-11 16 5.4230 5.1 U - U
658
659 2011-10-12 13 7.1000 7.9 Y Y -
660 2011-10-12 14 7.9530 7.6 Y Y Y
661 2011-10-12 15 7.1000 8.2 Y - Y
662 2011-10-12 16 5.4230 6.6 Y - Y
663
664 2011-11-03 12 7.1001 7.3 Y Y -
665 2011-11-03 13 6.2001 7.2 Y Y -
666 2011-11-03 14 6.2001 6.1 Y Y -
667 2011-11-03 15 5.4251 6.1 Y Y -
668
669 2011-11-08 10 7.9530 9.8 X X X test
670 2011-11-14 12 6.8800 11.5 X X X test
671 2011-11-14 13 5.5200 10.3 X X X test
672
673 2011-11-15 10 7.2730 11.7 Y Y Y
674 2011-11-15 11 7.2730 11.5 Y Y Y
675 2011-11-15 12 7.2730 11.4 Y Y Y
676 2011-11-15 13 7.2730 9.8 Y Y Y
677
678 2011-11-16 11 6.7000 10.3 Y Y -
679 2011-11-16 12 6.7000 10.3 Y Y -
680 2011-11-16 13 6.7000 8.6 Y Y -
681
682 2011-11-17 13 7.9530 8.6 Y Y -
683 2011-11-17 14 6.2000 7.8 Y Y -
684 2011-11-17 15 6.2000 6.3 Y Y -
685
686 2011-11-18 10 7.2730 10.3 Q Q Q
687 2011-11-18 11 7.2730 11.5 Q Q Q
688 2011-11-18 12 6.7000 9.1 Y Y -
689 2011-11-18 13 5.3095 8.5 Y Y -
690 2011-11-18 14 6.2000 6.9 Y Y -
691 2011-11-18 15 6.2000 5.7 Y Y -
692
693 2011-11-19 12 6.0500 8.5 Y Y -
694 2011-11-19 13 6.0500 8.7 Y Y -
695 2011-11-19 14 6.2000 6.5 Y Y -
696
697 2011-11-20 11 7.5200 9.0 X X X tune
698
699 2011-11-20 12 7.3700 8.6 Y Y -
700 2011-11-20 13 6.0500 7.8 Y Y -
701 2011-11-20 14 6.2000 6.5 Y Y -
702 2011-11-20 15 5.5200 6.0 Y Y -
703
704 2011-11-22 11 6.7000 10.9 Y Y -
705 2011-11-22 12 6.0500 10.5 Y Y -
706 2011-11-22 13 6.7700 7.5 U U -
707
708 2011-11-23 12 6.7000 9.0 Y Y -
709 2011-11-23 13 6.7000 8.4 Y Y -

710	2011-11-23	14	5.4230	6.5	Y	Y	-
711	2011-11-23	15	3.9500	4.4	Y	Y	-
712							
713	2011-11-24	10	5.3095	8.7	Y	Y	-
714	2011-11-24	11	6.7000	8.6	Y	Y	-
715	2011-11-24	12	6.2000	8.3	Y	Y	Y
716	2011-11-24	13	5.5200	5.1	U	U	U
717							
718	2011-11-25	09	6.7700	6.7	X	X	X tune
719							
720	2011-11-25	10	5.4230	7.9	U	U	-
721	2011-11-25	11	7.1000	9.1	U	U	-
722	2011-11-25	12	6.7000	7.8	Y	Y	-
723	2011-11-25	13	5.3095	6.4	Y	Y	-
724							
725	2011-11-26	11	7.5200	7.9	X	X	X tune
726							
727	2011-11-26	12	6.7000	7.6	Y	Y	-
728	2011-11-26	13	5.3095	7.3	Y	Y	-
729	2011-11-26	14	6.2000	5.8	Y	Y	-
730							
731	2011-11-27	12	6.7000	0.0	Y	Y	-
732	2011-11-27	13	5.3095	0.0	Y	Y	-
733	2011-11-27	14	6.2000	0.0	U	U	-
734							
735	2011-12-07	09	5.4230	7.1	X	X	X API
736	2011-12-07	10	5.4230	7.5	X	X	X
737	2011-12-07	11	5.4230	7.3	X	X	X
738	2011-12-07	12	5.4230	7.2	X	X	X
739	2011-12-07	13	5.4230	6.9	X	X	X
740	2011-12-07	14	5.4230	4.7	X	X	X
741	2011-12-08	08	5.4230	5.0	X	X	X API
742	2011-12-08	09	5.4230	6.4	X	X	X
743	2011-12-08	10	5.4230	7.7	X	X	X
744	2011-12-09	08	5.4230	5.0	X	X	X API
745	2011-12-09	09	5.4230	6.3	X	X	X
746	2011-12-09	10	5.4230	7.3	X	X	X
747	2011-12-09	11	5.4230	7.2	X	X	X
748	2011-12-09	12	5.4230	6.4	X	X	X
749	2011-12-09	13	5.4230	5.1	X	X	X
750	2011-12-11	13	5.4230	5.8	X	X	X
751	2011-12-11	14	5.4230	4.8	X	X	X
752	2011-12-12	08	5.4230	5.4	X	X	X API
753	2011-12-12	09	5.4230	6.1	X	X	X
754	2011-12-12	10	5.4230	7.1	X	X	X
755	2011-12-12	11	5.4230	7.9	X	X	X
756	2011-12-12	12	5.4230	7.1	X	X	X
757	2011-12-12	13	5.4230	6.4	X	X	X
758	2011-12-13	09	5.4230	6.1	X	X	X
759	2011-12-13	10	5.4230	6.9	X	X	X
760	2011-12-13	11	5.4230	7.1	X	X	X
761	2011-12-13	12	5.4230	7.3	X	X	X
762	2011-12-13	13	5.4230	6.4	X	X	X
763	2011-12-13	14	5.4230	5.1	X	X	X
764	2011-12-14	09	5.3600	5.8	X	X	X API
765	2011-12-14	10	5.3600	6.7	X	X	X
766	2011-12-14	11	5.3600	6.9	X	X	X
767	2011-12-14	12	5.3600	6.2	X	X	X
768	2011-12-14	13	5.3600	6.1	X	X	X
769	2011-12-15	09	5.3600	6.3	X	X	X API
770	2011-12-15	10	5.3600	7.3	X	X	X
771	2011-12-15	11	5.3600	7.1	X	X	X
772	2011-12-15	12	5.3600	6.3	X	X	X
773	2011-12-15	13	5.3600	6.1	X	X	X
774	2012-01-25	09	5.4230	NaN	X	X	X PMWE
775	2012-01-25	10	5.4230	NaN	X	X	X
776	2012-01-25	11	5.4230	NaN	X	X	X
777	2012-01-25	12	5.4230	NaN	X	X	X
778	2012-01-25	13	7.9530	NaN	X	X	X
779	2012-01-25	14	7.9530	NaN	X	X	X
780	2012-01-26	10	7.9530	NaN	X	X	X PMWE

781	2012-01-26	11	7.1000	NaN	X	X	X	
782	2012-01-26	12	7.1000	NaN	X	X	X	
783	2012-01-26	13	7.1000	NaN	X	X	X	
784	2012-01-30	11	5.4230	NaN	X	X	X	PMWE
785	2012-01-30	12	5.4230	NaN	X	X	X	
786	2012-01-30	13	5.4230	NaN	X	X	X	
787								
788	2012-02-12	13	6.2000	7.1	U	U	-	radar scanning
789	2012-02-12	14	6.2000	6.2	U	U	-	
790								
791	2012-02-13	11	7.1000	8.2	Y	Y	-	
792	2012-02-13	12	6.2000	6.7	Y	Y	-	
793	2012-02-13	13	5.4230	5.8	U	U	-	
794								
795	2012-02-16	12	6.7700	7.2	Y	U	Y	
796	2012-02-16	13	6.7700	6.9	Y	-	Y	
797	2012-02-16	14	6.2000	5.8	Y	-	Y	
798	2012-02-16	15	5.4230	5.7	Y	U	Y	
799	2012-02-16	16	5.4230	5.0	Y	-	Y	
800	2012-02-16	17	5.4230	4.8	Y	-	Y	
801								
802	2012-02-17	12	7.1000	7.1	Y	-	Y	
803	2012-02-17	13	6.7700	7.0	Y	-	Y	
804	2012-02-17	14	6.2000	6.6	Y	Y	Y	
805	2012-02-17	15	5.4230	5.7	Y	-	Y	
806	2012-02-17	16	5.4230	5.2	Y	-	Y	
807	2012-02-17	17	5.4230	5.6	Y	-	Y	
808								
809	2012-02-18	13	7.1000	7.3	Y	U	Y	
810	2012-02-18	14	6.2000	6.5	Y	-	Y	
811	2012-02-18	15	6.2000	6.6	Y	-	Y	
812	2012-02-18	16	5.4230	5.5	Y	-	Y	
813	2012-02-18	18	5.4230	4.6	X	X	X	no UHF radar
814								
815	2012-02-19	13	6.2000	6.8	U	U	U	
816	2012-02-19	14	5.4230	6.1	U	U	U	
817	2012-02-19	15	5.4230	5.8	U	-	U	
818								
819	2012-02-20	13	5.4230	5.7	U	-	U	disturbed conditions
820	2012-02-20	14	5.4230	5.1	U	-	U	
821								
822	2012-02-21	13	5.4230	6.9	Y	U	Y	
823	2012-02-21	14	6.2000	6.6	Y	-	Y	
824	2012-02-21	15	5.4230	5.7	Y	-	Y	
825	2012-02-21	16	5.4230	4.9	Y	-	Y	
826								
827	2012-02-22	12	4.0400	7.7	Y	Y	-	radar and HF scanning
828	2012-02-22	13	6.7700	6.7	Q	Q	Q	no plot?
829	2012-02-22	14	6.2000	6.4	Q	Q	Q	
830	2012-02-22	15	5.3000	6.1	Y	Y	-	
831	2012-02-22	16	5.3000	5.8	U	U	-	
832								
833	2012-02-23	13	6.7000	7.9	Y	Y	-	
834	2012-02-23	14	6.7000	6.6	Y	Y	-	
835	2012-02-23	15	5.3000	5.9	Y	Y	Y	
836	2012-02-23	16	5.3000	5.9	U	U	-	
837	2012-02-23	17	5.3000	5.7	U	U	-	
838								
839	2012-02-24	13	6.9600	7.9	Y	Y	-	
840	2012-02-24	14	6.2000	7.8	Y	-	Y	
841	2012-02-24	15	6.2000	6.4	Y	U	Y	
842								
843	2012-02-25	12	7.1000	9.2	X	X	X	tune
844								
845	2012-02-25	13	5.4230	7.3	Y	Y	-	
846	2012-02-25	14	5.4230	6.1	U	U	U	
847	2012-02-25	15	5.4230	7.1	Y	Y	U	
848	2012-02-25	16	5.4230	6.2	Y	-	Y	
849								
850	2012-02-26	13	6.7700	7.7	Y	Y	-	radar and HF scanning
851	2012-02-26	14	6.7700	7.3	Y	Y	Y	

852	2012-02-26	15	7.1000	6.6	Y	-	Y	
853	2012-02-26	16	7.1000	6.6	Y	-	Y	
854	2012-02-26	17	5.4230	5.8	Y	-	Y	
855								
856	2012-02-27	12	6.2000	6.7	X	X	X	tune
857								
858	2012-02-27	13	6.2000	6.6	U	U	U	
859	2012-02-27	14	5.4230	4.9	U	U	U	disturbed conditions
860								
861	2012-02-28	08	7.1000	0.0	X	X	X	PMWE?
862	2012-02-28	11	7.1000	6.3	X	X	X	
863								
864	2012-05-21	07	7.1000	7.4	X	X	X	PMSE
865	2012-05-21	08	7.1000	7.7	X	X	X	
866	2012-05-21	09	7.1000	7.5	X	X	X	
867	2012-05-21	10	7.1000	7.6	X	X	X	
868	2012-05-21	11	7.1000	7.3	X	X	X	
869								
870	2012-06-28	08	5.4230	5.9	X	X	X	test
871	2012-06-28	09	6.2000	6.0	X	X	X	test
872	2012-06-28	10	7.1000	6.5	X	X	X	test
873								
874	2012-07-02	08	5.4230	14.7	X	X	X	API
875	2012-07-02	09	5.4230	5.4	X	X	X	
876	2012-07-02	10	5.4230	5.7	X	X	X	PMSE
877	2012-07-02	11	5.4230	5.7	X	X	X	
878	2012-07-02	12	5.4230	5.5	X	X	X	
879	2012-07-03	08	5.4230	5.6	X	X	X	PMSE
880	2012-07-03	09	5.4230	5.7	X	X	X	
881	2012-07-03	10	5.4230	5.6	X	X	X	
882	2012-07-03	12	5.4230	5.9	X	X	X	
883	2012-07-03	13	5.4230	5.4	X	X	X	
884	2012-07-03	14	5.4200	5.5	X	X	X	
885								
886	2012-07-03	15	5.3000	5.6	U	U	-	
887	2012-07-03	16	5.3000	5.7	U	U	-	
888								
889	2012-07-04	08	5.4230	6.4	X	X	X	API
890	2012-07-04	09	5.4230	5.8	X	X	X	
891	2012-07-04	10	5.4230	6.0	X	X	X	
892								
893	2012-07-04	11	5.4200	5.6	U	U	-	
894	2012-07-04	12	5.4200	5.5	U	U	-	
895								
896	2012-07-06	08	5.4230	6.3	X	X	X	API
897	2012-07-06	09	5.4230	6.4	X	X	X	
898	2012-07-06	10	5.4230	5.8	X	X	X	
899								
900	2012-07-06	11	5.4230	6.3	U	U	-	
901	2012-07-06	12	5.4230	5.8	U	U	-	
902								
903	2012-07-07	17	5.4230	5.8	X	X	X	test
904	2012-07-09	08	5.4230	0.0	X	X	X	PMSE
905	2012-07-09	09	5.4230	5.5	X	X	X	
906	2012-07-09	10	5.4230	5.4	X	X	X	
907	2012-07-09	11	5.4230	0.0	X	X	X	
908	2012-07-09	12	5.4230	4.9	X	X	X	
909	2012-07-09	13	5.4230	5.5	X	X	X	
910								
911	2012-07-09	15	5.3000	5.9	U	U	-	disturbed conditions
912								
913	2012-07-10	09	5.4230	4.7	X	X	X	PMSE
914	2012-07-11	08	5.4230	5.8	X	X	X	PMSE
915	2012-07-11	09	5.4230	5.6	X	X	X	
916	2012-07-11	10	5.4230	5.2	X	X	X	
917	2012-07-13	08	6.7700	6.0	X	X	X	PMSE
918								
919	2012-09-29	14	5.3000	9.3	X	X	X	test
920	2012-09-29	15	6.2000	8.7	X	X	X	
921								
922	2012-10-10	11	5.4230	5.9	X	X	X	test

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923
924 2012-10-12 12 6.2000 6.7 U - U
925 2012-10-12 13 5.4230 5.8 U U U
926
927 2012-10-13 14 4.0400 4.1 X X X array 2!
928 2012-10-13 15 4.0400 4.8 X X X
929 2012-10-13 16 4.0400 5.1 X X X
930 2012-10-13 17 4.0400 5.3 X X X
931 2012-10-14 10 6.2000 7.5 X X X tune/cal
932 2012-10-14 11 6.9600 7.2 X X X
933 2012-10-14 12 6.2000 6.6 X X X
934
935 2012-10-14 14 6.2000 5.9 U - U
936 2012-10-14 15 6.2000 5.8 U - U
937
938 2012-10-15 08 5.4230 6.0 X X X tune
939
940 2012-10-15 12 6.7700 7.1 U - U scanning
941 2012-10-15 13 6.2000 6.0 U U U
942 2012-10-15 14 5.4230 6.0 U - U
943 2012-10-15 15 5.4230 5.8 U - U
944 2012-10-15 16 5.4230 5.4 Y - Y
945
946 2012-10-16 10 6.9600 8.9 X X X cal
947 2012-10-16 11 7.1000 9.2 Q Q Q
948 2012-10-16 12 7.1000 8.9 Q Q Q
949
950 2012-10-16 13 7.1000 8.4 Y Y -
951 2012-10-16 14 6.9600 7.2 Y Y -
952 2012-10-16 15 5.4230 7.1 U U -
953
954 2012-10-17 08 6.7700 7.1 X X X test
955 2012-10-17 09 6.7700 8.1 X X X
956 2012-10-17 11 7.9530 8.3 X X X test
957
958 2012-10-17 12 7.1000 8.0 Q Q Q
959 2012-10-17 13 7.1000 8.0 Q Q Q
960 2012-10-17 14 7.1000 7.8 Q Q Q
961 2012-10-17 15 7.1000 6.8 Q Q Q
962 2012-10-17 16 5.4230 6.7 Q Q Q
963
964 2012-10-18 11 6.7700 10.5 U U -
965 2012-10-18 12 7.9530 10.3 Y - Y radar scanning
966 2012-10-18 13 7.9530 9.4 Y U Y
967 2012-10-18 14 7.9530 9.3 Y U Y
968 2012-10-18 15 7.9530 7.9 Y - Y
969 2012-10-18 16 5.4230 6.5 U U -
970
971 2012-10-19 11 7.9530 10.3 Y - Y radar scanning
972 2012-10-19 12 7.9530 10.3 Y U Y
973 2012-10-19 13 7.9530 9.3 Y Y -
974 2012-10-19 14 7.9530 8.8 U U -
975 2012-10-19 15 7.1000 7.9 Y Y -
976 2012-10-19 16 7.1000 7.3 Y Y -
977 2012-10-19 17 6.2000 6.5 Y - Y
978 2012-10-19 18 5.4230 5.8 U U U
979
980 2012-10-20 13 7.9530 9.3 Y U Y
981 2012-10-20 14 7.9530 9.2 Y U Y
982 2012-10-20 15 7.9530 7.9 Y Y Y
983 2012-10-20 16 7.1000 7.8 Y - Y
984 2012-10-20 17 6.2000 7.0 Y - Y
985 2012-10-20 18 6.2000 6.6 Y - Y
986
987 2012-10-21 13 7.9530 9.3 Y U Y radar scanning
988 2012-10-21 14 7.9530 9.1 Y U Y radar scanning
989 2012-10-21 15 7.9530 9.0 Y U Y radar scanning
990 2012-10-21 16 7.1000 7.9 Y Y Y
991 2012-10-21 17 7.1000 6.5 Y - Y
992
993 2012-10-22 12 5.4230 10.6 X X X tune

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994	2012-10-22	13	7.9530	10.1	Y	U	Y	radar scanning
995	2012-10-22	14	7.9530	9.3	Y	U	Y	radar scanning
996	2012-10-22	15	7.9530	9.2	Y	U	Y	
997	2012-10-22	16	7.1000	8.2	Y	Y	Y	
998	2012-10-22	17	7.1000	7.0	Y	Y	Y	
999								
1000	2012-10-24	09	5.4230	9.6	X	X	X	test
1001								
1002	2012-11-23	09	5.4091	7.7	U	U	-	
1003	2012-11-23	10	6.1861	8.5	Y	Y	-	
1004								
1005	2012-11-24	08	5.4091	0.0	U	U	-	disturbed conditions
1006	2012-11-24	09	5.4091	5.8	U	U	-	
1007	2012-11-24	10	5.4091	7.2	U	U	-	
1008	2012-11-24	11	6.1861	6.9	U	U	-	
1009								
1010	2012-12-03	10	5.6020	5.8	X	X	X	not in handwritten log
1011	2012-12-03	11	5.6020	5.9	Y	-	Y	large data gap
1012	2012-12-03	12	5.6020	5.7	Y	-	Y	
1013	2012-12-03	13	5.6020	5.1	Y	-	Y	
1014								
1015	2012-12-04	11	5.6020	5.7	Y	-	Y	
1016	2012-12-04	12	5.6020	5.5	Y	Y	Y	
1017	2012-12-04	13	5.6020	5.0	Y	Y	U	
1018								
1019	2012-12-05	11	5.4230	5.2	X	X	X	
1020								
1021	2012-12-06	10	5.6020	5.6	Y	-	Y	
1022	2012-12-06	11	5.6020	5.5	Y	Y	Y	
1023	2012-12-06	12	5.6003	5.3	Y	Y	-	
1024								
1025	2012-12-07	10	5.4230	5.7	X	X	X	
1026	2012-12-07	11	5.4230	5.5	X	X	X	
1027	2012-12-07	12	5.4230	5.0	X	X	X	
1028	2012-12-07	13	5.6056	4.9	U	-	U	
1029								
1030	2013-02-16	12	6.2000	6.7	Y	U	Y	
1031	2013-02-16	13	5.3000	6.6	Y	U	Y	
1032	2013-02-16	14	5.3000	5.7	Y	Y	Y	
1033	2013-02-16	15	5.3000	5.2	Y	-	Y	
1034								
1035	2013-02-17	12	5.3000	5.6	U	U	U	
1036	2013-02-17	13	5.3000	5.0	U	U	U	
1037								
1038	2013-02-18	12	5.3000	5.3	U	U	-	
1039	2013-02-18	13	5.3000	5.5	U	U	U	
1040	2013-02-18	14	5.3000	5.4	U	U	U	but Y after 15:30 UT, A2, X-mode
1041								
1042	2013-02-19	12	6.2000	6.9	U	U	U	radar scanning
1043	2013-02-19	13	6.2000	6.7	U	U	U	
1044	2013-02-19	14	5.4230	5.8	U	U	U	disturbed conditions
1045								
1046	2013-02-20	12	5.3500	7.2	U	U	-	
1047	2013-02-20	13	5.3500	7.3	U	U	-	disturbed conditions
1048	2013-02-20	14	5.4230	5.8	U	U	U	X-mode was A2
1049								
1050	2013-02-21	12	7.1000	7.8	Y	Y	Y	
1051	2013-02-21	13	7.1000	7.3	Y	Y	Y	
1052	2013-02-21	14	5.4230	6.8	Y	Y	Y	
1053	2013-02-21	15	5.4230	5.9	Y	U	Y	
1054								
1055	2013-02-23	08	5.4230	5.8	U	U	-	
1056	2013-02-23	09	6.2000	7.0	U	U	-	
1057	2013-02-23	10	6.2000	6.6	U	U	U	
1058	2013-02-23	11	6.2000	7.3	Y	U	Y	
1059	2013-02-23	12	6.2000	7.3	Y	Y	Y	
1060	2013-02-23	13	5.4230	6.6	Y	Y	-	
1061	2013-02-23	14	6.2000	6.9	Y	Y	Y	
1062	2013-02-23	15	5.4230	5.7	Y	-	Y	
1063								
1064	2013-02-24	11	5.4230	5.9	U	U	U	

1065	2013-02-24	12	5.4230	6.2	U	U	-
1066	2013-02-24	13	5.4230	6.5	U	U	U
1067	2013-02-24	14	5.4230	5.9	U	U	U
1068							
1069	2013-02-25	08	5.4230	6.5	U	U	U
1070	2013-02-25	09	5.4230	6.8	Y	U	Y
1071	2013-02-25	10	6.2000	7.3	Y	-	Y
1072	2013-02-25	11	6.7700	7.0	Y	Y	Y
1073	2013-02-25	12	6.7700	7.2	Y	U	Y
1074	2013-02-25	13	6.7000	7.1	Y	Y	Y
1075	2013-02-25	14	5.4230	6.3	Y	Y	Y
1076	2013-02-25	15	5.4230	6.0	Y	Y	Y
1077	2013-02-25	16	5.4230	5.7	Y	U	Y
1078	2013-02-25	17	5.4230	5.7	Y	-	Y
1079							
1080	2013-02-26	08	5.4230	6.6	U	U	-
1081	2013-02-26	09	6.2000	7.5	Y	Y	-
1082	2013-02-26	10	6.2000	7.5	Y	Y	Y
1083	2013-02-26	11	7.1000	8.1	Y	Y	Y
1084	2013-02-26	12	7.1000	7.7	Y	Y	Y
1085	2013-02-26	13	7.1000	7.9	Y	Y	Y
1086	2013-02-26	14	5.4230	7.1	Y	Y	Y
1087	2013-02-26	15	5.4230	5.8	U	U	U
1088							
1089	2013-03-05	12	6.8000	7.9	Y	Y	-
1090	2013-03-05	13	6.8800	7.8	Y	Y	-
1091	2013-03-05	14	6.8800	7.9	Y	Y	-
1092	2013-03-05	15	5.5500	7.2	Y	Y	-
1093	2013-03-05	16	5.5500	6.7	U	U	-
1094							
1095	2013-03-06	12	7.9530	9.2	U	U	-
1096	2013-03-06	13	7.9530	8.1	Y	Y	-
1097	2013-03-06	14	6.9600	7.7	Y	Y	-
1098	2013-03-06	15	5.5600	6.9	Y	Y	-
1099	2013-03-06	16	5.5600	6.0	U	U	-
1100							
1101	2013-03-19	12	7.9530	7.9	X	X	X tune
1102							
1103	2013-03-20	09	7.9530	7.9	X	X	X PMWE
1104	2013-03-20	10	7.9530	7.5	X	X	X
1105	2013-03-20	11	7.9530	8.1	X	X	X
1106	2013-03-20	12	7.9530	7.9	X	X	X
1107	2013-03-21	09	7.9530	0.0	X	X	X
1108	2013-03-21	10	7.9530	0.0	X	X	X
1109							
1110	2013-05-15	08	6.7700	6.4	X	X	X test
1111	2013-05-15	09	6.7700	6.6	X	X	X
1112	2013-05-21	16	6.7700	6.7	X	X	X test
1113	2013-05-21	17	6.7700	6.9	X	X	X
1114	2013-05-22	07	6.7700	7.7	X	X	X PMSE
1115	2013-05-22	08	6.7700	7.6	X	X	X
1116	2013-05-22	09	6.7700	7.9	X	X	X
1117	2013-05-22	10	6.7700	7.8	X	X	X
1118	2013-05-22	11	6.7700	7.7	X	X	X
1119	2013-05-22	12	6.7700	7.8	X	X	X
1120	2013-05-23	07	6.7700	0.0	X	X	X
1121	2013-05-23	08	6.7700	0.0	X	X	X
1122	2013-05-23	09	6.7700	0.0	X	X	X
1123	2013-05-23	10	6.7700	0.0	X	X	X
1124	2013-05-23	12	6.7700	0.0	X	X	X
1125							
1126	2013-06-14	15	6.7700	6.2	X	X	X test
1127	2013-06-14	16	6.7700	6.3	X	X	X
1128	2013-06-17	09	6.7700	7.6	X	X	X PMSE
1129	2013-06-17	10	6.7700	7.1	X	X	X
1130	2013-06-17	11	6.7700	6.7	X	X	X
1131	2013-06-17	12	6.7700	6.5	X	X	X
1132	2013-06-18	09	6.7700	7.1	X	X	X PMSE
1133	2013-06-18	10	6.7700	7.0	X	X	X
1134	2013-06-18	11	6.7700	6.6	X	X	X
1135	2013-06-20	09	6.7700	6.1	X	X	X PMSE

1207 2013-10-27 11 6.7700 10.7 X X X tune
1208 2013-10-27 13 7.9530 9.2 Y U Y radar scanning
1209 2013-10-27 14 7.9500 9.0 Y Y - also 15 UT
1210
1211 2013-10-28 11 7.9530 10.2 X X X tune
1212 2013-10-28 13 7.9530 9.3 Y U Y radar scanning
1213 2013-10-28 14 7.9500 8.5 Y Y Y
1214 2013-10-28 15 6.9600 7.6 Y Y Y
1215 2013-10-28 16 6.9600 6.5 Y - Y also 17 UT
1216
1217 2013-10-29 12 5.4230 9.2 Y Y Y also A3
1218 2013-10-29 13 5.4230 9.3 Y Y Y also A3
1219 2013-10-29 14 7.9500 8.9 Y Y -
1220 2013-10-29 15 6.2000 6.3 Y U Y
1221 2013-10-29 16 5.4230 5.4 U U -
1222
1223 2013-10-30 12 6.9600 8.2 U U -
1224 2013-10-30 13 5.4230 5.7 U U -
1225
1226 2013-10-31 12 6.9600 6.9 Y Y -
1227 2013-10-31 13 6.2000 6.0 U U -
1228 2013-10-31 14 5.4230 5.9 Y Y -
1229 2013-10-31 15 5.3500 5.4 Y Y -
1230 2013-10-31 16 5.2500 5.1 U U -
1231
1232 2013-11-01 12 5.4230 9.3 Y Y -
1233 2013-11-01 13 5.4230 6.5 Y Y -
1234
1235 2013-11-02 12 6.9600 7.6 Y Y Y radar scanning
1236 2013-11-02 13 6.9600 7.0 Y Y Y
1237 2013-11-02 14 6.9600 6.8 Y Y Y
1238 2013-11-02 15 6.2000 6.1 Y Y Y
1239
1240 2013-11-03 11 7.9530 9.4 X X X tune
1241 2013-11-03 12 7.9530 8.9 Y U Y radar scanning; also 13 UT
1242 2013-11-03 14 6.9600 7.8 Y Y Y
1243 2013-11-03 15 6.2000 6.5 Y Y Y
1244 2013-11-03 16 6.2000 6.5 Y Y Y also 17 UT
1245 2013-11-03 18 5.4230 5.0 U U -
1246
1247 2013-11-08 15 5.2500 6.0 U U -
1248 2013-11-08 16 5.2500 5.1 U U U
1249
1250 2013-11-12 15 5.2500 6.2 Y Y -
1251
1252 2013-11-21 15 5.3500 5.0 Y Y -
1253
1254 2013-11-25 08 5.4230 5.8 X X X D-region
1255 2013-11-25 09 5.4230 6.9 X X X
1256 2013-11-25 10 7.9530 7.2 X X X
1257 2013-11-25 11 7.9530 7.3 X X X
1258
1259 2013-11-26 10 7.9530 7.3 X X X
1260 2013-11-26 11 7.9530 7.3 X X X
1261
1262 2013-12-10 10 6.2000 7.8 X X X tune
1263 2013-12-11 10 6.9600 7.9 X X X tune
1264 2013-12-11 11 6.9600 7.8 X X X rapid cycle
1265
1266 2014-02-26 15 7.9530 9.7 X X X tune
1267 2014-06-26 08 6.7700 7.4 X X X PMSE
1268 2014-06-26 11 6.7700 6.6 X X X
1269 2014-06-26 12 6.7700 6.4 X X X
1270 2014-06-27 09 6.7700 6.1 X X X PMSE
1271 2014-06-27 10 6.7700 6.1 X X X
1272 2014-06-27 13 5.3000 5.8 X X X
1273 2014-06-30 08 6.7700 6.3 X X X PMSE
1274 2014-06-30 09 6.7700 6.2 X X X
1275 2014-06-30 10 6.7700 6.3 X X X
1276 2014-06-30 11 6.7700 6.3 X X X
1277 2014-06-30 12 6.7700 6.1 X X X

1278	2014-07-01	08	6.7700	6.8	X	X	X	PMSE
1279	2014-07-01	09	6.7700	6.6	X	X	X	
1280	2014-07-01	10	6.7700	7.3	X	X	X	
1281	2014-07-01	11	6.7700	6.4	X	X	X	
1282	2014-07-01	12	6.7700	6.5	X	X	X	
1283	2014-07-02	09	6.7700	7.8	X	X	X	PMSE
1284	2014-07-02	10	6.7700	7.0	X	X	X	
1285	2014-07-02	11	6.7700	6.6	X	X	X	
1286	2014-07-02	12	6.7700	6.8	X	X	X	
1287	2014-07-03	11	6.7700	6.4	X	X	X	PMSE
1288	2014-07-03	12	6.7700	6.8	X	X	X	
1289	2014-07-04	09	6.7700	6.6	X	X	X	PMSE
1290	2014-07-04	10	6.7700	7.2	X	X	X	
1291	2014-07-04	11	6.7700	7.4	X	X	X	
1292	2014-07-04	12	6.7700	6.7	X	X	X	
1293	2014-07-04	13	6.7700	6.4	X	X	X	
1294	2014-07-06	15	5.4230	6.5	X	X	X	tune
1295	2014-07-07	08	5.4230	7.4	X	X	X	tune
1296	2014-07-07	09	5.4230	7.0	Q	Q	Q	
1297	2014-07-07	10	5.4230	6.9	Q	Q	Q	
1298	2014-07-07	11	5.4230	6.7	Q	Q	Q	
1299	2014-07-08	07	7.9530	7.2	X	X	X	?
1300	2014-07-08	08	6.7700	7.5	X	X	X	PMSE
1301	2014-07-08	09	6.7700	7.5	X	X	X	
1302	2014-07-08	10	6.7700	7.0	X	X	X	
1303	2014-07-08	11	6.2000	6.7	Q	Q	Q	
1304	2014-07-08	12	6.2000	6.7	Q	Q	Q	
1305	2014-07-09	08	5.3000	7.4	X	X	X	PMSE
1306	2014-07-09	09	6.7700	7.0	X	X	X	
1307	2014-07-09	10	6.7700	6.8	X	X	X	
1308	2014-07-09	11	6.7700	6.6	X	X	X	
1309	2014-07-09	12	5.4230	6.7	X	X	X	
1310	2014-07-11	07	6.7700	6.3	X	X	X	PMSE
1311	2014-07-11	08	6.7700	6.3	X	X	X	
1312	2014-07-11	09	6.7700	6.5	X	X	X	
1313	2014-07-11	10	6.7700	7.0	X	X	X	
1314								
1315	2014-10-14	10	6.2000	7.2	X	X	X	tune
1316	2014-10-15	09	5.3000	7.0	X	X	X	tune
1317								
1318	2014-10-15	10	6.2000	7.4	U	U	U	
1319	2014-10-15	11	6.2000	7.2	U	U	U	
1320	2014-10-15	12	6.2000	7.2	U	U	U	
1321								
1322	2014-10-16	10	5.5780	9.1	U	U	-	
1323	2014-10-16	11	5.5780	9.0	U	-	U	
1324	2014-10-16	12	5.5780	9.3	U	U	-	
1325	2014-10-16	13	5.4230	10.5	U	-	U	
1326	2014-10-16	14	7.1000	10.7	Y	Y	Y	
1327	2014-10-16	15	7.1000	9.3	Y	Y	Y	
1328								
1329	2014-10-17	10	6.9600	10.2	U	U	-	
1330	2014-10-17	11	6.9750	10.6	Y	-	Y	
1331	2014-10-17	12	6.9750	9.8	U	U	-	
1332	2014-10-17	13	6.9750	9.2	Y	-	Y	
1333	2014-10-17	14	7.9530	9.2	Y	Y	Y	
1334	2014-10-17	15	5.4230	7.9	U	U	U	
1335								
1336	2014-10-18	14	5.4230	7.0	U	U	U	
1337								
1338	2014-10-19	09	5.5780	6.0	U	U	-	
1339	2014-10-19	10	5.5780	6.5	U	U	-	
1340								
1341	2014-10-20	10	6.9750	8.7	U	U	-	
1342	2014-10-20	11	6.9750	8.4	U	U	-	
1343	2014-10-20	12	6.9750	7.4	U	U	-	
1344	2014-10-20	13	7.1000	9.2	X	X	X	tune
1345	2014-10-20	16	7.1000	7.3	X	X	X	tune
1346								
1347	2014-10-21	09	6.2000	7.0	X	X	X	tune
1348	2014-10-21	10	6.2000	6.7	U	U	U	

1349	2014-10-21	11	6.2000	7.4	U	U	U	
1350								
1351	2014-10-23	10	7.1000	9.3	Y	Y	Y	
1352	2014-10-23	11	7.1000	8.2	Y	Y	Y	
1353	2014-10-23	12	7.1000	8.0	U	U	U	
1354								
1355	2014-10-24	09	7.9530	8.3	X	X	X	test
1356	2014-10-24	10	7.9530	9.8	Y	U	Y	
1357	2014-10-24	11	7.9530	10.1	Y	U	Y	
1358	2014-10-24	12	7.9530	9.2	U	U	U	
1359								
1360	2014-10-25	09	5.4230	7.7	X	X	X	tune
1361	2014-10-25	10	5.5780	9.1	U	U	-	
1362	2014-10-25	11	5.5780	9.0	U	U	-	
1363	2014-10-25	12	5.5780	7.9	U	U	-	
1364	2014-10-25	13	5.5780	7.8	U	U	-	
1365	2014-10-25	14	5.4230	7.9	U	U	U	disturbed conditions
1366	2014-10-25	15	5.4230	7.6	U	U	U	
1367	2014-10-25	16	5.4230	5.8	X	X	X	tune
1368	2014-10-25	17	5.4230	5.8	X	X	X	
1369								
1370	2014-10-26	08	6.7700	7.9	U	U	U	
1371	2014-10-26	09	7.1000	8.5	U	U	U	
1372	2014-10-26	10	6.9750	9.4	Y	Y	-	
1373	2014-10-26	11	6.9750	10.3	Y	Y	-	
1374	2014-10-26	12	6.9750	9.5	Y	Y	-	
1375	2014-10-26	13	6.9750	8.8	U	U	-	
1376								
1377	2014-10-27	10	6.9750	12.3	U	U	-	
1378	2014-10-27	11	5.5780	11.5	U	U	-	disturbed conditions
1379	2014-10-27	13	6.9750	10.2	Y	Y	-	
1380								
1381	2014-11-10	16	6.7700	6.3	X	X	X	test
1382	2014-11-10	17	6.7700	7.5	X	X	X	test
1383	2014-11-10	18	5.4230	5.0	X	X	X	test
1384								
1385	2014-11-11	10	7.9530	9.7	X	X	X	test
1386	2014-11-11	13	7.1000	NaN	X	X	X	test
1387	2014-11-11	14	6.7700	8.4	X	X	X	test
1388								
1389	2014-11-12	10	7.9530	10.9	U	U	-	radar scanning
1390	2014-11-12	11	7.9530	10.8	U	U	-	
1391	2014-11-12	12	7.9530	10.3	U	U	-	
1392	2014-11-12	13	7.1000	9.7	U	U	-	
1393	2014-11-12	14	7.9530	9.2	Y	-	Y	very brief O-mode (5 s)
1394	2014-11-12	15	6.2000	8.9	Y	-	Y	
1395	2014-11-12	17	5.4231	4.8	X	X	X	tune
1396								
1397	2014-11-13	12	7.9391	9.7	U	U	-	
1398	2014-11-13	13	6.7561	9.0	Y	Y	-	
1399	2014-11-13	14	6.2000	8.3	Y	-	Y	very brief O-mode (5 s)
1400	2014-11-13	15	5.4230	6.5	Y	-	Y	
1401	2014-11-13	16	5.4230	5.8	X	X	X	no radar
1402								
1403	2014-11-14	14	5.4230	7.0	Y	-	Y	very brief O-mode (5 s)
1404	2014-11-14	15	5.4230	5.7	X	X	X	no radar
1405								
1406	2014-11-17	08	5.4231	8.3	U	U	-	
1407	2014-11-17	09	7.0861	8.5	Y	Y	-	
1408	2014-11-17	10	7.9530	9.5	X	X	X	
1409	2014-11-17	11	7.9530	10.9	X	X	X	
1410	2014-11-17	12	7.9530	9.0	X	X	X	
1411								
1412	2014-11-18	08	6.7700	7.8	U	U	-	
1413	2014-11-18	09	6.7700	10.2	X	X	X	PMWE
1414	2014-11-18	10	7.9530	10.2	X	X	X	
1415	2014-11-18	11	7.9530	9.9	X	X	X	
1416	2014-11-18	12	7.9530	9.0	X	X	X	
1417	2014-11-18	13	5.4230	0.0	X	X	X	
1418								
1419	2014-11-19	08	6.1999	7.2	U	U	-	

1420	2014-11-19	09	6.1999	8.5	Y	Y	-
1421	2014-11-19	10	6.2000	9.0	X	X	X short pulses
1422	2014-11-19	11	6.2000	9.7	X	X	X
1423	2014-11-19	12	6.2000	9.2	X	X	X
1424							
1425	2014-11-20	08	6.7700	7.3	X	X	X PMWE
1426	2014-11-20	09	6.7700	8.3	X	X	X
1427	2014-11-20	11	7.9530	9.6	X	X	X
1428	2014-11-20	12	7.9530	9.2	X	X	X
1429	2014-11-20	13	5.3000	9.3	X	X	X
1430							
1431	2014-11-21	08	6.7700	7.8	X	X	X PMWE
1432	2014-11-21	09	6.7700	8.8	X	X	X
1433	2014-11-21	10	7.9530	11.0	X	X	X
1434	2014-11-21	14	5.4238	6.1	Q	Q	Q
1435							
1436	2014-11-23	10	6.7700	10.6	X	X	X PMWE
1437	2014-11-23	11	6.7700	10.8	X	X	X
1438							
1439	2014-11-24	09	6.7700	9.0	X	X	X PMWE
1440	2014-11-24	10	6.7700	10.5	X	X	X
1441	2014-11-24	11	6.2000	11.4	X	X	X short pulses
1442	2014-11-24	12	6.2000	9.4	X	X	X
1443	2014-11-24	13	6.2000	9.1	X	X	X
1444	2014-11-24	14	5.4230	6.2	U	U	- disturbed conditions
1445							
1446	2014-11-25	10	5.3000	8.9	X	X	X test
1447	2014-11-25	11	6.3000	9.2	U	U	- radar scanning
1448	2014-11-25	12	6.3000	9.2	U	U	U
1449	2014-11-25	13	6.3000	8.4	U	U	U
1450	2014-11-25	14	5.3500	6.7	U	U	-
1451							
1452	2014-11-26	10	6.3000	8.5	X	X	X short pulses
1453	2014-11-26	11	6.3000	8.9	X	X	X
1454	2014-11-26	12	6.3000	8.9	X	X	X
1455	2014-11-26	13	5.4230	8.1	X	X	X
1456							
1457	2014-11-27	10	6.3000	10.1	Y	Y	-
1458	2014-11-27	11	6.3000	10.2	Y	Y	Y
1459	2014-11-27	12	6.3000	10.5	Y	Y	Y
1460	2014-11-27	13	5.4230	9.1	Y	Y	Y
1461	2014-11-27	14	5.4230	7.5	Y	Y	U
1462							
1463	2014-11-28	10	6.3000	10.6	X	X	X test
1464	2014-11-28	11	6.3000	10.5	Q	Q	Q "lace" program
1465	2014-11-28	12	6.3000	9.0	Q	Q	Q
1466	2014-11-28	13	6.3000	7.6	Q	Q	Q
1467							
1468	2014-11-29	10	6.2999	10.4	X	X	X no radar
1469	2014-11-29	11	6.2999	10.6	X	X	X
1470	2014-11-29	12	5.3000	9.5	X	X	X test?
1471							
1472	2014-12-04	09	6.3000	9.0	X	X	X short pulses
1473	2014-12-04	10	7.1000	9.0	X	X	X
1474	2014-12-10	10	6.3000	7.4	X	X	X short pulses
1475	2014-12-10	11	6.3000	8.4	X	X	X
1476	2014-12-10	12	6.3000	8.9	X	X	X
1477	2014-12-10	13	6.3000	7.0	X	X	X
1478							
1479	2015-03-10	15	7.1000	9.0	Y	Y	-
1480	2015-03-10	16	7.1000	9.0	Y	Y	-
1481	2015-03-10	17	6.2000	8.4	Y	Y	-
1482	2015-03-10	18	5.4230	6.8	U	U	-
1483							
1484	2015-03-11	15	5.4230	5.8	U	U	- disturbed conditions
1485							
1486	2015-03-12	07	5.4230	6.0	X	X	X short pulses
1487	2015-03-12	08	5.4230	6.7	X	X	X
1488	2015-03-12	15	6.2000	6.7	U	U	-
1489	2015-03-12	16	5.4230	4.8	U	U	-
1490							

1491	2015-03-13	15	6.2000	7.3	U	U	-
1492	2015-03-13	16	6.2000	7.1	Y	Y	-
1493	2015-03-13	17	5.4230	5.9	Y	Y	-
1494							
1495	2015-03-14	15	7.1000	8.4	Y	Y	-
1496	2015-03-14	16	7.1000	7.9	Y	Y	-
1497	2015-03-14	17	5.4230	7.0	Y	Y	-
1498							
1499	2015-04-14	09	6.7700	8.8	X	X	X tune
1500	2015-04-14	10	7.0000	8.4	Y	Y	-
1501	2015-04-14	11	7.0000	8.5	Y	Y	-
1502	2015-04-14	12	7.0000	8.4	Y	Y	-
1503	2015-04-14	13	7.0000	8.1	Y	Y	-
1504							
1505	2015-04-15	09	5.4230	6.7	X	X	X tune
1506	2015-04-15	10	5.6000	6.7	U	U	-
1507	2015-04-15	11	5.6000	6.8	U	U	-
1508							
1509	2015-04-16	12	5.6000	5.8	Q	Q	Q
1510	2015-04-16	15	5.5500	7.0	U	U	-
1511	2015-04-16	16	5.5500	5.9	U	U	-
1512							
1513	2015-04-20	10	5.6000	7.6	U	U	-
1514	2015-04-20	11	5.6000	7.5	U	U	-
1515	2015-04-20	12	7.0000	7.6	Y	Y	-
1516	2015-04-20	13	7.0000	7.2	Y	Y	-
1517							
1518	2015-04-22	10	7.0000	8.2	U	U	-
1519	2015-04-22	11	7.0000	8.2	U	U	-
1520	2015-04-22	12	7.0000	8.4	Y	Y	-
1521	2015-04-22	13	5.6000	8.5	Y	Y	-
1522	2015-04-22	14	5.6000	8.2	X	X	X expt stopped at 14 UT.
1523							
1524	2015-04-23	10	5.6000	8.2	U	U	-
1525	2015-04-23	11	5.6000	8.6	U	U	-
1526	2015-04-23	12	7.0000	8.5	U	U	-
1527	2015-04-23	13	7.0000	8.5	U	U	-
1528							
1529	2015-04-24	10	5.6000	8.2	Y	Y	-
1530	2015-04-24	11	7.0000	8.1	Y	Y	-
1531	2015-04-24	12	7.0000	7.6	Y	Y	-
1532							
1533	2015-04-27	11	7.0000	9.2	Y	Y	-
1534	2015-04-27	12	7.0000	9.5	Y	Y	-
1535	2015-04-27	13	7.0000	8.8	U	U	-
1536							
1537	2015-07-02	08	5.3000	7.0	X	X	X tune
1538	2015-07-02	09	6.2000	7.4	U	U	-
1539							
1540	2015-07-03	08	6.7700	7.4	X	X	X PMSE
1541	2015-07-03	09	6.7700	7.4	X	X	X
1542	2015-07-03	10	6.7700	7.3	X	X	X
1543	2015-07-03	11	6.7700	6.8	X	X	X
1544	2015-07-03	12	6.7700	6.6	X	X	X
1545							
1546	2015-07-06	09	6.7700	6.3	X	X	X PMSE
1547	2015-07-06	10	6.7700	6.8	X	X	X
1548	2015-07-06	11	6.7700	6.7	X	X	X
1549							
1550	2015-07-07	08	6.7700	6.7	X	X	X PMSE
1551	2015-07-07	09	6.7700	7.6	X	X	X
1552	2015-07-07	10	5.4230	6.7	U	U	-
1553	2015-07-07	12	6.7700	6.8	X	X	X PMSE
1554							
1555	2015-07-08	07	6.7700	7.4	X	X	X PMSE
1556	2015-07-08	08	6.2000	7.4	U	U	-
1557	2015-07-08	09	6.7700	7.5	X	X	X PMSE
1558	2015-07-08	10	6.7700	7.0	X	X	X
1559	2015-07-08	11	6.7700	7.0	X	X	X
1560							
1561	2015-07-09	07	6.7700	7.4	X	X	X PMSE

1562	2015-07-09	08	6.7700	6.9	X	X	X	
1563	2015-07-09	09	6.7700	6.9	X	X	X	
1564	2015-07-09	10	6.7700	6.7	X	X	X	
1565	2015-07-09	11	6.7700	6.4	X	X	X	
1566								
1567	2015-07-10	08	6.7700	7.1	X	X	X	PMSE
1568	2015-07-10	09	6.7700	7.1	X	X	X	
1569	2015-07-10	12	6.7700	6.3	X	X	X	
1570								
1571	2015-07-13	10	6.7700	6.7	X	X	X	PMSE
1572	2015-07-13	11	6.7700	8.2	X	X	X	
1573								
1574	2015-09-23	18	5.4230	10.0	X	X	X	tune
1575	2015-09-23	19	6.7700	8.5	X	X	X	
1576	2015-09-24	09	5.4230	5.5	U	U	-	
1577	2015-09-24	11	5.4230	5.7	U	U	U	
1578	2015-09-24	12	5.4230	5.5	U	U	U	
1579								
1580	2015-09-25	08	5.4230	5.4	U	U	-	
1581	2015-09-25	12	5.4230	6.7	U	U	-	
1582								
1583	2015-09-28	07	5.4230	7.1	U	U	-	
1584	2015-09-28	08	6.2000	7.5	U	U	-	
1585	2015-09-28	09	6.7700	7.4	U	U	-	
1586								
1587	2015-10-21	09	6.7700	8.2	X	X	X	tune
1588	2015-10-21	10	7.0000	9.1	Y	Y	-	
1589	2015-10-21	11	7.0000	9.1	Y	Y	-	
1590	2015-10-21	12	7.0000	8.3	Y	Y	-	
1591								
1592	2015-10-23	10	7.0000	8.3	Y	Y	-	
1593	2015-10-23	11	7.0000	8.5	Y	Y	-	
1594	2015-10-23	12	7.0000	9.2	Y	Y	-	
1595								
1596	2015-10-24	10	7.0000	9.0	Y	Y	-	
1597	2015-10-24	11	7.0000	9.0	Y	Y	-	
1598	2015-10-24	12	7.0000	8.8	Y	Y	-	
1599	2015-10-24	13	7.0000	8.7	Y	Y	-	
1600								
1601	2015-10-25	10	7.0000	10.1	Y	Y	-	
1602	2015-10-25	11	7.0000	9.9	Y	Y	-	
1603	2015-10-25	12	7.0000	9.4	Y	Y	-	
1604	2015-10-25	13	7.0000	8.9	Y	Y	-	
1605								
1606	2015-10-26	09	5.4230	8.9	X	X	X	tune
1607	2015-10-26	10	5.6000	9.4	Y	Y	-	(but not strong)
1608	2015-10-26	11	5.6000	9.0	Y	Y	-	
1609	2015-10-26	12	5.6000	9.2	Y	Y	-	
1610	2015-10-26	13	5.6000	8.3	Y	Y	-	
1611								
1612	2015-10-28	12	6.7700	10.4	X	X	X	tune
1613	2015-10-28	13	7.9530	9.2	Y	Y	Y	
1614	2015-10-28	14	6.7700	9.0	Y	Y	Y	
1615	2015-10-28	15	5.4230	7.1	Y	Y	Y	
1616	2015-10-28	16	5.4230	6.0	Y	-	Y	
1617								
1618	2015-10-29	11	7.1000	10.0	X	X	X	tune
1619	2015-10-29	12	6.2000	10.4	X	X	X	
1620	2015-10-29	13	7.9530	9.0	Y	U	Y	
1621	2015-10-29	14	5.4230	7.6	Y	-	Y	
1622	2015-10-29	15	5.4230	6.7	Y	-	Y	
1623	2015-10-29	16	5.4230	6.3	Y	-	Y	
1624								
1625	2015-10-30	08	6.2000	7.4	X	X	X	tune
1626	2015-10-30	09	6.2000	8.0	Y	Y	-	
1627	2015-10-30	10	7.1000	8.5	Y	-	Y	
1628	2015-10-30	11	7.1000	9.5	Y	Y	Y	
1629	2015-10-30	12	7.9530	9.6	Y	Y	Y	
1630								
1631	2015-10-31	11	7.1000	9.3	X	X	X	tune
1632	2015-10-31	12	5.4230	8.5	X	X	X	

1633	2015-10-31	13	7.1000	7.2	Y	Y	Y	
1634	2015-10-31	14	5.3000	7.0	Y	Y	Y	
1635								
1636	2015-11-02	11	5.4230	8.2	X	X	X	tune
1637	2015-11-02	12	5.4230	8.9	X	X	X	
1638	2015-11-02	13	6.7700	7.8	Y	Y	U	
1639								
1640	2015-11-03	10	6.7700	9.3	Y	Y	U	
1641	2015-11-03	11	6.3000	9.4	U	-	U	
1642								
1643	2015-11-05	11	6.7700	8.4	U	U	U	disturbed conditions
1644	2015-11-05	12	5.4230	7.6	U	U	-	
1645								
1646	2015-11-06	11	5.3000	6.4	U	U	U	
1647	2015-11-06	12	5.3000	6.4	U	U	U	
1648	2015-11-06	13	5.3000	5.6	U	U	-	
1649								
1650	2015-11-09	14	5.4230	11.6	U	U	-	disturbed conditions
1651	2015-11-09	15	5.4230	12.4	U	U	-	
1652								
1653	2015-11-16	10	5.4230	6.4	U	U	-	
1654	2015-11-16	11	5.4230	7.3	U	U	-	
1655	2015-11-16	12	5.4230	7.1	U	U	-	
1656								
1657	2015-11-18	10	6.7700	7.9	U	U	-	
1658	2015-11-18	12	6.7700	9.2	U	U	-	
1659	2015-11-18	13	5.4230	8.4	U	U	-	
1660								
1661	2015-11-26	11	6.2000	7.0	U	U	-	
1662	2015-11-26	12	5.3000	6.7	U	U	-	
1663								
1664	2015-11-27	11	6.2000	7.0	U	U	-	
1665	2015-11-27	12	5.4230	6.6	U	U	-	
1666								
1667	2015-12-04	11	5.4230	6.0	U	-	U	radar scanning
1668	2015-12-04	12	5.4230	5.8	U	U	U	
1669								
1670	2016-03-04	13	6.2000	7.1	X	X	X	tune
1671	2016-03-04	14	6.9600	8.1	Y	U	Y	
1672	2016-03-04	15	6.2000	7.8	Y	U	Y	
1673	2016-03-04	16	6.2000	6.0	Y	Y	Y	
1674								
1675	2016-03-09	10	5.3600	6.6	U	U	-	
1676	2016-03-09	11	5.3600	7.1	U	U	-	
1677	2016-03-09	12	5.3600	7.0	U	U	-	
1678								
1679	2016-03-10	10	5.3000	6.3	U	U	-	
1680	2016-03-10	11	5.3000	6.2	U	U	-	
1681	2016-03-10	12	5.3000	6.3	U	U	-	
1682								
1683	2016-03-11	10	5.3600	6.1	U	U	-	
1684	2016-03-11	11	5.3600	6.1	U	U	-	
1685	2016-03-11	12	5.3600	6.6	U	U	-	
1686								
1687	2016-04-22	08	4.0400	5.5	X	X	X	test
1688	2016-04-22	12	5.3000	5.7	X	X	X	
1689								
1690	2016-09-23	10	5.2000	6.1	X	X	X	tune
1691								
1692	2016-09-24	11	5.9000	6.6	U	U	-	
1693	2016-09-24	12	5.6000	6.2	U	U	-	
1694	2016-09-24	13	5.3000	5.8	U	U	-	
1695	2016-09-24	14	5.3000	5.6	U	U	-	
1696								
1697	2016-10-12	11	5.4230	6.4	X	X	X	tune
1698	2016-10-12	12	5.6000	6.1	X	X	X	short pulses
1699	2016-10-13	10	6.9600	8.9	X	X	X	tune
1700	2016-10-13	11	6.7700	7.0	X	X	X	short pulses
1701	2016-10-20	11	5.4230	6.1	X	X	X	tune
1702	2016-10-20	12	5.4230	6.0	Q	Q	Q	
1703	2016-10-20	13	5.3000	5.7	Q	Q	Q	but WAILES on A2 later

1704
1705 2017-07-10 18 5.4230 4.8 X X X API
1706 2017-07-10 19 5.4230 4.7 X X X
1707 2017-07-11 06 5.4230 5.4 X X X API
1708 2017-07-11 09 5.4230 0.0 X X X
1709
1710 2017-10-18 10 4.0400 5.9 Q Q Q
1711 2017-10-18 11 5.4230 6.4 Q Q Q
1712 2017-10-18 12 5.4230 5.6 Q Q Q
1713 2017-10-18 13 5.4230 5.2 Q Q Q
1714 2017-10-18 14 5.4230 4.7 Q Q Q
1715 2017-10-19 10 5.5400 6.8 Q Q Q
1716 2017-10-19 11 5.5400 7.3 Q Q Q
1717 2017-10-19 12 5.5400 6.4 Q Q Q
1718 2017-10-19 13 5.5400 5.5 Q Q Q
1719 2017-10-23 08 5.4230 5.4 X X X test
1720 2017-10-23 10 5.5400 5.7 Q Q Q
1721 2017-10-23 11 5.5400 6.3 Q Q Q
1722 2017-10-23 12 5.5400 6.4 Q Q Q
1723 2017-10-23 13 5.5400 6.0 Q Q Q
1724 2017-10-24 10 5.5400 6.8 Q Q Q
1725 2017-10-24 11 5.5400 7.6 Q Q Q
1726 2017-10-24 12 6.2000 7.0 Q Q Q
1727
1728 2017-11-06 10 5.4230 5.5 X X X tune
1729 2017-11-06 11 5.4230 5.4 Q Q Q
1730 2017-11-06 12 5.4230 5.8 Q Q Q
1731 2017-11-06 13 5.4230 5.2 Q Q Q
1732 2017-11-06 22 5.3000 8.7 X X X tune
1733 2017-11-06 23 7.9530 8.1 X X X
1734 2017-11-07 00 7.9530 8.9 X X X moon radar
1735 2017-11-20 18 5.4230 7.1 X X X ELF
1736 2017-11-20 19 5.4230 5.0 X X X
1737 2017-11-20 21 5.4230 6.9 X X X
1738 2017-11-22 16 5.4230 8.6 X X X ELF
1739 2017-11-22 17 5.4230 6.9 X X X
1740