

# Crossing the Thames Estuary

63 routes with full passage planning tables

Imray 

*Roger Gaspar*



Second edition

**Free Supplement to the Second Edition: Supplement No 1 – ‘Summer Passages’**

**Boulogne to St Valerie**

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#### CAUTION

Every effort has been made to ensure the accuracy of this Supplement No 2. It contains selected information and thus is not definitive and does not include all known information on the subject in hand; this is particularly relevant to the plans, which should not be used for navigation. The author believes that his selection is a useful aid to prudent navigation, but the safety of a vessel depends ultimately on the judgement of the navigator, who should access all information, published or unpublished.

#### PLANS

The plans in this supplement No 1 are not to be used for navigation. They are designed to support the text and should at all times be used with navigational charts.

Imray have kindly given permission to allow drawings to be based on their material.

## Boulogne to St Valerie

This summer (2015), we are planning a visit on Tiller Girl to St Valerie weather permitting. The passage from Boulogne to the *AT-SO* buoy off the Somme is a simple track of 185°(T) southbound and 005°(T) northbound. Tidal diamonds are not best placed for this passage so I have interpolated from the relevant UKHO tidal atlas. There is therefore an element of ‘proving’ of the tables to be completed. But then it is based upon the best data available!

There is nothing critical about the waypoints, other than, of course, the North Cardinal buoy at the mouth of the Somme (*AT-SO VQ*) is the goal. From *AT-SO* local buoyage is picked up for entrance into the Bay currently lying 095°(T). The latest data on the marked channel is usually available for download on:

<http://www.portsaintvalery.fr/24.html>

I note that the recommended arrival time at *AT-SO* is 2:30 hours before local High Water. I have worked on -2:30hrs St Valerie being approximately equal to -2:10hrs Dover and the southbound tables have this as an end ETA marked on the tables with some indicators working back to a start time. **NOTE: These tables are based on HW Dover.**

### Waypoints and Sectors used:

V1	Boulogne to Etaples			
64	Off Boulogne Harbour Entrance	50°44'70N 001°33'40E	10.0 nm	005°(T) Northbound
65	Off the Baie de Etaples	50°34'80N 001°32'00E		185°(T) Southbound
V2	Etaples to Pointe de Haut-Banc			
65	Off the Baie de Etaples	50°34'80N 001°32'00E	10.0 nm	005°(T) Northbound
66	Off Pointe de Haut-Banc	50°24'90N 001°30'00E		185°(T) Southbound
V3	Pointe de Haut-Banc to AT-SO			
66	Off Pointe de Haut-Banc	50°24'90N 001°30'00E	11.2 nm	005°(T) Northbound
67	AT-SO	50°14'04N 001°28'12E		185°(T) Southbound



## **Boulogne to St Valerie Tables**

Neaps									All times relate to HW Dover				Time to cover Sectors (in minutes) at 4.0 Kts								
S O U T H B O U N D	V1			V2			V3			N O R T H B O U N D	V3			V2			V1				
	Boulogne to Etaples			Etaples/Pointe Haut-Banc			Pointe de Haut-Banc to ATSO				ATSO to Pointe de Haut-Banc			Pointe de Haut-Banc to Etaples			Etaples to Boulogne				
	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector		Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector		
- 6.00	111	- 4:09	- 6.00	117	- 4:03	- 6.00	144	- 3:36	- 6.00	- 6.00	187	- 2:53	- 6.00	187	- 2:53	- 6.00	202	- 2:38			
- 5.45	111	- 3:54	- 5.45	119	- 3:46	- 5.45	149	- 3:16	- 5.45	- 5.45	183	- 2:42	- 5.45	183	- 2:42	- 5.45	199	- 2:26			
- 5.30	111	- 3:39	- 5.30	121	- 3:29	- 5.30	153	- 2:57	- 5.30	- 5.30	179	- 2:31	- 5.30	180	- 2:30	- 5.30	196	- 2:14			
- 5.15	110	- 3:25	- 5.15	122	- 3:13	- 5.15	158	- 2:37	- 5.15	- 5.15	174	- 2:21	- 5.15	177	- 2:18	- 5.15	193	- 2:02			
- 5.00	110	- 3:10	- 5.00	124	- 2:56	- 5.00	162	- 2:18	- 5.00	- 5.00	170	- 2:10	- 5.00	173	- 2:07	- 5.00	190	- 1:50			
- 4.45	114	- 2:51	- 4.45	128	- 2:37	- 4.45	167	- 1:58	- 4.45	- 4.45	167	- 1:58	- 4.45	169	- 1:56	- 4.45	185	- 1:40			
- 4.30	118	- 2:32	- 4.30	132	- 2:18	- 4.30	173	- 1:37	- 4.30	- 4.30	163	- 1:47	- 4.30	165	- 1:45	- 4.30	180	- 1:30			
- 4.15	121	- 2:14	- 4.15	136	- 1:59	- 4.15	178	- 1:17	- 4.15	- 4.15	160	- 1:35	- 4.15	161	- 1:34	- 4.15	174	- 1:21			
- 4.00	125	- 1:55	- 4.00	140	- 1:40	- 4.00	183	- 0:57	- 4.00	- 4.00	156	- 1:24	- 4.00	157	- 1:23	- 4.00	169	- 1:11			
- 3.45	132	- 1:33	- 3.45	147	- 1:18	- 3.45	188	- 0:37	+ 3.45	+ 3.45	152	- 1:13	- 3.45	151	- 1:14	- 3.45	163	- 1:02			
- 3.30	139	- 1:11	- 3.30	154	- 0:56	- 3.30	194	- 0:16	+ 3.30	+ 3.30	148	- 1:02	- 3.30	145	- 1:05	- 3.30	158	- 0:52			
- 3.15	146	- 0:49	- 3.15	162	- 0:33	- 3.15	199	+ 0:04	+ 3.15	+ 3.15	143	- 0:52	- 3.15	140	- 0:55	- 3.15	152	- 0:43			
- 3.00	153	- 0:27	- 3.00	169	- 0:11	- 3.00	204	+ 0:24	+ 3.00	+ 3.00	139	- 0:41	- 3.00	134	- 0:46	- 3.00	146	- 0:34			
- 2.45	161	- 0:04	- 2.45	173	+ 0:08	- 2.45	205	+ 0:40	+ 2.45	+ 2.45	138	- 0:27	- 2.45	132	- 0:33	- 2.45	141	- 0:24			
- 2.30	169	+ 0:19	- 2.30	176	+ 0:26	- 2.30	205	+ 0:55	+ 2.30	+ 2.30	138	- 0:12	- 2.30	129	- 0:21	- 2.30	135	- 0:15			
- 2.15	177	+ 0:42	- 2.15	180	+ 0:45	- 2.15	206	+ 1:11	+ 2.15	+ 2.15	137	+ 0:02	- 2.15	127	- 0:08	- 2.15	130	- 0:05			
- 2.00	185	+ 1:05	- 2.00	184	+ 1:04	- 2.00	207	+ 1:27	+ 2.00	+ 2.00	137	+ 0:17	- 2.00	124	+ 0:04	- 2.00	124	+ 0:04			
- 1.45	188	+ 1:23	- 1.45	185	+ 1:20	- 1.45	205	+ 1:40	+ 1.45	+ 1.45	137	+ 0:32	- 1.45	123	+ 0:18	- 1.45	122	+ 0:17			
- 1.30	192	+ 1:42	- 1.30	186	+ 1:36	- 1.30	203	+ 1:53	+ 1.30	+ 1.30	137	+ 0:47	- 1.30	121	+ 0:31	- 1.30	120	+ 0:30			
- 1.15	195	+ 2:00	- 1.15	188	+ 1:53	- 1.15	201	+ 2:06	+ 1.15	+ 1.15	137	+ 1:02	- 1.15	119	+ 0:44	- 1.15	118	+ 0:43			
- 1.00	198	+ 2:18	- 1.00	189	+ 2:09	- 1.00	199	+ 2:19	+ 1.00	+ 1.00	137	+ 1:17	- 1.00	117	+ 0:57	- 1.00	115	+ 0:55			
- 0.45	199	+ 2:34	- 0.45	186	+ 2:21	- 0.45	196	+ 2:31	+ 0.45	+ 0.45	140	+ 1:35	- 0.45	118	+ 1:13	- 0.45	114	+ 1:09			
- 0.30	200	+ 2:50	- 0.30	184	+ 2:34	- 0.30	193	+ 2:43	+ 0.30	+ 0.30	143	+ 1:53	- 0.30	120	+ 1:30	- 0.30	112	+ 1:22			
- 0.15	201	+ 3:06	- 0.15	181	+ 2:46	- 0.15	189	+ 2:54	+ 0.15	+ 0.15	146	+ 2:11	- 0.15	121	+ 1:46	- 0.15	111	+ 1:36			
HW	201	+ 3:21	HW	179	+ 2:59	HW	186	+ 3:06	HW	HW	149	+ 2:29	HW	122	+ 2:02	HW	109	+ 1:49			
+ 0.15	197	+ 3:32	+ 0.15	176	+ 3:11	+ 0.15	183	+ 3:18	+ 0.15	+ 0.15	151	+ 2:46	+ 0.15	124	+ 2:19	+ 0.15	111	+ 2:06			
+ 0.30	193	+ 3:43	+ 0.30	174	+ 3:24	+ 0.30	181	+ 3:31	+ 0.30	+ 0.30	154	+ 3:04	+ 0.30	126	+ 2:36	+ 0.30	113	+ 2:23			
+ 0.45	189	+ 3:54	+ 0.45	171	+ 3:36	+ 0.45	178	+ 3:43	+ 0.45	+ 0.45	156	+ 3:21	+ 0.45	128	+ 2:53	+ 0.45	115	+ 2:40			
+ 1.00	185	+ 4:05	+ 1.00	169	+ 3:49	+ 1.00	175	+ 3:55	+ 1.00	+ 1.00	159	+ 3:39	+ 1.00	130	+ 3:10	+ 1.00	117	+ 2:57			
+ 1.15	180	+ 4:15	+ 1.15	165	+ 4:00	+ 1.15	172	+ 4:07	+ 1.15	+ 1.15	163	+ 3:58	+ 1.15	134	+ 3:29	+ 1.15	120	+ 3:15			
+ 1.30	176	+ 4:26	+ 1.30	161	+ 4:11	+ 1.30	169	+ 4:19	+ 1.30	+ 1.30	167	+ 4:17	+ 1.30	137	+ 3:47	+ 1.30	123	+ 3:33			
+ 1.45	172	+ 4:37	+ 1.45	158	+ 4:23	+ 1.45	165	+ 4:30	+ 1.45	+ 1.45	171	+ 4:36	+ 1.45	141	+ 4:06	+ 1.45	126	+ 3:51			
+ 2.00	168	+ 4:48	+ 2.00	154	+ 4:34	+ 2.00	162	+ 4:42	+ 2.00	+ 2.00	174	+ 4:54	+ 2.00	144	+ 4:24	+ 2.00	129	+ 4:09			
+ 2.15	163	+ 4:58	+ 2.15	151	+ 4:46	+ 2.15	160	+ 4:55	+ 2.15	+ 2.15	177	+ 5:12	+ 2.15	148	+ 4:43	+ 2.15	119	+ 4:14			
+ 2.30	158	+ 5:08	+ 2.30	147	+ 4:57	+ 2.30	158	+ 5:08	+ 2.30	+ 2.30	180	+ 5:30	+ 2.30	152	+ 5:02	+ 2.30	109	+ 4:19			
+ 2.45	153	+ 5:18	+ 2.45	144	+ 5:09	+ 2.45	156	+ 5:21	+ 2.45	+ 2.45	182	+ 5:47	+ 2.45	156	+ 5:21	+ 2.45	100	+ 4:25			
+ 3.00	148	+ 5:28	+ 3.00	141	+ 5:21	+ 3.00	154	+ 5:34	+ 3.00	+ 3.00	185	- 5:55	+ 3.00	160	+ 5:40	+ 3.00	90	+ 4:30			
+ 3.15	144	+ 5:39	+ 3.15	138	+ 5:33	+ 3.15	152	+ 5:47	+ 3.15	+ 3.15	188	- 5:37	+ 3.15	164	+ 5:59	+ 3.15	111	+ 5:06			
+ 3.30	140	+ 5:50	+ 3.30	135	+ 5:45	+ 3.30	150	- 6:00	+ 3.30	+ 3.30	191	- 5:19	+ 3.30	168	- 5:42	+ 3.30	131	+ 5:41			
+ 3.45	137	- 5:58	+ 3.45	133	+ 5:58	+ 3.45	148	- 5:47	+ 3.45	+ 3.45	194	- 5:01	+ 3.45	172	- 5:23	+ 3.45	151	- 5:44			
+ 4.00	133	- 5:47	+ 4.00	130	- 5:50	+ 4.00	145	- 5:35	- 4.00	- 4.00	198	- 4:42	+ 4.00	176	- 5:04	+ 4.00	171	- 5:09			
+ 4.15	130	- 5:35	+ 4.15	127	- 5:38	+ 4.15	143	- 5:22	- 4.15	- 4.15	201	- 4:24	+ 4.15	180	- 4:45	+ 4.15	176	- 4:49			
+ 4.30	127	- 5:23	+ 4.30	124	- 5:26	+ 4.30	141	- 5:09	- 4.30	- 4.30	203	- 4:07	+ 4.30	184	- 4:26	+ 4.30	180	- 4:30			
+ 4.45	125	- 5:10	+ 4.45	122	- 5:13	+ 4.45	139	- 4:56	- 4.45	- 4.45	206	- 3:49	+ 4.45	188	- 4:07	+ 4.45	185	- 4:10			
+ 5.00	122	- 4:58	+ 5.00	119	- 5:01	+ 5.00	136	- 4:44	- 5.00	- 5.00	209	- 3:31	+ 5.00	192	- 3:48	+ 5.00	190	- 3:50			
+ 5.15	120	- 4:45	+ 5.15	119	- 4:46	+ 5.15	137	- 4:28	- 5.15	- 5.15	207	- 3:18	+ 5.15	192	- 3:33	+ 5.15	193	- 3:32			
+ 5.30	119	- 4:31	+ 5.30	118	- 4:32	+ 5.30	138	- 4:12	- 5.30	- 5.30	205	- 3:05	+ 5.30	193	- 3:17	+ 5.30	196	- 3:14			
+ 5.45	117	- 4:18	+ 5.45	118	- 4:17	+ 5.45	139	- 3:56	- 5.45	- 5.45	203	- 2:52	+ 5.45	194	- 3:01	+ 5.45	199	- 2:56			
+ 6.00	115	- 4:05	+ 6.00	117	- 4:03	+ 6.00	139	- 3:41	- 6.00	- 6.00	201	- 2:39	+ 6.00	194	- 2:46	+ 6.00	202	- 2:38			

Time to cover Sectors (in minutes) at 4.0 kts									All times relate to HW Dover									Springs								
V1			V2			V3			V3			V2			V1											
Boulogne to Etapes			Etapes/Pointe Haut-Banc			Pointe de Haut-Banc to ATSO			ATSO to Pointe de Haut-Banc			Pointe de Haut-Banc to Etapes			Etapes to Boulogne											
Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector									
- 6.00	92	- 4:28	- 6.00	100	- 4:20	- 6.00	129	- 3:51	- 6.00	195	- 2:45	- 6.00	216	- 2:24	- 6.00	253	- 1:47									
- 5.45	91	- 4:14	- 5.45	103	- 4:02	- 5.45	139	- 3:26	- 5.45	187	- 2:38	- 5.45	208	- 2:17	- 5.45	243	- 1:42									
- 5.30	91	- 3:59	- 5.30	105	- 3:45	- 5.30	149	- 3:01	- 5.30	180	- 2:30	- 5.30	200	- 2:10	- 5.30	234	- 1:36									
- 5.15	91	- 3:44	- 5.15	107	- 3:28	- 5.15	159	- 2:36	- 5.15	172	- 2:23	- 5.15	192	- 2:03	- 5.15	225	- 1:30									
- 5.00	90	- 3:30	- 5.00	109	- 3:11	- 5.00	169	- 2:11	- 5.00	165	- 2:15	- 5.00	184	- 1:56	- 5.00	215	- 1:25									
- 4.45	97	- 3:08	- 4.45	118	- 2:47	- 4.45	187	- 1:38	- 4.45	158	- 2:07	- 4.45	176	- 1:49	- 4.45	204	- 1:21									
- 4.30	103	- 2:47	- 4.30	126	- 2:24	- 4.30	204	- 1:06	- 4.30	150	- 2:00	- 4.30	168	- 1:42	- 4.30	192	- 1:18									
- 4.15	109	- 2:26	- 4.15	135	- 2:00	- 4.15	222	- 0:33	- 4.15	143	- 1:52	- 4.15	160	- 1:35	- 4.15	181	- 1:14									
- 4.00	116	- 2:04	- 4.00	143	- 1:37	- 4.00	239	- 0:01	- 4.00	136	- 1:44	- 4.00	152	- 1:28	- 4.00	169	- 1:11									
- 3.45	132	- 1:33	- 3.45	161	- 1:04	- 3.45	246	+ 0:21	+ 3.45	130	- 1:35	- 3.45	143	- 1:22	- 3.45	160	- 1:05									
- 3.30	148	- 1:02	- 3.30	179	- 0:31	- 3.30	252	+ 0:42	+ 3.30	125	- 1:25	- 3.30	135	- 1:15	- 3.30	150	- 1:00									
- 3.15	164	- 0:31	- 3.15	196	+ 0:01	- 3.15	258	+ 1:03	+ 3.15	120	- 1:15	- 3.15	126	- 1:09	- 3.15	141	- 0:54									
- 3.00	180	HW	- 3.00	214	+ 0:34	- 3.00	264	+ 1:24	+ 3.00	114	- 1:06	- 3.00	118	- 1:02	- 3.00	132	- 0:48									
- 2.45	201	+ 0:36	- 2.45	221	+ 0:56	- 2.45	261	+ 1:36	+ 2.45	114	- 0:51	- 2.45	115	- 0:50	- 2.45	124	- 0:41									
- 2.30	223	+ 1:13	- 2.30	228	+ 1:18	- 2.30	257	+ 1:47	+ 2.30	114	- 0:36	- 2.30	111	- 0:39	- 2.30	117	- 0:33									
- 2.15	244	+ 1:49	- 2.15	235	+ 1:40	- 2.15	253	+ 1:58	+ 2.15	113	- 0:22	- 2.15	108	- 0:27	- 2.15	109	- 0:26									
- 2.00	266	+ 2:26	- 2.00	242	+ 2:02	- 2.00	250	+ 2:10	+ 2.00	113	- 0:07	- 2.00	105	- 0:15	- 2.00	102	- 0:18									
- 1.45	268	+ 2:43	- 1.45	239	+ 2:14	- 1.45	243	+ 2:18	+ 1.45	114	+ 0:09	- 1.45	104	- 0:01	- 1.45	100	- 0:05									
- 1.30	271	+ 3:01	- 1.30	236	+ 2:26	- 1.30	236	+ 2:26	+ 1.30	115	+ 0:25	- 1.30	102	+ 0:12	- 1.30	98	+ 0:08									
- 1.15	273	+ 3:18	- 1.15	233	+ 2:38	- 1.15	230	+ 2:35	+ 1.15	117	+ 0:42	- 1.15	101	+ 0:26	- 1.15	96	+ 0:21									
- 1.00	276	+ 3:36	- 1.00	230	+ 2:50	- 1.00	223	+ 2:43	+ 1.00	118	+ 0:58	- 1.00	99	+ 0:39	- 1.00	94	+ 0:34									
- 0.45	269	+ 3:44	- 0.45	224	+ 2:59	- 0.45	216	+ 2:51	+ 0.45	123	+ 1:18	- 0.45	100	+ 0:55	- 0.45	94	+ 0:49									
- 0.30	262	+ 3:52	- 0.30	217	+ 3:07	- 0.30	210	+ 3:00	+ 0.30	128	+ 1:38	- 0.30	101	+ 1:11	- 0.30	93	+ 1:03									
- 0.15	255	+ 4:00	- 0.15	211	+ 3:16	- 0.15	203	+ 3:08	+ 0.15	133	+ 1:58	- 0.15	102	+ 1:27	- 0.15	93	+ 1:18									
HW	248	+ 4:08	HW	205	+ 3:25	HW	197	+ 3:17	HW	138	+ 2:18	HW	104	+ 1:44	HW	92	+ 1:32									
+ 0.15	238	+ 4:13	+ 0.15	197	+ 3:32	+ 0.15	191	+ 3:26	+ 0.15	144	+ 2:39	+ 0.15	109	+ 2:04	+ 0.15	94	+ 1:49									
+ 0.30	229	+ 4:19	+ 0.30	190	+ 3:40	+ 0.30	185	+ 3:35	+ 0.30	149	+ 2:59	+ 0.30	114	+ 2:24	+ 0.30	96	+ 2:06									
+ 0.45	219	+ 4:24	+ 0.45	183	+ 3:48	+ 0.45	179	+ 3:44	+ 0.45	154	+ 3:19	+ 0.45	119	+ 2:44	+ 0.45	98	+ 2:23									
+ 1.00	210	+ 4:30	+ 1.00	176	+ 3:56	+ 1.00	174	+ 3:54	+ 1.00	160	+ 3:40	+ 1.00	124	+ 3:04	+ 1.00	99	+ 2:39									
+ 1.15	200	+ 4:35	+ 1.15	170	+ 4:05	+ 1.15	169	+ 4:04	+ 1.15	166	+ 4:01	+ 1.15	129	+ 3:24	+ 1.15	105	+ 3:00									
+ 1.30	190	+ 4:40	+ 1.30	164	+ 4:14	+ 1.30	165	+ 4:15	+ 1.30	173	+ 4:23	+ 1.30	134	+ 3:44	+ 1.30	110	+ 3:20									
+ 1.45	180	+ 4:45	+ 1.45	159	+ 4:24	+ 1.45	161	+ 4:26	+ 1.45	180	+ 4:45	+ 1.45	139	+ 4:04	+ 1.45	116	+ 3:41									
+ 2.00	169	+ 4:49	+ 2.00	153	+ 4:33	+ 2.00	157	+ 4:37	+ 2.00	186	+ 5:06	+ 2.00	144	+ 4:24	+ 2.00	121	+ 4:01									
+ 2.15	161	+ 4:56	+ 2.15	147	+ 4:42	+ 2.15	151	+ 4:46	+ 2.15	196	+ 5:31	+ 2.15	153	+ 4:48	+ 2.15	132	+ 4:27									
+ 2.30	153	+ 5:03	+ 2.30	140	+ 4:50	+ 2.30	145	+ 4:55	+ 2.30	206	+ 5:56	+ 2.30	163	+ 5:13	+ 2.30	143	+ 4:53									
+ 2.45	145	+ 5:10	+ 2.45	134	+ 4:59	+ 2.45	140	+ 5:05	+ 2.45	216	- 5:39	+ 2.45	173	+ 5:38	+ 2.45	154	+ 5:19									
+ 3.00	136	+ 5:16	+ 3.00	127	+ 5:07	+ 3.00	134	+ 5:14	+ 3.00	226	- 5:14	+ 3.00	182	- 5:58	+ 3.00	166	+ 5:46									
+ 3.15	131	+ 5:26	+ 3.15	123	+ 5:18	+ 3.15	131	+ 5:26	+ 3.15	233	- 4:52	+ 3.15	195	- 5:30	+ 3.15	181	- 5:44									
+ 3.30	125	+ 5:35	+ 3.30	118	+ 5:28	+ 3.30	128	+ 5:38	+ 3.30	239	- 4:31	+ 3.30	208	- 5:02	+ 3.30	196	- 5:14									
+ 3.45	119	+ 5:44	+ 3.45	114	+ 5:39	+ 3.45	125	+ 5:50	+ 3.45	246	- 4:09	+ 3.45	222	- 4:33	+ 3.45	211	- 4:44									
+ 4.00	114	+ 5:54	+ 4.00	110	+ 5:50	+ 4.00	122	- 5:58	- 4.00	253	- 3:47	+ 4.00	235	- 4:05	+ 4.00	227	- 4:13									
+ 4.15	111	- 5:54	+ 4.15	108	- 5:57	+ 4.15	120	- 5:45	- 4.15	252	- 3:33	+ 4.15	240	- 3:45	+ 4.15	240	- 3:45									
+ 4.30	109	- 5:41	+ 4.30	106	- 5:44	+ 4.30	119	- 5:31	- 4.30	251	- 3:18	+ 4.30	245	- 3:25	+ 4.30	253	- 3:17									
+ 4.45	106	- 5:29	+ 4.45	104	- 5:31	+ 4.45	117	- 5:18	- 4.45	252	- 3:04	+ 4.45	251	- 3:04	+ 4.45	266	- 2:49									
+ 5.00	104	- 5:16	+ 5.00	102	- 5:18	+ 5.00	115	- 5:05	- 5.00	251	- 2:49	+ 5.00	256	- 2:44	+ 5.00	278	- 2:22									
+ 5.15	102	- 5:03	+ 5.15	101	- 5:04	+ 5.15	116	- 4:49	- 5.15	245	- 2:40	+ 5.15	253	- 2:32	+ 5.15	280	- 2:05									
+ 5.30	100	- 4:50	+ 5.30	101	- 4:49	+ 5.30	117	- 4:33	- 5.30	239	- 2:31	+ 5.30	250	- 2:20	+ 5.30	282	- 1:48									
+ 5.45	98	- 4:37	+ 5.45	101	- 4:34	+ 5.45	118	- 4:17	- 5.45	234	- 2:21	+ 5.45	247	- 2:08	+ 5.45	284	- 1:31									
+ 6.00	96	- 4:24	+ 6.00	100	- 4:20	+ 6.00	119	- 4:01	- 6.00	228	- 2:12	+ 6.00	244	- 1:56	+ 6.00	286	- 1:14									

S O U T H B O U N D

N O R T H B O U N D







Neaps										All times relate to HW Dover										Time to cover Sectors (in minutes) at 6.0 Kts									
V1										V2										V3									
Boulogne to Etaples										Etaples/Pointe Haut-Banc										Pointe de Haut-Banc to ATSO									
Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector		
- 6.00	83	- 4:37	- 6.00	87	- 4:33	- 6.00	100	- 4:20	- 6.00	- 6.00	122	- 3:58	- 6.00	117	- 4:03	- 6.00	122	- 3:58	- 6.00	122	- 3:58	- 6.00	122	- 3:58	- 6.00	122	- 3:58		
- 5.45	83	- 4:22	- 5.45	87	- 4:18	- 5.45	101	- 4:04	- 5.45	- 5.45	121	- 3:44	- 5.45	116	- 3:49	- 5.45	122	- 3:43	- 5.45	122	- 3:43	- 5.45	122	- 3:43	- 5.45	122	- 3:43		
- 5.30	83	- 4:07	- 5.30	87	- 4:03	- 5.30	102	- 3:48	- 5.30	- 5.30	119	- 3:31	- 5.30	116	- 3:34	- 5.30	122	- 3:28	- 5.30	122	- 3:28	- 5.30	122	- 3:28	- 5.30	122	- 3:28		
- 5.15	83	- 3:52	- 5.15	87	- 3:48	- 5.15	103	- 3:32	- 5.15	- 5.15	118	- 3:17	- 5.15	115	- 3:20	- 5.15	122	- 3:13	- 5.15	122	- 3:13	- 5.15	122	- 3:13	- 5.15	122	- 3:13		
- 5.00	82	- 3:38	- 5.00	87	- 3:33	- 5.00	104	- 3:16	- 5.00	- 5.00	117	- 3:03	- 5.00	115	- 3:05	- 5.00	122	- 2:58	- 5.00	122	- 2:58	- 5.00	122	- 2:58	- 5.00	122	- 2:58		
- 4.45	84	- 3:21	- 4.45	88	- 3:17	- 4.45	107	- 2:58	- 4.45	- 4.45	115	- 2:50	- 4.45	113	- 2:52	- 4.45	120	- 2:45	- 4.45	120	- 2:45	- 4.45	120	- 2:45	- 4.45	120	- 2:45		
- 4.30	85	- 3:05	- 4.30	89	- 3:01	- 4.30	110	- 2:40	- 4.30	- 4.30	113	- 2:37	- 4.30	111	- 2:39	- 4.30	119	- 2:31	- 4.30	119	- 2:31	- 4.30	119	- 2:31	- 4.30	119	- 2:31		
- 4.15	87	- 2:48	- 4.15	90	- 2:45	- 4.15	112	- 2:23	- 4.15	- 4.15	110	- 2:25	- 4.15	108	- 2:27	- 4.15	117	- 2:18	- 4.15	117	- 2:18	- 4.15	117	- 2:18	- 4.15	117	- 2:18		
- 4.00	89	- 2:31	- 4.00	91	- 2:29	- 4.00	115	- 2:05	- 4.00	- 4.00	108	- 2:12	- 4.00	106	- 2:14	- 4.00	115	- 2:05	- 4.00	115	- 2:05	- 4.00	115	- 2:05	- 4.00	115	- 2:05		
- 3.45	91	- 2:14	- 3.45	94	- 2:11	- 3.45	118	- 1:47	- 3.45	- 3.45	106	- 1:59	- 3.45	103	- 2:02	- 3.45	111	- 1:54	- 3.45	111	- 1:54	- 3.45	111	- 1:54	- 3.45	111	- 1:54		
- 3.30	93	- 1:57	- 3.30	97	- 1:53	- 3.30	121	- 1:29	- 3.30	- 3.30	104	- 1:46	- 3.30	101	- 1:49	- 3.30	108	- 1:42	- 3.30	108	- 1:42	- 3.30	108	- 1:42	- 3.30	108	- 1:42		
- 3.15	96	- 1:39	- 3.15	101	- 1:34	- 3.15	123	- 1:12	- 3.15	- 3.15	102	- 1:33	- 3.15	98	- 1:37	- 3.15	104	- 1:31	- 3.15	104	- 1:31	- 3.15	104	- 1:31	- 3.15	104	- 1:31		
- 3.00	98	- 1:22	- 3.00	104	- 1:16	- 3.00	126	- 0:54	- 3.00	- 3.00	99	- 1:21	- 3.00	96	- 1:24	- 3.00	100	- 1:20	- 3.00	100	- 1:20	- 3.00	100	- 1:20	- 3.00	100	- 1:20		
- 2.45	101	- 1:04	- 2.45	106	- 0:59	- 2.45	127	- 0:38	- 2.45	- 2.45	99	- 1:06	- 2.45	94	- 1:11	- 2.45	98	- 1:07	- 2.45	98	- 1:07	- 2.45	98	- 1:07	- 2.45	98	- 1:07		
- 2.30	104	- 0:46	- 2.30	109	- 0:41	- 2.30	128	- 0:22	- 2.30	- 2.30	98	- 0:52	- 2.30	92	- 0:58	- 2.30	96	- 0:54	- 2.30	96	- 0:54	- 2.30	96	- 0:54	- 2.30	96	- 0:54		
- 2.15	107	- 0:28	- 2.15	111	- 0:24	- 2.15	129	- 0:06	- 2.15	- 2.15	97	- 0:38	- 2.15	91	- 0:44	- 2.15	93	- 0:42	- 2.15	93	- 0:42	- 2.15	93	- 0:42	- 2.15	93	- 0:42		
- 2.00	110	- 0:10	- 2.00	113	- 0:07	- 2.00	130	+ 0:10	- 2.00	- 2.00	96	- 0:24	- 2.00	89	- 0:31	- 2.00	91	- 0:29	- 2.00	91	- 0:29	- 2.00	91	- 0:29	- 2.00	91	- 0:29		
- 1.45	113	+ 0:08	- 1.45	114	+ 0:09	- 1.45	130	+ 0:25	- 1.45	- 1.45	96	- 0:09	- 1.45	88	- 0:17	- 1.45	90	- 0:15	- 1.45	90	- 0:15	- 1.45	90	- 0:15	- 1.45	90	- 0:15		
- 1.30	115	+ 0:25	- 1.30	115	+ 0:25	- 1.30	129	+ 0:39	- 1.30	- 1.30	96	+ 0:06	- 1.30	88	- 0:02	- 1.30	88	- 0:02	- 1.30	88	- 0:02	- 1.30	88	- 0:02	- 1.30	88	- 0:02		
- 1.15	118	+ 0:43	- 1.15	116	+ 0:41	- 1.15	128	+ 0:53	- 1.15	- 1.15	96	+ 0:21	- 1.15	87	+ 0:12	- 1.15	86	+ 0:11	- 1.15	86	+ 0:11	- 1.15	86	+ 0:11	- 1.15	86	+ 0:11		
- 1.00	120	+ 1:00	- 1.00	117	+ 0:57	- 1.00	128	+ 1:08	- 1.00	- 1.00	96	+ 0:36	- 1.00	87	+ 0:27	- 1.00	85	+ 0:25	- 1.00	85	+ 0:25	- 1.00	85	+ 0:25	- 1.00	85	+ 0:25		
- 0.45	121	+ 1:16	- 0.45	117	+ 1:12	- 0.45	127	+ 1:22	- 0.45	- 0.45	96	+ 0:51	- 0.45	87	+ 0:42	- 0.45	84	+ 0:39	- 0.45	84	+ 0:39	- 0.45	84	+ 0:39	- 0.45	84	+ 0:39		
- 0.30	123	+ 1:33	- 0.30	117	+ 1:27	- 0.30	126	+ 1:36	- 0.30	- 0.30	97	+ 1:07	- 0.30	87	+ 0:57	- 0.30	84	+ 0:54	- 0.30	84	+ 0:54	- 0.30	84	+ 0:54	- 0.30	84	+ 0:54		
- 0.15	124	+ 1:49	- 0.15	117	+ 1:42	- 0.15	125	+ 1:50	- 0.15	- 0.15	98	+ 1:23	- 0.15	87	+ 1:12	- 0.15	84	+ 1:09	- 0.15	84	+ 1:09	- 0.15	84	+ 1:09	- 0.15	84	+ 1:09		
HW	125	+ 2:05	HW	117	+ 1:57	HW	124	+ 2:04	HW	HW	99	+ 1:39	HW	87	+ 1:27	HW	83	+ 1:23	HW	83	+ 1:23	HW	83	+ 1:23	HW	83	+ 1:23		
+ 0.15	124	+ 2:19	+ 0.15	116	+ 2:11	+ 0.15	122	+ 2:17	+ 0.15	+ 0.15	101	+ 1:56	+ 0.15	88	+ 1:43	+ 0.15	84	+ 1:39	+ 0.15	84	+ 1:39	+ 0.15	84	+ 1:39	+ 0.15	84	+ 1:39		
+ 0.30	122	+ 2:32	+ 0.30	114	+ 2:24	+ 0.30	120	+ 2:30	+ 0.30	+ 0.30	103	+ 2:13	+ 0.30	90	+ 2:00	+ 0.30	85	+ 1:55	+ 0.30	85	+ 1:55	+ 0.30	85	+ 1:55	+ 0.30	85	+ 1:55		
+ 0.45	121	+ 2:46	+ 0.45	113	+ 2:38	+ 0.45	118	+ 2:43	+ 0.45	+ 0.45	104	+ 2:29	+ 0.45	92	+ 2:17	+ 0.45	85	+ 2:10	+ 0.45	85	+ 2:10	+ 0.45	85	+ 2:10	+ 0.45	85	+ 2:10		
+ 1.00	119	+ 2:59	+ 1.00	111	+ 2:51	+ 1.00	116	+ 2:56	+ 1.00	+ 1.00	106	+ 2:46	+ 1.00	93	+ 2:33	+ 1.00	86	+ 2:26	+ 1.00	86	+ 2:26	+ 1.00	86	+ 2:26	+ 1.00	86	+ 2:26		
+ 1.15	117	+ 3:12	+ 1.15	109	+ 3:04	+ 1.15	115	+ 3:10	+ 1.15	+ 1.15	108	+ 3:03	+ 1.15	94	+ 2:49	+ 1.15	87	+ 2:42	+ 1.15	87	+ 2:42	+ 1.15	87	+ 2:42	+ 1.15	87	+ 2:42		
+ 1.30	115	+ 3:25	+ 1.30	107	+ 3:17	+ 1.30	113	+ 3:23	+ 1.30	+ 1.30	110	+ 3:20	+ 1.30	95	+ 3:05	+ 1.30	88	+ 2:58	+ 1.30	88	+ 2:58	+ 1.30	88	+ 2:58	+ 1.30	88	+ 2:58		
+ 1.45	113	+ 3:38	+ 1.45	104	+ 3:29	+ 1.45	111	+ 3:36	+ 1.45	+ 1.45	112	+ 3:37	+ 1.45	95	+ 3:20	+ 1.45	90	+ 3:15	+ 1.45	90	+ 3:15	+ 1.45	90	+ 3:15	+ 1.45	90	+ 3:15		
+ 2.00	111	+ 3:51	+ 2.00	102	+ 3:42	+ 2.00	109	+ 3:49	+ 2.00	+ 2.00	114	+ 3:54	+ 2.00	96	+ 3:36	+ 2.00	91	+ 3:31	+ 2.00	91	+ 3:31	+ 2.00	91	+ 3:31	+ 2.00	91	+ 3:31		
+ 2.15	109	+ 4:04	+ 2.15	101	+ 3:56	+ 2.15	109	+ 4:04	+ 2.15	+ 2.15	114	+ 4:09	+ 2.15	97	+ 3:52	+ 2.15	92	+ 3:47	+ 2.15	92	+ 3:47	+ 2.15	92	+ 3:47	+ 2.15	92	+ 3:47		
+ 2.30	107	+ 4:17	+ 2.30	100	+ 4:10	+ 2.30	108	+ 4:18	+ 2.30	+ 2.30	115	+ 4:25	+ 2.30	98	+ 4:08	+ 2.30	93	+ 4:03	+ 2.30	93	+ 4:03	+ 2.30	93	+ 4:03	+ 2.30	93	+ 4:03		
+ 2.45	105	+ 4:30	+ 2.45	99	+ 4:24	+ 2.45	108	+ 4:33	+ 2.45	+ 2.45	116	+ 4:41	+ 2.45	99	+ 4:24	+ 2.45	95	+ 4:20	+ 2.45	95	+ 4:20	+ 2.45	95	+ 4:20	+ 2.45	95	+ 4:20		
+ 3.00	102	+ 4:42	+ 3.00	99	+ 4:39	+ 3.00	107	+ 4:47	+ 3.00	+ 3.00	116	+ 4:56	+ 3.00	100	+ 4:40	+ 3.00	96	+ 4:36	+ 3.00	96	+ 4:36	+ 3.00	96	+ 4:36	+ 3.00	96	+ 4:36		
+ 3.15	100	+ 4:55	+ 3.15	97	+ 4:52	+ 3.15	106	+ 5:01	+ 3.15	+ 3.15	117	+ 5:12	+ 3.15	102	+ 4:57	+ 3.15	98	+ 4:53	+ 3.15	98	+ 4:53	+ 3.15	98	+ 4:53	+ 3.15	98	+ 4:53		
+ 3.30	98	+ 5:08	+ 3.30	96	+ 5:06	+ 3.30	105	+ 5:15	+ 3.30	+ 3.30	118	+ 5:28	+ 3.30	103	+ 5:13	+ 3.30	100	+ 5:10	+ 3.30	100	+ 5:10	+ 3.30	100	+ 5:10	+ 3.30	100	+ 5:10		
+ 3.45	96	+ 5:21	+ 3.45	94	+ 5:19	+ 3.45	104	+ 5:29	+ 3.45	+ 3.45	119	+ 5:44	+ 3.45	105	+ 5:30	+ 3.45	102	+ 5:27	+ 3.45	102	+ 5:27	+ 3.45	102	+ 5:27	+ 3.45	102	+ 5:27		
+ 4.00	95	+ 5:35	+ 4.00	93	+ 5:33	+ 4.00	103	+ 5:43	+ 4.00	+ 4.00	120	- 6:00	+ 4.00	106	+ 5:46	+ 4.00	104	+ 5:44	+ 4.00	104	+ 5:44	+ 4.00	104	+ 5:44	+ 4.00	104	+ 5:44		
+ 4.15	93	+ 5:48	+ 4.15	92	+ 5:47	+ 4.15	102	+ 5:57	+ 4.15	+ 4.15	123	- 5:42	+ 4.15	109	- 5:56	+ 4.15	107	- 5:58	+ 4.15	107	- 5:58	+ 4.15	107	- 5:58	+ 4.15	107	- 5:58		
+ 4.30	92	- 5:58	+ 4.30	90	- 6:00	+ 4.30	100	- 5:50	+ 4.30	+ 4.30	125	- 5:25	+ 4.30	112	- 5:38	+ 4.30	110	- 5:40	+ 4.30	110	- 5:40	+ 4.30	110	- 5:40	+ 4.30	110	- 5:40		
+ 4.45	91	- 5:44	+ 4.45	89	- 5:46	+ 4.45	99	- 5:36	+ 4.45	+ 4.45	127	- 5:08	+ 4.45	115	- 5:20	+ 4.45	113	- 5:22	+ 4.45	113	- 5:22	+ 4.45	113	- 5:22	+ 4.45	113	- 5:22		
+ 5.00	89	- 5:31	+ 5.00	88	- 5:32	+ 5.00	97	- 5:23	+ 5.00	+ 5.00	130	- 4:50	+ 5.00	118															

Time to cover Sectors (in minutes) at 6.0 kts								All times relate to HW Dover								Springs							
V1				V2				V3				V3				V2				V1			
Boulogne to Etapes				Etapes/Pointe Haut-Banc				Pointe de Haut-Banc to ATSO				ATSO to Pointe de Haut-Banc				Pointe de Haut-Banc to Etapes				Etapes to Boulogne			
Time	Time at End of Sector			Time	Time at End of Sector			Time	Time at End of Sector			Time	Time at End of Sector			Time	Time at End of Sector			Time	Time at End of Sector		
	Duration				Duration				Duration				Duration				Duration				Duration		
- 6.00	63	- 4:57		- 6.00	72	- 4:48		- 6.00	90	- 4:30		- 6.00	137	- 3:43		- 6.00	138	- 3:42		- 6.00	164	- 3:16	
- 5.45	63	- 4:42		- 5.45	72	- 4:33		- 5.45	91	- 4:14		- 5.45	132	- 3:33		- 5.45	135	- 3:30		- 5.45	160	- 3:05	
- 5.30	62	- 4:28		- 5.30	72	- 4:18		- 5.30	93	- 3:57		- 5.30	128	- 3:22		- 5.30	132	- 3:18		- 5.30	157	- 2:53	
- 5.15	62	- 4:13		- 5.15	72	- 4:03		- 5.15	94	- 3:41		- 5.15	123	- 3:12		- 5.15	129	- 3:06		- 5.15	154	- 2:41	
- 5.00	62	- 3:58		- 5.00	72	- 3:48		- 5.00	96	- 3:24		- 5.00	119	- 3:01		- 5.00	126	- 2:54		- 5.00	151	- 2:29	
- 4.45	65	- 3:40		- 4.45	77	- 3:28		- 4.45	102	- 3:03		- 4.45	115	- 2:50		- 4.45	121	- 2:44		- 4.45	143	- 2:22	
- 4.30	68	- 3:22		- 4.30	81	- 3:09		- 4.30	109	- 2:41		- 4.30	110	- 2:40		- 4.30	117	- 2:33		- 4.30	136	- 2:14	
- 4.15	72	- 3:03		- 4.15	86	- 2:49		- 4.15	115	- 2:20		- 4.15	106	- 2:29		- 4.15	112	- 2:23		- 4.15	128	- 2:07	
- 4.00	75	- 2:45		- 4.00	91	- 2:29		- 4.00	121	- 1:59		- 4.00	102	- 2:18		- 4.00	107	- 2:13		- 4.00	121	- 1:59	
- 3.45	82	- 2:23		- 3.45	96	- 2:09		- 3.45	129	- 1:36		- 3.45	99	- 2:06		- 3.45	103	- 2:02		- 3.45	115	- 1:50	
- 3.30	88	- 2:02		- 3.30	100	- 1:50		- 3.30	137	- 1:13		- 3.30	97	- 1:53		- 3.30	99	- 1:51		- 3.30	109	- 1:41	
- 3.15	95	- 1:40		- 3.15	105	- 1:30		- 3.15	145	- 0:50		- 3.15	94	- 1:41		- 3.15	96	- 1:39		- 3.15	103	- 1:32	
- 3.00	102	- 1:18		- 3.00	110	- 1:10		- 3.00	153	- 0:27		- 3.00	91	- 1:29		- 3.00	92	- 1:28		- 3.00	97	- 1:23	
- 2.45	108	- 0:57		- 2.45	115	- 0:50		- 2.45	153	- 0:12		- 2.45	88	- 1:17		- 2.45	88	- 1:17		- 2.45	94	- 1:11	
- 2.30	114	- 0:36		- 2.30	120	- 0:30		- 2.30	154	+ 0:04		- 2.30	85	- 1:05		- 2.30	84	- 1:06		- 2.30	90	- 1:00	
- 2.15	120	- 0:15		- 2.15	125	- 0:10		- 2.15	155	+ 0:20		- 2.15	82	- 0:53		- 2.15	80	- 0:55		- 2.15	87	- 0:48	
- 2.00	126	+ 0:06		- 2.00	130	+ 0:10		- 2.00	155	+ 0:35		- 2.00	79	- 0:41		- 2.00	76	- 0:44		- 2.00	83	- 0:37	
- 1.45	134	+ 0:29		- 1.45	132	+ 0:27		- 1.45	153	+ 0:48		- 1.45	80	- 0:25		- 1.45	75	- 0:30		- 1.45	79	- 0:26	
- 1.30	142	+ 0:52		- 1.30	134	+ 0:44		- 1.30	150	+ 1:00		- 1.30	81	- 0:09		- 1.30	74	- 0:16		- 1.30	74	- 0:16	
- 1.15	150	+ 1:15		- 1.15	137	+ 1:02		- 1.15	148	+ 1:13		- 1.15	82	+ 0:07		- 1.15	73	- 0:02		- 1.15	69	- 0:06	
- 1.00	157	+ 1:37		- 1.00	139	+ 1:19		- 1.00	146	+ 1:26		- 1.00	84	+ 0:24		- 1.00	72	+ 0:12		- 1.00	65	+ 0:05	
- 0.45	157	+ 1:52		- 0.45	137	+ 1:32		- 0.45	142	+ 1:37		- 0.45	86	+ 0:41		- 0.45	72	+ 0:27		- 0.45	65	+ 0:20	
- 0.30	157	+ 2:07		- 0.30	136	+ 1:46		- 0.30	138	+ 1:48		- 0.30	88	+ 0:58		- 0.30	71	+ 0:41		- 0.30	65	+ 0:35	
- 0.15	157	+ 2:22		- 0.15	134	+ 1:59		- 0.15	135	+ 2:00		- 0.15	90	+ 1:15		- 0.15	71	+ 0:56		- 0.15	64	+ 0:49	
HW	157	+ 2:37		HW	132	+ 2:12		HW	131	+ 2:11		HW	92	+ 1:32		HW	70	+ 1:10		HW	64	+ 1:04	
+ 0.15	152	+ 2:47		+ 0.15	128	+ 2:23		+ 0.15	128	+ 2:23		+ 0.15	95	+ 1:50		+ 0.15	74	+ 1:29		+ 0.15	65	+ 1:20	
+ 0.30	147	+ 2:57		+ 0.30	124	+ 2:34		+ 0.30	124	+ 2:34		+ 0.30	99	+ 2:09		+ 0.30	77	+ 1:47		+ 0.30	66	+ 1:36	
+ 0.45	142	+ 3:07		+ 0.45	120	+ 2:45		+ 0.45	121	+ 2:46		+ 0.45	102	+ 2:27		+ 0.45	80	+ 2:05		+ 0.45	67	+ 1:52	
+ 1.00	137	+ 3:17		+ 1.00	116	+ 2:56		+ 1.00	118	+ 2:58		+ 1.00	106	+ 2:46		+ 1.00	84	+ 2:24		+ 1.00	69	+ 2:09	
+ 1.15	132	+ 3:27		+ 1.15	113	+ 3:08		+ 1.15	116	+ 3:11		+ 1.15	108	+ 3:03		+ 1.15	86	+ 2:41		+ 1.15	72	+ 2:27	
+ 1.30	128	+ 3:38		+ 1.30	110	+ 3:20		+ 1.30	114	+ 3:24		+ 1.30	110	+ 3:20		+ 1.30	89	+ 2:59		+ 1.30	75	+ 2:45	
+ 1.45	123	+ 3:48		+ 1.45	107	+ 3:32		+ 1.45	112	+ 3:37		+ 1.45	112	+ 3:37		+ 1.45	92	+ 3:17		+ 1.45	78	+ 3:03	
+ 2.00	118	+ 3:58		+ 2.00	104	+ 3:44		+ 2.00	110	+ 3:50		+ 2.00	114	+ 3:54		+ 2.00	95	+ 3:35		+ 2.00	81	+ 3:21	
+ 2.15	114	+ 4:09		+ 2.15	102	+ 3:57		+ 2.15	108	+ 4:03		+ 2.15	116	+ 4:11		+ 2.15	97	+ 3:52		+ 2.15	84	+ 3:39	
+ 2.30	110	+ 4:20		+ 2.30	101	+ 4:11		+ 2.30	106	+ 4:16		+ 2.30	119	+ 4:29		+ 2.30	98	+ 4:08		+ 2.30	88	+ 3:58	
+ 2.45	105	+ 4:30		+ 2.45	99	+ 4:24		+ 2.45	104	+ 4:29		+ 2.45	121	+ 4:46		+ 2.45	100	+ 4:25		+ 2.45	92	+ 4:17	
+ 3.00	101	+ 4:41		+ 3.00	97	+ 4:37		+ 3.00	102	+ 4:42		+ 3.00	124	+ 5:04		+ 3.00	102	+ 4:42		+ 3.00	96	+ 4:36	
+ 3.15	97	+ 4:52		+ 3.15	93	+ 4:48		+ 3.15	100	+ 4:55		+ 3.15	128	+ 5:23		+ 3.15	107	+ 5:02		+ 3.15	102	+ 4:57	
+ 3.30	93	+ 5:03		+ 3.30	89	+ 4:59		+ 3.30	98	+ 5:08		+ 3.30	132	+ 5:42		+ 3.30	112	+ 5:22		+ 3.30	107	+ 5:17	
+ 3.45	89	+ 5:14		+ 3.45	85	+ 5:10		+ 3.45	95	+ 5:20		+ 3.45	135	- 6:00		+ 3.45	118	+ 5:43		+ 3.45	112	+ 5:37	
+ 4.00	86	+ 5:26		+ 4.00	82	+ 5:22		+ 4.00	93	+ 5:33		+ 4.00	139	- 5:41		+ 4.00	123	- 5:57		+ 4.00	118	+ 5:58	
+ 4.15	83	+ 5:38		+ 4.15	80	+ 5:35		+ 4.15	91	+ 5:46		+ 4.15	142	- 5:23		+ 4.15	126	- 5:39		+ 4.15	121	- 5:44	
+ 4.30	81	+ 5:51		+ 4.30	78	+ 5:48		+ 4.30	89	+ 5:59		+ 4.30	146	- 5:04		+ 4.30	129	- 5:21		+ 4.30	125	- 5:25	
+ 4.45	78	- 5:57		+ 4.45	75	- 6:00		+ 4.45	87	- 5:48		+ 4.45	149	- 4:46		+ 4.45	132	- 5:03		+ 4.45	129	- 5:06	
+ 5.00	75	- 5:45		+ 5.00	73	- 5:47		+ 5.00	85	- 5:35		+ 5.00	152	- 4:28		+ 5.00	136	- 4:44		+ 5.00	132	- 4:48	
+ 5.15	75	- 5:30		+ 5.15	73	- 5:32		+ 5.15	85	- 5:20		+ 5.15	150	- 4:15		+ 5.15	136	- 4:29		+ 5.15	138	- 4:27	
+ 5.30	74	- 5:16		+ 5.30	73	- 5:17		+ 5.30	84	- 5:06		+ 5.30	149	- 4:01		+ 5.30	137	- 4:13		+ 5.30	143	- 4:07	
+ 5.45	73	- 5:02		+ 5.45	73	- 5:02		+ 5.45	83	- 4:52		+ 5.45	147	- 3:48		+ 5.45	137	- 3:58		+ 5.45	149	- 3:46	
+ 6.00	73	- 4:47		+ 6.00	72	- 4:48		+ 6.00	83	- 4:37		+ 6.00	145	- 3:35		+ 6.00	138	- 3:42		+ 6.00	154	- 3:26	

SOUTH BOUND

NORTH BOUND

Neaps										All times relate to HW Dover										Time to cover Sectors (in minutes) at 7.0 Kts									
V1					V2					V3					V3					V2					V1				
Boulogne to Etaples					Etaples/Pointe Haut-Banc					Pointe de Haut-Banc to ATSO					ATSO to Pointe de Haut-Banc					Pointe de Haut-Banc to Etaples					Etaples to Boulogne				
Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector			
- 6.00	74	- 4:46	- 6.00	76	- 4:44	- 6.00	89	- 4:31	- 6.00	107	- 4:13	- 6.00	101	- 4:19	- 6.00	104	- 4:16												
- 5.45	73	- 4:32	- 5.45	76	- 4:29	- 5.45	89	- 4:16	- 5.45	106	- 3:59	- 5.45	101	- 4:04	- 5.45	105	- 4:00												
- 5.30	73	- 4:17	- 5.30	76	- 4:14	- 5.30	90	- 4:00	- 5.30	105	- 3:45	- 5.30	100	- 3:50	- 5.30	106	- 3:44												
- 5.15	73	- 4:02	- 5.15	76	- 3:59	- 5.15	90	- 3:45	- 5.15	103	- 3:32	- 5.15	100	- 3:35	- 5.15	107	- 3:28												
- 5.00	73	- 3:47	- 5.00	76	- 3:44	- 5.00	91	- 3:29	- 5.00	102	- 3:18	- 5.00	100	- 3:20	- 5.00	107	- 3:13												
- 4.45	74	- 3:31	- 4.45	77	- 3:28	- 4.45	92	- 3:13	- 4.45	100	- 3:05	- 4.45	98	- 3:07	- 4.45	106	- 2:59												
- 4.30	75	- 3:15	- 4.30	79	- 3:11	- 4.30	94	- 2:56	- 4.30	98	- 2:52	- 4.30	96	- 2:54	- 4.30	104	- 2:46												
- 4.15	76	- 2:59	- 4.15	80	- 2:55	- 4.15	95	- 2:40	- 4.15	97	- 2:38	- 4.15	95	- 2:40	- 4.15	102	- 2:33												
- 4.00	77	- 2:43	- 4.00	82	- 2:38	- 4.00	96	- 2:24	- 4.00	95	- 2:25	- 4.00	93	- 2:27	- 4.00	100	- 2:20												
- 3.45	79	- 2:26	- 3.45	83	- 2:22	- 3.45	99	- 2:06	- 3.45	93	- 2:12	- 3.45	90	- 2:15	- 3.45	96	- 2:09												
- 3.30	81	- 2:09	- 3.30	85	- 2:05	- 3.30	102	- 1:48	- 3.30	91	- 1:59	- 3.30	88	- 2:02	- 3.30	92	- 1:58												
- 3.15	83	- 1:52	- 3.15	86	- 1:49	- 3.15	104	- 1:31	- 3.15	90	- 1:45	- 3.15	85	- 1:50	- 3.15	89	- 1:46												
- 3.00	85	- 1:35	- 3.00	88	- 1:32	- 3.00	107	- 1:13	- 3.00	88	- 1:32	- 3.00	83	- 1:37	- 3.00	85	- 1:35												
- 2.45	87	- 1:18	- 2.45	90	- 1:15	- 2.45	108	- 0:57	- 2.45	88	- 1:17	- 2.45	82	- 1:23	- 2.45	84	- 1:21												
- 2.30	89	- 1:01	- 2.30	91	- 0:59	- 2.30	109	- 0:41	- 2.30	87	- 1:03	- 2.30	80	- 1:10	- 2.30	82	- 1:08												
- 2.15	91	- 0:44	- 2.15	93	- 0:42	- 2.15	110	- 0:25	- 2.15	86	- 0:49	- 2.15	79	- 0:56	- 2.15	81	- 0:54												
- 2.00	92	- 0:28	- 2.00	95	- 0:25	- 2.00	111	- 0:09	- 2.00	86	- 0:34	- 2.00	78	- 0:42	- 2.00	80	- 0:40												
- 1.45	95	- 0:10	- 1.45	97	- 0:08	- 1.45	111	+ 0:06	- 1.45	86	- 0:19	- 1.45	77	- 0:28	- 1.45	79	- 0:26												
- 1.30	97	+ 0:07	- 1.30	98	+ 0:08	- 1.30	111	+ 0:21	- 1.30	86	- 0:04	- 1.30	77	- 0:13	- 1.30	77	- 0:13												
- 1.15	99	+ 0:24	- 1.15	100	+ 0:25	- 1.15	111	+ 0:36	- 1.15	86	+ 0:11	- 1.15	76	+ 0:01	- 1.15	76	+ 0:01												
- 1.00	101	+ 0:41	- 1.00	101	+ 0:41	- 1.00	111	+ 0:51	- 1.00	87	+ 0:27	- 1.00	76	+ 0:16	- 1.00	75	+ 0:15												
- 0.45	103	+ 0:58	- 0.45	101	+ 0:56	- 0.45	110	+ 1:05	- 0.45	87	+ 0:42	- 0.45	76	+ 0:31	- 0.45	74	+ 0:29												
- 0.30	104	+ 1:14	- 0.30	101	+ 1:11	- 0.30	108	+ 1:18	- 0.30	88	+ 0:58	- 0.30	76	+ 0:46	- 0.30	74	+ 0:44												
- 0.15	106	+ 1:31	- 0.15	100	+ 1:25	- 0.15	107	+ 1:32	- 0.15	88	+ 1:13	- 0.15	76	+ 1:01	- 0.15	74	+ 0:59												
HW	107	+ 1:47	HW	100	+ 1:40	HW	106	+ 1:46	HW	88	+ 1:28	HW	76	+ 1:16	HW	73	+ 1:13												
+ 0.15	106	+ 2:01	+ 0.15	99	+ 1:54	+ 0.15	105	+ 2:00	+ 0.15	89	+ 1:44	+ 0.15	77	+ 1:32	+ 0.15	74	+ 1:29												
+ 0.30	105	+ 2:15	+ 0.30	98	+ 2:08	+ 0.30	103	+ 2:13	+ 0.30	89	+ 1:59	+ 0.30	78	+ 1:48	+ 0.30	74	+ 1:44												
+ 0.45	104	+ 2:29	+ 0.45	97	+ 2:22	+ 0.45	102	+ 2:27	+ 0.45	90	+ 2:15	+ 0.45	79	+ 2:04	+ 0.45	75	+ 2:00												
+ 1.00	103	+ 2:43	+ 1.00	96	+ 2:36	+ 1.00	101	+ 2:41	+ 1.00	90	+ 2:30	+ 1.00	80	+ 2:20	+ 1.00	75	+ 2:15												
+ 1.15	101	+ 2:56	+ 1.15	93	+ 2:48	+ 1.15	99	+ 2:54	+ 1.15	92	+ 2:47	+ 1.15	81	+ 2:36	+ 1.15	76	+ 2:31												
+ 1.30	100	+ 3:10	+ 1.30	91	+ 3:01	+ 1.30	98	+ 3:08	+ 1.30	93	+ 3:03	+ 1.30	82	+ 2:52	+ 1.30	77	+ 2:47												
+ 1.45	99	+ 3:24	+ 1.45	89	+ 3:14	+ 1.45	97	+ 3:22	+ 1.45	94	+ 3:19	+ 1.45	83	+ 3:08	+ 1.45	78	+ 3:03												
+ 2.00	97	+ 3:37	+ 2.00	87	+ 3:27	+ 2.00	95	+ 3:35	+ 2.00	96	+ 3:36	+ 2.00	84	+ 3:24	+ 2.00	79	+ 3:19												
+ 2.15	95	+ 3:50	+ 2.15	86	+ 3:41	+ 2.15	95	+ 3:50	+ 2.15	96	+ 3:51	+ 2.15	84	+ 3:39	+ 2.15	80	+ 3:35												
+ 2.30	92	+ 4:02	+ 2.30	86	+ 3:56	+ 2.30	94	+ 4:04	+ 2.30	97	+ 4:07	+ 2.30	84	+ 3:54	+ 2.30	81	+ 3:51												
+ 2.45	89	+ 4:14	+ 2.45	86	+ 4:11	+ 2.45	94	+ 4:19	+ 2.45	98	+ 4:23	+ 2.45	85	+ 4:10	+ 2.45	82	+ 4:07												
+ 3.00	87	+ 4:27	+ 3.00	85	+ 4:25	+ 3.00	93	+ 4:33	+ 3.00	98	+ 4:38	+ 3.00	85	+ 4:25	+ 3.00	84	+ 4:24												
+ 3.15	86	+ 4:41	+ 3.15	84	+ 4:39	+ 3.15	92	+ 4:47	+ 3.15	100	+ 4:55	+ 3.15	87	+ 4:42	+ 3.15	85	+ 4:40												
+ 3.30	84	+ 4:54	+ 3.30	83	+ 4:53	+ 3.30	91	+ 5:01	+ 3.30	101	+ 5:11	+ 3.30	88	+ 4:58	+ 3.30	86	+ 4:56												
+ 3.45	83	+ 5:08	+ 3.45	81	+ 5:06	+ 3.45	90	+ 5:15	+ 3.45	103	+ 5:28	+ 3.45	90	+ 5:15	+ 3.45	88	+ 5:13												
+ 4.00	81	+ 5:21	+ 4.00	80	+ 5:20	+ 4.00	89	+ 5:29	+ 4.00	104	+ 5:44	+ 4.00	91	+ 5:31	+ 4.00	89	+ 5:29												
+ 4.15	80	+ 5:35	+ 4.15	79	+ 5:34	+ 4.15	89	+ 5:44	+ 4.15	105	- 6:00	+ 4.15	93	+ 5:48	+ 4.15	91	+ 5:46												
+ 4.30	79	+ 5:49	+ 4.30	78	+ 5:48	+ 4.30	88	+ 5:58	+ 4.30	107	- 5:43	+ 4.30	95	- 5:55	+ 4.30	93	- 5:57												
+ 4.45	79	- 5:56	+ 4.45	78	- 5:57	+ 4.45	88	- 5:47	+ 4.45	108	- 5:27	+ 4.45	97	- 5:38	+ 4.45	95	- 5:40												
+ 5.00	78	- 5:42	+ 5.00	77	- 5:43	+ 5.00	88	- 5:32	+ 5.00	109	- 5:11	+ 5.00	99	- 5:21	+ 5.00	97	- 5:23												
+ 5.15	77	- 5:28	+ 5.15	76	- 5:29	+ 5.15	87	- 5:18	+ 5.15	109	- 4:56	+ 5.15	100	- 5:05	+ 5.15	98	- 5:07												
+ 5.30	77	- 5:13	+ 5.30	76	- 5:14	+ 5.30	87	- 5:03	+ 5.30	109	- 4:41	+ 5.30	100	- 4:50	+ 5.30	99	- 4:51												
+ 5.45	77	- 4:58	+ 5.45	76	- 4:59	+ 5.45	86	- 4:49	+ 5.45	109	- 4:26	+ 5.45	101	- 4:34	+ 5.45	100	- 4:35												
+ 6.00	76	- 4:44	+ 6.00	76	- 4:44	+ 6.00	86	- 4:34	+ 6.00	110	- 4:10	+ 6.00	101	- 4:19	+ 6.00	101	- 4:19												

Time to cover Sectors (in minutes) at 7.0 kts									All times relate to HW Dover									Springs								
V1			V2			V3			V3			V2			V1											
Boulogne to Etaples			Etaples/Pointe Haut-Banc			Pointe de Haut-Banc to ATSO			ATSO to Pointe de Haut-Banc			Pointe de Haut-Banc to Etaples			Etaples to Boulogne											
Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector	Time	Duration	Time at End of Sector									
- 6.00	59	- 5:01	- 6.00	65	- 4:55	- 6.00	79	- 4:41	- 6.00	115	- 4:05	- 6.00	113	- 4:07	- 6.00	126	- 3:54									
- 5.45	59	- 4:46	- 5.45	65	- 4:40	- 5.45	80	- 4:25	- 5.45	112	- 3:53	- 5.45	112	- 3:53	- 5.45	125	- 3:40									
- 5.30	58	- 4:32	- 5.30	65	- 4:25	- 5.30	81	- 4:09	- 5.30	110	- 3:40	- 5.30	111	- 3:39	- 5.30	125	- 3:25									
- 5.15	58	- 4:17	- 5.15	65	- 4:10	- 5.15	83	- 3:52	- 5.15	107	- 3:28	- 5.15	110	- 3:25	- 5.15	124	- 3:11									
- 5.00	57	- 4:03	- 5.00	65	- 3:55	- 5.00	84	- 3:36	- 5.00	105	- 3:15	- 5.00	108	- 3:12	- 5.00	124	- 2:56									
- 4.45	60	- 3:45	- 4.45	68	- 3:37	- 4.45	89	- 3:16	- 4.45	101	- 3:04	- 4.45	104	- 3:01	- 4.45	119	- 2:46									
- 4.30	62	- 3:28	- 4.30	71	- 3:19	- 4.30	94	- 2:56	- 4.30	97	- 2:53	- 4.30	100	- 2:50	- 4.30	115	- 2:35									
- 4.15	64	- 3:11	- 4.15	74	- 3:01	- 4.15	99	- 2:36	- 4.15	94	- 2:41	- 4.15	97	- 2:38	- 4.15	110	- 2:25									
- 4.00	67	- 2:53	- 4.00	78	- 2:42	- 4.00	104	- 2:16	- 4.00	90	- 2:30	- 4.00	93	- 2:27	- 4.00	105	- 2:15									
- 3.45	71	- 2:34	- 3.45	81	- 2:24	- 3.45	108	- 1:57	- 3.45	87	- 2:18	- 3.45	90	- 2:15	- 3.45	100	- 2:05									
- 3.30	75	- 2:15	- 3.30	84	- 2:06	- 3.30	112	- 1:38	- 3.30	84	- 2:06	- 3.30	87	- 2:03	- 3.30	95	- 1:55									
- 3.15	80	- 1:55	- 3.15	87	- 1:48	- 3.15	116	- 1:19	- 3.15	82	- 1:53	- 3.15	83	- 1:52	- 3.15	90	- 1:45									
- 3.00	84	- 1:36	- 3.00	91	- 1:29	- 3.00	120	- 1:00	- 3.00	79	- 1:41	- 3.00	80	- 1:40	- 3.00	85	- 1:35									
- 2.45	89	- 1:16	- 2.45	95	- 1:10	- 2.45	121	- 0:44	- 2.45	77	- 1:28	- 2.45	78	- 1:27	- 2.45	82	- 1:23									
- 2.30	93	- 0:57	- 2.30	99	- 0:51	- 2.30	123	- 0:27	- 2.30	76	- 1:14	- 2.30	75	- 1:15	- 2.30	79	- 1:11									
- 2.15	97	- 0:38	- 2.15	103	- 0:32	- 2.15	124	- 0:11	- 2.15	74	- 1:01	- 2.15	72	- 1:03	- 2.15	76	- 0:59									
- 2.00	101	- 0:19	- 2.00	107	- 0:13	- 2.00	126	+ 0:06	- 2.00	72	- 0:48	- 2.00	69	- 0:51	- 2.00	74	- 0:46									
- 1.45	106	+ 0:01	- 1.45	108	+ 0:03	- 1.45	125	+ 0:20	- 1.45	73	- 0:32	- 1.45	68	- 0:37	- 1.45	70	- 0:35									
- 1.30	111	+ 0:21	- 1.30	110	+ 0:20	- 1.30	124	+ 0:34	- 1.30	73	- 0:17	- 1.30	67	- 0:23	- 1.30	67	- 0:23									
- 1.15	116	+ 0:41	- 1.15	112	+ 0:37	- 1.15	123	+ 0:48	- 1.15	74	- 0:01	- 1.15	66	- 0:09	- 1.15	64	- 0:11									
- 1.00	121	+ 1:01	- 1.00	114	+ 0:54	- 1.00	122	+ 1:02	- 1.00	75	+ 0:15	- 1.00	65	+ 0:05	- 1.00	61	+ 0:01									
- 0.45	122	+ 1:17	- 0.45	113	+ 1:08	- 0.45	119	+ 1:14	- 0.45	76	+ 0:31	- 0.45	65	+ 0:20	- 0.45	60	+ 0:15									
- 0.30	123	+ 1:33	- 0.30	113	+ 1:23	- 0.30	117	+ 1:27	- 0.30	77	+ 0:47	- 0.30	64	+ 0:34	- 0.30	60	+ 0:30									
- 0.15	124	+ 1:49	- 0.15	112	+ 1:37	- 0.15	115	+ 1:40	- 0.15	78	+ 1:03	- 0.15	64	+ 0:49	- 0.15	59	+ 0:44									
HW	124	+ 2:04	HW	112	+ 1:52	HW	112	+ 1:52	HW	79	+ 1:19	HW	64	+ 1:04	HW	59	+ 0:59									
+ 0.15	122	+ 2:17	+ 0.15	109	+ 2:04	+ 0.15	109	+ 2:04	+ 0.15	82	+ 1:37	+ 0.15	66	+ 1:21	+ 0.15	60	+ 1:15									
+ 0.30	120	+ 2:30	+ 0.30	106	+ 2:16	+ 0.30	106	+ 2:16	+ 0.30	85	+ 1:55	+ 0.30	68	+ 1:38	+ 0.30	61	+ 1:31									
+ 0.45	117	+ 2:42	+ 0.45	102	+ 2:27	+ 0.45	104	+ 2:29	+ 0.45	87	+ 2:12	+ 0.45	70	+ 1:55	+ 0.45	61	+ 1:46									
+ 1.00	115	+ 2:55	+ 1.00	99	+ 2:39	+ 1.00	101	+ 2:41	+ 1.00	90	+ 2:30	+ 1.00	73	+ 2:13	+ 1.00	62	+ 2:02									
+ 1.15	112	+ 3:07	+ 1.15	97	+ 2:52	+ 1.15	99	+ 2:54	+ 1.15	92	+ 2:47	+ 1.15	75	+ 2:30	+ 1.15	64	+ 2:19									
+ 1.30	108	+ 3:18	+ 1.30	94	+ 3:04	+ 1.30	98	+ 3:08	+ 1.30	93	+ 3:03	+ 1.30	77	+ 2:47	+ 1.30	66	+ 2:36									
+ 1.45	105	+ 3:30	+ 1.45	92	+ 3:17	+ 1.45	96	+ 3:21	+ 1.45	95	+ 3:20	+ 1.45	79	+ 3:04	+ 1.45	69	+ 2:54									
+ 2.00	101	+ 3:41	+ 2.00	89	+ 3:29	+ 2.00	95	+ 3:35	+ 2.00	96	+ 3:36	+ 2.00	81	+ 3:21	+ 2.00	71	+ 3:11									
+ 2.15	98	+ 3:53	+ 2.15	88	+ 3:43	+ 2.15	94	+ 3:49	+ 2.15	98	+ 3:53	+ 2.15	82	+ 3:37	+ 2.15	73	+ 3:28									
+ 2.30	95	+ 4:05	+ 2.30	87	+ 3:57	+ 2.30	93	+ 4:03	+ 2.30	99	+ 4:09	+ 2.30	83	+ 3:53	+ 2.30	76	+ 3:46									
+ 2.45	92	+ 4:17	+ 2.45	86	+ 4:11	+ 2.45	92	+ 4:17	+ 2.45	101	+ 4:26	+ 2.45	84	+ 4:09	+ 2.45	79	+ 4:04									
+ 3.00	89	+ 4:29	+ 3.00	85	+ 4:25	+ 3.00	91	+ 4:31	+ 3.00	103	+ 4:43	+ 3.00	85	+ 4:25	+ 3.00	81	+ 4:21									
+ 3.15	86	+ 4:41	+ 3.15	82	+ 4:37	+ 3.15	88	+ 4:43	+ 3.15	106	+ 5:01	+ 3.15	89	+ 4:44	+ 3.15	85	+ 4:40									
+ 3.30	82	+ 4:52	+ 3.30	79	+ 4:49	+ 3.30	85	+ 4:55	+ 3.30	109	+ 5:19	+ 3.30	93	+ 5:03	+ 3.30	89	+ 4:59									
+ 3.45	79	+ 5:04	+ 3.45	76	+ 5:01	+ 3.45	83	+ 5:08	+ 3.45	112	+ 5:37	+ 3.45	97	+ 5:22	+ 3.45	93	+ 5:18									
+ 4.00	76	+ 5:16	+ 4.00	73	+ 5:13	+ 4.00	80	+ 5:20	+ 4.00	115	+ 5:55	+ 4.00	101	+ 5:41	+ 4.00	97	+ 5:37									
+ 4.15	74	+ 5:29	+ 4.15	71	+ 5:26	+ 4.15	79	+ 5:34	+ 4.15	117	- 5:48	+ 4.15	104	+ 5:59	+ 4.15	100	+ 5:55									
+ 4.30	72	+ 5:42	+ 4.30	70	+ 5:40	+ 4.30	78	+ 5:48	+ 4.30	118	- 5:32	+ 4.30	106	- 5:44	+ 4.30	103	- 5:47									
+ 4.45	70	+ 5:55	+ 4.45	68	+ 5:53	+ 4.45	77	- 5:58	+ 4.45	120	- 5:15	+ 4.45	109	- 5:26	+ 4.45	106	- 5:29									
+ 5.00	68	- 5:52	+ 5.00	66	- 5:54	+ 5.00	76	- 5:44	+ 5.00	121	- 4:59	+ 5.00	112	- 5:08	+ 5.00	109	- 5:11									
+ 5.15	67	- 5:38	+ 5.15	66	- 5:39	+ 5.15	76	- 5:29	+ 5.15	121	- 4:44	+ 5.15	112	- 4:53	+ 5.15	110	- 4:55									
+ 5.30	67	- 5:23	+ 5.30	66	- 5:24	+ 5.30	75	- 5:15	+ 5.30	121	- 4:29	+ 5.30	112	- 4:38	+ 5.30	112	- 4:38									
+ 5.45	66	- 5:09	+ 5.45	65	- 5:10	+ 5.45	75	- 5:00	+ 5.45	121	- 4:14	+ 5.45	113	- 4:22	+ 5.45	113	- 4:22									
+ 6.00	66	- 4:54	+ 6.00	65	- 4:55	+ 6.00	74	- 4:46	+ 6.00	121	- 3:59	+ 6.00	113	- 4:07	+ 6.00	115	- 4:05									

S O U T H B O U N D

N O R T H B O U N D