



LABORATÓRIO NACIONAL
DE ENGENHARIA CIVIL



UNIVERSIDADE DO ALGARVE
CENTRO DE INVESTIGAÇÃO MARINHA E AMBIENTAL

Projeto EW-Coast

Sistema de alerta a riscos costeiros induzidos por tempestades

Early warning system for coastal risks induced by storms

ALG-LISBOA-01-145-FEDER- 028657

LEVANTAMENTO TOPOGRÁFICO DOS PERFIS DE PRAIA DAS PRAIAS URBANAS DA COSTA DA CAPARICA

Relatório da campanha de 18 de dezembro de 2020

Lisboa, dezembro de 2020

Relatório EW-Coast 1/2021

Agradecimentos:

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LEVANTAMENTO TOPOGRÁFICO DOS PERFIS DE PRAIA DAS PRAIAS URBANAS DA COSTA DA CAPARICA

– Relatório da campanha de 18 de dezembro de 2020 –

EW-Coast – Sistema de alerta a riscos costeiros induzidos por tempestades

TO-SEAlert – Galgamento e inundação em zonas costeiras e portuárias: Ferramentas para um sistema de previsão e alerta, planeamento de emergência e de gestão do risco

Lisboa, janeiro de 2021

Relatório EW-Coast/TO-SEAlert/LNEC/2021

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Acrónimos

DGPS	<i>Differential Global Positioning System</i>
FCT	Fundação para a Ciência e a Tecnologia, IP
FEDER	Fundo Europeu de Desenvolvimento Regional
GNSS	<i>Global Navigation Satellite System</i>
GPS	<i>Global Positioning System</i>
LNEC	Laboratório Nacional de Engenharia Civil, IP
OE	Orçamento do Estado
RTK	<i>Real-Time Kinematic</i>
UAlg	Universidade do Algarve
USB	<i>Universal Serial Bus</i>

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- Aos elementos participantes na campanha:
Gaël Patrice Anastas, do Núcleo de Portos e Estruturas Marítimas do Departamento de Hidráulica e Ambiente do LNEC.

Este trabalho foi realizado no âmbito dos projetos

- EW-Coast – Sistema de alerta a riscos costeiros induzidos por tempestades, com referência ALG-LISBOA-01-145-FEDER-028657 atribuída pela Fundação para a Ciência e a Tecnologia, IP (FCT), suportado pelos orçamentos do Programa Operacional Regional do Algarve e do Programa Operacional Regional de Lisboa na sua componente FEDER e pelo orçamento da FCT na sua componente OE;
- TO-SEAlert – Wave overtopping and flooding in coastal and port areas: Tools for an early warning, emergency planning and risk management system, Ref. PTDC/EAMOCE/31207/2017, financiado pela Fundação para a Ciência e a Tecnologia, IP (FCT).

1 INTRODUÇÃO E OBJETIVOS

Este relatório descreve a campanha de campo realizada no dia 18 de dezembro de 2020 na Costa da Caparica, no âmbito dos projetos EW-Coast e TO-SEAlert, em desenvolvimento no Departamento de Hidráulica e Ambiente do LNEC, promovendo a sinergia dos recursos humanos e técnicos disponíveis na instituição.

O projeto EW-Coast – *Sistema de alerta a riscos costeiros induzidos por tempestades*, coordenado pela UAlg em parceria com o LNEC, pretende desenvolver, testar e validar a operacionalidade de um sistema de previsão e alerta para eventos de riscos de galgamento, inundação e erosão em zonas costeiras, com base numa rede bayesiana. Este projeto está a ser desenvolvido para 3 casos de estudo: Quarteira, Praia de Faro e Costa da Caparica.

Esta campanha surge no seguimento das campanhas anteriores de caracterização (Ferreira et al., 2019; Garzon et al., 2020), com a finalidade de avaliar e monitorizar os efeitos induzidos na morfologia das praias da Costa da Caparica devido a forçamentos oceanográficos extremos que atingiram a área de estudo no quarto trimestre de 2020 (tempestade Bárbara, tempestade Dora e efeitos do furacão Epsilon).

No presente relatório descreve-se a campanha de campo realizada em 18.12.2019, capítulo 3 e apresenta uma análise comparativa da evolução morfodinâmica devido aos forçamentos oceanográficos que ocorreram no último semestre de 2020, com especial enfoque nos eventos ocorridos em outubro e dezembro de 2020, capítulo 4. No capítulo 5 procede-se a uma avaliação da campanha. Finaliza-se o relatório com três anexos. No Anexo I apresentam-se os pontos medidos na campanha de 18.12.2020. No Anexo II descrevem-se os procedimentos de utilização e manuseamento do equipamento usado durante a campanha de 18.12.2020.

2 ÁREA DE ESTUDO

A área de estudo concentra-se no troço que compreende a estrutura de proteção costeira da Costa da Caparica, abrangendo, assim, o troço sul da praia de São João da Caparica até à Nova Praia (Figura 1). Esta área de estudo apresenta uma extensão longilitoral aproximada de 2,70 km.

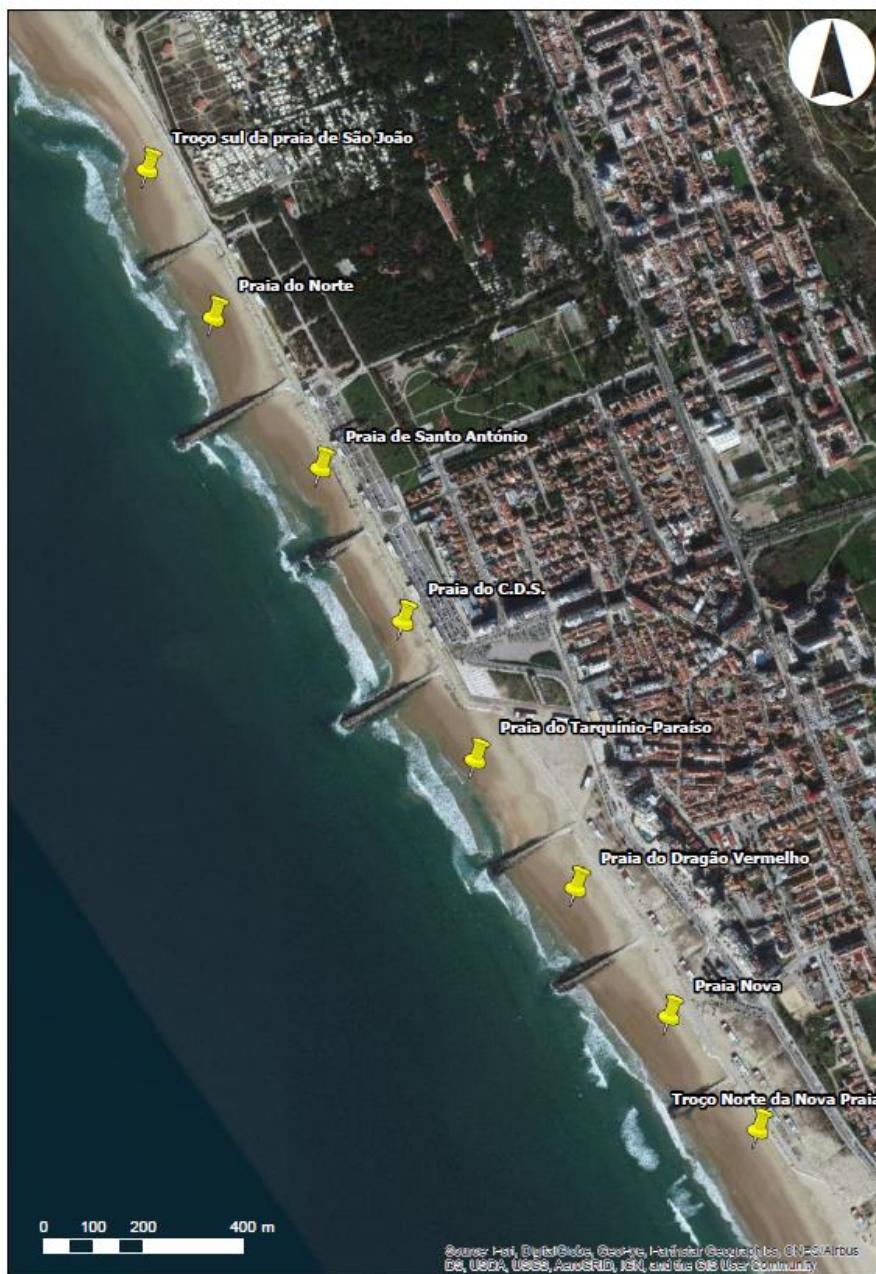


Figura 1. Vista aérea da área de estudo, com a referência do nome das praias

3 DESCRIÇÃO DA CAMPANHA DE 18.12.2020

3.1 Aspetos gerais

No dia 18 de dezembro de 2020, foram realizados levantamentos topográficos dos perfis de praias, nomeadamente, na praia do Norte, praia de Santo António, praia do CDS e praia Traquínio-Paraíso, ainda foi realizado o levantamento da base da estrutura de proteção aderente entre a praia Norte e a praia Traquínio-Paraíso.

Nesta campanha participaram elementos do LNEC, em paralelo com a campanha realizada pela equipa da UAlg.

3.2 Participantes na campanha

A campanha teve a participação de uma equipa científica do LNEC, nomeadamente:

- Andreia M. Marques Ferreira – Bolseira de Investigação;
- Gaël Patrice Anastas – Bolseiro de Investigação.

3.3 Características dos equipamentos

O equipamento utilizado foi um GPS diferencial (unidade móvel, unidade base, mochila), pertencente ao Núcleo de Estuários e Zonas Costeiras do LNEC, e acessórios, abaixo listados:

- 1 recetor GPS – BASE (+ antena maior) (Figura 2);
- 1 recetor GPS – ROVER (+ antena menor) (Figura 2);
- 1 controlador (com caneta) (Figura 2);
- 1 base nivelante;
- 1 mochila;
- 1 tripé;
- 1 fita métrica;
- 3 adaptadores para suporte da controladora;
- base nivelante para fixar a base no tripé (+ parafuso);
- 2 carregadores para BASE e ROVER;
- 1 carregador para o controlador;
- 1 cabo de ligação USB;
- 1 cabo de ligação em série;
- 1 carregador para isqueiro do carro.



Figura 2. Recetores GPS (BASE e ROVER) e controlador

3.4 Procedimentos

A presente campanha foi efetuada conforme abaixo descrito.

- O procedimento de levamento adotado foi o RTK;
- Optou-se por colocar a BASE no paredão da praia do CDS;
- Foram realizados os levantamentos em modo Auto com o registo a cada segundo e em modo medição pontual;
- O levantamento foi realizado em modo de medição relativa à base, tendo sido feita a correção para valores absolutos em pós processamento com base nos pontos de controlo.

3.5 Realização dos trabalhos

Os procedimentos seguidos foram:

- Em modo Auto, foram levantados 4 perfis de praia (Figura 3): praia do Norte (NRTPF), praia de Santo António (STAPF), praia do CDS (CDSPF) e praia do Traquínio-Paraíso (TRPPF);
- Também em modo auto, foram levantadas as bases das estruturas entre a praia do Norte e a praia Traquínio-Paraíso (códigos: NRTBASE, STABASE, CDSBASE e TRPBASE) (Figura 3);
- Foram medidos dois pontos de controlo, os pontos CC9 e CC10 localizados nas praias Norte e Santo António, respetivamente (Figura 4 e Figura 5) (Silveira et al., 2013).



Figura 3. Pontos levantados na Costa da Caparica nesta campanha (18.12.2020)

COSTA DA CAPARICA	CC9 (= SP67)
Estabelecido por: DEGGE FCUL (Carlos Antunes)	Data: 2010/01/18
Qualidade: Planimetria – II, Altimetria – I, Monumentação – I	
Objectivo: Ponto de Referência + Cabeça de Perfil (PCC9)	
Descrição: Spit num dos blocos de pedra do molhe aderente, entre o esporão 7 e o esporão 6, em frente do bar “Tasca do Leandro”.	

M	P	H
-96817.2461	-112426.5832	6.361

Sistema Coordenadas: PT-TM06 | Datum Vertical: NMM Cascais 1938 | medido em: 2010/11/30

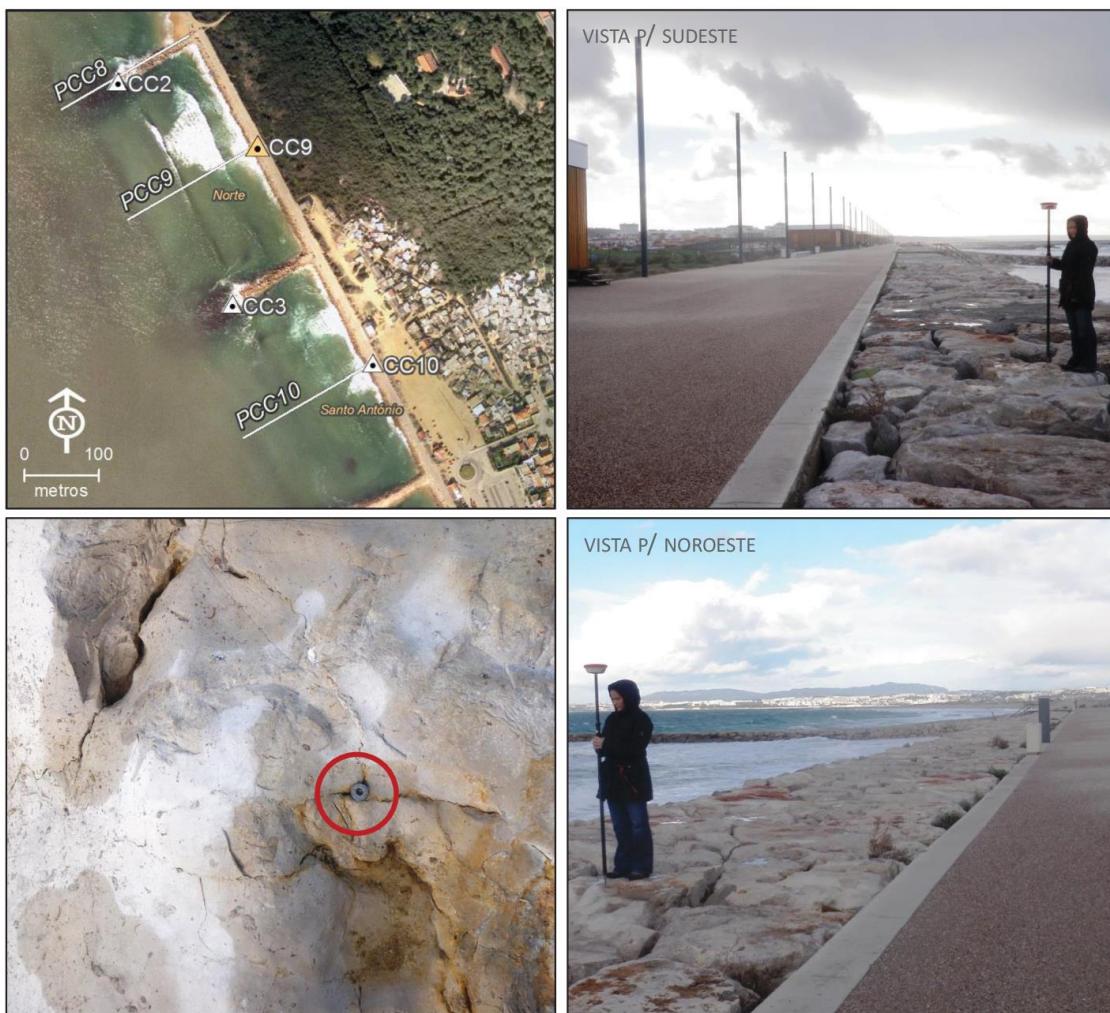


Figura 4. Ponto de Referência CC9 (Fonte: Silveira et al. 2013)

COSTA DA CAPARICA	CC10 (= SP56)
Estabelecido por: DEGGE FCUL (Carlos Antunes)	Data: 2010/01/18
Qualidade: Planimetria – II, Altimetria – I, Monumentação – I	
Objectivo: Ponto de Referência + Cabeça de Perfil (PCC10)	
Descrição: Spit num dos blocos do molhe aderente, entre o esporão 6 e o esporão 5, próximo das escadas de acesso ao areal e em frente ao restaurante-bar “Costa Nova”.	

M	P	H
-96661.3122	-112720.5111	6.396

Sistema Coordenadas: PT-TM06 | Datum Vertical: NMM Cascais 1938 | medido em: 2010/11/30

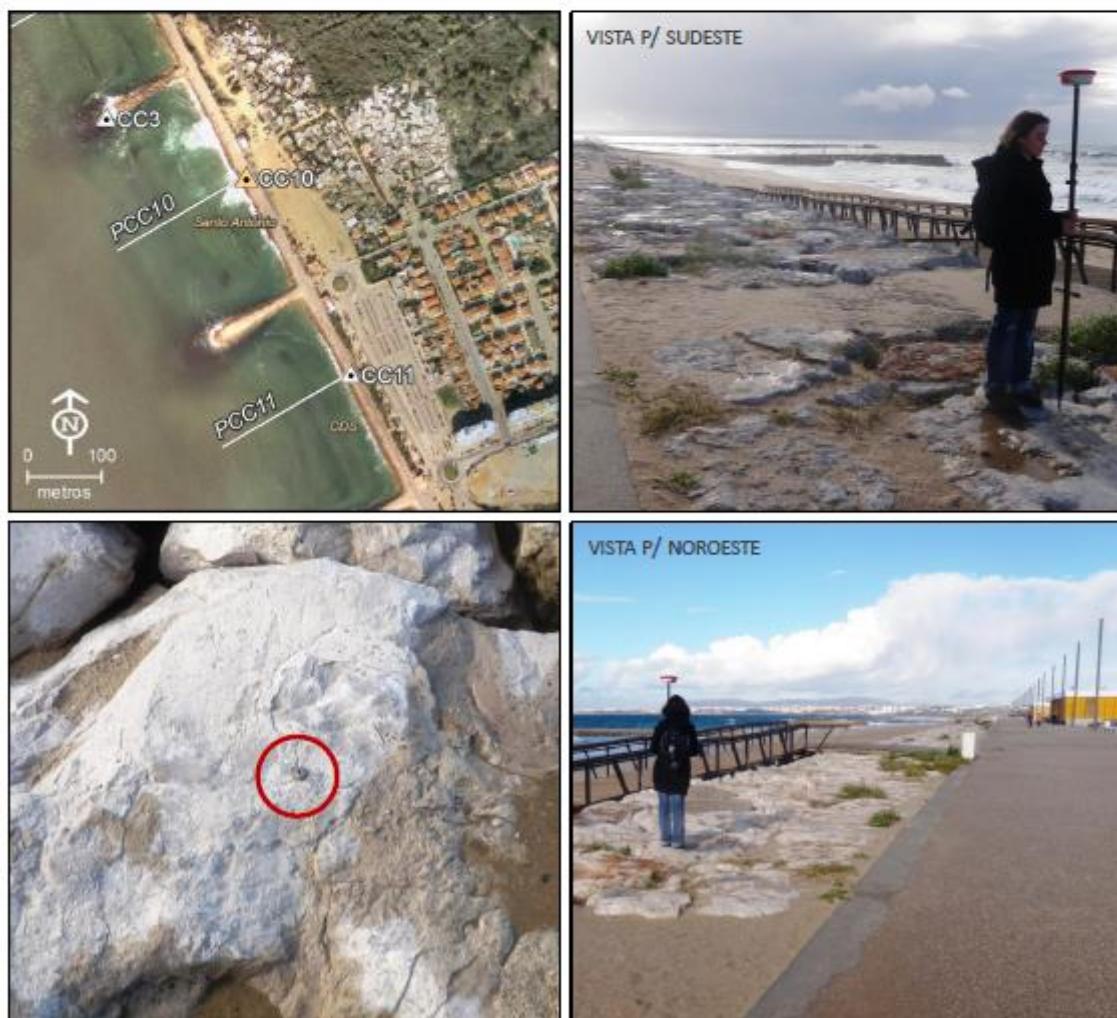


Figura 5. Ponto de Referência CC10 (Fonte: Silveira et al. 2013)

4 DISCUSSÃO DOS RESULTADOS

Os pontos levantados encontram-se anexos a este relatório (Anexo I), do qual foram excluídos os valores com qualidade insuficiente.

Os resultados dos perfis de praia foram comparados (Figura 6 à Figura 9) com as campanhas anteriores realizadas no âmbito do projeto, nos dias 30.05.2019 e 18.10.2019 (Ferreira et al., 2019), assim como os últimos dados disponibilizados pelo programa COSMO da campanha de 23.07.2020 (COSMO, 2020).

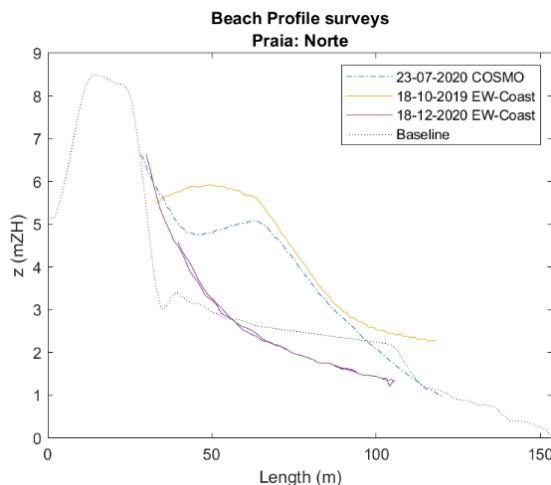


Figura 6. Variação do perfil de praia da Praia do Norte. Campanhas EW-Coast de 18.10.2019 e 18.12.2020, e campanha COSMO de 23.07.2020

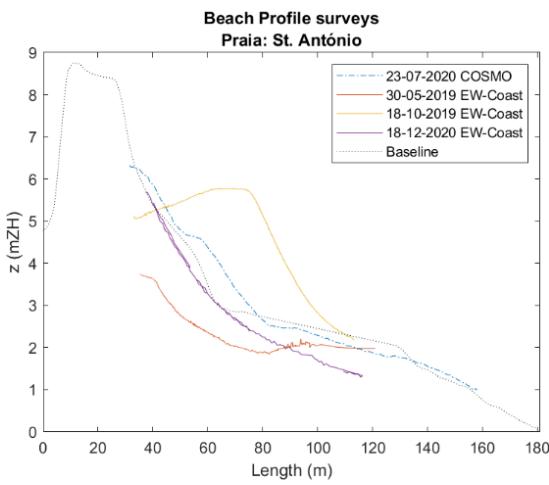


Figura 7. Variação do perfil de praia da Praia do CDS. Campanhas EW-Coast de 30.05.2019, 18.10.2019 e 18.12.2020, e campanha COSMO de 23.07.2020

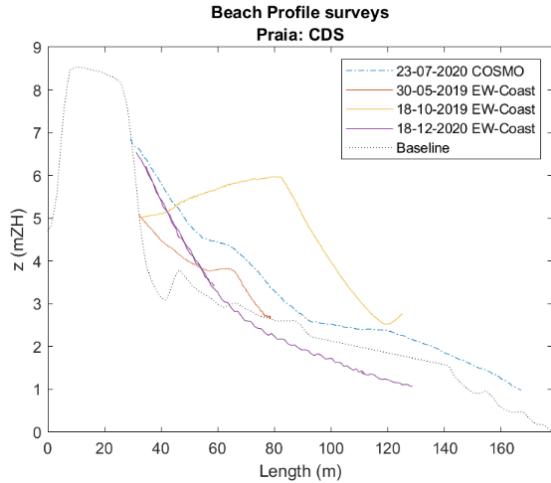


Figura 8. Variação do perfil de praia da Praia de Santo António. Campanhas EW-Coast de 30.05.2019, 18.10.2019 e 18.12.2020, e campanha COSMO de 23.07.2020

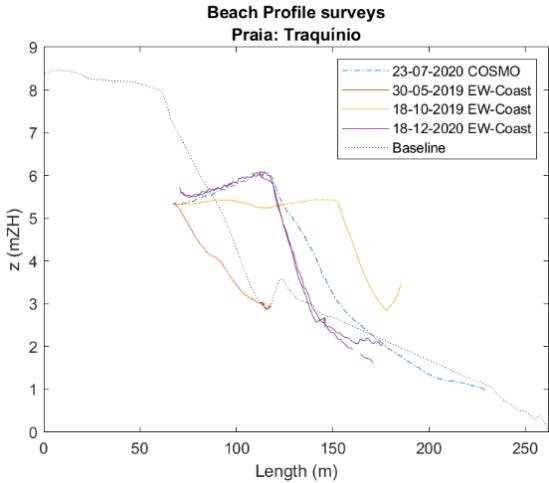


Figura 9. Variação do perfil de praia da Praia do Traquínio-Paraíso. Campanhas EW-Coast de 30.05.2019, 18.10.2019 e 18.12.2020, e campanha COSMO de 23.07.2020

No último trimestre de 2020, a zona costeira da Costa da Caparica foi atingida por duas grandes tempestades, a Tempestade Bárbara, a 19 de outubro de 2020, e a tempestade Dora, a 4 de dezembro de 2020. Além destas duas tempestades, no final de outubro um evento extremo de ondulação (*swell*) atingiu o litoral oeste de Portugal Continental na sequência do

furacão Epsilon. Através da análise deste conjunto de campanhas é possível ver os efeitos destes eventos.

As praias em análise foram alvo de alimentação artificial em agosto/setembro de 2019, é visível em todas as praias a diferença entre os perfis de 30.05.2019 e os perfis de 18.10.2019 (pós alimentação). No verão de 2020 (23.07.2020) a praia do Norte e a Traquínio-Paraíso, ainda preservavam uma berma de praia robusta, mas as praias de Santo António e CDS, passado um inverno, o perfil já se encontrava bastante rebaixado face ao perfil pós alimentação.

Da campanha ora realizada, pode-se verificar que os últimos eventos provocaram um rebaixamento generalizado dos perfis, com aumento do declive da face de praia. A alteração mais significativa dá-se no perfil da praia do Norte (Figura 10 eFigura 11), que no verão ainda preservava um perfil semelhante ao perfil pós-alimentação. As praias de Santo António e CDS perderam a pequena berma que tinham em julho. Na praia do Traquínio-Paraíso, o mais notório é o aumento da inclinação da face de praia, não tendo sido atingida a berma, que mantém a sua largura.



Figura 10 – Praia do Norte. Fotografia obtida a 18.10.2019



Figura 11 – Praia do Norte. Fotografia obtida a 18.12.2020

5 AVALIAÇÃO DA CAMPANHA

Os objetivos da campanha foram cumpridos com êxito, tendo-se obtido dados de suma importância para avaliação dos efeitos de eventos oceanográficos extremos na área de estudo, contribuindo para a monitorização da evolução do sistema costeiro da Costa da Caparica.

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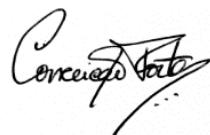
LNEC, janeiro de 2021

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Conceição Juana Fortes

Investigadora Principal do LNEC

Co-coordenadora do EW-Coast

ANEXO I

REGISTOS 18.12.2020

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
0	CC_2020	-112919	-96553	6.33	BASE	73	NEC69	-112963	-96538	4.61	CDSBASE
33	NEC29	-112932	-96559	4.07	CDSBASE	74	NEC70	-112964	-96538	4.67	CDSBASE
34	NEC30	-112933	-96560	4.07	CDSBASE	75	NEC71	-112965	-96537	4.65	CDSBASE
35	NEC31	-112933	-96559	4.16	CDSBASE	76	NEC72	-112966	-96537	4.68	CDSBASE
36	NEC32	-112934	-96557	4.20	CDSBASE	77	NEC73	-112967	-96537	4.67	CDSBASE
37	NEC33	-112935	-96557	4.24	CDSBASE	78	NEC74	-112967	-96536	4.67	CDSBASE
38	NEC34	-112935	-96557	4.18	CDSBASE	79	NEC75	-112968	-96535	4.73	CDSBASE
39	NEC35	-112935	-96556	4.27	CDSBASE	80	NEC76	-112969	-96535	4.70	CDSBASE
40	NEC36	-112936	-96555	4.30	CDSBASE	81	NEC77	-112970	-96535	4.71	CDSBASE
41	NEC37	-112938	-96552	4.34	CDSBASE	82	NEC78	-112971	-96534	4.72	CDSBASE
42	NEC38	-112938	-96553	LowQI	CDSBASE	83	NEC79	-112971	-96534	4.72	CDSBASE
43	NEC39	-112939	-96552	4.35	CDSBASE	84	NEC80	-112972	-96534	4.71	CDSBASE
44	NEC40	-112940	-96551	4.34	CDSBASE	85	NEC81	-112973	-96533	4.69	CDSBASE
45	NEC41	-112940	-96551	4.30	CDSBASE	86	NEC82	-112974	-96533	4.75	CDSBASE
46	NEC42	-112941	-96551	4.26	CDSBASE	87	NEC83	-112974	-96532	4.72	CDSBASE
47	NEC43	-112942	-96550	4.30	CDSBASE	88	NEC84	-112975	-96532	4.76	CDSBASE
48	NEC44	-112942	-96550	4.36	CDSBASE	89	NEC85	-112976	-96531	4.70	CDSBASE
49	NEC45	-112943	-96550	4.35	CDSBASE	90	NEC86	-112977	-96531	4.75	CDSBASE
50	NEC46	-112944	-96549	4.33	CDSBASE	91	NEC87	-112978	-96531	4.70	CDSBASE
51	NEC47	-112945	-96549	4.39	CDSBASE	92	NEC88	-112978	-96530	4.74	CDSBASE
52	NEC48	-112946	-96548	4.34	CDSBASE	93	NEC89	-112979	-96530	4.75	CDSBASE
53	NEC49	-112946	-96548	4.44	CDSBASE	94	NEC90	-112980	-96530	4.77	CDSBASE
54	NEC50	-112947	-96547	4.41	CDSBASE	95	NEC91	-112981	-96529	4.76	CDSBASE
55	NEC51	-112948	-96547	4.42	CDSBASE	96	NEC92	-112981	-96529	4.80	CDSBASE
56	NEC52	-112949	-96546	4.43	CDSBASE	97	NEC93	-112982	-96528	4.77	CDSBASE
57	NEC53	-112950	-96546	4.44	CDSBASE	98	NEC94	-112982	-96528	4.80	CDSBASE
58	NEC54	-112951	-96545	4.43	CDSBASE	99	NEC95	-112983	-96528	4.79	CDSBASE
59	NEC55	-112952	-96545	4.48	CDSBASE	100	NEC96	-112984	-96527	4.77	CDSBASE
60	NEC56	-112952	-96544	4.47	CDSBASE	101	NEC97	-112985	-96527	4.71	CDSBASE
61	NEC57	-112953	-96544	4.52	CDSBASE	102	NEC98	-112986	-96527	4.75	CDSBASE
62	NEC58	-112954	-96544	4.51	CDSBASE	103	NEC99	-112986	-96526	4.72	CDSBASE
63	NEC59	-112955	-96543	4.53	CDSBASE	104	NEC100	-112987	-96526	4.75	CDSBASE
64	NEC60	-112956	-96542	4.57	CDSBASE	105	NEC101	-112988	-96525	4.71	CDSBASE
65	NEC61	-112957	-96542	4.53	CDSBASE	106	NEC102	-112989	-96525	4.74	CDSBASE
66	NEC62	-112958	-96542	4.56	CDSBASE	107	NEC103	-112990	-96525	4.68	CDSBASE
67	NEC63	-112959	-96541	4.52	CDSBASE	108	NEC104	-112990	-96524	4.78	CDSBASE
68	NEC64	-112959	-96541	4.55	CDSBASE	109	NEC105	-112991	-96524	4.73	CDSBASE
69	NEC65	-112960	-96540	4.56	CDSBASE	110	NEC106	-112992	-96524	4.75	CDSBASE
70	NEC66	-112961	-96540	4.54	CDSBASE	111	NEC107	-112994	-96523	4.57	CDSBASE
71	NEC67	-112962	-96539	4.57	CDSBASE	112	NEC108	-112994	-96523	4.60	CDSBASE
72	NEC68	-112963	-96539	4.61	CDSBASE	113	NEC109	-112994	-96523	4.80	CDSBASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
114	NEC110	-112994	-96523	4.61	CDSBASE	159	NEC155	-113015	-96544	1.33	CDSPF
115	NEC111	-112994	-96522	4.56	CDSBASE	160	NEC156	-113016	-96546	LowQI	CDSPF
116	NEC112	-112995	-96522	4.58	CDSBASE	161	NEC157	-113016	-96546	LowQI	CDSPF
117	NEC113	-112995	-96522	4.58	CDSBASE	162	NEC158	-113016	-96546	LowQI	CDSPF
118	NEC114	-112996	-96521	4.59	CDSBASE	163	NEC159	-113017	-96547	LowQI	CDSPF
119	NEC115	-112997	-96521	4.63	CDSBASE	164	NEC160	-113017	-96547	LowQI	CDSPF
120	NEC116	-112997	-96521	4.63	CDSBASE	165	NEC161	-113017	-96548	LowQI	CDSPF
121	NEC117	-112998	-96520	4.70	CDSBASE	166	NEC162	-113018	-96549	LowQI	CDSPF
122	NEC118	-112998	-96520	4.74	CDSBASE	167	NEC163	-113018	-96549	LowQI	CDSPF
123	NEC119	-112999	-96520	4.71	CDSBASE	168	NEC164	-113019	-96550	LowQI	CDSPF
124	NEC120	-113000	-96519	4.66	CDSBASE	169	NEC165	-113020	-96550	LowQI	CDSPF
125	NEC121	-113000	-96519	4.68	CDSBASE	170	NEC166	-113020	-96551	LowQI	CDSPF
126	NEC122	-113001	-96519	4.67	CDSBASE	171	NEC167	-113021	-96552	LowQI	CDSPF
127	NEC123	-113001	-96520	LowQI	CDSPF	172	NEC168	-113022	-96553	LowQI	CDSPF
128	NEC124	-113002	-96521	LowQI	CDSPF	173	NEC169	-113022	-96554	LowQI	CDSPF
129	NEC125	-113002	-96521	LowQI	CDSPF	174	NEC170	-113023	-96555	LowQI	CDSPF
130	NEC126	-113002	-96522	LowQI	CDSPF	175	NEC171	-113024	-96556	LowQI	CDSPF
131	NEC127	-113003	-96523	LowQI	CDSPF	176	NEC172	-113024	-96557	LowQI	CDSPF
132	NEC128	-113003	-96523	4.14	CDSPF	177	NEC173	-113025	-96558	LowQI	CDSPF
133	NEC129	-113003	-96524	4.00	CDSPF	178	NEC174	-113026	-96559	LowQI	CDSPF
134	NEC130	-113003	-96525	3.89	CDSPF	179	NEC175	-113026	-96560	LowQI	CDSPF
135	NEC131	-113004	-96525	3.76	CDSPF	180	NEC176	-113027	-96560	LowQI	CDSPF
136	NEC132	-113004	-96526	3.66	CDSPF	181	NEC177	-113027	-96561	LowQI	CDSPF
137	NEC133	-113005	-96527	3.52	CDSPF	182	NEC178	-113028	-96562	LowQI	CDSPF
138	NEC134	-113005	-96527	3.40	CDSPF	183	NEC179	-113028	-96563	LowQI	CDSPF
139	NEC135	-113005	-96528	3.32	CDSPF	184	NEC180	-113029	-96564	LowQI	CDSPF
140	NEC136	-113006	-96529	3.21	CDSPF	185	NEC181	-113030	-96565	LowQI	CDSPF
141	NEC137	-113006	-96530	3.07	CDSPF	186	NEC182	-113031	-96566	LowQI	CDSPF
142	NEC138	-113007	-96531	2.99	CDSPF	187	NEC183	-113031	-96567	LowQI	CDSPF
143	NEC139	-113007	-96531	2.82	CDSPF	188	NEC184	-113032	-96568	LowQI	CDSPF
144	NEC140	-113008	-96532	2.71	CDSPF	189	NEC185	-113032	-96569	LowQI	CDSPF
145	NEC141	-113008	-96533	2.61	CDSPF	190	NEC186	-113033	-96570	LowQI	CDSPF
146	NEC142	-113009	-96534	2.47	CDSPF	191	NEC187	-113034	-96571	LowQI	CDSPF
147	NEC143	-113009	-96535	2.33	CDSPF	192	NEC188	-113034	-96572	LowQI	CDSPF
148	NEC144	-113010	-96536	2.25	CDSPF	193	NEC189	-113034	-96573	LowQI	CDSPF
149	NEC145	-113010	-96537	2.18	CDSPF	194	NEC190	-113035	-96574	LowQI	CDSPF
150	NEC146	-113011	-96538	2.05	CDSPF	195	NEC191	-113036	-96575	LowQI	CDSPF
151	NEC147	-113011	-96538	1.94	CDSPF	196	NEC192	-113036	-96576	LowQI	CDSPF
152	NEC148	-113011	-96539	1.89	CDSPF	197	NEC193	-113037	-96577	LowQI	CDSPF
153	NEC149	-113012	-96540	1.79	CDSPF	198	NEC194	-113037	-96578	LowQI	CDSPF
154	NEC150	-113012	-96541	1.69	CDSPF	199	NEC195	-113038	-96579	LowQI	CDSPF
155	NEC151	-113013	-96541	1.62	CDSPF	200	NEC196	-113039	-96580	LowQI	CDSPF
156	NEC152	-113013	-96542	1.49	CDSPF	201	NEC197	-113040	-96581	LowQI	CDSPF
157	NEC153	-113014	-96543	1.41	CDSPF	202	NEC198	-113040	-96582	LowQI	CDSPF
158	NEC154	-113014	-96544	1.40	CDSPF	203	NEC199	-113041	-96583	LowQI	CDSPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
204	NEC200	-113041	-96584	LowQI	CDSPF	249	NEC245	-113034	-96574	-0.29	CDSPF
205	NEC201	-113042	-96585	LowQI	CDSPF	250	NEC246	-113033	-96573	-0.25	CDSPF
206	NEC202	-113042	-96586	LowQI	CDSPF	251	NEC247	-113032	-96572	-0.17	CDSPF
207	NEC203	-113043	-96587	LowQI	CDSPF	252	NEC248	-113032	-96571	-0.15	CDSPF
208	NEC204	-113043	-96588	-0.68	CDSPF	253	NEC249	-113031	-96570	-0.16	CDSPF
209	NEC205	-113043	-96589	-0.73	CDSPF	254	NEC250	-113031	-96569	-0.10	CDSPF
210	NEC206	-113044	-96590	-0.75	CDSPF	255	NEC251	-113030	-96568	-0.04	CDSPF
211	NEC207	-113044	-96591	-0.72	CDSPF	256	NEC252	-113030	-96567	-0.06	CDSPF
212	NEC208	-113045	-96592	-0.75	CDSPF	257	NEC253	-113029	-96566	-0.02	CDSPF
213	NEC209	-113045	-96594	-0.82	CDSPF	258	NEC254	-113029	-96565	0.08	CDSPF
214	NEC210	-113046	-96595	-0.85	CDSPF	259	NEC255	-113028	-96564	0.10	CDSPF
215	NEC211	-113046	-96596	-0.84	CDSPF	260	NEC256	-113028	-96563	0.08	CDSPF
216	NEC212	-113047	-96597	-0.86	CDSPF	261	NEC257	-113027	-96562	0.15	CDSPF
217	NEC213	-113047	-96598	-0.90	CDSPF	262	NEC258	-113027	-96561	0.23	CDSPF
218	NEC214	-113048	-96599	-0.92	CDSPF	263	NEC259	-113026	-96559	0.18	CDSPF
219	NEC215	-113048	-96600	-0.92	CDSPF	264	NEC260	-113026	-96558	0.24	CDSPF
220	NEC216	-113049	-96601	-0.97	CDSPF	265	NEC261	-113025	-96557	0.33	CDSPF
221	NEC217	-113049	-96602	-0.97	CDSPF	266	NEC262	-113024	-96556	0.35	CDSPF
222	NEC218	-113050	-96603	-0.97	CDSPF	267	NEC263	-113024	-96555	0.39	CDSPF
223	NEC219	-113050	-96604	-1.01	CDSPF	268	NEC264	-113023	-96554	0.50	CDSPF
224	NEC220	-113050	-96604	-1.00	CDSPF	269	NEC265	-113022	-96553	0.52	CDSPF
225	NEC221	-113046	-96596	LowQI	CDSPF	270	NEC266	-113022	-96553	0.53	CDSPF
226	NEC222	-113045	-96595	LowQI	CDSPF	271	NEC267	-113021	-96552	0.64	CDSPF
227	NEC223	-113045	-96595	LowQI	CDSPF	272	NEC268	-113020	-96551	0.75	CDSPF
228	NEC224	-113044	-96594	LowQI	CDSPF	273	NEC269	-113019	-96550	0.74	CDSPF
229	NEC225	-113044	-96593	LowQI	CDSPF	274	NEC270	-113019	-96548	0.84	CDSPF
230	NEC226	-113043	-96592	LowQI	CDSPF	275	NEC271	-113018	-96547	0.95	CDSPF
231	NEC227	-113043	-96591	LowQI	CDSPF	276	NEC272	-113018	-96546	0.96	CDSPF
232	NEC228	-113042	-96590	LowQI	CDSPF	277	NEC273	-113017	-96545	1.05	CDSPF
233	NEC229	-113042	-96590	-0.72	CDSPF	278	NEC274	-113017	-96544	1.19	CDSPF
234	NEC230	-113041	-96589	-0.64	CDSPF	279	NEC275	-113016	-96543	1.27	CDSPF
235	NEC231	-113041	-96588	-0.68	CDSPF	280	NEC276	-113016	-96542	1.34	CDSPF
236	NEC232	-113040	-96587	-0.60	CDSPF	281	NEC277	-113015	-96541	1.51	CDSPF
237	NEC233	-113040	-96586	-0.63	CDSPF	282	NEC278	-113014	-96541	1.54	CDSPF
238	NEC234	-113039	-96585	-0.58	CDSPF	283	NEC279	-113014	-96540	1.70	CDSPF
239	NEC235	-113039	-96584	-0.53	CDSPF	284	NEC280	-113013	-96539	1.83	CDSPF
240	NEC236	-113038	-96583	-0.54	CDSPF	285	NEC281	-113013	-96538	1.86	CDSPF
241	NEC237	-113038	-96582	-0.46	CDSPF	286	NEC282	-113012	-96537	2.03	CDSPF
242	NEC238	-113038	-96581	-0.44	CDSPF	287	NEC283	-113012	-96536	2.09	CDSPF
243	NEC239	-113037	-96580	-0.45	CDSPF	288	NEC284	-113011	-96535	2.19	CDSPF
244	NEC240	-113037	-96579	-0.35	CDSPF	289	NEC285	-113011	-96534	2.35	CDSPF
245	NEC241	-113036	-96578	-0.36	CDSPF	290	NEC286	-113010	-96533	2.47	CDSPF
246	NEC242	-113036	-96577	-0.37	CDSPF	291	NEC287	-113010	-96532	2.48	CDSPF
247	NEC243	-113035	-96576	-0.29	CDSPF	292	NEC288	-113009	-96532	2.68	CDSPF
248	NEC244	-113034	-96575	-0.25	CDSPF	293	NEC289	-113009	-96531	2.76	CDSPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
294	NEC290	-113008	-96530	2.85	CDSPF	339	NEC335	-113026	-96504	LowQI	CDSBASE
295	NEC291	-113008	-96530	3.02	CDSPF	340	NEC336	-113027	-96504	LowQI	CDSBASE
296	NEC292	-113007	-96529	3.12	CDSPF	341	NEC337	-113028	-96504	LowQI	CDSBASE
297	NEC293	-113007	-96528	3.18	CDSPF	342	NEC338	-113028	-96504	LowQI	CDSBASE
298	NEC294	-113006	-96527	3.34	CDSPF	343	NEC339	-113029	-96503	LowQI	CDSBASE
299	NEC295	-113006	-96526	3.46	CDSPF	344	NEC340	-113030	-96503	LowQI	CDSBASE
300	NEC296	-113006	-96525	3.55	CDSPF	345	NEC341	-113031	-96502	LowQI	CDSBASE
301	NEC297	-113005	-96525	3.75	CDSPF	346	NEC342	-113032	-96501	LowQI	CDSBASE
302	NEC298	-113005	-96524	3.86	CDSPF	347	NEC343	-113033	-96501	LowQI	CDSBASE
303	NEC299	-113004	-96523	3.95	CDSPF	348	NEC344	-113034	-96500	LowQI	CDSBASE
304	NEC300	-113004	-96523	4.10	CDSPF	349	NEC345	-113035	-96500	LowQI	CDSBASE
305	NEC301	-113003	-96522	4.17	CDSPF	350	NEC346	-113036	-96499	LowQI	CDSBASE
306	NEC302	-113003	-96521	4.28	CDSPF	351	NEC347	-113036	-96499	LowQI	CDSBASE
307	NEC303	-113002	-96520	4.36	CDSPF	352	NEC348	-113037	-96499	LowQI	CDSBASE
308	NEC304	-113002	-96520	4.46	CDSPF	353	NEC349	-113038	-96498	LowQI	CDSBASE
309	NEC305	-113002	-96519	4.54	CDSBASE	354	NEC350	-113039	-96498	LowQI	CDSBASE
310	NEC306	-113002	-96518	4.64	CDSBASE	355	NEC351	-113040	-96497	LowQI	CDSBASE
311	NEC307	-113003	-96517	4.65	CDSBASE	356	NEC352	-113041	-96497	LowQI	CDSBASE
312	NEC308	-113004	-96517	4.62	CDSBASE	357	NEC353	-113042	-96497	LowQI	CDSBASE
313	NEC309	-113004	-96516	4.71	CDSBASE	358	NEC354	-113043	-96496	LowQI	CDSBASE
314	NEC310	-113005	-96516	4.58	CDSBASE	359	NEC355	-113043	-96496	LowQI	CDSBASE
315	NEC311	-113006	-96516	4.58	CDSBASE	360	NEC356	-113044	-96495	LowQI	CDSBASE
316	NEC312	-113007	-96515	4.59	CDSBASE	361	NEC357	-113045	-96495	LowQI	CDSBASE
317	NEC313	-113008	-96515	4.56	CDSBASE	362	NEC358	-113046	-96495	LowQI	CDSBASE
318	NEC314	-113008	-96514	4.59	CDSBASE	363	NEC359	-113047	-96494	LowQI	CDSBASE
319	NEC315	-113009	-96514	4.66	CDSBASE	364	NEC360	-113048	-96494	LowQI	CDSBASE
320	NEC316	-113010	-96513	4.65	CDSBASE	365	NEC361	-113049	-96493	LowQI	CDSBASE
321	NEC317	-113010	-96513	4.64	CDSBASE	366	NEC362	-113050	-96493	LowQI	CDSBASE
322	NEC318	-113011	-96513	4.63	CDSBASE	367	NEC363	-113051	-96493	LowQI	CDSBASE
323	NEC319	-113012	-96512	4.66	CDSBASE	368	NEC364	-113052	-96492	LowQI	CDSBASE
324	NEC320	-113013	-96512	4.66	CDSBASE	369	NEC365	-113052	-96492	LowQI	CDSBASE
325	NEC321	-113014	-96512	4.65	CDSBASE	370	NEC366	-113053	-96491	LowQI	CDSBASE
326	NEC322	-113015	-96511	4.59	CDSBASE	371	NEC367	-113054	-96490	LowQI	CDSBASE
327	NEC323	-113015	-96511	4.61	CDSBASE	372	NEC368	-113055	-96490	LowQI	CDSBASE
328	NEC324	-113016	-96510	4.63	CDSBASE	373	NEC369	-113056	-96489	LowQI	CDSBASE
329	NEC325	-113017	-96510	LowQI	CDSBASE	374	NEC370	-113057	-96489	LowQI	CDSBASE
330	NEC326	-113019	-96508	LowQI	CDSBASE	375	NEC371	-113058	-96488	LowQI	CDSBASE
331	NEC327	-113019	-96508	LowQI	CDSBASE	376	NEC372	-113059	-96488	LowQI	CDSBASE
332	NEC328	-113020	-96508	LowQI	CDSBASE	377	NEC373	-113060	-96488	LowQI	CDSBASE
333	NEC329	-113021	-96507	LowQI	CDSBASE	378	NEC374	-113061	-96487	LowQI	CDSBASE
334	NEC330	-113021	-96507	LowQI	CDSBASE	379	NEC375	-113062	-96486	LowQI	CDSBASE
335	NEC331	-113022	-96506	LowQI	CDSBASE	380	NEC376	-113064	-96484	LowQI	CDSBASE
336	NEC332	-113023	-96506	LowQI	CDSBASE	381	NEC377	-113064	-96484	LowQI	CDSBASE
337	NEC333	-113024	-96506	LowQI	CDSBASE	382	NEC378	-113065	-96484	LowQI	CDSBASE
338	NEC334	-113025	-96505	LowQI	CDSBASE	383	NEC379	-113066	-96483	LowQI	CDSBASE



ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
384	NEC380	-113067	-96483	LowQI	CDSBASE	429	NEC425	-113244	-96323	LowQI	TRPBASE
385	NEC381	-113067	-96483	LowQI	CDSBASE	430	NEC426	-113243	-96322	LowQI	TRPBASE
386	NEC382	-113068	-96482	LowQI	CDSBASE	431	NEC427	-113243	-96321	LowQI	TRPBASE
387	NEC383	-113069	-96482	LowQI	CDSBASE	432	NEC428	-113244	-96320	LowQI	TRPBASE
388	NEC384	-113070	-96482	LowQI	CDSBASE	433	NEC429	-113244	-96319	LowQI	TRPBASE
389	NEC385	-113071	-96481	LowQI	CDSBASE	434	NEC430	-113245	-96318	LowQI	TRPBASE
390	NEC386	-113072	-96481	LowQI	CDSBASE	435	NEC431	-113245	-96317	LowQI	TRPBASE
391	NEC387	-113073	-96481	LowQI	CDSBASE	436	NEC432	-113246	-96317	LowQI	TRPBASE
392	NEC388	-113074	-96480	LowQI	CDSBASE	437	NEC433	-113247	-96316	LowQI	TRPBASE
393	NEC389	-113075	-96480	LowQI	CDSBASE	438	NEC434	-113247	-96315	LowQI	TRPBASE
394	NEC390	-113076	-96479	LowQI	CDSBASE	439	NEC435	-113248	-96315	LowQI	TRPBASE
395	NEC391	-113076	-96479	LowQI	CDSBASE	440	NEC436	-113249	-96314	LowQI	TRPBASE
396	NEC392	-113077	-96478	LowQI	CDSBASE	441	NEC437	-113249	-96313	LowQI	TRPBASE
397	NEC393	-113078	-96478	LowQI	CDSBASE	442	NEC438	-113250	-96313	LowQI	TRPBASE
398	NEC394	-113079	-96477	LowQI	CDSBASE	443	NEC439	-113251	-96312	LowQI	TRPBASE
399	NEC395	-113080	-96477	LowQI	CDSBASE	444	NEC440	-113252	-96312	LowQI	TRPBASE
400	NEC396	-113081	-96476	LowQI	CDSBASE	445	NEC441	-113253	-96311	LowQI	TRPBASE
401	NEC397	-113082	-96476	LowQI	CDSBASE	446	NEC442	-113254	-96310	LowQI	TRPBASE
402	NEC398	-113083	-96475	LowQI	CDSBASE	447	NEC443	-113254	-96310	LowQI	TRPBASE
403	NEC399	-113084	-96475	LowQI	CDSBASE	448	NEC444	-113255	-96309	LowQI	TRPBASE
404	NEC400	-113085	-96475	LowQI	CDSBASE	449	NEC445	-113256	-96308	LowQI	TRPBASE
405	NEC401	-113086	-96474	LowQI	CDSBASE	450	NEC446	-113257	-96308	LowQI	TRPBASE
406	NEC402	-113087	-96474	LowQI	CDSBASE	451	NEC447	-113258	-96307	LowQI	TRPBASE
407	NEC403	-113088	-96473	LowQI	CDSBASE	452	NEC448	-113259	-96306	LowQI	TRPBASE
408	NEC404	-113089	-96473	LowQI	CDSBASE	453	NEC449	-113259	-96306	LowQI	TRPBASE
409	NEC405	-113090	-96473	LowQI	CDSBASE	454	NEC450	-113260	-96305	LowQI	TRPBASE
410	NEC406	-113091	-96472	LowQI	CDSBASE	455	NEC451	-113262	-96304	LowQI	TRPBASE
411	NEC407	-113092	-96472	LowQI	CDSBASE	456	NEC452	-113263	-96304	LowQI	TRPBASE
412	NEC408	-113093	-96471	LowQI	CDSBASE	457	NEC453	-113264	-96303	LowQI	TRPBASE
413	NEC409	-113094	-96471	LowQI	CDSBASE	458	NEC454	-113264	-96303	LowQI	TRPBASE
414	NEC410	-113097	-96470	LowQI	CDSBASE	459	NEC455	-113265	-96302	LowQI	TRPBASE
415	NEC411	-113097	-96470	LowQI	CDSBASE	460	NEC456	-113266	-96302	LowQI	TRPBASE
416	NEC412	-113097	-96470	LowQI	CDSBASE	461	NEC457	-113267	-96301	LowQI	TRPBASE
417	NEC413	-113098	-96470	LowQI	CDSBASE	462	NEC458	-113268	-96301	LowQI	TRPBASE
418	NEC414	-113099	-96471	LowQI	CDSBASE	463	NEC459	-113269	-96300	LowQI	TRPBASE
419	NEC415	-113100	-96471	LowQI	CDSBASE	464	NEC460	-113270	-96299	LowQI	TRPBASE
420	NEC416	-113101	-96472	LowQI	CDSBASE	465	NEC461	-113270	-96299	LowQI	TRPBASE
421	NEC417	-113101	-96472	LowQI	CDSBASE	466	NEC462	-113271	-96298	LowQI	TRPBASE
422	NEC418	-113101	-96471	LowQI	CDSBASE	467	NEC463	-113272	-96298	LowQI	TRPBASE
423	NEC419	-113101	-96470	LowQI	CDSBASE	468	NEC464	-113273	-96297	LowQI	TRPBASE
424	NEC420	-113101	-96470	LowQI	CDSBASE	469	NEC465	-113273	-96297	LowQI	TRPBASE
425	NEC421	-113244	-96326	LowQI	TRPBASE	470	NEC466	-113274	-96296	LowQI	TRPBASE
426	NEC422	-113244	-96326	LowQI	TRPBASE	471	NEC467	-113275	-96296	LowQI	TRPBASE
427	NEC423	-113244	-96325	LowQI	TRPBASE	472	NEC468	-113276	-96295	LowQI	TRPBASE
428	NEC424	-113244	-96324	LowQI	TRPBASE	473	NEC469	-113276	-96295	LowQI	TRPBASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
474	NEC470	-113277	-96294	LowQI	TRPBASE	519	NEC515	-113307	-96315	3.85	TRPPF
475	NEC471	-113278	-96294	LowQI	TRPBASE	520	NEC516	-113307	-96316	3.90	TRPPF
476	NEC472	-113278	-96293	LowQI	TRPBASE	521	NEC517	-113308	-96317	3.87	TRPPF
477	NEC473	-113279	-96292	LowQI	TRPBASE	522	NEC518	-113309	-96318	3.87	TRPPF
478	NEC474	-113280	-96292	LowQI	TRPBASE	523	NEC519	-113309	-96319	3.92	TRPPF
479	NEC475	-113281	-96291	LowQI	TRPBASE	524	NEC520	-113310	-96320	3.98	TRPPF
480	NEC476	-113281	-96291	LowQI	TRPBASE	525	NEC521	-113311	-96322	3.98	TRPPF
481	NEC477	-113282	-96290	LowQI	TRPBASE	526	NEC522	-113311	-96322	LowQI	TRPPF
482	NEC478	-113283	-96290	LowQI	TRPBASE	527	NEC523	-113311	-96322	LowQI	TRPPF
483	NEC479	-113283	-96289	LowQI	TRPBASE	528	NEC524	-113311	-96322	3.98	TRPPF
484	NEC480	-113284	-96289	LowQI	TRPBASE	529	NEC525	-113311	-96322	3.92	TRPPF
485	NEC481	-113285	-96288	LowQI	TRPBASE	530	NEC526	-113312	-96322	3.87	TRPPF
486	NEC482	-113285	-96288	LowQI	TRPBASE	531	NEC527	-113312	-96323	3.88	TRPPF
487	NEC483	-113286	-96288	3.63	TRPPF	532	NEC528	-113312	-96323	3.84	TRPPF
488	NEC484	-113287	-96288	3.52	TRPPF	533	NEC529	-113313	-96324	3.83	TRPPF
489	NEC485	-113287	-96289	3.52	TRPPF	534	NEC530	-113313	-96325	3.83	TRPPF
490	NEC486	-113288	-96290	3.46	TRPPF	535	NEC531	-113314	-96325	3.80	TRPPF
491	NEC487	-113289	-96291	3.45	TRPPF	536	NEC532	-113314	-96326	3.77	TRPPF
492	NEC488	-113289	-96291	3.46	TRPPF	537	NEC533	-113315	-96327	3.74	TRPPF
493	NEC489	-113290	-96292	3.42	TRPPF	538	NEC534	-113315	-96328	3.64	TRPPF
494	NEC490	-113291	-96293	3.45	TRPPF	539	NEC535	-113316	-96328	3.42	TRPPF
495	NEC491	-113292	-96294	3.49	TRPPF	540	NEC536	-113317	-96329	3.28	TRPPF
496	NEC492	-113292	-96295	3.46	TRPPF	541	NEC537	-113317	-96330	3.11	TRPPF
497	NEC493	-113293	-96296	3.46	TRPPF	542	NEC538	-113318	-96331	2.93	TRPPF
498	NEC494	-113294	-96296	3.55	TRPPF	543	NEC539	-113319	-96332	2.74	TRPPF
499	NEC495	-113295	-96297	3.55	TRPPF	544	NEC540	-113319	-96333	2.57	TRPPF
500	NEC496	-113295	-96298	3.52	TRPPF	545	NEC541	-113320	-96334	2.40	TRPPF
501	NEC497	-113296	-96299	3.58	TRPPF	546	NEC542	-113321	-96335	2.26	TRPPF
502	NEC498	-113296	-96300	3.62	TRPPF	547	NEC543	-113321	-96335	2.09	TRPPF
503	NEC499	-113297	-96301	3.60	TRPPF	548	NEC544	-113322	-96336	1.84	TRPPF
504	NEC500	-113298	-96302	3.57	TRPPF	549	NEC545	-113323	-96337	1.67	TRPPF
505	NEC501	-113298	-96303	3.62	TRPPF	550	NEC546	-113324	-96338	1.50	TRPPF
506	NEC502	-113299	-96304	3.64	TRPPF	551	NEC547	-113324	-96339	1.37	TRPPF
507	NEC503	-113300	-96304	3.60	TRPPF	552	NEC548	-113325	-96340	1.23	TRPPF
508	NEC504	-113300	-96305	3.65	TRPPF	553	NEC549	-113325	-96341	1.09	TRPPF
509	NEC505	-113301	-96306	3.69	TRPPF	554	NEC550	-113326	-96342	0.91	TRPPF
510	NEC506	-113302	-96307	3.66	TRPPF	555	NEC551	-113327	-96343	0.76	TRPPF
511	NEC507	-113302	-96308	3.69	TRPPF	556	NEC552	-113328	-96344	0.62	TRPPF
512	NEC508	-113303	-96309	3.72	TRPPF	557	NEC553	-113328	-96345	0.49	TRPPF
513	NEC509	-113303	-96310	3.78	TRPPF	558	NEC554	-113330	-96350	0.60	TRPPF
514	NEC510	-113304	-96311	3.76	TRPPF	559	NEC555	-113330	-96350	0.38	TRPPF
515	NEC511	-113305	-96312	3.75	TRPPF	560	NEC556	-113330	-96350	0.56	TRPPF
516	NEC512	-113305	-96312	3.85	TRPPF	561	NEC557	-113330	-96350	0.51	TRPPF
517	NEC513	-113306	-96313	3.85	TRPPF	562	NEC558	-113330	-96350	0.53	TRPPF
518	NEC514	-113306	-96314	3.89	TRPPF	563	NEC559	-113330	-96349	0.60	TRPPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
564	NEC560	-113331	-96349	0.47	TRPPF	609	NEC605	-113355	-96387	LowQI	TRPPF
565	NEC561	-113331	-96350	0.43	TRPPF	610	NEC606	-113356	-96388	LowQI	TRPPF
566	NEC562	-113332	-96350	0.39	TRPPF	611	NEC607	-113357	-96389	LowQI	TRPPF
567	NEC563	-113332	-96351	0.39	TRPPF	612	NEC608	-113357	-96390	LowQI	TRPPF
568	NEC564	-113333	-96352	0.37	TRPPF	613	NEC609	-113358	-96391	LowQI	TRPPF
569	NEC565	-113333	-96353	0.33	TRPPF	614	NEC610	-113359	-96392	LowQI	TRPPF
570	NEC566	-113334	-96354	0.27	TRPPF	615	NEC611	-113359	-96393	LowQI	TRPPF
571	NEC567	-113335	-96355	0.25	TRPPF	616	NEC612	-113360	-96394	LowQI	TRPPF
572	NEC568	-113335	-96356	0.24	TRPPF	617	NEC613	-113360	-96395	LowQI	TRPPF
573	NEC569	-113336	-96357	0.18	TRPPF	618	NEC614	-113346	-96375	LowQI	TRPPF
574	NEC570	-113337	-96358	0.14	TRPPF	619	NEC615	-113346	-96375	LowQI	TRPPF
575	NEC571	-113337	-96359	0.13	TRPPF	620	NEC616	-113345	-96374	LowQI	TRPPF
576	NEC572	-113338	-96360	0.12	TRPPF	621	NEC617	-113344	-96373	LowQI	TRPPF
577	NEC573	-113338	-96361	0.06	TRPPF	622	NEC618	-113344	-96372	LowQI	TRPPF
578	NEC574	-113339	-96362	0.02	TRPPF	623	NEC619	-113344	-96371	-0.46	TRPPF
579	NEC575	-113340	-96363	0.00	TRPPF	624	NEC620	-113343	-96370	-0.38	TRPPF
580	NEC576	-113340	-96364	-0.01	TRPPF	625	NEC621	-113343	-96369	-0.36	TRPPF
581	NEC577	-113341	-96365	0.10	TRPPF	626	NEC622	-113342	-96367	-0.34	TRPPF
582	NEC578	-113342	-96366	0.07	TRPPF	627	NEC623	-113342	-96366	-0.31	TRPPF
583	NEC579	-113342	-96367	0.05	TRPPF	628	NEC624	-113341	-96365	-0.26	TRPPF
584	NEC580	-113343	-96368	0.13	TRPPF	629	NEC625	-113339	-96362	LowQI	TRPPF
585	NEC581	-113344	-96369	0.08	TRPPF	630	NEC626	-113339	-96362	LowQI	TRPPF
586	NEC582	-113344	-96370	0.01	TRPPF	631	NEC627	-113339	-96362	-0.14	TRPPF
587	NEC583	-113345	-96371	-0.01	TRPPF	632	NEC628	-113338	-96361	-0.11	TRPPF
588	NEC584	-113346	-96372	0.04	TRPPF	633	NEC629	-113337	-96360	-0.11	TRPPF
589	NEC585	-113346	-96373	0.03	TRPPF	634	NEC630	-113337	-96359	-0.04	TRPPF
590	NEC586	-113347	-96374	-0.06	TRPPF	635	NEC631	-113336	-96357	0.02	TRPPF
591	NEC587	-113347	-96375	-0.03	TRPPF	636	NEC632	-113335	-96356	0.08	TRPPF
592	NEC588	-113346	-96374	LowQI	TRPPF	637	NEC633	-113335	-96355	0.08	TRPPF
593	NEC589	-113346	-96374	LowQI	TRPPF	638	NEC634	-113334	-96354	0.17	TRPPF
594	NEC590	-113346	-96374	LowQI	TRPPF	639	NEC635	-113334	-96353	0.25	TRPPF
595	NEC591	-113346	-96374	LowQI	TRPPF	640	NEC636	-113333	-96352	0.25	TRPPF
596	NEC592	-113346	-96374	LowQI	TRPPF	641	NEC637	-113332	-96351	0.30	TRPPF
597	NEC593	-113347	-96374	LowQI	TRPPF	642	NEC638	-113331	-96350	0.39	TRPPF
598	NEC594	-113347	-96375	LowQI	TRPPF	643	NEC639	-113331	-96349	0.47	TRPPF
599	NEC595	-113348	-96376	LowQI	TRPPF	644	NEC640	-113330	-96348	0.49	TRPPF
600	NEC596	-113348	-96377	LowQI	TRPPF	645	NEC641	-113330	-96347	0.54	TRPPF
601	NEC597	-113349	-96378	LowQI	TRPPF	646	NEC642	-113329	-96346	0.64	TRPPF
602	NEC598	-113350	-96379	LowQI	TRPPF	647	NEC643	-113329	-96345	0.74	TRPPF
603	NEC599	-113351	-96380	LowQI	TRPPF	648	NEC644	-113328	-96344	0.80	TRPPF
604	NEC600	-113352	-96381	LowQI	TRPPF	649	NEC645	-113327	-96343	0.94	TRPPF
605	NEC601	-113352	-96383	LowQI	TRPPF	650	NEC646	-113327	-96342	1.13	TRPPF
606	NEC602	-113353	-96384	LowQI	TRPPF	651	NEC647	-113326	-96341	1.24	TRPPF
607	NEC603	-113354	-96385	LowQI	TRPPF	652	NEC648	-113326	-96340	1.31	TRPPF
608	NEC604	-113355	-96386	LowQI	TRPPF	653	NEC649	-113325	-96339	1.51	TRPPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
654	NEC650	-113324	-96338	1.64	TRPPF	699	NEC695	-113300	-96304	3.62	TRPPF
655	NEC651	-113324	-96337	1.71	TRPPF	700	NEC696	-113299	-96303	3.63	TRPPF
656	NEC652	-113323	-96336	1.89	TRPPF	701	NEC697	-113299	-96303	3.59	TRPPF
657	NEC653	-113323	-96335	2.10	TRPPF	702	NEC698	-113298	-96302	3.59	TRPPF
658	NEC654	-113322	-96335	2.17	TRPPF	703	NEC699	-113297	-96301	3.60	TRPPF
659	NEC655	-113322	-96334	2.32	TRPPF	704	NEC700	-113296	-96300	3.56	TRPPF
660	NEC656	-113321	-96333	2.46	TRPPF	705	NEC701	-113296	-96300	3.53	TRPPF
661	NEC657	-113320	-96332	2.63	TRPPF	706	NEC702	-113295	-96299	3.53	TRPPF
662	NEC658	-113320	-96331	2.72	TRPPF	707	NEC703	-113295	-96298	3.51	TRPPF
663	NEC659	-113319	-96331	2.85	TRPPF	708	NEC704	-113294	-96297	3.47	TRPPF
664	NEC660	-113319	-96330	3.04	TRPPF	709	NEC705	-113293	-96296	3.48	TRPPF
665	NEC661	-113318	-96329	3.12	TRPPF	710	NEC706	-113293	-96295	3.49	TRPPF
666	NEC662	-113318	-96328	3.27	TRPPF	711	NEC707	-113292	-96295	3.43	TRPPF
667	NEC663	-113317	-96328	3.42	TRPPF	712	NEC708	-113291	-96294	3.43	TRPPF
668	NEC664	-113317	-96327	3.63	TRPPF	713	NEC709	-113290	-96293	3.44	TRPPF
669	NEC665	-113316	-96326	3.76	TRPPF	714	NEC710	-113289	-96292	3.41	TRPPF
670	NEC666	-113316	-96326	3.82	TRPPF	715	NEC711	-113288	-96292	3.41	TRPPF
671	NEC667	-113315	-96325	3.92	TRPPF	716	NEC712	-113288	-96291	3.45	TRPPF
672	NEC668	-113315	-96324	3.93	TRPPF	717	NEC713	-113287	-96290	3.44	TRPPF
673	NEC669	-113314	-96324	3.98	TRPPF	718	NEC714	-113287	-96290	3.48	TRPPF
674	NEC670	-113314	-96323	4.00	TRPPF	719	NEC715	-113286	-96289	3.49	TRPPF
675	NEC671	-113313	-96322	3.91	TRPPF	720	NEC716	-113286	-96288	3.50	TRPPF
676	NEC672	-113313	-96321	3.95	TRPPF	721	NEC717	-113287	-96287	LowQI	TRPBASE
677	NEC673	-113312	-96321	3.94	TRPPF	722	NEC718	-113288	-96287	LowQI	TRPBASE
678	NEC674	-113312	-96320	3.91	TRPPF	723	NEC719	-113289	-96286	LowQI	TRPBASE
679	NEC675	-113311	-96319	3.91	TRPPF	724	NEC720	-113289	-96285	LowQI	TRPBASE
680	NEC676	-113310	-96319	3.91	TRPPF	725	NEC721	-113290	-96285	LowQI	TRPBASE
681	NEC677	-113309	-96318	3.98	TRPPF	726	NEC722	-113291	-96284	LowQI	TRPBASE
682	NEC678	-113308	-96315	LowQI	TRPPF	727	NEC723	-113292	-96284	LowQI	TRPBASE
683	NEC679	-113308	-96315	LowQI	TRPPF	728	NEC724	-113293	-96283	LowQI	TRPBASE
684	NEC680	-113307	-96315	LowQI	TRPPF	729	NEC725	-113294	-96283	LowQI	TRPBASE
685	NEC681	-113307	-96314	LowQI	TRPPF	730	NEC726	-113294	-96282	LowQI	TRPBASE
686	NEC682	-113306	-96314	LowQI	TRPPF	731	NEC727	-113295	-96282	LowQI	TRPBASE
687	NEC683	-113306	-96313	LowQI	TRPPF	732	NEC728	-113296	-96281	LowQI	TRPBASE
688	NEC684	-113305	-96312	LowQI	TRPPF	733	NEC729	-113296	-96281	LowQI	TRPBASE
689	NEC685	-113305	-96311	LowQI	TRPPF	734	NEC730	-113297	-96281	LowQI	TRPBASE
690	NEC686	-113305	-96311	3.77	TRPPF	735	NEC731	-113298	-96280	LowQI	TRPBASE
691	NEC687	-113304	-96310	3.77	TRPPF	736	NEC732	-113299	-96280	LowQI	TRPBASE
692	NEC688	-113304	-96310	3.77	TRPPF	737	NEC733	-113299	-96279	LowQI	TRPBASE
693	NEC689	-113303	-96309	3.71	TRPPF	738	NEC734	-113300	-96279	LowQI	TRPBASE
694	NEC690	-113303	-96308	3.74	TRPPF	739	NEC735	-113301	-96278	LowQI	TRPBASE
695	NEC691	-113302	-96307	3.70	TRPPF	740	NEC736	-113302	-96278	LowQI	TRPBASE
696	NEC692	-113302	-96307	3.68	TRPPF	741	NEC737	-113303	-96277	LowQI	TRPBASE
697	NEC693	-113301	-96306	3.70	TRPPF	742	NEC738	-113303	-96277	LowQI	TRPBASE
698	NEC694	-113301	-96305	3.64	TRPPF	743	NEC739	-113304	-96276	LowQI	TRPBASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
744	NEC740	-113305	-96276	LowQI	TRPBASE	789	NEC785	-113353	-96243	LowQI	TRPBASE
745	NEC741	-113306	-96275	LowQI	TRPBASE	790	NEC786	-113355	-96243	LowQI	TRPBASE
746	NEC742	-113306	-96274	LowQI	TRPBASE	791	NEC787	-113356	-96242	LowQI	TRPBASE
747	NEC743	-113307	-96274	LowQI	TRPBASE	792	NEC788	-113356	-96242	LowQI	TRPBASE
748	NEC744	-113308	-96273	LowQI	TRPBASE	793	NEC789	-113357	-96241	LowQI	TRPBASE
749	NEC745	-113309	-96273	LowQI	TRPBASE	794	NEC790	-113358	-96240	LowQI	TRPBASE
750	NEC746	-113311	-96271	LowQI	TRPBASE	795	NEC791	-113359	-96239	LowQI	TRPBASE
751	NEC747	-113311	-96271	LowQI	TRPBASE	796	NEC792	-113359	-96239	LowQI	TRPBASE
752	NEC748	-113312	-96271	LowQI	TRPBASE	797	NEC793	-113360	-96238	LowQI	TRPBASE
753	NEC749	-113313	-96270	LowQI	TRPBASE	798	NEC794	-113361	-96238	LowQI	TRPBASE
754	NEC750	-113314	-96270	LowQI	TRPBASE	799	NEC795	-113361	-96237	LowQI	TRPBASE
755	NEC751	-113315	-96269	LowQI	TRPBASE	800	NEC796	-113362	-96236	LowQI	TRPBASE
756	NEC752	-113316	-96268	LowQI	TRPBASE	801	NEC797	-113363	-96236	3.96	TRPBASE
757	NEC753	-113317	-96268	LowQI	TRPBASE	802	NEC798	-113364	-96235	3.97	TRPBASE
758	NEC754	-113318	-96267	LowQI	TRPBASE	803	NEC799	-113364	-96235	4.02	TRPBASE
759	NEC755	-113319	-96266	LowQI	TRPBASE	804	NEC800	-113365	-96234	4.05	TRPBASE
760	NEC756	-113320	-96266	LowQI	TRPBASE	805	NEC801	-113366	-96234	4.05	TRPBASE
761	NEC757	-113321	-96265	LowQI	TRPBASE	806	NEC802	-113367	-96233	4.06	TRPBASE
762	NEC758	-113322	-96265	LowQI	TRPBASE	807	NEC803	-113367	-96233	4.08	TRPBASE
763	NEC759	-113323	-96264	LowQI	TRPBASE	808	NEC804	-113368	-96232	4.12	TRPBASE
764	NEC760	-113324	-96263	LowQI	TRPBASE	809	NEC805	-113369	-96232	4.09	TRPBASE
765	NEC761	-113325	-96263	LowQI	TRPBASE	810	NEC806	-113369	-96231	4.14	TRPBASE
766	NEC762	-113326	-96262	LowQI	TRPBASE	811	NEC807	-113370	-96231	4.17	TRPBASE
767	NEC763	-113327	-96261	LowQI	TRPBASE	812	NEC808	-113371	-96230	4.08	TRPBASE
768	NEC764	-113328	-96261	LowQI	TRPBASE	813	NEC809	-113371	-96230	4.09	TRPBASE
769	NEC765	-113329	-96260	LowQI	TRPBASE	814	NEC810	-113372	-96229	4.12	TRPBASE
770	NEC766	-113330	-96260	LowQI	TRPBASE	815	NEC811	-113374	-96229	4.58	TRPBASE
771	NEC767	-113330	-96259	LowQI	TRPBASE	816	NEC812	-113374	-96228	4.60	TRPBASE
772	NEC768	-113331	-96258	LowQI	TRPBASE	817	NEC813	-113375	-96228	4.72	TRPBASE
773	NEC769	-113332	-96258	LowQI	TRPBASE	818	NEC814	-113376	-96227	4.74	TRPBASE
774	NEC770	-113333	-96257	LowQI	TRPBASE	819	NEC815	-113376	-96227	4.80	TRPBASE
775	NEC771	-113334	-96257	LowQI	TRPBASE	820	NEC816	-113377	-96226	4.86	TRPBASE
776	NEC772	-113335	-96256	LowQI	TRPBASE	821	NEC817	-113377	-96225	4.96	TRPBASE
777	NEC773	-113343	-96250	LowQI	TRPBASE	822	NEC818	-113378	-96225	5.05	TRPBASE
778	NEC774	-113344	-96250	LowQI	TRPBASE	823	NEC819	-113379	-96224	5.07	TRPBASE
779	NEC775	-113344	-96250	LowQI	TRPBASE	824	NEC820	-113380	-96224	5.07	TRPBASE
780	NEC776	-113345	-96249	LowQI	TRPBASE	825	NEC821	-113381	-96223	5.21	TRPBASE
781	NEC777	-113346	-96248	LowQI	TRPBASE	826	NEC822	-113381	-96223	5.29	TRPBASE
782	NEC778	-113347	-96248	LowQI	TRPBASE	827	NEC823	-113382	-96222	5.29	TRPBASE
783	NEC779	-113348	-96247	LowQI	TRPBASE	828	NEC824	-113383	-96222	5.31	TRPBASE
784	NEC780	-113349	-96246	LowQI	TRPBASE	829	NEC825	-113384	-96221	5.36	TRPBASE
785	NEC781	-113350	-96246	LowQI	TRPBASE	830	NEC826	-113385	-96221	5.42	TRPBASE
786	NEC782	-113351	-96245	LowQI	TRPBASE	831	NEC827	-113386	-96220	5.45	TRPBASE
787	NEC783	-113352	-96244	LowQI	TRPBASE	832	NEC828	-113386	-96220	5.48	TRPBASE
788	NEC784	-113353	-96244	LowQI	TRPBASE	833	NEC829	-113387	-96219	5.50	TRPBASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
834	NEC830	-113388	-96219	5.52	TRPBASE	879	NEC875	-113502	-96163	3.36	DRVBASE
835	NEC831	-113389	-96218	5.60	TRPBASE	881	NEC877	-112824	-96613	4.48	STABASE
836	NEC832	-113390	-96218	5.63	TRPBASE	882	NEC878	-112824	-96613	4.55	STABASE
837	NEC833	-113391	-96217	5.65	TRPBASE	883	NEC879	-112824	-96613	4.61	STABASE
838	NEC834	-113391	-96216	5.71	TRPBASE	884	NEC880	-112823	-96614	4.57	STABASE
839	NEC835	-113392	-96216	5.75	TRPBASE	885	NEC881	-112822	-96614	4.58	STABASE
840	NEC836	-113393	-96215	5.77	TRPBASE	886	NEC882	-112821	-96615	4.59	STABASE
841	NEC837	-113395	-96213	4.83	TRPBASE	887	NEC883	-112821	-96615	4.61	STABASE
842	NEC838	-113395	-96213	4.75	TRPBASE	888	NEC884	-112820	-96615	4.59	STABASE
843	NEC839	-113396	-96213	4.63	TRPBASE	889	NEC885	-112819	-96615	4.54	STABASE
844	NEC840	-113397	-96212	4.57	TRPBASE	890	NEC886	-112818	-96616	4.55	STABASE
845	NEC841	-113397	-96212	4.62	TRPBASE	891	NEC887	-112818	-96616	4.62	STABASE
846	NEC842	-113398	-96211	4.72	TRPBASE	892	NEC888	-112817	-96616	4.60	STABASE
847	NEC843	-113399	-96211	4.58	TRPBASE	893	NEC889	-112817	-96617	4.57	STABASE
848	NEC844	-113400	-96210	4.64	TRPBASE	894	NEC890	-112816	-96617	4.57	STABASE
849	NEC845	-113400	-96210	4.68	TRPBASE	895	NEC891	-112815	-96617	4.55	STABASE
850	NEC846	-113401	-96209	4.67	TRPBASE	896	NEC892	-112815	-96618	4.55	STABASE
851	NEC847	-113402	-96208	4.59	TRPBASE	897	NEC893	-112815	-96618	4.53	STABASE
852	NEC848	-113403	-96208	4.60	TRPBASE	898	NEC894	-112814	-96618	4.51	STABASE
853	NEC849	-113404	-96207	4.70	TRPBASE	899	NEC895	-112813	-96619	4.45	STABASE
854	NEC850	-113405	-96207	4.65	TRPBASE	900	NEC896	-112812	-96619	4.58	STABASE
855	NEC851	-113406	-96206	4.53	TRPBASE	901	NEC897	-112812	-96620	4.54	STABASE
856	NEC852	-113406	-96205	4.22	TRPBASE	902	NEC898	-112811	-96620	4.59	STABASE
857	NEC853	-113407	-96205	4.46	TRPBASE	903	NEC899	-112810	-96620	4.61	STABASE
858	NEC854	-113408	-96204	4.37	TRPBASE	904	NEC900	-112809	-96621	4.68	STABASE
859	NEC855	-113409	-96203	4.54	TRPBASE	905	NEC901	-112809	-96621	4.65	STABASE
860	NEC856	-113409	-96203	4.50	TRPBASE	906	NEC902	-112808	-96622	4.65	STABASE
861	NEC857	-113410	-96202	4.49	TRPBASE	907	NEC903	-112807	-96622	4.64	STABASE
862	NEC858	-113411	-96201	4.62	TRPBASE	908	NEC904	-112806	-96622	4.69	STABASE
863	NEC859	-113412	-96201	4.40	TRPBASE	909	NEC905	-112805	-96623	4.65	STABASE
864	NEC860	-113412	-96200	LowQI	TRPBASE	910	NEC906	-112804	-96623	4.71	STABASE
865	NEC861	-113413	-96200	LowQI	TRPBASE	911	NEC907	-112804	-96624	4.68	STABASE
866	NEC862	-113413	-96200	LowQI	TRPBASE	912	NEC908	-112803	-96624	4.71	STABASE
867	NEC863	-113493	-96169	3.11	DRVBASE	913	NEC909	-112802	-96624	4.74	STABASE
868	NEC864	-113493	-96169	3.15	DRVBASE	914	NEC910	-112801	-96625	4.71	STABASE
869	NEC865	-113494	-96168	3.15	DRVBASE	915	NEC911	-112800	-96625	4.76	STABASE
870	NEC866	-113495	-96168	3.29	DRVBASE	916	NEC912	-112800	-96625	4.73	STABASE
871	NEC867	-113495	-96167	3.39	DRVBASE	917	NEC913	-112799	-96626	4.76	STABASE
872	NEC868	-113496	-96167	3.30	DRVBASE	918	NEC914	-112798	-96626	4.73	STABASE
873	NEC869	-113497	-96166	3.36	DRVBASE	919	NEC915	-112797	-96627	4.70	STABASE
874	NEC870	-113498	-96166	3.28	DRVBASE	920	NEC916	-112797	-96627	4.72	STABASE
875	NEC871	-113499	-96165	3.20	DRVBASE	921	NEC917	-112796	-96627	4.77	STABASE
876	NEC872	-113500	-96165	3.15	DRVBASE	922	NEC918	-112795	-96628	4.77	STABASE
877	NEC873	-113501	-96164	3.32	DRVBASE	923	NEC919	-112794	-96628	4.83	STABASE
878	NEC874	-113501	-96163	3.29	DRVBASE	924	NEC920	-112793	-96629	4.79	STABASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
925	NEC921	-112793	-96629	4.75	STABASE	970	NEC966	-112758	-96648	LowQI	STABASE
926	NEC922	-112792	-96630	4.74	STABASE	971	NEC967	-112757	-96648	LowQI	STABASE
927	NEC923	-112791	-96630	4.72	STABASE	972	NEC968	-112757	-96649	LowQI	STABASE
928	NEC924	-112790	-96630	4.75	STABASE	973	NEC969	-112756	-96649	LowQI	STABASE
929	NEC925	-112789	-96631	4.71	STABASE	974	NEC970	-112755	-96650	LowQI	STABASE
930	NEC926	-112788	-96632	4.70	STABASE	975	NEC971	-112754	-96650	LowQI	STABASE
931	NEC927	-112788	-96632	4.64	STABASE	976	NEC972	-112754	-96651	LowQI	STABASE
932	NEC928	-112787	-96633	4.70	STABASE	977	NEC973	-112753	-96651	LowQI	STABASE
933	NEC929	-112786	-96633	4.66	STABASE	978	NEC974	-112752	-96651	LowQI	STABASE
934	NEC930	-112785	-96633	4.67	STABASE	979	NEC975	-112751	-96652	LowQI	STABASE
935	NEC931	-112784	-96634	4.67	STABASE	980	NEC976	-112750	-96652	LowQI	STABASE
936	NEC932	-112783	-96634	4.66	STABASE	981	NEC977	-112750	-96652	LowQI	STABASE
937	NEC933	-112782	-96635	4.62	STABASE	982	NEC978	-112750	-96652	LowQI	STABASE
938	NEC934	-112782	-96635	4.67	STABASE	983	NEC979	-112750	-96652	LowQI	STABASE
939	NEC935	-112781	-96635	4.64	STABASE	984	NEC980	-112750	-96653	LowQI	STABASE
940	NEC936	-112780	-96636	4.62	STABASE	985	NEC981	-112749	-96653	LowQI	STABASE
941	NEC937	-112779	-96636	4.69	STABASE	986	NEC982	-112749	-96653	LowQI	STABASE
942	NEC938	-112778	-96637	4.64	STABASE	987	NEC983	-112748	-96653	LowQI	STABASE
943	NEC939	-112777	-96637	4.65	STABASE	988	NEC984	-112748	-96653	LowQI	STABASE
944	NEC940	-112777	-96638	4.75	STABASE	989	NEC985	-112745	-96653	LowQI	STABASE
945	NEC941	-112776	-96638	4.76	STABASE	990	NEC986	-112745	-96653	LowQI	STABASE
946	NEC942	-112775	-96639	4.77	STABASE	991	NEC987	-112744	-96654	LowQI	STABASE
947	NEC943	-112774	-96639	4.80	STABASE	992	NEC988	-112744	-96654	LowQI	STABASE
948	NEC944	-112773	-96639	4.80	STABASE	993	NEC989	-112743	-96654	LowQI	STABASE
949	NEC945	-112772	-96640	4.82	STABASE	994	NEC990	-112742	-96654	LowQI	STABASE
950	NEC946	-112771	-96640	4.85	STABASE	995	NEC991	-112743	-96655	LowQI	STABASE
951	NEC947	-112771	-96641	4.85	STABASE	996	NEC992	-112742	-96655	LowQI	STABASE
952	NEC948	-112770	-96641	4.85	STABASE	997	NEC993	-112741	-96656	LowQI	STABASE
953	NEC949	-112769	-96642	4.85	STABASE	998	NEC994	-112742	-96657	LowQI	STAPF
954	NEC950	-112768	-96642	4.83	STABASE	999	NEC995	-112743	-96659	LowQI	STAPF
955	NEC951	-112767	-96643	4.81	STABASE	1000	NEC996	-112743	-96659	LowQI	STAPF
956	NEC952	-112766	-96643	4.83	STABASE	1001	NEC997	-112744	-96660	LowQI	STAPF
957	NEC953	-112766	-96644	4.83	STABASE	1002	NEC998	-112745	-96661	LowQI	STAPF
958	NEC954	-112765	-96644	4.64	STABASE	1003	NEC999	-112746	-96661	LowQI	STAPF
959	NEC955	-112764	-96645	4.79	STABASE	1004	NEC1000	-112746	-96662	LowQI	STAPF
960	NEC956	-112763	-96645	4.74	STABASE	1005	NEC1001	-112746	-96662	LowQI	STAPF
961	NEC957	-112762	-96645	4.74	STABASE	1006	NEC1002	-112746	-96662	LowQI	STAPF
962	NEC958	-112762	-96646	4.80	STABASE	1007	NEC1003	-112748	-96663	3.36	STAPF
963	NEC959	-112761	-96646	4.83	STABASE	1008	NEC1004	-112748	-96663	3.36	STAPF
964	NEC960	-112761	-96646	4.68	STABASE	1009	NEC1005	-112748	-96663	3.36	STAPF
965	NEC961	-112760	-96647	4.71	STABASE	1010	NEC1006	-112749	-96665	3.01	STAPF
966	NEC962	-112760	-96647	4.57	STABASE	1011	NEC1007	-112750	-96666	2.94	STAPF
967	NEC963	-112759	-96647	4.67	STABASE	1012	NEC1008	-112750	-96667	2.78	STAPF
968	NEC964	-112759	-96647	LowQI	STABASE	1013	NEC1009	-112751	-96668	2.68	STAPF
969	NEC965	-112759	-96647	LowQI	STABASE	1014	NEC1010	-112751	-96669	2.58	STAPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1015	NEC1011	-112752	-966670	2.41	STAPF	1060	NEC1056	-112773	-96705	LowQI	STAPF
1016	NEC1012	-112752	-966670	2.33	STAPF	1061	NEC1057	-112773	-96706	LowQI	STAPF
1017	NEC1013	-112755	-966674	1.87	STAPF	1062	NEC1058	-112774	-96707	LowQI	STAPF
1018	NEC1014	-112755	-966674	1.87	STAPF	1063	NEC1059	-112774	-96708	LowQI	STAPF
1019	NEC1015	-112755	-966675	1.80	STAPF	1064	NEC1060	-112774	-96708	LowQI	STAPF
1020	NEC1016	-112756	-966676	LowQI	STAPF	1065	NEC1061	-112775	-96709	LowQI	STAPF
1021	NEC1017	-112756	-966677	LowQI	STAPF	1066	NEC1062	-112775	-96709	LowQI	STAPF
1022	NEC1018	-112757	-966677	LowQI	STAPF	1067	NEC1063	-112776	-96710	LowQI	STAPF
1023	NEC1019	-112756	-966677	1.52	STAPF	1068	NEC1064	-112776	-96711	LowQI	STAPF
1024	NEC1020	-112757	-966678	1.49	STAPF	1069	NEC1065	-112777	-96712	LowQI	STAPF
1025	NEC1021	-112757	-966678	1.39	STAPF	1070	NEC1066	-112777	-96712	LowQI	STAPF
1026	NEC1022	-112757	-966679	1.36	STAPF	1071	NEC1067	-112778	-96713	LowQI	STAPF
1027	NEC1023	-112758	-966679	1.33	STAPF	1072	NEC1068	-112778	-96714	LowQI	STAPF
1028	NEC1024	-112758	-966680	1.20	STAPF	1073	NEC1069	-112779	-96715	LowQI	STAPF
1029	NEC1025	-112760	-966683	LowQI	STAPF	1074	NEC1070	-112779	-96716	LowQI	STAPF
1030	NEC1026	-112760	-966683	LowQI	STAPF	1075	NEC1071	-112780	-96716	LowQI	STAPF
1031	NEC1027	-112760	-966683	LowQI	STAPF	1076	NEC1072	-112780	-96717	LowQI	STAPF
1032	NEC1028	-112760	-966683	LowQI	STAPF	1077	NEC1073	-112781	-96718	LowQI	STAPF
1033	NEC1029	-112760	-966683	0.98	STAPF	1078	NEC1074	-112783	-96720	LowQI	STAPF
1034	NEC1030	-112760	-966684	0.92	STAPF	1079	NEC1075	-112783	-96720	LowQI	STAPF
1035	NEC1031	-112761	-966685	0.85	STAPF	1080	NEC1076	-112783	-96721	LowQI	STAPF
1036	NEC1032	-112761	-966685	0.83	STAPF	1081	NEC1077	-112784	-96721	LowQI	STAPF
1037	NEC1033	-112762	-966686	0.75	STAPF	1082	NEC1078	-112784	-96722	-0.64	STAPF
1038	NEC1034	-112762	-966687	0.74	STAPF	1083	NEC1079	-112785	-96723	-0.69	STAPF
1039	NEC1035	-112762	-966688	0.65	STAPF	1084	NEC1080	-112785	-96724	-0.66	STAPF
1040	NEC1036	-112763	-966689	0.58	STAPF	1085	NEC1081	-112786	-96725	-0.69	STAPF
1041	NEC1037	-112763	-966690	0.56	STAPF	1086	NEC1082	-112786	-96726	-0.72	STAPF
1042	NEC1038	-112764	-966691	0.48	STAPF	1087	NEC1083	-112787	-96727	-0.69	STAPF
1043	NEC1039	-112764	-966692	0.43	STAPF	1088	NEC1084	-112787	-96728	-0.78	STAPF
1044	NEC1040	-112765	-966693	0.43	STAPF	1089	NEC1085	-112788	-96728	-0.75	STAPF
1045	NEC1041	-112766	-966694	0.31	STAPF	1090	NEC1086	-112783	-96719	-0.54	STAPF
1046	NEC1042	-112767	-966695	LowQI	STAPF	1091	NEC1087	-112782	-96719	-0.54	STAPF
1047	NEC1043	-112767	-966695	LowQI	STAPF	1092	NEC1088	-112782	-96718	-0.51	STAPF
1048	NEC1044	-112767	-966696	LowQI	STAPF	1093	NEC1089	-112781	-96717	-0.46	STAPF
1049	NEC1045	-112767	-966697	LowQI	STAPF	1094	NEC1090	-112780	-96716	-0.50	STAPF
1050	NEC1046	-112767	-966697	LowQI	STAPF	1095	NEC1091	-112780	-96716	-0.41	STAPF
1051	NEC1047	-112768	-966698	LowQI	STAPF	1096	NEC1092	-112780	-96715	-0.42	STAPF
1052	NEC1048	-112768	-966699	LowQI	STAPF	1097	NEC1093	-112779	-96714	-0.37	STAPF
1053	NEC1049	-112769	-966699	LowQI	STAPF	1098	NEC1094	-112779	-96713	-0.34	STAPF
1054	NEC1050	-112769	-967000	LowQI	STAPF	1099	NEC1095	-112778	-96713	-0.27	STAPF
1055	NEC1051	-112770	-96701	LowQI	STAPF	1100	NEC1096	-112778	-96712	-0.27	STAPF
1056	NEC1052	-112770	-96702	LowQI	STAPF	1101	NEC1097	-112777	-96711	-0.25	STAPF
1057	NEC1053	-112771	-96703	LowQI	STAPF	1102	NEC1098	-112776	-96710	-0.25	STAPF
1058	NEC1054	-112771	-96703	LowQI	STAPF	1103	NEC1099	-112776	-96709	-0.24	STAPF
1059	NEC1055	-112772	-96704	LowQI	STAPF	1104	NEC1100	-112775	-96709	-0.18	STAPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1105	NEC1101	-112774	-96708	-0.17	STAPF	1150	NEC1146	-112754	-96674	1.85	STAPF
1106	NEC1102	-112774	-96707	-0.15	STAPF	1151	NEC1147	-112753	-96673	1.97	STAPF
1107	NEC1103	-112773	-96706	-0.06	STAPF	1152	NEC1148	-112753	-96672	2.07	STAPF
1108	NEC1104	-112773	-96705	-0.09	STAPF	1153	NEC1149	-112753	-96672	2.12	STAPF
1109	NEC1105	-112772	-96704	-0.03	STAPF	1154	NEC1150	-112752	-96671	2.26	STAPF
1110	NEC1106	-112771	-96703	-0.01	STAPF	1155	NEC1151	-112752	-96670	2.31	STAPF
1111	NEC1107	-112771	-96702	-0.02	STAPF	1156	NEC1152	-112751	-96669	2.43	STAPF
1112	NEC1108	-112770	-96701	0.07	STAPF	1157	NEC1153	-112751	-96669	2.51	STAPF
1113	NEC1109	-112769	-96701	0.03	STAPF	1158	NEC1154	-112750	-96668	2.66	STAPF
1114	NEC1110	-112769	-96700	0.11	STAPF	1159	NEC1155	-112750	-96667	2.69	STAPF
1115	NEC1111	-112768	-96699	0.10	STAPF	1160	NEC1156	-112749	-96666	2.87	STAPF
1116	NEC1112	-112768	-96699	0.17	STAPF	1161	NEC1157	-112749	-96665	2.92	STAPF
1117	NEC1113	-112767	-96698	0.17	STAPF	1162	NEC1158	-112748	-96665	3.11	STAPF
1118	NEC1114	-112767	-96697	0.21	STAPF	1163	NEC1159	-112748	-96664	3.25	STAPF
1119	NEC1115	-112766	-96697	0.25	STAPF	1164	NEC1160	-112747	-96663	3.34	STAPF
1120	NEC1116	-112766	-96696	0.25	STAPF	1165	NEC1161	-112747	-96663	3.48	STAPF
1121	NEC1117	-112766	-96695	0.30	STAPF	1166	NEC1162	-112746	-96662	3.59	STAPF
1122	NEC1118	-112766	-96695	0.32	STAPF	1167	NEC1163	-112746	-96661	3.61	STAPF
1123	NEC1119	-112765	-96694	0.32	STAPF	1168	NEC1164	-112744	-96659	LowQI	STAPF
1124	NEC1120	-112765	-96693	0.37	STAPF	1169	NEC1165	-112744	-96658	LowQI	STAPF
1125	NEC1121	-112765	-96693	0.41	STAPF	1170	NEC1166	-112743	-96657	LowQI	STABASE
1126	NEC1122	-112765	-96692	0.42	STAPF	1171	NEC1167	-112742	-96657	LowQI	STABASE
1127	NEC1123	-112764	-96692	0.46	STAPF	1172	NEC1168	-112742	-96657	LowQI	STABASE
1128	NEC1124	-112764	-96691	0.53	STAPF	1173	NEC1169	-112742	-96657	LowQI	STABASE
1129	NEC1125	-112764	-96690	0.54	STAPF	1174	NEC1170	-112741	-96657	LowQI	STABASE
1130	NEC1126	-112763	-96690	0.58	STAPF	1175	NEC1171	-112740	-96658	LowQI	STABASE
1131	NEC1127	-112763	-96689	0.63	STAPF	1176	NEC1172	-112739	-96658	LowQI	STABASE
1132	NEC1128	-112762	-96688	0.62	STAPF	1177	NEC1173	-112738	-96659	LowQI	STABASE
1133	NEC1129	-112761	-96688	0.71	STAPF	1178	NEC1174	-112738	-96659	LowQI	STABASE
1134	NEC1130	-112761	-96687	0.70	STAPF	1179	NEC1175	-112737	-96660	LowQI	STABASE
1135	NEC1131	-112760	-96686	0.81	STAPF	1180	NEC1176	-112736	-96660	LowQI	STABASE
1136	NEC1132	-112760	-96685	0.84	STAPF	1181	NEC1177	-112735	-96660	LowQI	STABASE
1137	NEC1133	-112760	-96684	0.92	STAPF	1182	NEC1178	-112735	-96661	LowQI	STABASE
1138	NEC1134	-112759	-96683	0.96	STAPF	1183	NEC1179	-112735	-96661	LowQI	STABASE
1139	NEC1135	-112759	-96683	1.02	STAPF	1184	NEC1180	-112733	-96661	LowQI	STABASE
1140	NEC1136	-112758	-96682	1.10	STAPF	1185	NEC1181	-112733	-96662	LowQI	STABASE
1141	NEC1137	-112758	-96681	1.15	STAPF	1186	NEC1182	-112732	-96662	LowQI	STABASE
1142	NEC1138	-112757	-96681	1.21	STAPF	1187	NEC1183	-112728	-96664	LowQI	STABASE
1143	NEC1139	-112757	-96680	1.24	STAPF	1188	NEC1184	-112728	-96664	LowQI	STABASE
1144	NEC1140	-112756	-96679	1.38	STAPF	1189	NEC1185	-112728	-96664	LowQI	STABASE
1145	NEC1141	-112756	-96678	1.42	STAPF	1190	NEC1186	-112727	-96665	LowQI	STABASE
1146	NEC1142	-112755	-96677	1.56	STAPF	1191	NEC1187	-112726	-96665	LowQI	STABASE
1147	NEC1143	-112754	-96675	1.75	STAPF	1192	NEC1188	-112725	-96666	LowQI	STABASE
1148	NEC1144	-112754	-96675	1.75	STAPF	1193	NEC1189	-112724	-96666	LowQI	STABASE
1149	NEC1145	-112754	-96675	1.86	STAPF	1194	NEC1190	-112723	-96667	LowQI	STABASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1195	NEC1191	-112722	-96667	LowQI	STABASE	1240	NEC1236	-112681	-96688	LowQI	STABASE
1196	NEC1192	-112721	-96668	LowQI	STABASE	1241	NEC1237	-112680	-96689	LowQI	STABASE
1197	NEC1193	-112720	-96668	LowQI	STABASE	1242	NEC1238	-112679	-96689	LowQI	STABASE
1198	NEC1194	-112718	-96669	LowQI	STABASE	1243	NEC1239	-112679	-96690	LowQI	STABASE
1199	NEC1195	-112718	-96669	LowQI	STABASE	1244	NEC1240	-112678	-96690	LowQI	STABASE
1200	NEC1196	-112718	-96669	LowQI	STABASE	1245	NEC1241	-112677	-96691	LowQI	STABASE
1201	NEC1197	-112713	-96672	LowQI	STABASE	1246	NEC1242	-112676	-96691	LowQI	STABASE
1202	NEC1198	-112713	-96672	LowQI	STABASE	1247	NEC1243	-112676	-96692	LowQI	STABASE
1203	NEC1199	-112713	-96672	LowQI	STABASE	1248	NEC1244	-112675	-96692	LowQI	STABASE
1204	NEC1200	-112712	-96673	LowQI	STABASE	1249	NEC1245	-112674	-96693	LowQI	STABASE
1205	NEC1201	-112711	-96673	LowQI	STABASE	1250	NEC1246	-112673	-96693	LowQI	STABASE
1206	NEC1202	-112710	-96674	LowQI	STABASE	1251	NEC1247	-112672	-96694	LowQI	STABASE
1207	NEC1203	-112709	-96674	LowQI	STABASE	1252	NEC1248	-112672	-96694	LowQI	STABASE
1208	NEC1204	-112708	-96675	LowQI	STABASE	1253	NEC1249	-112671	-96694	LowQI	STABASE
1209	NEC1205	-112708	-96675	LowQI	STABASE	1254	NEC1250	-112667	-96697	LowQI	STABASE
1210	NEC1206	-112707	-96676	LowQI	STABASE	1255	NEC1251	-112667	-96697	LowQI	STABASE
1211	NEC1207	-112706	-96676	LowQI	STABASE	1256	NEC1252	-112667	-96697	LowQI	STABASE
1212	NEC1208	-112705	-96677	LowQI	STABASE	1257	NEC1253	-112667	-96697	LowQI	STABASE
1213	NEC1209	-112704	-96677	LowQI	STABASE	1258	NEC1254	-112667	-96697	LowQI	STABASE
1214	NEC1210	-112703	-96677	LowQI	STABASE	1259	NEC1255	-112667	-96697	LowQI	STABASE
1215	NEC1211	-112703	-96678	LowQI	STABASE	1260	NEC1256	-112666	-96697	LowQI	STABASE
1216	NEC1212	-112702	-96678	LowQI	STABASE	1261	NEC1257	-112666	-96697	LowQI	STABASE
1217	NEC1213	-112701	-96678	LowQI	STABASE	1262	NEC1258	-112666	-96697	LowQI	STABASE
1218	NEC1214	-112700	-96679	LowQI	STABASE	1263	NEC1259	-112666	-96697	LowQI	STABASE
1219	NEC1215	-112699	-96679	LowQI	STABASE	1264	NEC1260	-112666	-96697	LowQI	STABASE
1220	NEC1216	-112699	-96680	LowQI	STABASE	1265	NEC1261	-112666	-96697	LowQI	STABASE
1221	NEC1217	-112698	-96680	LowQI	STABASE	1266	NEC1262	-112666	-96697	LowQI	STABASE
1222	NEC1218	-112697	-96681	LowQI	STABASE	1267	NEC1263	-112666	-96697	LowQI	STABASE
1223	NEC1219	-112696	-96681	LowQI	STABASE	1268	NEC1264	-112665	-96698	LowQI	STABASE
1224	NEC1220	-112696	-96681	LowQI	STABASE	1269	NEC1265	-112665	-96698	LowQI	STABASE
1225	NEC1221	-112695	-96682	LowQI	STABASE	1270	NEC1266	-112664	-96699	LowQI	STABASE
1226	NEC1222	-112694	-96682	LowQI	STABASE	1271	NEC1267	-112664	-96699	LowQI	STABASE
1227	NEC1223	-112693	-96683	LowQI	STABASE	1272	NEC1268	-112663	-96699	LowQI	STABASE
1228	NEC1224	-112692	-96683	LowQI	STABASE	1273	NEC1269	-112663	-96700	LowQI	STABASE
1229	NEC1225	-112691	-96684	LowQI	STABASE	1274	NEC1270	-112662	-96700	LowQI	STABASE
1230	NEC1226	-112691	-96684	LowQI	STABASE	1275	NEC1271	-112661	-96700	LowQI	STABASE
1231	NEC1227	-112690	-96685	LowQI	STABASE	1276	NEC1272	-112660	-96701	LowQI	STABASE
1232	NEC1228	-112689	-96685	LowQI	STABASE	1277	NEC1273	-112659	-96701	LowQI	STABASE
1233	NEC1229	-112688	-96686	LowQI	STABASE	1278	NEC1274	-112659	-96702	LowQI	STABASE
1234	NEC1230	-112686	-96686	LowQI	STABASE	1279	NEC1275	-112658	-96702	LowQI	STABASE
1235	NEC1231	-112685	-96687	LowQI	STABASE	1280	NEC1276	-112657	-96703	LowQI	STABASE
1236	NEC1232	-112684	-96687	LowQI	STABASE	1281	NEC1277	-112656	-96703	LowQI	STABASE
1237	NEC1233	-112683	-96687	LowQI	STABASE	1282	NEC1278	-112655	-96703	LowQI	STABASE
1238	NEC1234	-112683	-96687	LowQI	STABASE	1283	NEC1279	-112654	-96704	LowQI	STABASE
1239	NEC1235	-112682	-96688	LowQI	STABASE	1284	NEC1280	-112654	-96704	LowQI	STABASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1285	NEC1281	-112653	-96705	LowQI	STABASE	1330	NEC1326	-112618	-96724	LowQI	STABASE
1286	NEC1282	-112652	-96705	LowQI	STABASE	1331	NEC1327	-112617	-96724	LowQI	STABASE
1287	NEC1283	-112652	-96706	LowQI	STABASE	1332	NEC1328	-112616	-96725	LowQI	STABASE
1288	NEC1284	-112651	-96706	LowQI	STABASE	1333	NEC1329	-112615	-96725	LowQI	STABASE
1289	NEC1285	-112650	-96707	LowQI	STABASE	1334	NEC1330	-112614	-96726	LowQI	STABASE
1290	NEC1286	-112649	-96707	LowQI	STABASE	1335	NEC1331	-112613	-96726	LowQI	STABASE
1291	NEC1287	-112648	-96708	LowQI	STABASE	1336	NEC1332	-112612	-96727	LowQI	STABASE
1292	NEC1288	-112647	-96708	LowQI	STABASE	1337	NEC1333	-112611	-96727	LowQI	STABASE
1293	NEC1289	-112647	-96709	LowQI	STABASE	1338	NEC1334	-112610	-96728	LowQI	STABASE
1294	NEC1290	-112646	-96709	LowQI	STABASE	1339	NEC1335	-112609	-96728	LowQI	STABASE
1295	NEC1291	-112645	-96710	LowQI	STABASE	1340	NEC1336	-112608	-96729	LowQI	STABASE
1296	NEC1292	-112644	-96710	LowQI	STABASE	1341	NEC1337	-112607	-96729	LowQI	STABASE
1297	NEC1293	-112643	-96711	LowQI	STABASE	1342	NEC1338	-112606	-96730	LowQI	STABASE
1298	NEC1294	-112642	-96711	LowQI	STABASE	1343	NEC1339	-112605	-96730	LowQI	STABASE
1299	NEC1295	-112642	-96712	LowQI	STABASE	1344	NEC1340	-112604	-96730	LowQI	STABASE
1300	NEC1296	-112641	-96712	LowQI	STABASE	1345	NEC1341	-112603	-96731	LowQI	STABASE
1301	NEC1297	-112640	-96713	LowQI	STABASE	1346	NEC1342	-112602	-96731	LowQI	STABASE
1302	NEC1298	-112639	-96713	LowQI	STABASE	1347	NEC1343	-112601	-96732	LowQI	STABASE
1303	NEC1299	-112639	-96714	LowQI	STABASE	1348	NEC1344	-112600	-96733	LowQI	STABASE
1304	NEC1300	-112638	-96714	LowQI	STABASE	1349	NEC1345	-112599	-96733	LowQI	STABASE
1305	NEC1301	-112637	-96715	LowQI	STABASE	1350	NEC1346	-112599	-96734	LowQI	STABASE
1306	NEC1302	-112636	-96716	LowQI	STABASE	1351	NEC1347	-112598	-96735	LowQI	STABASE
1307	NEC1303	-112635	-96716	LowQI	STABASE	1352	NEC1348	-112598	-96736	LowQI	STABASE
1308	NEC1304	-112635	-96717	LowQI	STABASE	1353	NEC1349	-112597	-96737	LowQI	STABASE
1309	NEC1305	-112634	-96717	LowQI	STABASE	1354	NEC1350	-112597	-96737	LowQI	STABASE
1310	NEC1306	-112634	-96718	LowQI	STABASE	1355	NEC1351	-112596	-96739	LowQI	STABASE
1311	NEC1307	-112633	-96718	LowQI	STABASE	1356	NEC1352	-112596	-96740	LowQI	STABASE
1312	NEC1308	-112632	-96719	LowQI	STABASE	1357	NEC1353	-112595	-96741	LowQI	STABASE
1313	NEC1309	-112631	-96720	LowQI	STABASE	1358	NEC1354	-112595	-96742	LowQI	STABASE
1314	NEC1310	-112631	-96721	LowQI	STABASE	1359	NEC1355	-112594	-96742	LowQI	STABASE
1315	NEC1311	-112630	-96721	LowQI	STABASE	1360	NEC1356	-112594	-96743	LowQI	STABASE
1316	NEC1312	-112629	-96722	LowQI	STABASE	1361	NEC1357	-112593	-96744	LowQI	STABASE
1317	NEC1313	-112629	-96723	LowQI	STABASE	1362	NEC1358	-112593	-96745	LowQI	STABASE
1318	NEC1314	-112628	-96724	LowQI	STABASE	1363	NEC1359	-112593	-96747	LowQI	STABASE
1319	NEC1315	-112627	-96725	LowQI	STABASE	1364	NEC1360	-112593	-96748	LowQI	STABASE
1320	NEC1316	-112627	-96725	LowQI	STABASE	1365	NEC1361	-112593	-96749	LowQI	STABASE
1321	NEC1317	-112625	-96724	LowQI	STABASE	1397	NEC1393	-112576	-96753	LowQI	NRTBASE
1322	NEC1318	-112624	-96723	LowQI	STABASE	1398	NEC1394	-112576	-96754	LowQI	NRTBASE
1323	NEC1319	-112624	-96723	LowQI	STABASE	1399	NEC1395	-112575	-96753	LowQI	NRTBASE
1324	NEC1320	-112623	-96722	LowQI	STABASE	1400	NEC1396	-112574	-96753	LowQI	NRTBASE
1325	NEC1321	-112622	-96722	LowQI	STABASE	1401	NEC1397	-112574	-96752	LowQI	NRTBASE
1326	NEC1322	-112621	-96722	LowQI	STABASE	1402	NEC1398	-112573	-96752	LowQI	NRTBASE
1327	NEC1323	-112621	-96722	LowQI	STABASE	1403	NEC1399	-112575	-96751	LowQI	NRTBASE
1328	NEC1324	-112620	-96723	LowQI	STABASE	1404	NEC1400	-112575	-96750	LowQI	NRTBASE
1329	NEC1325	-112619	-96723	LowQI	STABASE	1405	NEC1401	-112574	-96749	LowQI	NRTBASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1406	NEC1402	-112573	-96749	LowQI	NRTBASE	1451	NEC1447	-112538	-96766	LowQI	NRTBASE
1407	NEC1403	-112573	-96749	LowQI	NRTBASE	1452	NEC1448	-112537	-96767	LowQI	NRTBASE
1408	NEC1404	-112572	-96749	LowQI	NRTBASE	1453	NEC1449	-112536	-96768	LowQI	NRTBASE
1409	NEC1405	-112571	-96749	LowQI	NRTBASE	1454	NEC1450	-112535	-96768	LowQI	NRTBASE
1410	NEC1406	-112570	-96749	LowQI	NRTBASE	1455	NEC1451	-112534	-96769	LowQI	NRTBASE
1411	NEC1407	-112569	-96750	LowQI	NRTBASE	1456	NEC1452	-112534	-96769	LowQI	NRTBASE
1412	NEC1408	-112568	-96750	LowQI	NRTBASE	1457	NEC1453	-112533	-96769	LowQI	NRTBASE
1413	NEC1409	-112567	-96751	LowQI	NRTBASE	1458	NEC1454	-112532	-96770	LowQI	NRTBASE
1414	NEC1410	-112566	-96751	LowQI	NRTBASE	1459	NEC1455	-112531	-96770	LowQI	NRTBASE
1415	NEC1411	-112565	-96752	LowQI	NRTBASE	1460	NEC1456	-112531	-96771	LowQI	NRTBASE
1416	NEC1412	-112564	-96752	LowQI	NRTBASE	1461	NEC1457	-112530	-96771	LowQI	NRTBASE
1417	NEC1413	-112563	-96753	LowQI	NRTBASE	1462	NEC1458	-112525	-96773	LowQI	NRTBASE
1418	NEC1414	-112563	-96753	LowQI	NRTBASE	1463	NEC1459	-112525	-96773	LowQI	NRTBASE
1419	NEC1415	-112562	-96754	LowQI	NRTBASE	1464	NEC1460	-112524	-96773	LowQI	NRTBASE
1420	NEC1416	-112561	-96754	LowQI	NRTBASE	1465	NEC1461	-112523	-96773	LowQI	NRTBASE
1421	NEC1417	-112560	-96755	LowQI	NRTBASE	1466	NEC1462	-112523	-96774	LowQI	NRTBASE
1422	NEC1418	-112559	-96756	LowQI	NRTBASE	1467	NEC1463	-112522	-96774	LowQI	NRTBASE
1423	NEC1419	-112558	-96756	LowQI	NRTBASE	1468	NEC1464	-112521	-96775	LowQI	NRTBASE
1424	NEC1420	-112557	-96757	LowQI	NRTBASE	1469	NEC1465	-112520	-96775	LowQI	NRTBASE
1425	NEC1421	-112556	-96757	LowQI	NRTBASE	1470	NEC1466	-112519	-96776	LowQI	NRTBASE
1426	NEC1422	-112555	-96758	LowQI	NRTBASE	1471	NEC1467	-112519	-96776	LowQI	NRTBASE
1427	NEC1423	-112554	-96760	LowQI	NRTBASE	1472	NEC1468	-112518	-96776	LowQI	NRTBASE
1428	NEC1424	-112554	-96760	LowQI	NRTBASE	1473	NEC1469	-112517	-96776	LowQI	NRTBASE
1429	NEC1425	-112554	-96760	LowQI	NRTBASE	1474	NEC1470	-112516	-96777	LowQI	NRTBASE
1430	NEC1426	-112555	-96761	LowQI	NRTBASE	1475	NEC1471	-112515	-96777	LowQI	NRTBASE
1431	NEC1427	-112555	-96762	LowQI	NRTBASE	1476	NEC1472	-112515	-96778	LowQI	NRTBASE
1432	NEC1428	-112555	-96764	LowQI	NRTBASE	1477	NEC1473	-112514	-96778	LowQI	NRTBASE
1433	NEC1429	-112554	-96764	LowQI	NRTBASE	1478	NEC1474	-112513	-96779	LowQI	NRTBASE
1434	NEC1430	-112553	-96765	LowQI	NRTBASE	1479	NEC1475	-112512	-96779	LowQI	NRTBASE
1435	NEC1431	-112552	-96765	LowQI	NRTBASE	1480	NEC1476	-112511	-96779	LowQI	NRTBASE
1436	NEC1432	-112551	-96765	LowQI	NRTBASE	1481	NEC1477	-112510	-96780	LowQI	NRTBASE
1437	NEC1433	-112550	-96765	LowQI	NRTBASE	1482	NEC1478	-112509	-96780	LowQI	NRTBASE
1438	NEC1434	-112550	-96765	LowQI	NRTBASE	1483	NEC1479	-112509	-96781	LowQI	NRTBASE
1439	NEC1435	-112549	-96764	LowQI	NRTBASE	1484	NEC1480	-112508	-96781	LowQI	NRTBASE
1440	NEC1436	-112548	-96764	LowQI	NRTBASE	1485	NEC1481	-112507	-96781	LowQI	NRTBASE
1441	NEC1437	-112547	-96764	LowQI	NRTBASE	1486	NEC1482	-112506	-96782	LowQI	NRTBASE
1442	NEC1438	-112546	-96764	LowQI	NRTBASE	1487	NEC1483	-112506	-96782	LowQI	NRTBASE
1443	NEC1439	-112545	-96764	LowQI	NRTBASE	1488	NEC1484	-112505	-96782	LowQI	NRTBASE
1444	NEC1440	-112544	-96764	LowQI	NRTBASE	1489	NEC1485	-112505	-96782	LowQI	NRTBASE
1445	NEC1441	-112543	-96765	LowQI	NRTBASE	1490	NEC1486	-112505	-96782	LowQI	NRTBASE
1446	NEC1442	-112542	-96765	LowQI	NRTBASE	1491	NEC1487	-112505	-96782	LowQI	NRTBASE
1447	NEC1443	-112541	-96765	LowQI	NRTBASE	1492	NEC1488	-112505	-96782	LowQI	NRTBASE
1448	NEC1444	-112540	-96765	LowQI	NRTBASE	1493	NEC1489	-112504	-96782	LowQI	NRTBASE
1449	NEC1445	-112540	-96766	LowQI	NRTBASE	1494	NEC1490	-112503	-96783	LowQI	NRTBASE
1450	NEC1446	-112539	-96766	LowQI	NRTBASE	1495	NEC1491	-112503	-96783	LowQI	NRTBASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1496	NEC1492	-112502	-96784	LowQI	NRTBASE	1541	NEC1537	-112468	-96800	LowQI	NRTBASE
1497	NEC1493	-112501	-96784	LowQI	NRTBASE	1542	NEC1538	-112467	-96801	LowQI	NRTBASE
1498	NEC1494	-112500	-96784	LowQI	NRTBASE	1543	NEC1539	-112466	-96801	LowQI	NRTBASE
1499	NEC1495	-112499	-96785	LowQI	NRTBASE	1544	NEC1540	-112466	-96802	LowQI	NRTBASE
1500	NEC1496	-112498	-96785	LowQI	NRTBASE	1545	NEC1541	-112465	-96802	LowQI	NRTBASE
1501	NEC1497	-112498	-96785	LowQI	NRTBASE	1546	NEC1542	-112464	-96803	LowQI	NRTBASE
1502	NEC1498	-112497	-96785	LowQI	NRTBASE	1547	NEC1543	-112463	-96803	LowQI	NRTBASE
1503	NEC1499	-112497	-96786	LowQI	NRTBASE	1548	NEC1544	-112463	-96803	LowQI	NRTBASE
1504	NEC1500	-112496	-96786	LowQI	NRTBASE	1549	NEC1545	-112460	-96804	LowQI	NRTBASE
1505	NEC1501	-112495	-96787	LowQI	NRTBASE	1550	NEC1546	-112460	-96804	LowQI	NRTBASE
1506	NEC1502	-112495	-96787	LowQI	NRTBASE	1551	NEC1547	-112460	-96805	LowQI	NRTBASE
1507	NEC1503	-112494	-96787	LowQI	NRTBASE	1552	NEC1548	-112459	-96805	LowQI	NRTBASE
1508	NEC1504	-112493	-96788	LowQI	NRTBASE	1553	NEC1549	-112458	-96806	LowQI	NRTBASE
1509	NEC1505	-112492	-96788	LowQI	NRTBASE	1554	NEC1550	-112458	-96806	LowQI	NRTBASE
1510	NEC1506	-112491	-96789	LowQI	NRTBASE	1555	NEC1551	-112457	-96806	LowQI	NRTBASE
1511	NEC1507	-112490	-96789	LowQI	NRTBASE	1556	NEC1552	-112456	-96807	LowQI	NRTBASE
1512	NEC1508	-112490	-96790	LowQI	NRTBASE	1557	NEC1553	-112455	-96807	LowQI	NRTBASE
1513	NEC1509	-112489	-96790	LowQI	NRTBASE	1558	NEC1554	-112454	-96808	LowQI	NRTBASE
1514	NEC1510	-112488	-96790	LowQI	NRTBASE	1559	NEC1555	-112453	-96808	LowQI	NRTBASE
1515	NEC1511	-112487	-96791	LowQI	NRTBASE	1560	NEC1556	-112452	-96809	LowQI	NRTBASE
1516	NEC1512	-112486	-96791	LowQI	NRTBASE	1561	NEC1557	-112452	-96809	LowQI	NRTBASE
1517	NEC1513	-112485	-96792	LowQI	NRTBASE	1562	NEC1558	-112451	-96810	LowQI	NRTBASE
1518	NEC1514	-112485	-96792	LowQI	NRTBASE	1563	NEC1559	-112450	-96810	LowQI	NRTBASE
1519	NEC1515	-112484	-96792	LowQI	NRTBASE	1564	NEC1560	-112449	-96811	LowQI	NRTBASE
1520	NEC1516	-112483	-96793	LowQI	NRTBASE	1565	NEC1561	-112449	-96811	LowQI	NRTBASE
1521	NEC1517	-112483	-96793	LowQI	NRTBASE	1566	NEC1562	-112448	-96812	LowQI	NRTBASE
1522	NEC1518	-112482	-96793	LowQI	NRTBASE	1567	NEC1563	-112447	-96812	LowQI	NRTBASE
1523	NEC1519	-112481	-96794	LowQI	NRTBASE	1568	NEC1564	-112446	-96813	LowQI	NRTBASE
1524	NEC1520	-112480	-96794	LowQI	NRTBASE	1569	NEC1565	-112445	-96813	LowQI	NRTBASE
1525	NEC1521	-112480	-96795	LowQI	NRTBASE	1570	NEC1566	-112444	-96813	LowQI	NRTBASE
1526	NEC1522	-112479	-96795	LowQI	NRTBASE	1571	NEC1567	-112444	-96814	LowQI	NRTBASE
1527	NEC1523	-112478	-96796	LowQI	NRTBASE	1575	NEC1571	-112443	-96815	LowQI	NRTPF
1528	NEC1524	-112477	-96796	LowQI	NRTBASE	1576	NEC1572	-112443	-96815	LowQI	NRTPF
1529	NEC1525	-112477	-96797	LowQI	NRTBASE	1577	NEC1573	-112443	-96815	LowQI	NRTPF
1530	NEC1526	-112476	-96797	LowQI	NRTBASE	1578	NEC1574	-112443	-96816	LowQI	NRTPF
1531	NEC1527	-112475	-96797	LowQI	NRTBASE	1579	NEC1575	-112444	-96816	LowQI	NRTPF
1532	NEC1528	-112474	-96797	LowQI	NRTBASE	1580	NEC1576	-112444	-96817	LowQI	NRTPF
1533	NEC1529	-112474	-96798	LowQI	NRTBASE	1581	NEC1577	-112444	-96817	LowQI	NRTPF
1534	NEC1530	-112473	-96798	LowQI	NRTBASE	1582	NEC1578	-112444	-96818	LowQI	NRTPF
1535	NEC1531	-112472	-96798	LowQI	NRTBASE	1583	NEC1579	-112445	-96819	LowQI	NRTPF
1536	NEC1532	-112472	-96799	LowQI	NRTBASE	1584	NEC1580	-112445	-96820	LowQI	NRTPF
1537	NEC1533	-112471	-96799	LowQI	NRTBASE	1585	NEC1581	-112446	-96821	LowQI	NRTPF
1538	NEC1534	-112470	-96799	LowQI	NRTBASE	1586	NEC1582	-112446	-96822	LowQI	NRTPF
1539	NEC1535	-112470	-96800	LowQI	NRTBASE	1587	NEC1583	-112446	-96823	LowQI	NRTPF
1540	NEC1536	-112469	-96800	LowQI	NRTBASE	1588	NEC1584	-112449	-96824	2.51	NRTPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1589	NEC1585	-112449	-96825	2.33	NRTPF	1634	NEC1630	-112468	-96874	-0.52	NRTPF
1590	NEC1586	-112450	-96826	2.18	NRTPF	1635	NEC1631	-112468	-96875	-0.52	NRTPF
1591	NEC1587	-112450	-96827	2.06	NRTPF	1636	NEC1632	-112468	-96875	-0.51	NRTPF
1592	NEC1588	-112451	-96828	1.91	NRTPF	1637	NEC1633	-112468	-96875	-0.51	NRTPF
1593	NEC1589	-112451	-96829	1.72	NRTPF	1638	NEC1634	-112468	-96874	-0.49	NRTPF
1594	NEC1590	-112451	-96830	1.56	NRTPF	1639	NEC1635	-112468	-96874	-0.47	NRTPF
1595	NEC1591	-112452	-96831	1.40	NRTPF	1640	NEC1636	-112468	-96873	-0.47	NRTPF
1596	NEC1592	-112452	-96832	1.27	NRTPF	1641	NEC1637	-112467	-96873	-0.46	NRTPF
1597	NEC1593	-112453	-96834	1.17	NRTPF	1642	NEC1638	-112467	-96872	-0.46	NRTPF
1598	NEC1594	-112453	-96835	1.06	NRTPF	1643	NEC1639	-112467	-96872	-0.47	NRTPF
1599	NEC1595	-112454	-96836	0.96	NRTPF	1644	NEC1640	-112467	-96871	-0.46	NRTPF
1600	NEC1596	-112454	-96837	0.86	NRTPF	1645	NEC1641	-112467	-96871	-0.45	NRTPF
1601	NEC1597	-112455	-96839	0.74	NRTPF	1646	NEC1642	-112466	-96870	-0.43	NRTPF
1602	NEC1598	-112455	-96840	0.66	NRTPF	1647	NEC1643	-112466	-96870	-0.40	NRTPF
1603	NEC1599	-112456	-96841	0.58	NRTPF	1648	NEC1644	-112466	-96869	-0.38	NRTPF
1604	NEC1600	-112456	-96842	0.53	NRTPF	1649	NEC1645	-112466	-96869	-0.38	NRTPF
1605	NEC1601	-112456	-96844	0.49	NRTPF	1650	NEC1646	-112466	-96869	-0.38	NRTPF
1606	NEC1602	-112457	-96845	0.45	NRTPF	1651	NEC1647	-112466	-96869	-0.38	NRTPF
1607	NEC1603	-112457	-96846	0.39	NRTPF	1652	NEC1648	-112466	-96869	-0.39	NRTPF
1608	NEC1604	-112458	-96847	0.30	NRTPF	1653	NEC1649	-112466	-96869	-0.40	NRTPF
1609	NEC1605	-112458	-96849	0.22	NRTPF	1654	NEC1650	-112466	-96870	-0.42	NRTPF
1610	NEC1606	-112459	-96850	0.17	NRTPF	1655	NEC1651	-112466	-96870	-0.42	NRTPF
1611	NEC1607	-112459	-96851	0.13	NRTPF	1656	NEC1652	-112467	-96871	-0.43	NRTPF
1612	NEC1608	-112459	-96852	0.10	NRTPF	1657	NEC1653	-112467	-96871	-0.46	NRTPF
1613	NEC1609	-112460	-96854	0.07	NRTPF	1658	NEC1654	-112467	-96872	-0.44	NRTPF
1614	NEC1610	-112460	-96855	0.02	NRTPF	1659	NEC1655	-112467	-96874	-0.48	NRTPF
1615	NEC1611	-112460	-96856	-0.04	NRTPF	1660	NEC1656	-112467	-96875	-0.53	NRTPF
1616	NEC1612	-112461	-96857	-0.09	NRTPF	1661	NEC1657	-112468	-96876	-0.57	NRTPF
1617	NEC1613	-112461	-96858	-0.12	NRTPF	1662	NEC1658	-112468	-96878	-0.61	NRTPF
1618	NEC1614	-112462	-96860	-0.14	NRTPF	1663	NEC1659	-112468	-96879	-0.61	NRTPF
1619	NEC1615	-112463	-96862	-0.21	NRTPF	1664	NEC1660	-112469	-96880	-0.62	NRTPF
1620	NEC1616	-112463	-96862	-0.21	NRTPF	1665	NEC1661	-112469	-96882	-0.63	NRTPF
1621	NEC1617	-112463	-96862	-0.20	NRTPF	1666	NEC1662	-112469	-96883	-0.67	NRTPF
1622	NEC1618	-112463	-96862	-0.20	NRTPF	1667	NEC1663	-112470	-96884	-0.71	NRTPF
1623	NEC1619	-112463	-96862	-0.22	NRTPF	1668	NEC1664	-112470	-96885	-0.72	NRTPF
1624	NEC1620	-112463	-96863	-0.25	NRTPF	1669	NEC1665	-112470	-96886	-0.70	NRTPF
1625	NEC1621	-112464	-96864	-0.31	NRTPF	1670	NEC1666	-112470	-96887	-0.76	NRTPF
1626	NEC1622	-112464	-96865	-0.33	NRTPF	1671	NEC1667	-112470	-96887	-0.73	NRTPF
1627	NEC1623	-112465	-96867	-0.32	NRTPF	1672	NEC1668	-112470	-96886	-0.87	NRTPF
1628	NEC1624	-112465	-96868	-0.34	NRTPF	1673	NEC1669	-112470	-96885	-0.68	NRTPF
1629	NEC1625	-112466	-96869	-0.38	NRTPF	1674	NEC1670	-112470	-96883	-0.69	NRTPF
1630	NEC1626	-112466	-96870	-0.42	NRTPF	1675	NEC1671	-112469	-96882	LowQI	NRTPF
1631	NEC1627	-112467	-96872	-0.45	NRTPF	1676	NEC1672	-112465	-96871	LowQI	NRTPF
1632	NEC1628	-112467	-96873	-0.48	NRTPF	1677	NEC1673	-112464	-96869	LowQI	NRTPF
1633	NEC1629	-112468	-96873	-0.49	NRTPF	1678	NEC1674	-112464	-96868	LowQI	NRTPF

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1679	NEC1675	-112463	-96867	LowQI	NRTPF	1724	NEC1720	-112436	-96824	3.57	NRTPF
1680	NEC1676	-112462	-96865	LowQI	NRTPF	1725	NEC1721	-112436	-96823	3.84	NRTPF
1681	NEC1677	-112462	-96864	LowQI	NRTPF	1726	NEC1722	-112435	-96822	4.15	NRTPF
1682	NEC1678	-112461	-96863	LowQI	NRTPF	1727	NEC1723	-112435	-96822	4.37	NRTPF
1683	NEC1679	-112461	-96862	LowQI	NRTPF	1728	NEC1724	-112434	-96821	4.56	NRTPF
1684	NEC1680	-112460	-96861	LowQI	NRTPF	1729	NEC1725	-112433	-96821	LowQI	NRTBASE
1685	NEC1681	-112459	-96860	LowQI	NRTPF	1730	NEC1726	-112432	-96821	LowQI	NRTBASE
1686	NEC1682	-112459	-96859	LowQI	NRTPF	1731	NEC1727	-112432	-96821	LowQI	NRTBASE
1687	NEC1683	-112458	-96858	LowQI	NRTPF	1732	NEC1728	-112431	-96821	LowQI	NRTBASE
1688	NEC1684	-112458	-96858	LowQI	NRTPF	1733	NEC1729	-112430	-96822	LowQI	NRTBASE
1689	NEC1685	-112458	-96857	LowQI	NRTPF	1734	NEC1730	-112429	-96822	LowQI	NRTBASE
1690	NEC1686	-112458	-96857	0.01	NRTPF	1735	NEC1731	-112428	-96823	LowQI	NRTBASE
1691	NEC1687	-112458	-96857	0.00	NRTPF	1736	NEC1732	-112428	-96824	LowQI	NRTBASE
1692	NEC1688	-112457	-96856	0.01	NRTPF	1737	NEC1733	-112427	-96824	LowQI	NRTBASE
1693	NEC1689	-112457	-96855	0.08	NRTPF	1738	NEC1734	-112426	-96825	LowQI	NRTBASE
1694	NEC1690	-112456	-96854	0.08	NRTPF	1739	NEC1735	-112425	-96825	LowQI	NRTBASE
1695	NEC1691	-112456	-96853	0.13	NRTPF	1740	NEC1736	-112425	-96826	LowQI	NRTBASE
1696	NEC1692	-112455	-96852	0.18	NRTPF	1741	NEC1737	-112424	-96826	LowQI	NRTBASE
1697	NEC1693	-112454	-96851	0.18	NRTPF	1742	NEC1738	-112423	-96827	LowQI	NRTBASE
1698	NEC1694	-112454	-96850	0.22	NRTPF	1743	NEC1739	-112422	-96827	LowQI	NRTBASE
1699	NEC1695	-112453	-96849	0.30	NRTPF	1744	NEC1740	-112421	-96828	LowQI	NRTBASE
1700	NEC1696	-112453	-96848	0.34	NRTPF	1745	NEC1741	-112421	-96828	LowQI	NRTBASE
1701	NEC1697	-112452	-96847	0.40	NRTPF	1746	NEC1742	-112420	-96828	LowQI	NRTBASE
1702	NEC1698	-112451	-96845	0.44	NRTPF	1747	NEC1743	-112420	-96828	LowQI	NRTBASE
1703	NEC1699	-112450	-96844	0.54	NRTPF	1748	NEC1744	-112420	-96828	LowQI	NRTBASE
1704	NEC1700	-112450	-96843	0.66	NRTPF	1749	NEC1745	-112420	-96828	LowQI	NRTBASE
1705	NEC1701	-112449	-96842	0.73	NRTPF	1750	NEC1746	-112420	-96828	LowQI	NRTBASE
1706	NEC1702	-112448	-96841	0.78	NRTPF	1751	NEC1747	-112420	-96828	LowQI	NRTBASE
1707	NEC1703	-112448	-96840	0.84	NRTPF	1752	NEC1748	-112420	-96828	LowQI	NRTBASE
1708	NEC1704	-112447	-96838	1.02	NRTPF	1753	NEC1749	-112420	-96828	LowQI	NRTBASE
1709	NEC1705	-112447	-96837	1.13	NRTPF	1754	NEC1750	-112420	-96828	LowQI	NRTBASE
1710	NEC1706	-112446	-96836	1.19	NRTPF	1755	NEC1751	-112420	-96828	LowQI	NRTBASE
1711	NEC1707	-112445	-96835	1.27	NRTPF	1756	NEC1752	-112420	-96828	LowQI	NRTBASE
1712	NEC1708	-112444	-96834	1.44	NRTPF	1757	NEC1753	-112420	-96828	LowQI	NRTBASE
1713	NEC1709	-112444	-96833	1.61	NRTPF	1758	NEC1754	-112420	-96829	LowQI	NRTBASE
1714	NEC1710	-112443	-96832	1.72	NRTPF	1759	NEC1755	-112420	-96829	LowQI	NRTBASE
1715	NEC1711	-112442	-96831	1.87	NRTPF	1760	NEC1756	-112419	-96829	LowQI	NRTBASE
1716	NEC1712	-112442	-96830	2.11	NRTPF	1761	NEC1757	-112419	-96829	LowQI	NRTBASE
1717	NEC1713	-112441	-96830	2.28	NRTPF	1762	NEC1758	-112419	-96829	LowQI	NRTBASE
1718	NEC1714	-112440	-96829	2.43	NRTPF	1763	NEC1759	-112418	-96829	LowQI	NRTBASE
1719	NEC1715	-112439	-96828	2.52	NRTPF	1764	NEC1760	-112418	-96830	LowQI	NRTBASE
1720	NEC1716	-112439	-96827	2.72	NRTPF	1765	NEC1761	-112415	-96831	LowQI	NRTBASE
1721	NEC1717	-112438	-96826	2.90	NRTPF	1766	NEC1762	-112415	-96831	LowQI	NRTBASE
1722	NEC1718	-112437	-96825	3.08	NRTPF	1767	NEC1763	-112415	-96832	LowQI	NRTBASE
1723	NEC1719	-112437	-96824	3.29	NRTPF	1768	NEC1764	-112414	-96832	LowQI	NRTBASE

ID	Name	Lat	Lon	Ht	Codes	ID	Name	Lat	Lon	Ht	Codes
1769	NEC1765	-112413	-96833	LowQI	NRTBASE	1814	NEC1810	-112375	-96851	LowQI	NRTBASE
1770	NEC1766	-112412	-96833	LowQI	NRTBASE	1815	NEC1811	-112375	-96851	LowQI	NRTBASE
1771	NEC1767	-112411	-96833	LowQI	NRTBASE	1816	NEC1812	-112374	-96852	LowQI	NRTBASE
1772	NEC1768	-112410	-96833	LowQI	NRTBASE	1817	NEC1813	-112373	-96852	LowQI	NRTBASE
1773	NEC1769	-112409	-96833	LowQI	NRTBASE	1818	NEC1814	-112372	-96853	LowQI	NRTBASE
1774	NEC1770	-112409	-96833	LowQI	NRTBASE	1819	NEC1815	-112371	-96853	LowQI	NRTBASE
1775	NEC1771	-112408	-96834	LowQI	NRTBASE	1820	NEC1816	-112370	-96853	LowQI	NRTBASE
1776	NEC1772	-112407	-96834	LowQI	NRTBASE	1821	NEC1817	-112369	-96854	LowQI	NRTBASE
1777	NEC1773	-112406	-96834	LowQI	NRTBASE	1822	NEC1818	-112368	-96854	LowQI	NRTBASE
1778	NEC1774	-112405	-96835	LowQI	NRTBASE	1823	NEC1819	-112367	-96855	LowQI	NRTBASE
1779	NEC1775	-112404	-96835	LowQI	NRTBASE	1824	NEC1820	-112367	-96855	LowQI	NRTBASE
1780	NEC1776	-112403	-96836	LowQI	NRTBASE	1825	NEC1821	-112366	-96856	LowQI	NRTBASE
1781	NEC1777	-112402	-96836	LowQI	NRTBASE	1826	NEC1822	-112363	-96857	4.24	NRTBASE
1782	NEC1778	-112402	-96836	LowQI	NRTBASE	1827	NEC1823	-112363	-96857	4.15	NRTBASE
1783	NEC1779	-112401	-96837	LowQI	NRTBASE	1828	NEC1824	-112363	-96857	4.33	NRTBASE
1784	NEC1780	-112400	-96837	LowQI	NRTBASE	1829	NEC1825	-112362	-96858	4.22	NRTBASE
1785	NEC1781	-112399	-96838	LowQI	NRTBASE	1830	NEC1826	-112361	-96859	4.16	NRTBASE
1786	NEC1782	-112398	-96838	LowQI	NRTBASE	1831	NEC1827	-112360	-96859	4.19	NRTBASE
1787	NEC1783	-112397	-96839	LowQI	NRTBASE	1832	NEC1828	-112359	-96859	4.19	NRTBASE
1788	NEC1784	-112396	-96839	LowQI	NRTBASE	1833	NEC1829	-112358	-96860	4.17	NRTBASE
1789	NEC1785	-112396	-96839	LowQI	NRTBASE	1834	NEC1830	-112358	-96860	4.09	NRTBASE
1790	NEC1786	-112396	-96839	LowQI	NRTBASE	1835	NEC1831	-112357	-96861	4.09	NRTBASE
1791	NEC1787	-112395	-96839	LowQI	NRTBASE	1836	NEC1832	-112356	-96861	4.08	NRTBASE
1792	NEC1788	-112394	-96840	LowQI	NRTBASE	1837	NEC1833	-112355	-96862	4.05	NRTBASE
1793	NEC1789	-112394	-96840	LowQI	NRTBASE	1838	NEC1834	-112354	-96862	4.02	NRTBASE
1794	NEC1790	-112393	-96840	LowQI	NRTBASE	1839	NEC1835	-112353	-96863	4.01	NRTBASE
1795	NEC1791	-112392	-96841	LowQI	NRTBASE	1840	NEC1836	-112352	-96863	3.97	NRTBASE
1796	NEC1792	-112390	-96843	LowQI	NRTBASE	1841	NEC1837	-112351	-96864	3.94	NRTBASE
1797	NEC1793	-112390	-96843	LowQI	NRTBASE	1842	NEC1838	-112351	-96864	3.95	NRTBASE
1798	NEC1794	-112389	-96843	LowQI	NRTBASE	1843	NEC1839	-112350	-96865	3.92	NRTBASE
1799	NEC1795	-112388	-96844	LowQI	NRTBASE	1844	NEC1840	-112349	-96865	3.88	NRTBASE
1800	NEC1796	-112387	-96844	LowQI	NRTBASE	1845	NEC1841	-112348	-96866	3.84	NRTBASE
1801	NEC1797	-112387	-96845	LowQI	NRTBASE	1846	NEC1842	-112347	-96866	3.84	NRTBASE
1802	NEC1798	-112386	-96845	LowQI	NRTBASE	1847	NEC1843	-112346	-96867	3.82	NRTBASE
1803	NEC1799	-112385	-96846	LowQI	NRTBASE	1848	NEC1844	-112346	-96867	3.81	NRTBASE
1804	NEC1800	-112384	-96846	LowQI	NRTBASE	1849	NEC1845	-112345	-96868	3.76	NRTBASE
1805	NEC1801	-112383	-96846	LowQI	NRTBASE	1850	NEC1846	-112344	-96868	3.70	NRTBASE
1806	NEC1802	-112382	-96847	LowQI	NRTBASE	1851	NEC1847	-112343	-96869	3.63	NRTBASE
1807	NEC1803	-112382	-96847	LowQI	NRTBASE	1852	NEC1848	-112342	-96869	3.69	NRTBASE
1808	NEC1804	-112381	-96848	LowQI	NRTBASE	1853	NEC1849	-112341	-96870	3.62	NRTBASE
1809	NEC1805	-112380	-96848	LowQI	NRTBASE	1854	NEC1850	-112340	-96870	3.57	NRTBASE
1810	NEC1806	-112379	-96849	LowQI	NRTBASE	1855	NEC1851	-112340	-96871	3.47	NRTBASE
1811	NEC1807	-112378	-96849	LowQI	NRTBASE	1856	NEC1852	-112339	-96872	3.42	NRTBASE
1812	NEC1808	-112377	-96850	LowQI	NRTBASE	Sistema de coordenadas: PT-TM06/ETRS89					
1813	NEC1809	-112376	-96850	LowQI	NRTBASE	Datum vertical: NMM Cascais 1938					
						LowQI – Registos com baixa qualidade					

ANEXO II

PROCEDIMENTO DE UTILIZAÇÃO: DGPS TOPCON HIPERPRO

(Adaptado do Relatório HIDRALERTA 02/2017)

Equipamento

- 1 receptor GPS – BASE (+ antena maior)
- 1 receptor GPS – ROVER (+ antena menor)
- 1 controlador (com caneta)
- 1 base nivelante
- 1 tripé
- 1 fita métrica

Material acessório: 1 mochila; 3 adaptadores para suporte da controladora; base nivelante para fixar a base no tripé (+ parafuso); 2 carregadores para BASE e ROVER; 1 carregador para o controlador; 1 cabo de ligação USB; 1 cabo de ligação em série; 1 carregador para isqueiro do carro.

Procedimento no campo (MODO RTK)

1. Montagem da BASE

Montar o tripé.

Posicionar o prisma, centrar (relativamente ao ponto de controlo no solo) e nivelar o tripé.

Montar a BASE, com a antena ligada, no tripé (ANTENA MAIOR).

Ligar a BASE no botão RESET (ou no botão ON se estiver em STAND-BY).

O led STAT acende intermitentemente (verde e vermelho) indicando os satélites (O Nº DE VERDES ENTRE VERMELHOS INDICA O Nº DE SATÉLITES – 4 SATÉLITES SÃO SUFICIENTES) que está a apanhar.

2. Criação de trabalho no controlador

Ligar o controlador.

Entrar no programa TOPSURV.

NOVO (para criar novo trabalho) >>:

Indicar o nome do trabalho e as iniciais do operador.

PROX >> Conf. Top.:

- para efetuar um levantamento “simples”, escolher o modo RTK;

PROX>> Sistema Coord

- Escolher a projeção >> DATUM 73 ou **ETRS89**
- Geoid < nenhum>

(se não se escolheu nenhuma projeção, escolher o Datum, p.e. WGS89)

PROX>> Unidades

m e DMS

PROX>> Display

Coord Tipo: Quad

FIM (grava o trabalho e abre a janela de trabalho)

Abrir a janela “Mode”: barra de menus Trb > Mode, e verificar que o Bluetooth está selecionado.

3. Configuração da BASE

Carregar no ícone da ligação Bluetooth (topo da janela direita) e selecionar BASE.

É aconselhável fazer “procurar” e escolher a BASE, em vez de escolher a BASE das opções listadas e selecionar BASE.

Esperar o sinal sonoro e verificar que o ícone fica verde (a ligação da BASE foi estabelecida).

Ir ao menu TOPO e escolher iniciar BASE.

Dar o nome do ponto de controlo onde está a base posicionada.

Introduzir a altura da BASE em metros (média de 3 medições do solo, no ponto de controlo, ao topo da marca na BASE ).

Escolher altura inclinada.

Posicionamento da base:

- opção 1: introduzir as coordenadas conhecidas do ponto de controlo (base).

Carregar no “iniciar base”.

Esperar a mensagem a dizer que a base foi iniciada com sucesso (só neste caso se deve proceder à configuração do ROVER, caso contrário repetir o procedimento).

O led da BASE (RX) deve piscar verde e vermelho (indica que a ligação diferencial está estabelecida).

No caso do modo RTK PP a led verde REC da BASE pisca com a frequência escolhida para o ficheiro RINEX (em geral 1Hz).

4. Montagem do ROVER

Montar a antena no recetor (ANTENA MENOR).

Montar o recetor no bastão regulável (fibra de carbono) ou no bastão da mochila: o recetor deve ficar sempre acima da cabeça do utilizador.

Medir a altura até à base do recetor.

A controladora pode eventualmente ser fixada ao bastão, e deve ser mantida durante todo o levantamento a uma distância razoável do recetor para manter a ligação Bluetooth.

Ligar o ROVER.

Os leds da BASE e do ROVER devem ter o seguinte comportamento: o led BATT deve piscar verde (bateria carregada); o led RX deve piscar verde e vermelho (significa que há comunicação entre a BASE e o ROVER e há correção diferencial).

5. Configuração do ROVER

Carregar no ícone da ligação Bluetooth (topo da janela direita) e selecionar ROVER.

É aconselhável fazer “procurar” e escolher a ROVER, em vez de escolher ROVER das opções listadas, e escolher ROVER.

Esperar o sinal sonoro e verificar que o ícone fica verde (significa que a ligação do ROVER foi estabelecida).

Se o STATUS estiver em verde fixo (*fixed*, só assim grava os pontos), pode-se começar o levantamento de pontos.

6. Levantamento de pontos

NOTA: a controladora pode estar até cerca de 10 m do recetor.

A) Levantamento (“ponto a ponto”)

Ir ao menu TOPO + Levantamento.

Introduzir a altura MEDIDA da base do recetor.

Escolher VERTICAL (se for possível garantir a verticalidade do bastão; para a utilização da mochila aconselha-se a escolher INCLINADO).

Introduzir o nome e o código do próximo ponto a levantar (não é obrigatório, pois a numeração vai sendo automaticamente incrementada). Se um código for introduzido para um determinado ponto (por ex., o primeiro ponto de um perfil), este será assumido para os pontos seguintes, a menos que se altere ou apague.

Fixar o recetor no ponto a levantar e posicioná-lo na vertical (com bastão verificar no nível).

Carregar no “START” ou premir o botão azul “ENT”.

Esperar pelo sinal sonoro, o ponto é gravado automaticamente.

B) Levantamento AUTOTOPÔ (levantamento em modo de registos contínuos)

Este modo permite gravar automaticamente, para o modo RTK, pontos em função da distância ou do tempo.

Ir ao menu TOPO + autotopo.

Introduzir a altura MEDIDA da base do recetor.

Escolher INCLINADO (deve-se escolher sempre que se utiliza a mochila, em que a verticalidade não está garantida).

Introduzir o nome e o código dos próximos pontos a levantar (não é obrigatório, pois a numeração vai sendo automaticamente incrementada). Todos os pontos terão o mesmo código e o nome vai incrementando-se (ACONSELHA-SE A UTILIZAÇÃO DE *UNDERSCORE ANTES DA NUMERAÇÃO INCREMENTADA*).

Para iniciar a medição carregar no START.

7. Visualizar os pontos

No TOPO + DADOS OU MAPA

Se o ficheiro está fechado:

TRB + abrir

EDT – editar pontos

8. Terminar

No menu TRAB

Saída

Grava automaticamente todos os pontos.

Desligar os receptores. (PARA DESLIGAR OS RECETORES - ROVER E BASE - CARREGAR CONTINUAMENTE NOS DOIS BOTÕES AO MESMO TEMPO ATÉ ACENDEREM AS DUAS LUZES A VERMELHO CLARO, ESPERAR ATÉ MUDAR PARA VERMELHO ESCURO E SÓ DEPOIS LARGAR)

9. Exportar pontos

No trabalho pretendido,

EXPORTA para ficheiro (escolher o tipo de ficheiro, p.e. txt)

Escolher a diretoria para onde se grava e o nome do ficheiro (que pode ser para a porta USB, caso ligado diretamente a um computador, os drivers do equipamento são instalados e é gerada uma pasta para onde o ficheiro será descarregado).