



FICHAS DE NODOS DE AGUAS PROFUNDAS

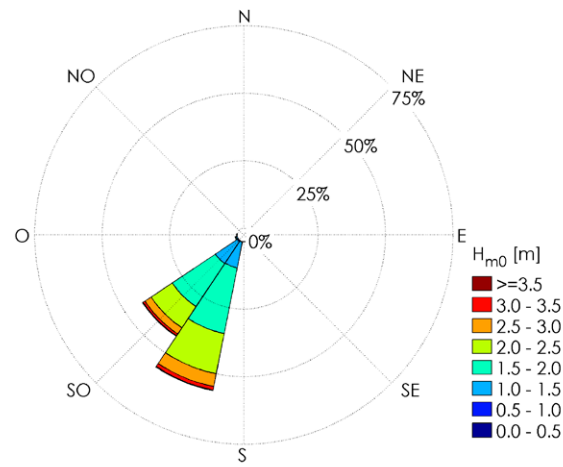
NODO 1 ARICA

Coordenadas del Nodo: 19°S, 72°O

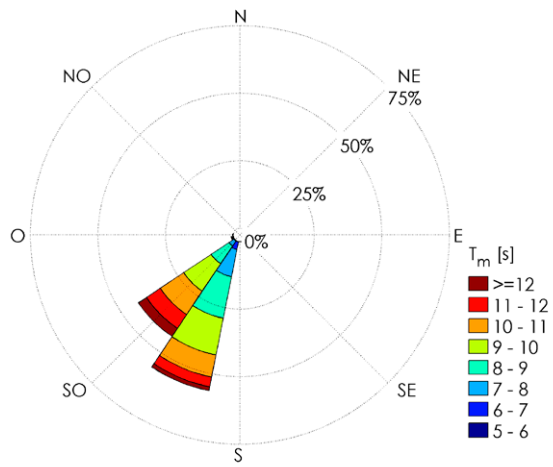


NODO 1: ARICA / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

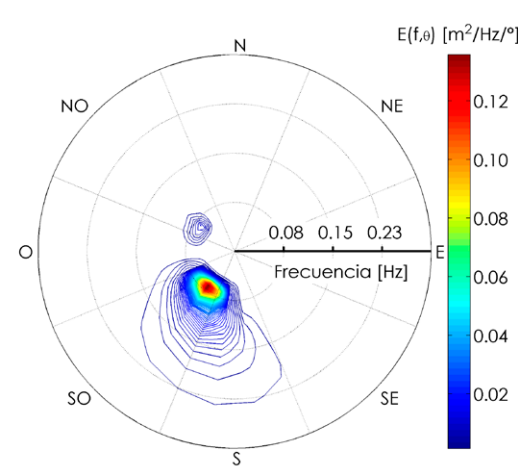
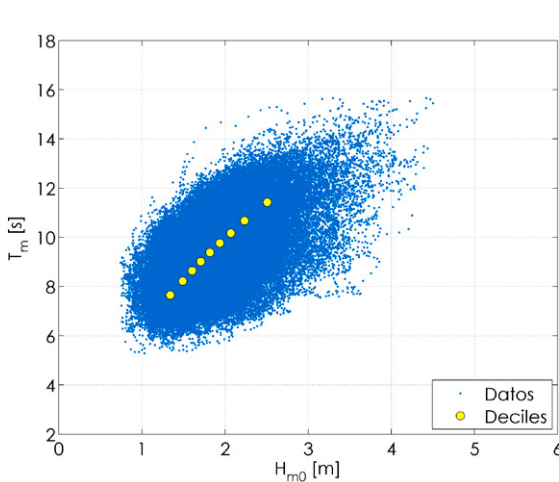


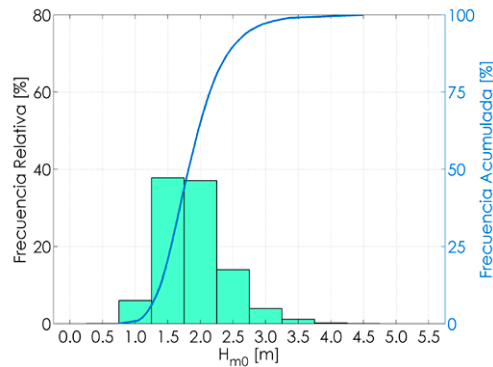
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



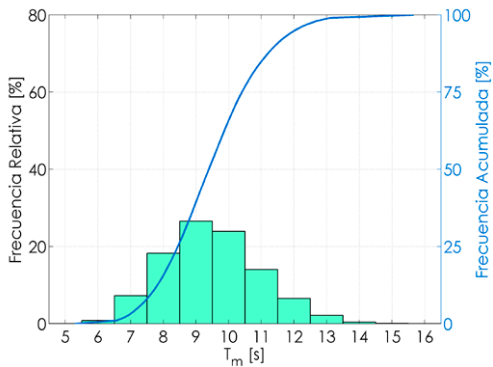
PARÁMETROS PROMEDIO

H_{m0} [m]	1.88
T_z [s]	8.3
T_e [s]	11.2
T_m [s]	9.5
T_p [s]	13.7
D_m [°]	213
D_p [°]	214
ε	0.84
ν	0.55
Q_p	2.27
γ	1.71
s	30.2

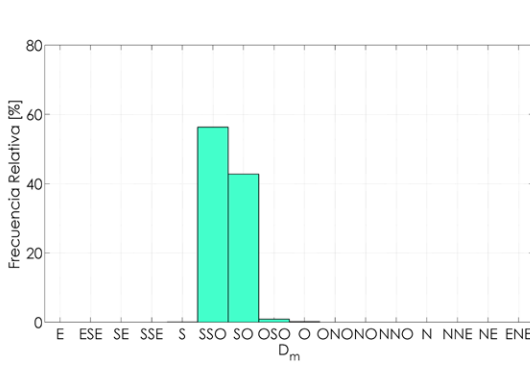
HISTOGRAMA DE H_{m0}



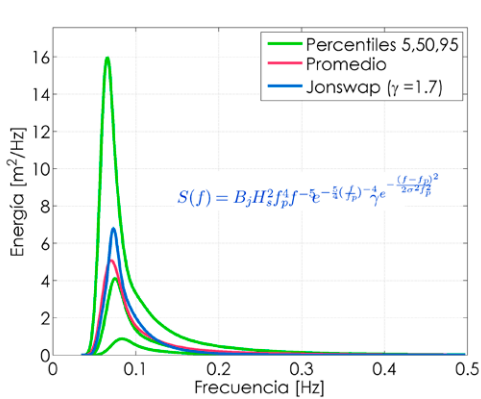
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

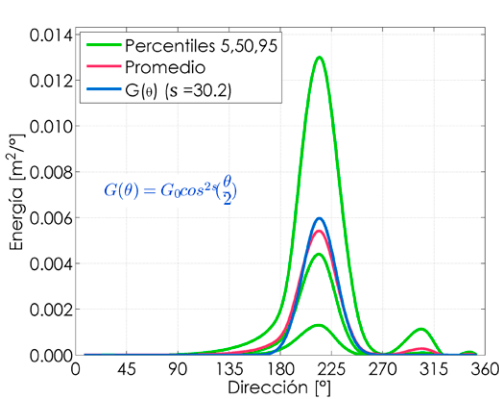


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
]0-0.5[									0.0
[0.5-1[			<0.1	0.7					0.7
[1-1.5[			0.6	19.3	0.1				20.0
[1.5-2[			2.4	41.9	0.1				44.4
[2-2.5[			1.7	23.0	<0.1				24.7
[2.5-3[			0.5	7.0					7.5
[3-3.5[			0.1	2.0					2.1
[3.5-4[			<0.1	0.6					0.6
TOTAL	0.0	0.0	5.4	94.4	0.3	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
]5-6[			<0.1	<0.1					0.1
[6-7[			1.1	2.0					3.1
[7-8[			2.0	10.5					12.4
[8-9[			1.4	22.3	<0.1				23.7
[9-10[			0.6	25.8	<0.1				26.4
[10-11[			0.2	18.8	0.1				19.1
[11-12[			<0.1	9.8	<0.1				9.9
[12-13[			<0.1	5.2	<0.1				5.2
TOTAL	0.0	0.0	5.4	94.4	0.3	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

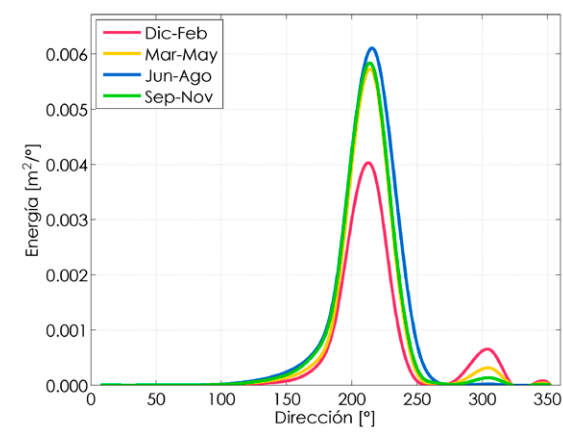
H_{m0} [m]	T_m [s]								TOTAL
	]5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
]0-0.5[									0.0
[0.5-1[	<0.1	<0.1	0.2	0.2	<0.1	<0.1			0.7
[1-1.5[	<0.1	1.4	4.6	7.1	5.2	1.5	0.1	<0.1	20.0
[1.5-2[	<0.1	1.2	5.7	11.5	13.7	9.2	2.7	0.3	44.4
[2-2.5[	<0.1	0.3	1.7	4.0	5.8	6.3	4.8	1.9	24.7
[2.5-3[		<0.1	0.2	0.8	1.3	1.6	1.8	1.8	7.5
[3-3.5[			<0.1	0.1	0.3	0.4	0.5	0.8	2.1
[3.5-4[			<0.1	<0.1	<0.1	<0.1	<0.1	0.4	0.6
TOTAL	0.1	3.1	12.4	23.7	26.4	19.1	9.9	5.2	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

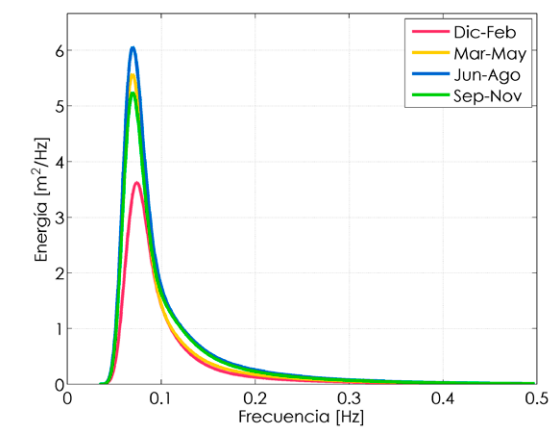
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S	<0.1%	1.76	1.78	1.78	1.78
SSO	56.3%	1.86	2.55	3.32	3.79
SO	42.7%	1.77	2.46	3.40	3.96
OSO	0.9%	1.48	1.88	2.36	2.40
O	0.1%	1.54	1.94	2.06	2.08
ONO					
NO					
NNO					
N					
NNE					
NE					
ENE					

NODO 1: ARICA / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



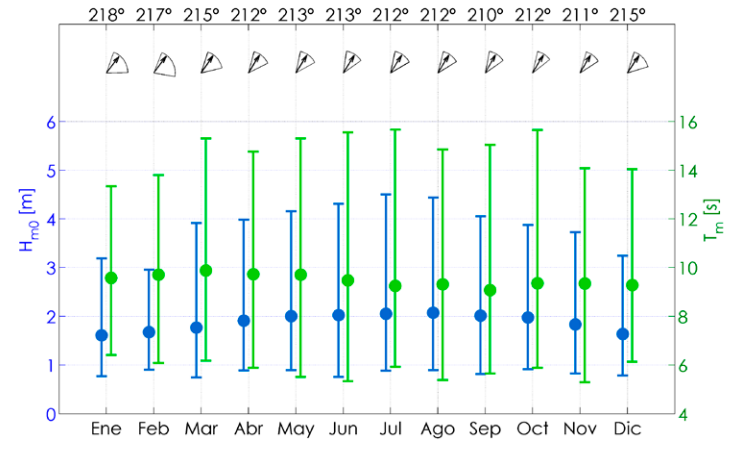
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

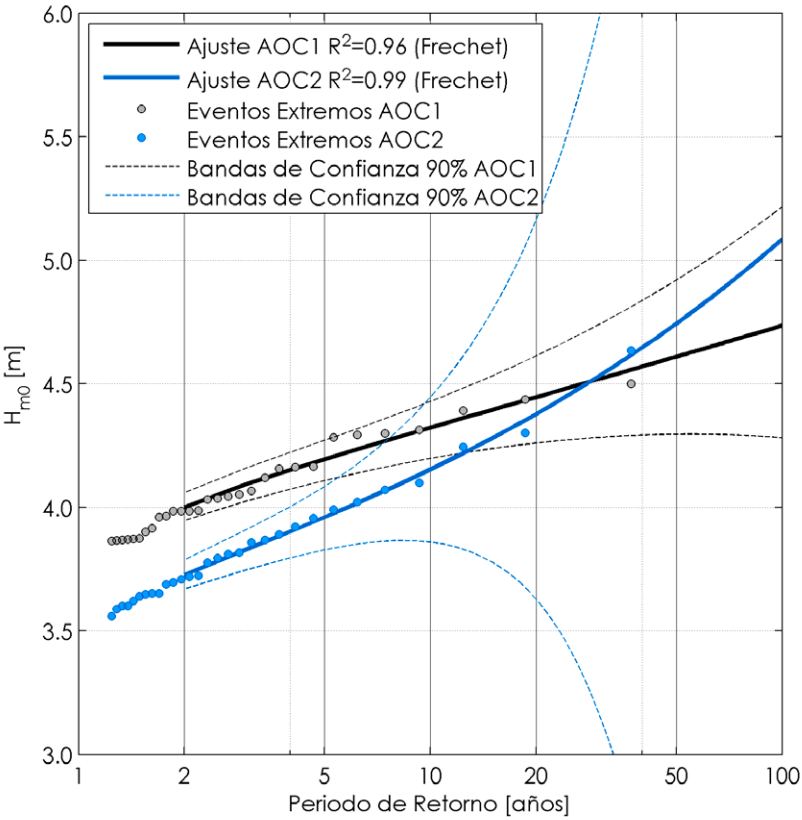
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	1.64	1.90	2.05	1.94
T_z [s]	8.4	8.5	8.2	8.1
T_e [s]	11.1	11.5	11.1	11.0
T_m [s]	9.5	9.8	9.3	9.3
T_p [s]	13.5	13.9	13.7	13.7
D_m [°]	217	213	212	211
D_p [°]	214	214	216	214
ε	0.83	0.84	0.84	0.83
ν	0.53	0.56	0.56	0.56
Q_p	2.29	2.38	2.23	2.18
γ	1.66	1.81	1.69	1.65
S	31.0	32.4	27.8	29.5

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

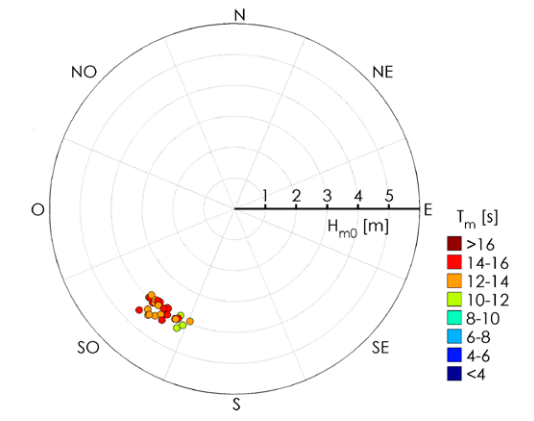


NODO 1: ARICA / CLIMA EXTREMO

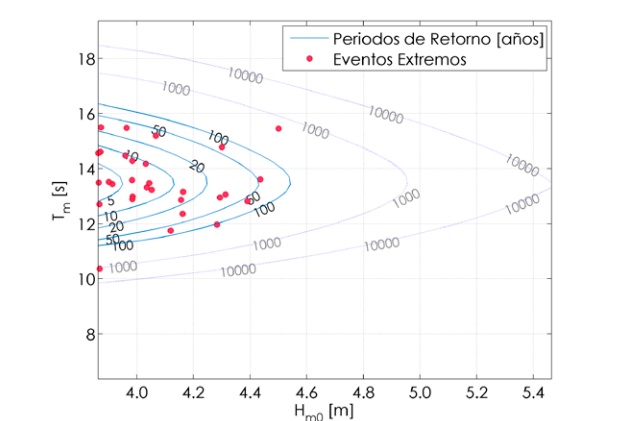
PERIODOS DE RETORNO UNIVARIADO



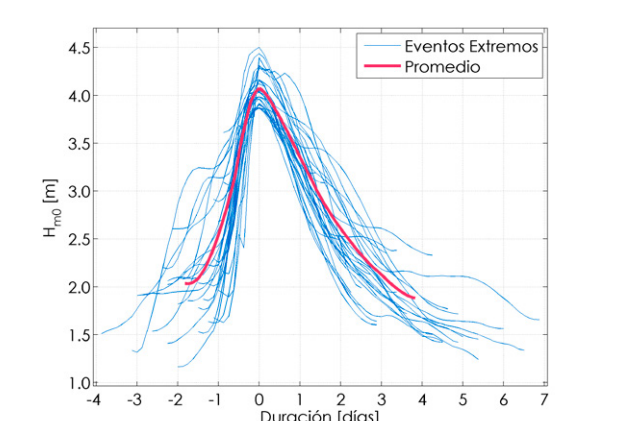
DISPERSIÓN DE EXTREMOS



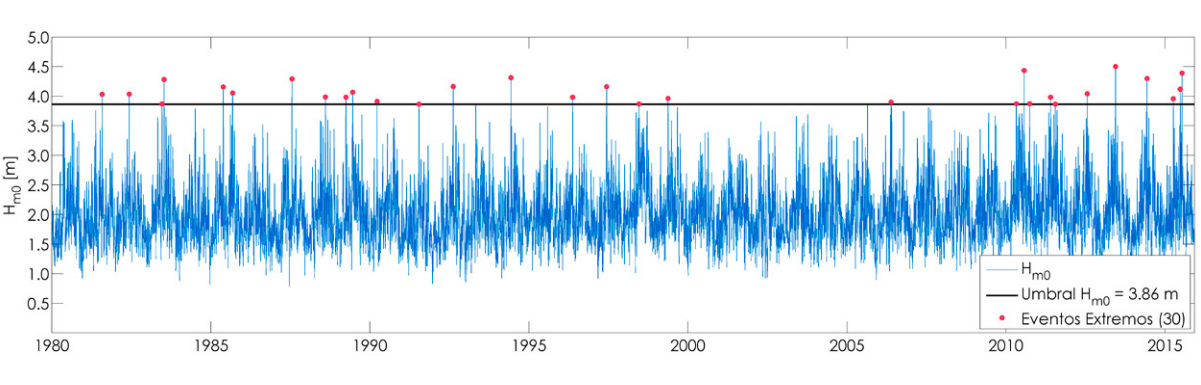
PERIODOS DE RETORNO BIVARIADO



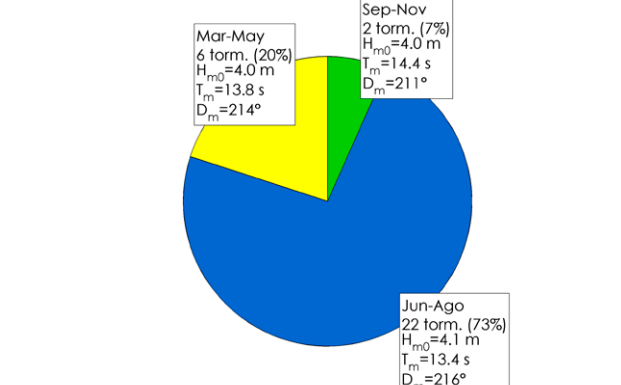
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO Hm0



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 1: ARICA / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 38.4	primer modo	mar de fondo	100.0			0.2	99.7	<0.1			
		mar de viento	0.0								
Bimodal 47.1	primer modo	mar de fondo	99.9			1.1	97.8	0.9	0.2		
		mar de viento	0.1			13.8	86.2				
	segundo modo	mar de fondo	94.5			14.7	1.6	3.0	80.7		
		mar de viento	5.5			86.3	13.7				
Trimodal 13.5	primer modo	mar de fondo	99.9			5.5	91.2	2.7	0.6		
		mar de viento	0.1			25.0	75.0				
	segundo modo	mar de fondo	89.9			48.3	7.2	5.9	38.6		
		mar de viento	10.1		<0.1	90.7	9.2				
	tercer modo	mar de fondo	86.3			30.2	2.1	7.9	59.9		
		mar de viento	13.7		0.1	96.9	3.0				

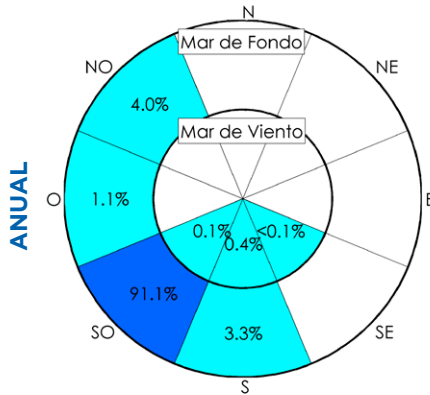
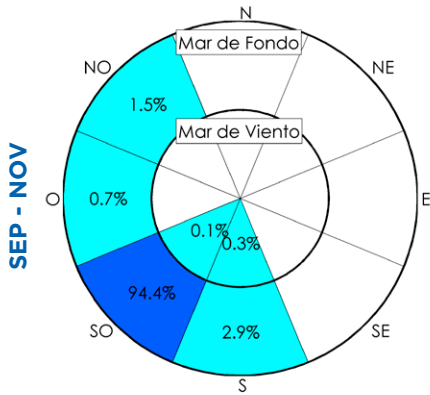
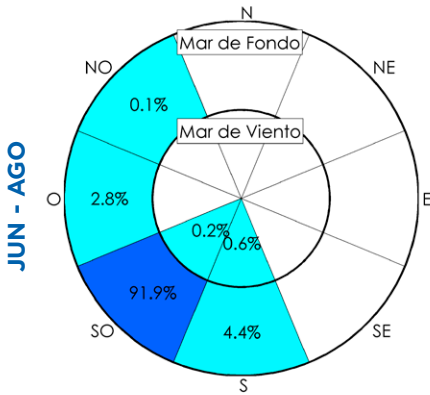
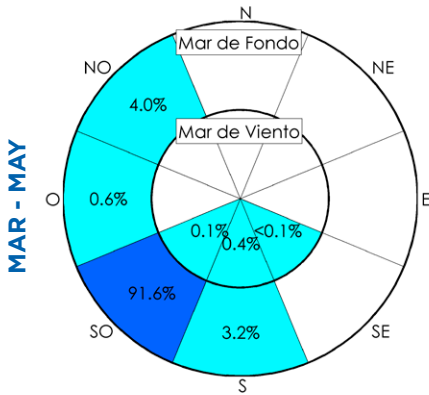
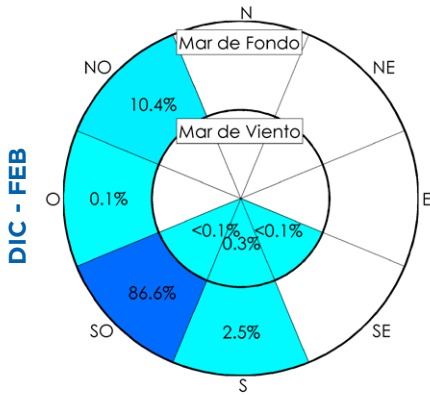
NOTA: estados de mar con más de 3 modos abarcan el 0.9% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO	5.2	28.4	66.2	52.9	38.3
MF del SO + MF del NO	72.3	43.8	1.7	26.8	36.0
MF del S + MF del SO + MF del NO	14.6	12.7	1.4	5.5	8.5
MF del S + MF del SO	0.6	5.5	14.1	6.7	6.7
MF del SO + MF del NO + MV del S	4.9	3.3	0.3	1.4	2.5
MF del SO + MV del S	0.3	2.0	4.4	2.1	2.2
MF del SO + MF del O	0.1	0.5	3.8	1.4	1.5
MF del S + MF del SO + MF del O	<0.1	0.6	3.2	0.7	1.1
MF del SO + MF del O + MF del NO	0.9	0.7	0.3	0.5	0.6
MF del S + MF del SO + MF del O + MF del NO	0.4	0.9	0.2	0.2	0.4
Otros	0.8	1.6	4.4	1.8	2.1
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

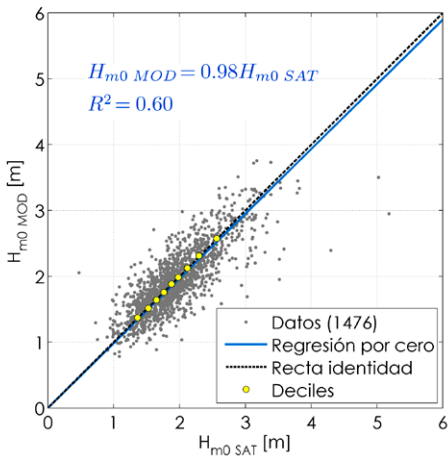


NODO 1: ARICA / INCERTIDUMBRE

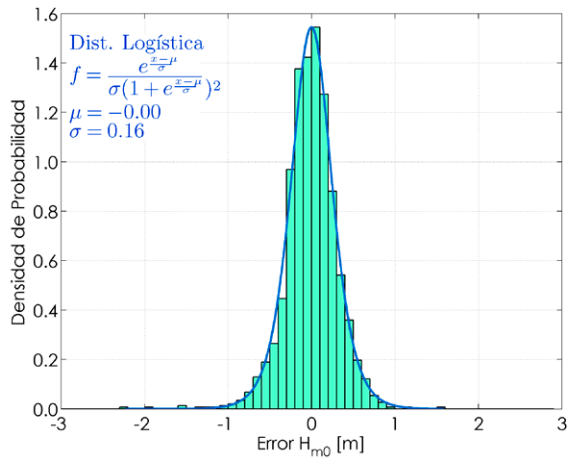
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	1.93	Intercepto mejor regresión lineal [m]	0.43
Promedio H_{m0} modelo [m]	1.93	Pendiente mejor regresión lineal	0.77
Desviación estándar H_{m0} satélite [m]	0.50	R^2 mejor regresión lineal	0.65
Desviación estándar H_{m0} modelo [m]	0.48	Mínimo error relativo (RE_{min})	-49%
Error absoluto medio (MAE) [m]	0.23	Máximo error relativo (RE_{max})	336%
Raíz del error cuadrático medio (RMSE) [m]	0.31	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.010%
Habilidad de pronóstico (SS)	0.85	Máximo error relativo absoluto (ARE_{max})	336%
Índice de dispersión (SI)	0.16	Error relativo absoluto medio (AARE)	12%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



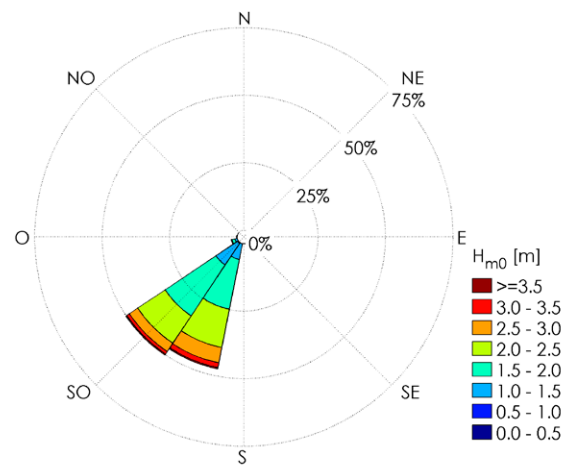
NODO 2 IQUIQUE

Coordenadas del Nodo: 21°S, 72°O

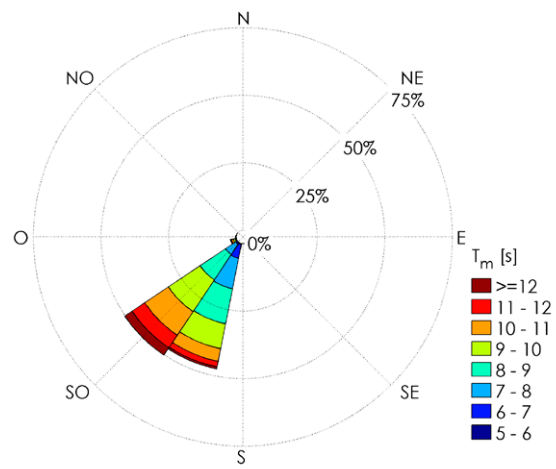


NODO 2: IQUIQUE / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

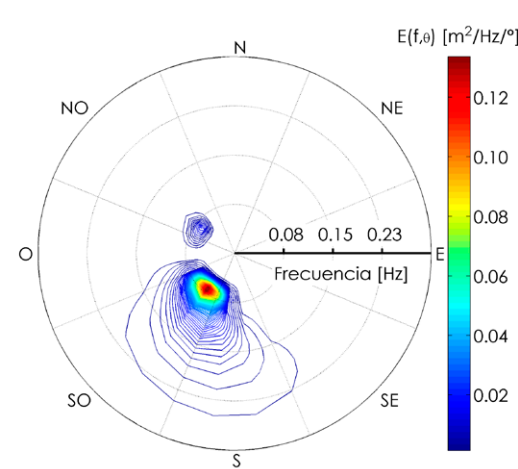
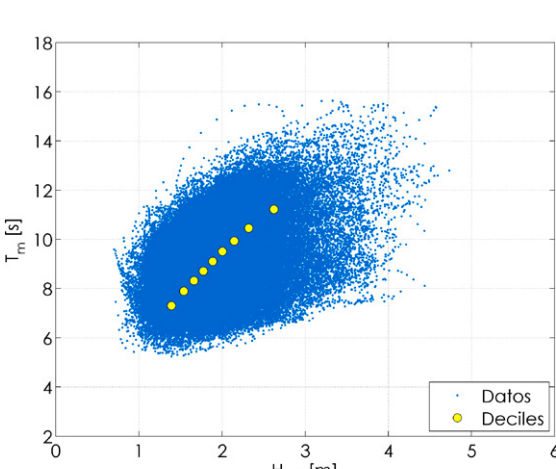


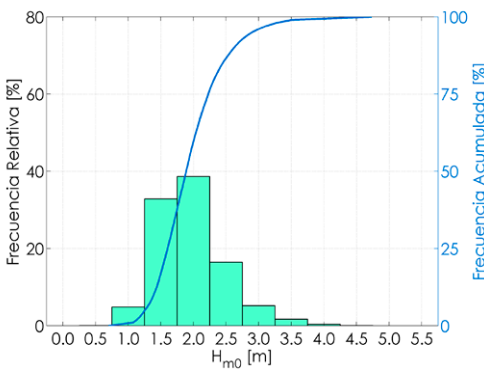
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



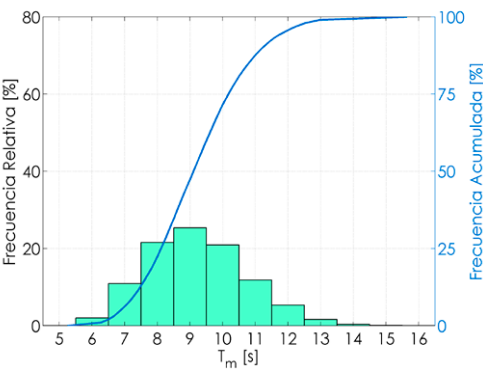
PARÁMETROS PROMEDIO

H_{m0} [m]	1.96
T_z [s]	8.0
T_e [s]	11.0
T_m [s]	9.2
T_p [s]	13.7
D_m [°]	215
D_p [°]	216
ϵ	0.83
γ	0.56
Q_p	2.15
γ	1.61
s	28.2

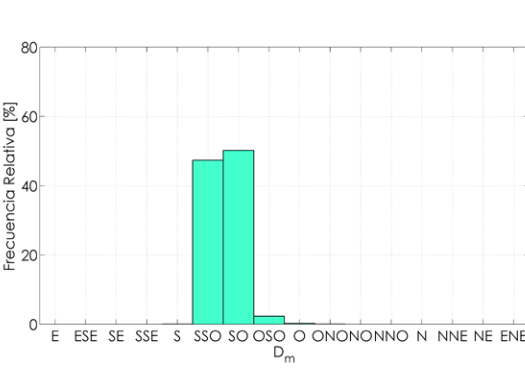
HISTOGRAMA DE H_{m0}



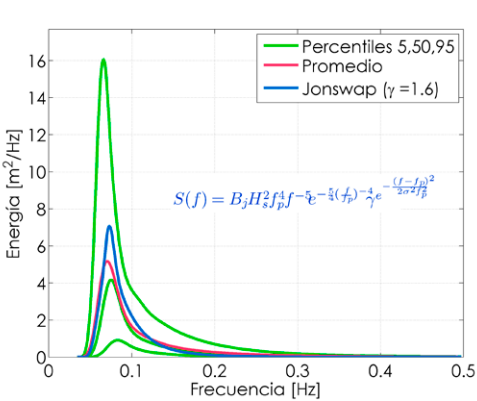
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

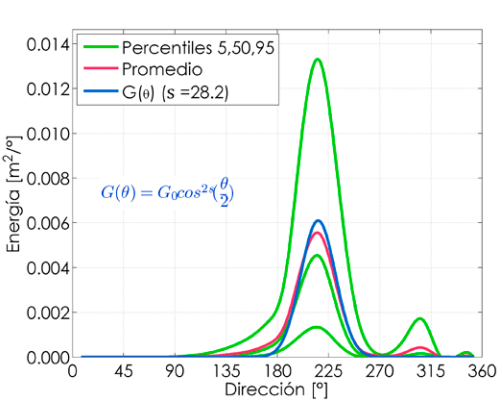


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.5]									0.0
[0.5-1]				0.4	<0.1				0.4
[1-1.5]			0.2	16.0	0.2				16.4
[1.5-2]			1.2	41.1	0.4				42.7
[2-2.5]			1.4	25.5	<0.1				27.0
[2.5-3]			0.8	8.7	<0.1				9.5
[3-3.5]			0.2	2.7					2.9
[3.5-4]			<0.1	1.0					1.0
TOTAL	0.0	0.0	3.9	95.4	0.7	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6]			0.2	0.1					0.3
[6-7]			1.5	4.4					5.9
[7-8]			1.4	14.7	<0.1				16.2
[8-9]			0.6	24.2	<0.1				24.9
[9-10]			0.2	23.9	0.1				24.3
[10-11]			<0.1	15.7	0.2				16.0
[11-12]			<0.1	7.9	0.2				8.1
[12-13]				4.2	<0.1				4.3
TOTAL	0.0	0.0	3.9	95.4	0.7	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

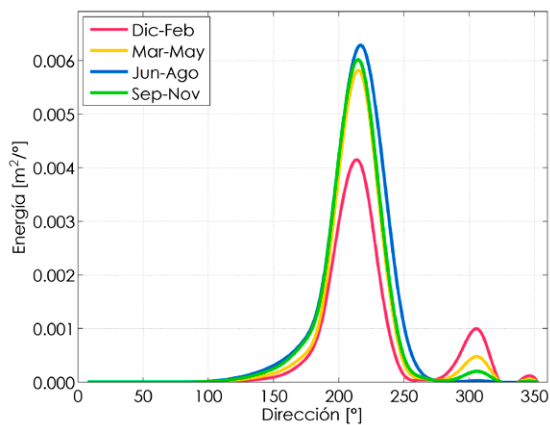
H_{m0} [m]	T_m [s]								TOTAL
	[5-6]	[6-7]	[7-8]	[8-9]	[9-10]	[10-11]	[11-12]	[12-13]	
[0-0.5]									0.0
[0.5-1]	<0.1	<0.1	0.2	0.1	<0.1	<0.1			0.4
[1-1.5]	0.2	1.8	3.9	5.4	3.7	1.3	0.1	<0.1	16.4
[1.5-2]	0.1	2.7	7.4	11.5	11.7	6.8	2.2	0.3	42.7
[2-2.5]	<0.1	1.1	3.4	5.5	6.2	5.6	3.5	1.6	27.0
[2.5-3]		0.2	1.0	1.7	1.9	1.7	1.5	1.4	9.5
[3-3.5]		<0.1	0.2	0.5	0.5	0.5	0.5	0.6	2.9
[3.5-4]			<0.1	0.1	0.2	0.2	0.2	0.4	1.0
TOTAL	0.3	5.9	16.2	24.9	24.3	16.0	8.1	4.3	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

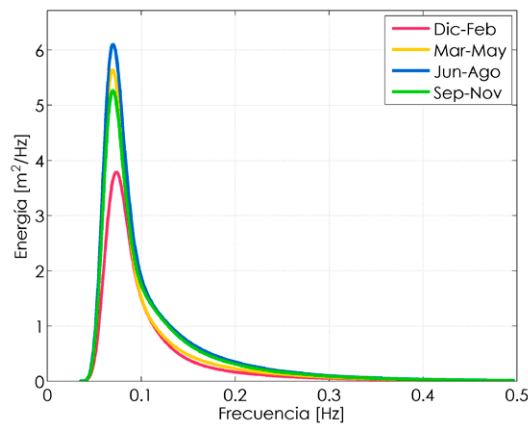
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S	<0.1%	1.82	1.84	1.84	1.84
SSO	47.3%	1.97	2.71	3.53	3.98
SO	50.2%	1.83	2.53	3.50	4.08
OSO	2.3%	1.62	2.04	2.49	2.71
O	0.2%	1.65	2.13	2.30	2.31
ONO	<0.1%	1.81	1.99	1.99	1.99
NO					
NNO					
N					
NNE					
NE					
ENE					

NODO 2: IQUIQUE / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



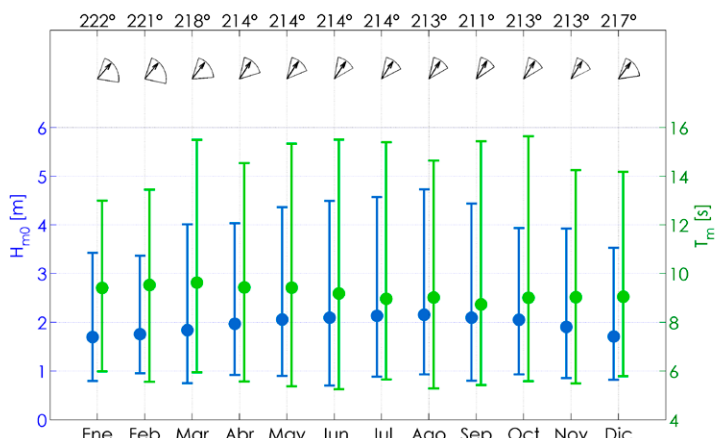
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

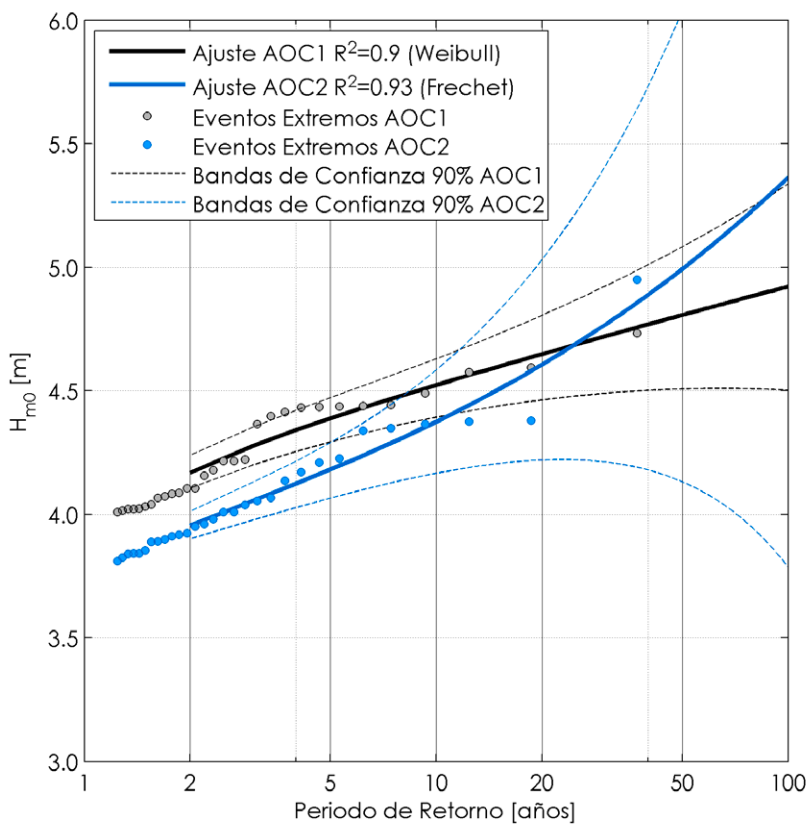
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	1.72	1.96	2.13	2.02
T_z [s]	8.2	8.3	7.9	7.8
T_e [s]	11.0	11.3	10.9	10.7
T_m [s]	9.3	9.5	9.1	8.9
T_p [s]	13.7	13.9	13.6	13.6
D_m [°]	220	215	214	212
D_p [°]	218	216	217	215
ε	0.83	0.84	0.83	0.83
ν	0.54	0.57	0.56	0.56
Q_p	2.18	2.26	2.12	2.05
γ	1.58	1.71	1.61	1.55
S	29.1	30.4	25.9	27.4

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

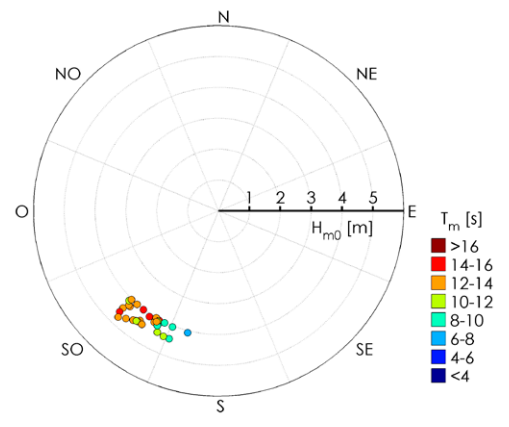


NODO 2: IQUIQUE / CLIMA EXTREMO

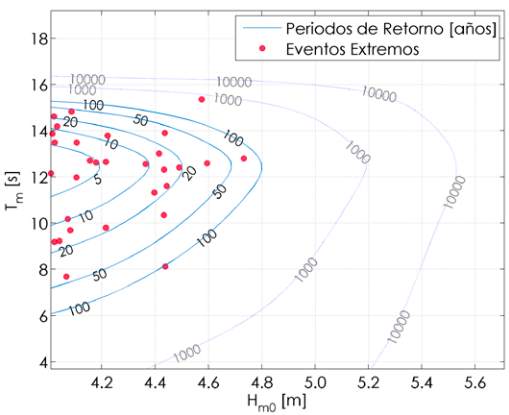
PERIODOS DE RETORNO UNIVARIADO



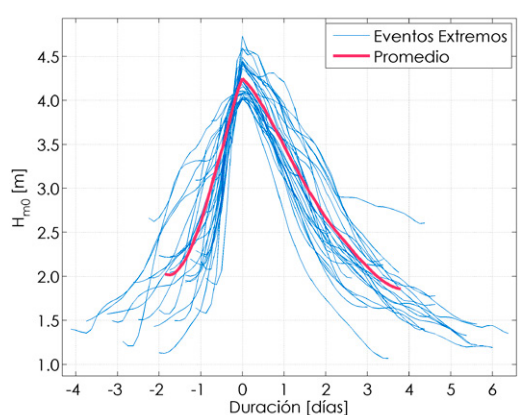
DISPERSIÓN DE EXTREMOS



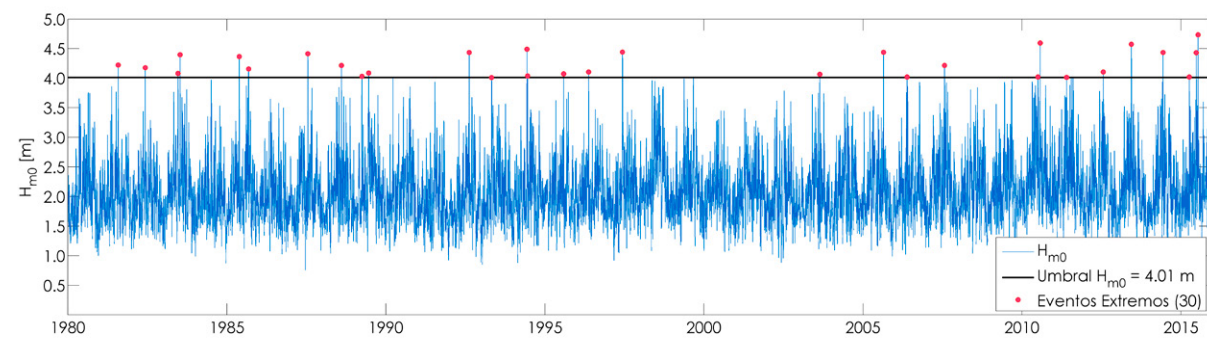
PERIODOS DE RETORNO BIVARIADO



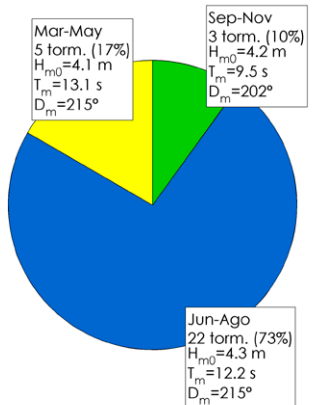
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 2: IQUIQUE / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 34.3	primer modo	mar de fondo	100.0			<0.1	99.7	0.2			
		mar de viento	<0.1				100.0				
Bimodal 51.5	primer modo	mar de fondo	99.5			0.5	98.0	1.3	0.3		
		mar de viento	0.5			13.7	86.3				
	segundo modo	mar de fondo	92.9			7.8	1.8	3.7	86.7		
		mar de viento	7.1			70.0	30.0				
Trimodal 13.1	primer modo	mar de fondo	98.7			3.9	90.4	4.1	1.7		
		mar de viento	1.3			37.3	62.7				
	segundo modo	mar de fondo	82.1			36.3	9.3	8.9	45.5		
		mar de viento	17.9			75.3	24.6	<0.1			
	tercer modo	mar de fondo	83.6		<0.1	29.4	2.7	10.4	57.5	<0.1	
		mar de viento	16.4			78.9	21.1				

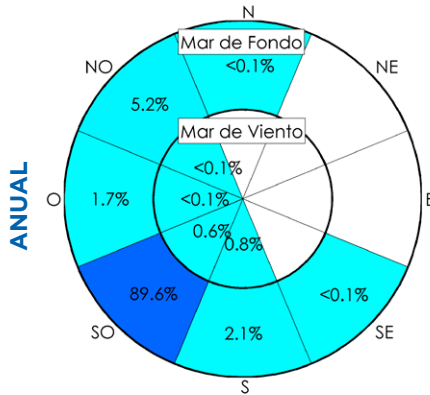
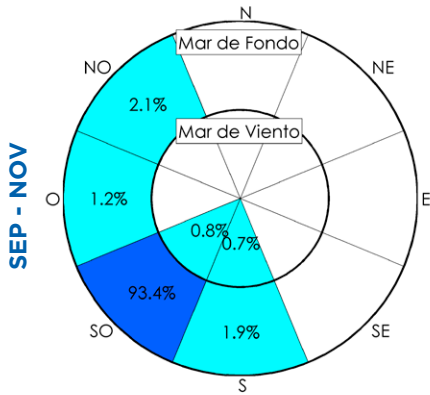
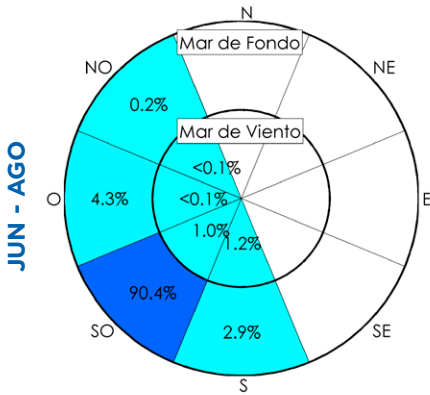
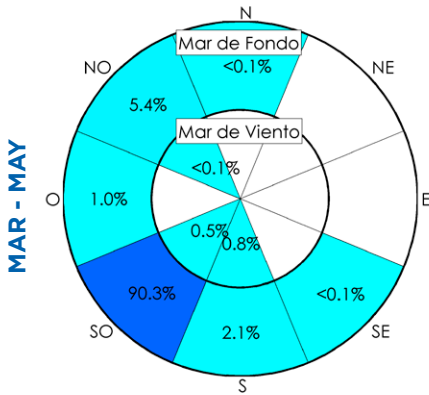
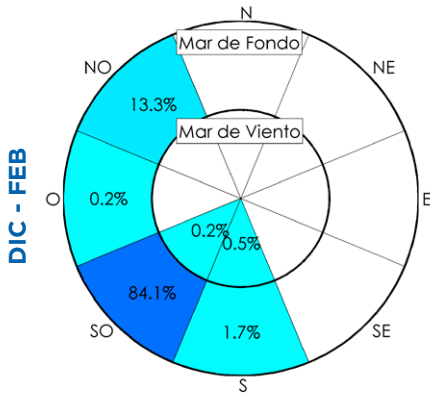
NOTA: estados de mar con más de 3 modos abarcan el 1.2% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	77.8	51.9	2.9	34.2	41.5
MF del SO	3.2	22.6	64.1	46.3	34.2
MF del S + MF del SO + MF del NO	10.0	9.8	1.2	4.3	6.3
MF del S + MF del SO	0.1	2.5	8.4	3.5	3.6
MF del SO + MF del NO + MV del S	4.8	4.7	0.5	1.8	3.0
MF del SO + MV del S	0.1	2.0	5.7	2.3	2.5
MF del SO + MF del O	<0.1	0.5	5.7	1.9	2.0
MF del SO + MV del SO	<0.1	0.9	2.7	1.5	1.3
MF del SO + MF del O + MF del NO	1.4	1.4	0.7	0.9	1.1
MF del S + MF del SO + MF del O	0.0	0.4	2.8	0.6	1.0
Otros	2.5	3.3	5.2	2.8	3.5
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

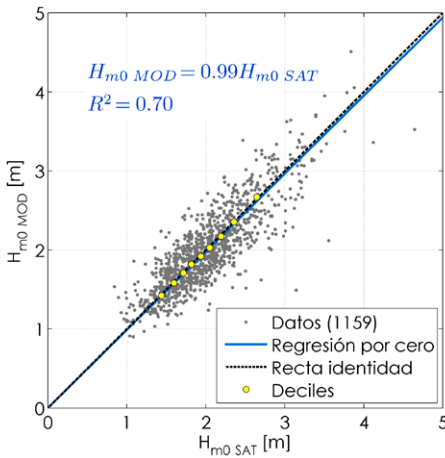


NODO 2: IQUIQUE / INCERTIDUMBRE

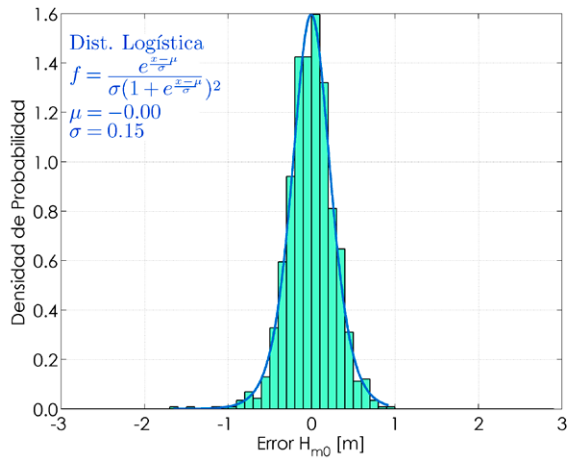
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{mo} satélite [m]	2.00	Intercepto mejor regresión lineal [m]	0.29
Promedio H_{mo} modelo [m]	1.99	Pendiente mejor regresión lineal	0.85
Desviación estándar H_{mo} satélite [m]	0.50	R^2 mejor regresión lineal	0.72
Desviación estándar H_{mo} modelo [m]	0.50	Mínimo error relativo (RE_{min})	-53%
Error absoluto medio (MAE) [m]	0.21	Máximo error relativo (RE_{max})	83%
Raíz del error cuadrático medio (RMSE) [m]	0.28	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.010%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	83%
Índice de dispersión (SI)	0.14	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



NODO 3 MEJILLONES

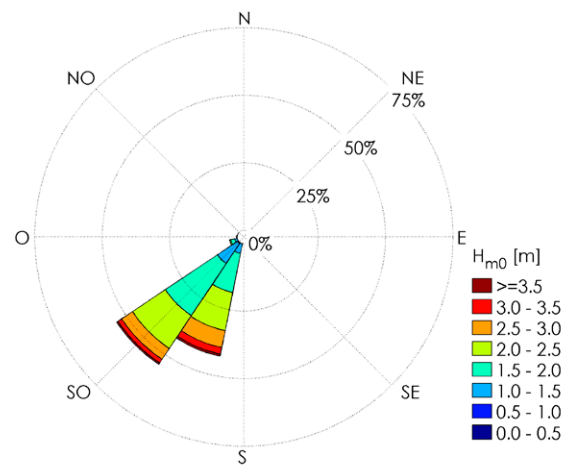
Coordenadas del Nodo: 23°S, 72°O



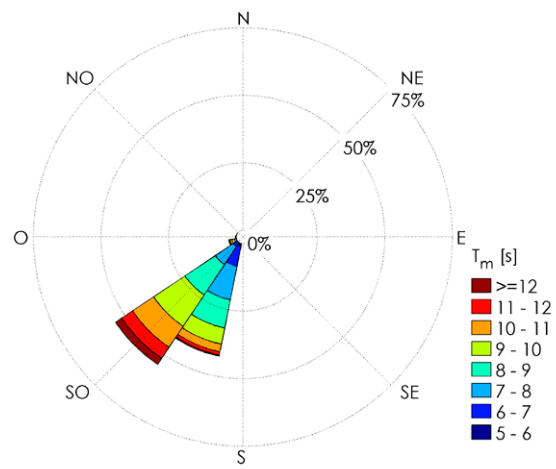
CRÉDITOS FOTOGRAFÍA: DIRECCIÓN DE OBRAS PORTUARIAS

NODO 3: MEJILLONES / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

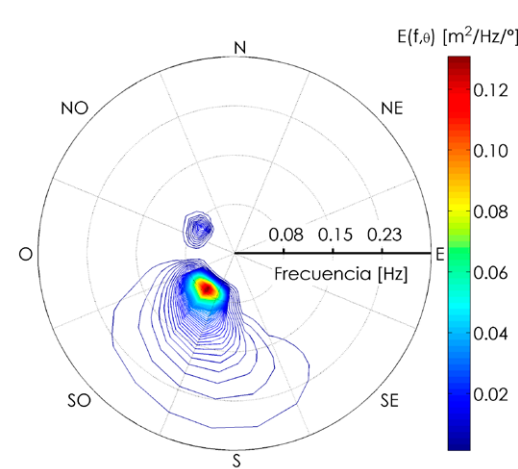
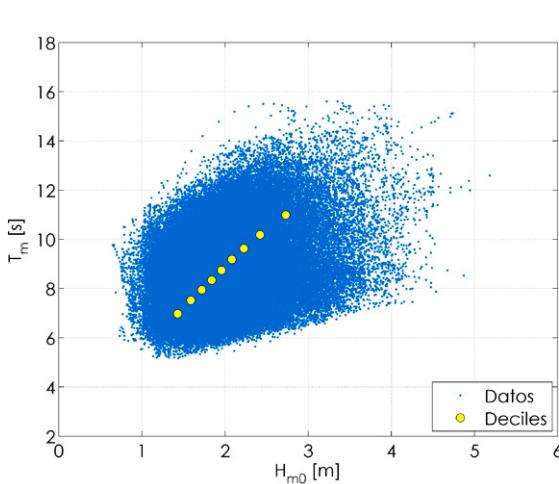


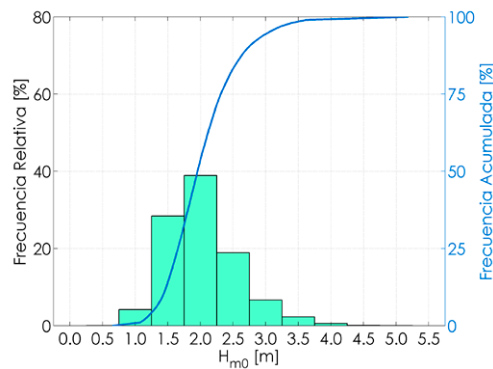
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



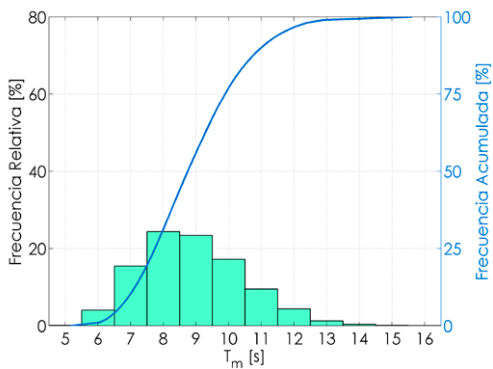
PARÁMETROS PROMEDIO

H_{m0} [m]	2.03
T_z [s]	7.8
T_e [s]	10.7
T_m [s]	8.9
T_p [s]	13.6
D_m [°]	216
D_p [°]	217
ε	0.82
ν	0.56
Q_p	2.04
γ	1.53
s	26.1

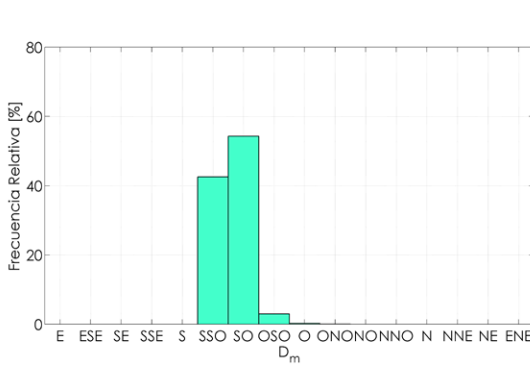
HISTOGRAMA DE H_{m0}



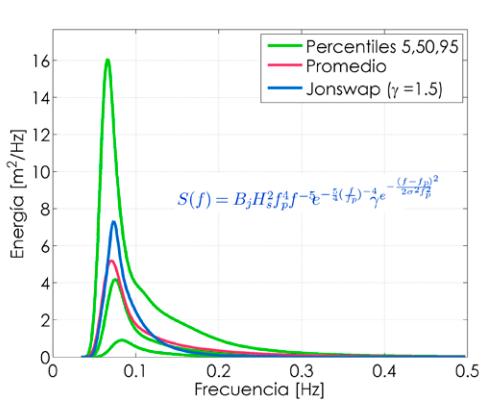
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

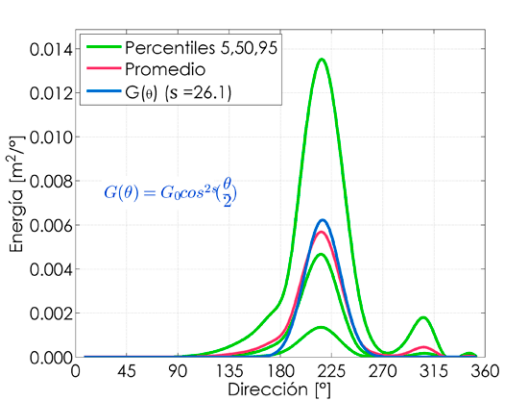


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.5[									0.0
[0.5-1[				0.4	<0.1				0.4
[1-1.5[			<0.1	13.3	0.2				13.5
[1.5-2[			0.6	38.7	0.5				39.7
[2-2.5[			1.1	28.3	0.1				29.5
[2.5-3[			0.8	10.5	<0.1				11.3
[3-3.5[			0.4	3.7					4.1
[3.5-4[			0.1	1.4					1.5
TOTAL	0.0	0.0	3.0	96.2	0.8	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			0.2	0.6					0.9
[6-7[			1.5	7.9					9.4
[7-8[			0.9	20.0	<0.1				20.9
[8-9[			0.2	24.4	<0.1				24.7
[9-10[			<0.1	20.7	0.2				21.0
[10-11[			<0.1	12.8	0.2				13.1
[11-12[			<0.1	6.4	0.2				6.6
[12-13[				3.3	<0.1				3.4
TOTAL	0.0	0.0	3.0	96.2	0.8	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

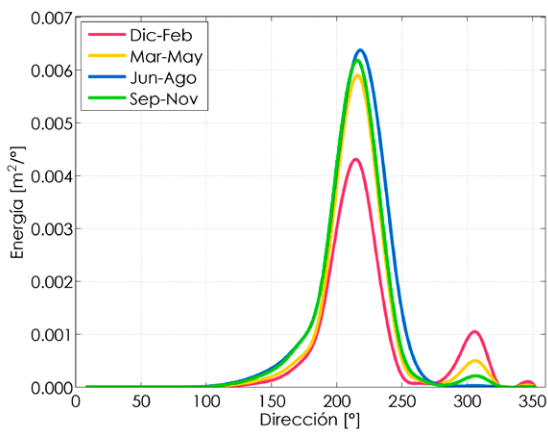
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.5[									0.0
[0.5-1[	<0.1	<0.1	0.1	0.1	<0.1	<0.1			0.4
[1-1.5[	0.3	1.9	3.4	3.8	2.8	1.0	0.2	<0.1	13.5
[1.5-2[	0.5	4.2	8.8	10.4	8.9	5.0	1.7	0.3	39.7
[2-2.5[	<0.1	2.5	5.7	6.6	6.2	4.6	2.6	1.3	29.5
[2.5-3[	<0.1	0.7	2.1	2.4	2.1	1.6	1.3	1.0	11.3
[3-3.5[		<0.1	0.7	1.0	0.7	0.6	0.5	0.5	4.1
[3.5-4[			0.1	0.3	0.3	0.2	0.2	0.3	1.5
TOTAL	0.9	9.4	20.9	24.7	21.0	13.1	6.6	3.4	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

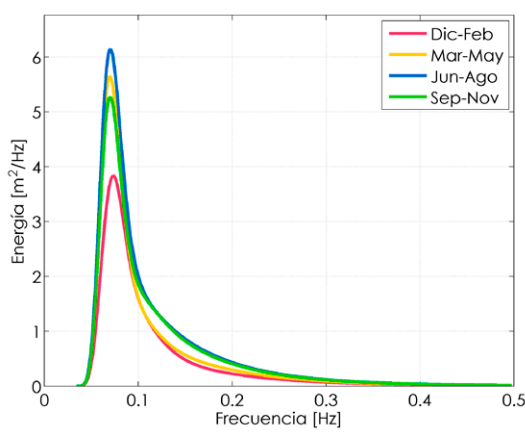
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S					
SSO	42.5%	2.08	2.88	3.67	4.16
SO	54.3%	1.89	2.62	3.56	4.19
OSO	3.0%	1.65	2.10	2.59	2.72
O	0.2%	1.71	2.19	2.39	2.40
ONO	<0.1%	1.89	2.03	2.04	2.04
NO					
NNO					
N					
NNE					
NE					
ENE					

NODO 3: MEJILLONES / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



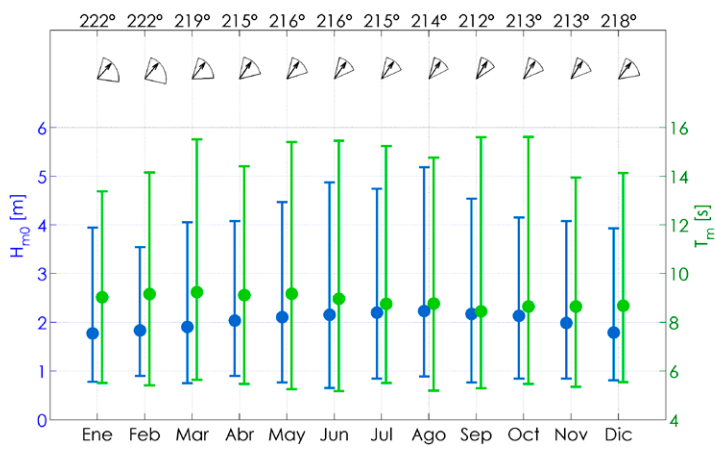
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

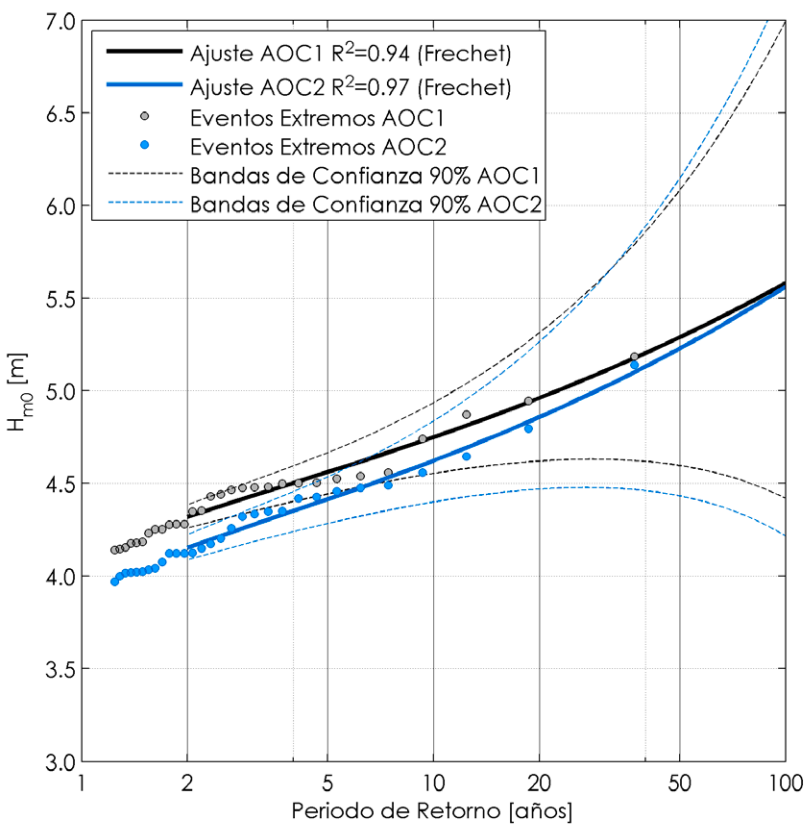
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	1.80	2.02	2.20	2.10
T_z [s]	7.8	8.0	7.7	7.5
T_e [s]	10.7	11.1	10.6	10.4
T_m [s]	9.0	9.2	8.8	8.6
T_p [s]	13.7	13.9	13.5	13.5
D_m [°]	221	217	215	213
D_p [°]	219	217	219	216
ε	0.83	0.83	0.82	0.82
ν	0.55	0.57	0.56	0.56
Q_p	2.04	2.14	2.05	1.94
γ	1.49	1.62	1.54	1.46
S	26.6	28.3	24.4	25.3

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

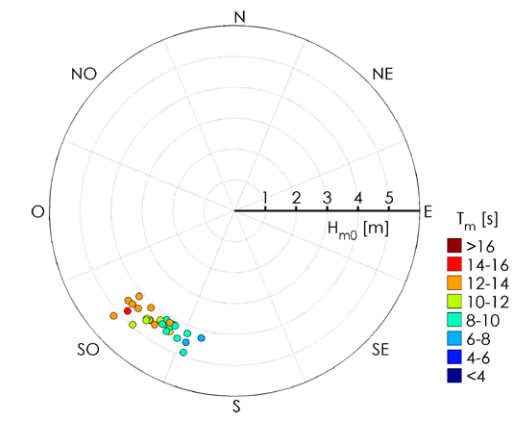


NODO 3: MEJILLONES / CLIMA EXTREMO

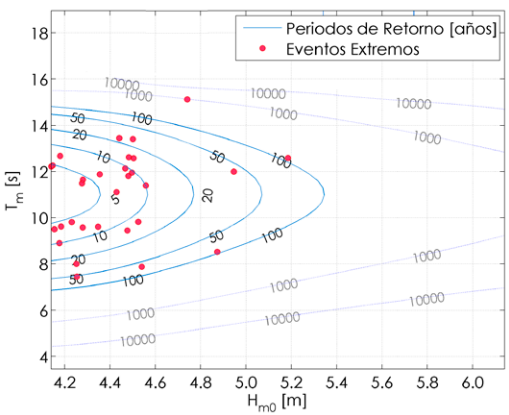
PERIODOS DE RETORNO UNIVARIADO



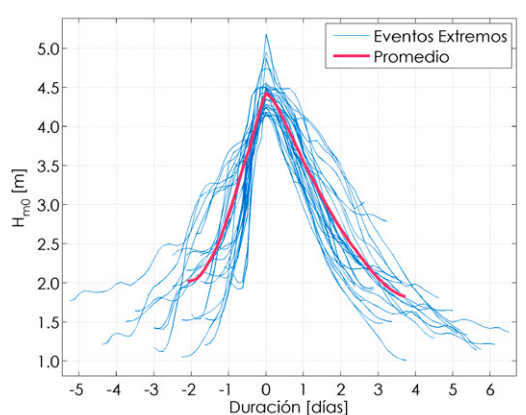
DISPERSIÓN DE EXTREMOS



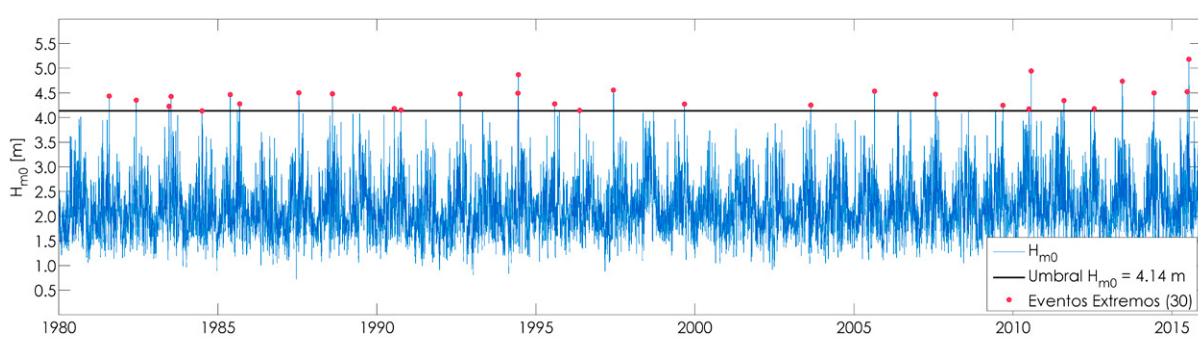
PERIODOS DE RETORNO BIVARIADO



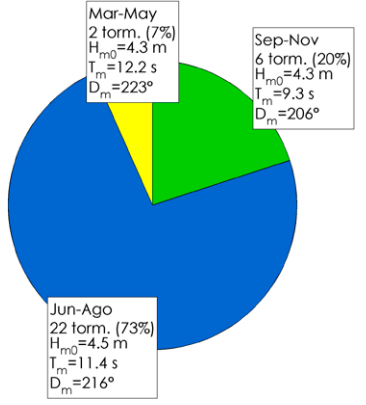
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO Hm0



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 3: MEJILLONES / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 31.0	primer modo	mar de fondo	100.0			<0.1	99.5	0.5			
		mar de viento	<0.1				100.0				
Bimodal 51.5	primer modo	mar de fondo	98.2			0.2	97.6	2.0	0.3		
		mar de viento	1.8			29.3	70.7				
	segundo modo	mar de fondo	88.9			5.1	3.5	4.7	86.7		
		mar de viento	11.1			57.3	42.6	<0.1	<0.1	<0.1	
Trimodal 16.0	primer modo	mar de fondo	94.6			2.0	91.6	4.9	1.5		
		mar de viento	5.4			42.1	57.9				
	segundo modo	mar de fondo	67.2			22.2	14.3	12.0	51.5		
		mar de viento	32.8			60.1	39.8		<0.1		
	tercer modo	mar de fondo	78.7		<0.1	20.1	3.3	11.1	65.4	<0.1	
		mar de viento	21.3			64.5	35.4	<0.1		<0.1	

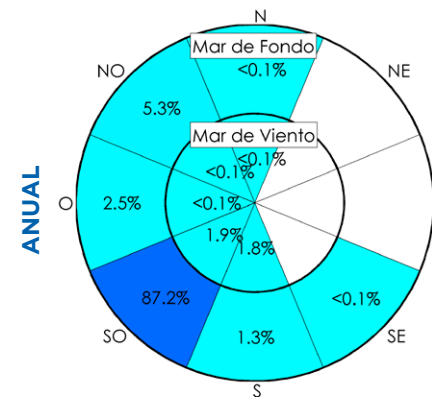
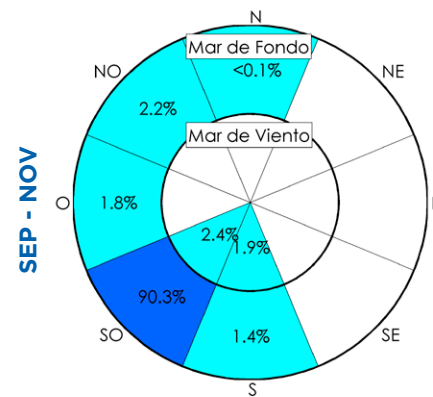
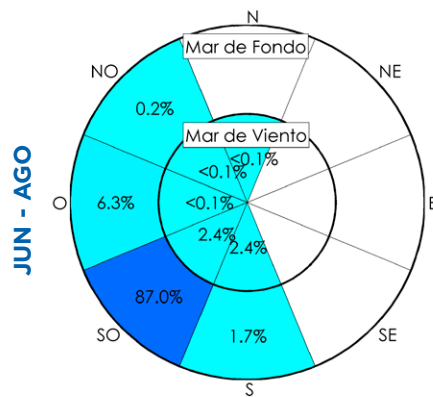
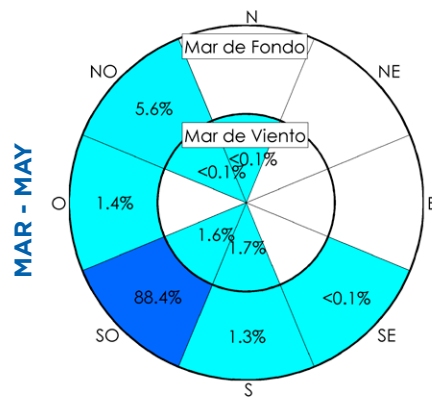
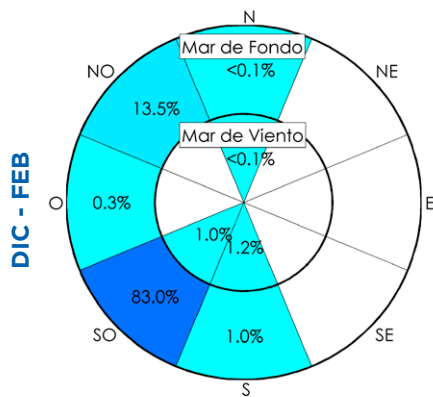
NOTA: estados de mar con más de 3 modos abarcan el 1.6% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	74.4	49.9	2.8	32.5	39.7
MF del SO	2.4	20.5	58.2	41.6	30.8
MF del SO + MF del NO + MV del S	8.3	7.6	0.7	3.0	4.9
MF del S + MF del SO + MF del NO	6.4	6.6	0.8	2.9	4.1
MF del SO + MV del S	0.1	2.4	7.6	3.5	3.4
MF del SO + MF del NO + MV del SO	5.4	4.3	0.4	3.1	3.3
MF del SO + MV del SO	0.1	1.7	6.0	4.1	3.0
MF del SO + MF del O	<0.1	0.7	7.6	2.1	2.6
MF del S + MF del SO	0.1	1.2	5.3	2.2	2.2
MF del SO + MF del O + MF del NO	1.7	2.0	1.1	1.4	1.5
Otros	1.2	3.2	9.6	3.6	4.4
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

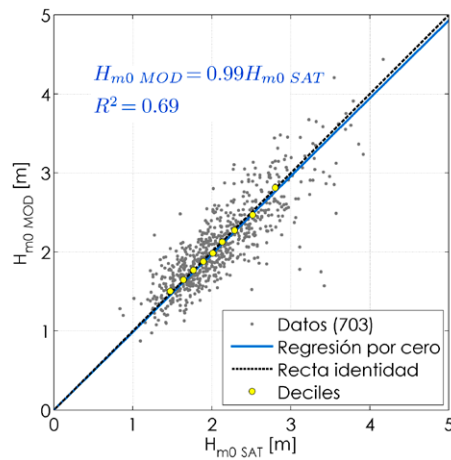


NODO 3: MEJILLONES / INCERTIDUMBRE

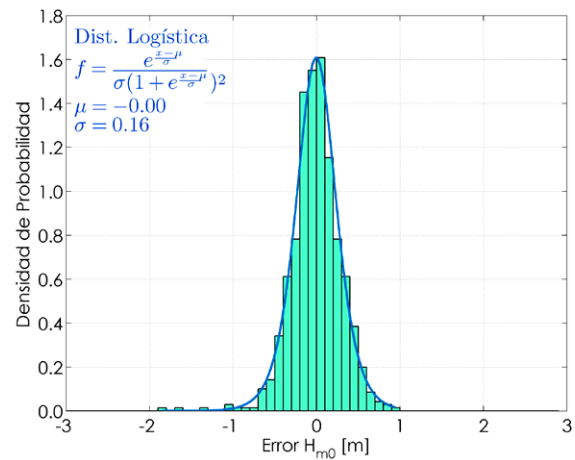
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.08	Intercepto mejor regresión lineal [m]	0.35
Promedio H_{m0} modelo [m]	2.08	Pendiente mejor regresión lineal	0.83
Desviación estándar H_{m0} satélite [m]	0.53	R^2 mejor regresión lineal	0.71
Desviación estándar H_{m0} modelo [m]	0.52	Mínimo error relativo (RE_{min})	-54%
Error absoluto medio (MAE) [m]	0.22	Máximo error relativo (RE_{max})	74%
Raíz del error cuadrático medio (RMSE) [m]	0.29	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.000%
Habilidad de pronóstico (SS)	0.86	Máximo error relativo absoluto (ARE_{max})	74%
Índice de dispersión (SI)	0.14	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



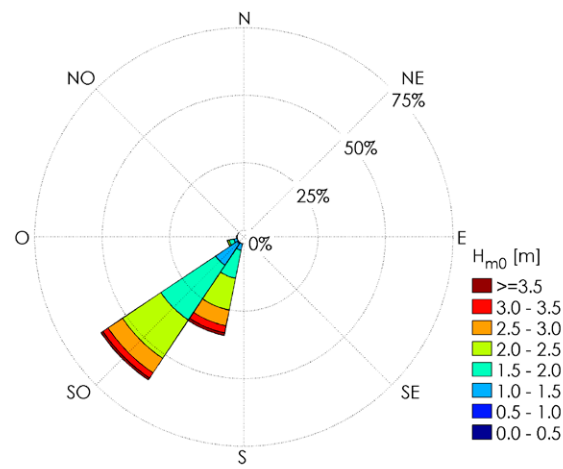
NODO 4 TALTAL

Coordenadas del Nodo: 25°S, 72°O

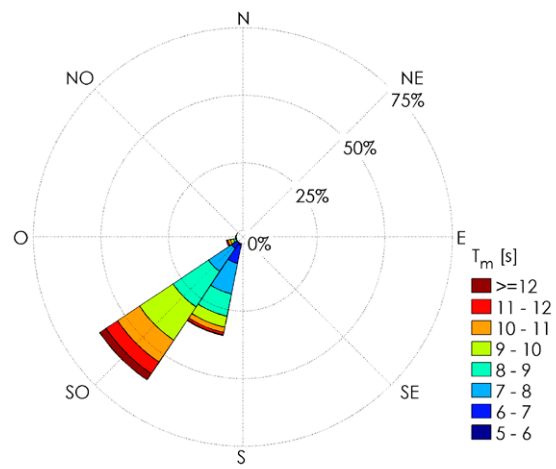


NODO 4: TALTAL / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

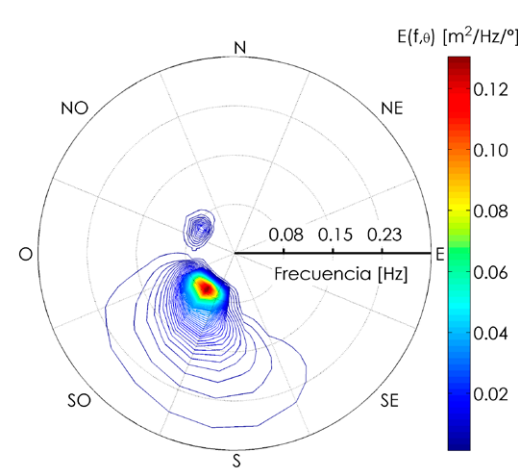
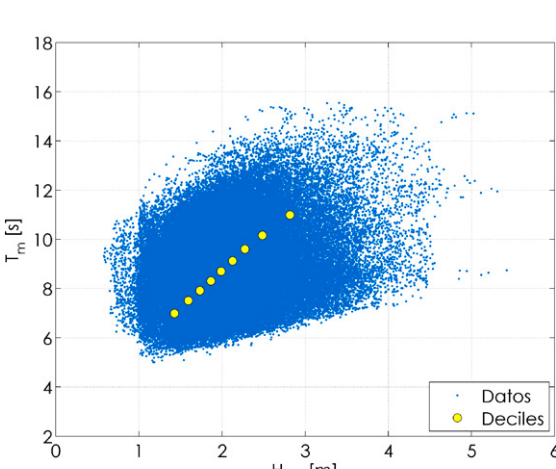


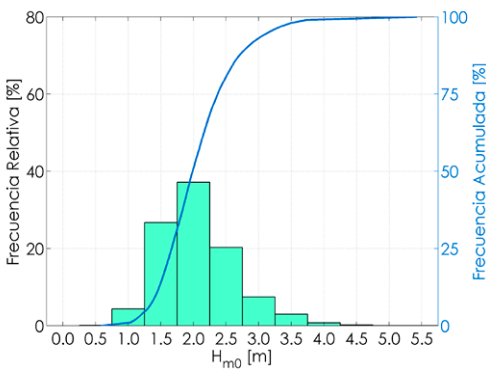
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



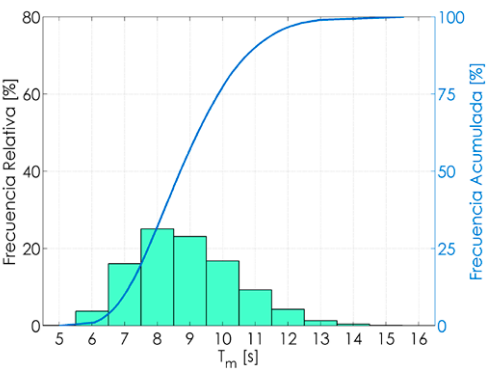
PARÁMETROS PROMEDIO

H_{m0} [m]	2.07
T_z [s]	7.8
T_e [s]	10.7
T_m [s]	8.9
T_p [s]	13.5
D_m [°]	218
D_p [°]	218
ϵ	0.82
ν	0.55
Q_p	2.02
γ	1.49
S	25.4

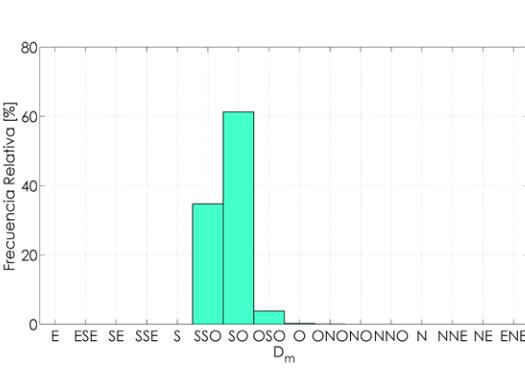
HISTOGRAMA DE H_{m0}



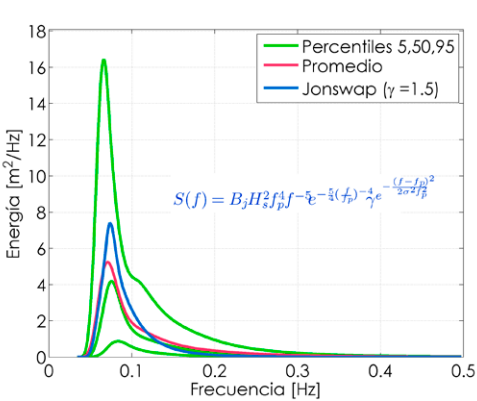
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

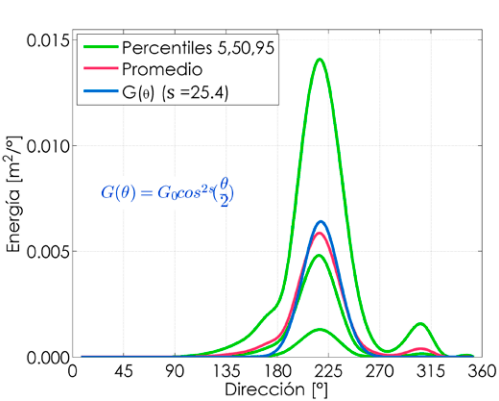


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.5[									0.0
[0.5-1[				0.6	<0.1				0.6
[1-1.5[			<0.1	13.1	0.3				13.3
[1.5-2[			0.2	36.2	0.5				36.9
[2-2.5[			0.4	29.1	0.2				29.7
[2.5-3[			0.4	12.1	<0.1				12.5
[3-3.5[			0.2	4.7					4.9
[3.5-4[			<0.1	1.9					2.0
TOTAL	0.0	0.0	1.3	97.7	0.9	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			0.1	0.7					0.8
[6-7[			0.7	8.6	<0.1				9.3
[7-8[			0.4	21.5	<0.1				21.9
[8-9[			<0.1	24.8	0.2				25.0
[9-10[			<0.1	20.0	0.3				20.2
[10-11[			<0.1	12.5	0.3				12.8
[11-12[			<0.1	6.4	0.2				6.5
[12-13[				3.3	<0.1				3.3
TOTAL	0.0	0.0	1.3	97.7	0.9	0.0	0.0	0.0	100.0

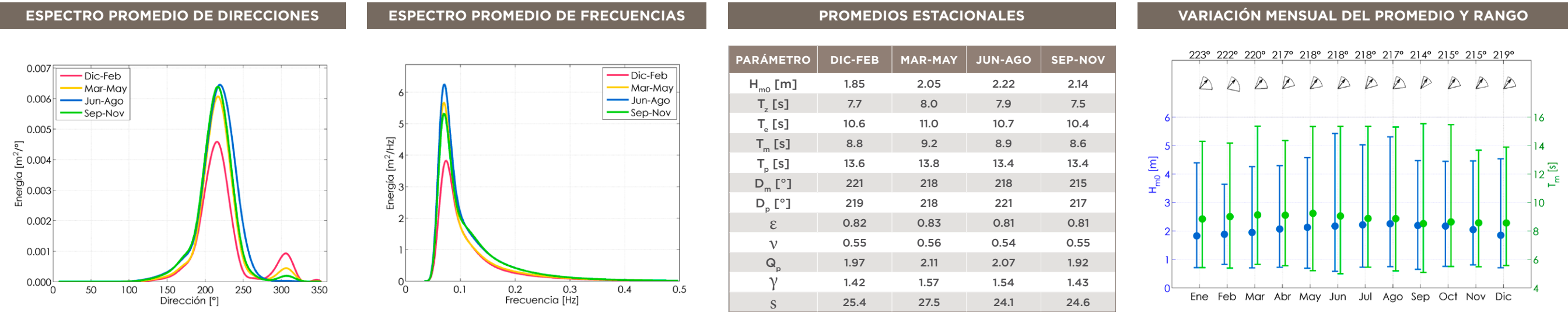
TABLA DE FRECUENCIA H_{m0} y T_m [%]

H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.5[									0.0
[0.5-1[	<0.1	<0.1	0.2	0.2	0.1	<0.1	<0.1		0.6
[1-1.5[	0.4	1.9	3.1	3.6	2.8	1.3	0.3	<0.1	13.3
[1.5-2[	0.4	4.0	8.6	9.4	7.8	4.6	1.8	0.3	36.9
[2-2.5[	<0.1	2.6	6.5	7.0	5.9	4.2	2.4	1.1	29.7
[2.5-3[	<0.1	0.6	2.5	3.0	2.4	1.7	1.4	1.0	12.5
[3-3.5[		<0.1	0.8	1.3	1.0	0.8	0.5	0.5	4.9
[3.5-4[			0.2	0.5	0.4	0.3	0.3	0.4	2.0
TOTAL	0.8	9.3	21.9	25.0	20.2	12.8	6.5	3.3	100.0

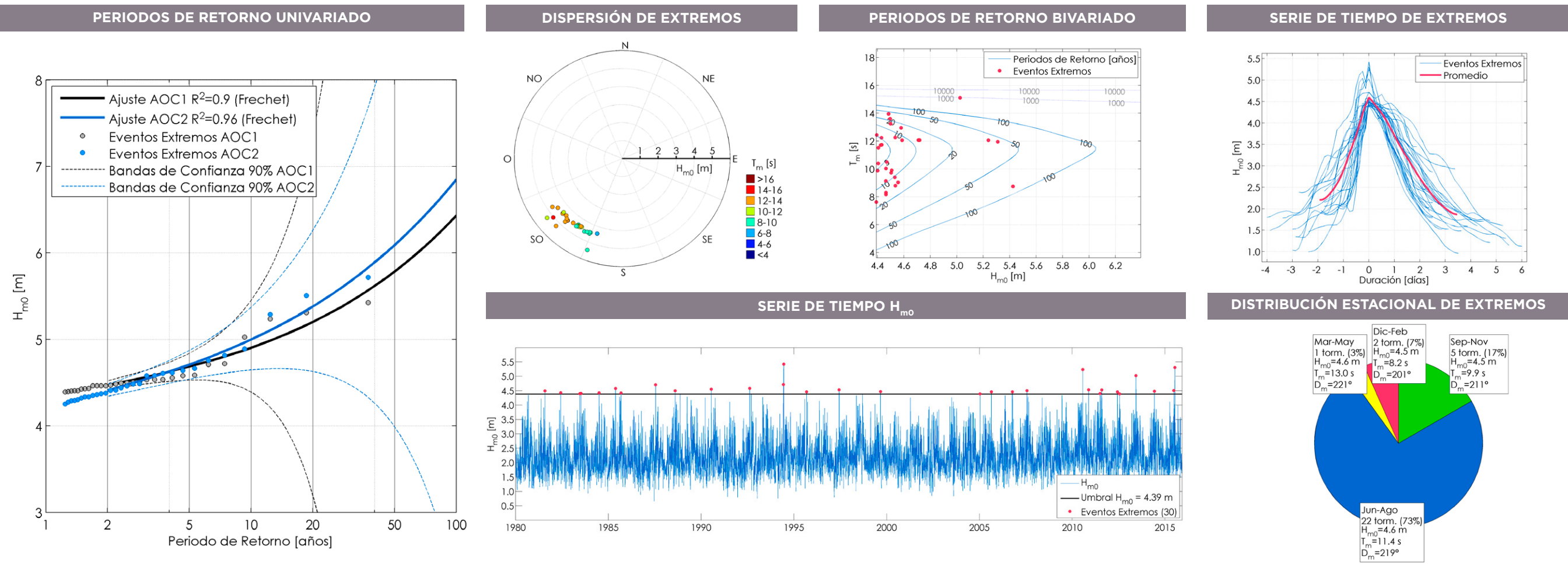
PERCENTILES DE H_{m0} POR DIRECCIÓN

	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S					
SSO	34.7%	2.16	3.02	3.85	4.39
SO	61.2%	1.92	2.70	3.65	4.34
OSO	3.8%	1.64	2.20	3.04	3.74
O	0.3%	1.66	2.18	2.39	2.46
ONO	<0.1%	1.93	1.99	1.99	1.99
NO					
NNO					
N					
NNE					
NE					
ENE					

NODO 4: TALTAL / CLIMA MEDIO ESTACIONAL



NODO 4: TALTAL / CLIMA EXTREMO



NODO 4: TALTAL / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 32.1	primer modo	mar de fondo	99.9			<0.1	98.8	1.2			
		mar de viento	0.1				100.0				
Bimodal 52.9	primer modo	mar de fondo	98.9			<0.1	96.7	3.0	0.2		
		mar de viento	1.1			18.3	81.7				
	segundo modo	mar de fondo	90.6			3.3	3.6	6.1	87.1	<0.1	<0.1
		mar de viento	9.4			58.9	40.3		0.5	0.3	
Trimodal 13.5	primer modo	mar de fondo	95.1			1.5	88.4	8.8	1.3		
		mar de viento	4.9			38.6	61.4				
	segundo modo	mar de fondo	69.8			16.1	15.7	17.7	50.5	<0.1	
		mar de viento	30.2			54.6	45.1	<0.1	0.1	0.1	
	tercer modo	mar de fondo	76.3		<0.1	16.8	4.4	13.2	64.9	0.6	
		mar de viento	23.7			59.2	39.9	0.1	0.3	0.4	

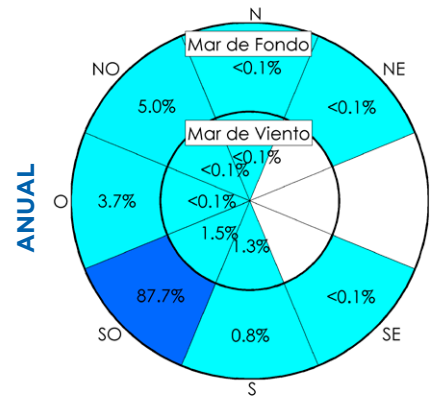
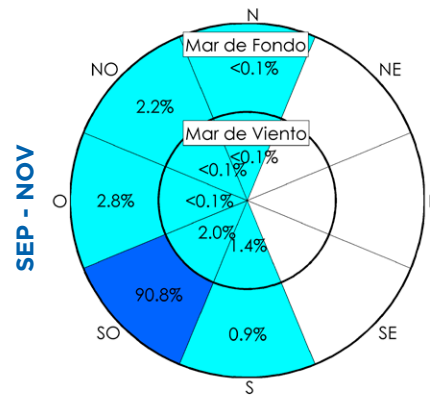
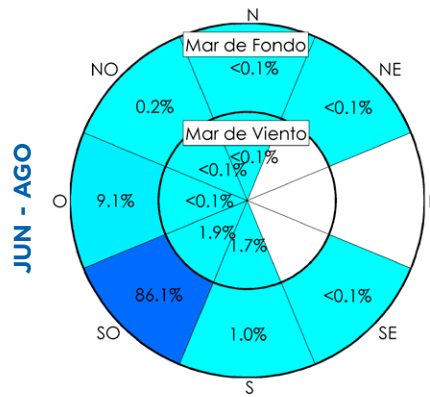
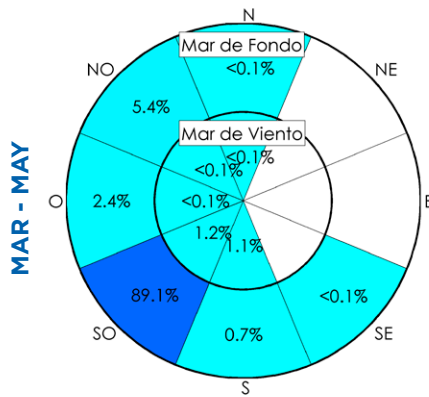
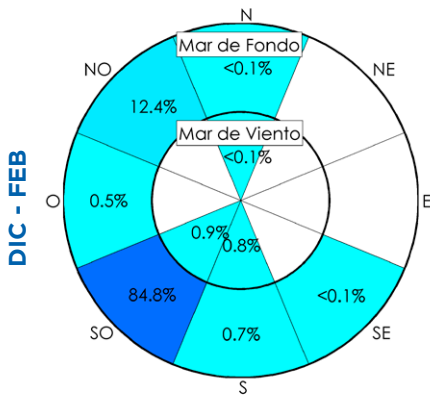
NOTA: estados de mar con más de 3 modos abarcan el 1.5% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	78.8	53.1	2.8	32.9	41.8
MF del SO	2.6	21.8	58.6	43.3	31.7
MF del SO + MF del O	<0.1	1.2	11.0	3.1	3.9
MF del SO + MF del NO + MV del S	5.7	5.5	0.5	2.4	3.5
MF del SO + MF del NO + MV del SO	4.9	4.0	0.3	2.6	2.9
MF del SO + MV del S	0.1	2.0	6.6	2.7	2.9
MF del S + MF del SO + MF del NO	4.2	3.9	0.4	2.0	2.6
MF del SO + MV del SO	0.1	1.1	4.8	3.4	2.4
MF del SO + MF del O + MF del NO	2.2	3.2	1.6	2.1	2.3
MF del S + MF del SO	<0.1	0.7	3.4	1.5	1.4
Otros	1.3	3.5	9.9	3.9	4.7
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

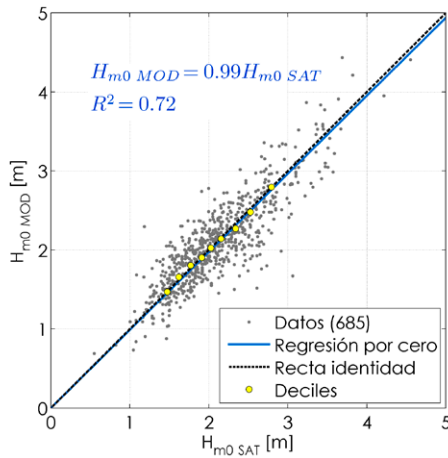


NODO 4: TALTAL / INCERTIDUMBRE

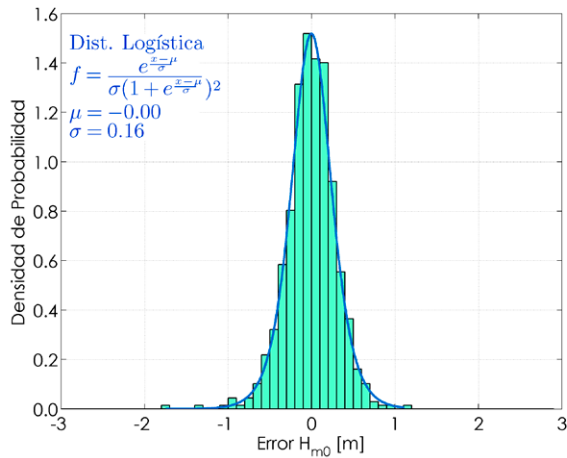
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.10	Intercepto mejor regresión lineal [m]	0.28
Promedio H_{m0} modelo [m]	2.09	Pendiente mejor regresión lineal	0.86
Desviación estándar H_{m0} satélite [m]	0.56	R^2 mejor regresión lineal	0.74
Desviación estándar H_{m0} modelo [m]	0.56	Mínimo error relativo (RE_{min})	-60%
Error absoluto medio (MAE) [m]	0.22	Máximo error relativo (RE_{max})	94%
Raíz del error cuadrático medio (RMSE) [m]	0.29	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.013%
Habilidad de pronóstico (SS)	0.86	Máximo error relativo absoluto (ARE_{max})	94%
Índice de dispersión (SI)	0.14	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



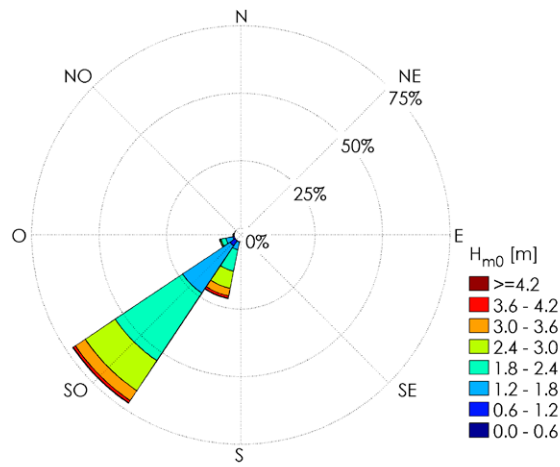
NODO 5 BAHÍA INGLESA

Coordenadas del Nodo: 27°S, 72°O

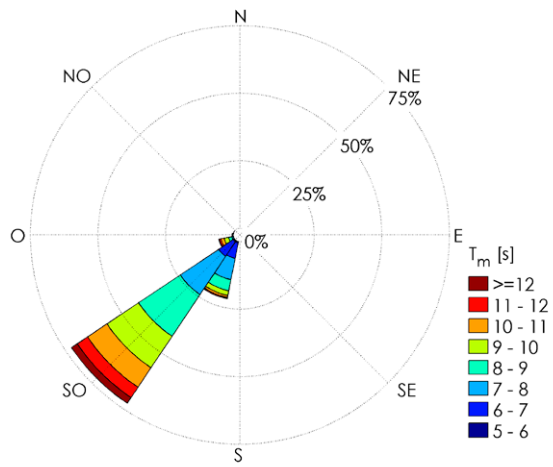


NODO 5: BAHÍA INGLESA / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

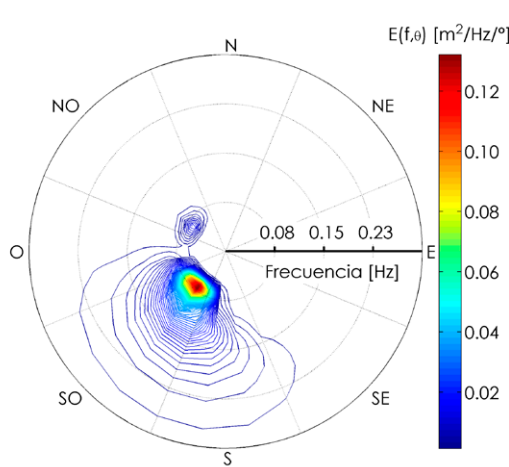
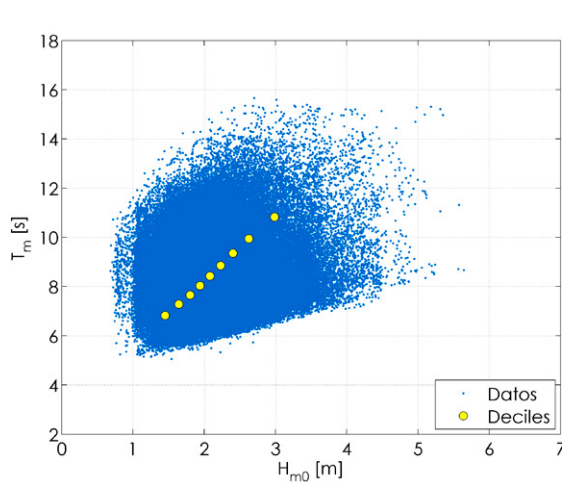


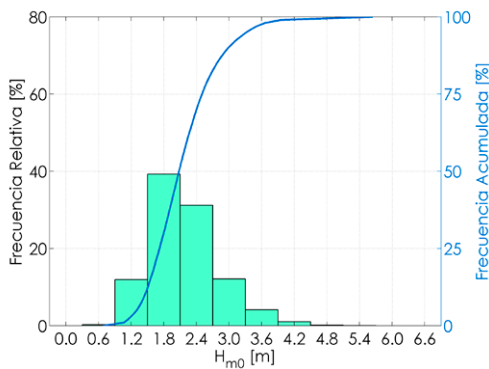
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



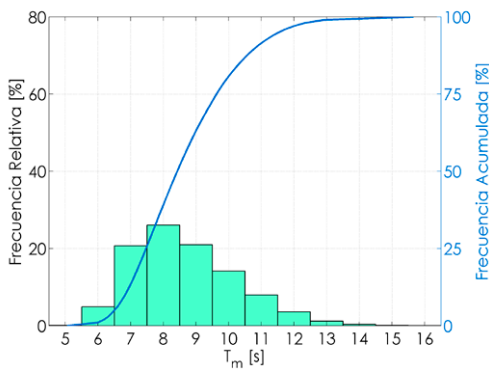
PARÁMETROS PROMEDIO

H_{m0} [m]	2.16
T_z [s]	7.6
T_e [s]	10.4
T_m [s]	8.7
T_p [s]	13.4
D_m [°]	221
D_p [°]	220
ε	0.81
ν	0.54
Q_p	1.94
γ	1.42
S	24.2

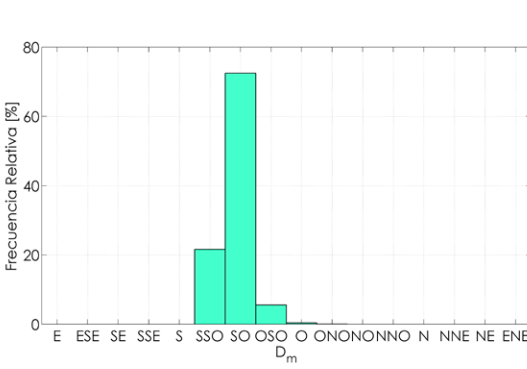
HISTOGRAMA DE H_{m0}



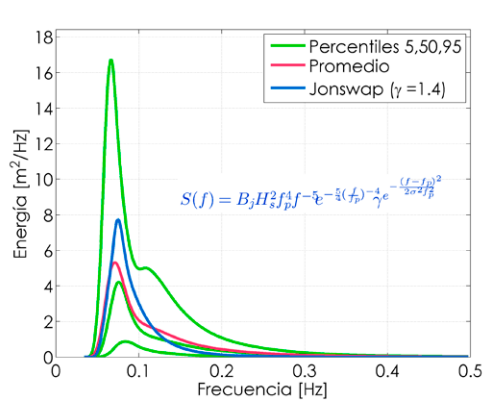
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

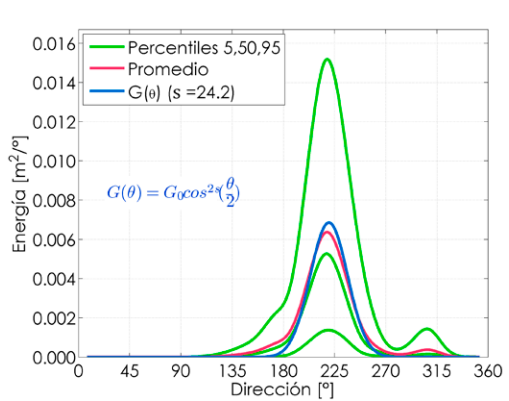


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[									0.0
[0.6-1.2[				2.9	0.1				3.0
[1.2-1.8[			<0.1	26.2	0.7				26.9
[1.8-2.4[			<0.1	39.5	0.5	<0.1			40.0
[2.4-3[			<0.1	20.2	<0.1	<0.1			20.3
[3-3.6[			<0.1	7.4	<0.1	<0.1			7.4
[3.6-4.2[			<0.1	1.8	<0.1				1.8
[4.2-4.8[			<0.1	0.5	<0.1				0.5
TOTAL	0.0	0.0	0.1	98.5	1.4	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			<0.1	1.0					1.0
[6-7[			<0.1	12.3	<0.1	<0.1			12.4
[7-8[			<0.1	25.5	0.1	<0.1			25.6
[8-9[				23.7	0.3				24.0
[9-10[				17.2	0.4				17.6
[10-11[			<0.1	10.5	0.3				10.8
[11-12[			<0.1	5.4	0.1				5.6
[12-13[				2.9	<0.1				3.0
TOTAL	0.0	0.0	0.1	98.5	1.4	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

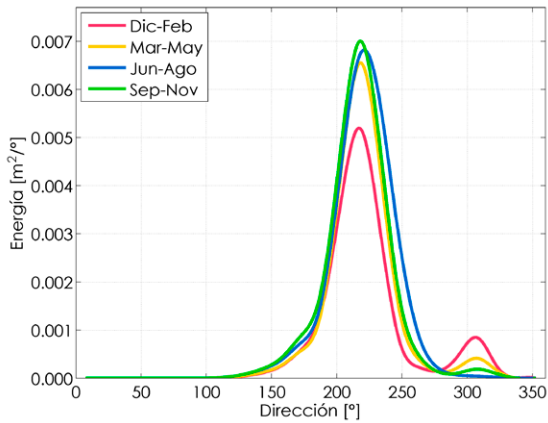
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[									0.0
[0.6-1.2[	<0.1	0.4	0.7	0.7	0.7	0.3	<0.1	<0.1	3.0
[1.2-1.8[	0.7	3.8	6.3	6.7	5.2	2.9	1.1	0.2	26.9
[1.8-2.4[	0.2	5.8	10.6	9.2	6.7	4.3	2.3	0.9	40.0
[2.4-3[	<0.1	2.2	5.6	4.7	3.3	2.1	1.4	1.0	20.3
[3-3.6[		0.2	2.0	2.0	1.3	0.8	0.5	0.5	7.4
[3.6-4.2[		<0.1	0.4	0.5	0.4	0.2	0.1	0.2	1.8
[4.2-4.8[			<0.1	0.2	0.1	<0.1	<0.1	<0.1	0.5
TOTAL	1.0	12.4	25.6	24.0	17.6	10.8	5.6	3.0	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

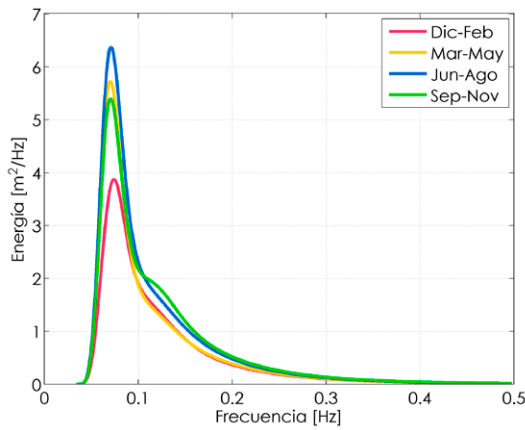
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S					
SSO	21.6%	2.38	3.32	4.22	4.78
SO	72.5%	2.03	2.88	3.82	4.41
OSO	5.5%	1.71	2.44	3.62	4.92
O	0.4%	1.75	2.26	3.18	3.33
ONO	<0.1%	2.54	3.04	3.18	3.18
NO					
NNO					
N					
NNE					
NE					
ENE					

NODO 5: BAHÍA INGLESA / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



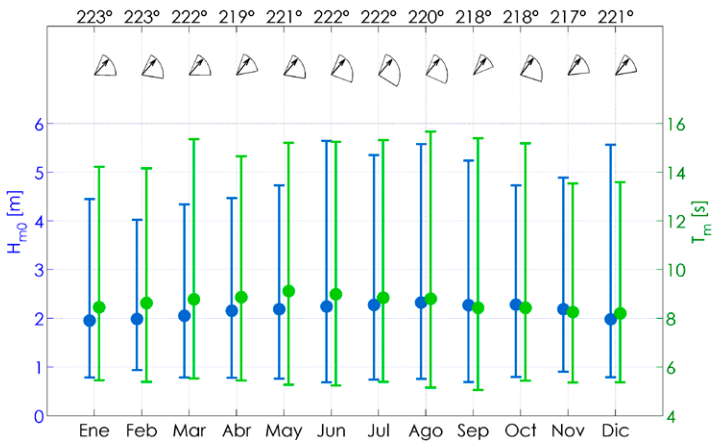
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

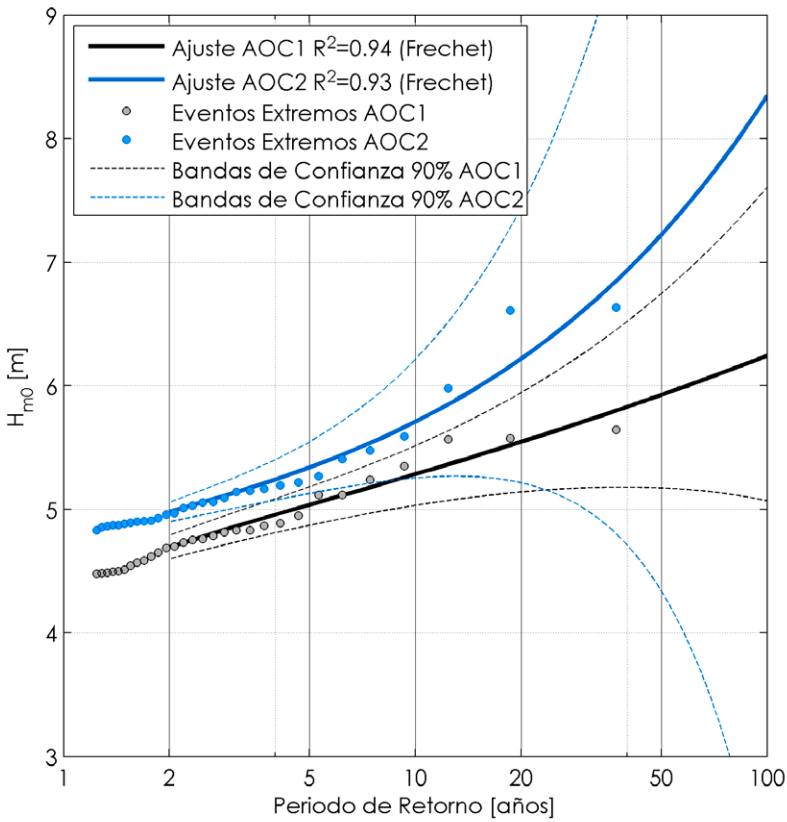
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	1.97	2.13	2.28	2.25
T_z [s]	7.4	7.8	7.9	7.4
T_e [s]	10.2	10.7	10.5	10.1
T_m [s]	8.4	8.9	8.9	8.4
T_p [s]	13.3	13.7	13.3	13.2
D_m [°]	222	221	221	218
D_p [°]	219	220	223	219
ε	0.81	0.82	0.81	0.80
ν	0.54	0.55	0.53	0.54
Q_p	1.84	2.01	2.05	1.85
γ	1.32	1.49	1.50	1.36
S	23.8	26.3	23.2	23.4

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

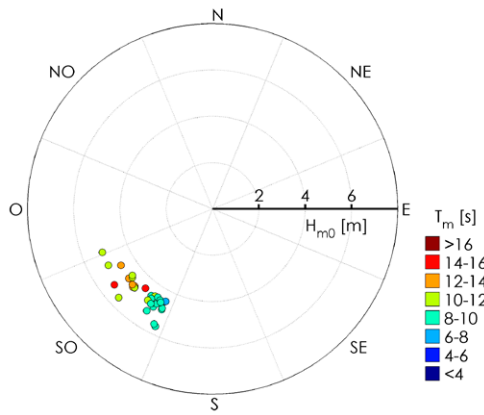


NODO 5: BAHÍA INGLESA / CLIMA EXTREMO

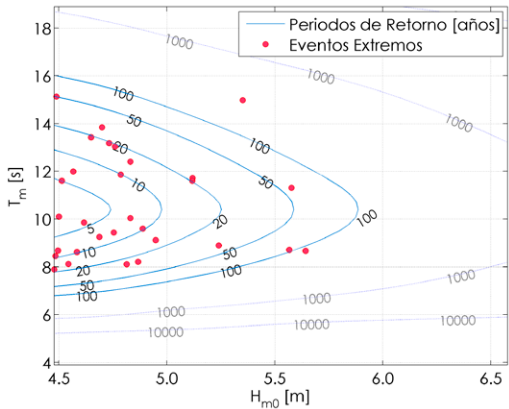
PERIODOS DE RETORNO UNIVARIADO



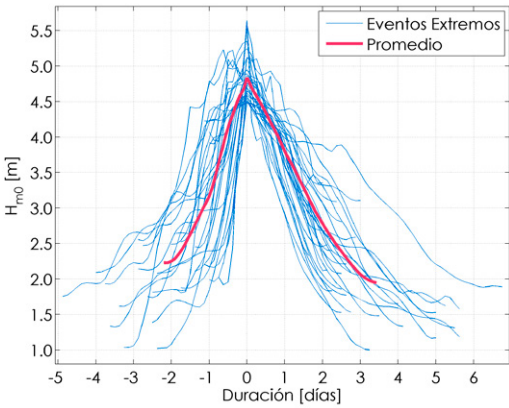
DISPERSIÓN DE EXTREMOS



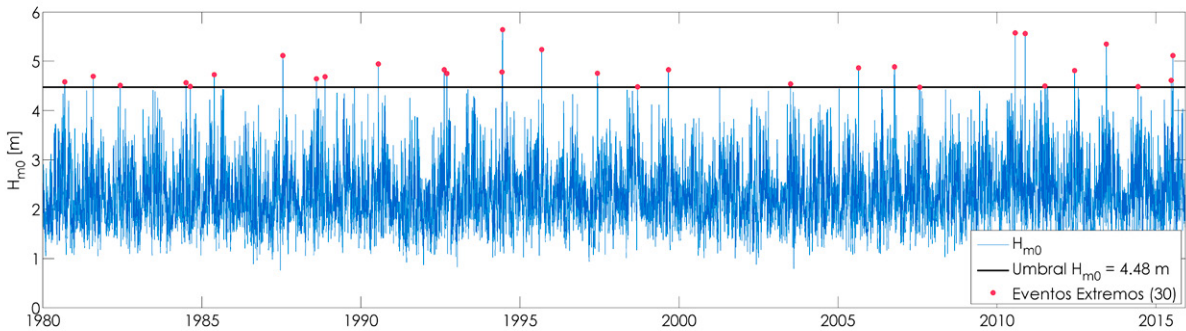
PERIODOS DE RETORNO BIVARIADO



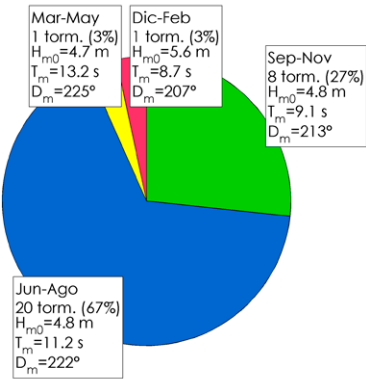
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 5: BAHÍA INGLESA / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 32.7	primer modo	mar de fondo	99.7				97.6	2.4			
		mar de viento	0.3				100.0				
Bimodal 54.9	primer modo	mar de fondo	96.9			<0.1	95.1	4.6	0.2		
		mar de viento	3.1			2.0	97.9			<0.1	
	segundo modo	mar de fondo	92.1			0.7	6.8	7.2	85.1	0.2	
		mar de viento	7.9			8.1	89.5	<0.1	0.5	1.8	
Trimodal 11.3	primer modo	mar de fondo	83.7			0.5	83.3	14.7	1.4		
		mar de viento	16.3			3.3	96.6		<0.1	<0.1	
	segundo modo	mar de fondo	71.7			6.8	33.2	24.8	34.9	0.3	
		mar de viento	28.3			6.2	92.5		0.3	1.0	
	tercer modo	mar de fondo	86.1			5.7	5.6	14.6	71.2	2.8	<0.1
		mar de viento	13.9			7.8	89.9	<0.1	0.7	1.6	

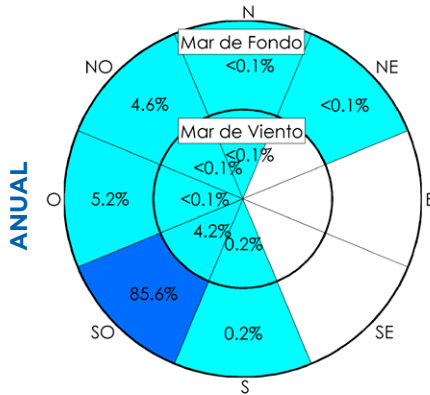
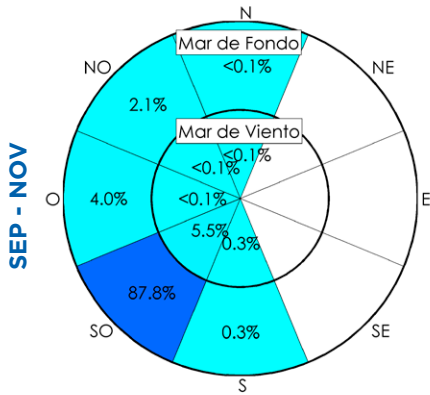
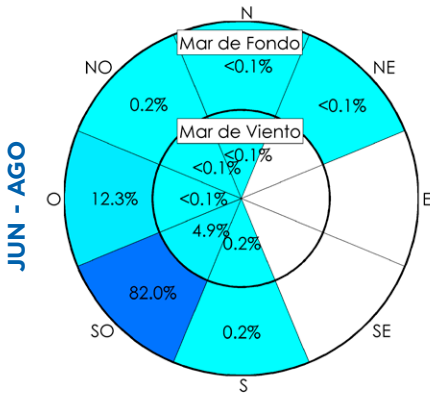
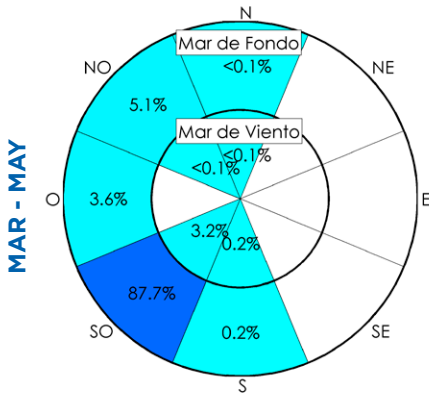
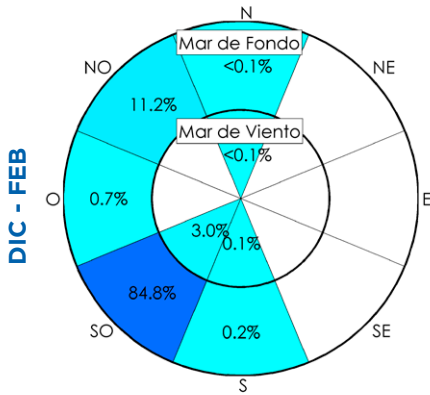
NOTA: estados de mar con más de 3 modos abarcan el 1.0% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	82.2	55.1	2.7	32.2	42.9
MF del SO	3.2	23.0	57.6	43.1	31.8
MF del SO + MF del O	<0.1	1.7	15.0	4.5	5.3
MF del SO + MF del NO + MV del SO	8.1	7.3	0.5	4.4	5.0
MF del SO + MV del SO	0.2	2.8	10.2	6.9	5.0
MF del SO + MF del O + MF del NO	2.6	4.9	2.4	3.1	3.3
MF del SO + MF del O + MV del SO	0.0	0.2	2.7	1.1	1.0
MF del S + MF del SO + MF del NO	1.2	1.4	0.1	0.8	0.9
MF del O	0.0	0.2	2.4	0.4	0.8
MF del SO + MF del O + MF del NO + MV del SO	0.5	0.8	0.6	0.5	0.6
Otros	2.0	2.6	5.6	3.0	3.3
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

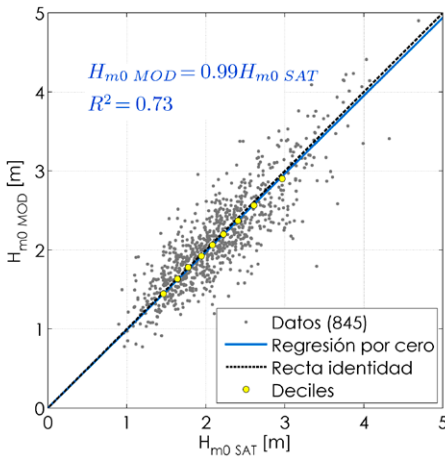


NODO 5: BAHÍA INGLESA / INCERTIDUMBRE

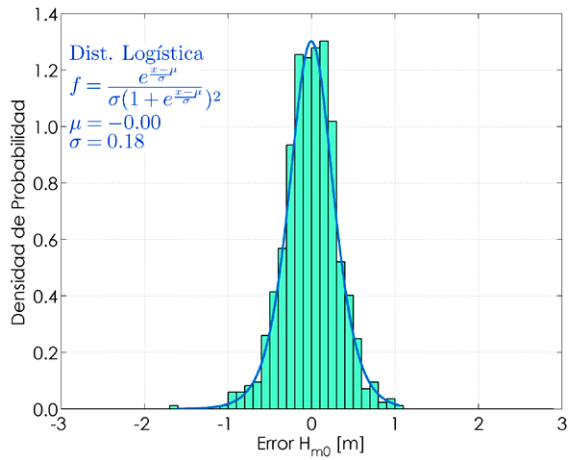
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.14	Intercepto mejor regresión lineal [m]	0.26
Promedio H_{m0} modelo [m]	2.14	Pendiente mejor regresión lineal	0.88
Desviación estándar H_{m0} satélite [m]	0.59	R^2 mejor regresión lineal	0.74
Desviación estándar H_{m0} modelo [m]	0.60	Mínimo error relativo (RE_{min})	-47%
Error absoluto medio (MAE) [m]	0.24	Máximo error relativo (RE_{max})	71%
Raíz del error cuadrático medio (RMSE) [m]	0.32	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.019%
Habilidad de pronóstico (SS)	0.86	Máximo error relativo absoluto (ARE_{max})	71%
Índice de dispersión (SI)	0.15	Error relativo absoluto medio (AARE)	12%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



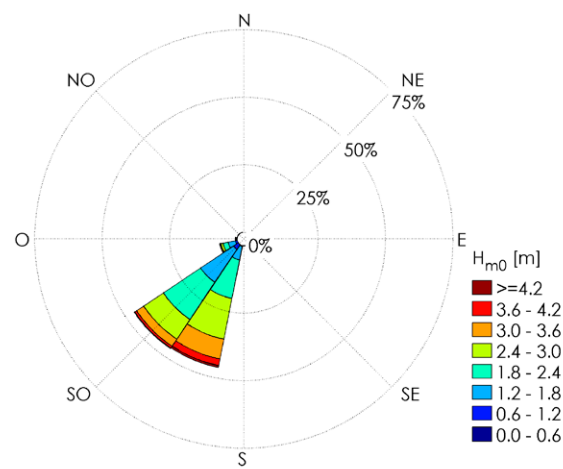
NODO 6 HUASCO

Coordenadas del Nodo: 29°S, 73°O

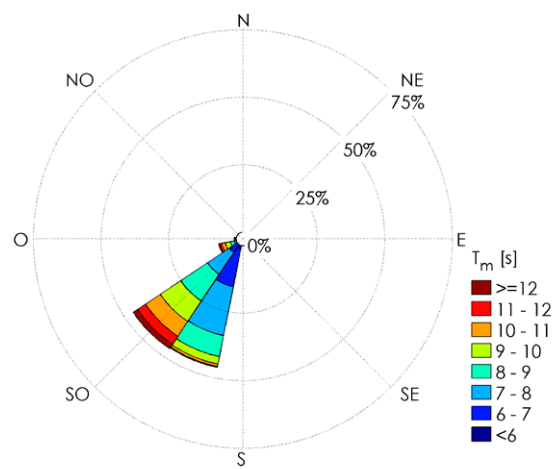


NODO 6: HUASCO / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

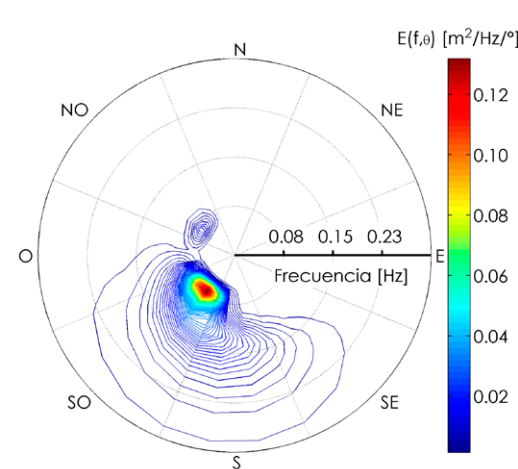
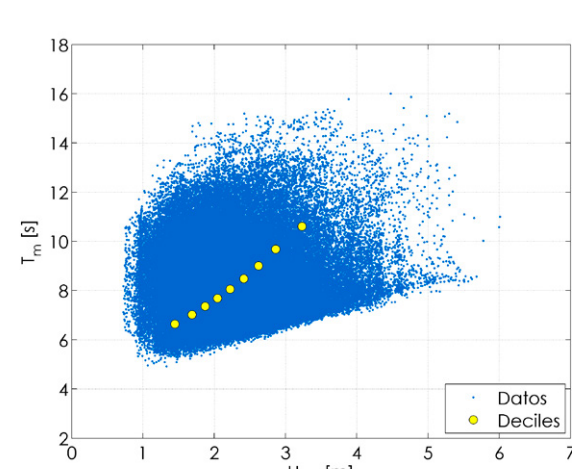


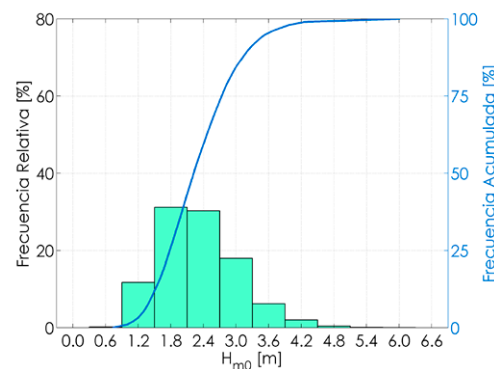
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



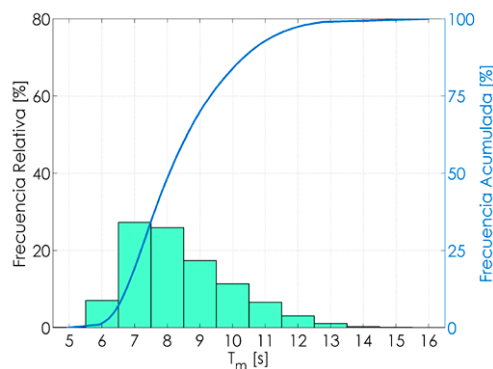
PARÁMETROS PROMEDIO

H_{m0} [m]	2.30
T_z [s]	7.4
T_e [s]	10.1
T_m [s]	8.4
T_p [s]	13.2
D_m [°]	217
D_p [°]	220
ε	0.80
ν	0.54
Q_p	1.86
γ	1.36
s	20.3

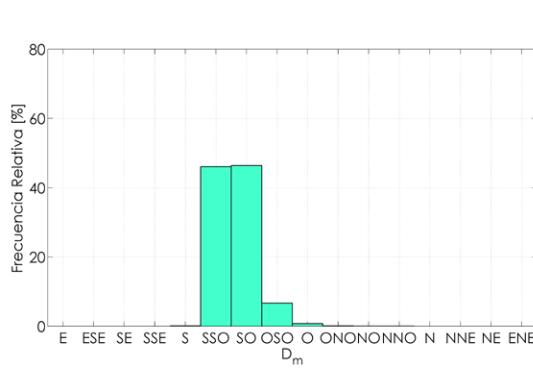
HISTOGRAMA DE H_{m0}



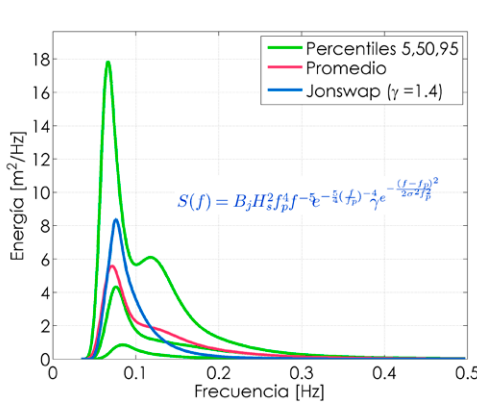
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

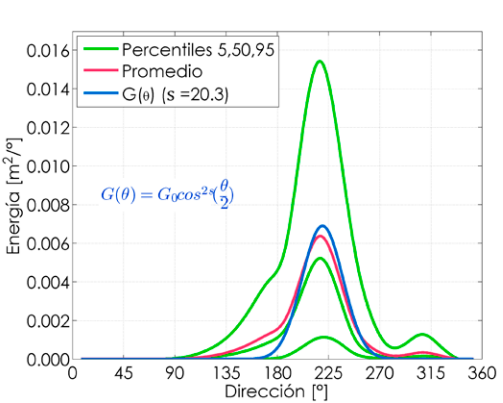


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6]									0.0
[0.6-1.2]				3.0	0.3				3.3
[1.2-1.8]			0.3	21.4	1.0	<0.1			22.7
[1.8-2.4]			1.6	30.9	0.8	<0.1			33.4
[2.4-3]			2.9	21.8	0.3	<0.1			25.1
[3-3.6]			2.1	8.8	0.1	<0.1			11.0
[3.6-4.2]			0.9	2.4	<0.1	<0.1			3.3
[4.2-4.8]			0.4	0.7	<0.1	<0.1			1.1
TOTAL	0.0	0.0	8.2	89.1	2.6	0.1	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6]			0.4	0.9	<0.1	<0.1			1.4
[6-7]			4.3	13.5	0.1	<0.1			17.9
[7-8]			3.0	25.7	0.4	<0.1			29.1
[8-9]			0.4	20.4	0.7				21.5
[9-10]			<0.1	13.3	0.7				14.0
[10-11]			<0.1	8.6	0.4				9.0
[11-12]			<0.1	4.4	0.2				4.6
[12-13]			<0.1	2.4	<0.1				2.5
TOTAL	0.0	0.0	8.2	89.1	2.6	0.1	0.0	0.0	100.0

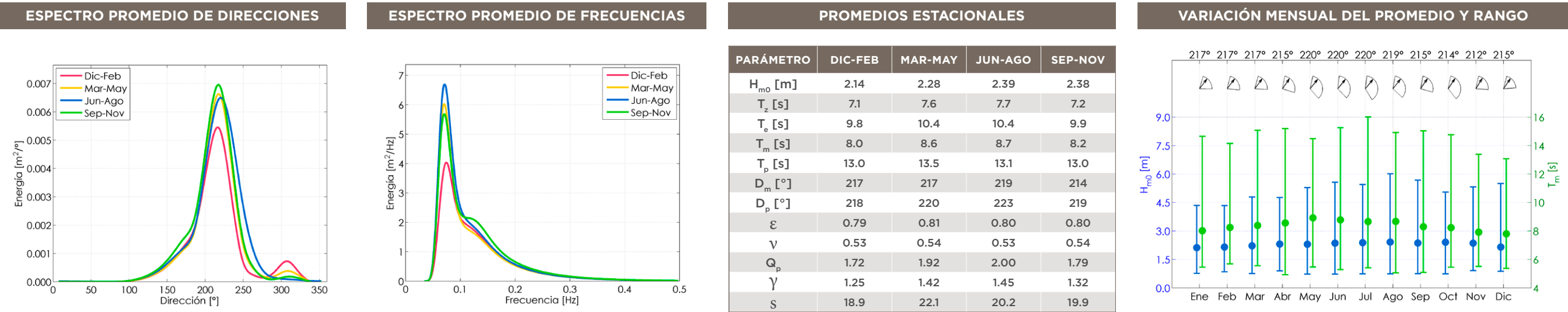
TABLA DE FRECUENCIA H_{m0} y T_m [%]

H_{m0} [m]	T_m [s]								TOTAL
	[5-6]	[6-7]	[7-8]	[8-9]	[9-10]	[10-11]	[11-12]	[12-13]	
[0-0.6]									0.0
[0.6-1.2]	0.1	0.5	0.7	0.8	0.7	0.3	<0.1	<0.1	3.3
[1.2-1.8]	0.9	3.9	5.1	5.1	3.8	2.6	1.1	0.3	22.7
[1.8-2.4]	0.4	8.0	9.3	6.3	4.1	2.9	1.6	0.7	33.4
[2.4-3]	<0.1	4.8	8.4	5.3	3.0	1.8	1.1	0.8	25.1
[3-3.6]		0.7	4.3	2.7	1.5	1.0	0.5	0.5	11.0
[3.6-4.2]		<0.1	1.1	1.0	0.6	0.3	0.2	0.2	3.3
[4.2-4.8]			0.2	0.4	0.2	<0.1	<0.1	0.1	1.1
TOTAL	1.4	17.9	29.1	21.5	14.0	9.0	4.6	2.5	100.0

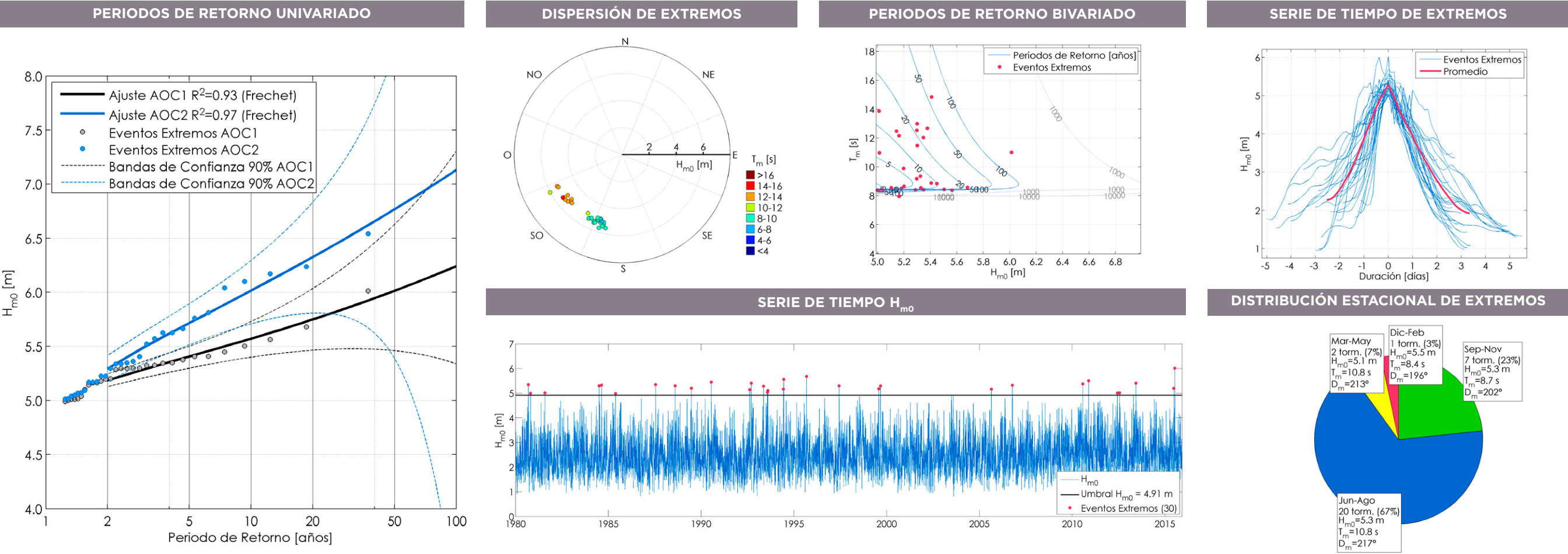
PERCENTILES DE H_{m0} POR DIRECCIÓN

	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S	<0.1%	3.38	4.33	4.49	4.49
SSO	46.0%	2.51	3.44	4.35	5.08
SO	46.4%	2.01	2.96	4.00	4.63
OSO	6.7%	1.77	2.81	4.07	5.13
O	0.7%	1.87	2.67	3.45	5.88
ONO	<0.1%	2.41	3.44	5.02	5.21
NO	<0.1%	2.71	3.61	3.93	3.93
NNO	<0.1%	1.68	1.68	1.68	1.68
N					
NNE					
NE					
ENE					

NODO 6: HUASCO / CLIMA MEDIO ESTACIONAL



NODO 6: HUASCO / CLIMA EXTREMO



NODO 6: HUASCO / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 26.6	primer modo	mar de fondo	99.4			0.1	96.0	3.8			
		mar de viento	0.6			20.5	79.5				
Bimodal 53.2	primer modo	mar de fondo	92.8			0.7	93.6	5.6	0.1		
		mar de viento	7.2			34.5	65.3		<0.1	0.1	
	segundo modo	mar de fondo	87.5			4.7	11.1	7.4	76.1	0.5	0.1
		mar de viento	12.5			52.1	44.2	<0.1	0.6	2.8	0.1
Trimodal 17.7	primer modo	mar de fondo	74.6			2.8	81.6	14.4	1.2	<0.1	
		mar de viento	25.4			34.6	65.2		0.1	<0.1	
	segundo modo	mar de fondo	74.4			14.7	40.0	18.8	25.6	0.8	0.2
		mar de viento	25.6			50.8	46.7	<0.1	0.4	2.0	<0.1
	tercer modo	mar de fondo	92.0	<0.1		9.4	6.5	11.9	69.1	2.9	0.3
		mar de viento	8.0			49.4	43.4	0.3	1.7	4.9	0.3

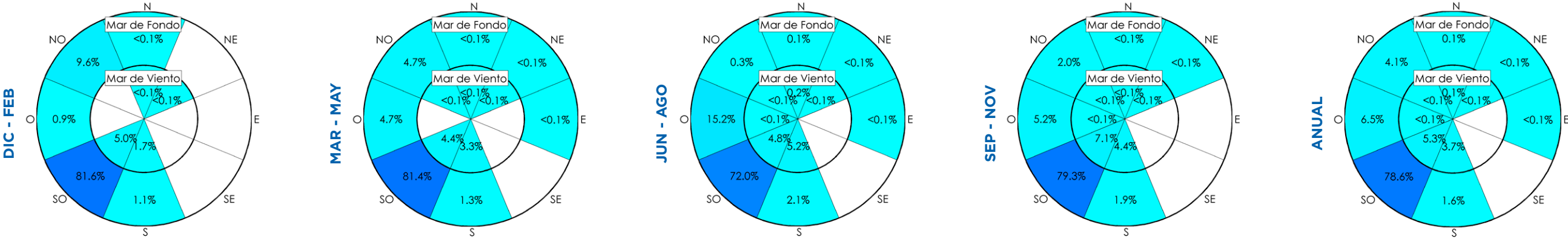
NOTA: estados de mar con más de 3 modos abarcan el 2.5% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	71.1	43.7	2.0	24.4	35.2
MF del SO	4.6	19.8	41.9	34.9	25.4
MF del SO + MV del SO	0.5	3.5	8.1	7.8	5.0
MF del SO + MF del NO + MV del SO	8.6	5.9	0.2	4.3	4.7
MF del SO + MF del O	<0.1	1.7	12.2	3.8	4.5
MF del SO + MV del S	0.1	2.8	8.8	4.8	4.2
MF del SO + MF del NO + MV del S	4.3	5.8	0.3	3.0	3.3
MF del SO + MF del O + MF del NO	2.5	4.8	2.4	2.3	3.0
MF del S + MF del SO + MF del NO	4.2	3.8	0.2	2.4	2.6
MF del S + MF del SO	0.1	1.3	4.4	2.8	2.2
Otros	4.0	7.0	19.4	9.3	10.0
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

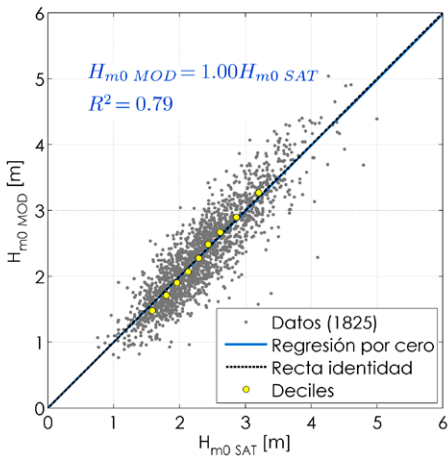


NODO 6: HUASCO / INCERTIDUMBRE

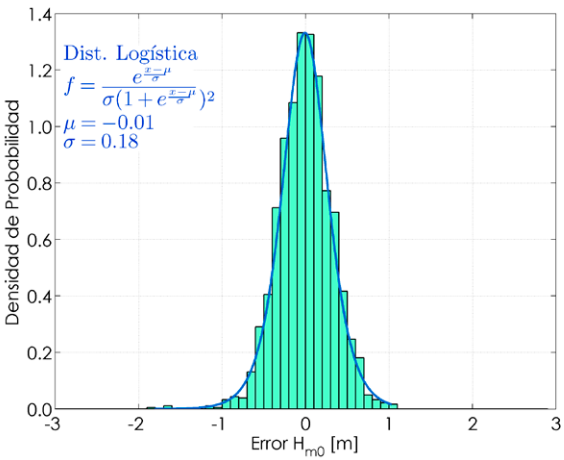
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.34	Intercepto mejor regresión lineal [m]	0.00
Promedio H_{m0} modelo [m]	2.33	Pendiente mejor regresión lineal	1.00
Desviación estándar H_{m0} satélite [m]	0.63	R^2 mejor regresión lineal	0.79
Desviación estándar H_{m0} modelo [m]	0.70	Mínimo error relativo (RE_{min})	-55%
Error absoluto medio (MAE) [m]	0.25	Máximo error relativo (RE_{max})	78%
Raíz del error cuadrático medio (RMSE) [m]	0.32	Error relativo medio (RE_{mean})	0%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.000%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	78%
Índice de dispersión (SI)	0.14	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



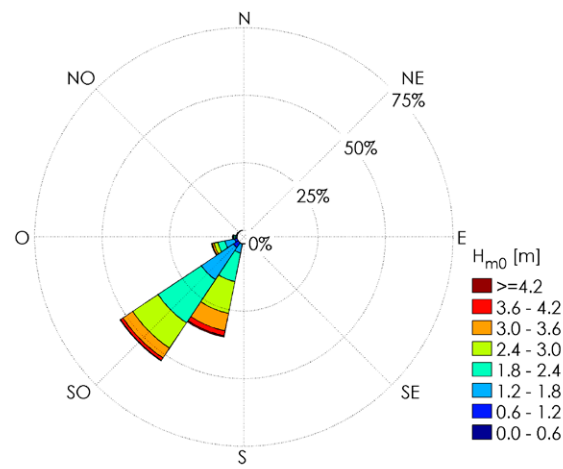
NODO 7 TONGOY

Coordenadas del Nodo: 31°S, 73°O

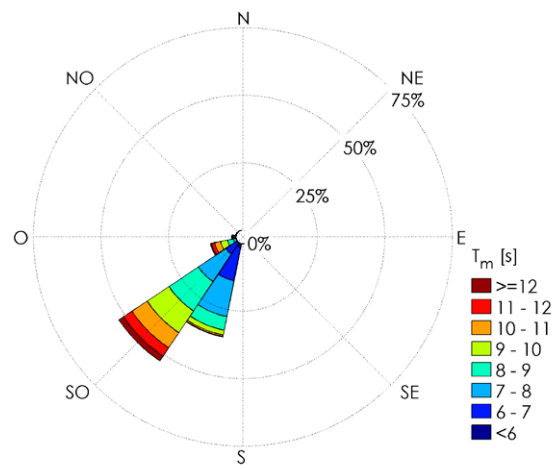


NODO 7: TONGOY / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

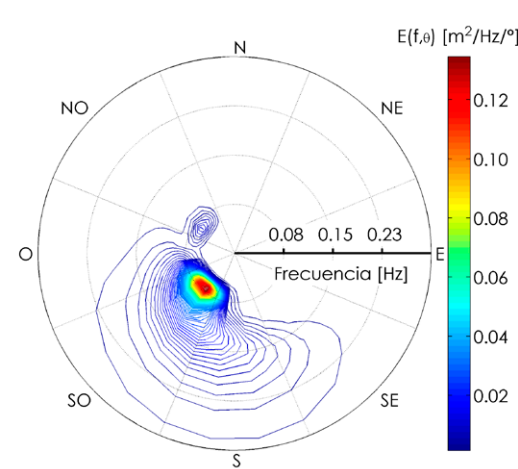
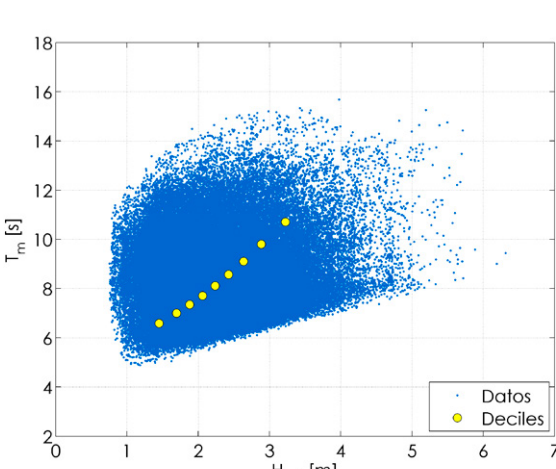


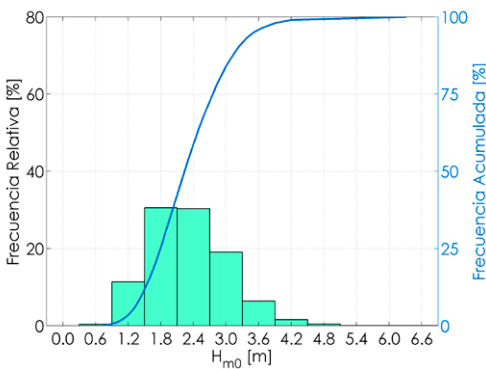
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



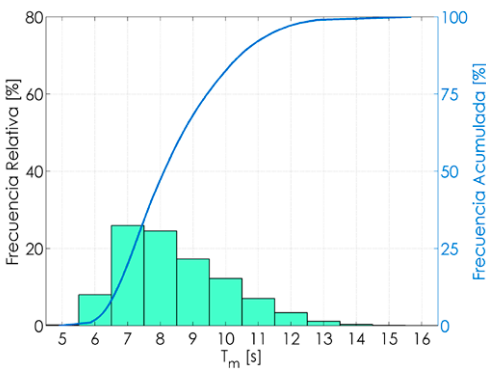
PARÁMETROS PROMEDIO

H_{m0} [m]	2.30
T_z [s]	7.4
T_e [s]	10.2
T_m [s]	8.4
T_p [s]	13.2
D_m [°]	220
D_p [°]	222
ε	0.80
ν	0.54
Q_p	1.88
γ	1.38
s	20.6

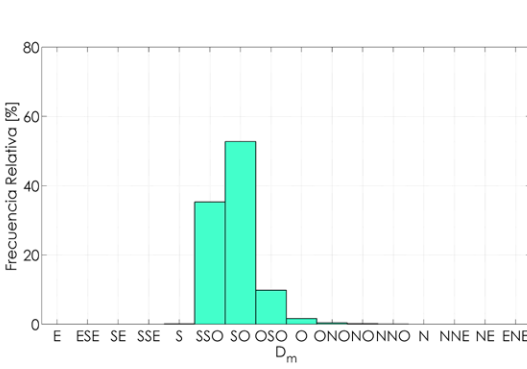
HISTOGRAMA DE H_{m0}



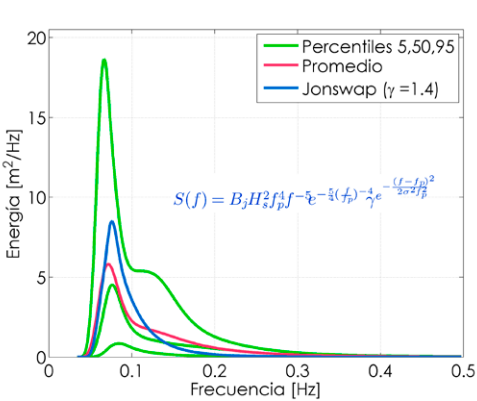
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

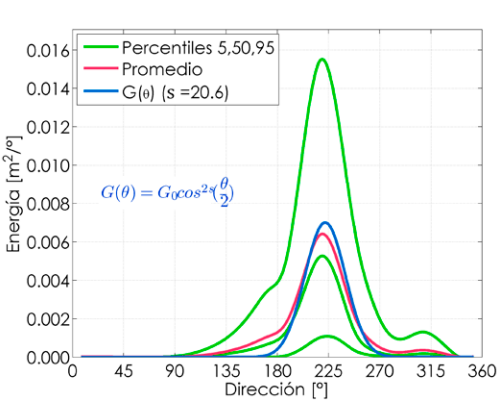


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[									0.0
[0.6-1.2[			<0.1	3.0	0.4	<0.1			3.5
[1.2-1.8[			0.2	20.1	1.6	<0.1			21.9
[1.8-2.4[			1.0	30.9	1.5	<0.1	<0.1		33.5
[2.4-3[			1.6	22.8	0.7	<0.1	<0.1		25.2
[3-3.6[			1.2	10.2	0.3	<0.1			11.9
[3.6-4.2[			0.5	2.6	<0.1	<0.1			3.2
[4.2-4.8[			0.2	0.7	<0.1	<0.1			1.0
TOTAL	0.0	0.0	4.7	90.3	4.8	0.3	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			0.5	1.3	<0.1	<0.1	<0.1		1.9
[6-7[			2.6	14.9	0.3	0.1	<0.1		18.0
[7-8[			1.4	25.0	0.9	0.1			27.4
[8-9[			0.2	19.4	1.3	<0.1			20.8
[9-10[			<0.1	13.4	1.0	<0.1			14.4
[10-11[			<0.1	8.9	0.8				9.7
[11-12[			<0.1	4.6	0.4				5.0
[12-13[			<0.1	2.7	<0.1				2.8
TOTAL	0.0	0.0	4.7	90.3	4.8	0.3	0.0	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

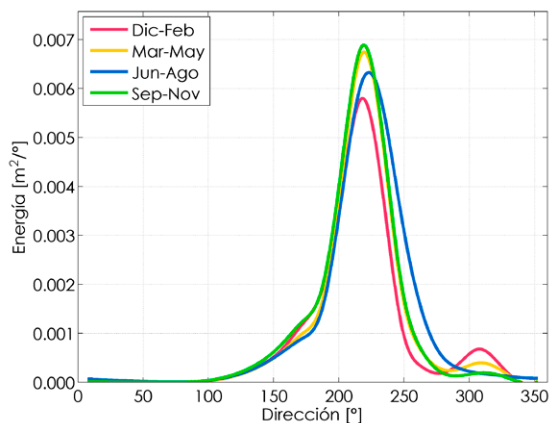
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[									0.0
[0.6-1.2[	0.2	0.5	0.7	0.9	0.7	0.4	0.1	<0.1	3.5
[1.2-1.8[	1.0	3.9	4.6	4.6	3.6	2.6	1.1	0.3	21.9
[1.8-2.4[	0.7	8.2	8.9	6.2	4.3	2.9	1.6	0.7	33.5
[2.4-3[	<0.1	4.6	8.3	5.2	3.1	2.0	1.2	0.8	25.2
[3-3.6[		0.8	4.0	2.9	1.9	1.2	0.6	0.5	11.9
[3.6-4.2[		<0.1	0.9	0.8	0.6	0.4	0.2	0.2	3.2
[4.2-4.8[			0.1	0.3	0.2	0.1	0.1	0.2	1.0
TOTAL	1.9	18.0	27.4	20.8	14.4	9.7	5.0	2.8	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

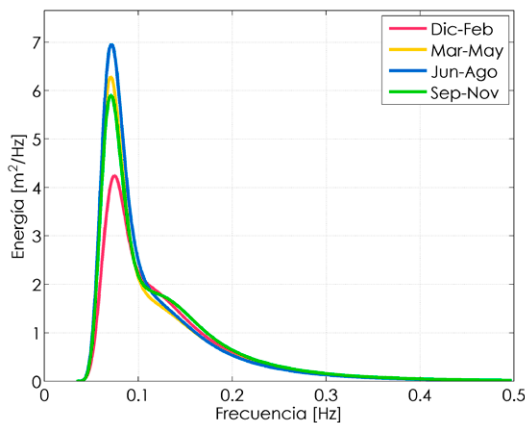
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S	<0.1%	3.27	3.87	4.24	4.25
SSO	35.3%	2.56	3.42	4.36	4.94
SO	52.7%	2.09	3.03	3.96	4.63
OSO	9.8%	1.85	3.03	4.31	5.34
O	1.6%	1.99	3.10	4.29	5.47
ONO	0.3%	2.51	3.37	4.36	5.88
NO	0.1%	2.82	3.91	6.22	6.31
NNO	<0.1%	3.19	4.23	4.54	4.54
N					
NNE					
NE					
ENE					

NODO 7: TONGOY / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



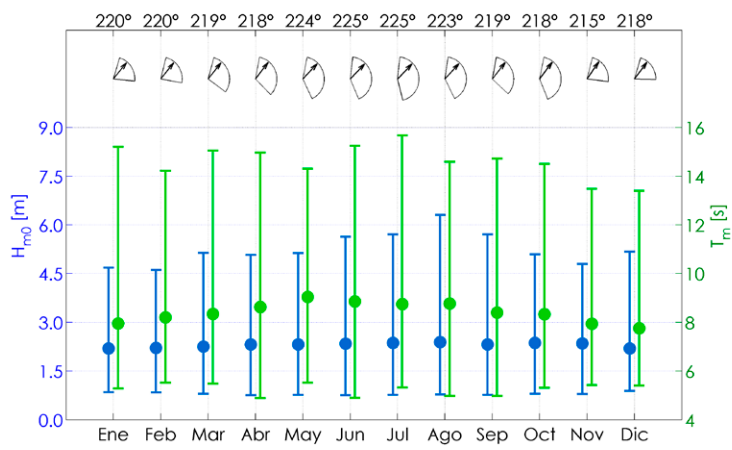
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

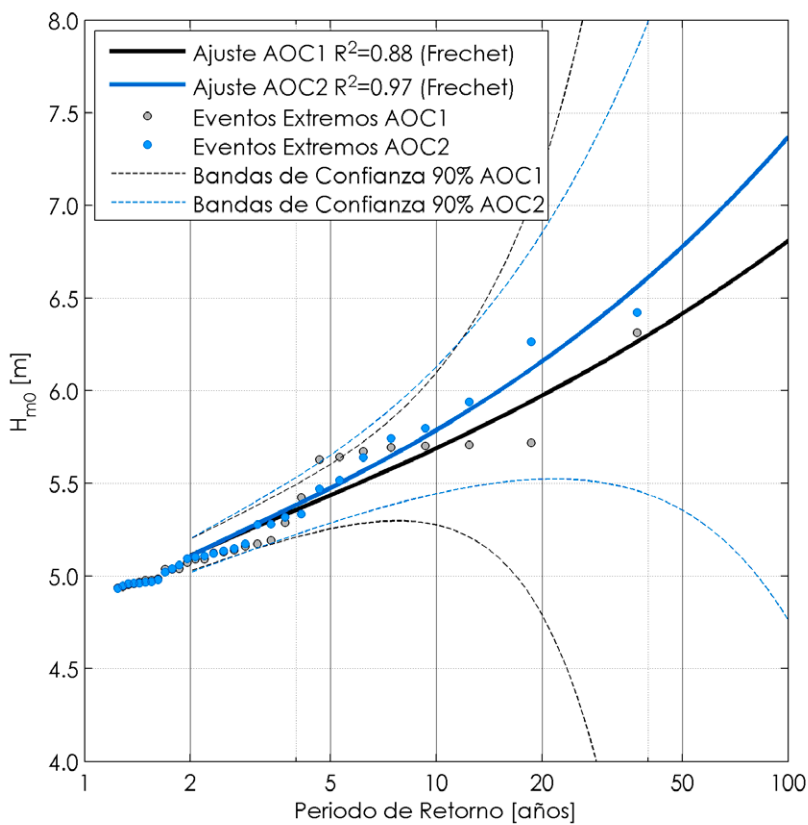
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.20	2.30	2.37	2.35
T_z [s]	7.0	7.6	7.8	7.2
T_e [s]	9.7	10.5	10.5	10.0
T_m [s]	8.0	8.7	8.8	8.2
T_p [s]	13.0	13.5	13.1	13.1
D_m [°]	219	221	224	217
D_p [°]	220	222	226	221
ε	0.79	0.81	0.80	0.80
ν	0.53	0.54	0.53	0.54
Q_p	1.72	1.94	2.04	1.83
γ	1.25	1.43	1.48	1.35
S	19.0	22.2	20.4	20.7

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

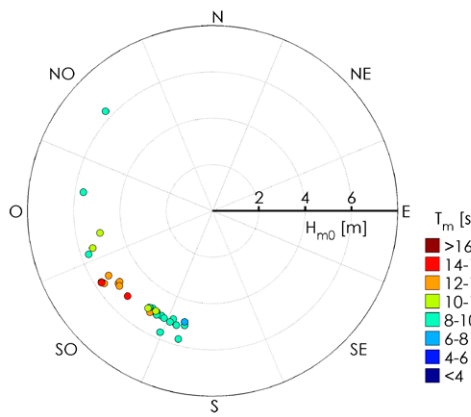


NODO 7: TONGOY / CLIMA EXTREMO

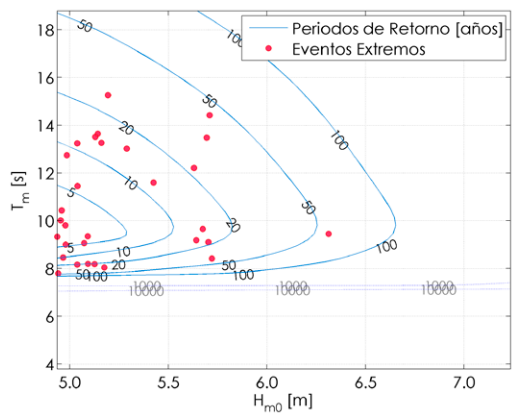
PERIODOS DE RETORNO UNIVARIADO



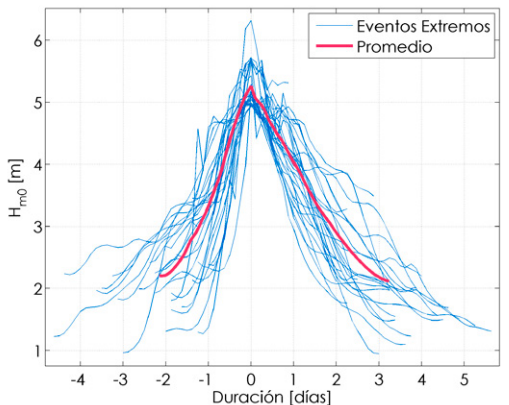
DISPERSIÓN DE EXTREMOS



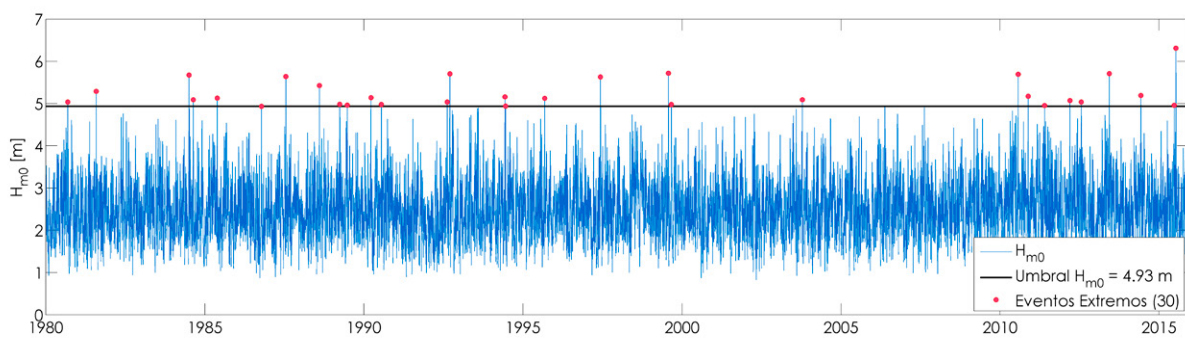
PERIODOS DE RETORNO BIVARIADO



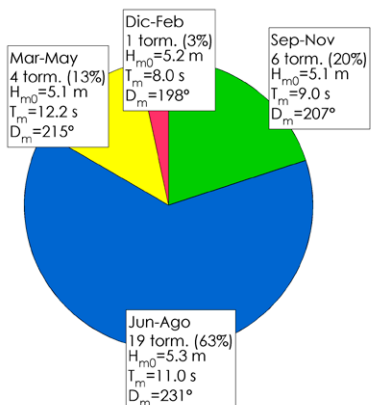
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO Hm0



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 7: TONGOY / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 24.8	primer modo	mar de fondo	99.7			<0.1	93.3	6.7			
		mar de viento	0.3			28.4	71.6				
Bimodal 52.3	primer modo	mar de fondo	94.0			0.4	92.1	7.1	0.3	<0.1	
		mar de viento	6.0			43.0	55.2	<0.1	0.4	1.4	
	segundo modo	mar de fondo	84.7		<0.1	4.2	11.3	7.7	75.8	0.9	0.2
		mar de viento	15.3			61.5	33.4	<0.1	1.4	3.6	<0.1
Trimodal 19.8	primer modo	mar de fondo	76.5			1.3	81.4	15.8	1.4	0.1	
		mar de viento	23.5			37.8	60.7	<0.1	0.3	1.2	
	segundo modo	mar de fondo	68.7			11.0	40.2	21.1	26.2	1.4	0.2
		mar de viento	31.3			58.2	38.2	<0.1	0.9	2.7	<0.1
	tercer modo	mar de fondo	90.5		0.3	6.9	7.5	12.0	70.3	2.6	0.3
		mar de viento	9.5	<0.1		49.7	43.2	0.3	2.6	4.1	<0.1

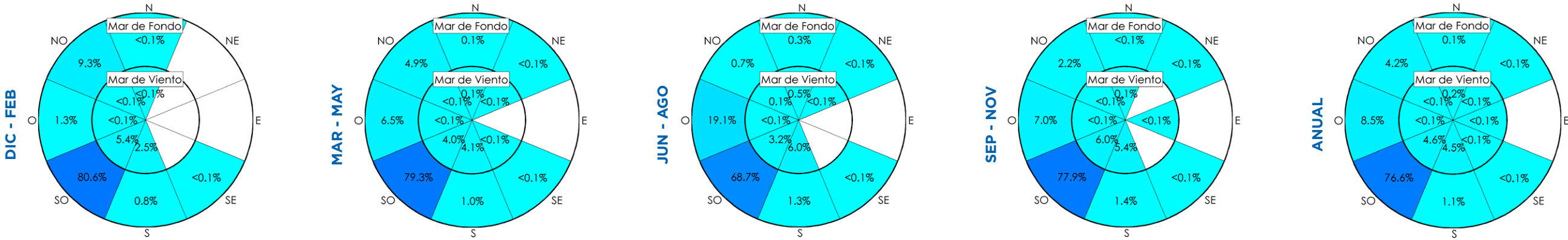
NOTA: estados de mar con más de 3 modos abarcan el 3.0% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLEAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	67.3	40.8	2.4	23.0	33.2
MF del SO	5.1	18.1	37.1	31.7	23.1
MF del SO + MV del S	0.2	4.0	11.1	6.8	5.6
MF del SO + MF del NO + MV del SO	9.6	5.9	0.2	4.6	5.0
MF del SO + MF del O	<0.1	1.9	13.3	4.6	5.0
MF del SO + MF del NO + MV del S	6.5	7.2	0.4	4.0	4.5
MF del SO + MV del SO	0.8	2.8	5.7	6.8	4.0
MF del SO + MF del O + MF del NO	3.0	6.0	2.7	3.5	3.8
MF del S + MF del SO + MF del NO	3.1	2.5	0.2	2.0	1.9
MF del S + MF del SO	0.1	1.5	3.3	2.5	1.9
Otros	4.4	9.3	23.6	10.5	12.0
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

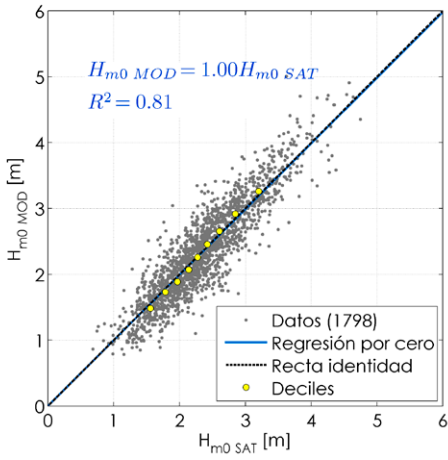


NODO 7: TONGOY / INCERTIDUMBRE

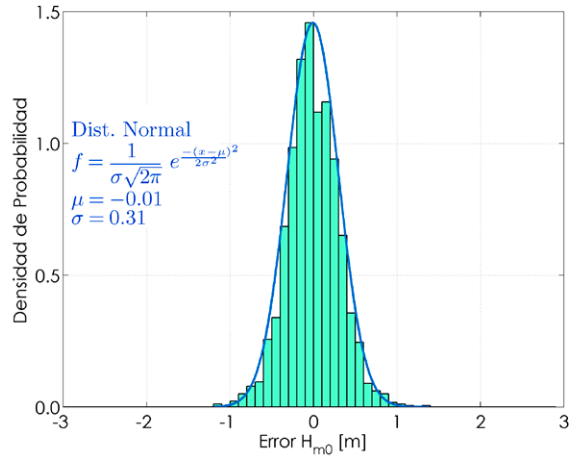
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.34	Intercepto mejor regresión lineal [m]	-0.02
Promedio H_{m0} modelo [m]	2.33	Pendiente mejor regresión lineal	1.01
Desviación estándar H_{m0} satélite [m]	0.63	R^2 mejor regresión lineal	0.81
Desviación estándar H_{m0} modelo [m]	0.71	Mínimo error relativo (RE_{min})	-51%
Error absoluto medio (MAE) [m]	0.24	Máximo error relativo (RE_{max})	65%
Raíz del error cuadrático medio (RMSE) [m]	0.31	Error relativo medio (RE_{mean})	0%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.001%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	65%
Índice de dispersión (SI)	0.13	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN

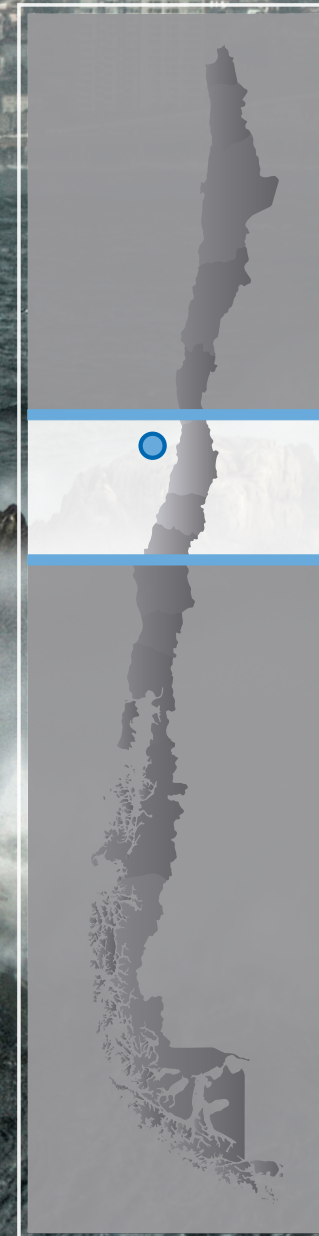


DISTRIBUCIÓN DEL ERROR



NODO 8 VALPARAÍSO

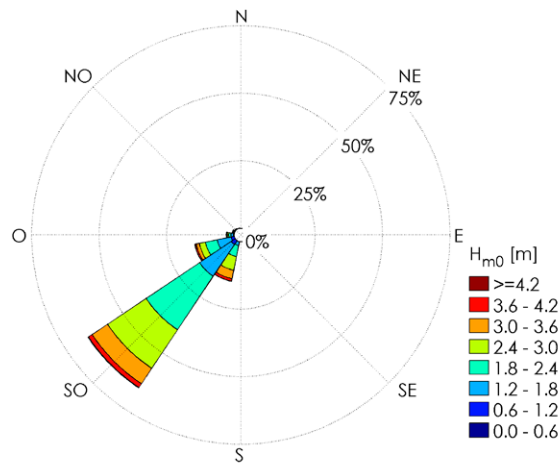
Coordenadas del Nodo: 33°S, 73°O



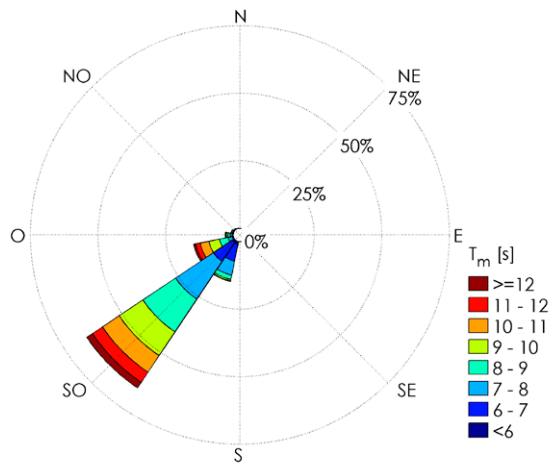
CRÉDITOS FOTOGRAFÍA: DANIEL CONCHA

NODO 8: VALPARAÍSO / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

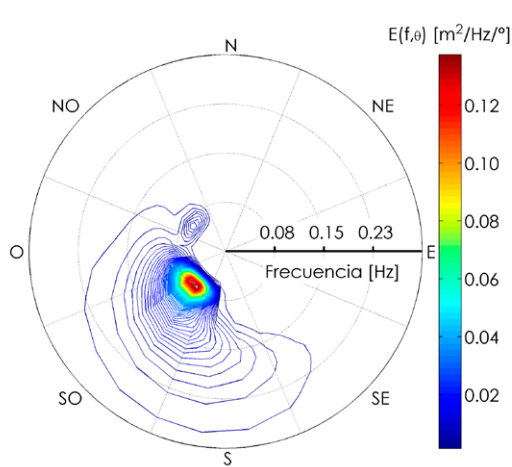
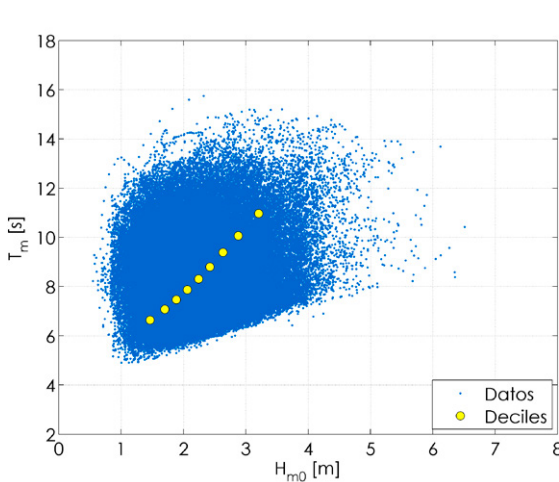


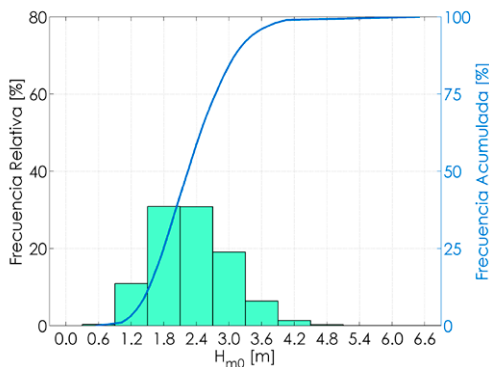
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



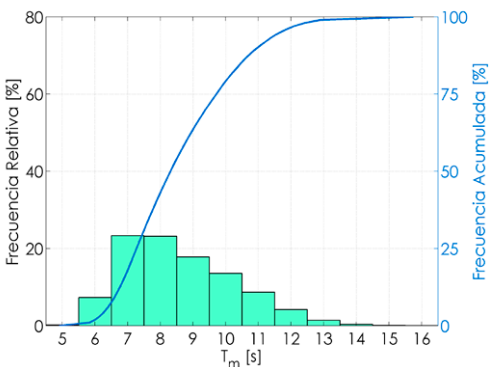
PARÁMETROS PROMEDIO

H_{m0} [m]	2.30
T_z [s]	7.6
T_e [s]	10.3
T_m [s]	8.6
T_p [s]	13.2
D_m [°]	226
D_p [°]	226
ε	0.80
ν	0.53
Q_p	1.94
γ	1.42
s	21.9

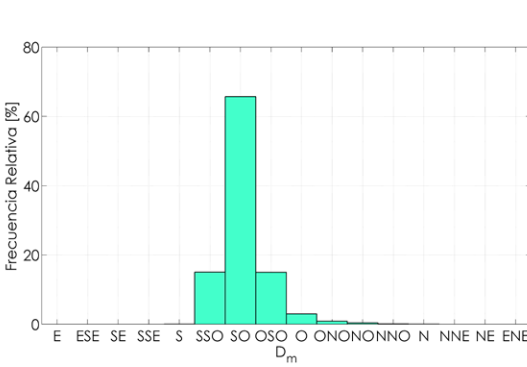
HISTOGRAMA DE H_{m0}



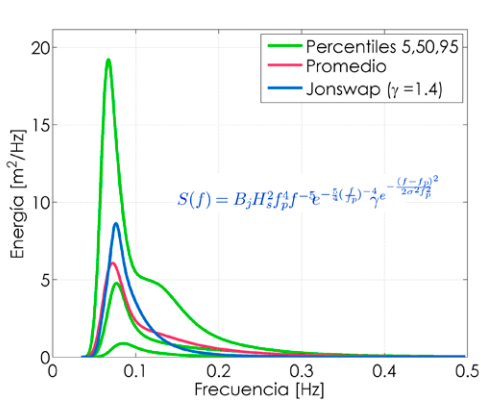
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

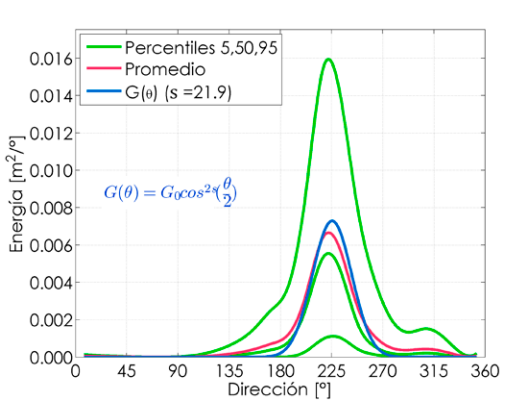


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[				<0.1	<0.1				0.0
[0.6-1.2[				2.7	0.6	<0.1			3.3
[1.2-1.8[			<0.1	19.2	2.6	<0.1			21.9
[1.8-2.4[			0.2	31.0	2.2	0.1	<0.1		33.6
[2.4-3[			0.2	23.7	1.4	0.2	<0.1		25.5
[3-3.6[			0.2	10.7	0.7	0.2	<0.1		11.8
[3.6-4.2[			<0.1	2.8	0.3	0.1	<0.1		3.3
[4.2-4.8[			<0.1	0.5	0.1	<0.1	<0.1		0.7
TOTAL	0.0	0.0	0.7	90.5	8.0	0.8	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			0.1	1.7	<0.1	<0.1	<0.1		1.9
[6-7[			0.4	14.7	0.5	0.4	<0.1		16.0
[7-8[			0.1	23.1	1.6	0.3	<0.1		25.2
[8-9[			<0.1	18.3	2.1	<0.1	<0.1		20.5
[9-10[				13.9	1.7	<0.1	<0.1		15.6
[10-11[				9.8	1.3				11.1
[11-12[				5.8	0.5				6.4
[12-13[				3.2	0.2				3.4
TOTAL	0.0	0.0	0.7	90.5	8.0	0.8	0.0	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

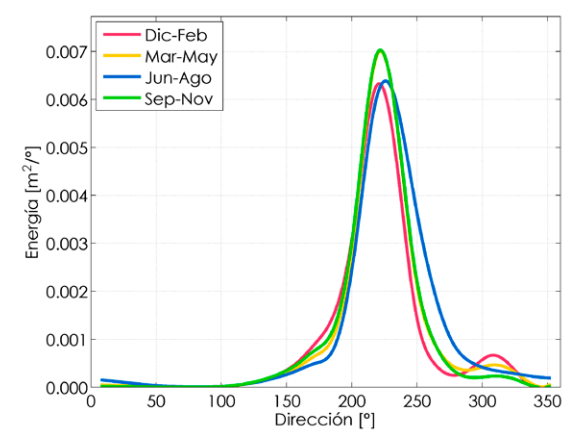
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[				<0.1	<0.1				0.0
[0.6-1.2[	0.2	0.4	0.6	0.9	0.7	0.4	0.1	<0.1	3.3
[1.2-1.8[	1.1	3.8	4.3	4.4	3.8	2.7	1.3	0.4	21.9
[1.8-2.4[	0.6	7.1	8.3	6.5	4.9	3.4	1.9	0.8	33.6
[2.4-3[	<0.1	4.1	7.7	5.3	3.5	2.5	1.6	1.0	25.5
[3-3.6[		0.6	3.5	2.6	2.0	1.4	1.0	0.6	11.8
[3.6-4.2[		<0.1	0.7	0.7	0.6	0.5	0.4	0.4	3.3
[4.2-4.8[		<0.1	<0.1	0.1	0.1	0.1	<0.1	0.2	0.7
TOTAL	1.9	16.0	25.2	20.5	15.6	11.1	6.4	3.4	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

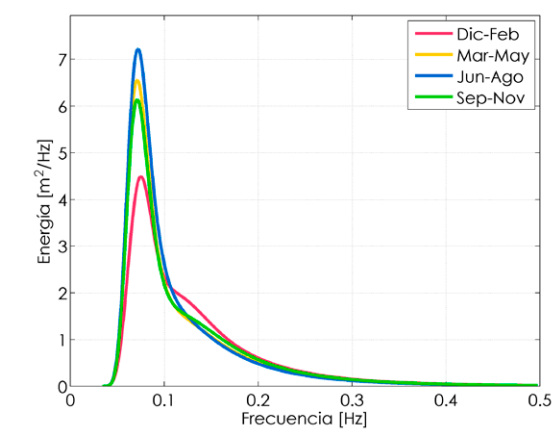
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S	<0.1%	2.48	3.20	3.21	3.21
SSO	15.1%	2.60	3.46	4.13	4.63
SO	65.7%	2.22	3.12	3.93	4.45
OSO	15.0%	1.92	3.10	4.24	5.29
O	2.9%	2.03	3.30	4.92	5.73
ONO	0.9%	2.64	3.72	4.71	5.91
NO	0.4%	2.95	3.91	4.93	6.34
NNO	0.1%	3.40	4.19	6.08	6.13
N	<0.1%	2.61	2.61	2.61	2.61
NNE					
NE					
ENE					

NODO 8: VALPARAÍSO / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



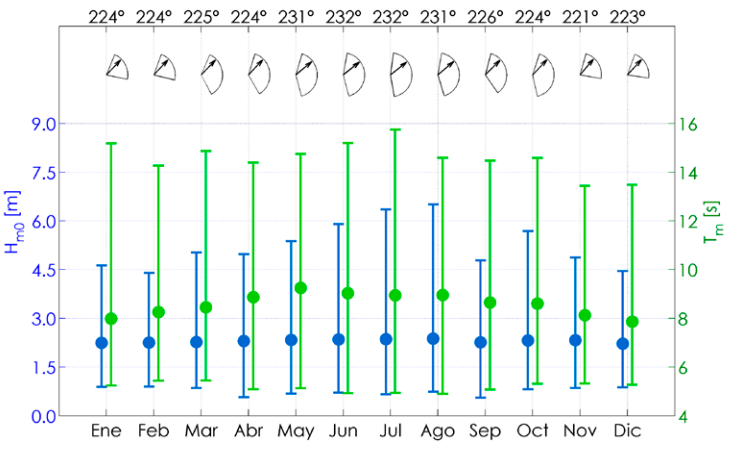
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

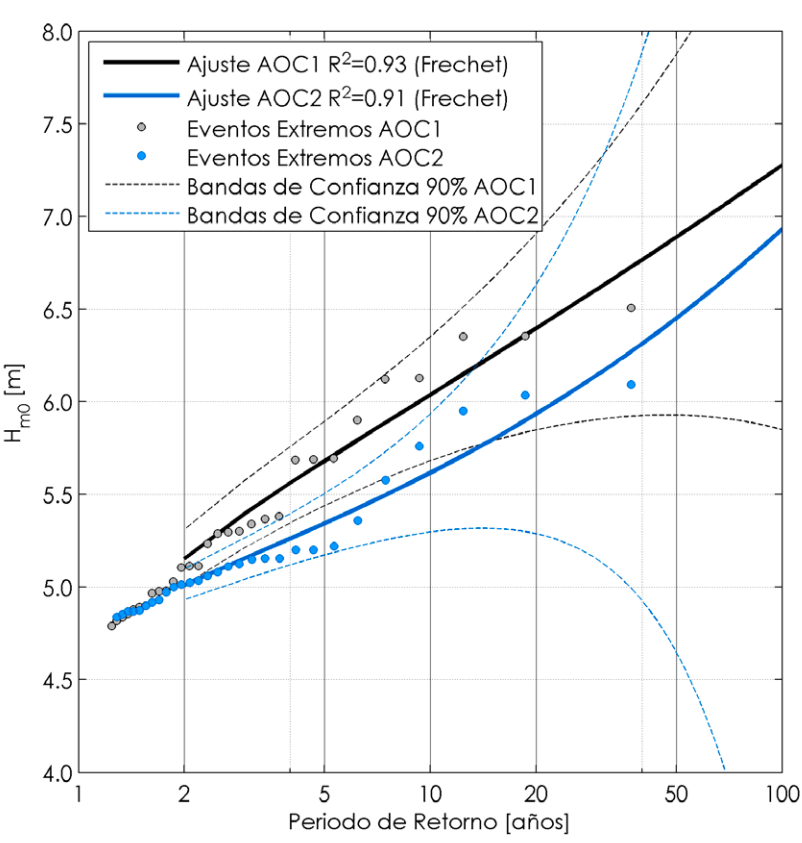
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.24	2.30	2.36	2.30
T_z [s]	7.1	7.8	8.0	7.4
T_e [s]	9.8	10.6	10.6	10.2
T_m [s]	8.0	8.9	9.0	8.5
T_p [s]	12.9	13.5	13.1	13.2
D_m [°]	224	226	232	224
D_p [°]	223	225	231	225
ε	0.79	0.81	0.81	0.81
ν	0.53	0.54	0.52	0.54
Q_p	1.75	2.01	2.10	1.92
γ	1.27	1.46	1.52	1.41
S	20.4	23.5	21.2	22.5

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

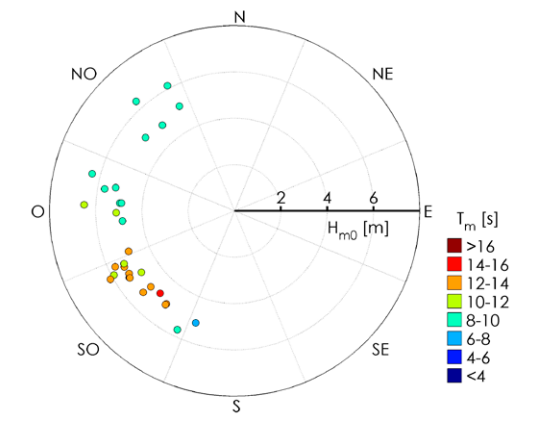


NODO 8: VALPARAÍSO / CLIMA EXTREMO

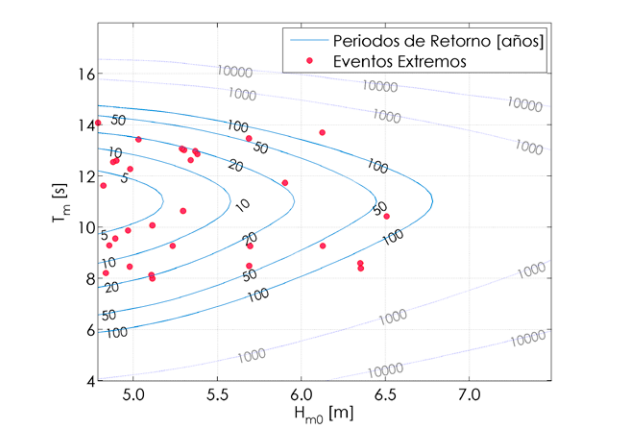
PERIODOS DE RETORNO UNIVARIADO



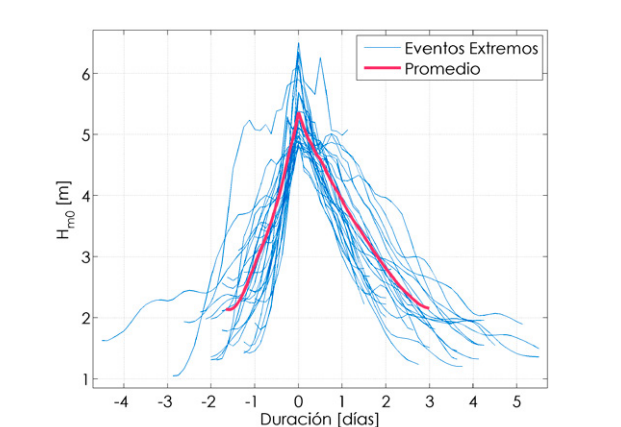
DISPERSIÓN DE EXTREMOS



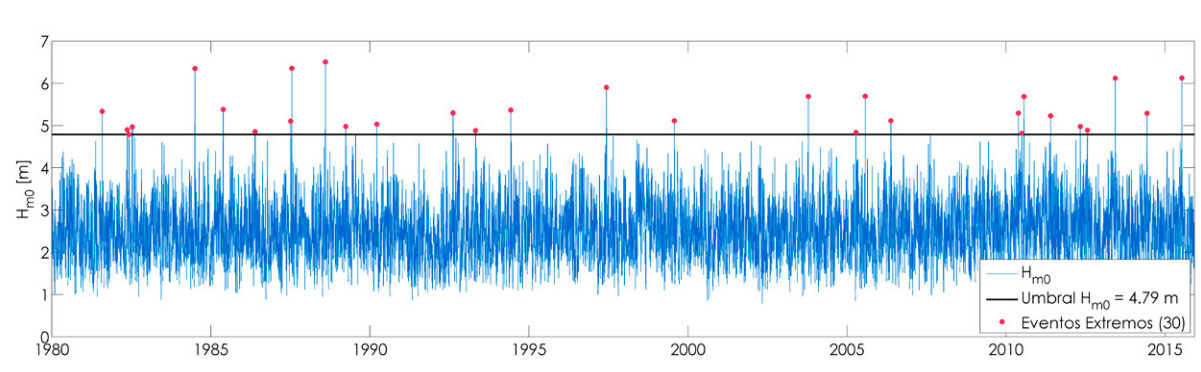
PERIODOS DE RETORNO BIVARIADO



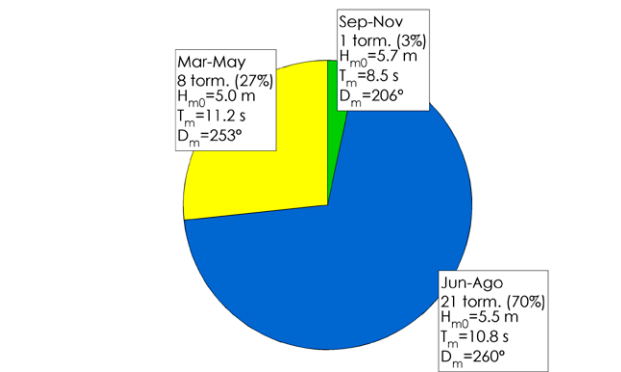
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO Hm0



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 8: VALPARAÍSO / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 26.0	primer modo	mar de fondo	99.8			<0.1	89.6	10.4	<0.1		
		mar de viento	0.2			4.7	83.7		2.3	9.3	
Bimodal 51.4	primer modo	mar de fondo	95.8			<0.1	90.2	9.1	0.6	<0.1	
		mar de viento	4.2			14.9	77.1	<0.1	2.2	5.8	
	segundo modo	mar de fondo	86.7	<0.1	<0.1	2.5	10.6	7.8	77.4	1.4	0.2
		mar de viento	13.3		<0.1	39.9	50.4	0.2	2.9	6.6	
Trimodal 19.9	primer modo	mar de fondo	78.6			0.4	77.4	20.1	1.8	0.3	
		mar de viento	21.4			12.3	83.7	<0.1	0.9	3.1	
	segundo modo	mar de fondo	68.5		<0.1	5.6	41.0	23.3	27.6	2.4	0.1
		mar de viento	31.5	<0.1	<0.1	27.2	66.5	<0.1	1.6	4.6	
	tercer modo	mar de fondo	89.9	<0.1	0.4	4.6	8.6	11.9	71.0	3.3	0.2
		mar de viento	10.1	<0.1		29.2	58.5	0.6	5.2	6.4	0.1

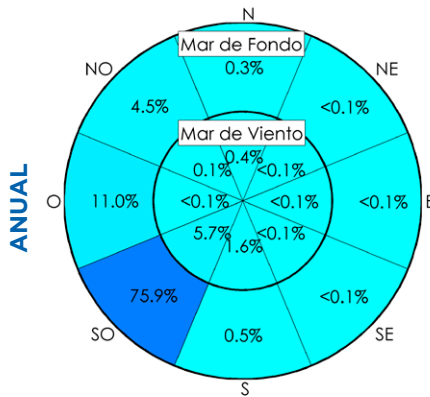
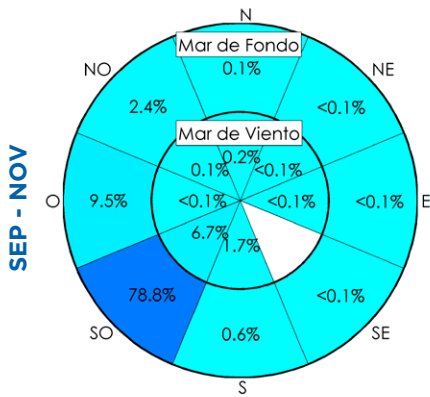
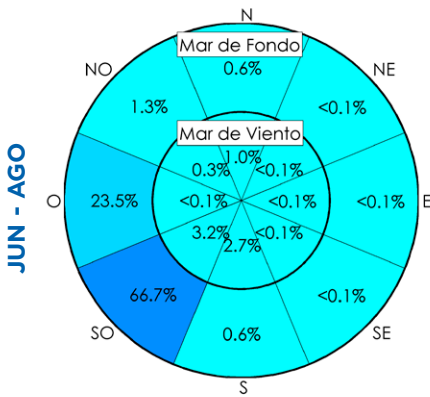
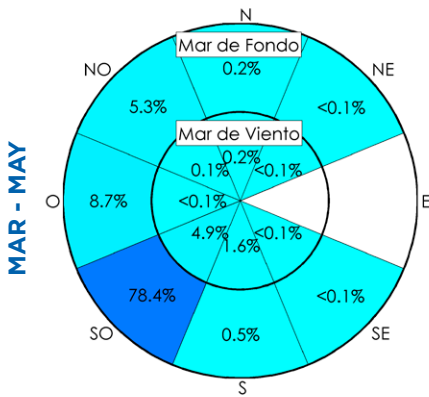
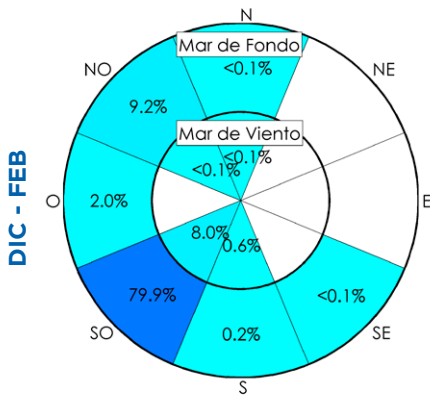
NOTA: estados de mar con más de 3 modos abarcan el 2.7% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	66.4	41.2	3.4	24.9	33.9
MF del SO	5.6	17.9	37.1	32.2	23.3
MF del SO + MF del NO + MV del SO	15.1	8.7	0.2	6.4	7.6
MF del SO + MF del O	0.1	2.4	15.2	5.5	5.8
MF del SO + MF del O + MF del NO	4.2	7.9	3.1	5.3	5.1
MF del SO + MV del SO	1.3	3.2	5.9	8.3	4.7
MF del O	<0.1	1.4	7.9	1.5	2.7
MF del SO + MV del S	0.1	2.1	5.8	2.7	2.7
MF del SO + MF del NO + MV del S	1.9	3.3	0.4	1.4	1.7
MF del S + MF del SO	<0.1	0.8	1.9	1.4	1.0
Otros	5.3	11.2	19.3	10.4	11.6
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

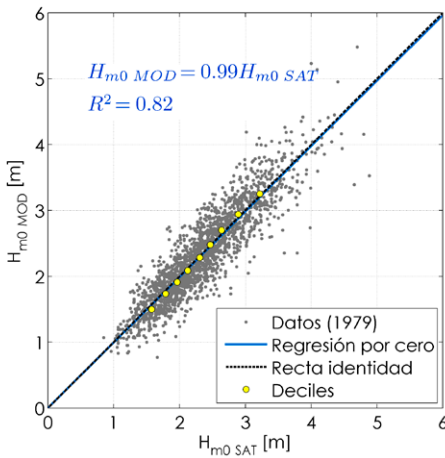


NODO 8: VALPARAÍSO / INCERTIDUMBRE

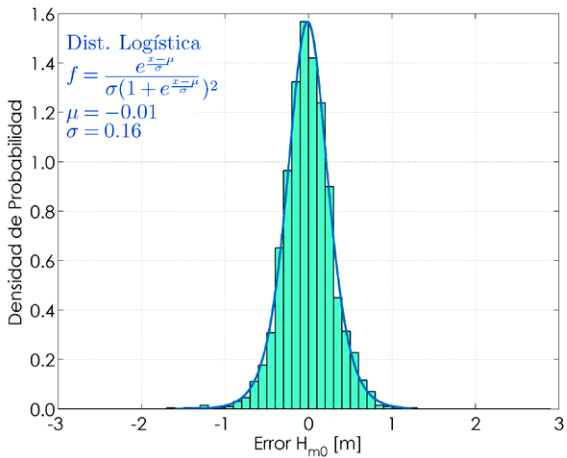
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.35	Intercepto mejor regresión lineal [m]	0.04
Promedio H_{m0} modelo [m]	2.35	Pendiente mejor regresión lineal	0.98
Desviación estándar H_{m0} satélite [m]	0.64	R^2 mejor regresión lineal	0.82
Desviación estándar H_{m0} modelo [m]	0.69	Mínimo error relativo (RE_{min})	-57%
Error absoluto medio (MAE) [m]	0.22	Máximo error relativo (RE_{max})	53%
Raíz del error cuadrático medio (RMSE) [m]	0.29	Error relativo medio (RE_{mean})	0%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.006%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	57%
Índice de dispersión (SI)	0.12	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



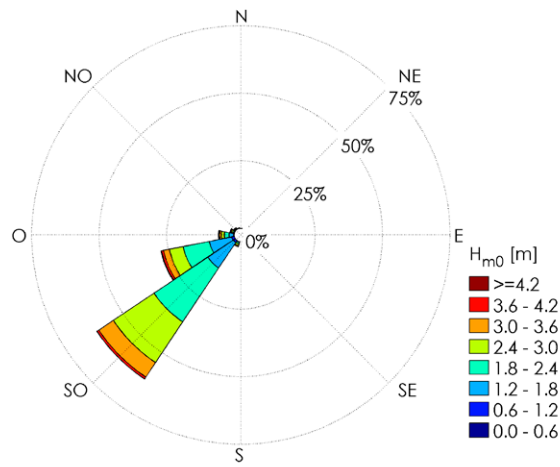
NODO 9 CONSTITUCIÓN

Coordenadas del Nodo: 35°S, 73°O

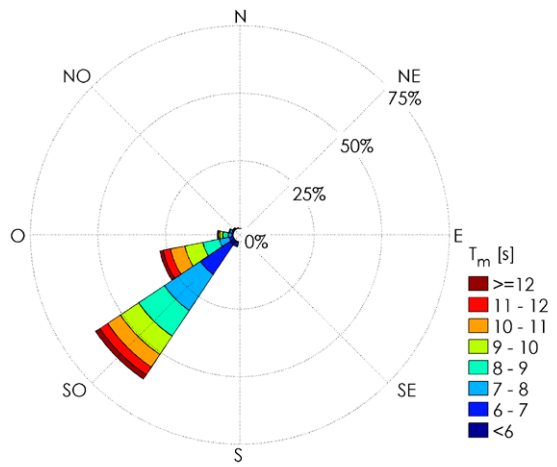


NODO 9: CONSTITUCIÓN / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

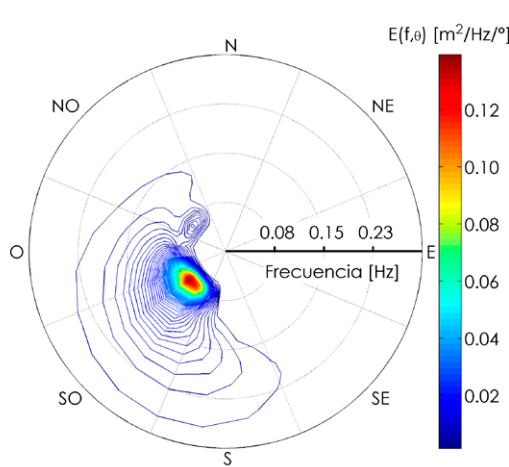
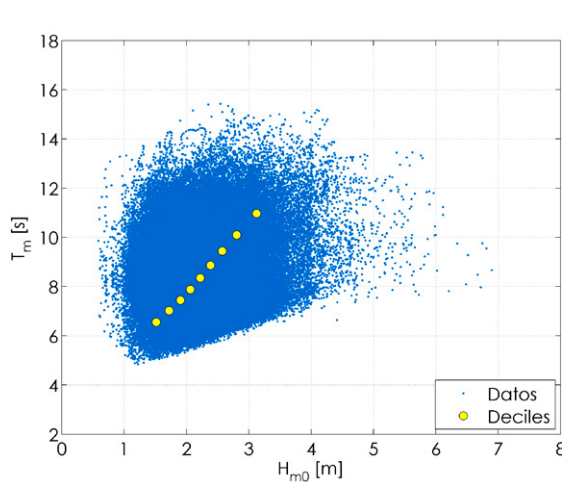


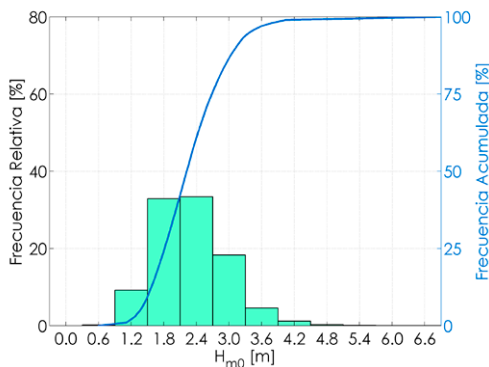
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



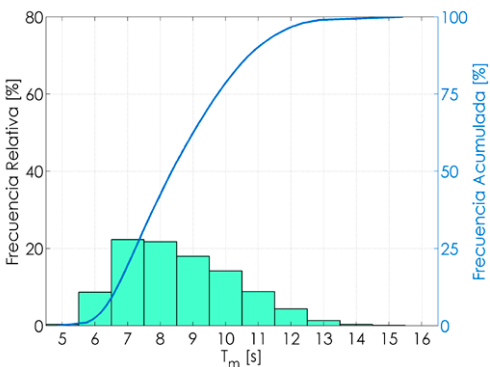
PARÁMETROS PROMEDIO

H_{m0} [m]	2.28
T_z [s]	7.6
T_e [s]	10.3
T_m [s]	8.6
T_p [s]	13.2
D_m [°]	235
D_p [°]	232
ϵ	0.80
ν	0.54
Q_p	1.94
γ	1.41
s	21.3

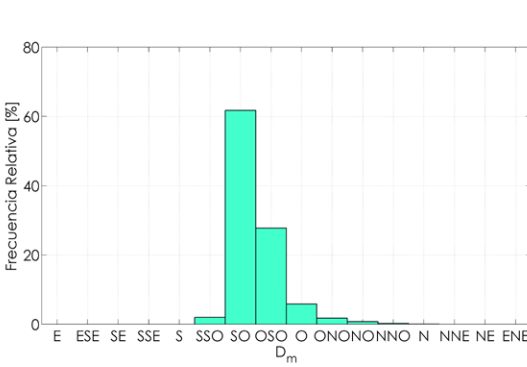
HISTOGRAMA DE H_{m0}



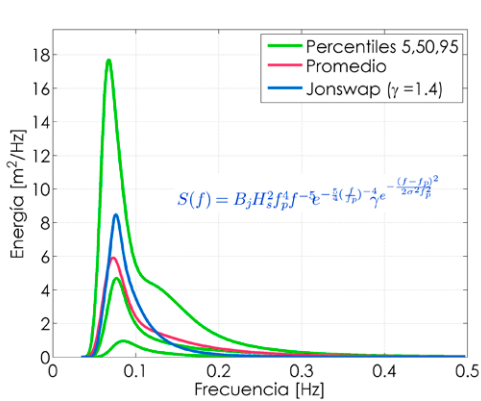
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

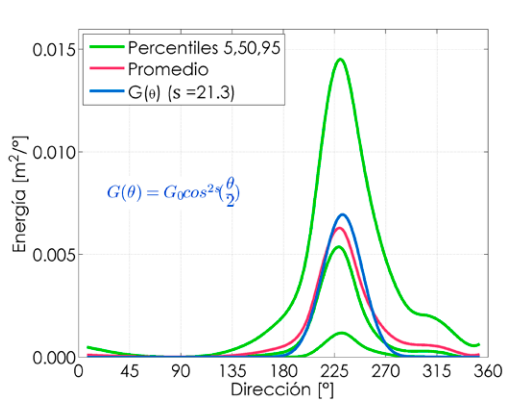


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[				<0.1					0.0
[0.6-1.2[				1.4	0.6	<0.1			2.1
[1.2-1.8[			<0.1	17.3	4.6	0.1	<0.1		22.0
[1.8-2.4[			<0.1	31.8	4.7	0.3	<0.1		36.8
[2.4-3[			<0.1	22.4	2.9	0.4	<0.1		25.7
[3-3.6[			<0.1	8.3	1.7	0.4	<0.1		10.4
[3.6-4.2[				1.3	0.7	0.2	<0.1		2.3
[4.2-4.8[				0.2	0.4	0.1	<0.1		0.7
TOTAL	0.0	0.0	0.0	82.8	15.5	1.6	0.1	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			<0.1	2.3	<0.1	0.1	<0.1		2.5
[6-7[			<0.1	15.4	1.0	0.6	<0.1		17.0
[7-8[				19.1	3.0	0.7	<0.1		22.9
[8-9[				15.5	4.3	0.2	<0.1		20.0
[9-10[				12.6	3.6	<0.1			16.2
[10-11[				9.4	2.3				11.7
[11-12[				5.5	0.9				6.4
[12-13[				3.0	0.3				3.3
TOTAL	0.0	0.0	0.0	82.8	15.5	1.6	0.1	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

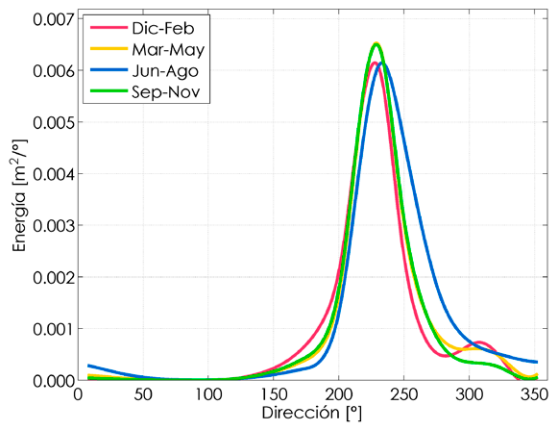
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[				<0.1					0.0
[0.6-1.2[	0.1	0.2	0.4	0.5	0.4	0.2	<0.1	<0.1	2.1
[1.2-1.8[	1.2	3.6	4.4	4.7	3.9	2.5	1.2	0.4	22.0
[1.8-2.4[	1.1	7.7	8.6	7.1	5.7	3.8	1.9	0.9	36.8
[2.4-3[	<0.1	4.6	6.5	5.0	3.9	2.9	1.7	0.9	25.7
[3-3.6[		0.8	2.6	2.1	1.7	1.6	1.0	0.7	10.4
[3.6-4.2[		<0.1	0.3	0.4	0.4	0.4	0.4	0.3	2.3
[4.2-4.8[		<0.1	<0.1	0.1	0.2	0.1	0.1	0.1	0.7
TOTAL	2.5	17.0	22.9	20.0	16.2	11.7	6.4	3.3	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

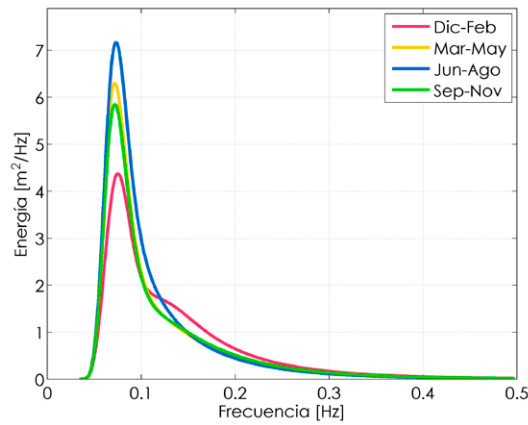
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE					
S					
SSO	1.9%	2.52	3.32	3.94	4.69
SO	61.7%	2.27	3.06	3.72	4.13
OSO	27.7%	2.04	3.10	4.21	4.98
O	5.8%	2.15	3.44	4.66	5.53
ONO	1.7%	2.70	3.84	5.30	6.33
NO	0.8%	2.98	4.02	5.63	6.79
NNO	0.2%	3.22	4.31	5.74	6.21
N	<0.1%	3.20	4.44	4.71	4.71
NNE					
NE					
ENE					

NODO 9: CONSTITUCIÓN / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



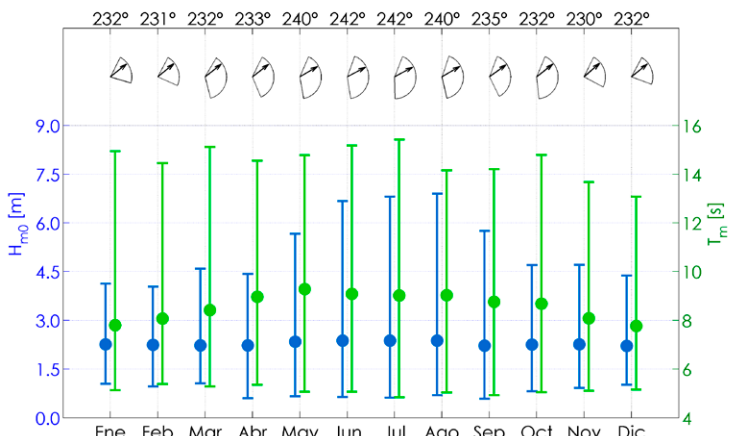
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

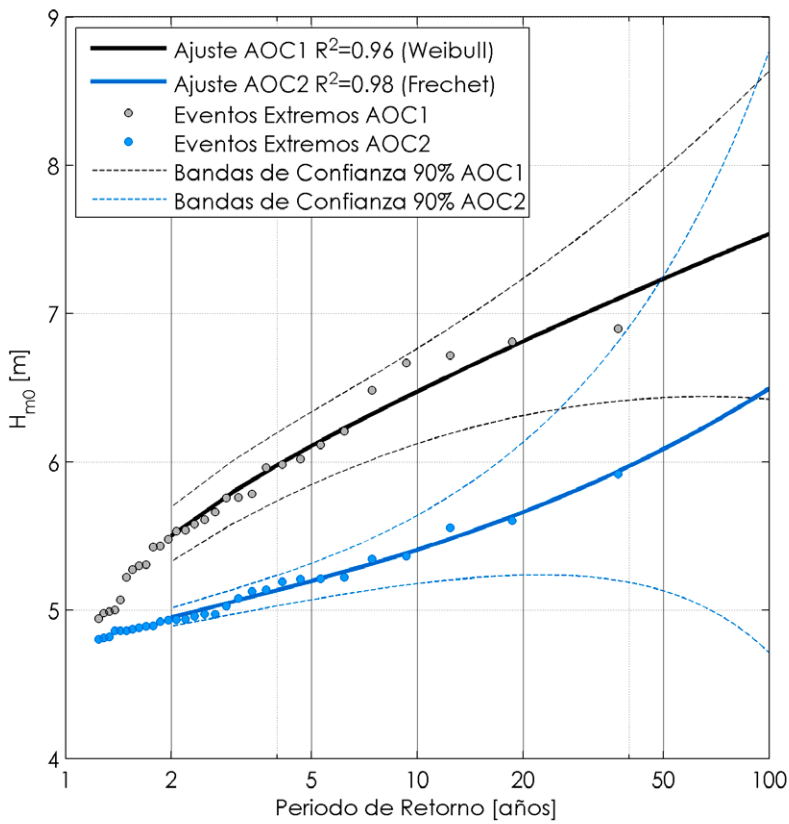
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.24	2.27	2.38	2.24
T_z [s]	6.9	7.8	8.0	7.5
T_e [s]	9.7	10.6	10.6	10.3
T_m [s]	7.9	8.9	9.0	8.5
T_p [s]	13.0	13.4	13.1	13.2
D_m [°]	232	235	242	232
D_p [°]	229	232	238	231
ε	0.80	0.81	0.80	0.81
ν	0.55	0.54	0.51	0.55
Q_p	1.70	2.01	2.11	1.93
γ	1.25	1.46	1.51	1.42
S	19.4	22.9	20.6	22.2

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

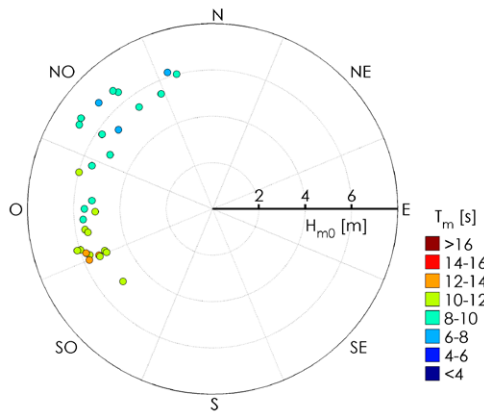


NODO 9: CONSTITUCIÓN / CLIMA EXTREMO

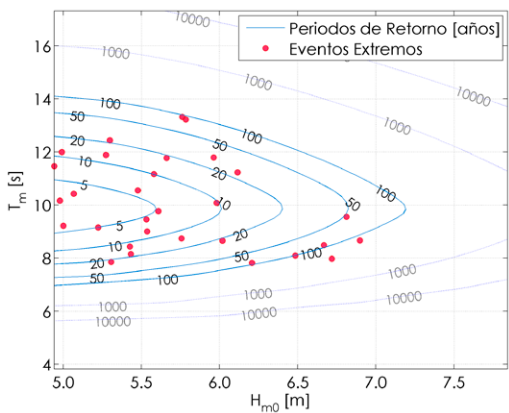
PERIODOS DE RETORNO UNIVARIADO



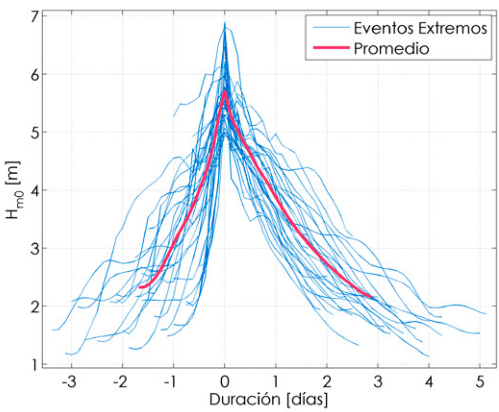
DISPERSIÓN DE EXTREMOS



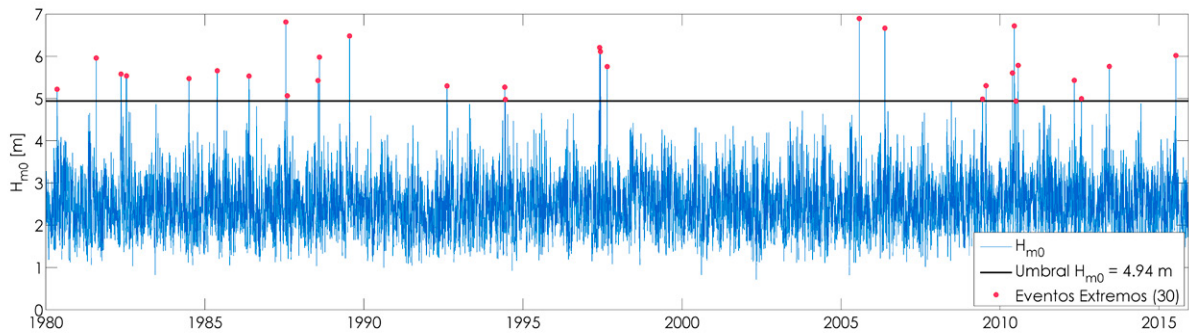
PERIODOS DE RETORNO BIVARIADO



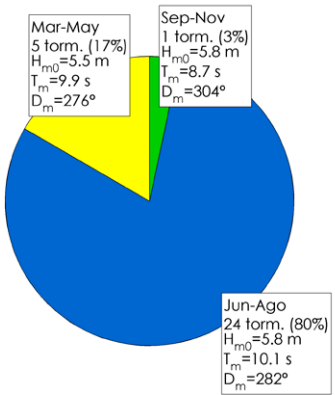
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 9: CONSTITUCIÓN / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 25.0	primer modo	mar de fondo	99.8				79.5	20.4	0.1		
		mar de viento	0.2				19.6	37.3	23.5	19.6	
Bimodal 49.5	primer modo	mar de fondo	97.3			<0.1	83.6	15.0	1.3	0.1	
		mar de viento	2.7			2.3	74.3	1.1	7.9	14.3	<0.1
	segundo modo	mar de fondo	90.5	<0.1	<0.1	1.6	11.4	8.4	75.8	2.6	<0.1
		mar de viento	9.5		<0.1	21.4	59.5	1.5	3.6	13.6	0.3
Trimodal 22.0	primer modo	mar de fondo	81.4			0.1	68.4	28.0	3.0	0.5	
		mar de viento	18.6			1.4	92.0	0.8	1.4	4.4	<0.1
	segundo modo	mar de fondo	74.4	<0.1	<0.1	2.4	39.5	24.8	29.8	3.4	<0.1
		mar de viento	25.6	0.1	<0.1	12.0	75.2	2.2	2.3	7.9	0.3
	tercer modo	mar de fondo	89.1	<0.1	0.3	3.0	10.9	12.3	68.4	4.6	0.5
		mar de viento	10.9	<0.1	<0.1	10.6	63.0	7.9	5.3	12.1	1.1

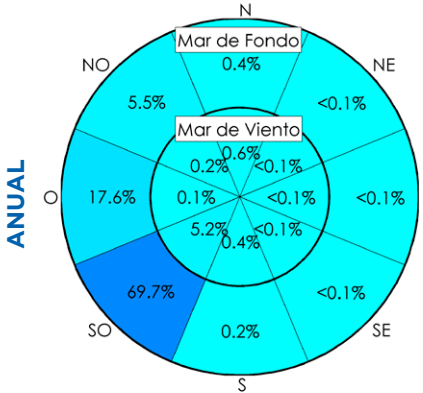
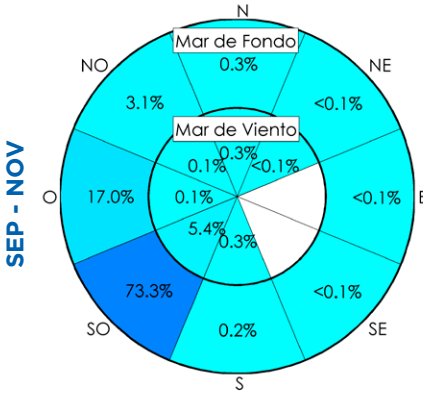
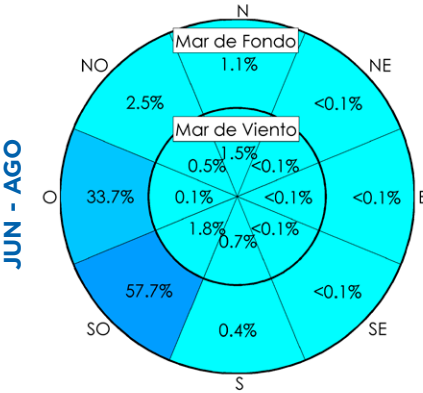
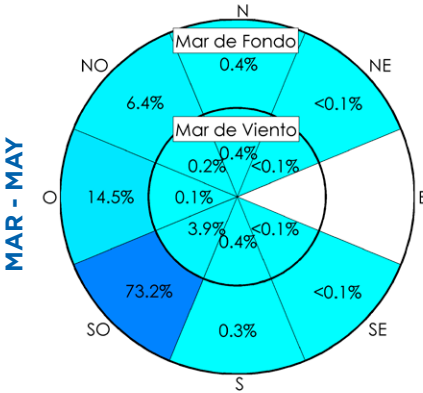
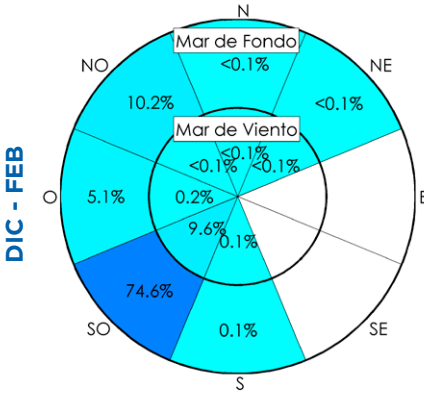
NOTA: estados de mar con más de 3 modos abarcan el 3.4% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	60.1	40.7	4.2	24.3	32.2
MF del SO	4.5	15.0	31.4	28.3	19.8
MF del SO + MF del NO + MV del SO	17.2	7.7	0.3	6.1	7.8
MF del SO + MF del O + MF del NO	8.0	10.9	3.3	8.7	7.7
MF del SO + MF del O	0.3	3.1	16.7	7.6	7.0
MF del O	0.1	2.5	13.8	3.9	5.1
MF del SO + MV del SO	1.1	2.3	3.6	5.7	3.2
MF del O + MF del NO	1.7	3.3	1.7	2.4	2.3
MF del SO + MF del O + MF del NO + MV del SO	1.7	1.9	0.2	1.5	1.3
MF del SO + MV del S	<0.1	0.8	2.2	0.7	0.9
Otros	5.2	11.9	22.6	10.7	12.6
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

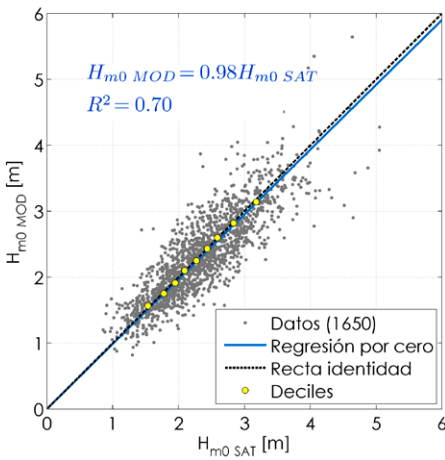


NODO 9: CONSTITUCIÓN / INCERTIDUMBRE

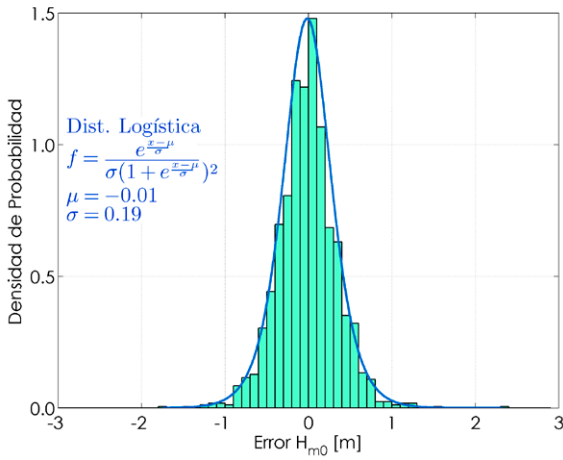
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{mo} satélite [m]	2.32	Intercepto mejor regresión lineal [m]	0.35
Promedio H_{mo} modelo [m]	2.31	Pendiente mejor regresión lineal	0.84
Desviación estándar H_{mo} satélite [m]	0.64	R^2 mejor regresión lineal	0.72
Desviación estándar H_{mo} modelo [m]	0.63	Mínimo error relativo (RE_{min})	-42%
Error absoluto medio (MAE) [m]	0.26	Máximo error relativo (RE_{max})	111%
Raíz del error cuadrático medio (RMSE) [m]	0.35	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.007%
Habilidad de pronóstico (SS)	0.85	Máximo error relativo absoluto (ARE_{max})	111%
Índice de dispersión (SI)	0.15	Error relativo absoluto medio (AARE)	12%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



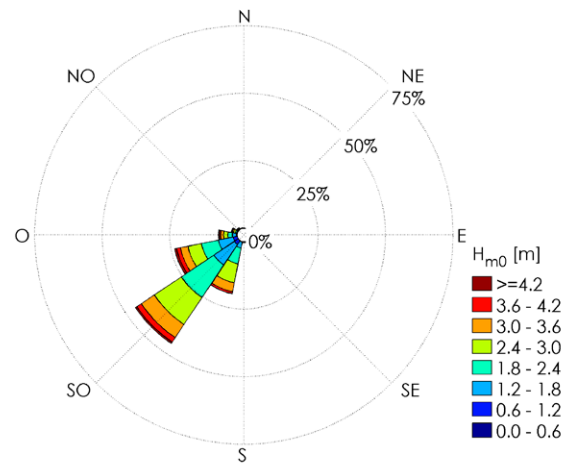


NODO 10 TALCAHUANO

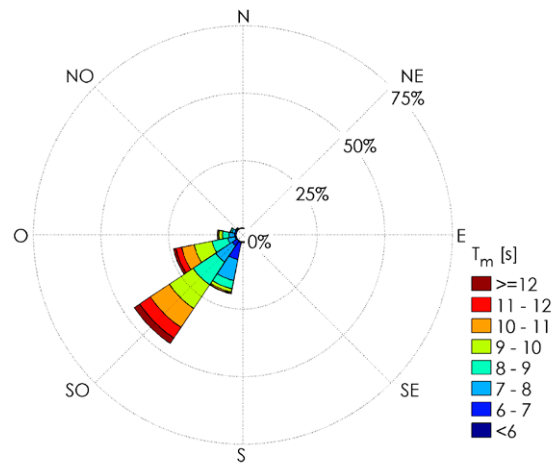
Coordenadas del Nodo: 37°S, 75°O

NODO 10: TALCAHUANO / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

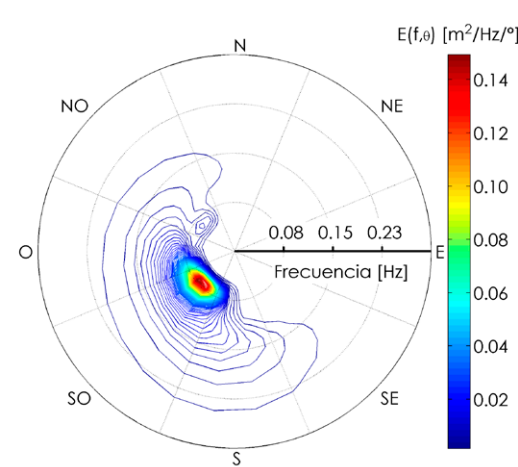
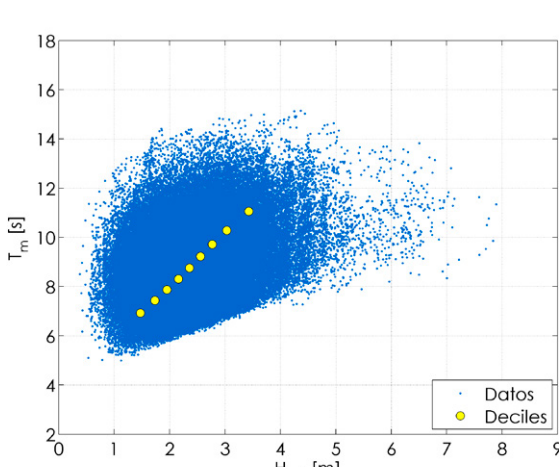


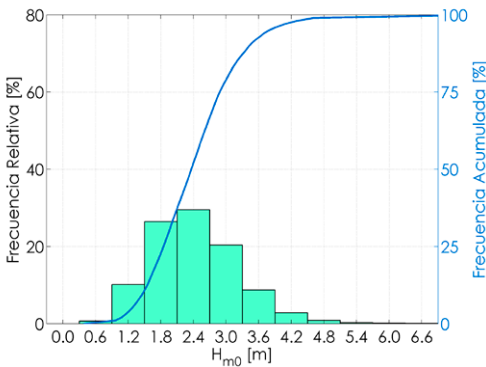
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



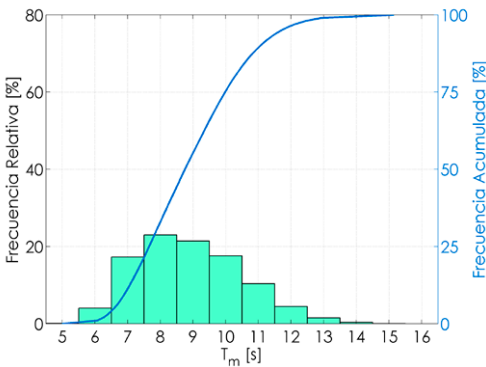
PARÁMETROS PROMEDIO

H_{m0} [m]	2.42
T_z [s]	7.9
T_e [s]	10.5
T_m [s]	8.9
T_p [s]	13.0
D_m [°]	231
D_p [°]	229
ε	0.81
ν	0.52
Q_p	2.02
γ	1.44
s	17.7

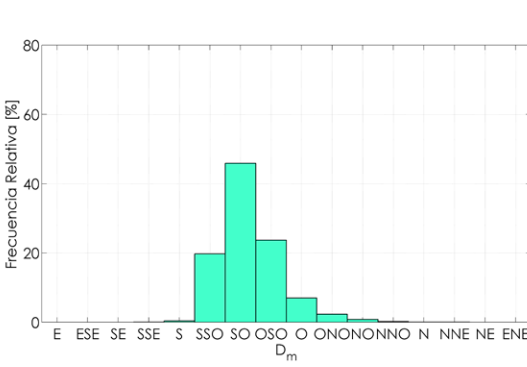
HISTOGRAMA DE H_{m0}



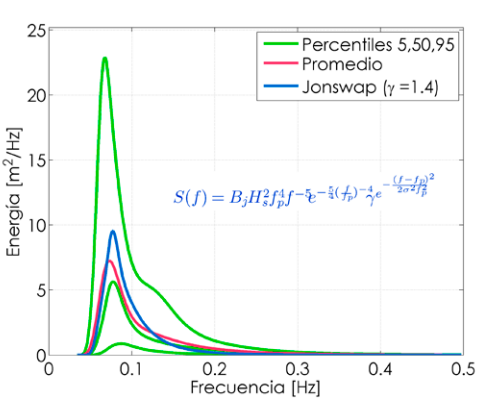
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

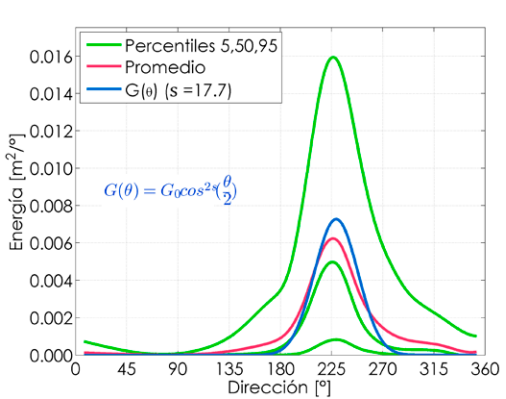


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[			<0.1	<0.1	<0.1				0.0
[0.6-1.2[			<0.1	2.8	0.9	<0.1			3.7
[1.2-1.8[			0.4	14.7	3.6	0.2	<0.1		18.9
[1.8-2.4[			1.4	23.5	4.1	0.3	<0.1		29.3
[2.4-3[			2.0	20.6	3.7	0.5	<0.1		26.9
[3-3.6[			1.2	9.9	2.2	0.4	<0.1		13.7
[3.6-4.2[			0.3	3.3	1.2	0.2	<0.1		5.0
[4.2-4.8[			<0.1	1.2	0.9	0.2	<0.1		2.3
TOTAL	0.0	0.0	5.3	76.0	16.7	1.8	0.1	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			0.3	0.4	<0.1	<0.1	<0.1		0.8
[6-7[			2.7	6.2	1.0	0.5	<0.1		10.5
[7-8[			2.0	14.8	4.0	0.8	<0.1		21.6
[8-9[			0.3	16.4	5.2	0.4	<0.1		22.3
[9-10[			<0.1	16.1	3.8	<0.1			20.0
[10-11[			<0.1	12.4	1.8	<0.1			14.1
[11-12[			<0.1	6.5	0.6				7.1
[12-13[			<0.1	3.3	0.2				3.5
TOTAL	0.0	0.0	5.3	76.0	16.7	1.8	0.1	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

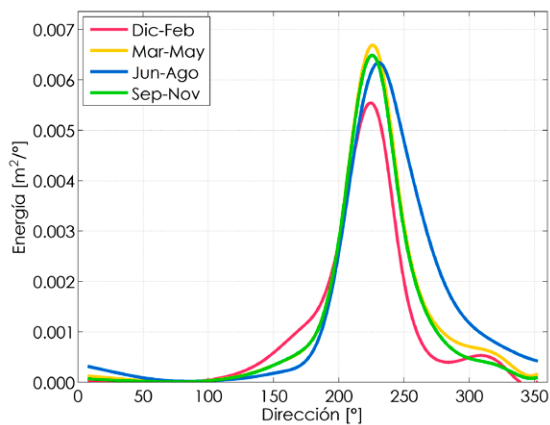
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.0
[0.6-1.2[	0.1	0.5	1.0	1.1	0.7	0.3	<0.1	<0.1	3.7
[1.2-1.8[	0.5	2.9	4.3	4.6	3.7	2.0	0.7	0.2	18.9
[1.8-2.4[	0.1	4.5	6.8	6.5	5.7	3.6	1.5	0.5	29.3
[2.4-3[		2.4	6.5	5.8	5.4	3.8	2.1	0.9	26.9
[3-3.6[		0.2	2.7	2.9	2.8	2.6	1.6	0.9	13.7
[3.6-4.2[			0.3	1.1	1.2	1.1	0.8	0.5	5.0
[4.2-4.8[			<0.1	0.3	0.6	0.6	0.4	0.4	2.3
TOTAL	0.8	10.5	21.6	22.3	20.0	14.1	7.1	3.5	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

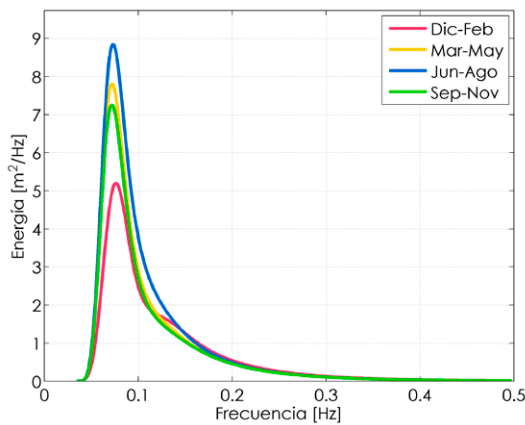
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E					
ESE					
SE					
SSE	<0.1%	2.74	3.10	3.10	3.10
S	0.3%	2.73	3.46	4.12	4.19
SSO	19.7%	2.51	3.31	3.99	4.48
SO	45.9%	2.30	3.35	4.39	5.14
OSO	23.7%	2.23	3.55	4.97	6.40
O	7.0%	2.42	3.79	5.44	6.66
ONO	2.3%	2.72	4.09	6.20	6.94
NO	0.8%	2.88	4.21	5.84	7.67
NNO	0.2%	2.87	3.88	5.23	6.50
N	<0.1%	2.63	4.30	5.36	5.36
NNE	<0.1%	3.26	3.50	3.50	3.50
NE					
ENE					

NODO 10: TALCAHUANO / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



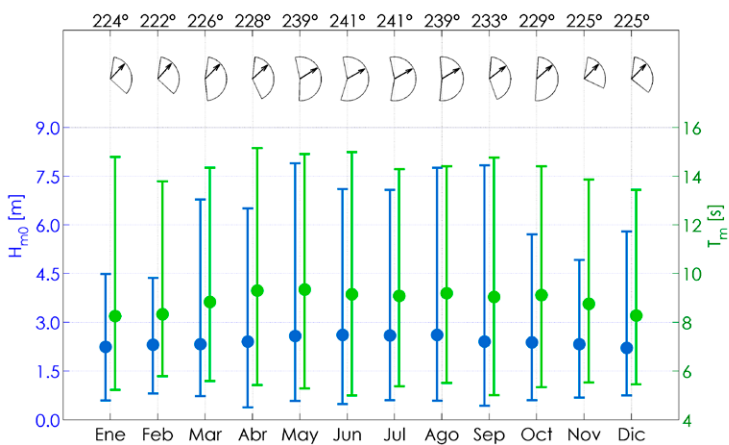
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

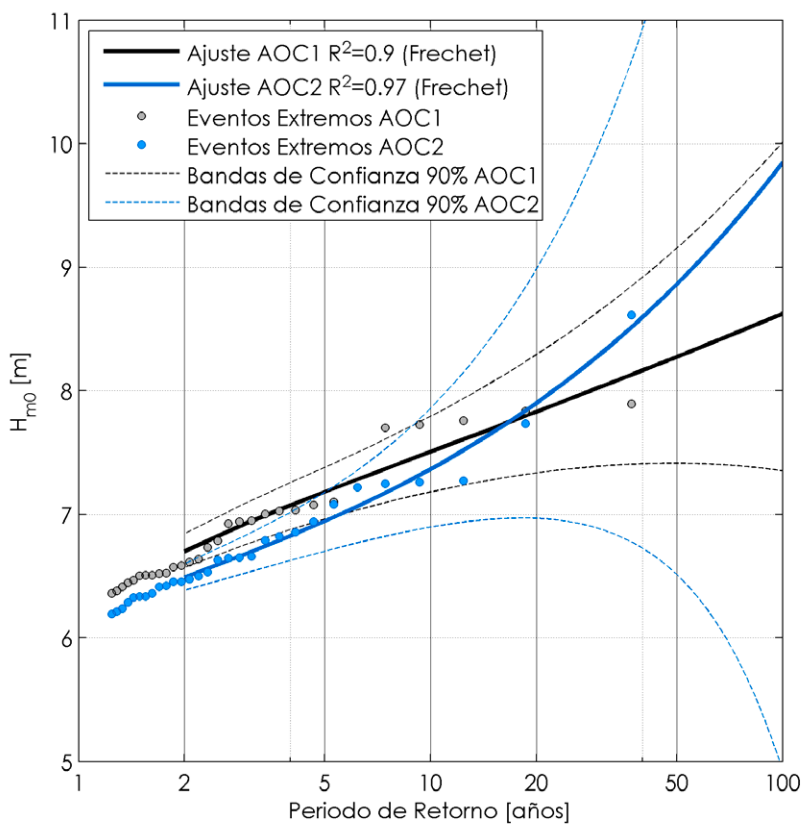
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.25	2.44	2.61	2.37
T_z [s]	7.3	8.1	8.2	8.0
T_e [s]	9.9	10.8	10.7	10.6
T_m [s]	8.3	9.2	9.1	9.0
T_p [s]	12.6	13.2	13.0	13.1
D_m [°]	224	231	240	229
D_p [°]	225	229	235	228
ε	0.80	0.81	0.81	0.81
ν	0.52	0.52	0.50	0.52
Q_p	1.86	2.08	2.09	2.05
γ	1.33	1.48	1.47	1.47
S	16.5	18.9	16.7	18.8

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

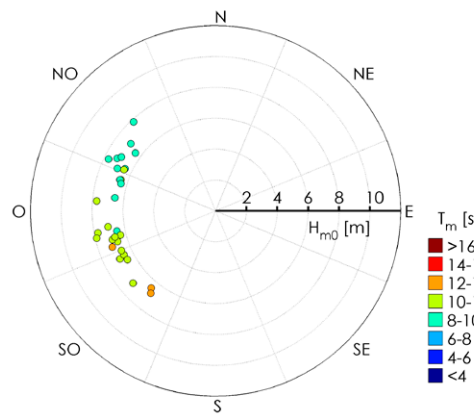


NODO 10: TALCAHUANO / CLIMA EXTREMO

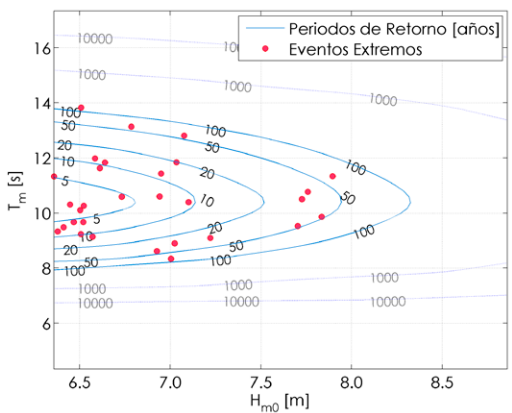
PERIODOS DE RETORNO UNIVARIADO



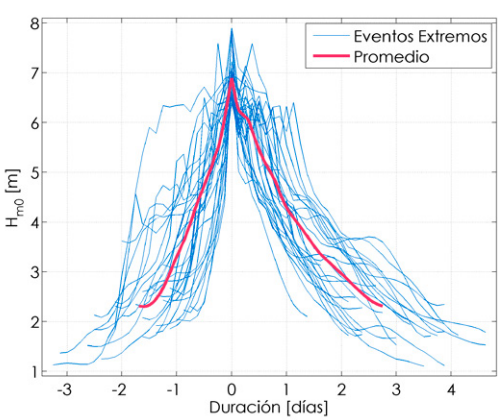
DISPERSIÓN DE EXTREMOS



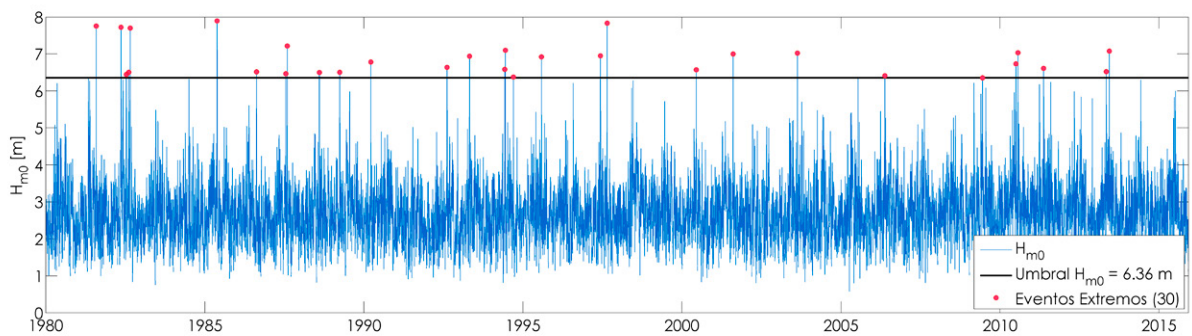
PERIODOS DE RETORNO BIVARIADO



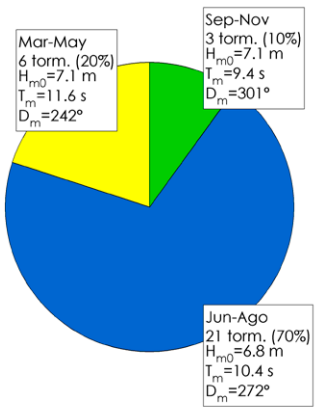
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 10: TALCAHUANO / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 28.7	primer modo	mar de fondo	99.7			<0.1	78.7	21.1	0.2	<0.1	
		mar de viento	0.3			10.1	24.7	40.4	20.2	4.5	
Bimodal 44.7	primer modo	mar de fondo	96.4		<0.1	1.3	80.8	15.6	2.1	<0.1	<0.1
		mar de viento	3.6		0.2	57.9	21.0	1.2	11.4	8.0	0.4
	segundo modo	mar de fondo	90.1	<0.1	0.2	7.1	14.3	9.1	65.9	2.4	1.0
		mar de viento	9.9	0.2	0.4	69.7	13.6	0.9	5.5	7.6	2.0
Trimodal 23.1	primer modo	mar de fondo	88.1		<0.1	4.9	70.5	21.1	2.9	0.5	<0.1
		mar de viento	11.9		0.2	67.3	24.6	0.3	2.7	4.1	0.7
	segundo modo	mar de fondo	77.3	<0.1	0.3	22.0	31.1	18.6	23.7	3.4	0.9
		mar de viento	22.7	<0.1	0.2	70.0	19.7	0.4	3.3	5.2	1.0
	tercer modo	mar de fondo	95.1	<0.1	0.9	8.7	7.5	9.4	67.9	3.6	1.9
		mar de viento	4.9	0.7	0.7	46.2	27.0	2.8	5.9	13.5	3.1

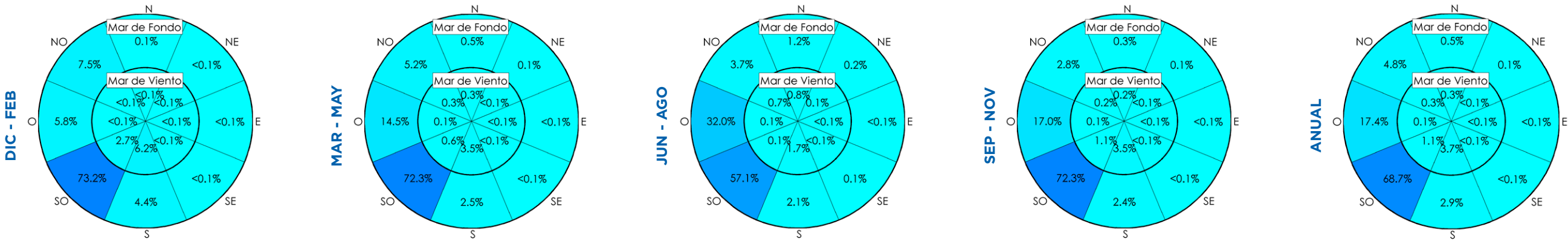
NOTA: estados de mar con más de 3 modos abarcan el 3.5% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	46.9	30.1	5.2	19.0	25.2
MF del SO	6.9	20.4	31.9	30.7	22.5
MF del SO + MF del O	0.2	3.6	14.6	7.2	6.4
MF del O	0.3	3.3	15.4	5.1	6.0
MF del SO + MF del O + MF del NO	5.6	7.7	2.4	5.8	5.4
MF del SO + MF del NO + MV del S	11.3	5.8	0.2	2.9	5.1
MF del S + MF del SO + MF del NO	10.6	5.2	0.4	3.0	4.8
MF del SO + MV del S	1.9	3.4	3.4	5.7	3.6
MF del S + MF del SO	1.6	2.4	2.9	3.9	2.7
MF del O + MF del NO	1.9	2.9	1.3	2.2	2.1
Otros	12.8	15.1	22.2	14.4	16.1
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

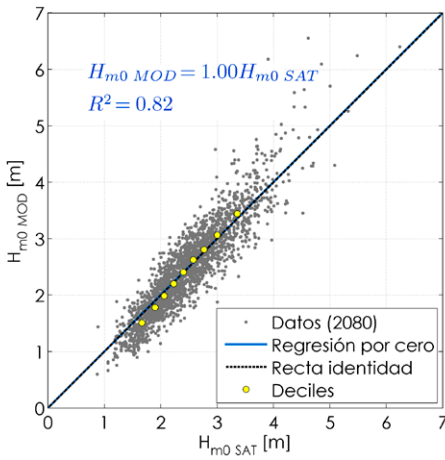


NODO 10: TALCAHUANO / INCERTIDUMBRE

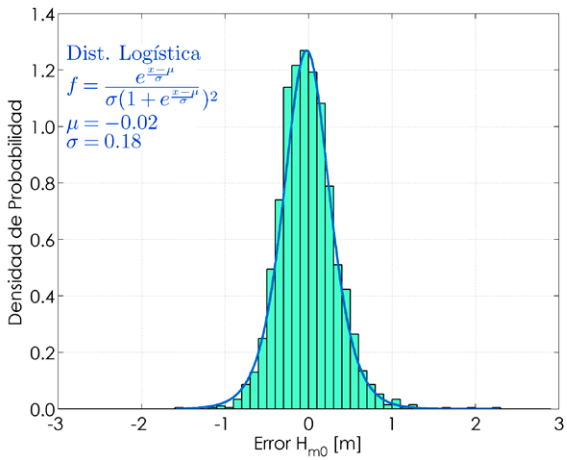
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{mo} satélite [m]	2.47	Intercepto mejor regresión lineal [m]	-0.21
Promedio H_{mo} modelo [m]	2.46	Pendiente mejor regresión lineal	1.08
Desviación estándar H_{mo} satélite [m]	0.67	R^2 mejor regresión lineal	0.83
Desviación estándar H_{mo} modelo [m]	0.79	Mínimo error relativo (RE_{min})	-52%
Error absoluto medio (MAE) [m]	0.26	Máximo error relativo (RE_{max})	62%
Raíz del error cuadrático medio (RMSE) [m]	0.33	Error relativo medio (RE_{mean})	-1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.005%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	62%
Índice de dispersión (SI)	0.13	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN



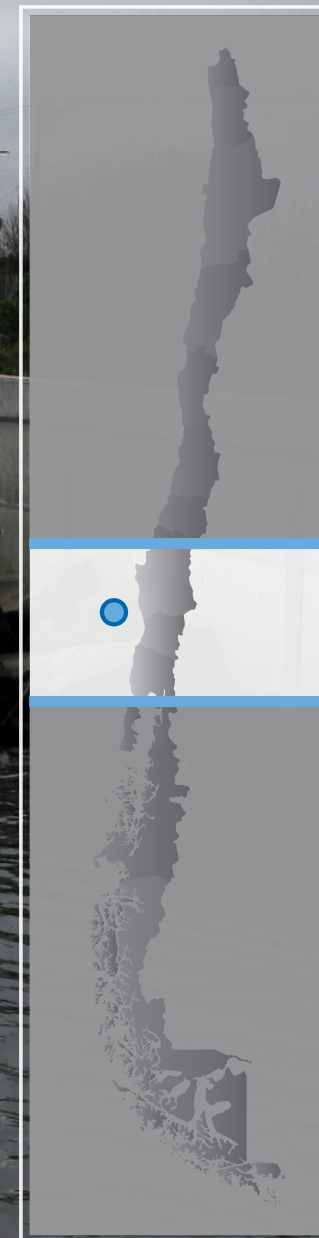
DISTRIBUCIÓN DEL ERROR





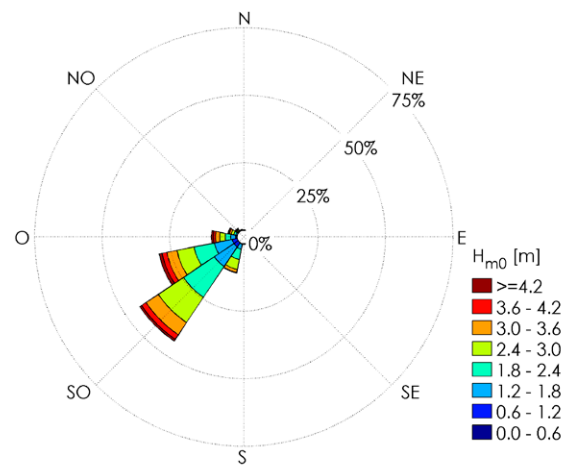
NODO 11 PUERTO SAAVEDRA

Coordenadas del Nodo: 39°S, 75°O

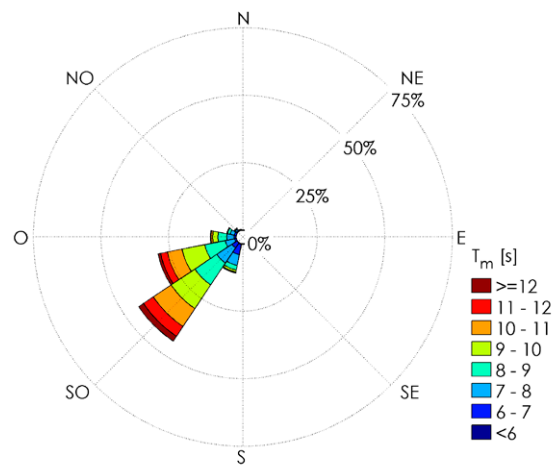


NODO 11: PUERTO SAAVEDRA / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

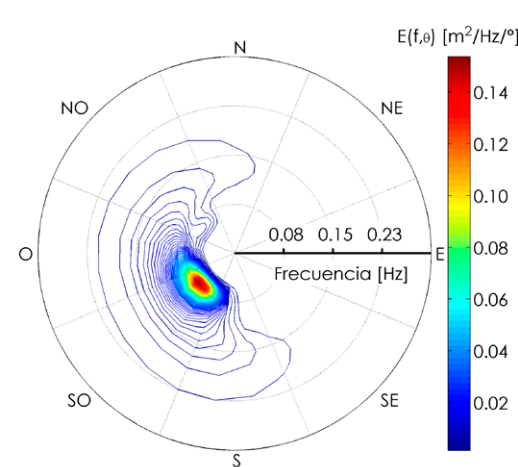
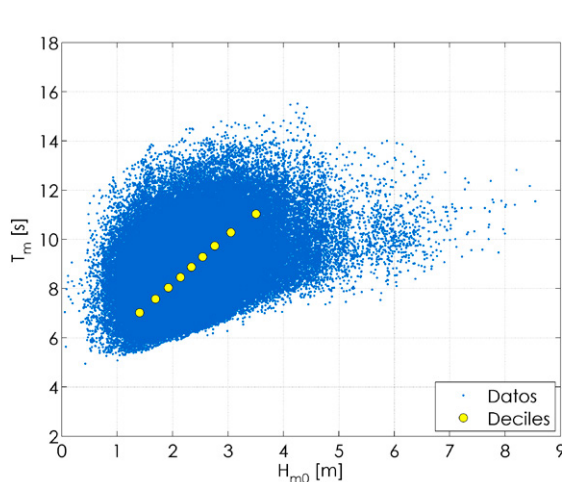


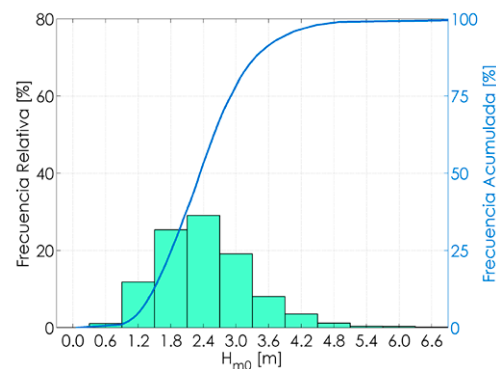
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



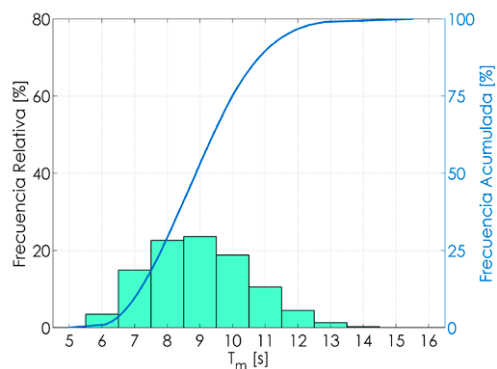
PARÁMETROS PROMEDIO

H _{m0} [m]	2.42
T _z [s]	8.0
T _e [s]	10.5
T _m [s]	9.0
T _p [s]	12.9
D _m [°]	237
D _p [°]	233
ε	0.81
ν	0.51
Q _p	2.04
γ	1.44
s	17.2

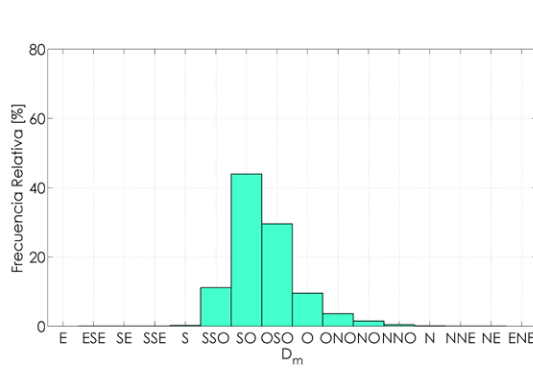
HISTOGRAMA DE H_{m0}



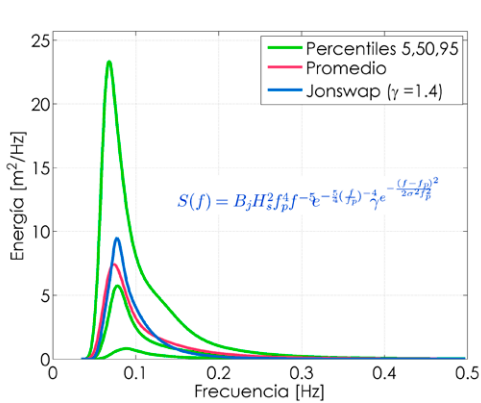
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

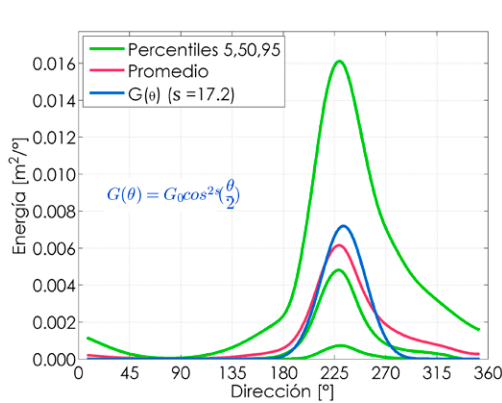


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H _{m0} [m]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
]0-0.6[			<0.1	<0.1	<0.1	<0.1			0.1
]0.6-1.2[		<0.1	<0.1	3.1	1.3	<0.1	<0.1		4.6
]1.2-1.8[		<0.1	0.3	14.7	4.5	0.3	<0.1		19.9
]1.8-2.4[		<0.1	0.7	22.2	5.0	0.6	<0.1	<0.1	28.6
]2.4-3[		<0.1	0.9	18.3	5.0	0.9	<0.1		25.1
]3-3.6[		<0.1	0.2	8.8	3.3	0.7	<0.1		13.1
]3.6-4.2[			<0.1	3.1	1.7	0.3	<0.1		5.3
]4.2-4.8[			<0.1	1.5	1.6	0.3	<0.1		3.4
TOTAL	0.0	0.0	2.2	71.9	22.5	3.2	0.2	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T _m [s]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
]5-6[		<0.1	0.1	0.3	<0.1	<0.1	<0.1		0.7
]6-7[		<0.1	1.4	5.2	1.4	0.9	<0.1	<0.1	8.9
]7-8[		<0.1	0.6	12.1	5.3	1.4	<0.1		19.6
]8-9[			<0.1	15.8	7.2	0.7	<0.1		23.8
]9-10[			<0.1	16.7	5.3	0.1			22.1
]10-11[			<0.1	12.2	2.2	<0.1			14.5
]11-12[				6.4	0.7				7.1
]12-13[				3.1	0.2				3.3
TOTAL	0.0	0.0	2.2	71.9	22.5	3.2	0.2	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

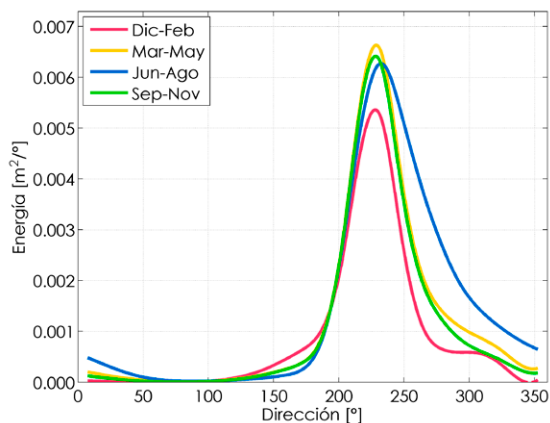
H _{m0} [m]	T _m [s]								TOTAL
	]5-6[	]6-7[	]7-8[	]8-9[	]9-10[	]10-11[	]11-12[	]12-13[	
]0-0.6[	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		0.1
]0.6-1.2[	0.2	0.7	1.1	1.3	0.8	0.3	<0.1	<0.1	4.6
]1.2-1.8[	0.4	3.2	4.6	4.8	4.0	2.0	0.7	0.2	19.9
]1.8-2.4[	<0.1	3.5	6.6	6.7	6.0	3.7	1.4	0.5	28.6
]2.4-3[		1.4	5.3	6.1	5.5	3.9	2.0	0.9	25.1
]3-3.6[		<0.1	1.7	3.1	3.2	2.6	1.6	0.9	13.1
]3.6-4.2[		<0.1	0.3	1.2	1.5	1.1	0.7	0.5	5.3
]4.2-4.8[			<0.1	0.5	1.0	0.9	0.5	0.3	3.4
TOTAL	0.7	8.9	19.6	23.8	22.1	14.5	7.1	3.3	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

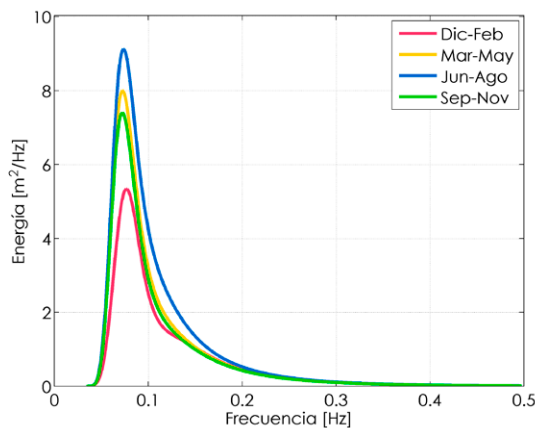
	Prob. Dir.	H _{m0} 50% [m]	H _{m0} 90% [m]	H _{m0} 99% [m]	H _{m0} 12 [m]
E					
ESE	<0.1%	3.11	3.29	3.29	3.29
SE	<0.1%	2.09	3.30	3.39	3.39
SSE	<0.1%	1.94	2.20	2.74	2.74
S	0.2%	2.15	2.94	3.27	3.33
SSO	11.1%	2.35	3.06	3.76	4.41
SO	43.9%	2.30	3.34	4.47	5.60
OSO	29.5%	2.28	3.60	5.07	6.29
O	9.5%	2.51	4.02	6.07	7.10
ONO	3.6%	2.71	4.08	5.91	6.96
NO	1.5%	2.91	4.36	6.15	7.32
NNO	0.4%	2.80	4.13	5.87	6.46
N	<0.1%	2.73	4.00	4.86	4.87
NNE	<0.1%	2.95	4.16	4.45	4.45
NE	<0.1%	2.04	2.04	2.04	2.04
ENE					

NODO 11: PUERTO SAAVEDRA / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



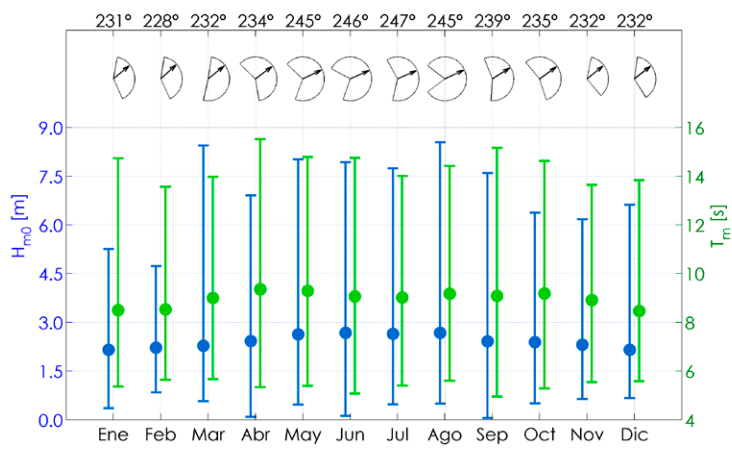
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

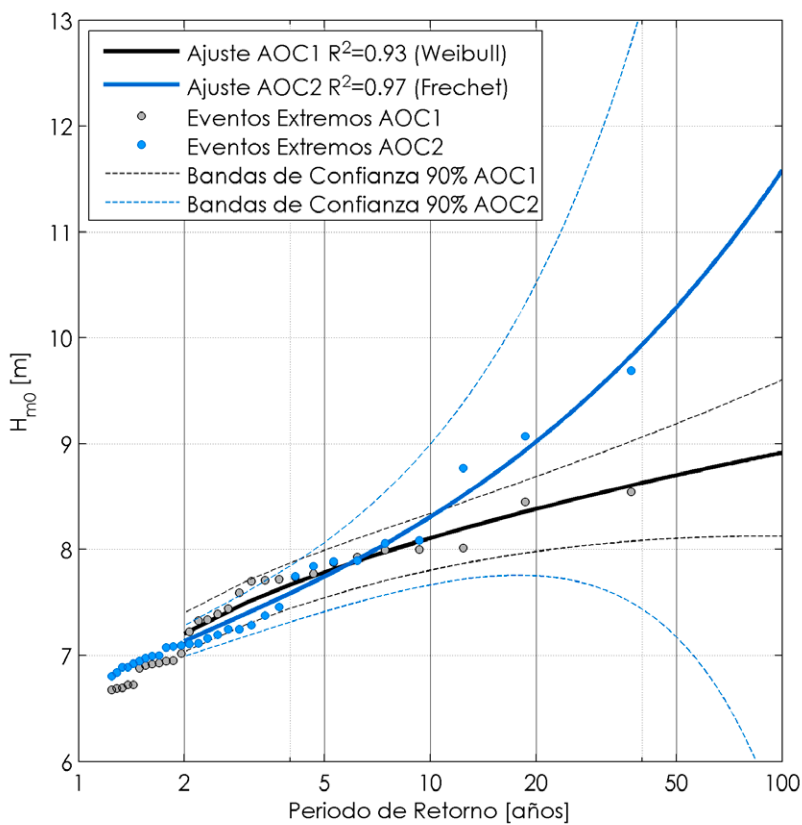
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.18	2.45	2.67	2.37
T_z [s]	7.5	8.2	8.1	8.1
T_e [s]	10.1	10.8	10.6	10.6
T_m [s]	8.5	9.2	9.1	9.1
T_p [s]	12.7	13.1	12.9	13.0
D_m [°]	231	237	246	235
D_p [°]	229	233	239	232
ε	0.80	0.81	0.80	0.81
ν	0.52	0.51	0.50	0.52
Q_p	1.92	2.09	2.07	2.08
γ	1.37	1.48	1.44	1.47
S	16.8	18.2	15.5	18.2

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

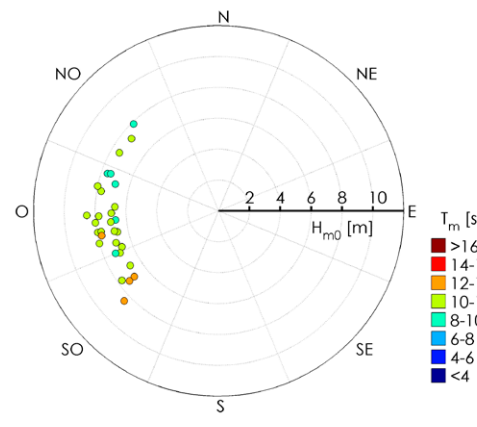


NODO 11: PUERTO SAAVEDRA / CLIMA EXTREMO

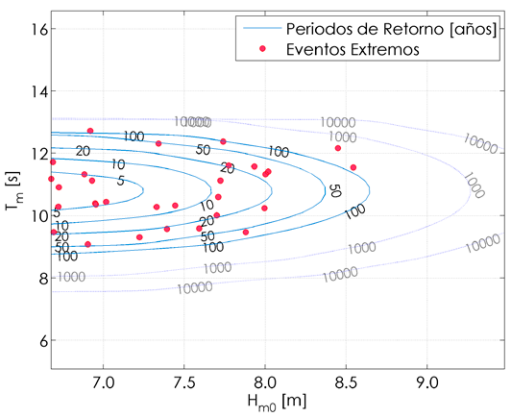
PERIODOS DE RETORNO UNIVARIADO



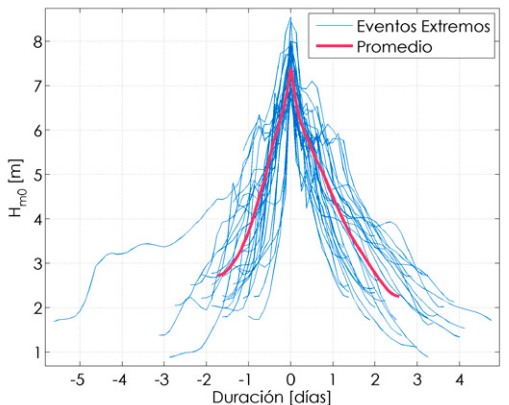
DISPERSIÓN DE EXTREMOS



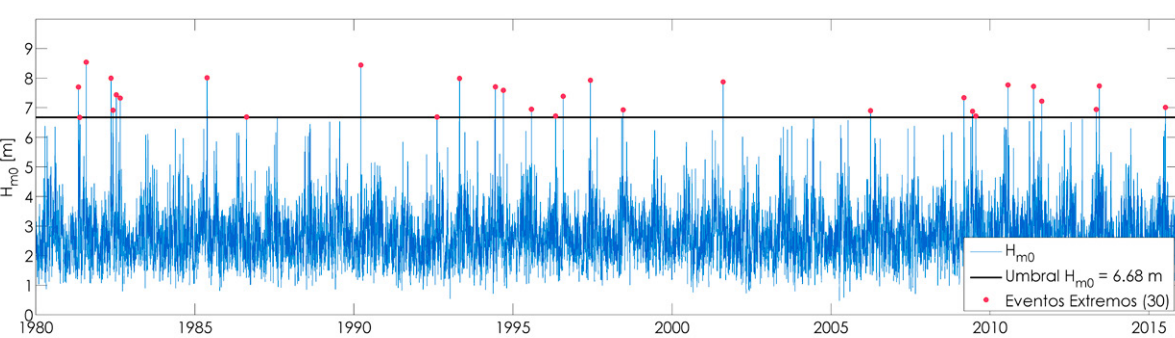
PERIODOS DE RETORNO BIVARIADO



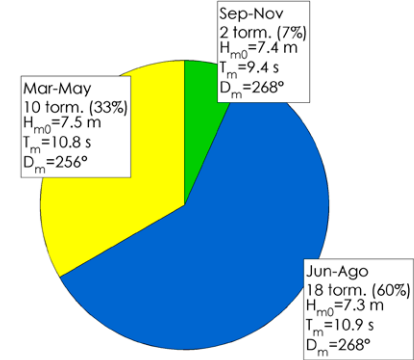
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 11: PUERTO SAAVEDRA / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 31.4	primer modo	mar de fondo	99.5			<0.1	74.5	25.0	0.5	<0.1	
		mar de viento	0.5				11.6	46.5	36.1	5.8	
Bimodal 45.9	primer modo	mar de fondo	97.6	<0.1	<0.1	0.5	77.4	18.2	3.6	0.4	<0.1
		mar de viento	2.4	0.9	1.3	31.7	13.5	2.6	24.6	24.4	0.9
	segundo modo	mar de fondo	93.1	<0.1	0.5	5.0	14.3	8.7	67.7	3.5	0.3
		mar de viento	6.9	0.6	2.6	53.8	14.3	1.0	10.5	15.7	1.4
Trimodal 19.4	primer modo	mar de fondo	91.3	<0.1	<0.1	3.1	65.3	25.5	4.6	1.4	<0.1
		mar de viento	8.7	0.2	0.7	53.7	22.6	1.1	7.0	14.1	0.6
	segundo modo	mar de fondo	82.1	0.2	1.1	18.8	28.9	20.7	24.1	5.8	0.4
		mar de viento	17.9	0.7	2.5	56.0	21.6	0.6	7.0	10.4	1.1
	tercer modo	mar de fondo	95.4	0.4	1.4	8.1	9.8	11.2	62.1	6.2	0.8
		mar de viento	4.6	2.0	4.0	31.1	27.5	2.8	13.9	16.2	2.6

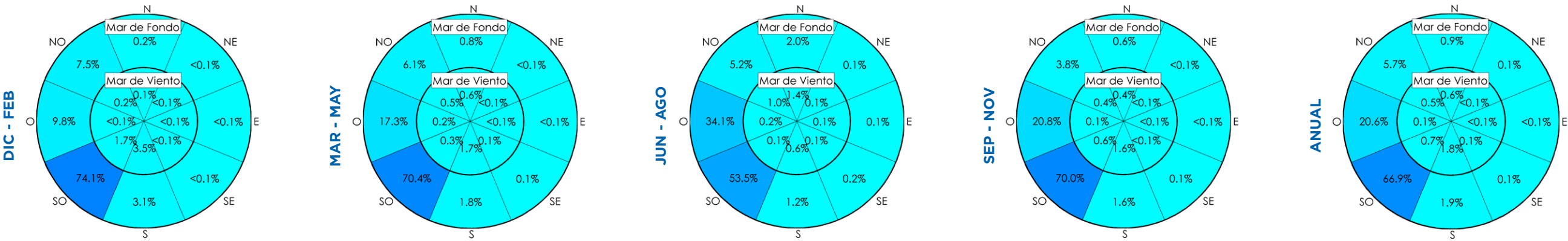
NOTA: estados de mar con más de 3 modos abarcan el 3.3% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	51.6	30.5	7.0	20.4	27.3
MF del SO	8.7	22.9	29.3	32.0	23.3
MF del O	1.0	5.0	17.5	7.6	7.8
MF del SO + MF del O	0.4	3.9	14.5	8.3	6.8
MF del SO + MF del O + MF del NO	7.4	7.9	2.3	6.0	5.9
MF del S + MF del SO + MF del NO	7.4	3.9	0.5	1.8	3.4
MF del O + MF del NO	4.3	3.7	1.6	3.2	3.2
MF del SO + MF del NO + MV del S	5.5	3.0	0.2	1.3	2.5
MF del S + MF del SO	1.4	1.9	1.5	2.9	1.9
MF del SO + MV del S	1.2	1.7	1.4	3.0	1.8
Otros	11.1	15.5	24.1	13.5	16.1
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

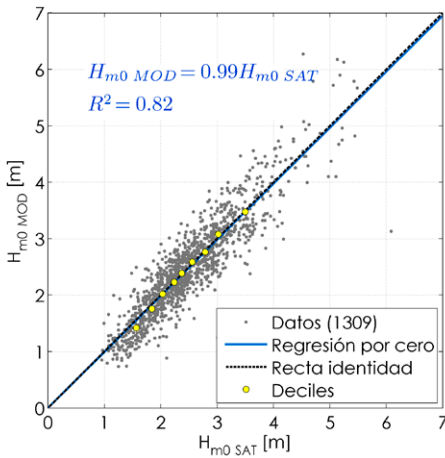


NODO 11: PUERTO SAAVEDRA / INCERTIDUMBRE

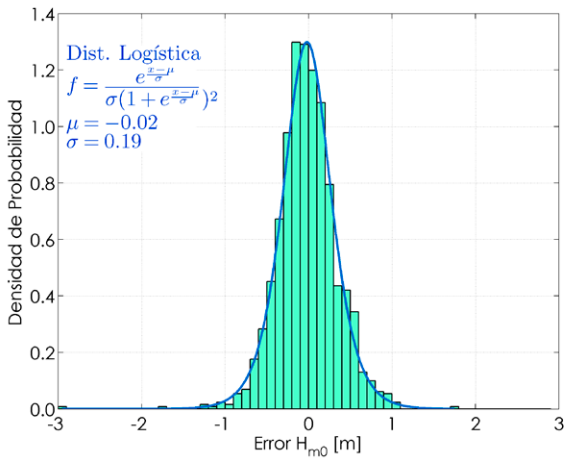
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{mo} satélite [m]	2.48	Intercepto mejor regresión lineal [m]	0.01
Promedio H_{mo} modelo [m]	2.46	Pendiente mejor regresión lineal	0.99
Desviación estándar H_{mo} satélite [m]	0.76	R^2 mejor regresión lineal	0.82
Desviación estándar H_{mo} modelo [m]	0.83	Mínimo error relativo (RE_{min})	-59%
Error absoluto medio (MAE) [m]	0.26	Máximo error relativo (RE_{max})	71%
Raíz del error cuadrático medio (RMSE) [m]	0.35	Error relativo medio (RE_{mean})	-1%
Sesgo (BIAS) [m]	-0.02	Mínimo error relativo absoluto (ARE_{min})	0.012%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	71%
Índice de dispersión (SI)	0.14	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN

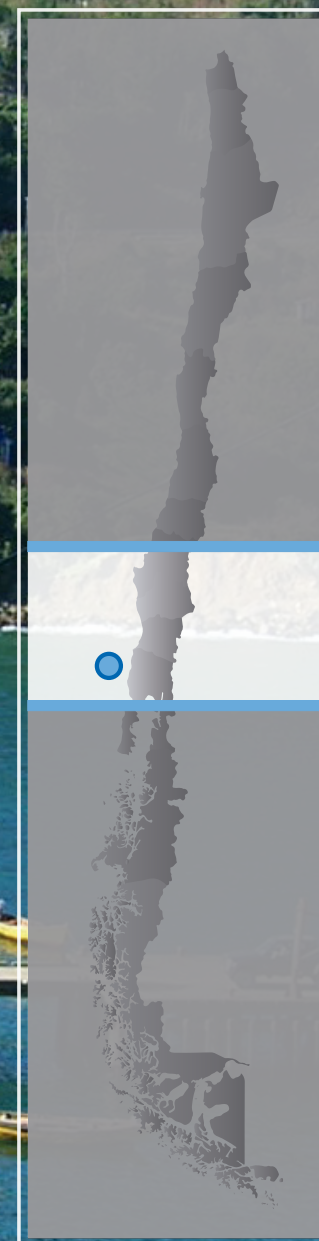


DISTRIBUCIÓN DEL ERROR



NODO 12 BAHÍA MANSA

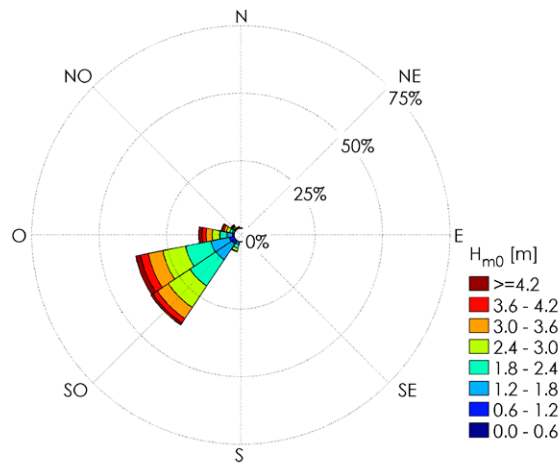
COORDENADAS DEL NODO: 41°S, 75°O



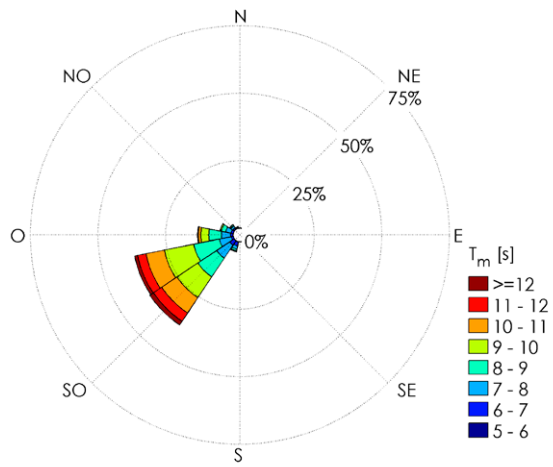
CRÉDITOS FOTOGRAFÍA: DIRECCIÓN DE OBRAS PORTUARIAS

NODO 12: BAHÍA MANSA / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

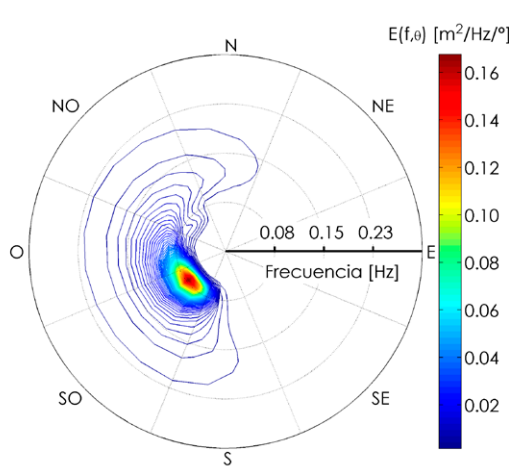
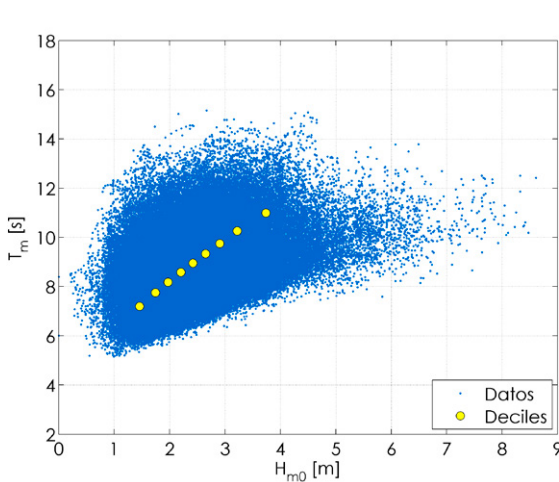


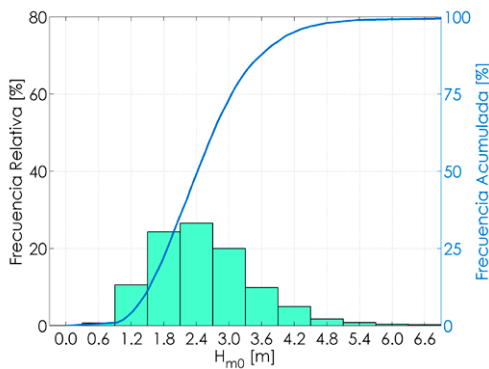
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



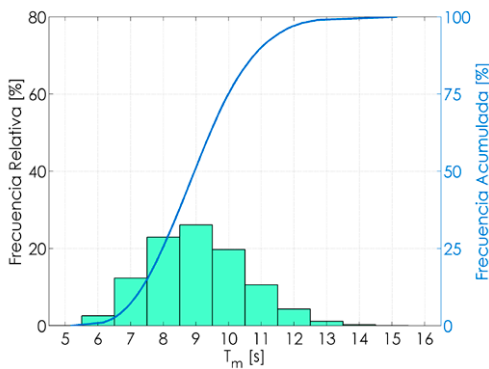
PARÁMETROS PROMEDIO

H_{m0} [m]	2.53
T_z [s]	8.1
T_e [s]	10.6
T_m [s]	9.0
T_p [s]	12.9
D_m [°]	244
D_p [°]	237
ε	0.81
γ	0.51
Q_p	2.06
γ	1.43
s	16.6

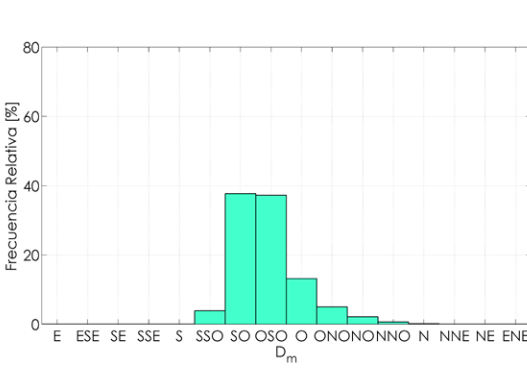
HISTOGRAMA DE H_{m0}



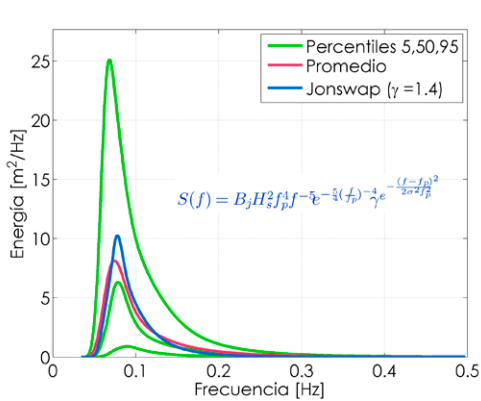
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

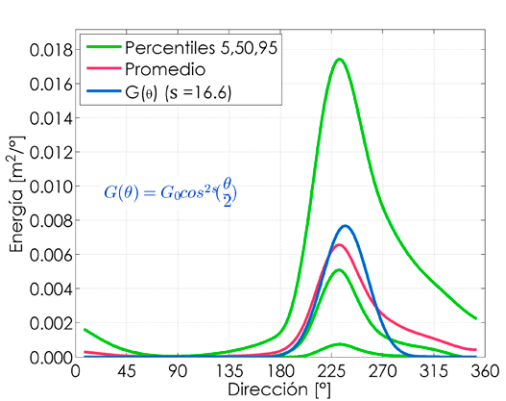


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[				<0.1	<0.1	<0.1			0.1
[0.6-1.2[		<0.1	<0.1	2.6	1.4	<0.1	<0.1	<0.1	4.1
[1.2-1.8[	<0.1	<0.1	0.1	12.2	5.2	0.4	<0.1	<0.1	18.0
[1.8-2.4[	<0.1	<0.1	0.2	19.1	6.6	0.9	<0.1	<0.1	26.9
[2.4-3[		<0.1	<0.1	16.0	6.9	1.2	<0.1		24.2
[3-3.6[			<0.1	8.4	5.1	0.9	<0.1	<0.1	14.5
[3.6-4.2[				3.6	3.0	0.6	<0.1		7.2
[4.2-4.8[				2.0	2.5	0.5	<0.1		4.9
TOTAL	0.0	0.0	0.4	64.0	30.6	4.5	0.4	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	0.6
[6-7[	<0.1	<0.1	0.3	3.6	1.6	1.1	0.2	<0.1	6.7
[7-8[			<0.1	9.2	7.0	2.0	0.2		18.3
[8-9[			<0.1	14.2	10.2	1.1	<0.1		25.6
[9-10[			<0.1	16.4	7.4	0.2	<0.1		24.0
[10-11[			<0.1	11.7	3.2	<0.1			14.9
[11-12[				6.1	0.9	<0.1			7.0
[12-13[				2.6	0.3				2.9
TOTAL	0.0	0.0	0.4	64.0	30.6	4.5	0.4	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

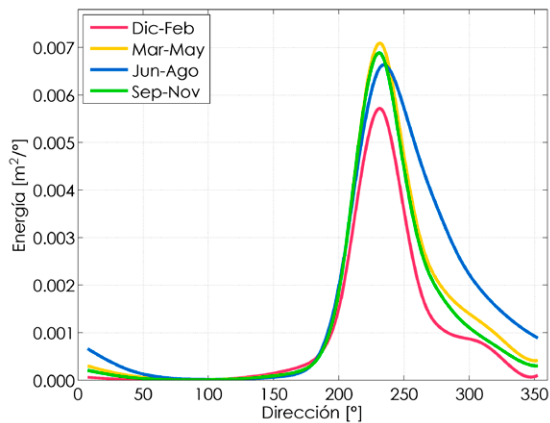
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[	<0.1	<0.1	<0.1	<0.1	<0.1				0.1
[0.6-1.2[	0.2	0.7	1.2	1.1	0.7	0.2	<0.1	<0.1	4.1
[1.2-1.8[	0.3	2.7	4.4	4.6	3.6	1.6	0.6	0.2	18.0
[1.8-2.4[	<0.1	2.5	6.0	6.9	6.1	3.7	1.3	0.4	26.9
[2.4-3[		0.7	4.7	6.3	5.9	3.9	2.0	0.7	24.2
[3-3.6[		<0.1	1.8	3.9	3.7	2.7	1.6	0.8	14.5
[3.6-4.2[			0.3	2.0	2.2	1.4	0.8	0.5	7.2
[4.2-4.8[			<0.1	0.8	1.8	1.4	0.7	0.3	4.9
TOTAL	0.6	6.7	18.3	25.6	24.0	14.9	7.0	2.9	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

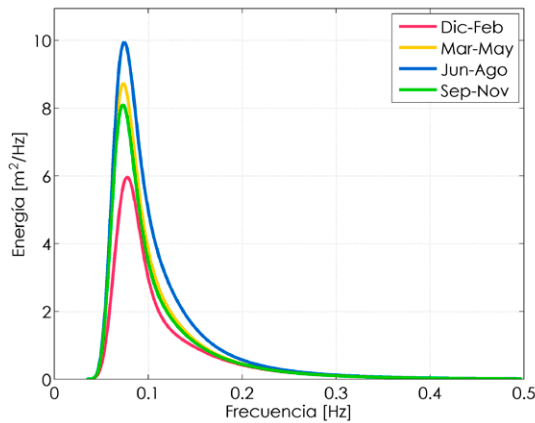
	Prob. Dir.	$H_{m0} 50\%$ [m]	$H_{m0} 90\%$ [m]	$H_{m0} 99\%$ [m]	$H_{m0} 12\%$ [m]
E	<0.1%	1.61	1.92	1.92	1.92
ESE	<0.1%	1.25	2.10	2.10	2.10
SE	<0.1%	1.62	2.41	2.44	2.44
SSE	<0.1%	1.74	2.09	2.13	2.13
S	<0.1%	1.55	2.23	2.47	2.47
SSO	3.9%	2.18	2.88	3.67	4.84
SO	37.6%	2.33	3.42	4.65	5.70
OSO	37.2%	2.41	3.76	5.29	6.43
O	13.2%	2.68	4.21	6.15	7.51
ONO	5.0%	2.77	4.17	6.13	7.83
NO	2.1%	2.87	4.31	5.92	6.73
NNO	0.7%	2.89	4.55	6.17	6.79
N	0.2%	2.91	4.33	6.06	6.22
NNE	<0.1%	2.10	3.57	4.18	4.18
NE	<0.1%	1.84	1.89	1.89	1.89
ENE	<0.1%	1.84	1.96	1.96	1.96

NODO 12: BAHÍA MANSA / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



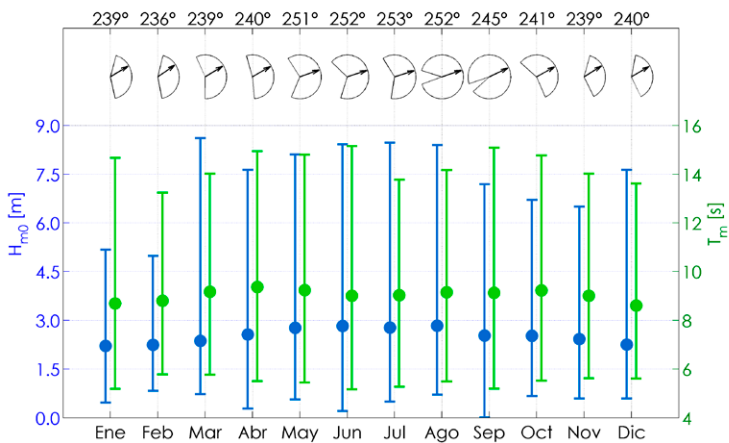
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

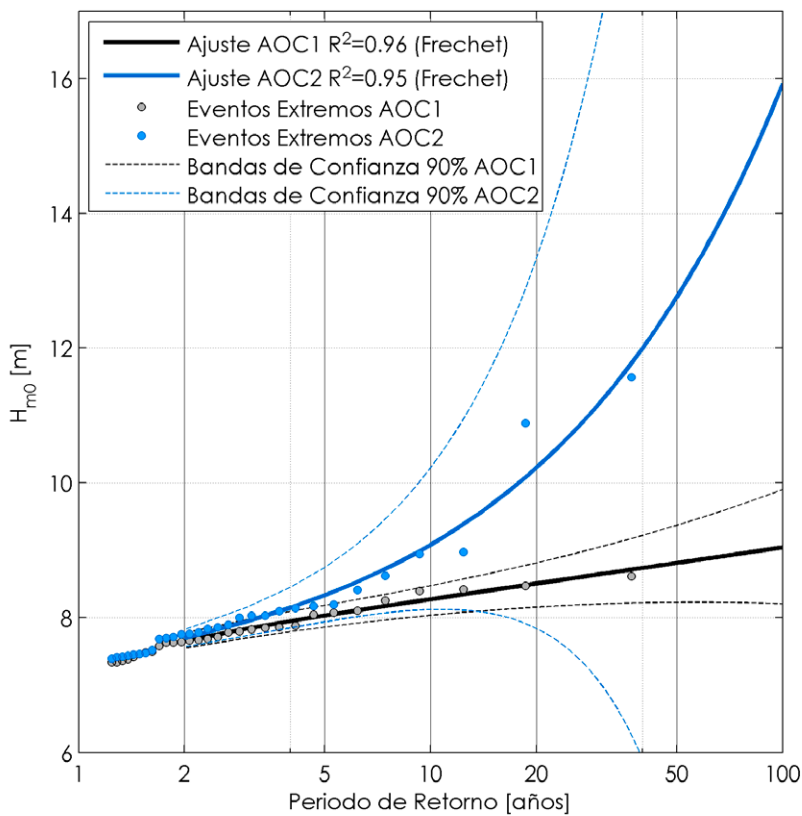
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.24	2.57	2.81	2.49
T_z [s]	7.7	8.3	8.1	8.1
T_e [s]	10.3	10.8	10.5	10.6
T_m [s]	8.7	9.3	9.1	9.1
T_p [s]	12.7	13.0	12.8	12.9
D_m [°]	239	243	252	242
D_p [°]	234	237	243	236
ε	0.81	0.81	0.80	0.81
ν	0.52	0.51	0.49	0.51
Q_p	1.97	2.10	2.06	2.09
γ	1.39	1.46	1.42	1.46
S	16.9	17.4	14.6	17.6

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

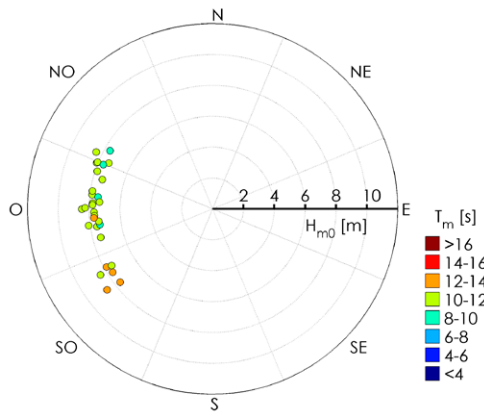


NODO 12: BAHÍA MANSA / CLIMA EXTREMO

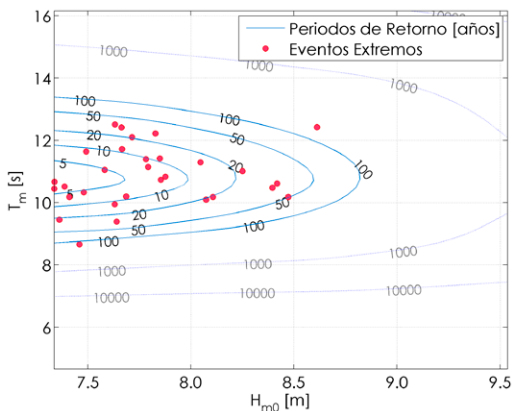
PERIODOS DE RETORNO UNIVARIADO



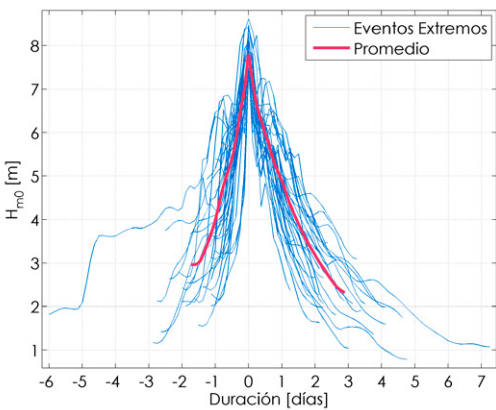
DISPERSIÓN DE EXTREMOS



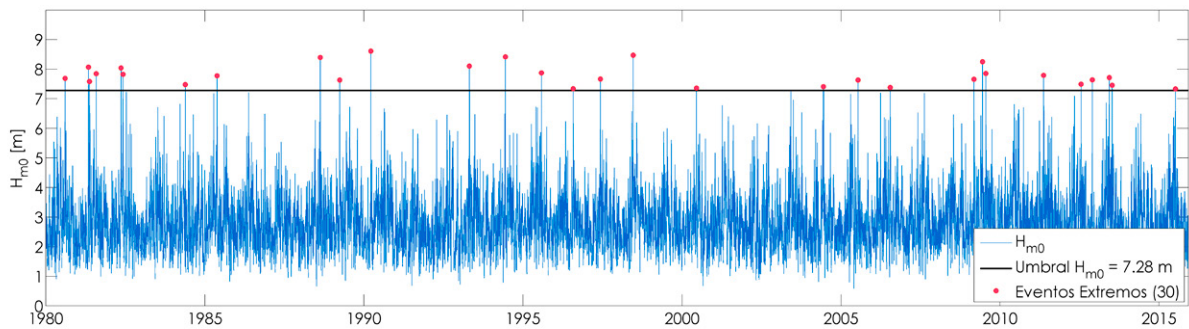
PERIODOS DE RETORNO BIVARIADO



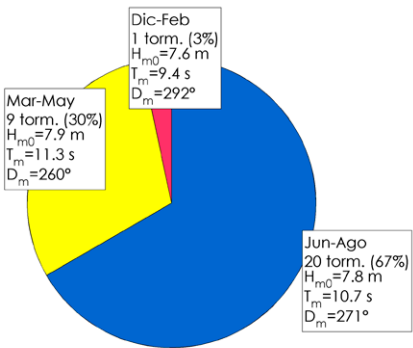
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 12: BAHÍA MANSA / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 33.2	primer modo	mar de fondo	99.2			<0.1	68.6	30.6	0.7	<0.1	
		mar de viento	0.8				9.1	52.7	34.1	4.2	
Bimodal 47.0	primer modo	mar de fondo	98.3			<0.1	71.7	21.8	5.8	0.7	<0.1
		mar de viento	1.7	0.9		2.6	4.8	5.8	41.9	41.9	2.1
	segundo modo	mar de fondo	95.5	<0.1	0.4	2.5	14.8	8.1	69.7	4.1	0.2
		mar de viento	4.5	2.3	3.5	35.3	12.6	0.8	17.5	24.0	4.1
Trimodal 16.9	primer modo	mar de fondo	95.5	<0.1		0.8	58.9	30.8	6.7	2.7	<0.1
		mar de viento	4.5	1.7	0.4	21.5	12.2	3.4	20.5	37.9	2.4
	segundo modo	mar de fondo	85.5	0.3	1.0	13.2	26.1	22.8	28.4	7.6	0.5
		mar de viento	14.5	1.4	3.8	45.8	19.0	1.0	9.4	17.3	2.3
	tercer modo	mar de fondo	93.7	0.5	2.1	7.4	14.0	11.8	55.2	8.1	0.9
		mar de viento	6.3	3.0	6.7	32.4	23.8	1.4	10.8	16.7	5.2

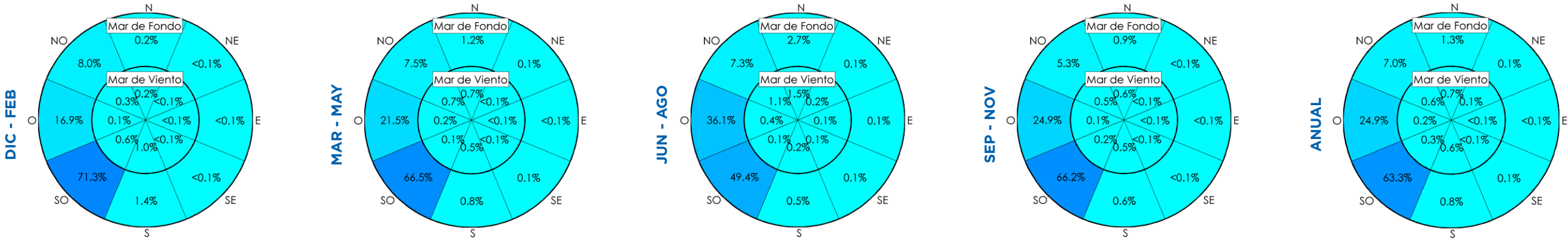
NOTA: estados de mar con más de 3 modos abarcan el 2.9% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	52.3	31.9	9.4	21.8	28.7
MF del SO	9.9	22.9	26.3	31.2	22.6
MF del O	2.8	7.6	19.4	10.3	10.1
MF del SO + MF del O	0.6	3.7	13.2	8.6	6.6
MF del SO + MF del O + MF del NO	9.4	7.4	2.3	6.3	6.3
MF del O + MF del NO	8.4	5.3	2.4	4.3	5.1
MF del S + MF del SO + MF del NO	4.5	2.6	0.4	1.0	2.1
MF del N + MF del SO + MF del NO	0.7	1.6	1.8	1.1	1.3
MF del N + MF del SO	<0.1	1.1	2.8	0.9	1.2
MF del SO + MF del NO + MV del S	2.5	1.4	0.2	0.8	1.2
Otros	8.9	14.5	21.9	13.6	14.8
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

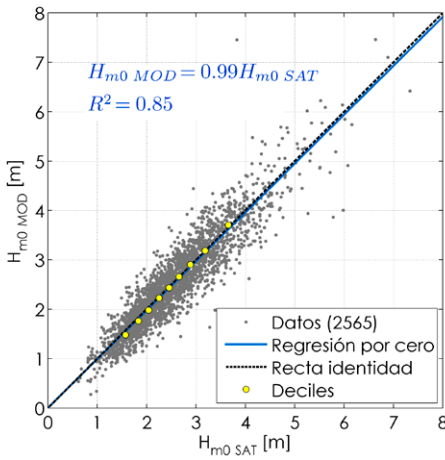


NODO 12: BAHÍA MANSA / INCERTIDUMBRE

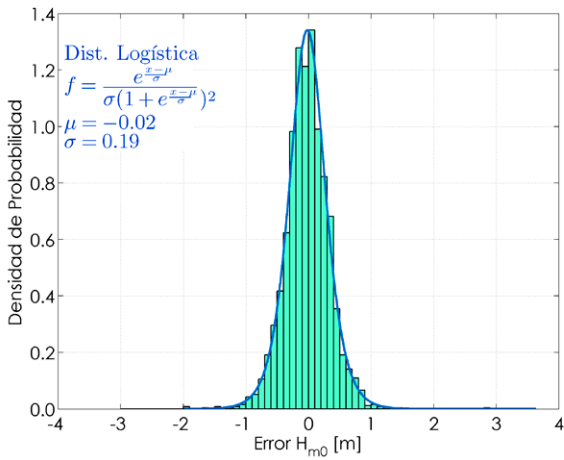
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.54	Intercepto mejor regresión lineal [m]	0.06
Promedio H_{m0} modelo [m]	2.52	Pendiente mejor regresión lineal	0.97
Desviación estándar H_{m0} satélite [m]	0.85	R^2 mejor regresión lineal	0.85
Desviación estándar H_{m0} modelo [m]	0.89	Mínimo error relativo (RE_{min})	-68%
Error absoluto medio (MAE) [m]	0.26	Máximo error relativo (RE_{max})	95%
Raíz del error cuadrático medio (RMSE) [m]	0.35	Error relativo medio (RE_{mean})	-1%
Sesgo (BIAS) [m]	-0.02	Mínimo error relativo absoluto (ARE_{min})	0.001%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	95%
Índice de dispersión (SI)	0.14	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN

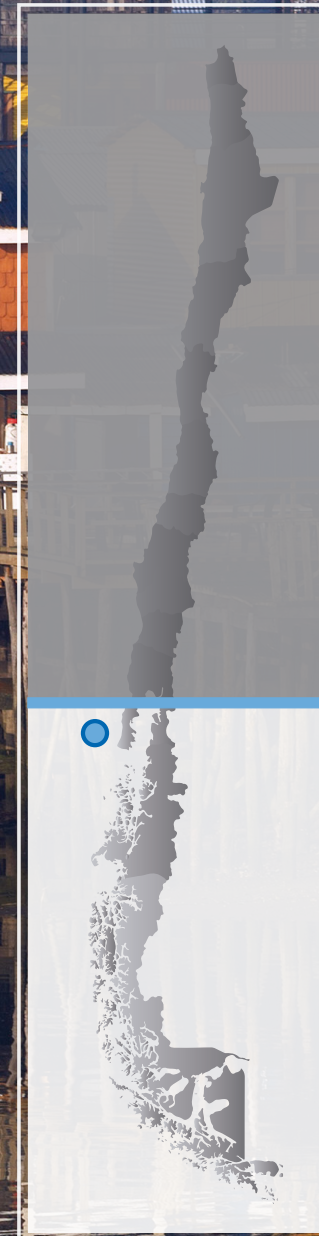


DISTRIBUCIÓN DEL ERROR



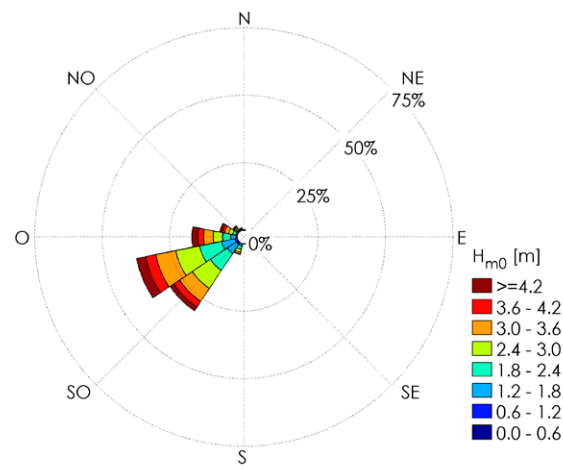
NODO 13 CHILOÉ

Coordenadas del Nodo: 43°S, 76°O

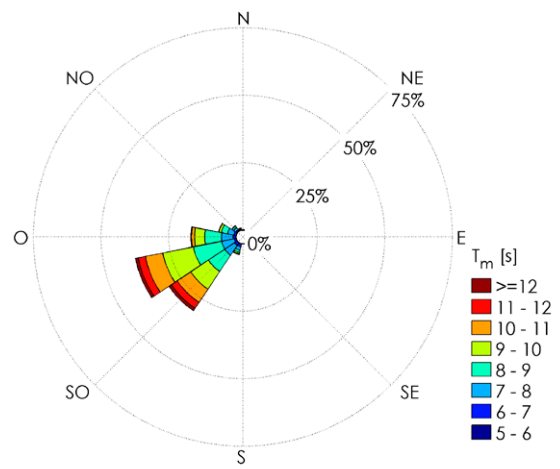


NODO 13: CHILOÉ / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

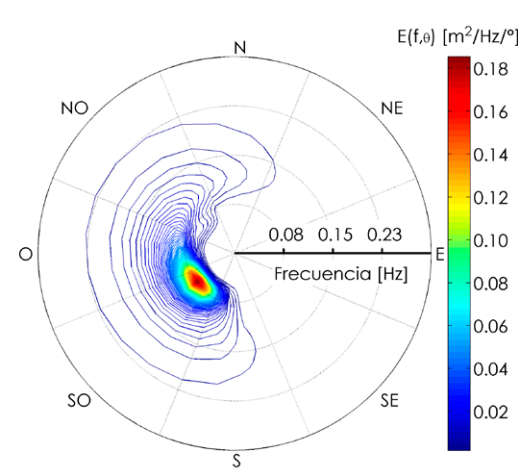
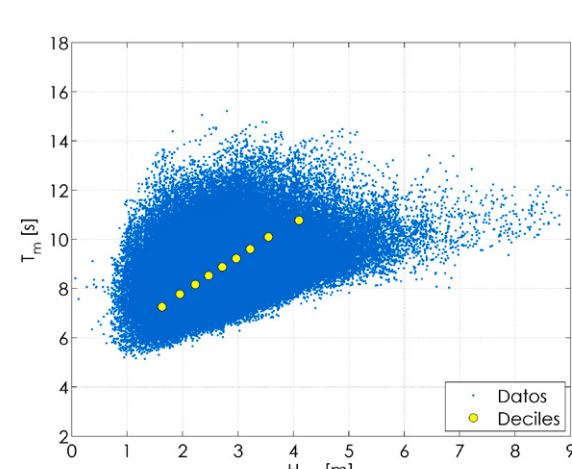


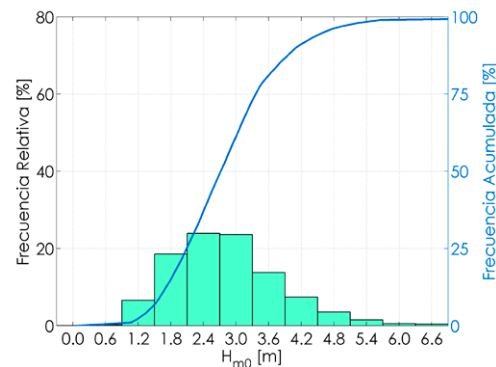
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



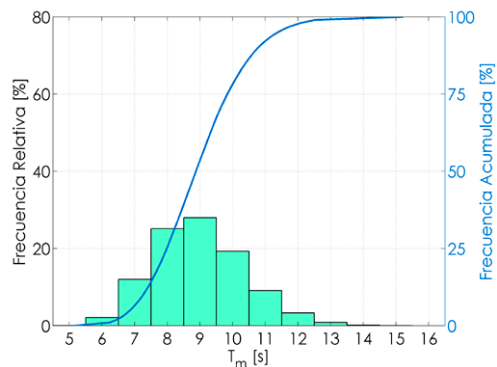
PARÁMETROS PROMEDIO

H _{m0} [m]	2.81
T _z [s]	8.0
T _e [s]	10.4
T _m [s]	9.0
T _p [s]	12.7
D _m [°]	247
D _p [°]	239
ε	0.80
ν	0.50
Q _p	2.01
γ	1.38
s	14.0

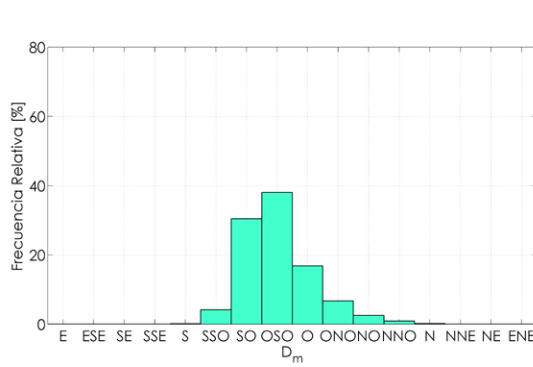
HISTOGRAMA DE H_{m0}



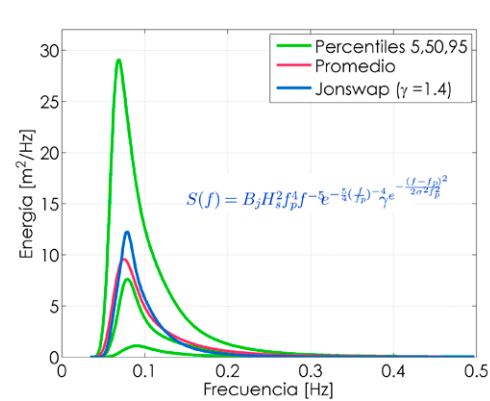
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

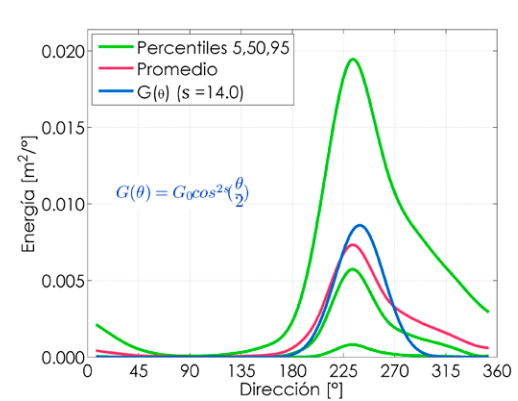


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H _{m0} [m]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
]0-0.6[				<0.1	<0.1	<0.1			0.0
]0.6-1.2[	<0.1	<0.1	<0.1	1.4	0.9	<0.1	<0.1	<0.1	2.3
]1.2-1.8[		<0.1	0.2	7.7	4.3	0.4	<0.1	<0.1	12.6
]1.8-2.4[	<0.1	<0.1	0.3	13.6	7.2	0.9	0.1	<0.1	22.1
]2.4-3[	<0.1	<0.1	0.2	14.4	8.0	1.4	0.2	<0.1	24.2
]3-3.6[			<0.1	10.5	7.7	1.4	0.1	<0.1	19.8
]3.6-4.2[			<0.1	4.8	4.4	0.8	<0.1		10.1
]4.2-4.8[			<0.1	3.6	4.4	0.8	<0.1		8.8
TOTAL	0.0	0.0	0.8	56.0	36.9	5.7	0.6	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T _m [s]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
]5-6[	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.5
]6-7[	<0.1	<0.1	0.3	2.4	2.0	1.1	0.2	<0.1	6.0
]7-8[			0.2	7.7	8.3	2.4	0.2	<0.1	18.9
]8-9[			<0.1	13.6	12.8	1.6	<0.1		28.1
]9-10[			<0.1	15.2	9.1	0.4	<0.1		24.7
]10-11[			<0.1	10.4	3.6	<0.1			14.0
]11-12[			<0.1	4.6	0.9	<0.1			5.5
]12-13[				2.0	0.2				2.3
TOTAL	0.0	0.0	0.8	56.0	36.9	5.7	0.6	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

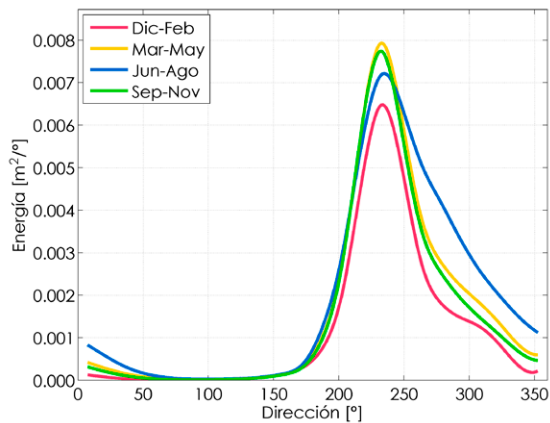
H _{m0} [m]	T _m [s]								TOTAL
	]5-6[	]6-7[	]7-8[	]8-9[	]9-10[	]10-11[	]11-12[	]12-13[	
]0-0.6[		<0.1	<0.1	<0.1	<0.1				0.0
]0.6-1.2[	0.1	0.4	0.7	0.7	0.3	0.1	<0.1		2.3
]1.2-1.8[	0.3	2.0	3.1	3.4	2.3	1.1	0.3	0.1	12.6
]1.8-2.4[	<0.1	2.4	5.5	5.9	4.7	2.5	0.8	0.3	22.1
]2.4-3[		1.1	5.5	6.9	5.5	3.4	1.4	0.5	24.2
]3-3.6[		0.1	3.5	6.2	5.2	3.0	1.3	0.6	19.8
]3.6-4.2[		<0.1	0.7	3.3	3.2	1.8	0.8	0.4	10.1
]4.2-4.8[			<0.1	1.8	3.4	2.3	0.9	0.3	8.8
TOTAL	0.5	6.0	18.9	28.1	24.7	14.0	5.5	2.3	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

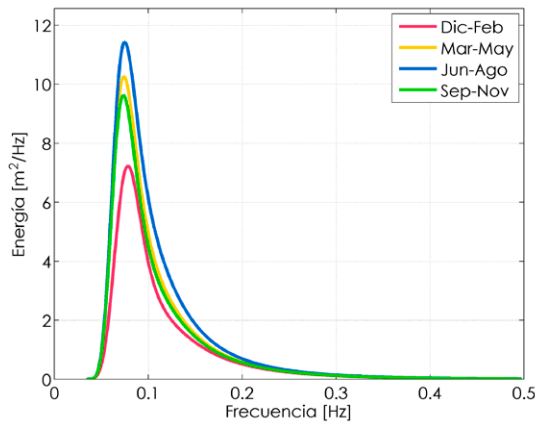
	Prob. Dir.	H _{m0} 50% [m]	H _{m0} 90% [m]	H _{m0} 99% [m]	H _{m0} 12 [m]
E	<0.1%	1.95	2.73	2.73	2.73
ESE	<0.1%	1.67	2.09	2.16	2.16
SE	<0.1%	1.95	2.17	2.18	2.18
SSE	<0.1%	1.94	2.44	2.55	2.55
S	0.1%	1.90	2.89	3.66	3.76
SSO	4.2%	2.35	3.29	4.64	5.88
SO	30.4%	2.59	3.85	5.27	6.33
OSO	38.1%	2.72	4.11	5.59	7.20
O	16.8%	2.91	4.43	6.17	7.85
ONO	6.7%	3.02	4.52	6.30	8.09
NO	2.5%	3.04	4.43	6.20	7.79
NNO	0.9%	3.02	4.53	6.00	6.70
N	0.2%	2.89	4.09	5.74	6.74
NNE	<0.1%	2.74	3.73	5.30	5.30
NE	<0.1%	1.70	2.18	2.18	2.18
ENE	<0.1%	2.17	2.19	2.19	2.19

NODO 13: CHILOÉ / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



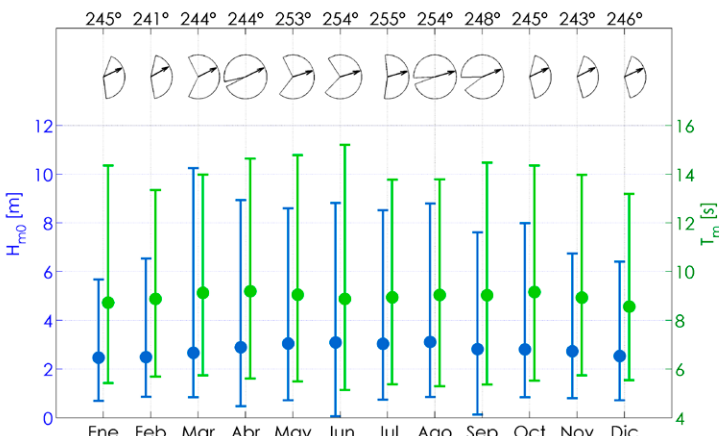
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

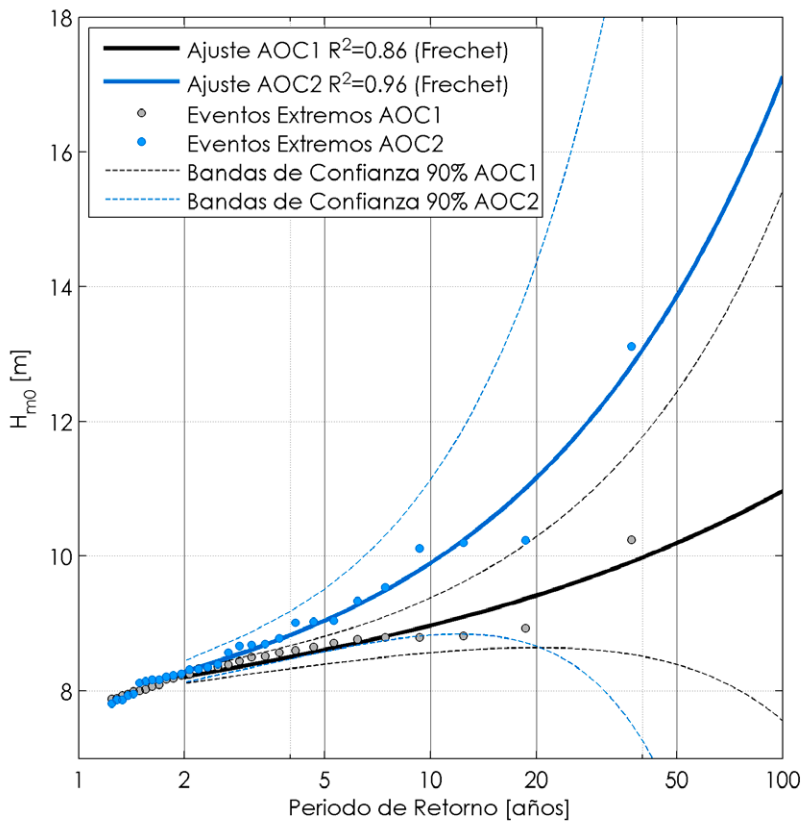
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.50	2.87	3.08	2.79
T_z [s]	7.8	8.2	8.0	8.1
T_e [s]	10.2	10.6	10.4	10.5
T_m [s]	8.7	9.1	9.0	9.0
T_p [s]	12.6	12.9	12.7	12.8
D_m [°]	244	247	254	245
D_p [°]	237	239	244	238
ϵ	0.80	0.80	0.80	0.80
ν	0.51	0.50	0.49	0.50
Q_p	1.96	2.03	2.01	2.04
γ	1.35	1.39	1.36	1.41
S	14.3	14.5	12.4	14.9

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

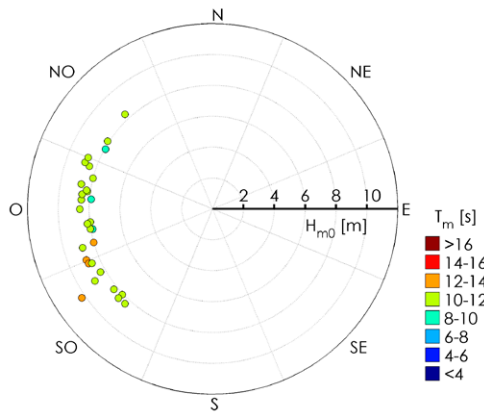


NODO 13: CHILOÉ / CLIMA EXTREMO

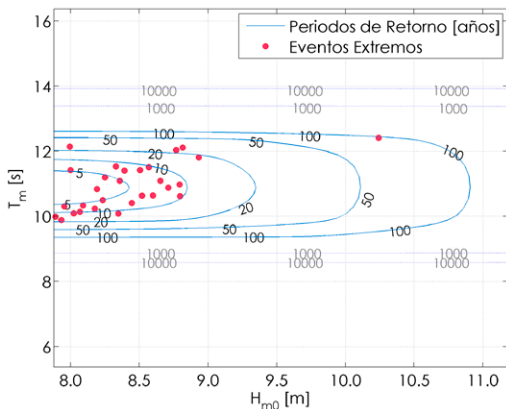
PERIODOS DE RETORNO UNIVARIADO



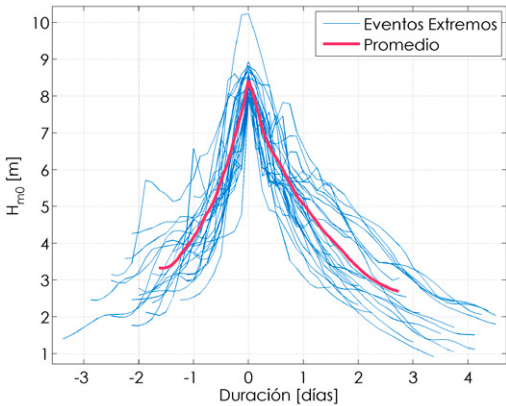
DISPERSIÓN DE EXTREMOS



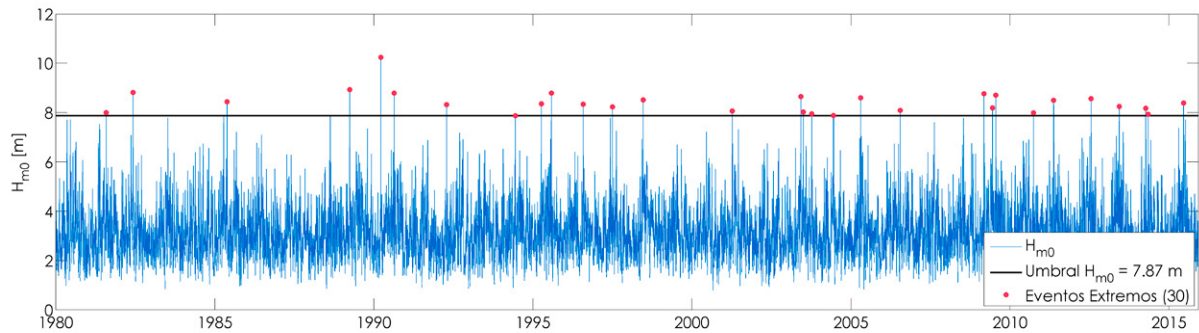
PERIODOS DE RETORNO BIVARIADO



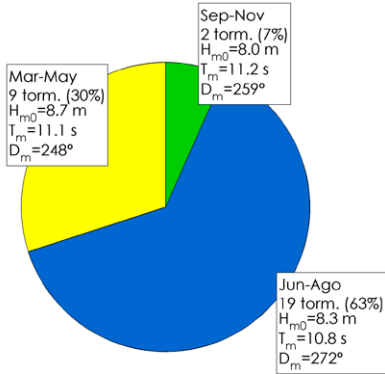
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 13: CHILOÉ / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 33.6	primer modo	mar de fondo	98.8			0.2	63.7	34.8	1.3	<0.1	
		mar de viento	1.2				16.1	44.1	36.9	2.9	
Bimodal 46.4	primer modo	mar de fondo	97.5		<0.1	0.6	65.0	24.6	9.0	0.8	<0.1
		mar de viento	2.5		0.3	4.0	4.5	6.7	51.6	30.8	2.1
	segundo modo	mar de fondo	96.3	<0.1	0.3	2.6	16.1	8.5	68.1	3.9	0.5
		mar de viento	3.7	1.8	4.9	28.8	9.3	3.2	25.7	22.3	4.0
Trimodal 16.2	primer modo	mar de fondo	94.0	<0.1	<0.1	4.2	51.5	31.6	9.6	2.8	0.1
		mar de viento	6.0	0.7	0.9	18.7	8.0	5.4	29.7	33.1	3.5
	segundo modo	mar de fondo	86.5	0.2	1.0	11.4	26.9	21.5	30.2	7.8	1.1
		mar de viento	13.5	1.8	4.4	35.3	11.5	3.3	19.5	19.7	4.5
	tercer modo	mar de fondo	93.5	0.5	2.0	10.4	14.4	12.2	50.4	8.7	1.4
		mar de viento	6.5	5.1	9.6	25.3	13.5	4.8	13.1	18.7	9.8

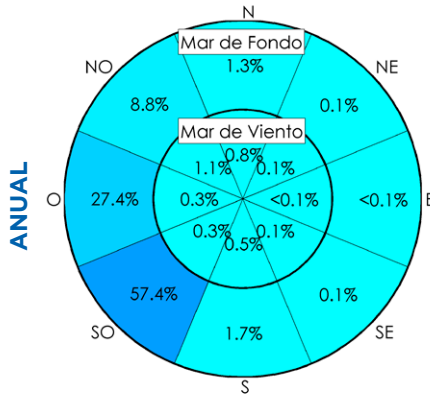
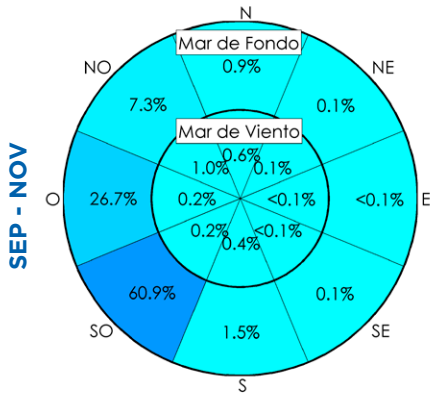
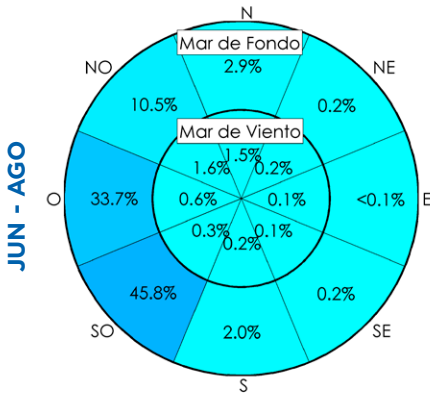
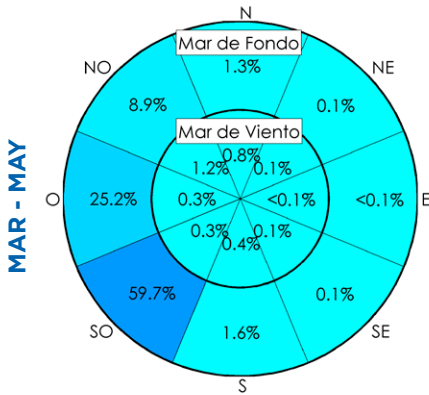
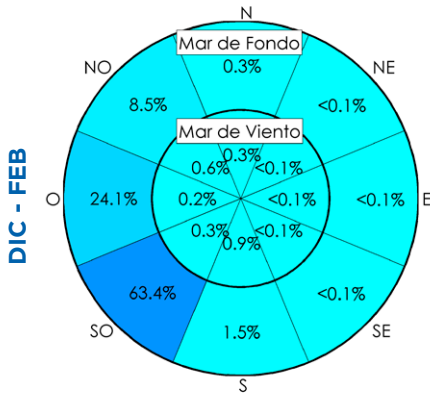
NOTA: estados de mar con más de 3 modos abarcan el 3.7% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	46.9	28.8	11.5	22.2	27.3
MF del SO	10.3	21.8	22.8	29.4	21.1
MF del O	5.4	10.6	17.9	12.2	11.5
MF del O + MF del NO	12.5	6.6	3.2	5.4	6.9
MF del SO + MF del O	0.8	3.7	10.5	6.8	5.5
MF del SO + MF del O + MF del NO	8.2	6.2	2.0	5.0	5.4
MF del S + MF del SO + MF del NO	3.0	2.3	1.0	1.3	1.9
MF del N + MF del SO + MF del NO	0.7	1.6	1.6	1.1	1.2
MF del N + MF del SO	<0.1	0.9	2.9	0.9	1.2
MF del SO + MF del NO + MV del S	1.8	1.0	0.2	0.6	0.9
Otros	10.2	16.4	26.5	15.0	17.1
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

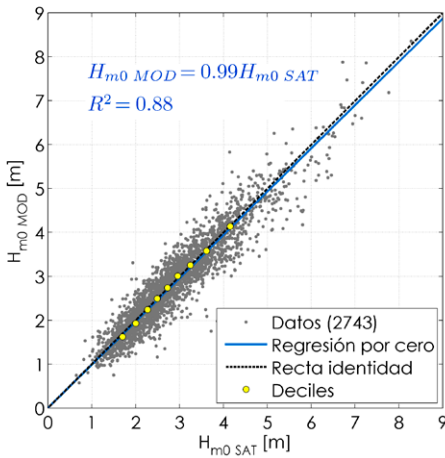


NODO 13: CHILOÉ / INCERTIDUMBRE

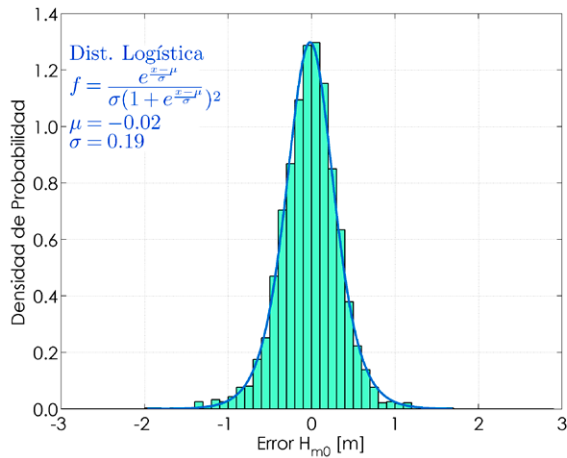
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.86	Intercepto mejor regresión lineal [m]	0.14
Promedio H_{m0} modelo [m]	2.84	Pendiente mejor regresión lineal	0.94
Desviación estándar H_{m0} satélite [m]	1.01	R^2 mejor regresión lineal	0.88
Desviación estándar H_{m0} modelo [m]	1.01	Mínimo error relativo (RE_{min})	-53%
Error absoluto medio (MAE) [m]	0.26	Máximo error relativo (RE_{max})	81%
Raíz del error cuadrático medio (RMSE) [m]	0.35	Error relativo medio (RE_{mean})	0%
Sesgo (BIAS) [m]	-0.02	Mínimo error relativo absoluto (ARE_{min})	0.005%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	81%
Índice de dispersión (SI)	0.12	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN

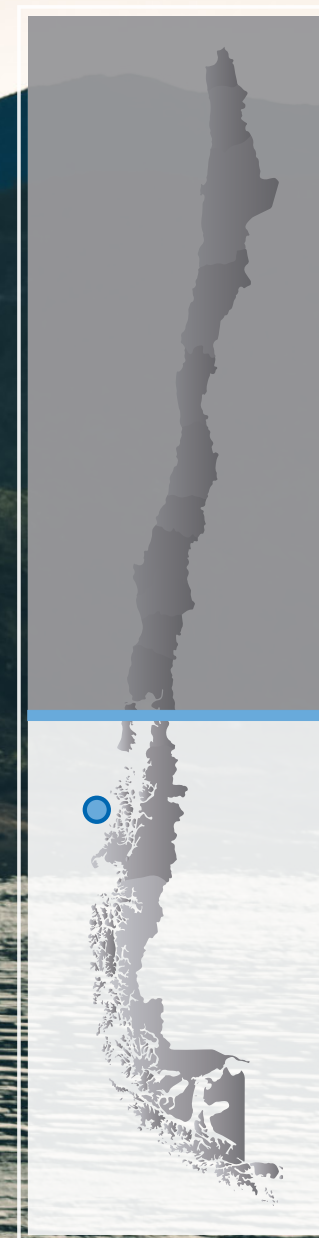


DISTRIBUCIÓN DEL ERROR



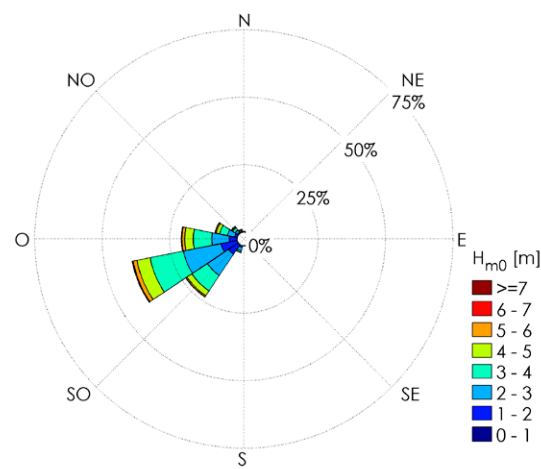
NODO 14 **ARCHIPIÉLAGO** **DE LOS CHONOS**

Coordenadas del Nodo: 45°S, 76°O

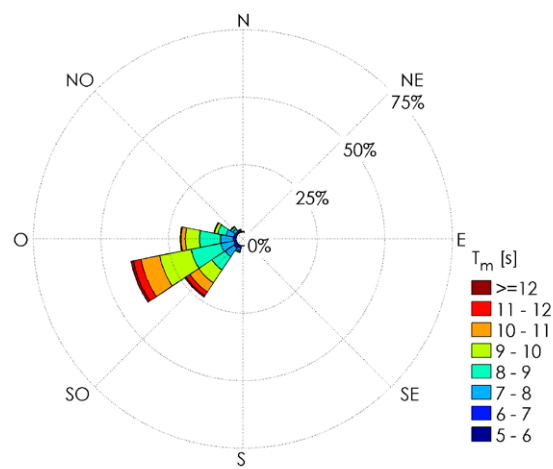


NODO 14: ARCHIPIÉLAGO DE LOS CHONOS / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

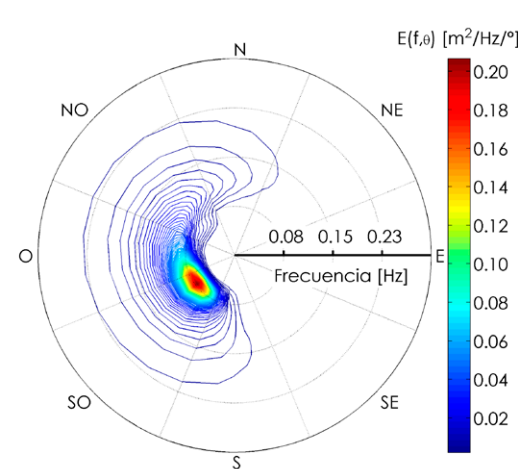
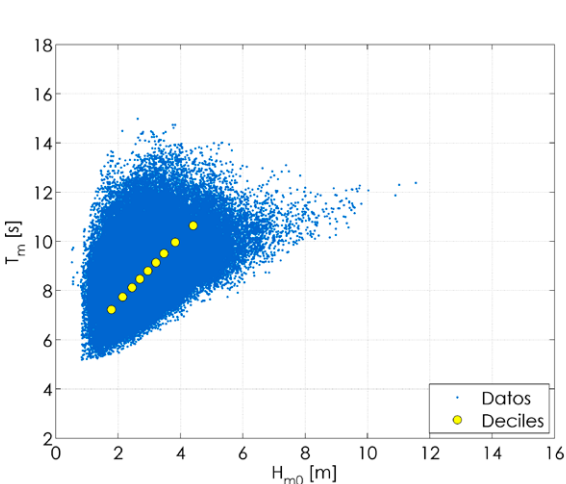


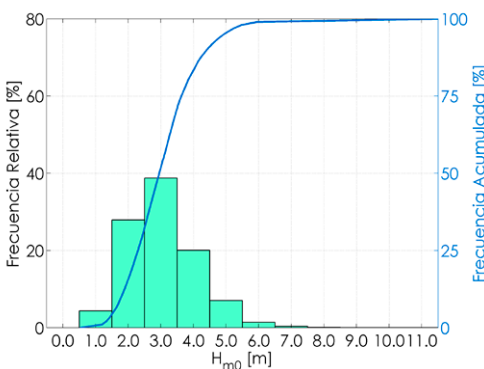
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



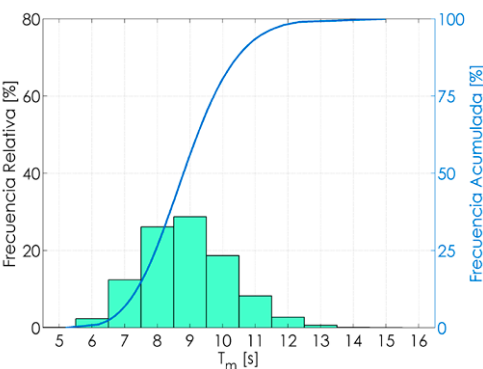
PARÁMETROS PROMEDIO

H _{m0} [m]	3.05
T _z [s]	8.0
T _e [s]	10.3
T _m [s]	8.9
T _p [s]	12.6
D _m [°]	252
D _p [°]	243
ε	0.80
ν	0.50
Q _p	1.99
γ	1.36
s	12.9

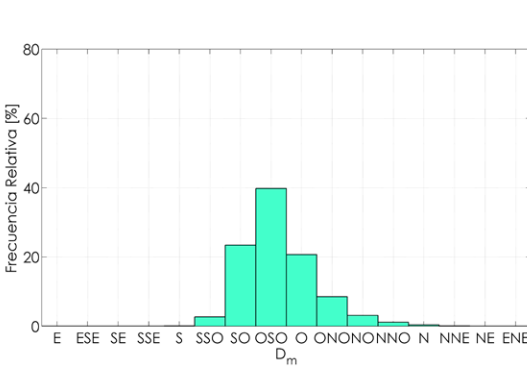
HISTOGRAMA DE H_{m0}



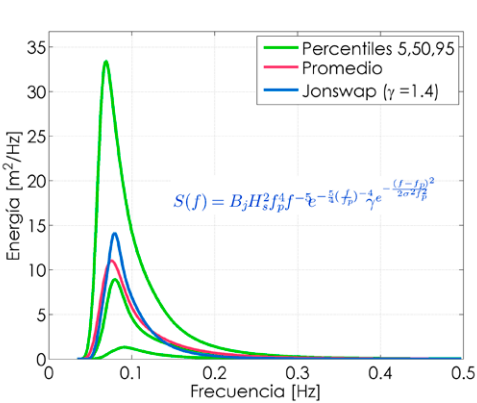
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

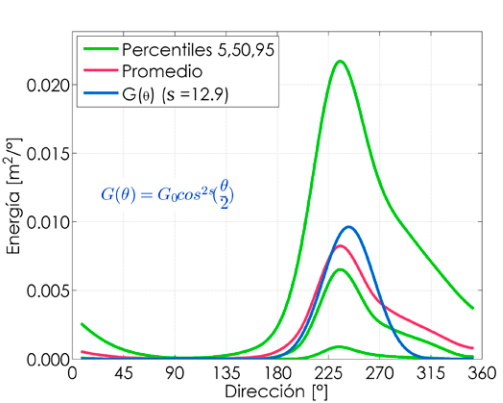


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H _{m0} [m]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-1[			<0.1	0.1	<0.1	<0.1	<0.1		0.2
[1-2[	<0.1	<0.1	0.2	8.0	6.3	0.8	<0.1	<0.1	15.4
[2-3[	<0.1	<0.1	0.3	18.4	14.6	2.4	0.3	<0.1	36.0
[3-4[	<0.1	<0.1	<0.1	14.2	14.4	2.6	0.3	<0.1	31.6
[4-5[			<0.1	4.8	6.4	0.9	0.1	<0.1	12.2
[5-6[			<0.1	1.2	2.0	0.3	<0.1		3.6
[6-7[			<0.1	0.2	0.4	<0.1	<0.1		0.7
[7-8[				<0.1	0.2	<0.1	<0.1		0.3
TOTAL	0.0	0.1	0.5	47.1	44.3	7.1	0.8	0.1	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T _m [s]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[	<0.1	<0.1	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.5
[6-7[	<0.1	<0.1	0.3	2.4	1.9	1.4	0.3	<0.1	6.3
[7-8[	<0.1	<0.1	0.2	7.1	9.1	2.9	0.4	<0.1	19.6
[8-9[			<0.1	11.6	15.6	2.2	0.1		29.6
[9-10[			<0.1	12.4	11.5	0.6	<0.1		24.5
[10-11[			<0.1	8.3	4.5	<0.1			13.0
[11-12[				3.6	1.3	<0.1			4.9
[12-13[				1.4	0.3				1.6
TOTAL	0.0	0.1	0.5	47.1	44.3	7.1	0.8	0.1	100.0

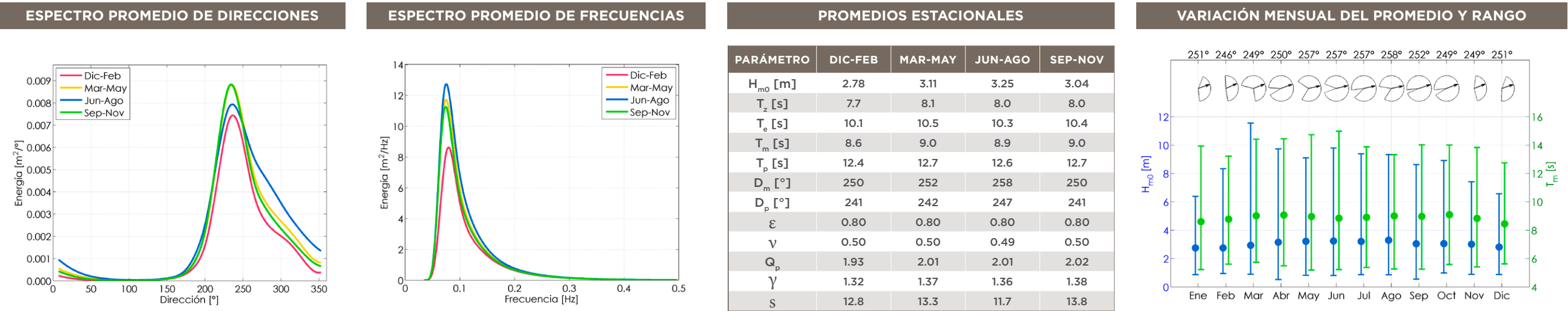
TABLA DE FRECUENCIA H_{m0} y T_m [%]

H _{m0} [m]	T _m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-1[	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			0.2
[1-2[	0.5	2.7	4.2	4.1	2.6	1.0	0.3	<0.1	15.4
[2-3[	<0.1	3.3	9.5	10.4	7.3	3.8	1.3	0.4	36.0
[3-4[		0.3	5.6	11.0	8.2	4.2	1.7	0.7	31.6
[4-5[		<0.1	0.3	3.6	4.6	2.5	0.9	0.3	12.2
[5-6[			<0.1	0.4	1.6	1.1	0.4	<0.1	3.6
[6-7[				<0.1	0.2	0.3	0.1	<0.1	0.7
[7-8[					<0.1	0.1	<0.1	<0.1	0.3
TOTAL	0.5	6.3	19.6	29.6	24.5	13.0	4.9	1.6	100.0

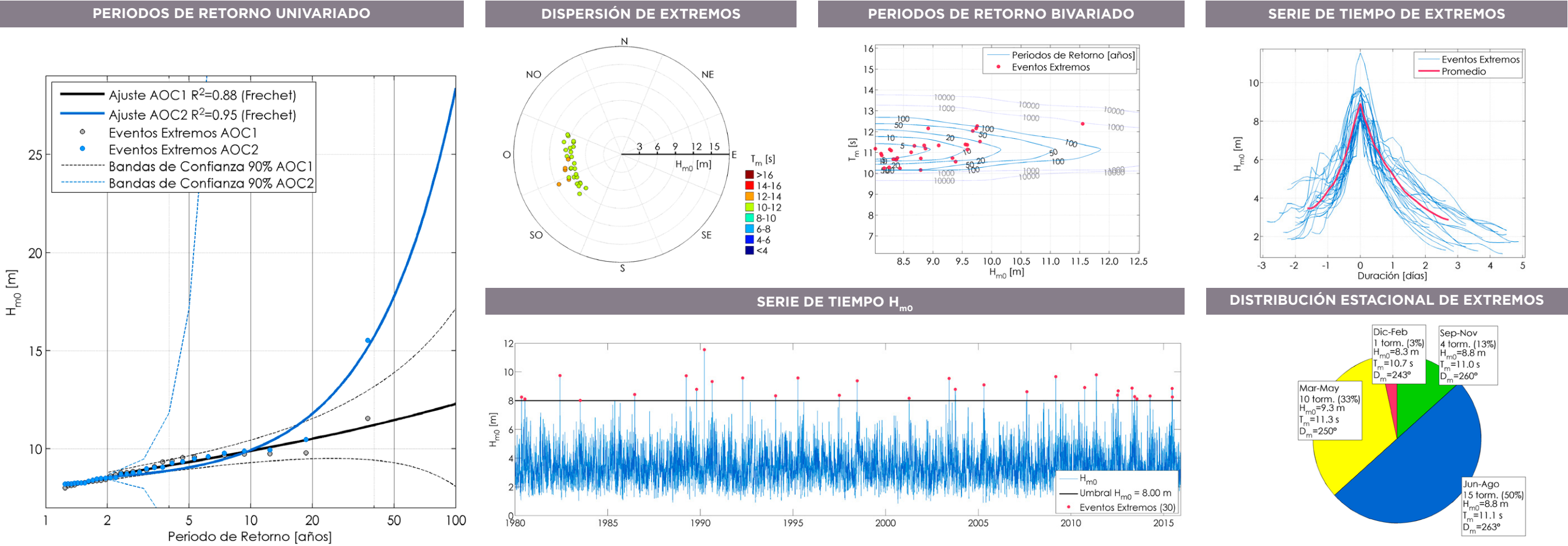
PERCENTILES DE H_{m0} POR DIRECCIÓN

	Prob. Dir.	H _{m0} 50% [m]	H _{m0} 90% [m]	H _{m0} 99% [m]	H _{m0} 12 [m]
E	<0.1%	2.55	3.04	3.07	3.07
ESE	<0.1%	2.56	2.95	3.19	3.19
SE	<0.1%	2.44	3.07	3.11	3.11
SSE	<0.1%	2.30	2.84	3.08	3.08
S	0.1%	2.11	2.78	3.66	3.74
SSO	2.7%	2.53	3.48	5.19	6.41
SO	23.4%	2.79	4.11	5.56	6.92
OSO	39.7%	2.96	4.45	5.98	7.61
O	20.7%	3.12	4.65	6.16	7.98
ONO	8.5%	3.17	4.63	6.35	8.26
NO	3.1%	3.10	4.52	5.94	7.16
NNO	1.1%	3.10	4.34	5.85	6.98
N	0.3%	3.03	4.44	5.40	6.33
NNE	<0.1%	2.79	3.69	4.29	4.33
NE	<0.1%	2.49	2.93	3.06	3.06
ENE	<0.1%	1.97	3.08	3.11	3.11

NODO 14: ARCHIPIÉLAGO DE LOS CHONOS / CLIMA MEDIO ESTACIONAL



NODO 14: ARCHIPIÉLAGO DE LOS CHONOS / CLIMA EXTREMO



NODO 14: ARCHIPIÉLAGO DE LOS CHONOS / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 36.2	primer modo	mar de fondo	98.2			<0.1	57.9	40.2	1.8	<0.1	
		mar de viento	1.8				17.1	51.9	27.6	3.4	
Bimodal 44.4	primer modo	mar de fondo	96.9	<0.1	<0.1	0.4	58.0	28.3	12.1	1.1	<0.1
		mar de viento	3.1	0.8	1.2	4.3	6.8	7.5	50.4	26.6	2.4
	segundo modo	mar de fondo	95.9	0.1	<0.1	2.1	17.9	9.3	65.6	4.6	0.3
		mar de viento	4.1	5.9	3.4	15.0	18.7	2.8	22.1	24.1	8.0
Trimodal 15.5	primer modo	mar de fondo	91.4	<0.1		3.0	46.7	34.1	12.3	3.9	0.1
		mar de viento	8.6	2.1	0.8	12.4	17.9	4.4	27.9	28.7	5.8
	segundo modo	mar de fondo	83.2	0.5	0.3	6.5	30.6	21.6	30.0	9.4	1.1
		mar de viento	16.8	4.6	2.8	16.5	27.5	3.2	16.2	21.4	7.8
	tercer modo	mar de fondo	92.5	1.4	0.7	8.6	15.2	12.2	50.1	9.9	1.8
		mar de viento	7.5	8.2	5.9	14.2	17.6	5.4	10.5	23.5	14.7

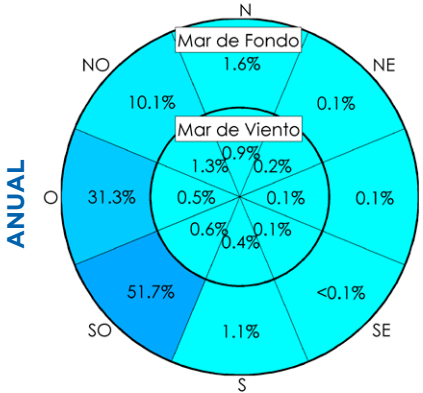
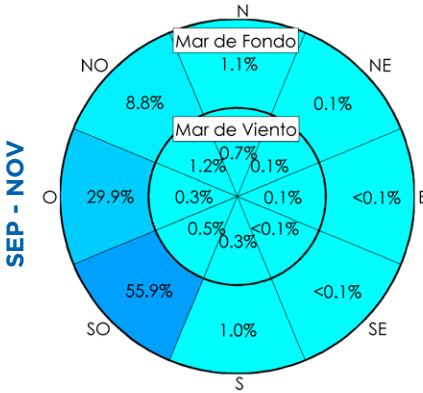
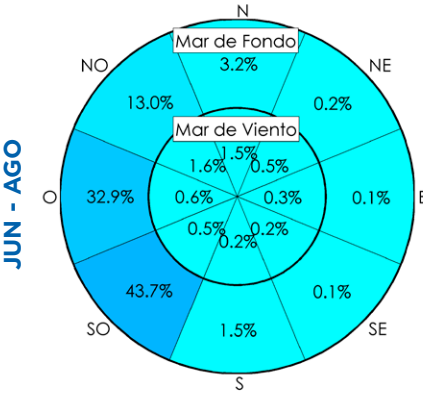
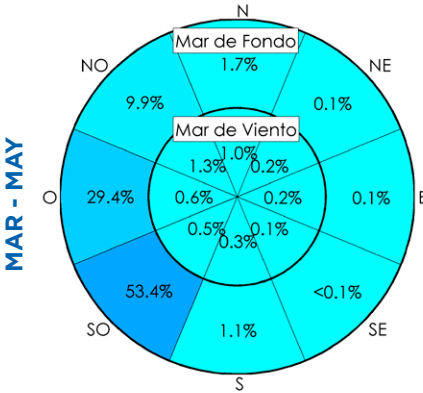
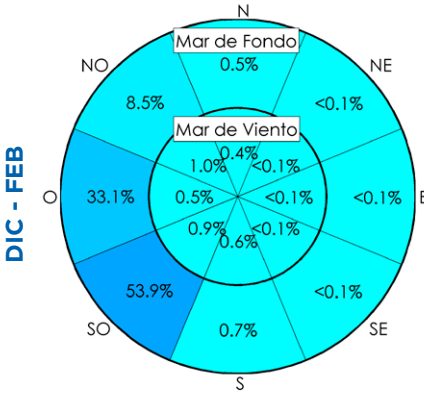
NOTA: estados de mar con más de 3 modos abarcan el 3.9% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	38.6	25.0	13.3	20.8	24.3
MF del SO	11.2	21.7	21.1	28.2	20.6
MF del O	9.7	14.0	18.0	15.4	14.3
MF del O + MF del NO	16.6	7.4	3.6	6.4	8.4
MF del SO + MF del O + MF del NO	8.2	5.3	2.1	4.3	4.9
MF del SO + MF del O	1.2	3.4	8.5	5.9	4.7
MF del N + MF del SO + MF del NO	0.8	1.8	1.8	1.1	1.4
MF del N + MF del SO	<0.1	0.9	2.9	1.0	1.2
MF del N + MF del O	0.2	0.8	2.3	1.1	1.1
MF del S + MF del SO + MF del NO	1.0	1.3	0.9	0.9	1.0
Otros	12.4	18.4	25.6	15.1	17.9
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

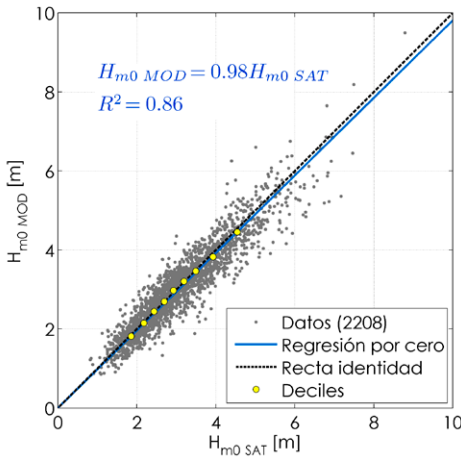


NODO 14: ARCHIPIÉLAGO DE LOS CHONOS / INCERTIDUMBRE

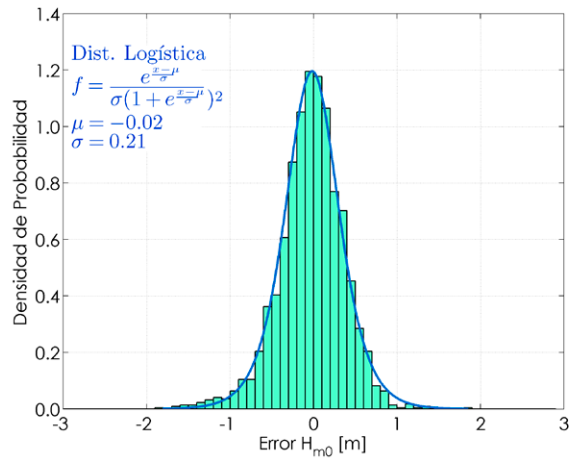
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	3.08	Intercepto mejor regresión lineal [m]	0.27
Promedio H_{m0} modelo [m]	3.05	Pendiente mejor regresión lineal	0.90
Desviación estándar H_{m0} satélite [m]	1.07	R^2 mejor regresión lineal	0.87
Desviación estándar H_{m0} modelo [m]	1.04	Mínimo error relativo (RE_{min})	-50%
Error absoluto medio (MAE) [m]	0.29	Máximo error relativo (RE_{max})	69%
Raíz del error cuadrático medio (RMSE) [m]	0.39	Error relativo medio (RE_{mean})	0%
Sesgo (BIAS) [m]	-0.03	Mínimo error relativo absoluto (ARE_{min})	0.003%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	69%
Índice de dispersión (SI)	0.13	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



NODO 15 GOLFO DE PENAS

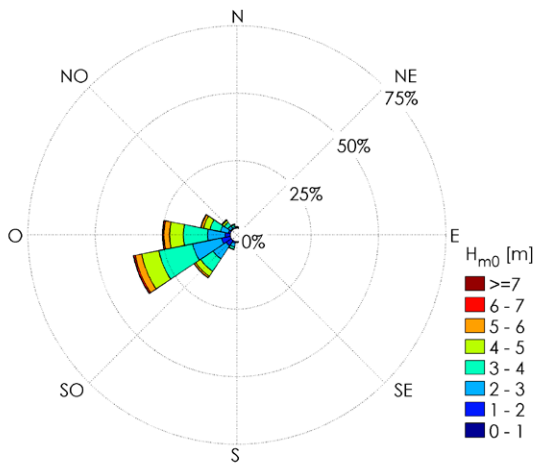
Coordenadas del Nodo: 47°S, 77°O



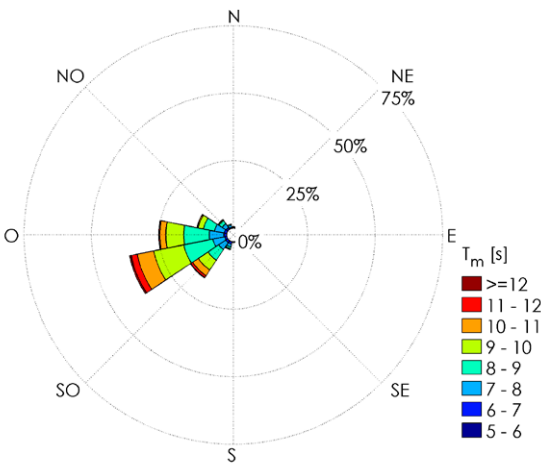
CRÉDITOS FOTOGRAFÍA: DIRECCIÓN DE OBRAS PORTUARIAS

NODO 15: GOLFO DE PENAS / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

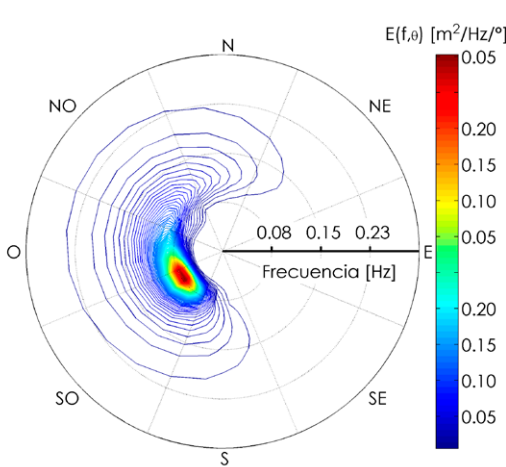
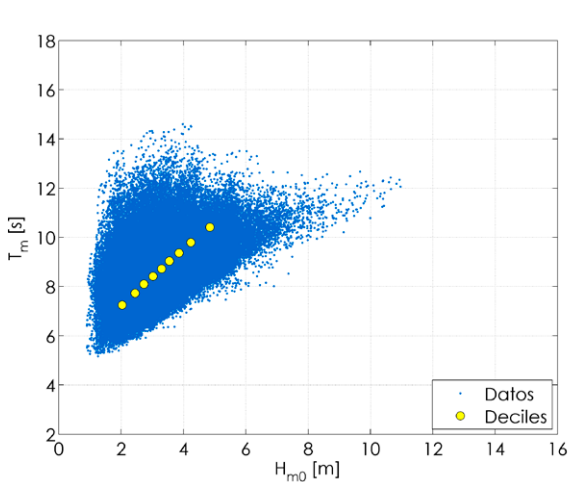


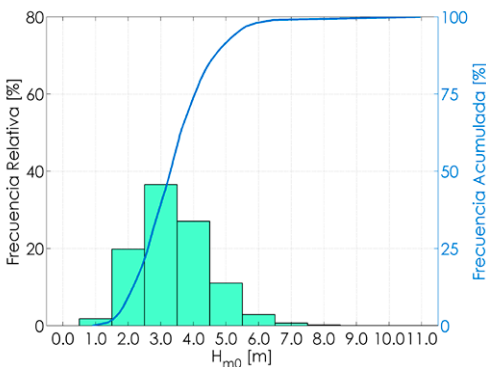
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



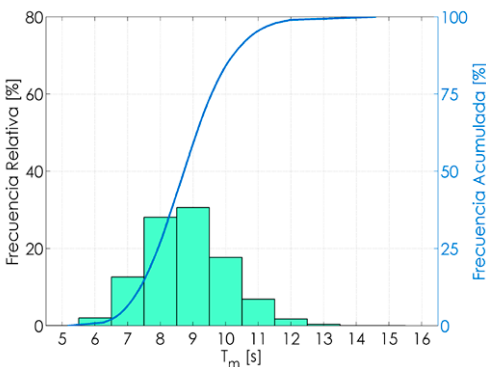
PARÁMETROS PROMEDIO

H _{m0} [m]	3.38
T _z [s]	7.9
T _e [s]	10.2
T _m [s]	8.8
T _p [s]	12.4
D _m [°]	257
D _p [°]	247
ε	0.79
ν	0.49
Q _p	1.95
γ	1.30
s	10.8

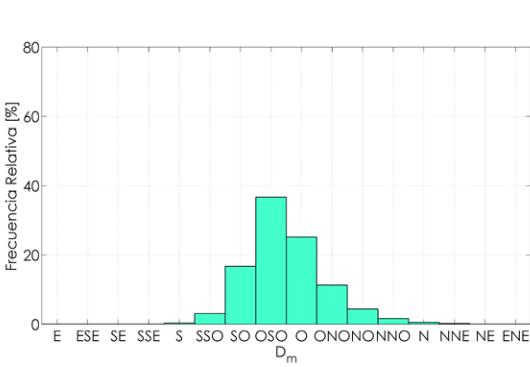
HISTOGRAMA DE H_{m0}



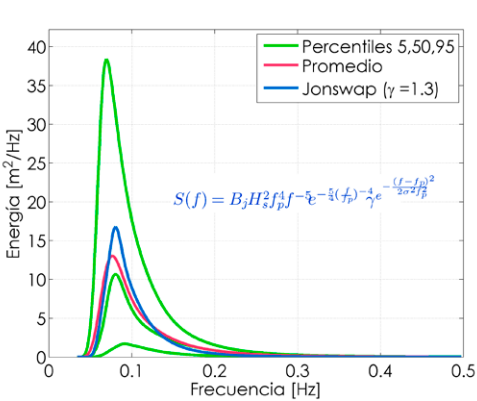
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

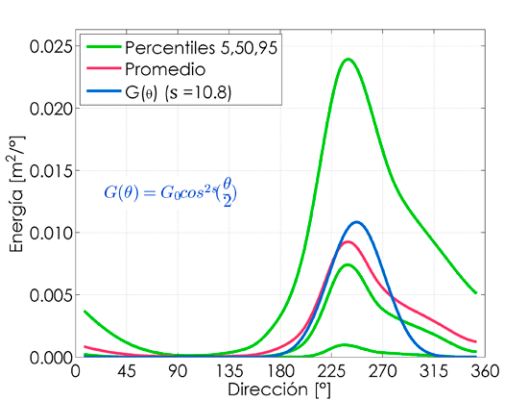


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H _{m0} [m]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-1[				<0.1	<0.1	<0.1			0.0
[1-2[	<0.1	<0.1	0.2	4.4	3.9	0.6	<0.1	<0.1	9.2
[2-3[	<0.1	<0.1	0.6	12.3	13.8	2.8	0.4	<0.1	30.0
[3-4[	<0.1		0.3	12.3	18.1	3.5	0.5	<0.1	34.6
[4-5[			<0.1	5.3	10.3	1.9	0.2	<0.1	17.7
[5-6[			<0.1	1.7	4.1	0.7	<0.1	<0.1	6.5
[6-7[				0.3	0.8	0.1	<0.1		1.3
[7-8[				0.1	0.3	<0.1	<0.1		0.5
TOTAL	0.0	0.0	1.1	36.6	51.3	9.7	1.3	0.1	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T _m [s]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4
[6-7[	<0.1	<0.1	0.5	1.7	1.9	1.4	0.4	<0.1	6.0
[7-8[	<0.1		0.4	6.0	10.0	3.6	0.6	<0.1	20.6
[8-9[			<0.1	10.1	18.2	3.3	0.2	<0.1	31.9
[9-10[			<0.1	9.9	14.1	1.1	<0.1		25.2
[10-11[			<0.1	5.9	5.4	0.1			11.5
[11-12[				2.2	1.3	<0.1			3.6
[12-13[				0.7	0.3	<0.1			0.9
TOTAL	0.0	0.0	1.1	36.6	51.3	9.7	1.3	0.1	100.0

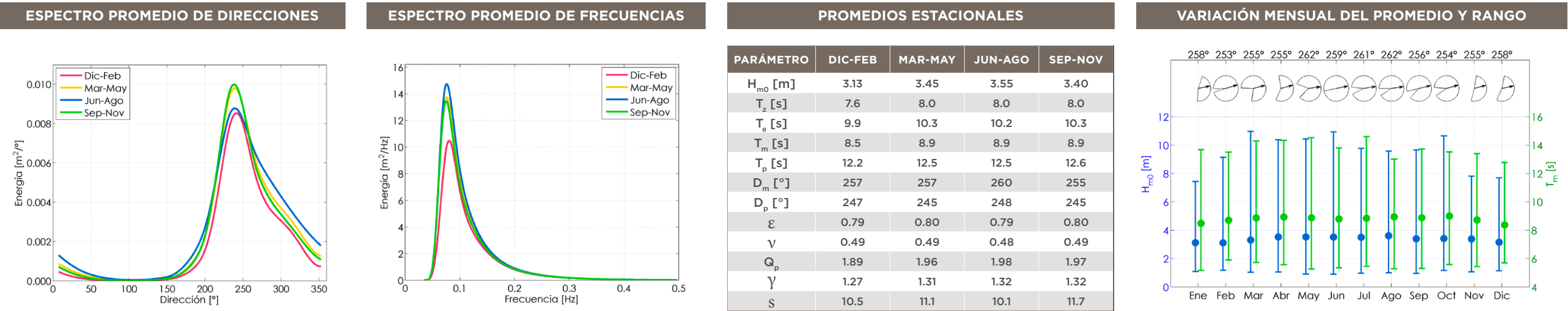
TABLA DE FRECUENCIA H_{m0} y T_m [%]

H _{m0} [m]	T _m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-1[	<0.1	<0.1	<0.1	<0.1					0.0
[1-2[	0.3	1.9	2.9	2.4	1.2	0.4	0.2	<0.1	9.2
[2-3[	0.1	3.6	9.4	8.6	5.2	2.2	0.7	0.2	30.0
[3-4[		0.5	7.7	13.3	8.4	3.3	1.0	0.4	34.6
[4-5[		<0.1	0.7	6.6	6.8	2.7	0.7	0.2	17.7
[5-6[			<0.1	0.8	3.1	1.9	0.5	<0.1	6.5
[6-7[				<0.1	0.4	0.7	0.2	<0.1	1.3
[7-8[				<0.1	<0.1	0.2	0.2	<0.1	0.5
TOTAL	0.4	6.0	20.6	31.9	25.2	11.5	3.6	0.9	100.0

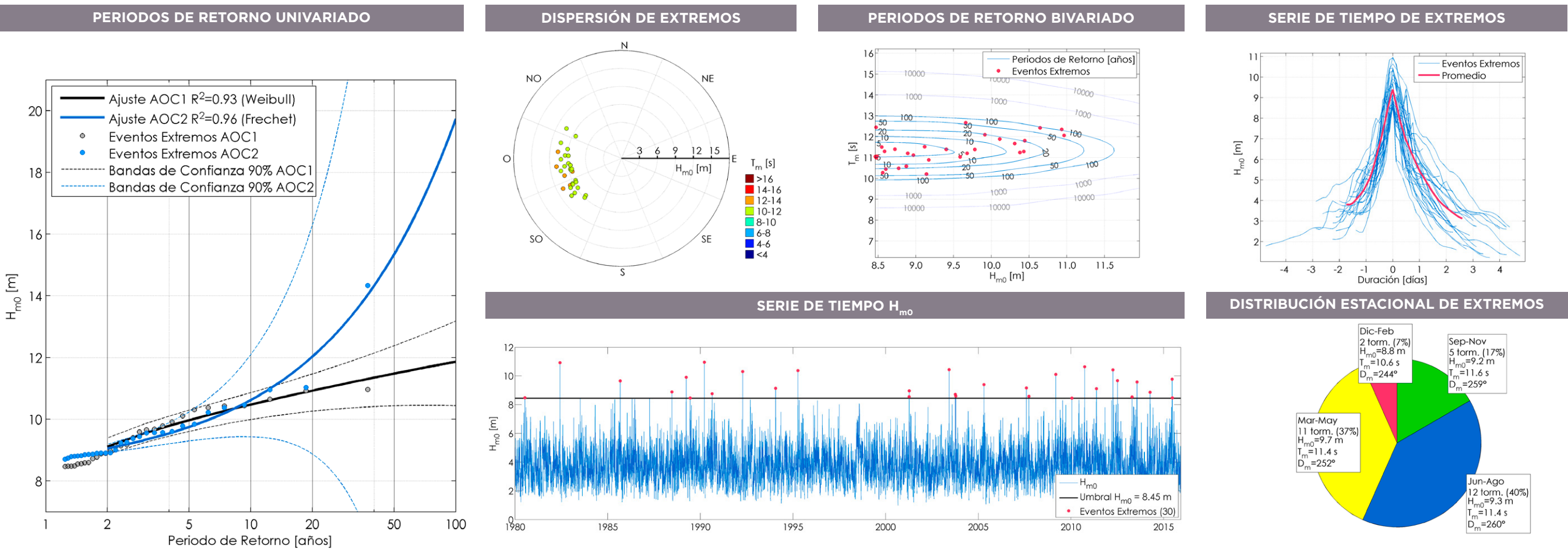
PERCENTILES DE H_{m0} POR DIRECCIÓN

	Prob. Dir.	H _{m0} 50% [m]	H _{m0} 90% [m]	H _{m0} 99% [m]	H _{m0} 12 [m]
E	<0.1%	2.35	2.54	2.57	2.57
ESE	<0.1%	2.58	3.45	3.45	3.45
SE	<0.1%	2.56	2.63	2.63	2.63
SSE	<0.1%	1.94	2.65	2.85	2.85
S	0.3%	2.72	3.52	4.29	4.48
SSO	3.1%	2.66	3.86	5.41	6.44
SO	16.7%	3.03	4.45	5.96	7.76
OSO	36.7%	3.31	4.88	6.57	8.27
O	25.1%	3.45	5.06	6.65	8.48
ONO	11.3%	3.46	5.03	6.61	8.30
NO	4.4%	3.38	4.80	6.26	7.67
NNO	1.6%	3.27	4.72	5.98	7.26
N	0.5%	3.22	4.57	5.79	6.34
NNE	<0.1%	3.07	4.14	5.19	5.75
NE	<0.1%	2.43	3.30	3.43	3.43
ENE	<0.1%	2.12	2.65	2.77	2.77

NODO 15: GOLFO DE PENAS / CLIMA MEDIO ESTACIONAL



NODO 15: GOLFO DE PENAS / CLIMA EXTREMO



NODO 15: GOLFO DE PENAS / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 37.4	primer modo	mar de fondo	96.9			0.2	46.0	51.3	2.4	<0.1	
		mar de viento	3.1			<0.1	13.5	50.9	32.0	3.5	
Bimodal 42.6	primer modo	mar de fondo	95.5			1.0	47.3	35.3	14.5	1.7	<0.1
		mar de viento	4.5	<0.1		3.6	5.3	9.6	49.4	28.5	3.5
	segundo modo	mar de fondo	96.1	<0.1	<0.1	3.2	17.9	10.9	61.7	5.7	0.5
		mar de viento	3.9	1.3	2.3	14.8	6.4	3.6	33.1	31.6	6.8
Trimodal 15.6	primer modo	mar de fondo	90.3			6.4	38.4	36.2	13.3	5.4	0.4
		mar de viento	9.7	0.4	0.2	12.5	7.0	3.5	31.2	36.2	9.1
	segundo modo	mar de fondo	86.1	0.2	0.1	11.1	26.2	21.0	29.0	10.9	1.5
		mar de viento	13.9	1.3	1.9	19.9	9.7	2.3	25.8	30.2	8.8
	tercer modo	mar de fondo	93.3	0.5	0.5	12.0	17.1	11.6	46.2	10.3	1.8
		mar de viento	6.7	4.0	5.8	19.1	15.1	6.2	14.2	24.7	11.0

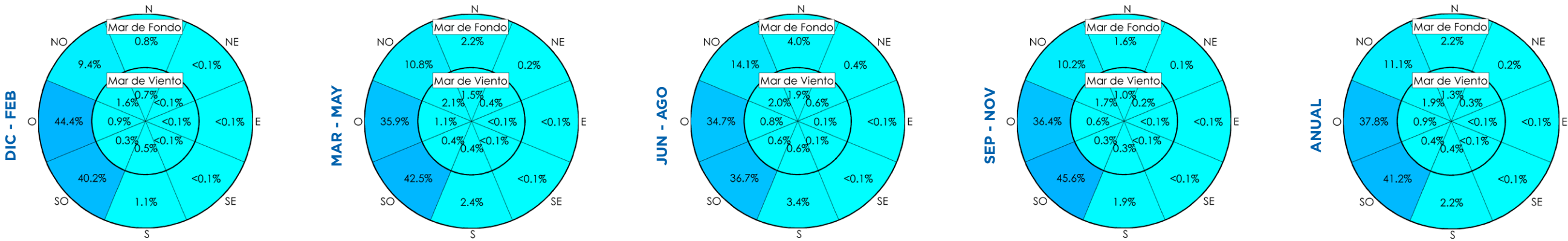
NOTA: estados de mar con más de 3 modos abarcan el 4.5% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO + MF del NO	28.2	19.5	12.5	18.2	19.6
MF del O	16.1	18.0	19.4	20.8	18.6
MF del SO	9.3	18.0	16.9	22.5	16.7
MF del O + MF del NO	21.3	9.4	4.7	8.0	10.8
MF del SO + MF del O + MF del NO	6.4	3.9	1.7	3.2	3.8
MF del SO + MF del O	1.4	3.0	5.9	4.2	3.7
MF del S + MF del SO + MF del NO	1.4	1.7	1.6	1.5	1.6
MF del N + MF del O	0.4	1.3	3.0	1.5	1.5
MF del N + MF del SO	0.1	1.0	3.0	1.1	1.3
MF del N + MF del SO + MF del NO	0.7	1.6	1.4	1.2	1.2
Otros	14.8	22.7	29.9	17.7	21.3
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

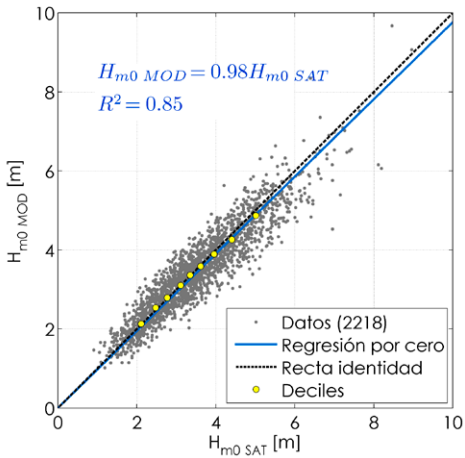


NODO 15: GOLFO DE PENAS / INCERTIDUMBRE

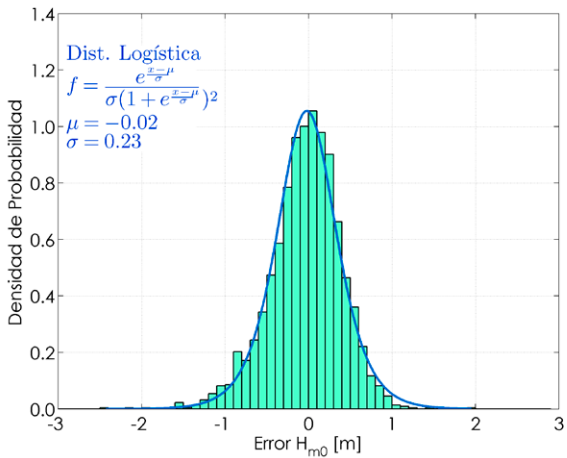
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	3.47	Intercepto mejor regresión lineal [m]	0.42
Promedio H_{m0} modelo [m]	3.43	Pendiente mejor regresión lineal	0.87
Desviación estándar H_{m0} satélite [m]	1.15	R^2 mejor regresión lineal	0.86
Desviación estándar H_{m0} modelo [m]	1.07	Mínimo error relativo (RE_{min})	-39%
Error absoluto medio (MAE) [m]	0.33	Máximo error relativo (RE_{max})	62%
Raíz del error cuadrático medio (RMSE) [m]	0.43	Error relativo medio (RE_{mean})	0%
Sesgo (BIAS) [m]	-0.04	Mínimo error relativo absoluto (ARE_{min})	0.007%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	62%
Índice de dispersión (SI)	0.12	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN



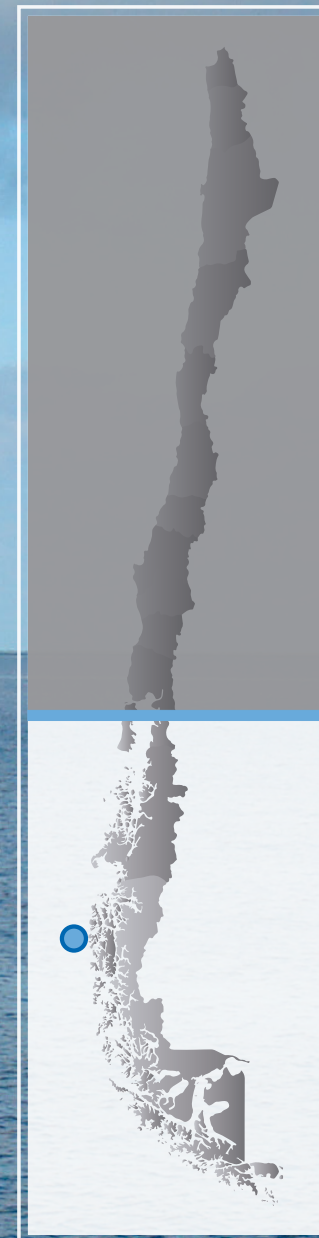
DISTRIBUCIÓN DEL ERROR



NODO 16

ISLA ESMERALDA

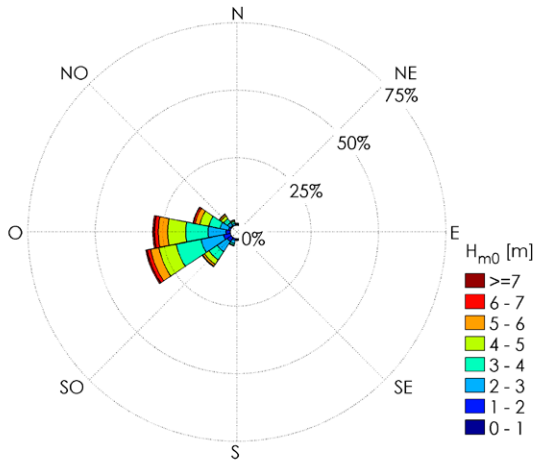
Coordenadas del Nodo: 49°S, 77°O



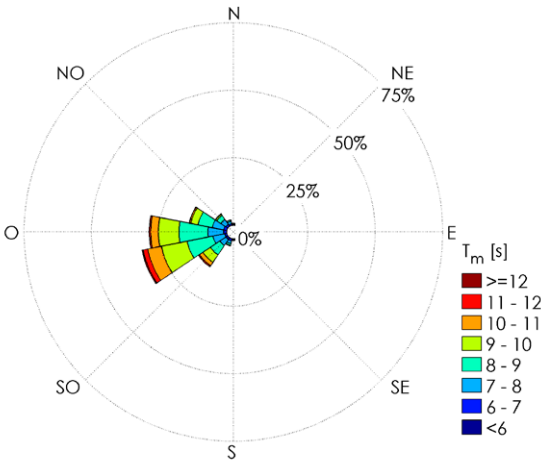
CRÉDITOS FOTOGRAFÍA: MARIO CÁCERES

NODO 16: ISLA ESMERALDA / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

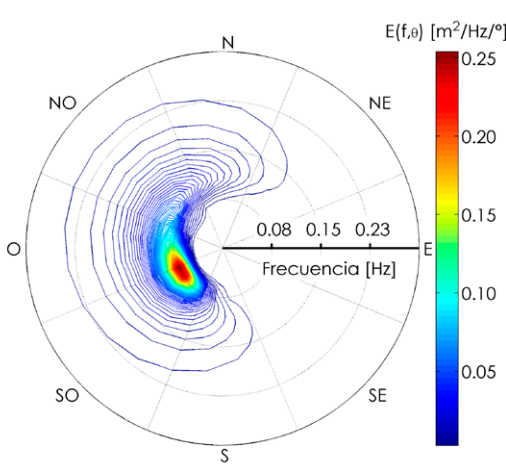
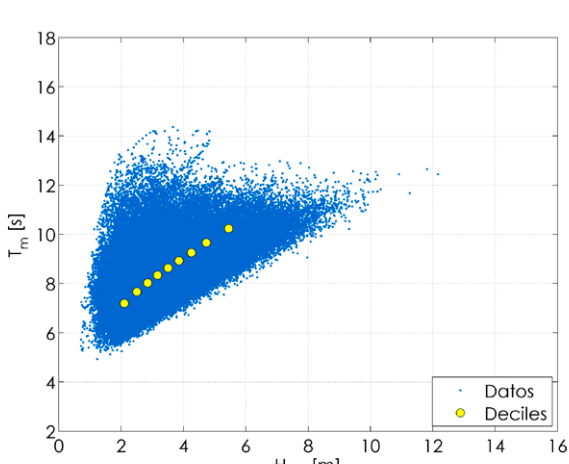


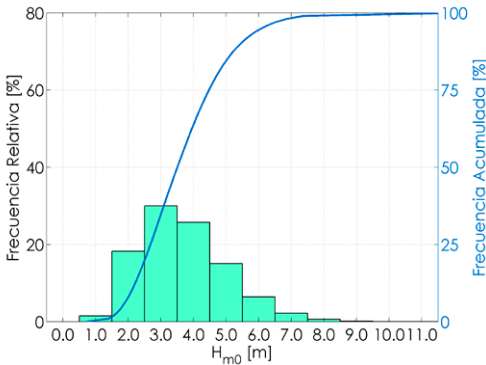
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



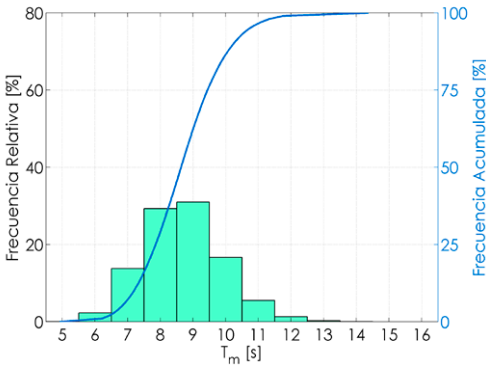
PARÁMETROS PROMEDIO

H _{m0} [m]	3.67
T _z [s]	7.8
T _e [s]	10.1
T _m [s]	8.7
T _p [s]	12.3
D _m [°]	262
D _p [°]	251
ε	0.79
ν	0.48
Q _p	1.93
γ	1.28
s	9.7

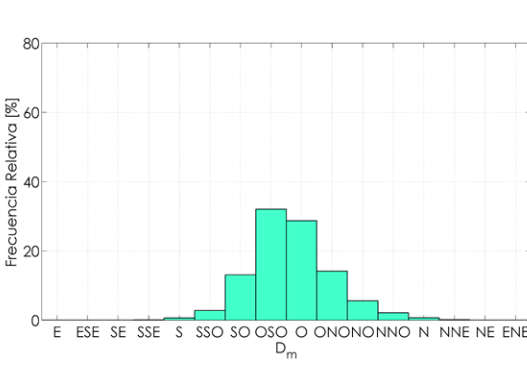
HISTOGRAMA DE H_{m0}



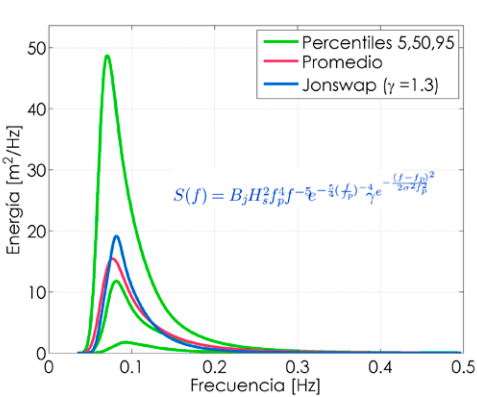
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

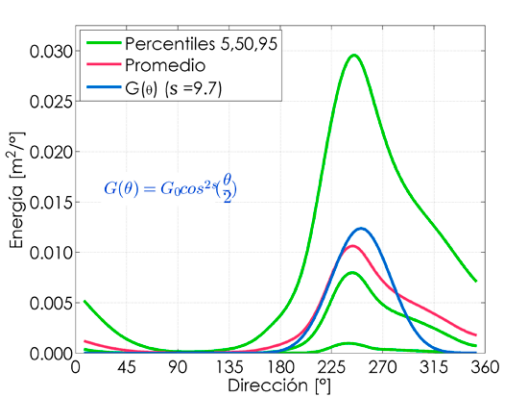


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H _{m0} [m]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-1[				<0.1	<0.1	<0.1			0.0
[1-2[	<0.1	<0.1	0.3	3.5	3.3	0.6	<0.1	<0.1	7.8
[2-3[	<0.1	<0.1	0.8	9.2	13.1	3.1	0.5	<0.1	26.8
[3-4[			0.3	8.3	16.0	3.8	0.5	<0.1	29.0
[4-5[			<0.1	4.9	12.6	2.9	0.3		20.7
[5-6[			<0.1	2.2	6.4	1.4	0.1		10.1
[6-7[			<0.1	0.8	2.6	0.5	<0.1		3.8
[7-8[				0.3	1.2	0.2	<0.1		1.7
TOTAL	0.0	0.0	1.6	29.2	55.1	12.4	1.6	0.1	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T _m [s]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.5
[6-7[	<0.1	<0.1	0.8	1.5	2.1	1.8	0.6	<0.1	6.7
[7-8[			0.6	5.4	10.8	4.6	0.6		21.9
[8-9[			0.1	8.9	19.6	4.2	0.3		33.1
[9-10[			<0.1	7.8	14.9	1.6	<0.1		24.3
[10-11[			<0.1	4.0	6.0	0.2			10.1
[11-12[				1.3	1.5	<0.1			2.7
[12-13[				0.4	0.3	<0.1			0.6
TOTAL	0.0	0.0	1.6	29.2	55.1	12.4	1.6	0.1	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

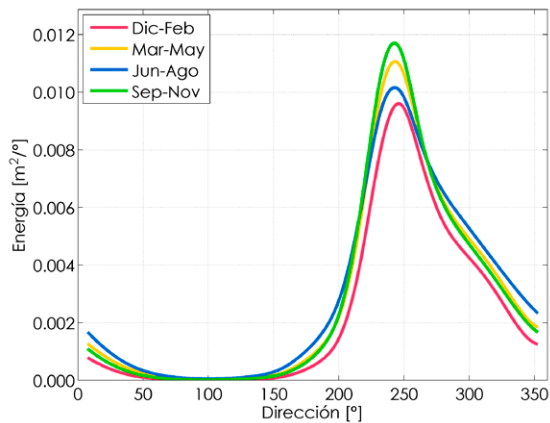
H _{m0} [m]	T _m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-1[	<0.1	<0.1	<0.1	<0.1					0.0
[1-2[	0.3	1.7	2.5	2.0	0.8	0.3	0.1	<0.1	7.8
[2-3[	0.1	4.1	9.1	7.7	3.7	1.3	0.5	0.2	26.8
[3-4[		0.8	8.5	11.1	5.9	1.9	0.6	0.2	29.0
[4-5[		<0.1	1.7	9.6	6.6	2.2	0.5	0.1	20.7
[5-6[			<0.1	2.7	5.0	2.0	0.4	<0.1	10.1
[6-7[				0.1	1.9	1.4	0.3	<0.1	3.8
[7-8[				<0.1	0.3	1.0	0.4	<0.1	1.7
TOTAL	0.5	6.7	21.9	33.1	24.3	10.1	2.7	0.6	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

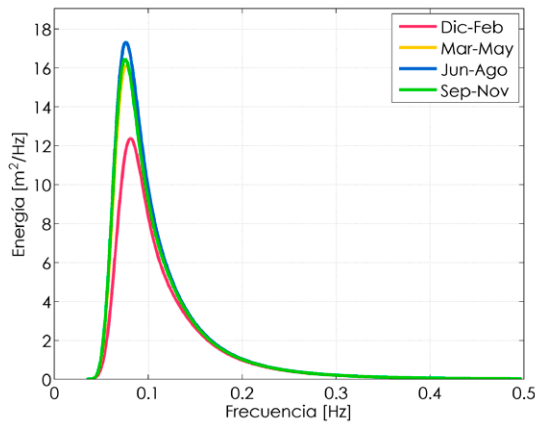
	Prob. Dir.	H _{m0} 50% [m]	H _{m0} 90% [m]	H _{m0} 99% [m]	H _{m0} 12 [m]
E	<0.1%	2.12	2.39	2.39	2.39
ESE	<0.1%	2.08	2.33	2.33	2.33
SE	<0.1%	2.19	2.33	2.33	2.33
SSE	<0.1%	2.07	3.82	4.39	4.39
S	0.6%	2.64	3.70	5.09	5.66
SSO	2.8%	2.58	4.15	6.19	7.10
SO	13.1%	3.05	4.87	6.70	8.35
OSO	32.0%	3.49	5.47	7.55	8.75
O	28.7%	3.74	5.67	7.62	8.80
ONO	14.2%	3.76	5.58	7.23	8.45
NO	5.6%	3.61	5.40	7.20	8.11
NNO	2.1%	3.44	5.19	6.67	7.58
N	0.7%	3.32	4.88	6.86	8.03
NNE	<0.1%	3.00	4.02	5.77	5.92
NE	<0.1%	2.24	2.61	2.84	2.84
ENE	<0.1%	2.38	2.50	2.51	2.51

NODO 16: ISLA ESMERALDA / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



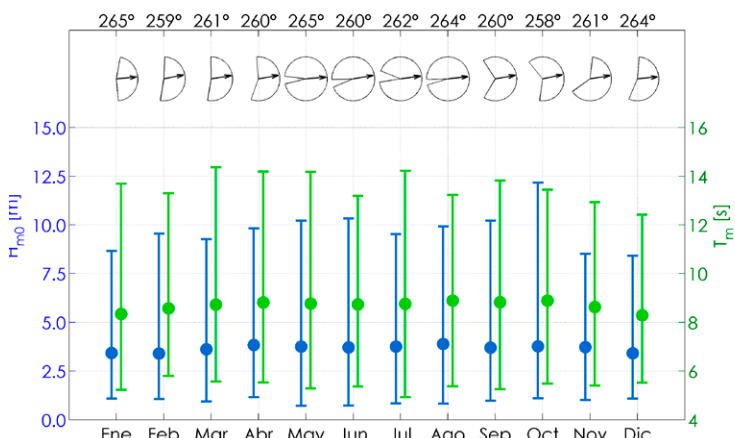
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

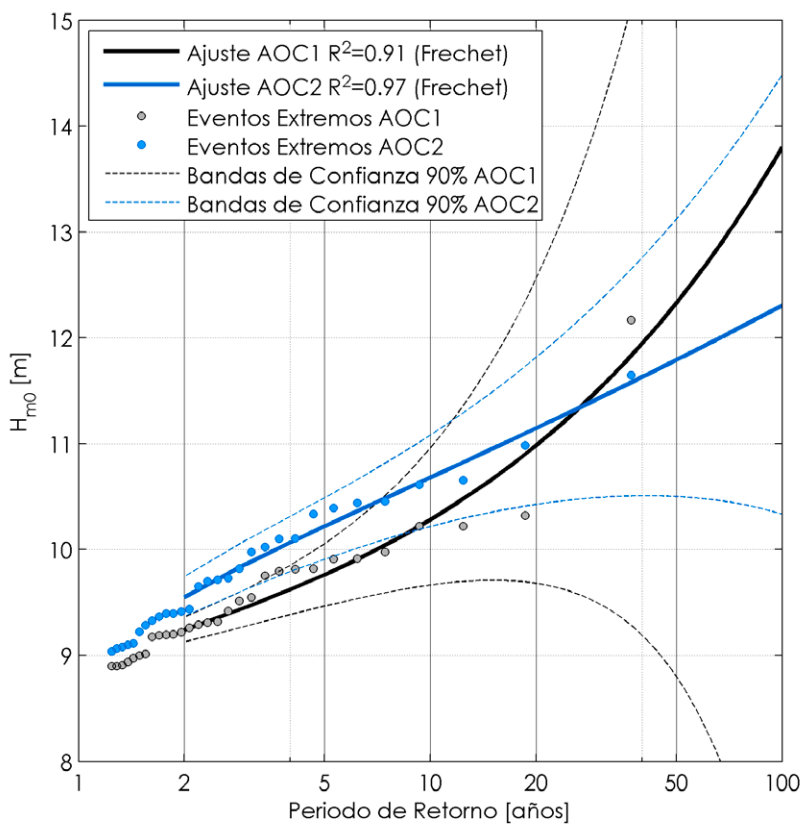
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	3.41	3.74	3.79	3.73
T_z [s]	7.6	7.9	7.9	7.9
T_e [s]	9.8	10.2	10.2	10.2
T_m [s]	8.4	8.8	8.8	8.8
T_p [s]	11.9	12.4	12.4	12.5
D_m [°]	263	262	262	260
D_p [°]	252	249	250	249
ε	0.79	0.79	0.79	0.79
ν	0.48	0.48	0.48	0.48
Q_p	1.87	1.93	1.97	1.94
γ	1.24	1.28	1.31	1.29
S	9.0	9.9	9.4	10.4

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

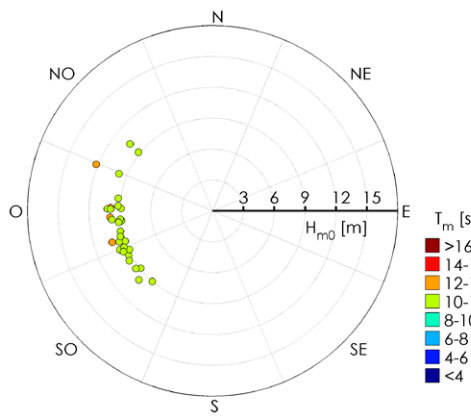


NODO 16: ISLA ESMERALDA / CLIMA EXTREMO

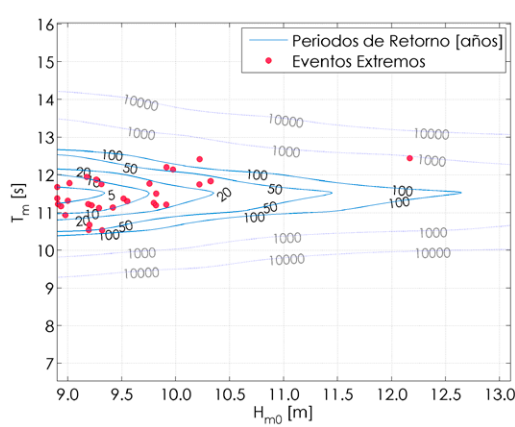
PERIODOS DE RETORNO UNIVARIADO



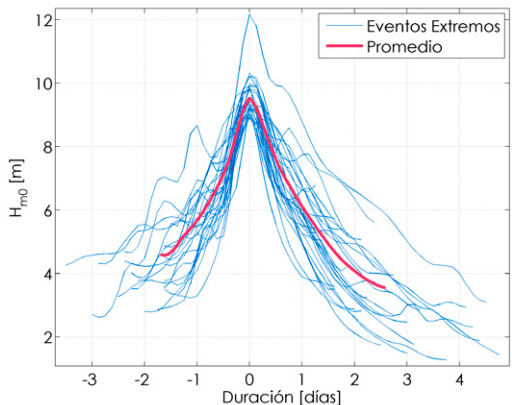
DISPERSIÓN DE EXTREMOS



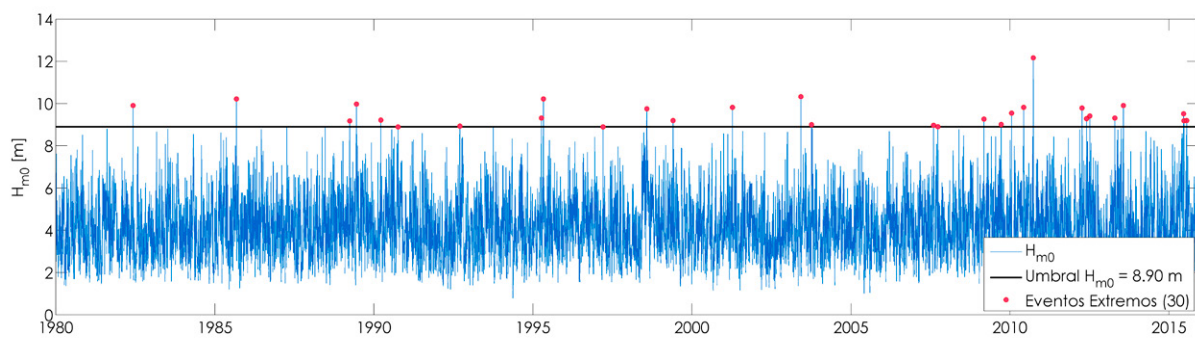
PERIODOS DE RETORNO BIVARIADO



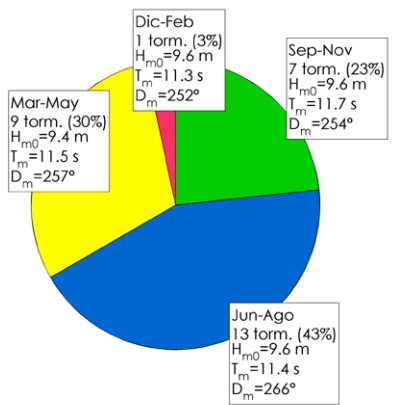
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 16: ISLA ESMERALDA / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 38.1	primer modo	mar de fondo	93.1			0.2	36.9	59.5	3.3	0.1	
		mar de viento	6.9			0.6	16.6	55.2	23.8	3.9	
Bimodal 40.5	primer modo	mar de fondo	92.2			1.5	38.9	41.1	16.1	2.3	<0.1
		mar de viento	7.8			2.7	3.9	12.0	48.6	32.0	0.8
	segundo modo	mar de fondo	93.8	<0.1	<0.1	4.6	16.0	15.2	56.5	7.6	<0.1
		mar de viento	6.2	1.0	1.2	9.8	2.6	4.0	46.6	31.5	3.3
Trimodal 16.2	primer modo	mar de fondo	87.8			8.6	32.9	36.8	15.0	6.6	0.2
		mar de viento	12.2	0.1	0.2	11.3	4.6	4.2	35.8	39.9	3.8
	segundo modo	mar de fondo	84.7	<0.1	<0.1	12.9	22.9	22.5	28.5	12.5	0.5
		mar de viento	15.3	0.6	1.2	15.0	5.8	3.9	33.7	36.0	3.9
	tercer modo	mar de fondo	93.4	0.3	0.2	13.4	17.2	11.2	44.7	12.0	1.0
		mar de viento	6.6	3.9	5.4	15.8	10.1	5.1	19.8	29.3	10.6

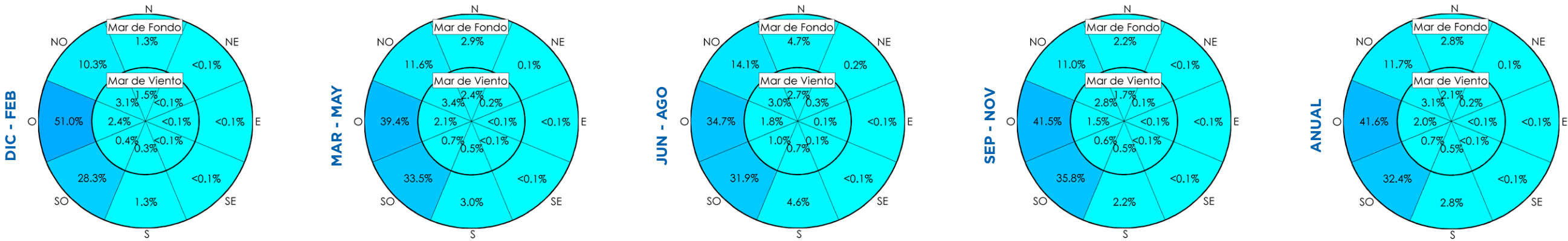
NOTA: estados de mar con más de 3 modos abarcan el 5.1% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del O	21.2	20.3	19.0	24.0	21.1
MF del SO + MF del NO	18.4	14.5	11.1	13.8	14.4
MF del SO	7.5	14.0	13.8	17.0	13.1
MF del O + MF del NO	22.1	9.9	5.4	10.1	11.9
MF del SO + MF del O + MF del NO	4.6	2.7	1.6	2.6	2.9
MF del SO + MF del O	1.3	2.6	3.8	2.6	2.6
MF del N + MF del O	0.7	2.1	3.8	2.3	2.2
MF del S + MF del SO + MF del NO	1.2	2.0	2.3	1.7	1.8
MF del O + MV del NO	1.2	1.4	1.6	1.8	1.5
MF del S + MF del O + MF del NO	2.2	1.5	1.2	1.1	1.5
Otros	19.6	29.0	36.4	22.9	27.0
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

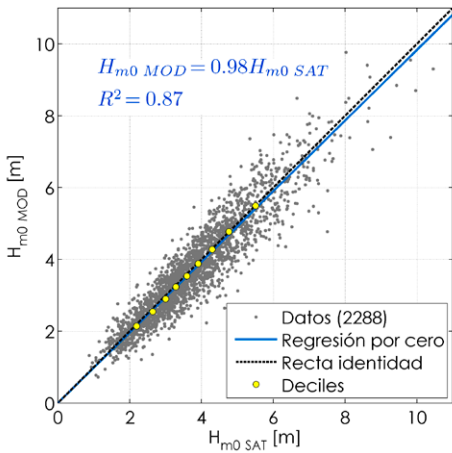


NODO 16: ISLA ANGAMOS / INCERTIDUMBRE

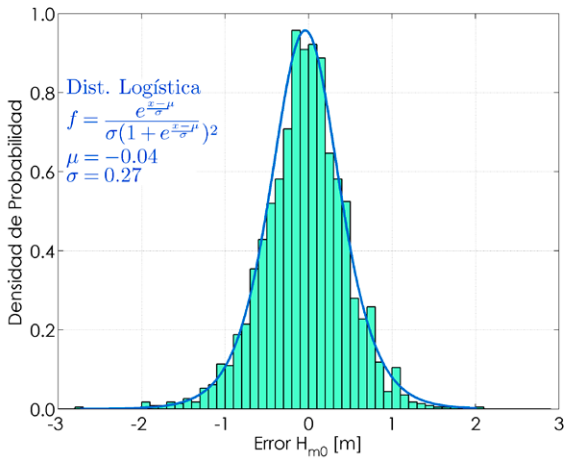
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	3.76	Intercepto mejor regresión lineal [m]	0.14
Promedio H_{m0} modelo [m]	3.71	Pendiente mejor regresión lineal	0.95
Desviación estándar H_{m0} satélite [m]	1.32	R^2 mejor regresión lineal	0.87
Desviación estándar H_{m0} modelo [m]	1.35	Mínimo error relativo (RE_{min})	-49%
Error absoluto medio (MAE) [m]	0.38	Máximo error relativo (RE_{max})	66%
Raíz del error cuadrático medio (RMSE) [m]	0.50	Error relativo medio (RE_{mean})	-1%
Sesgo (BIAS) [m]	-0.05	Mínimo error relativo absoluto (ARE_{min})	0.005%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	66%
Índice de dispersión (SI)	0.13	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



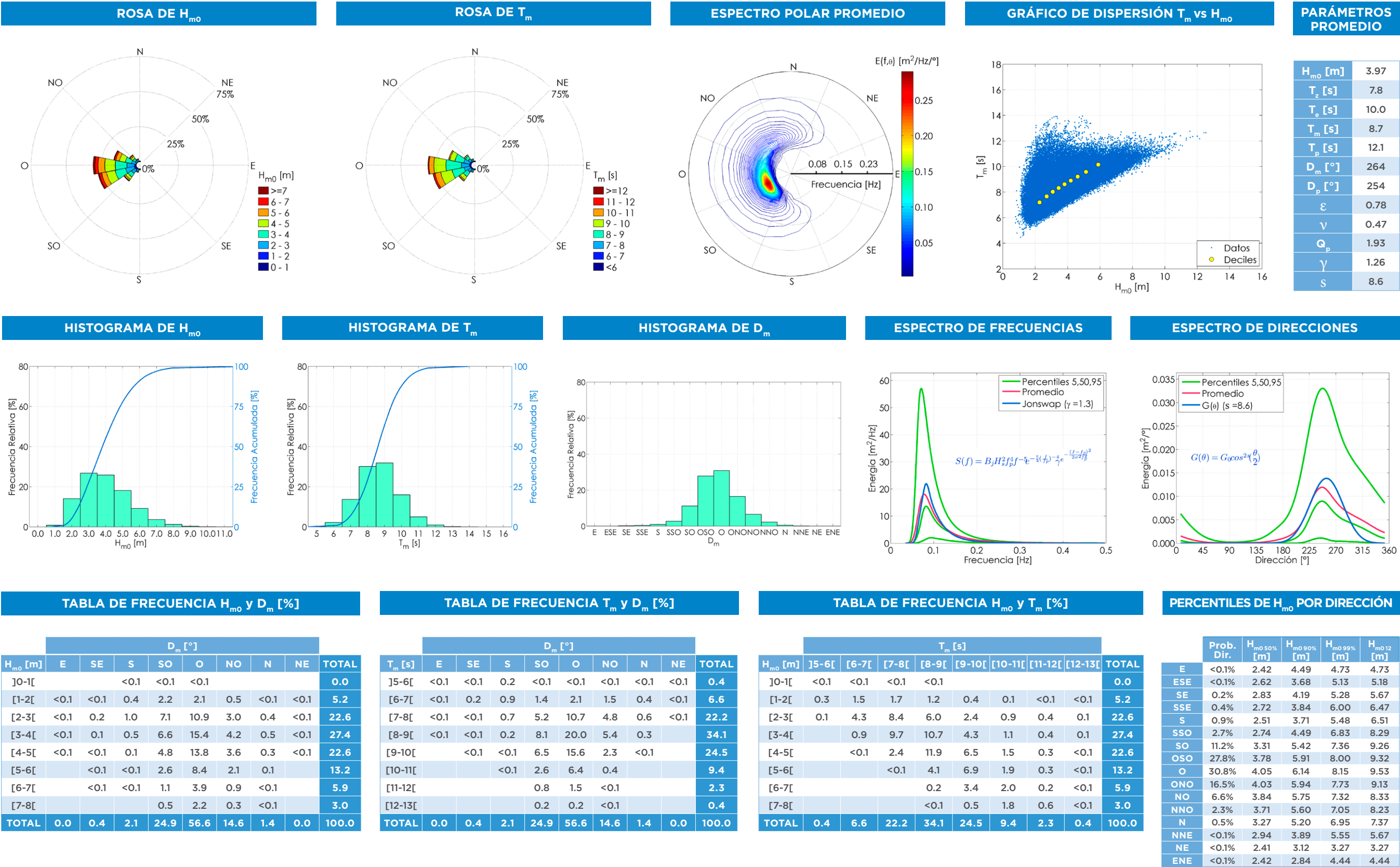
NODO 17 ISLA DIEGO DE ALMAGRO

Coordenadas del Nodo: 51°S, 77°O



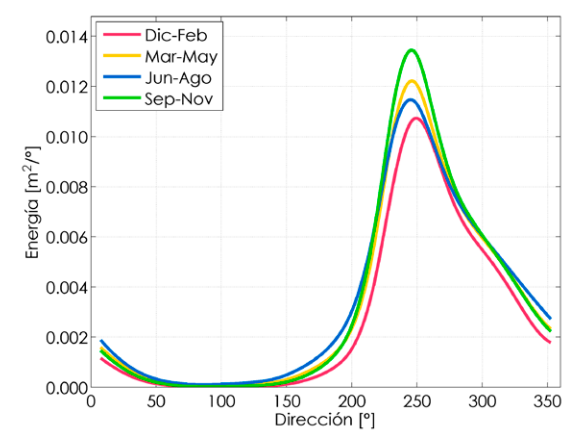
CRÉDITOS FOTOGRAFÍA: MARIO CÁCERES

NODO 17: ISLA DIEGO DE ALMAGRO / CLIMA MEDIO

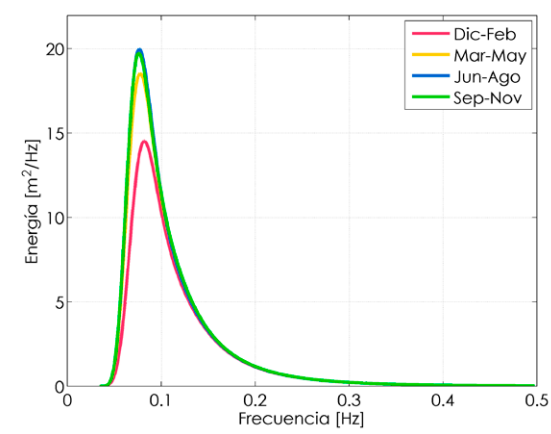


NODO 17: ISLA DIEGO DE ALMAGRO / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



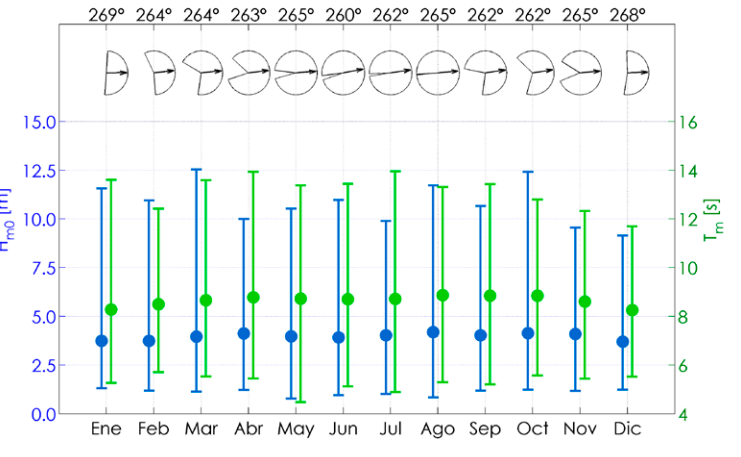
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

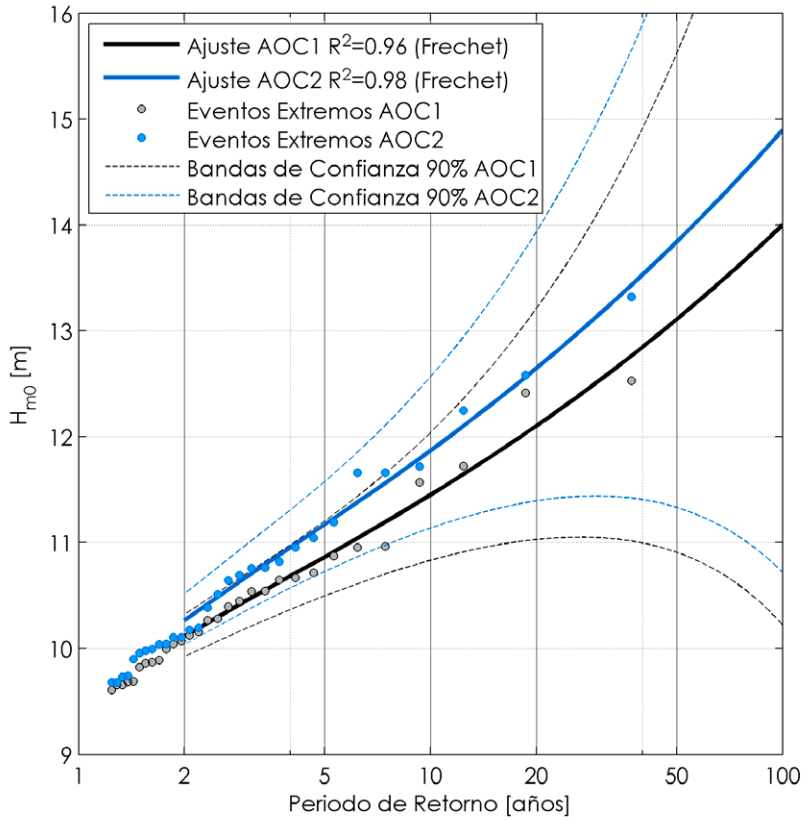
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	3.73	4.02	4.05	4.09
T_z [s]	7.5	7.9	7.9	7.9
T_e [s]	9.6	10.1	10.1	10.1
T_m [s]	8.3	8.7	8.8	8.8
T_p [s]	11.8	12.2	12.3	12.3
D_m [°]	267	264	262	263
D_p [°]	256	253	253	252
ε	0.78	0.79	0.79	0.79
ν	0.47	0.47	0.47	0.47
Q_p	1.87	1.93	1.97	1.95
γ	1.21	1.26	1.29	1.26
S	7.8	8.7	8.6	9.2

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

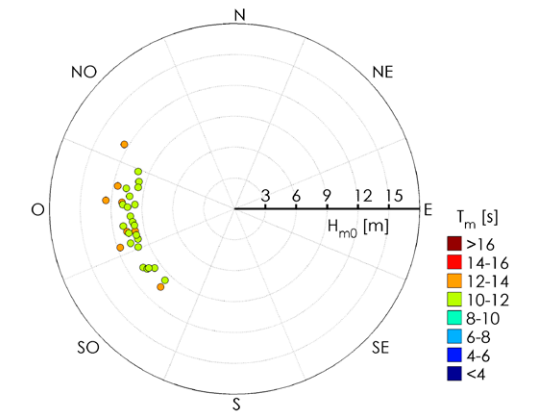


NODO 17: ISLA DIEGO DE ALMAGRO / CLIMA EXTREMO

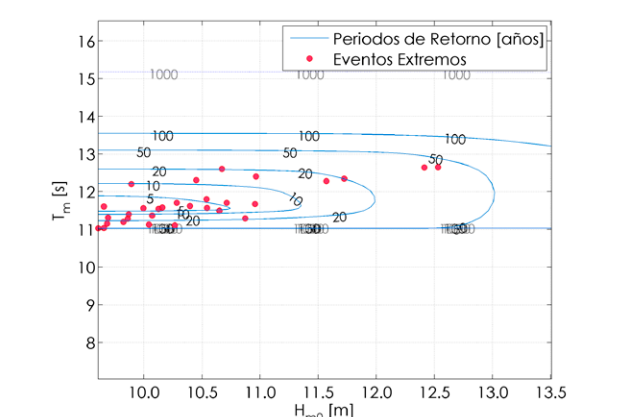
PERIODOS DE RETORNO UNIVARIADO



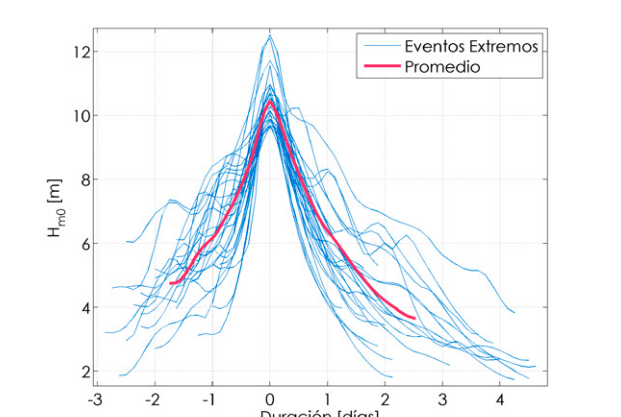
DISPERSIÓN DE EXTREMOS



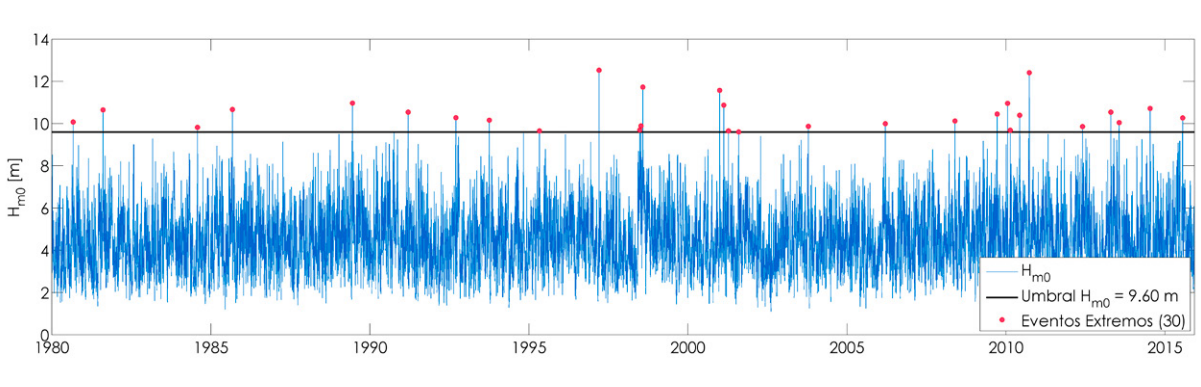
PERIODOS DE RETORNO BIVARIADO



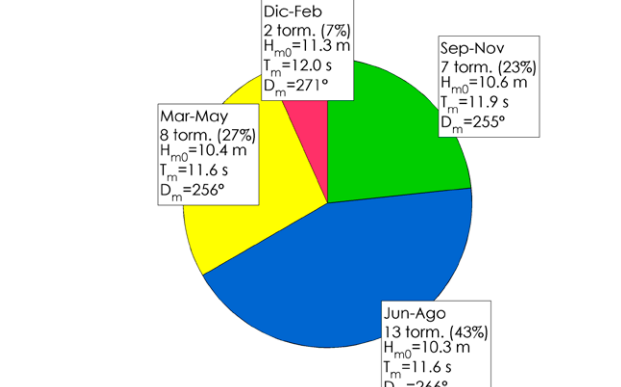
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO Hm0



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 17: ISLA DIEGO DE ALMAGRO / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 40.1	primer modo	mar de fondo	87.5		<0.1	0.2	30.1	65.3	4.3	0.1	
		mar de viento	12.5		<0.1	0.6	21.9	55.9	18.5	3.1	
Bimodal 38.9	primer modo	mar de fondo	89.5	<0.1	<0.1	1.8	31.3	46.4	17.3	3.1	
		mar de viento	10.5		1.1	3.0	6.7	14.5	47.2	27.5	<0.1
	segundo modo	mar de fondo	94.0	<0.1	0.3	6.2	13.0	19.4	51.8	9.2	<0.1
		mar de viento	6.0	0.8	4.3	4.7	1.7	6.6	52.3	28.5	1.2
Trimodal 15.7	primer modo	mar de fondo	87.5	<0.1	0.5	10.5	28.0	37.6	15.9	7.5	<0.1
		mar de viento	12.5	0.1	6.9	9.8	4.6	6.2	39.7	31.7	0.9
	segundo modo	mar de fondo	87.2	0.2	1.3	14.3	20.1	24.1	25.5	14.3	0.2
		mar de viento	12.8	1.8	7.6	10.4	5.1	5.9	39.8	27.9	1.6
	tercer modo	mar de fondo	94.5	0.6	2.3	14.4	14.9	11.6	42.6	13.1	0.4
		mar de viento	5.5	7.1	12.7	12.9	11.1	8.0	24.9	17.5	5.7

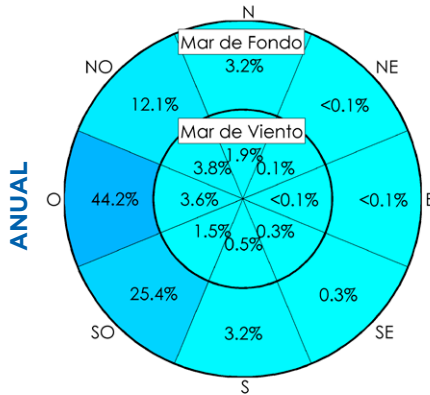
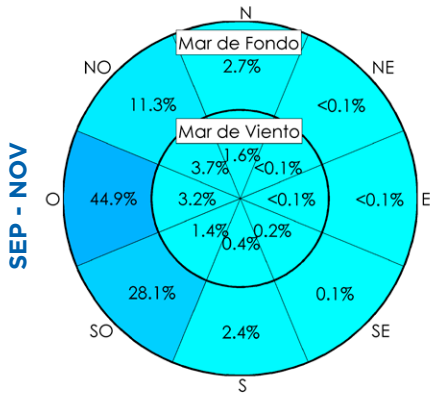
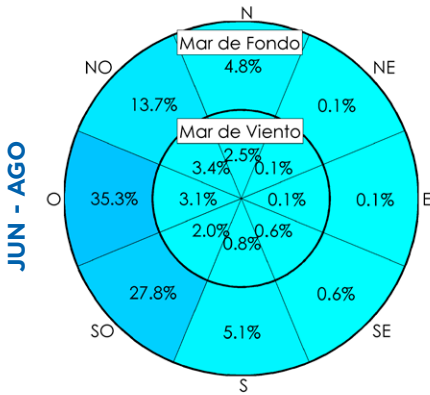
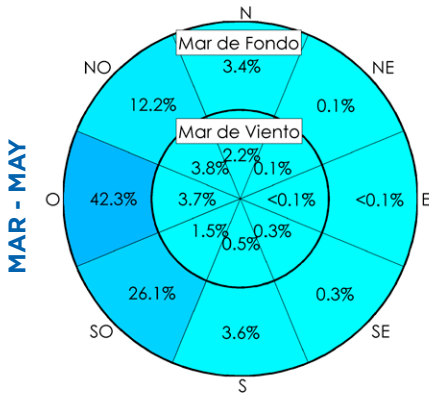
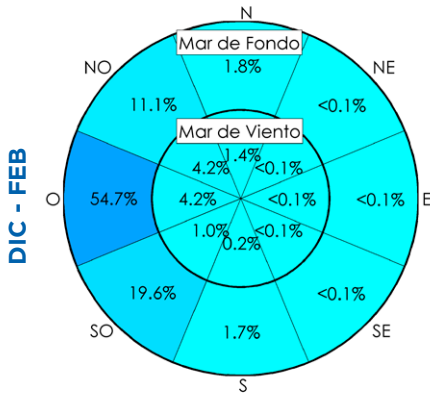
NOTA: estados de mar con más de 3 modos abarcan el 5.3% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del O	24.3	22.0	19.2	26.2	22.9
MF del O + MF del NO	22.7	11.1	6.4	11.2	12.8
MF del SO	5.8	11.0	12.2	13.2	10.6
MF del SO + MF del NO	11.6	10.7	9.5	10.3	10.5
MF del N + MF del O	1.4	3.0	4.1	3.1	2.9
MV del O	3.0	2.9	2.6	2.7	2.8
MF del SO + MF del O + MF del NO	3.6	2.1	1.2	1.8	2.2
MF del SO + MF del O	1.3	2.0	2.5	2.0	1.9
MF del O + MV del NO	1.7	1.9	1.8	2.4	1.9
MF del S + MF del O	1.3	1.8	2.7	1.8	1.9
Otros	23.4	31.6	37.7	25.3	29.5
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

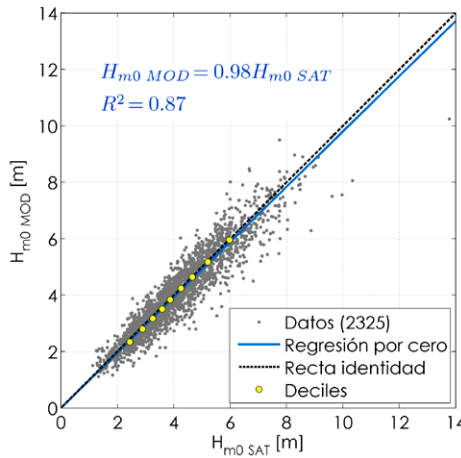


NODO 17: ISLA DIEGO DE ALMAGRO / INCERTIDUMBRE

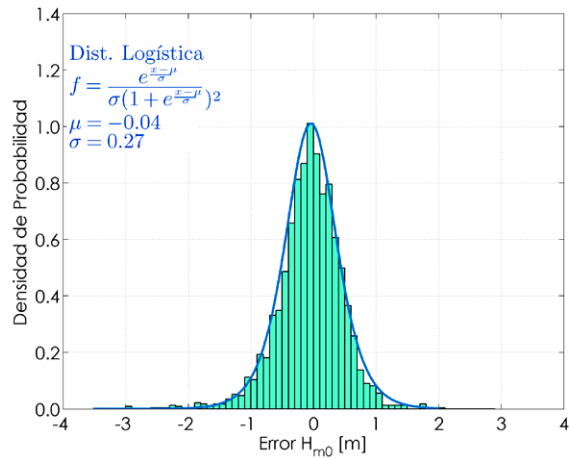
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	4.09	Intercepto mejor regresión lineal [m]	0.21
Promedio H_{m0} modelo [m]	4.03	Pendiente mejor regresión lineal	0.93
Desviación estándar H_{m0} satélite [m]	1.42	R^2 mejor regresión lineal	0.88
Desviación estándar H_{m0} modelo [m]	1.41	Mínimo error relativo (RE_{min})	-55%
Error absoluto medio (MAE) [m]	0.38	Máximo error relativo (RE_{max})	63%
Raíz del error cuadrático medio (RMSE) [m]	0.51	Error relativo medio (RE_{mean})	-1%
Sesgo (BIAS) [m]	-0.06	Mínimo error relativo absoluto (ARE_{min})	0.005%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	63%
Índice de dispersión (SI)	0.12	Error relativo absoluto medio (AARE)	9%

GRÁFICO DE DISPERSIÓN

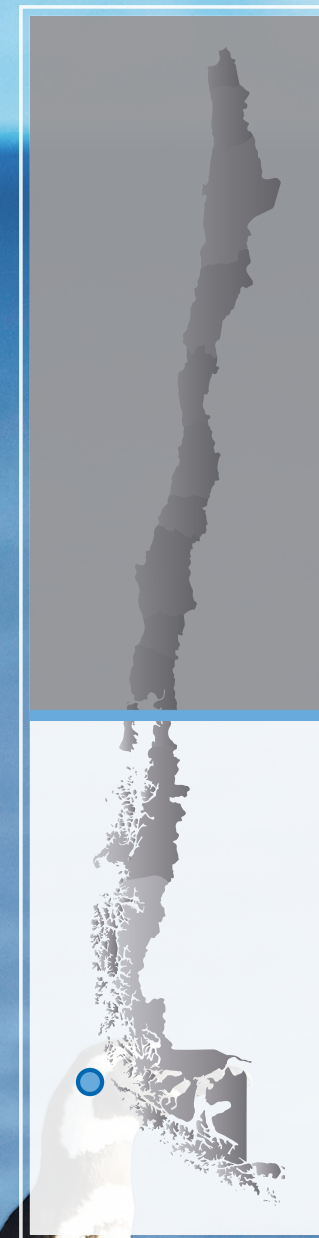


DISTRIBUCIÓN DEL ERROR



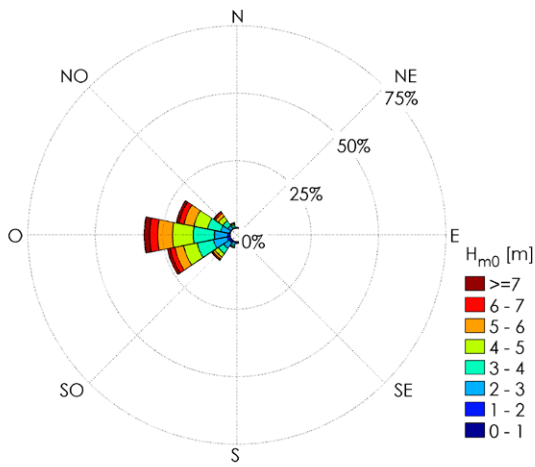
NODO 18 ISLA CONTRERAS

Coordenadas del Nodo: 53°S, 76°O

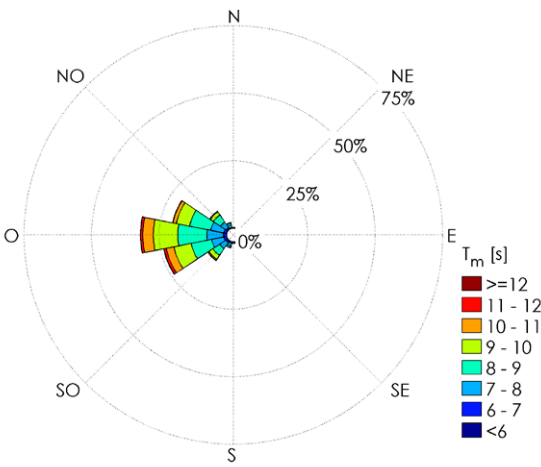


NODO 18: ISLA CONTRERAS / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

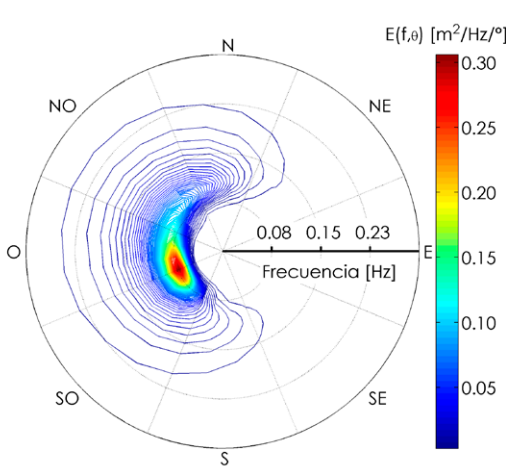
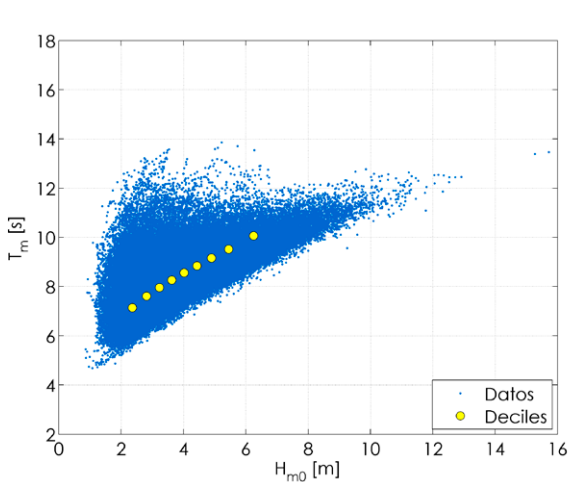


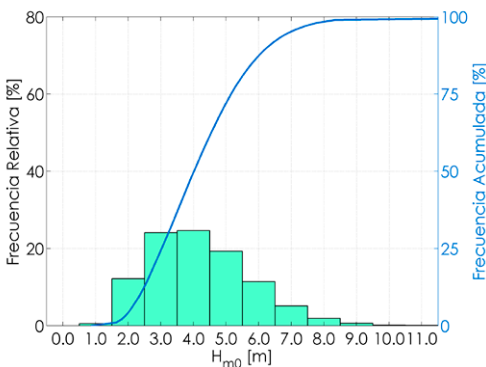
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



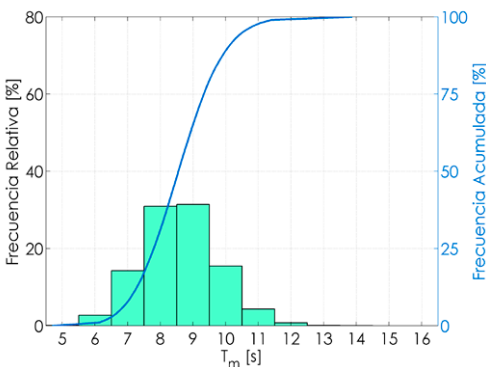
PARÁMETROS PROMEDIO

H _{m0} [m]	4.19
T _z [s]	7.8
T _e [s]	9.9
T _m [s]	8.6
T _p [s]	12.0
D _m [°]	268
D _p [°]	259
ε	0.78
ν	0.47
Q _p	1.94
γ	1.25
s	7.7

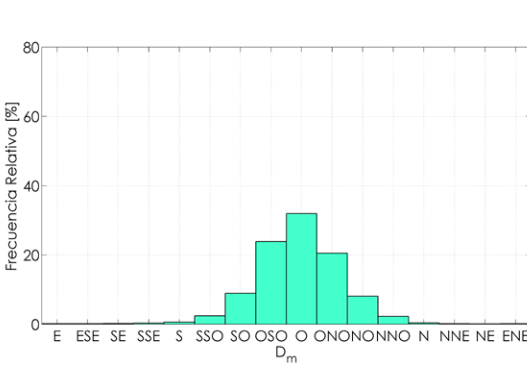
HISTOGRAMA DE H_{m0}



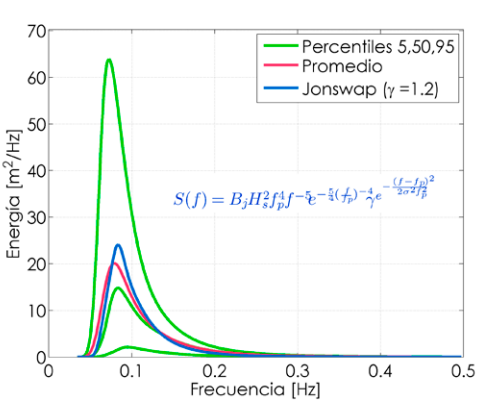
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

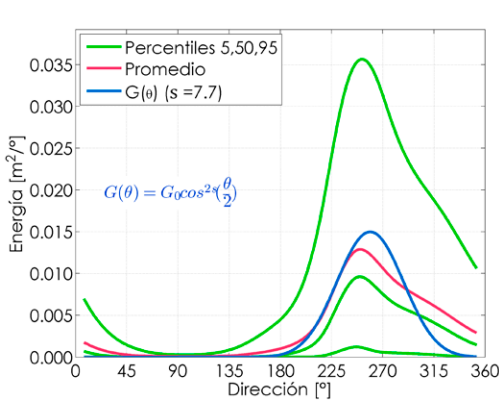


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H _{m0} [m]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-1[			<0.1	<0.1	<0.1				0.0
[1-2[	<0.1	<0.1	0.2	1.6	1.8	0.4	<0.1	<0.1	4.2
[2-3[	0.2	0.2	0.7	5.6	9.7	3.1	0.4	0.1	20.1
[3-4[	<0.1	<0.1	0.4	5.3	14.3	4.7	0.3	<0.1	25.3
[4-5[	<0.1	<0.1	0.1	3.7	14.0	4.4	0.2	<0.1	22.5
[5-6[	<0.1	<0.1	<0.1	2.3	9.8	3.1	<0.1		15.3
[6-7[			<0.1	1.1	5.2	1.5	<0.1		7.9
[7-8[			<0.1	0.6	3.4	0.7	<0.1		4.8
TOTAL	0.3	0.4	1.5	20.3	58.2	17.9	1.1	0.2	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T _m [s]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[	<0.1	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.7
[6-7[	0.2	0.2	0.6	1.7	2.4	1.5	0.3	0.1	7.1
[7-8[	<0.1	<0.1	0.5	5.5	11.4	5.2	0.5	<0.1	23.3
[8-9[	<0.1	<0.1	0.2	6.6	20.1	6.9	0.2		34.0
[9-10[			<0.1	4.4	16.0	3.5	<0.1		24.0
[10-11[				1.6	6.5	0.6	<0.1		8.8
[11-12[				0.3	1.5	<0.1			1.9
[12-13[				<0.1	0.2	<0.1			0.3
TOTAL	0.3	0.4	1.5	20.3	58.2	17.9	1.1	0.2	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

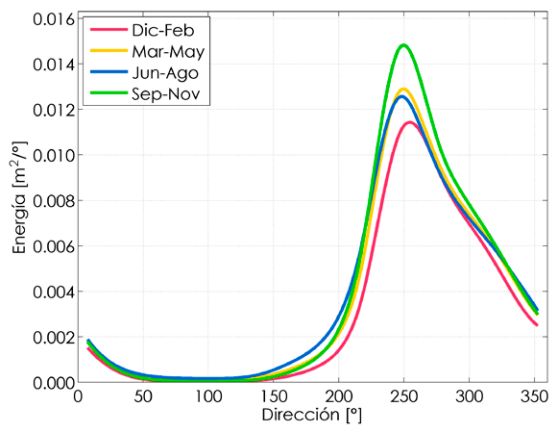
H _{m0} [m]	T _m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-1[	<0.1		<0.1	<0.1					0.0
[1-2[	0.4	1.2	1.4	0.8	0.3	<0.1	<0.1	<0.1	4.2
[2-3[	0.3	4.6	7.5	4.8	1.9	0.8	0.2	<0.1	20.1
[3-4[		1.2	10.8	8.9	3.0	0.9	0.3	<0.1	25.3
[4-5[		<0.1	3.6	12.6	5.0	1.0	0.2	<0.1	22.5
[5-6[			<0.1	6.4	7.3	1.4	0.2	<0.1	15.3
[6-7[				0.5	5.3	1.9	0.2	<0.1	7.9
[7-8[				<0.1	1.2	2.8	0.8	<0.1	4.8
TOTAL	0.7	7.1	23.3	34.0	24.0	8.8	1.9	0.3	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

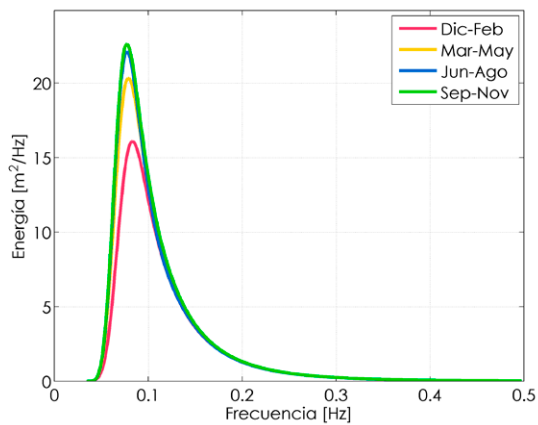
	Prob. Dir.	H _{m0} 50% [m]	H _{m0} 90% [m]	H _{m0} 99% [m]	H _{m0} 12 [m]
E	0.2%	2.68	3.90	5.83	5.86
ESE	0.1%	2.75	3.83	5.91	5.96
SE	0.2%	2.65	3.70	5.72	5.95
SSE	0.3%	2.42	3.60	4.90	5.67
S	0.6%	2.45	4.03	5.76	7.16
SSO	2.4%	2.82	4.61	7.09	8.21
SO	8.9%	3.40	5.64	7.60	9.43
OSO	23.8%	3.89	6.19	8.37	9.89
O	31.9%	4.28	6.52	8.65	9.92
ONO	20.5%	4.29	6.37	8.34	9.88
NO	8.1%	4.09	6.12	7.94	9.47
NNO	2.2%	3.86	5.94	7.31	7.88
N	0.4%	3.08	4.35	5.96	6.45
NNE	<0.1%	2.79	3.60	3.97	4.57
NE	<0.1%	2.91	3.68	4.09	4.37
ENE	<0.1%	2.73	3.67	4.60	4.68

NODO 18: ISLA CONTRERAS / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



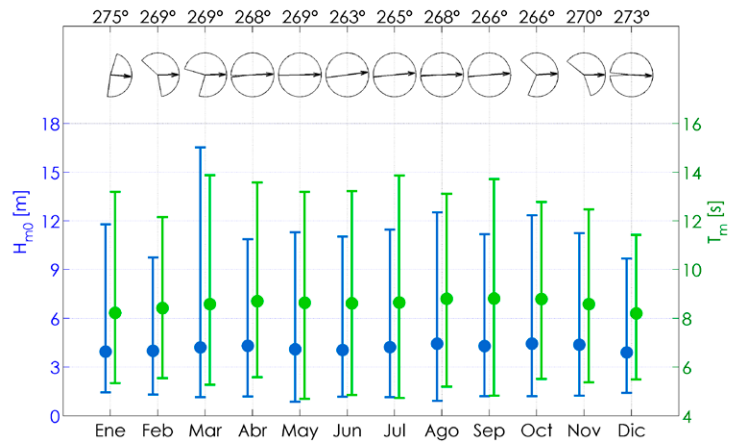
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

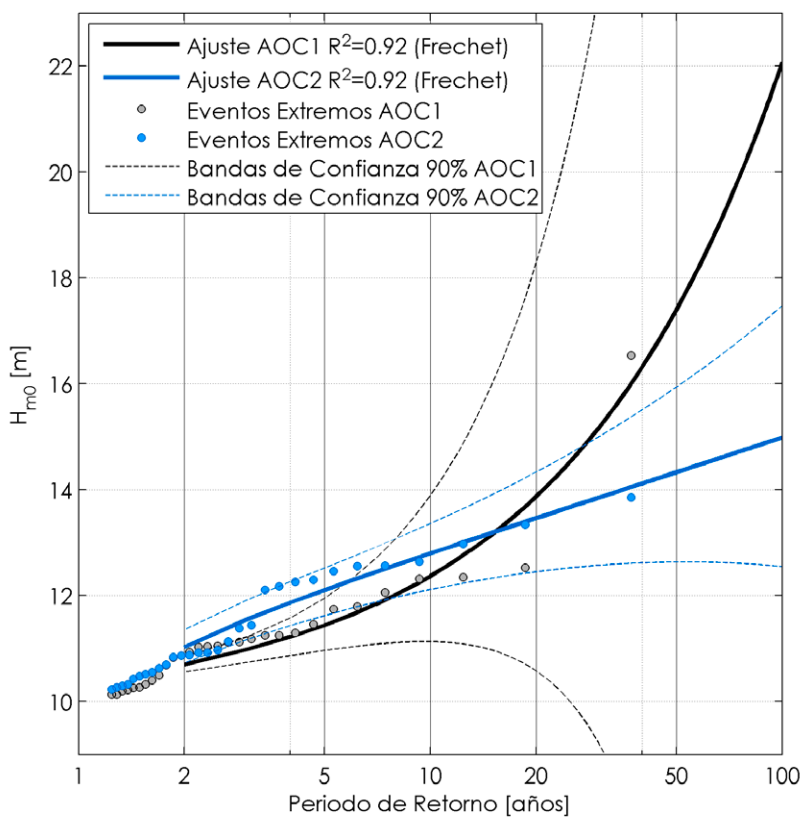
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	3.95	4.21	4.24	4.37
T_z [s]	7.5	7.8	7.9	7.9
T_e [s]	9.5	10.0	10.0	10.0
T_m [s]	8.3	8.6	8.7	8.7
T_p [s]	11.6	12.1	12.2	12.2
D_m [°]	272	268	265	267
D_p [°]	262	258	257	257
ε	0.77	0.78	0.78	0.78
ν	0.46	0.47	0.47	0.47
Q_p	1.88	1.93	1.97	1.96
γ	1.21	1.25	1.29	1.25
S	6.9	7.8	8.0	8.1

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

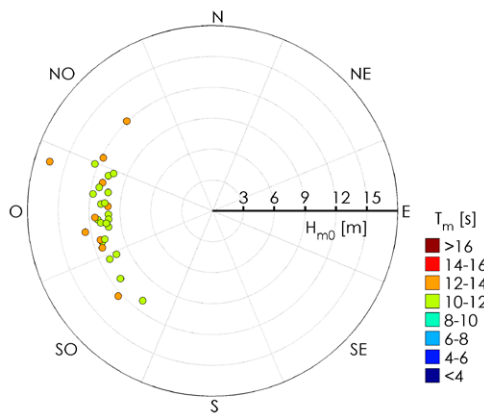


NODO 18: ISLA CONTRERAS / CLIMA EXTREMO

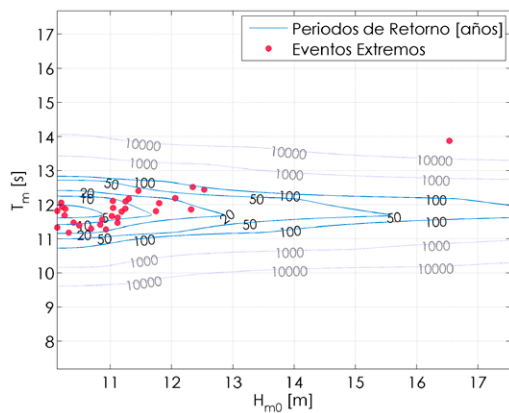
PERIODOS DE RETORNO UNIVARIADO



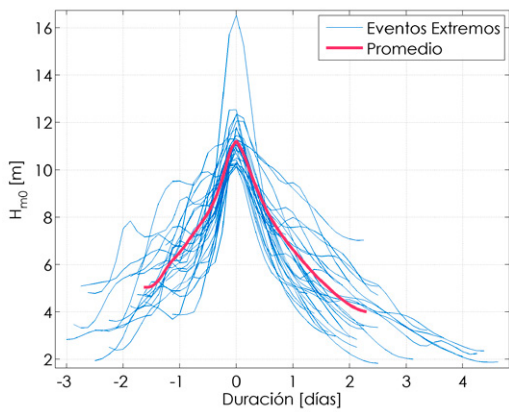
DISPERSIÓN DE EXTREMOS



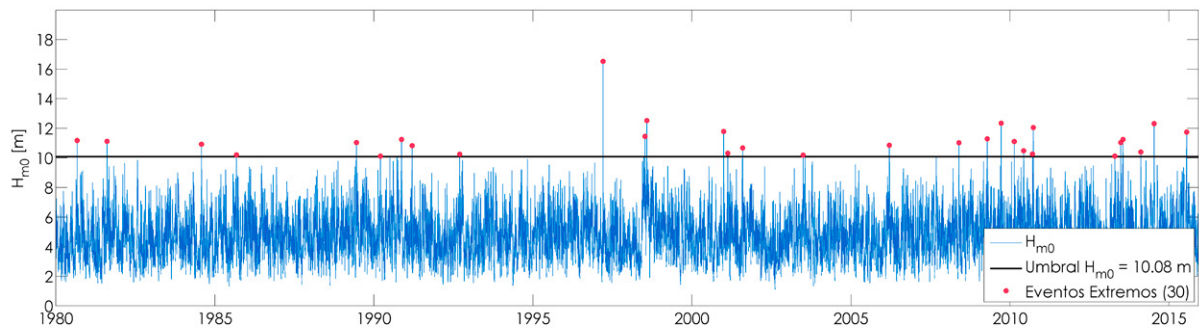
PERIODOS DE RETORNO BIVARIADO



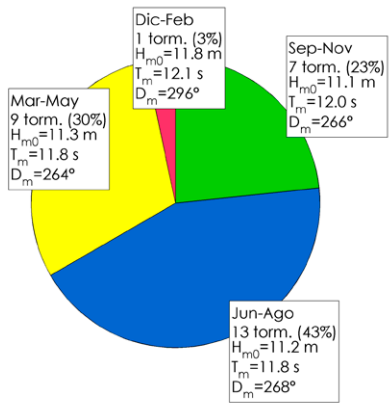
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 18: ISLA CONTRERAS / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 40.9	primer modo	mar de fondo	79.9			0.2	20.6	72.3	6.7	0.2	
		mar de viento	20.1	<0.1	<0.1	0.5	18.6	55.2	22.8	2.9	
Bimodal 38.7	primer modo	mar de fondo	85.0	<0.1	<0.1	1.8	22.3	52.2	20.1	3.6	<0.1
		mar de viento	15.0	1.1	0.4	2.5	6.4	17.0	50.0	22.3	0.3
	segundo modo	mar de fondo	93.3	0.2	0.9	6.7	8.8	27.0	46.3	9.9	<0.1
		mar de viento	6.7	3.2	2.7	4.9	3.1	12.8	50.3	19.8	3.2
Trimodal 14.6	primer modo	mar de fondo	84.0	0.2	0.2	9.6	21.6	42.4	18.1	7.7	<0.1
		mar de viento	16.0	9.2	4.1	8.3	5.0	8.8	39.7	21.2	3.6
	segundo modo	mar de fondo	87.4	0.4	1.9	13.7	15.3	29.8	24.4	14.0	0.4
		mar de viento	12.6	11.3	7.1	7.1	5.8	10.0	35.2	16.0	7.6
	tercer modo	mar de fondo	93.5	1.7	3.9	14.3	11.5	13.3	42.6	12.2	0.5
		mar de viento	6.5	20.0	11.5	7.0	10.9	9.4	18.5	12.3	10.5

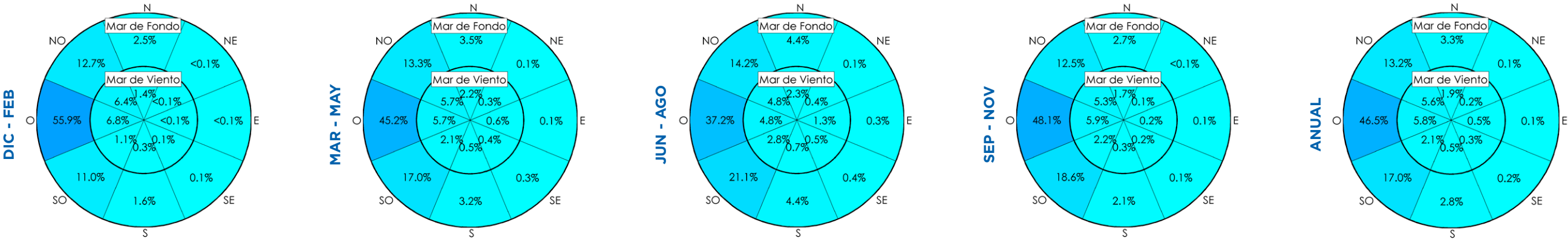
NOTA: estados de mar con más de 3 modos abarcan el 5.7% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLEAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del O	25.4	22.9	19.6	26.7	23.6
MF del O + MF del NO	22.8	13.3	8.4	13.5	14.4
MF del SO	3.2	7.0	8.3	8.5	6.7
MF del SO + MF del NO	6.1	6.4	7.4	6.7	6.6
MV del O	4.7	4.7	3.9	4.9	4.6
MF del N + MF del O	2.4	3.3	4.5	4.0	3.5
MF del O + MV del NO	2.5	2.7	2.6	3.7	2.9
MF del NO	2.3	2.0	2.5	2.0	2.2
MF del S + MF del O + MF del NO	3.0	2.2	1.5	1.8	2.1
MF del S + MF del O	1.5	2.0	2.8	2.0	2.1
Otros	26.1	33.6	38.4	26.4	31.2
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

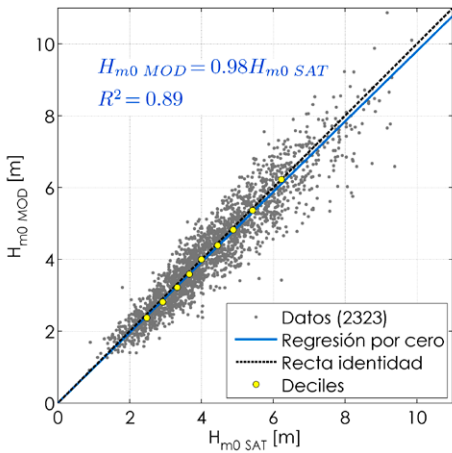


NODO 18: ISLA CONTRERAS / INCERTIDUMBRE

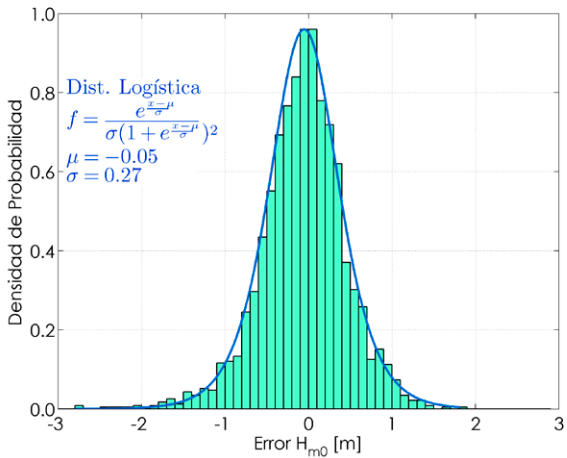
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	4.22	Intercepto mejor regresión lineal [m]	0.17
Promedio H_{m0} modelo [m]	4.16	Pendiente mejor regresión lineal	0.94
Desviación estándar H_{m0} satélite [m]	1.48	R^2 mejor regresión lineal	0.89
Desviación estándar H_{m0} modelo [m]	1.49	Mínimo error relativo (RE_{min})	-45%
Error absoluto medio (MAE) [m]	0.38	Máximo error relativo (RE_{max})	88%
Raíz del error cuadrático medio (RMSE) [m]	0.51	Error relativo medio (RE_{mean})	-1%
Sesgo (BIAS) [m]	-0.07	Mínimo error relativo absoluto (ARE_{min})	0.012%
Habilidad de pronóstico (SS)	0.89	Máximo error relativo absoluto (ARE_{max})	88%
Índice de dispersión (SI)	0.12	Error relativo absoluto medio (AARE)	9%

GRÁFICO DE DISPERSIÓN

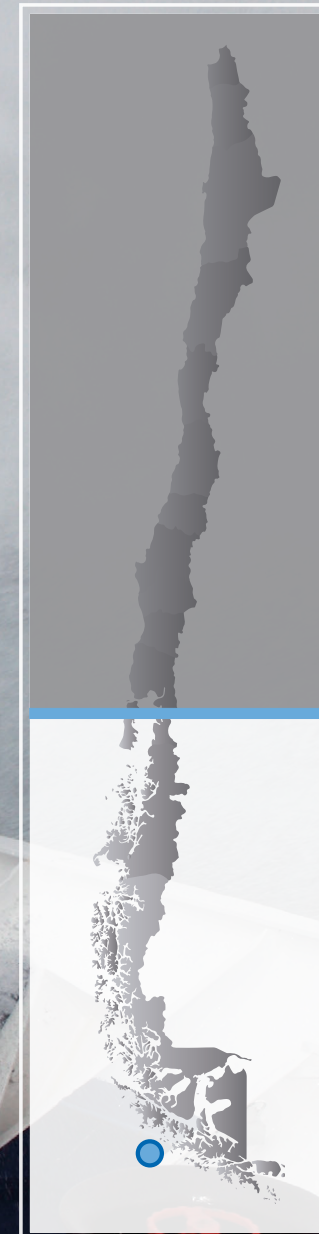


DISTRIBUCIÓN DEL ERROR



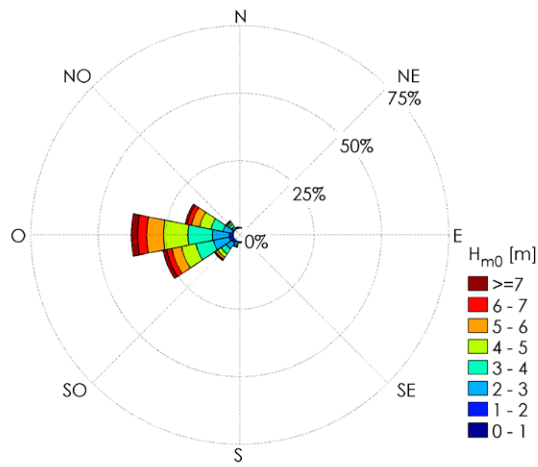
NODO 19 ISLA LONDON

Coordenadas del Nodo: 55°S, 73°O

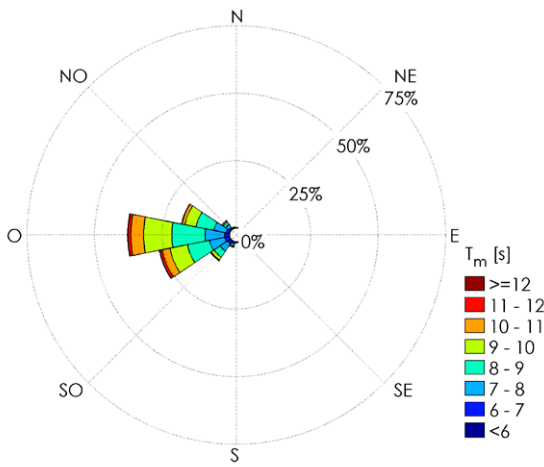


NODO 19: ISLA LONDON / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

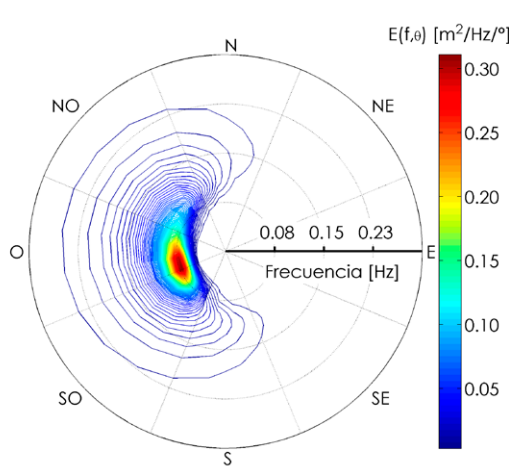
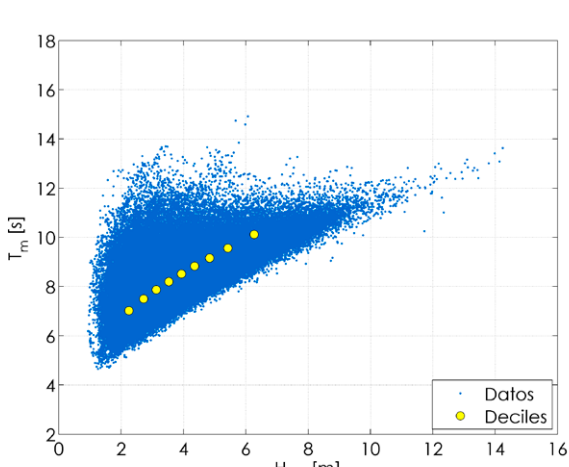


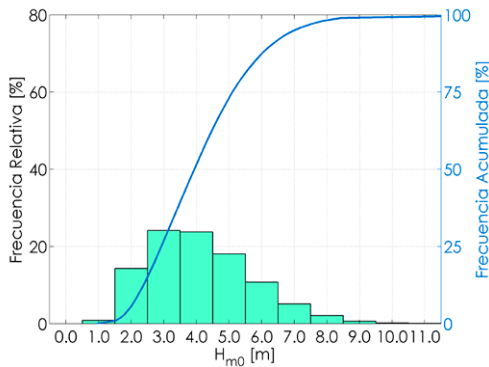
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



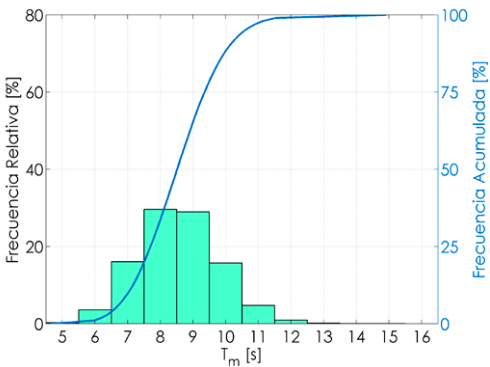
PARÁMETROS PROMEDIO

H_{m0} [m]	4.13
T_z [s]	7.7
T_e [s]	9.9
T_m [s]	8.6
T_p [s]	12.0
D_m [°]	265
D_p [°]	260
ε	0.78
ν	0.47
Q_p	1.95
γ	1.29
S	8.6

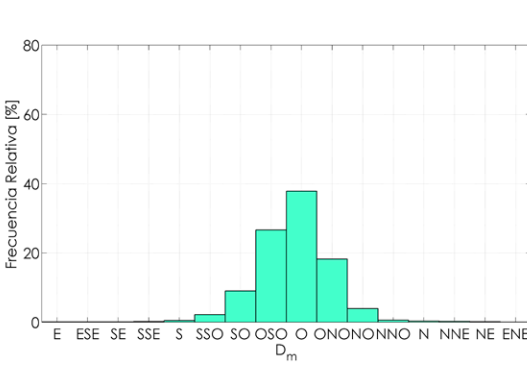
HISTOGRAMA DE H_{m0}



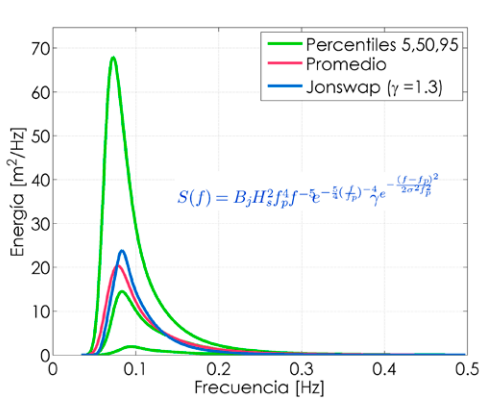
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

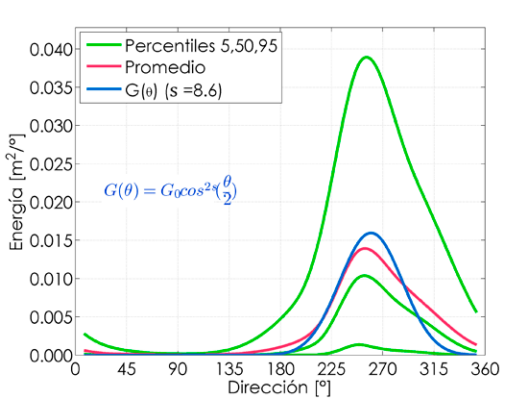


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-1]			<0.1	<0.1	<0.1				0.0
[1-2]	<0.1	<0.1	0.3	2.0	2.5	0.5	0.1	<0.1	5.6
[2-3]	<0.1	<0.1	0.5	5.9	11.8	2.4	0.3	0.1	21.2
[3-4]	<0.1	<0.1	0.2	5.4	15.9	2.9	0.1	<0.1	24.6
[4-5]		<0.1	0.1	3.9	15.2	2.3	<0.1	<0.1	21.6
[5-6]			<0.1	2.2	10.6	1.5	<0.1		14.4
[6-7]			<0.1	1.1	5.7	0.7	<0.1		7.6
[7-8]			<0.1	0.8	3.8	0.4			5.0
TOTAL	0.1	0.2	1.2	21.3	65.7	10.7	0.6	0.2	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6]	<0.1	<0.1	0.2	0.2	0.1	0.1	0.2	<0.1	1.1
[6-7]	<0.1	0.1	0.5	2.6	3.5	1.4	0.3	0.1	8.6
[7-8]	<0.1	<0.1	0.4	6.6	13.3	3.4	0.1	<0.1	23.9
[8-9]			0.1	6.4	21.6	3.5	<0.1		31.7
[9-10]			<0.1	3.7	17.4	1.8			22.9
[10-11]				1.3	7.5	0.3			9.2
[11-12]				0.3	1.8	<0.1			2.2
[12-13]				<0.1	0.4	<0.1			0.4
TOTAL	0.1	0.2	1.2	21.3	65.7	10.7	0.6	0.2	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

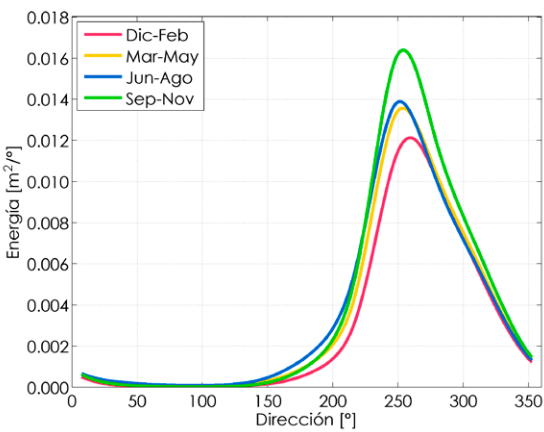
H_{m0} [m]	T_m [s]								TOTAL
	[5-6]	[6-7]	[7-8]	[8-9]	[9-10]	[10-11]	[11-12]	[12-13]	
[0-1]		<0.1	<0.1						0.0
[1-2]	0.7	1.6	1.7	1.0	0.5	0.1	<0.1	<0.1	5.6
[2-3]	0.4	5.3	7.4	4.7	2.2	0.9	0.2	<0.1	21.2
[3-4]	<0.1	1.7	10.6	7.7	3.0	1.1	0.4	<0.1	24.6
[4-5]		<0.1	4.1	11.4	4.6	1.1	0.3	<0.1	21.6
[5-6]			0.1	6.2	6.4	1.3	0.2	<0.1	14.4
[6-7]				0.6	4.9	1.8	0.2	<0.1	7.6
[7-8]				<0.1	1.3	2.8	0.8	0.1	5.0
TOTAL	1.1	8.6	23.9	31.7	22.9	9.2	2.2	0.4	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

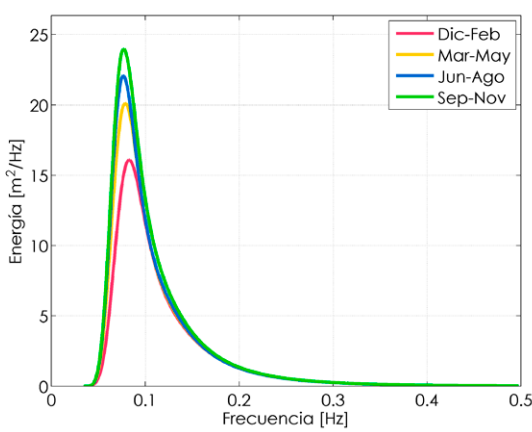
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E	<0.1%	2.53	3.25	3.71	3.72
ESE	<0.1%	2.51	3.02	3.93	3.95
SE	<0.1%	2.43	3.58	4.21	4.22
SSE	0.2%	2.39	3.74	5.40	6.34
S	0.4%	2.39	4.32	5.69	6.82
SSO	2.2%	2.77	4.51	6.20	8.07
SO	9.0%	3.35	5.67	8.10	10.59
OSO	26.6%	3.87	6.29	8.54	10.43
O	37.8%	4.21	6.49	8.59	10.17
ONO	18.2%	4.14	6.30	8.33	9.92
NO	4.0%	3.63	5.75	7.82	9.25
NNO	0.6%	2.65	3.99	5.34	7.27
N	0.3%	2.29	3.45	4.71	5.85
NNE	<0.1%	2.59	3.81	4.26	5.00
NE	<0.1%	2.77	3.42	4.14	4.25
ENE	<0.1%	2.36	3.50	3.69	3.69

NODO 19: ISLA LONDON / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



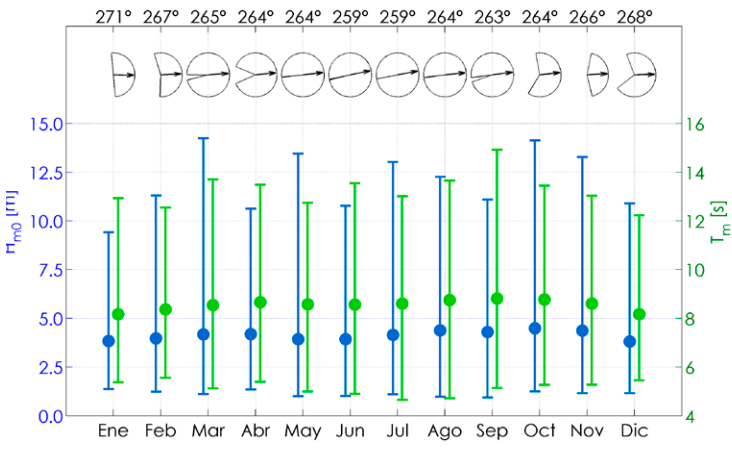
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

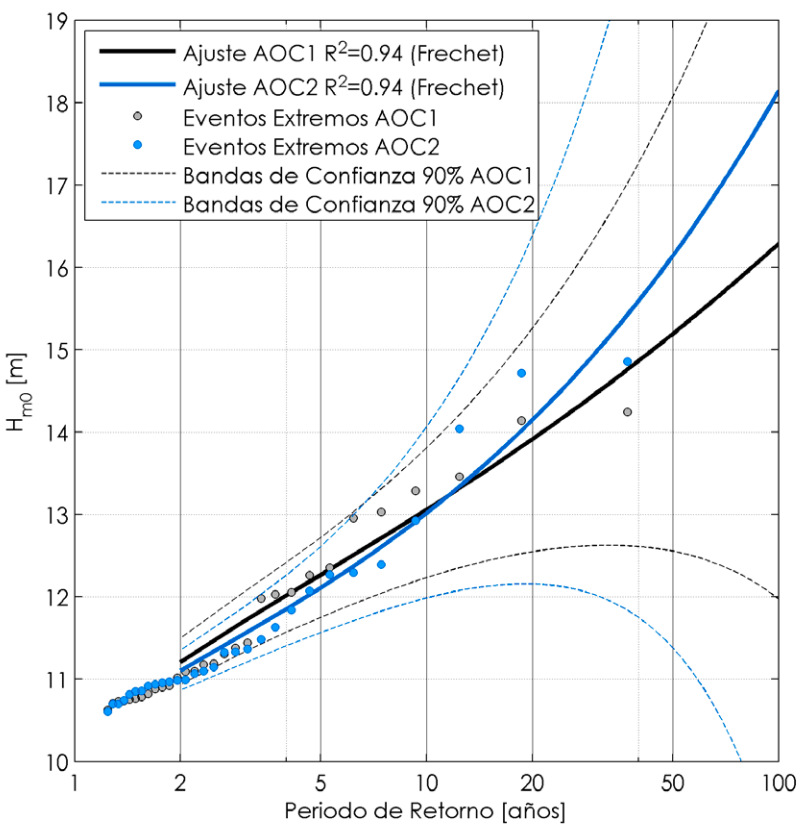
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	3.87	4.10	4.16	4.39
T_z [s]	7.4	7.7	7.8	7.9
T_e [s]	9.5	9.9	10.0	10.0
T_m [s]	8.2	8.6	8.6	8.7
T_p [s]	11.5	12.1	12.2	12.2
D_m [°]	269	264	261	264
D_p [°]	264	257	253	258
ε	0.78	0.79	0.79	0.79
ν	0.47	0.48	0.48	0.47
Q_p	1.90	1.95	1.97	1.98
γ	1.24	1.29	1.31	1.30
S	7.8	8.9	9.0	8.8

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

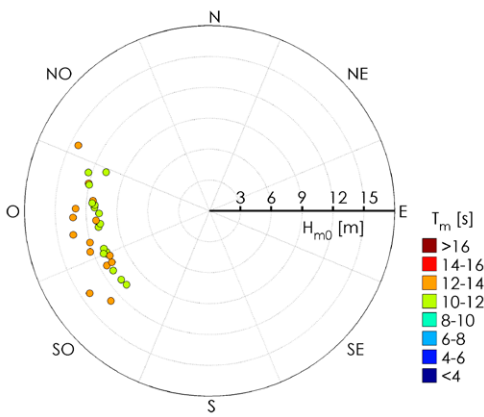


NODO 19: ISLA LONDON / CLIMA EXTREMO

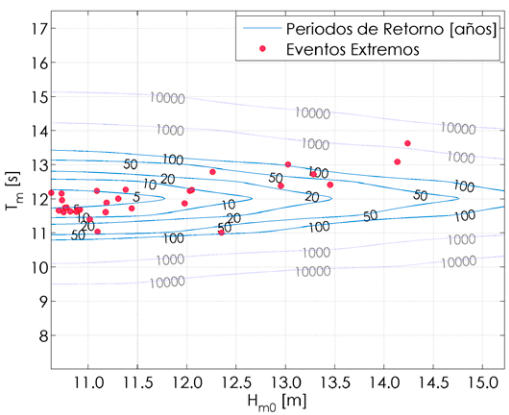
PERIODOS DE RETORNO UNIVARIADO



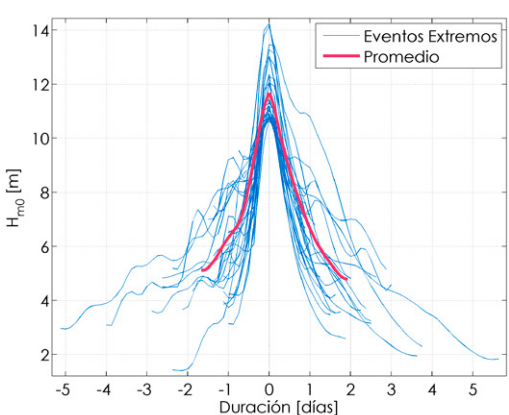
DISPERSIÓN DE EXTREMOS



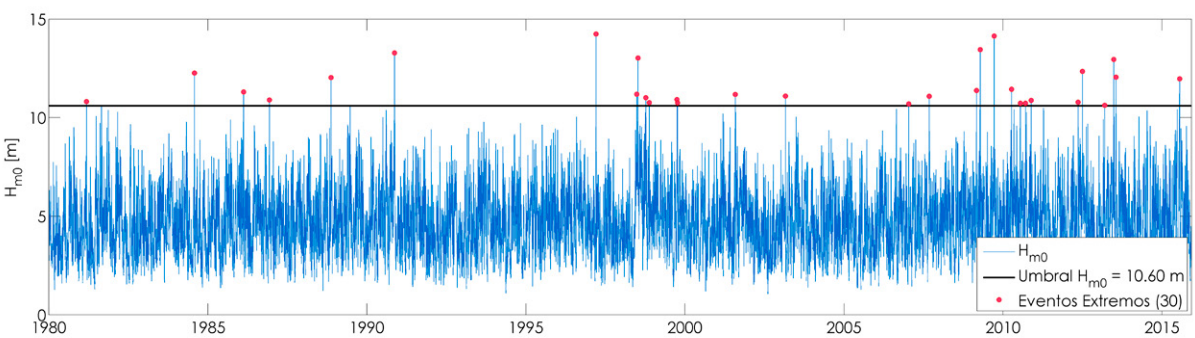
PERIODOS DE RETORNO BIVARIADO



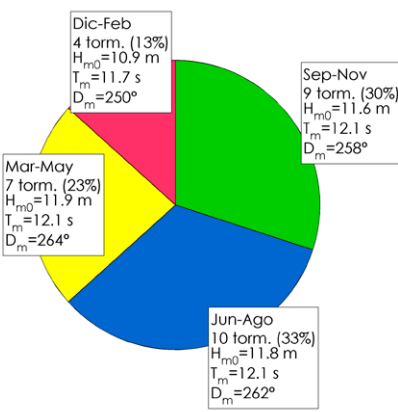
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 19: ISLA LONDON / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 53.0	primer modo	mar de fondo	79.0			0.1	10.1	82.6	7.2		<0.1
		mar de viento	21.0			0.6	18.5	64.8	15.9	<0.1	<0.1
Bimodal 31.1	primer modo	mar de fondo	87.1	<0.1	0.2	2.7	14.2	59.3	23.3	0.1	<0.1
		mar de viento	12.9	0.7	0.7	5.3	13.6	27.3	45.4	2.8	4.2
	segundo modo	mar de fondo	89.4	<0.1	3.0	11.2	5.3	32.7	45.5	1.4	0.8
		mar de viento	10.6	3.7	4.0	6.0	4.8	17.3	34.8	12.0	17.3
Trimodal 11.9	primer modo	mar de fondo	84.8	<0.1	1.1	9.4	18.1	51.0	19.5	0.4	0.4
		mar de viento	15.2	4.8	2.6	12.6	10.4	16.6	31.9	6.0	15.1
	segundo modo	mar de fondo	80.7	0.2	4.5	16.4	9.1	34.8	31.1	2.4	1.4
		mar de viento	19.3	9.3	5.1	5.6	5.8	13.5	26.4	12.6	21.7
	tercer modo	mar de fondo	89.3	1.0	8.3	14.9	5.9	18.8	44.9	3.7	2.6
		mar de viento	10.7	14.0	9.9	4.7	5.9	10.8	16.3	14.0	24.3

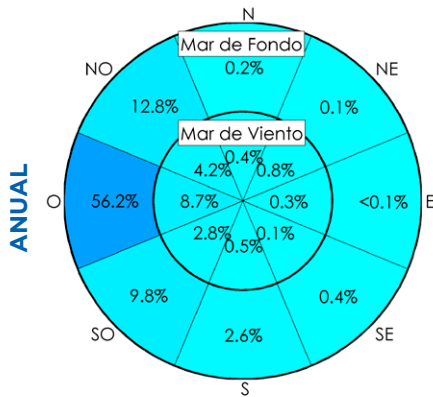
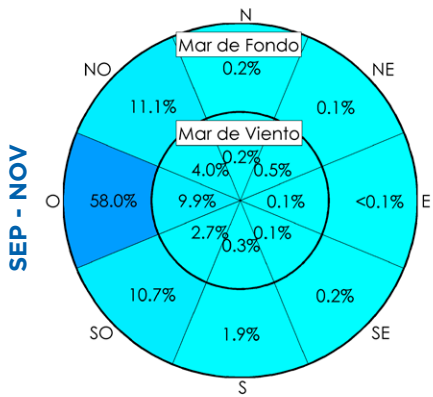
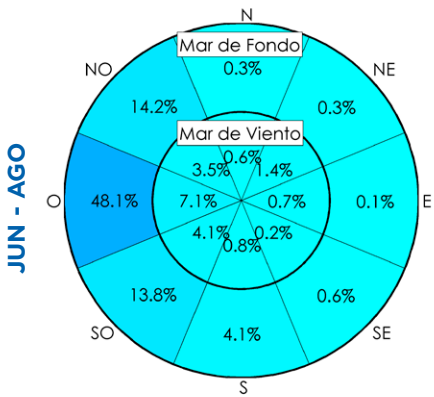
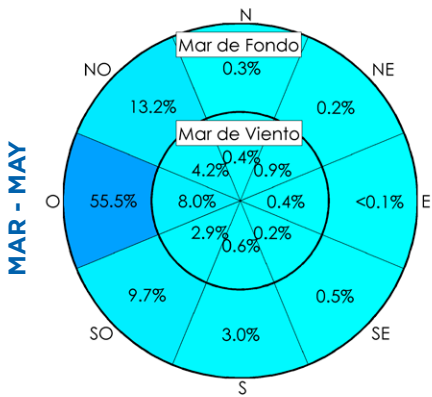
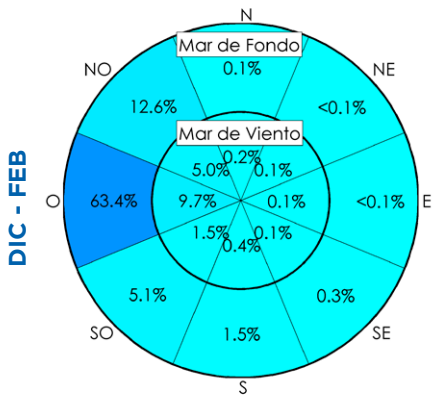
NOTA: estados de mar con más de 3 modos abarcan el 4.0% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del O	36.7	33.2	29.6	39.0	34.6
MF del O + MF del NO	20.3	13.0	9.5	12.9	13.9
MV del O	7.3	6.7	6.0	8.9	7.2
MF del SO	1.6	3.9	6.0	5.5	4.2
MF del S + MF del O	2.5	3.3	4.0	2.8	3.1
MF del NO	3.5	2.9	3.1	2.4	3.0
MF del SO + MF del NO	2.2	2.8	4.1	2.9	3.0
MF del O + MV del NO	2.2	2.3	2.4	2.8	2.4
MF del S + MF del O + MF del NO	2.7	2.6	2.4	1.9	2.4
MV del SO	0.8	2.2	3.0	2.3	2.1
Otros	20.3	27.0	30.0	18.8	24.1
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

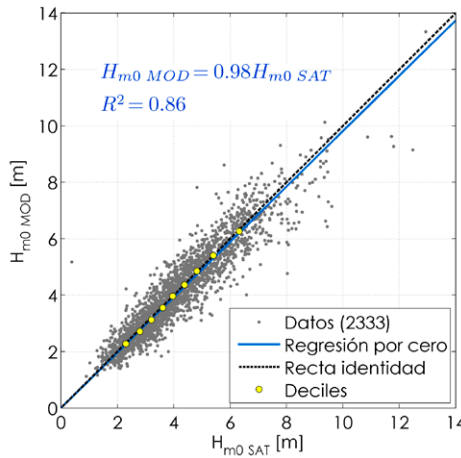


NODO 19: ISLA LONDON / INCERTIDUMBRE

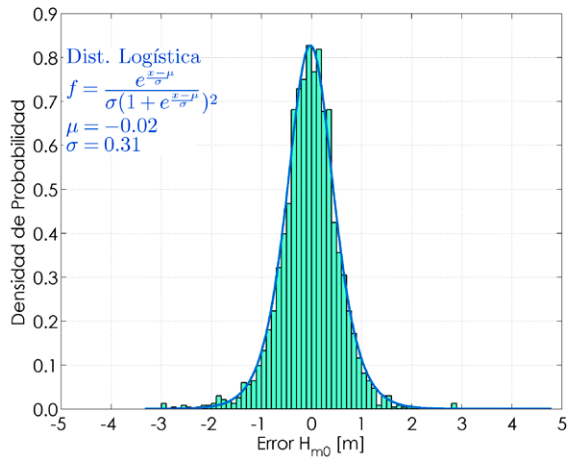
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{mo} satélite [m]	4.17	Intercepto mejor regresión lineal [m]	0.34
Promedio H_{mo} modelo [m]	4.13	Pendiente mejor regresión lineal	0.91
Desviación estándar H_{mo} satélite [m]	1.58	R^2 mejor regresión lineal	0.87
Desviación estándar H_{mo} modelo [m]	1.55	Mínimo error relativo (RE_{min})	-48%
Error absoluto medio (MAE) [m]	0.43	Máximo error relativo (RE_{max})	1262%
Raíz del error cuadrático medio (RMSE) [m]	0.59	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.03	Mínimo error relativo absoluto (ARE_{min})	0.009%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	1262%
Índice de dispersión (SI)	0.14	Error relativo absoluto medio (AARE)	11%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



NODO 20 ISLAS DESVENTURADAS

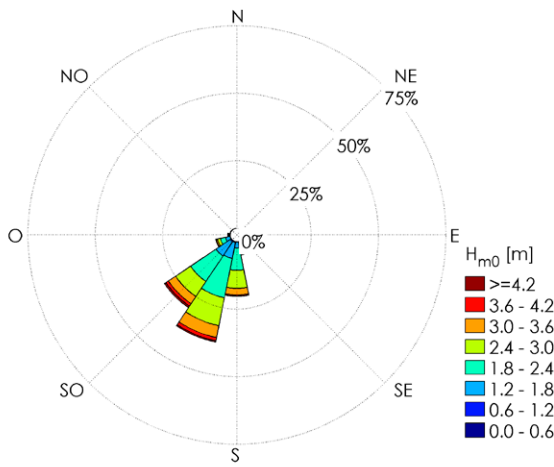
Coordenadas del Nodo: 27°S, 81°O



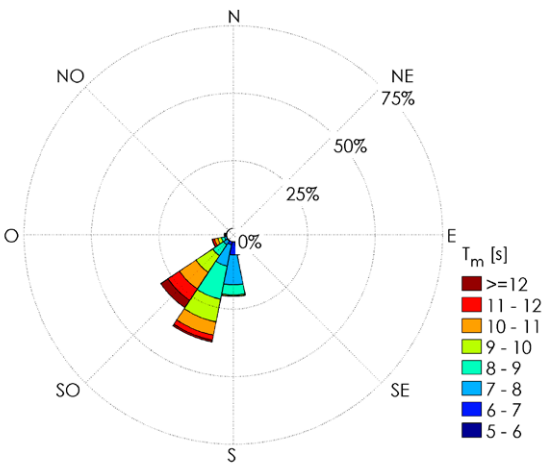
CRÉDITOS FOTOGRAFÍA: MARIO CÁCERES

NODO 20: ISLAS DESVENTURADAS / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

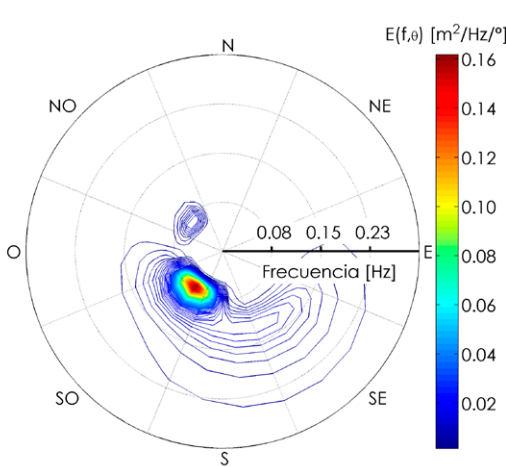
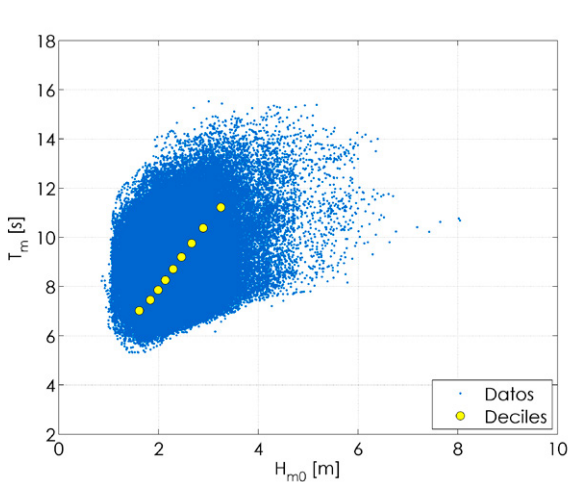


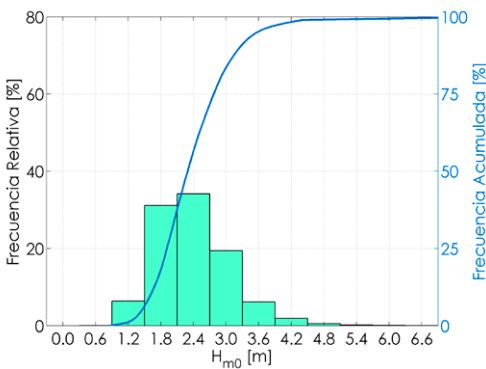
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



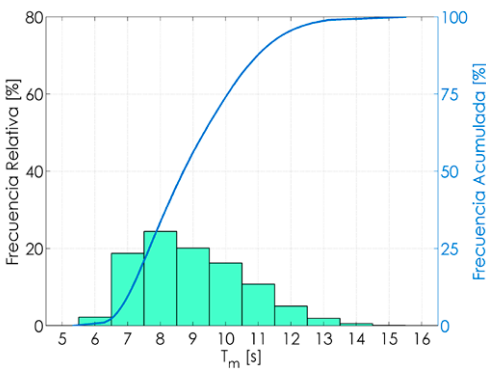
PARÁMETROS PROMEDIO

H _{m0} [m]	2.39
T _z [s]	7.9
T _e [s]	10.7
T _m [s]	8.9
T _p [s]	13.5
D _m [°]	206
D _p [°]	215
ε	0.81
ν	0.53
Q _p	2.02
γ	1.48
s	20.9

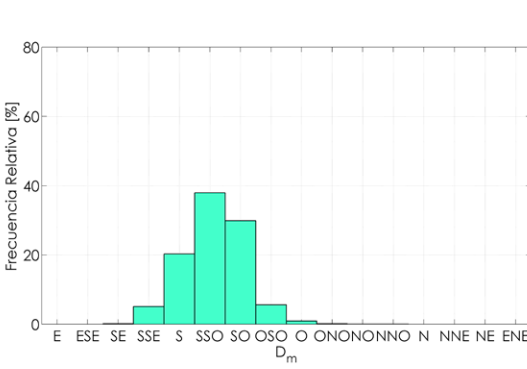
HISTOGRAMA DE H_{m0}



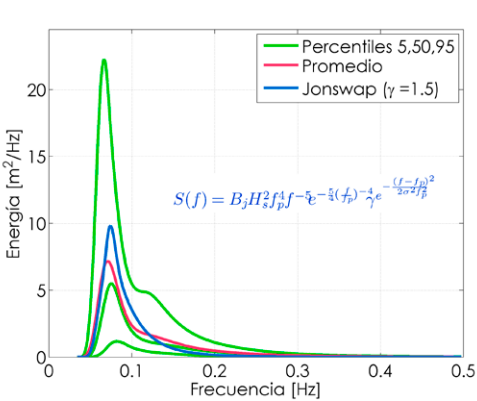
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

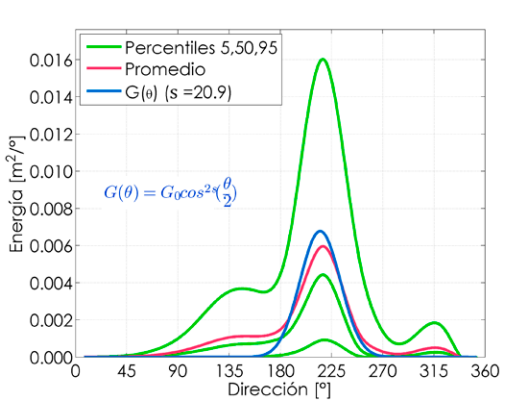


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H _{m0} [m]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[									0.0
[0.6-1.2[		<0.1	0.2	0.8	<0.1				1.1
[1.2-1.8[		<0.1	5.2	11.0	0.7				17.0
[1.8-2.4[		0.3	16.4	20.9	0.7	<0.1			38.4
[2.4-3[		0.4	13.1	13.3	0.4	<0.1			27.2
[3-3.6[		0.2	5.3	5.9	0.3	<0.1			11.7
[3.6-4.2[		<0.1	1.1	1.9	<0.1	<0.1			3.1
[4.2-4.8[		<0.1	0.3	1.2	<0.1	<0.1			1.5
TOTAL	0.0	1.1	41.6	54.9	2.4	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T _m [s]	D _m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[		<0.1	0.2	<0.1	<0.1	<0.1			0.3
[6-7[		0.7	7.7	0.5	0.3	<0.1			9.2
[7-8[		0.3	18.5	4.7	0.5	<0.1			24.0
[8-9[		<0.1	10.5	11.6	0.5	<0.1			22.6
[9-10[			3.3	14.2	0.4				17.9
[10-11[			1.2	12.3	0.3				13.8
[11-12[			0.2	7.3	0.3	<0.1			7.8
[12-13[			<0.1	4.2	0.1				4.4
TOTAL	0.0	1.1	41.6	54.9	2.4	0.0	0.0	0.0	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

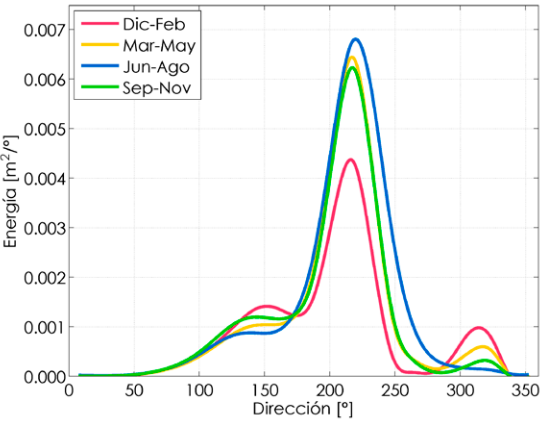
H _{m0} [m]	T _m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[									0.0
[0.6-1.2[	<0.1	0.1	0.3	0.3	0.3	<0.1	<0.1		1.1
[1.2-1.8[	0.2	2.0	4.0	4.1	3.7	2.2	0.6	<0.1	17.0
[1.8-2.4[	<0.1	5.0	10.0	8.5	6.5	5.0	2.5	0.7	38.4
[2.4-3[		2.0	7.0	6.3	4.4	3.7	2.5	1.4	27.2
[3-3.6[		0.2	2.4	2.5	2.2	1.9	1.3	1.3	11.7
[3.6-4.2[			0.3	0.6	0.6	0.7	0.5	0.5	3.1
[4.2-4.8[			<0.1	0.2	0.2	0.3	0.3	0.4	1.5
TOTAL	0.3	9.2	24.0	22.6	17.9	13.8	7.8	4.4	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

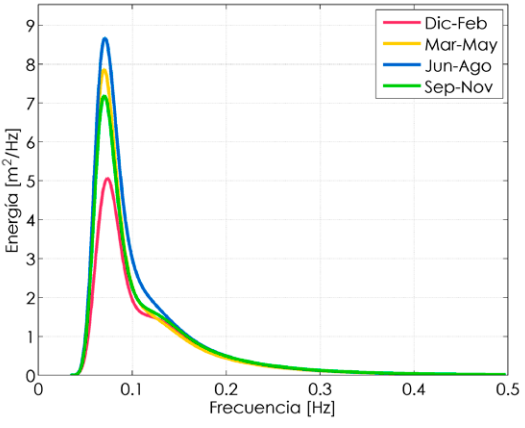
	Prob. Dir.	H _{m0} 50% [m]	H _{m0} 90% [m]	H _{m0} 99% [m]	H _{m0} 12 [m]
E					
ESE					
SE	0.1%	2.92	3.92	5.40	5.51
SSE	5.1%	2.59	3.33	4.17	4.98
S	20.3%	2.37	3.15	4.03	4.62
SSO	38.0%	2.30	3.25	4.34	5.42
SO	29.9%	2.20	3.30	4.76	5.93
OSO	5.6%	2.06	3.14	4.39	5.22
O	0.9%	2.13	3.42	4.50	5.30
ONO	0.2%	2.10	3.75	5.49	5.79
NO	<0.1%	2.89	5.10	5.59	5.59
NNO	<0.1%	3.27	4.50	4.50	4.50
N					
NNE					
NE					
ENE					

NODO 20: ISLAS DESVENTURADAS / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



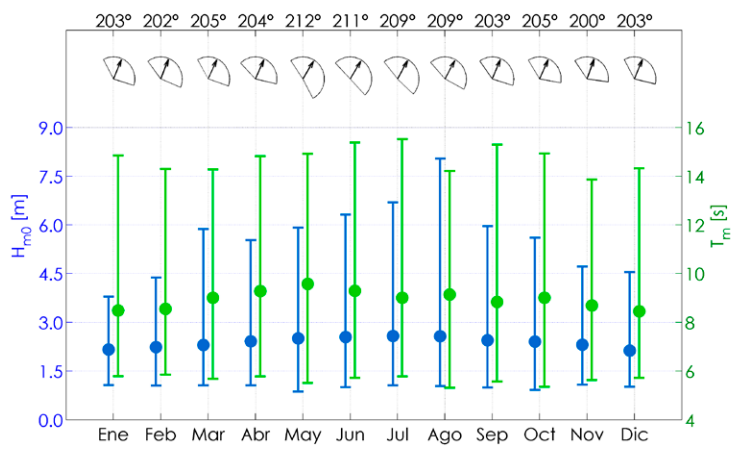
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

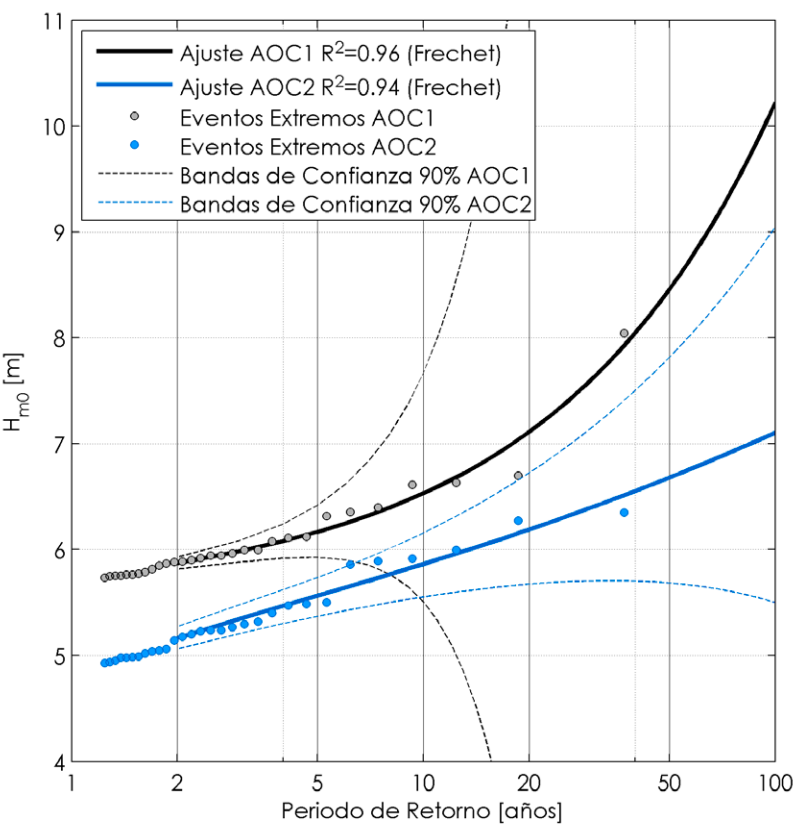
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.18	2.41	2.57	2.39
T_z [s]	7.5	8.2	8.1	7.8
T_e [s]	10.3	11.0	10.8	10.6
T_m [s]	8.5	9.3	9.1	8.9
T_p [s]	13.5	13.7	13.3	13.4
D_m [°]	203	207	210	203
D_p [°]	214	215	217	214
ε	0.81	0.81	0.81	0.81
ν	0.54	0.53	0.52	0.54
Q_p	1.87	2.11	2.09	2.00
γ	1.38	1.56	1.51	1.49
S	18.5	22.9	20.4	21.7

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

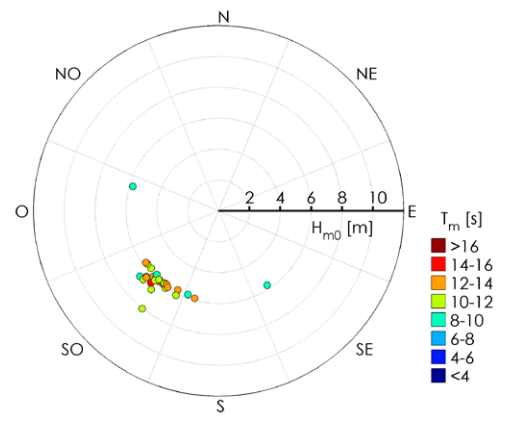


NODO 20: ISLAS DESVENTURADAS / CLIMA EXTREMO

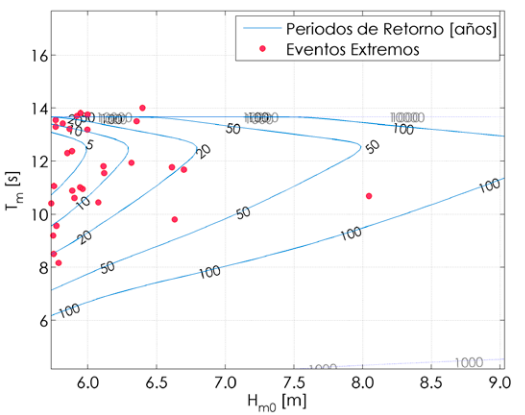
PERIODOS DE RETORNO UNIVARIADO



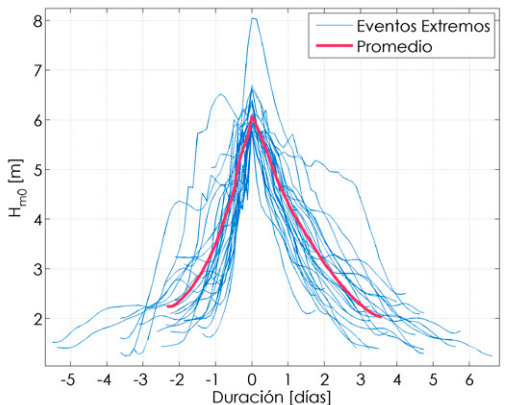
DISPERSIÓN DE EXTREMOS



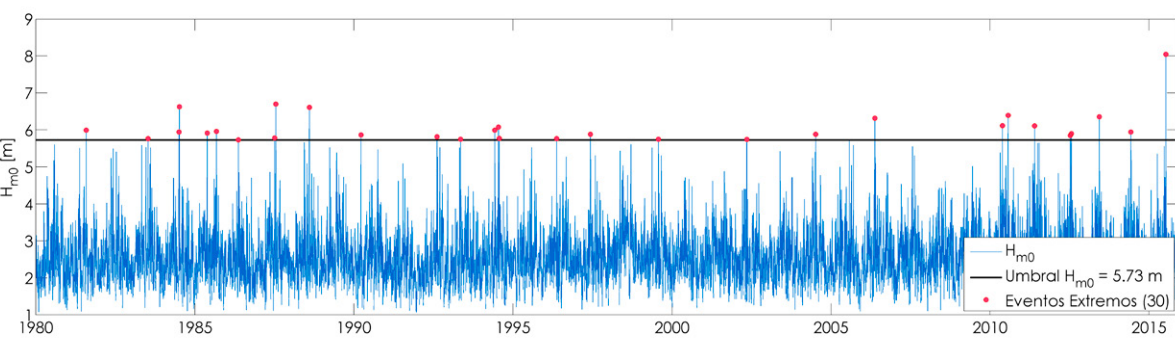
PERIODOS DE RETORNO BIVARIADO



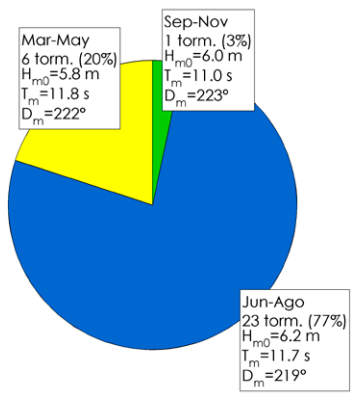
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 20: ISLAS DESVENTURADAS / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 9.9	primer modo	mar de fondo	99.7		<0.1	3.4	90.4	6.1			
		mar de viento	0.3		26.9	7.7	50.0	15.4			
Bimodal 30.1	primer modo	mar de fondo	96.6	<0.1	8.0	9.9	76.6	5.5	<0.1		
		mar de viento	3.4	0.2	83.4	10.8	1.8	1.7	2.0	0.2	
	segundo modo	mar de fondo	91.9	0.7	40.7	12.0	20.3	4.4	21.7	<0.1	<0.1
		mar de viento	8.1	1.3	76.0	14.0	2.3	1.8	3.4	0.9	0.4
Trimodal 49.8	primer modo	mar de fondo	96.6		12.5	15.7	67.5	3.6	0.7	<0.1	
		mar de viento	3.4	<0.1	86.3	11.8	0.2	0.5	1.0	0.2	
	segundo modo	mar de fondo	94.0	0.2	33.5	19.2	28.2	3.4	15.5	<0.1	
		mar de viento	6.0	0.5	74.7	17.1	2.2	1.9	2.7	0.8	0.1
	tercer modo	mar de fondo	98.6	0.3	10.8	8.9	4.3	3.5	71.9	0.3	<0.1
		mar de viento	1.4	2.2	30.2	39.6	7.7	7.5	9.2	2.9	0.7

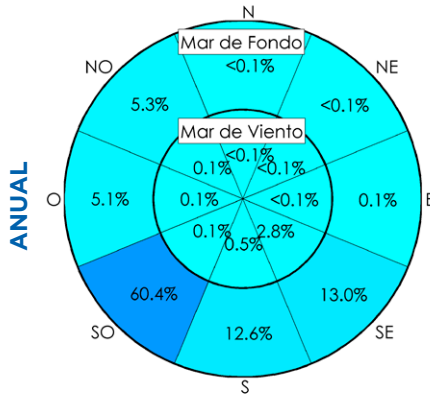
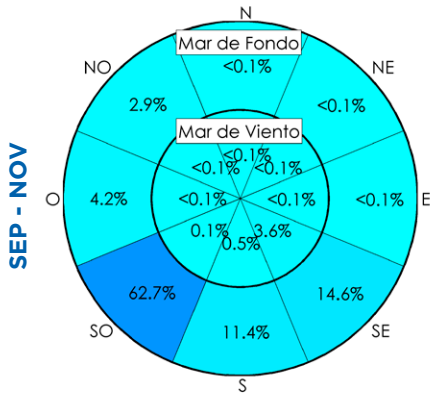
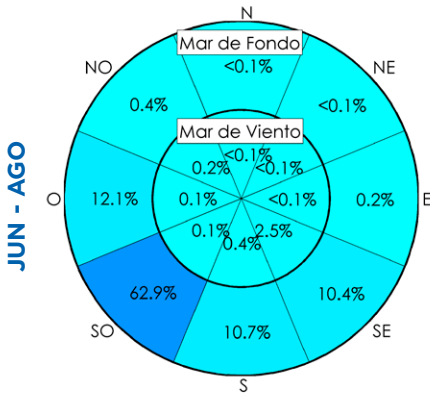
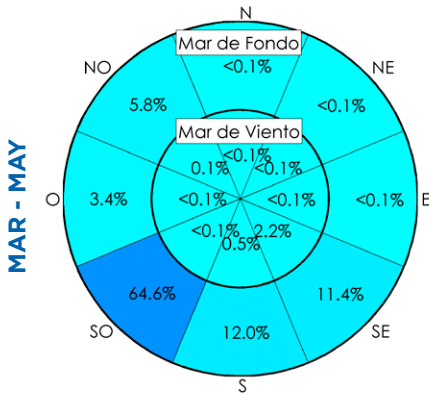
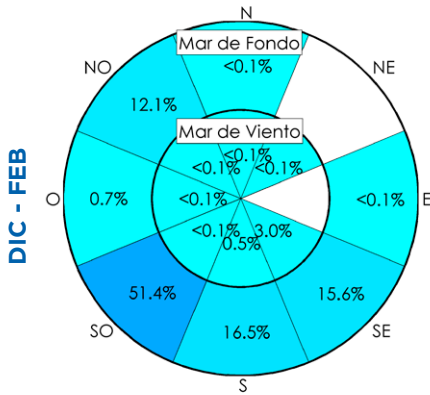
NOTA: estados de mar con más de 3 modos abarcan el 10.3% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLEAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SE + MF del SO + MF del NO	38.3	26.9	1.3	20.5	21.7
MF del S + MF del SO + MF del NO	32.0	18.1	0.7	10.5	15.3
MF del SE + MF del SO	1.5	9.2	21.9	18.7	12.9
MF del SO	0.1	5.5	22.2	7.6	8.9
MF del SO + MF del NO	5.8	10.1	1.6	4.7	5.5
MF del S + MF del SO	0.9	3.1	8.2	6.6	4.7
MF del SO + MF del NO + MV del SE	5.8	3.5	0.1	3.2	3.1
MF del SE + MF del S + MF del SO + MF del NO	4.0	4.4	0.4	3.2	3.0
MF del SO + MV del SE	0.4	1.7	4.2	4.0	2.6
MF del SE + MF del S + MF del SO	<0.1	1.1	5.1	2.5	2.2
Otros	11.2	16.3	34.4	18.5	20.1
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

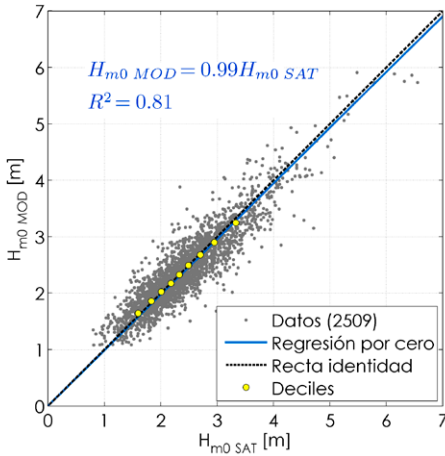


NODO 20: ISLAS DESVENTURADAS / INCERTIDUMBRE

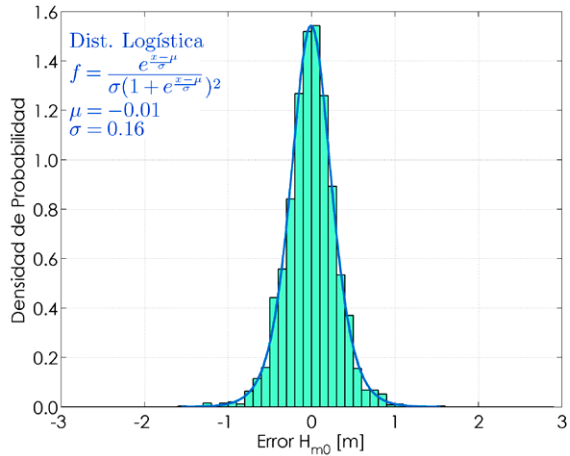
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.42	Intercepto mejor regresión lineal [m]	0.32
Promedio H_{m0} modelo [m]	2.41	Pendiente mejor regresión lineal	0.86
Desviación estándar H_{m0} satélite [m]	0.71	R^2 mejor regresión lineal	0.83
Desviación estándar H_{m0} modelo [m]	0.67	Mínimo error relativo (RE_{min})	-44%
Error absoluto medio (MAE) [m]	0.22	Máximo error relativo (RE_{max})	68%
Raíz del error cuadrático medio (RMSE) [m]	0.29	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.000%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	68%
Índice de dispersión (SI)	0.12	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR



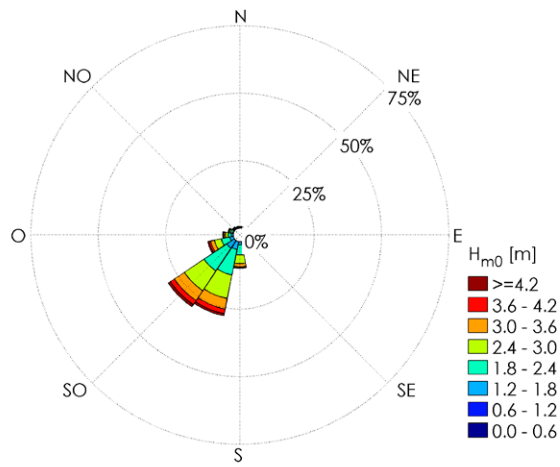
NODO 21 ISLA DE PASCUA

Coordenadas del Nodo: 28°S, 110°O

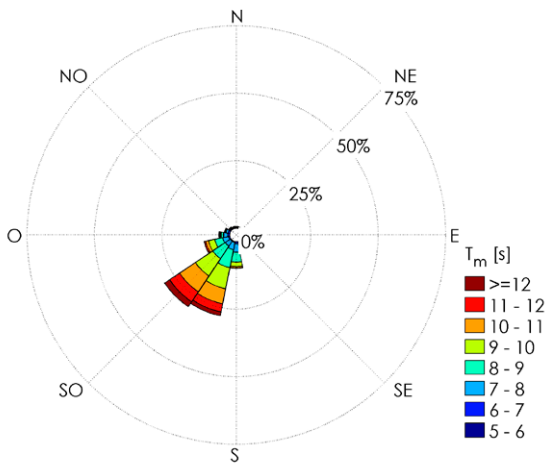


NODO 21: ISLA DE PASCUA / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

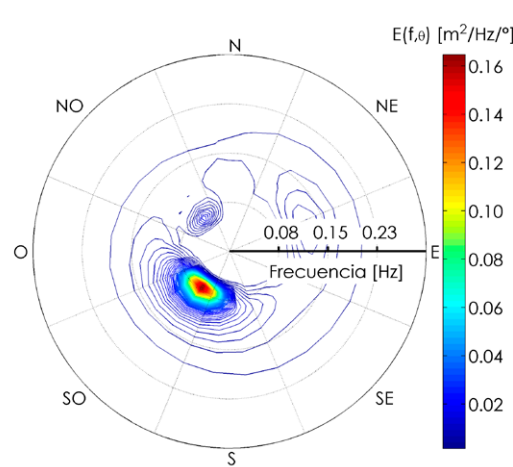
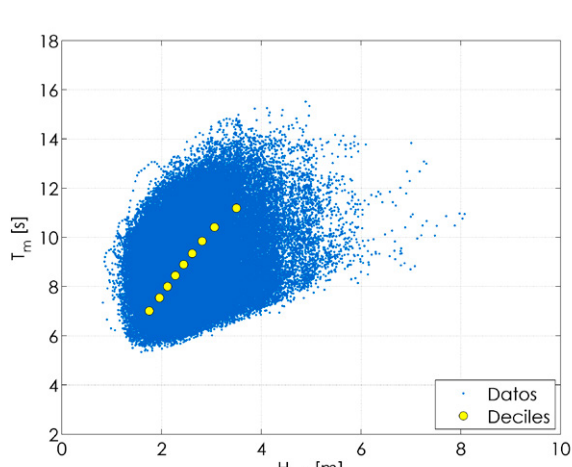


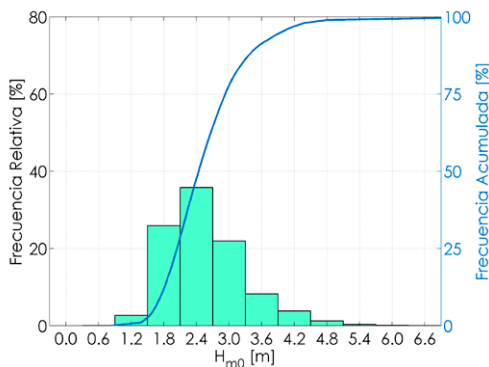
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



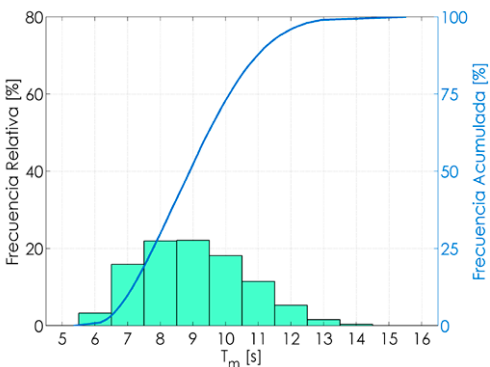
PARÁMETROS PROMEDIO

H_{m0} [m]	2.56
T_z [s]	8.0
T_e [s]	10.6
T_m [s]	9.0
T_p [s]	13.3
D_m [°]	211
D_p [°]	216
ε	0.80
ν	0.51
Q_p	2.02
γ	1.45
s	22.3

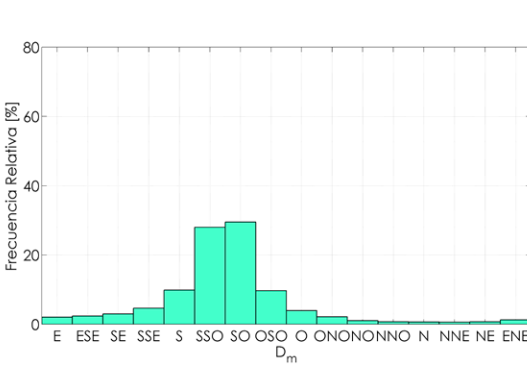
HISTOGRAMA DE H_{m0}



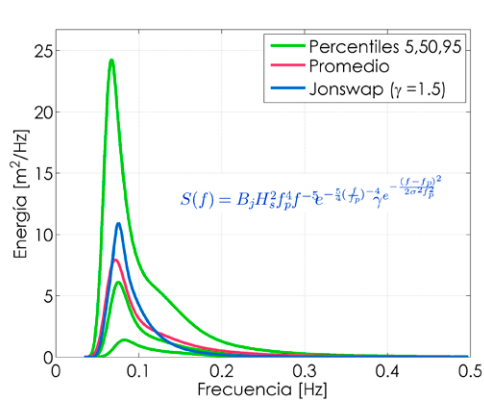
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

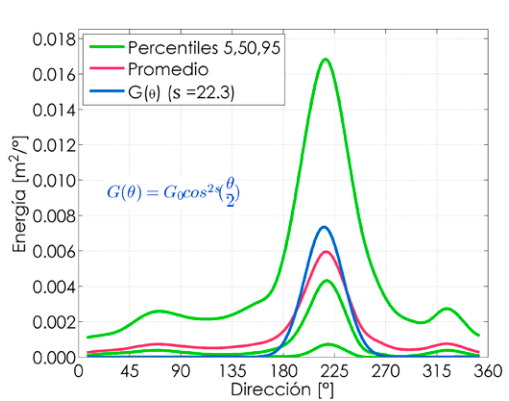


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[									0.0
[0.6-1.2[		<0.1	<0.1	<0.1	<0.1	<0.1			0.1
[1.2-1.8[	0.4	0.6	2.7	5.9	1.4	0.3	0.1	0.3	11.8
[1.8-2.4[	1.9	2.4	8.6	18.0	2.7	0.8	0.6	0.8	35.7
[2.4-3[	1.2	2.0	7.5	15.9	2.3	0.6	0.3	0.4	30.2
[3-3.6[	0.3	0.7	2.9	7.9	1.2	0.3	0.1	<0.1	13.5
[3.6-4.2[	0.1	0.2	1.1	3.3	0.6	0.2	<0.1	<0.1	5.6
[4.2-4.8[	<0.1	<0.1	0.5	1.9	0.4	<0.1	<0.1	<0.1	3.1
TOTAL	3.9	6.1	23.4	52.9	8.7	2.3	1.3	1.5	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4
[6-7[	1.9	2.0	1.3	0.6	1.3	1.0	0.7	0.8	9.5
[7-8[	1.7	3.0	5.9	4.5	3.2	0.8	0.4	0.6	20.0
[8-9[	0.3	0.8	7.9	10.8	2.1	0.3	0.1	0.1	22.4
[9-10[	<0.1	0.2	5.0	14.3	1.2	<0.1	<0.1	<0.1	20.7
[10-11[		<0.1	2.2	12.0	0.6	<0.1	<0.1		14.9
[11-12[		<0.1	0.8	7.1	0.2	<0.1			8.2
[12-13[			0.3	3.7	<0.1	<0.1			4.0
TOTAL	3.9	6.1	23.4	52.9	8.7	2.3	1.3	1.5	100.0

TABLA DE FRECUENCIA H_{m0} y T_m [%]

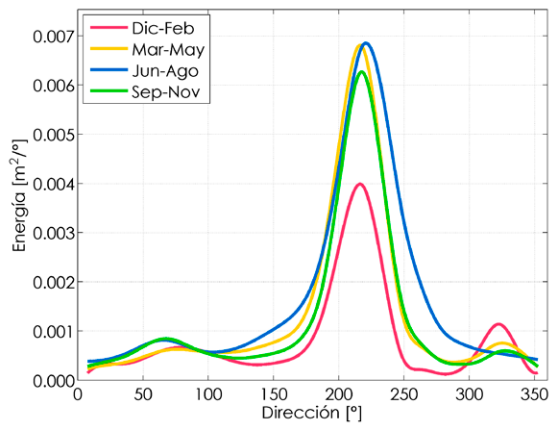
H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[									0.0
[0.6-1.2[		<0.1	<0.1	<0.1	<0.1	<0.1			0.1
[1.2-1.8[	0.1	1.3	2.8	3.4	2.9	1.1	0.1	<0.1	11.8
[1.8-2.4[	0.2	4.7	7.5	8.2	7.8	5.3	1.8	0.3	35.7
[2.4-3[	<0.1	2.9	6.0	6.2	5.9	4.8	3.3	1.1	30.2
[3-3.6[		0.5	2.5	2.7	2.5	2.1	1.8	1.5	13.5
[3.6-4.2[		<0.1	1.0	1.2	1.0	1.0	0.7	0.7	5.6
[4.2-4.8[		<0.1	0.2	0.7	0.7	0.6	0.5	0.4	3.1
TOTAL	0.4	9.5	20.0	22.4	20.7	14.9	8.2	4.0	100.0

PERCENTILES DE H_{m0} POR DIRECCIÓN

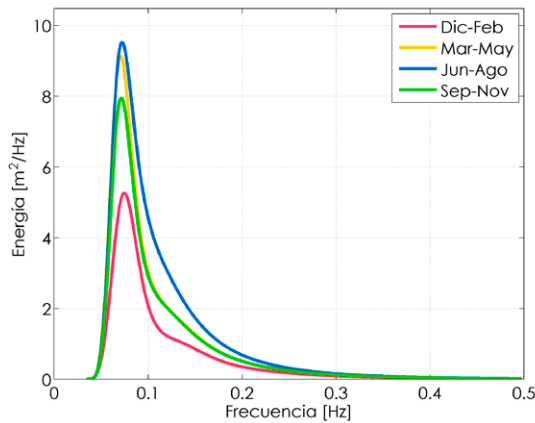
	Prob. Dir.	$H_{m0\ 50\%}$ [m]	$H_{m0\ 90\%}$ [m]	$H_{m0\ 99\%}$ [m]	$H_{m0\ 12}$ [m]
E	2.0%	2.30	2.96	4.07	4.79
ESE	2.4%	2.38	3.20	4.54	5.37
SE	2.9%	2.41	3.23	4.33	4.99
SSE	4.6%	2.38	3.25	4.42	5.47
S	9.9%	2.40	3.30	4.42	5.68
SSO	28.0%	2.48	3.53	4.80	5.81
SO	29.5%	2.48	3.56	4.88	5.70
OSO	9.7%	2.46	3.76	4.99	5.59
O	4.0%	2.45	3.76	5.08	6.20
ONO	2.1%	2.45	3.80	5.08	6.07
NO	1.0%	2.41	3.78	4.54	5.06
NNO	0.7%	2.44	3.38	4.14	5.02
N	0.6%	2.28	3.28	4.08	4.63
NNE	<0.1%	2.24	3.00	3.98	4.15
NE	<0.1%	2.19	2.86	3.81	4.24
ENE	<0.1%	2.21	2.81	3.80	4.58

NODO 21: ISLA DE PASCUA / CLIMA MEDIO ESTACIONAL

ESPECTRO PROMEDIO DE DIRECCIONES



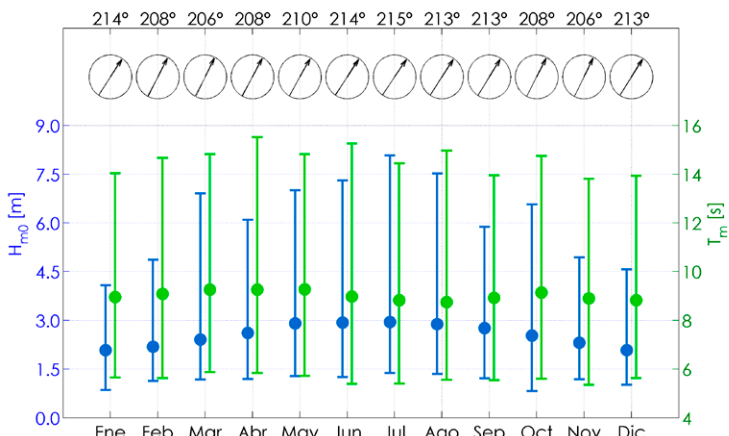
ESPECTRO PROMEDIO DE FRECUENCIAS



PROMEDIOS ESTACIONALES

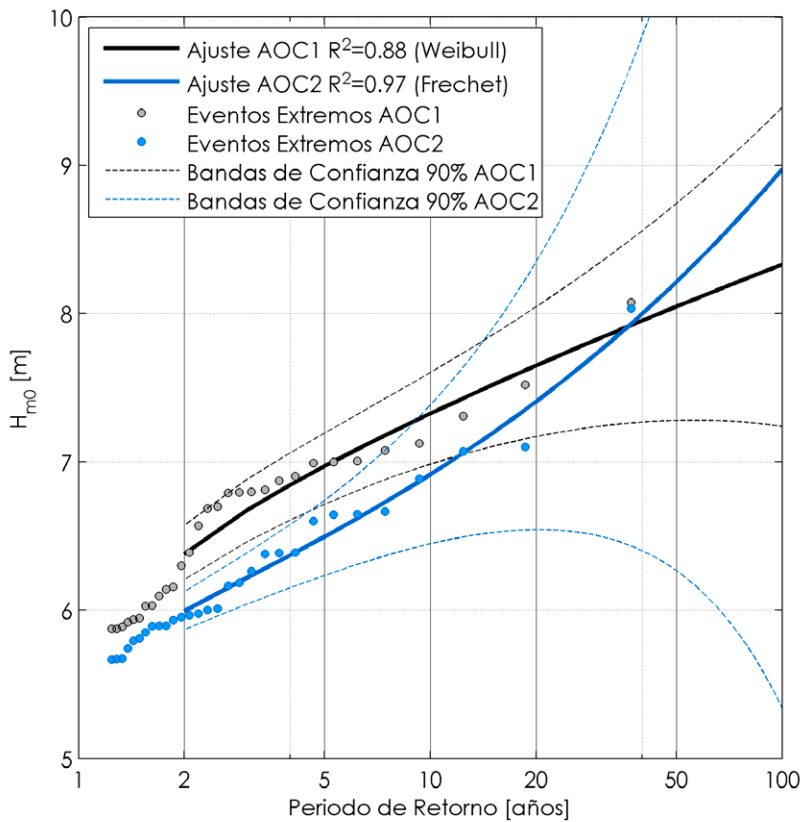
PARÁMETRO	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV
H_{m0} [m]	2.11	2.64	2.92	2.53
T_z [s]	8.0	8.2	7.9	8.0
T_e [s]	10.6	10.9	10.4	10.6
T_m [s]	9.0	9.3	8.9	9.0
T_p [s]	13.3	13.6	12.9	13.3
D_m [°]	211	208	214	209
D_p [°]	217	211	210	210
ε	0.80	0.81	0.80	0.80
ν	0.51	0.51	0.50	0.51
Q_p	2.03	2.07	1.97	2.03
γ	1.47	1.50	1.38	1.47
S	24.5	23.4	18.7	22.6

VARIACIÓN MENSUAL DEL PROMEDIO Y RANGO

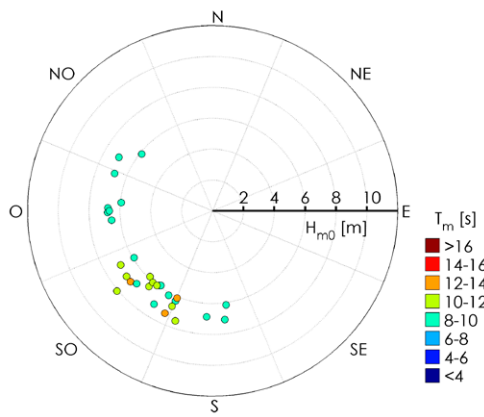


NODO 21: ISLA DE PASCUA / CLIMA EXTREMO

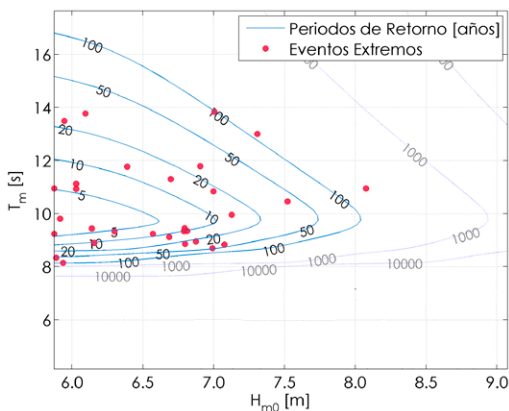
PERIODOS DE RETORNO UNIVARIADO



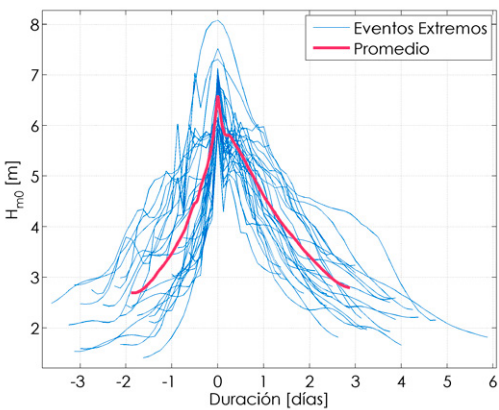
DISPERSIÓN DE EXTREMOS



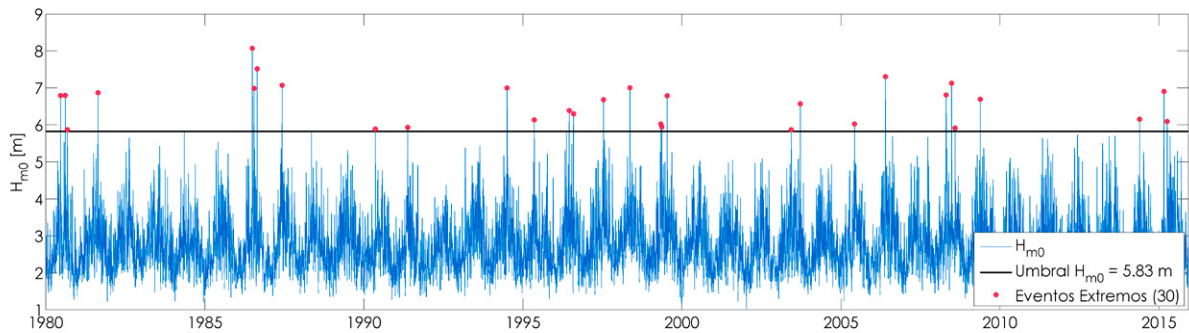
PERIODOS DE RETORNO BIVARIADO



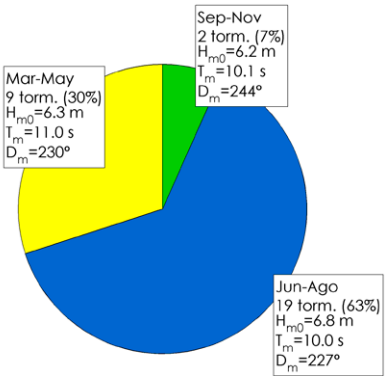
SERIE DE TIEMPO DE EXTREMOS



SERIE DE TIEMPO H_{m0}



DISTRIBUCIÓN ESTACIONAL DE EXTREMOS



NODO 21: ISLA DE PASCUA / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 5.2	primer modo	mar de fondo	98.6	<0.1	0.8	8.0	82.7	8.5	<0.1		
		mar de viento	1.4	3.8	9.0	33.3	20.5	28.2	1.3		3.8
Bimodal 19.2	primer modo	mar de fondo	96.0	5.7	4.7	7.9	71.5	8.2	1.0	0.1	0.9
		mar de viento	4.0	23.6	27.3	4.0	4.0	9.5	17.6	6.2	7.9
	segundo modo	mar de fondo	95.2	31.2	8.5	8.4	19.6	4.5	10.1	5.7	12.0
		mar de viento	4.8	21.5	22.9	4.1	1.4	2.7	19.5	14.9	12.9
Trimodal 33.9	primer modo	mar de fondo	95.7	8.3	3.1	7.3	71.7	6.5	1.3	0.3	1.4
		mar de viento	4.3	28.1	21.3	3.0	1.7	5.8	16.4	12.9	10.8
	segundo modo	mar de fondo	93.3	30.2	7.2	7.6	18.4	5.4	14.7	6.8	9.7
		mar de viento	6.7	18.3	21.3	6.8	2.5	3.4	16.1	20.4	11.3
	tercer modo	mar de fondo	97.4	17.3	6.3	7.3	5.2	4.5	27.9	21.3	10.2
		mar de viento	2.6	9.6	11.2	9.6	4.9	6.3	15.7	26.8	15.8

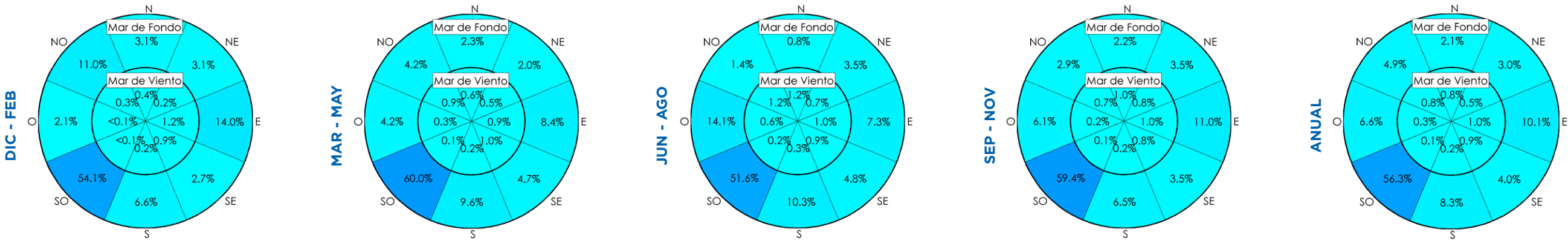
NOTA: estados de mar con más de 3 modos abarcan el 41.7% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del E + MF del SO + MF del NO	14.4	7.1	0.5	7.0	7.2
MF del E + MF del SO	0.4	4.4	10.7	8.8	6.1
MF del N + MF del E + MF del SO	5.1	5.9	0.8	6.5	4.6
MF del SO	<0.1	3.8	9.3	3.6	4.2
MF del NE + MF del SO + MF NO	4.4	2.3	0.6	2.3	2.4
MF del NE + MF del SO	0.2	1.7	4.0	2.6	2.1
MF del SE + MF del SO	0.1	1.8	4.4	1.8	2.1
MF del SO + MF del NO	2.3	2.5	0.7	1.7	1.8
MF del S + MF del SO	<0.1	1.1	4.0	1.3	1.6
MF del E + MF del S + MF del SO	0.1	0.9	3.4	1.9	1.6
Otros	73.1	68.6	61.5	62.6	66.4
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

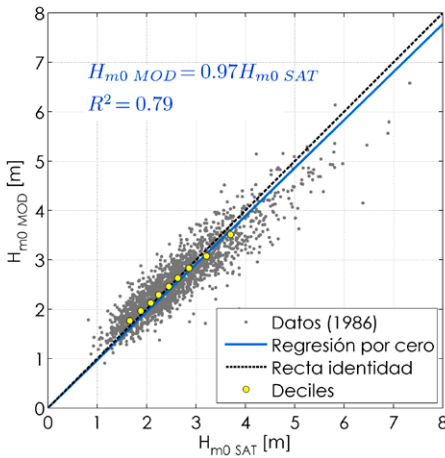


NODO 21: ISLA DE PASCUA / INCERTIDUMBRE

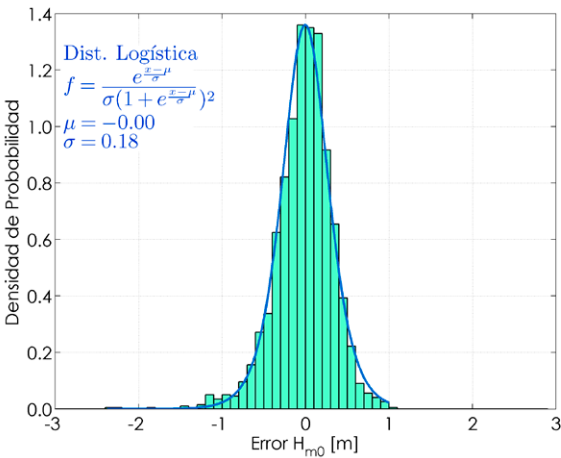
ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.59	Intercepto mejor regresión lineal [m]	0.54
Promedio H_{m0} modelo [m]	2.57	Pendiente mejor regresión lineal	0.79
Desviación estándar H_{m0} satélite [m]	0.86	R^2 mejor regresión lineal	0.85
Desviación estándar H_{m0} modelo [m]	0.73	Mínimo error relativo (RE_{min})	-55%
Error absoluto medio (MAE) [m]	0.25	Máximo error relativo (RE_{max})	118%
Raíz del error cuadrático medio (RMSE) [m]	0.34	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.02	Mínimo error relativo absoluto (ARE_{min})	0.004%
Habilidad de pronóstico (SS)	0.87	Máximo error relativo absoluto (ARE_{max})	118%
Índice de dispersión (SI)	0.13	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN

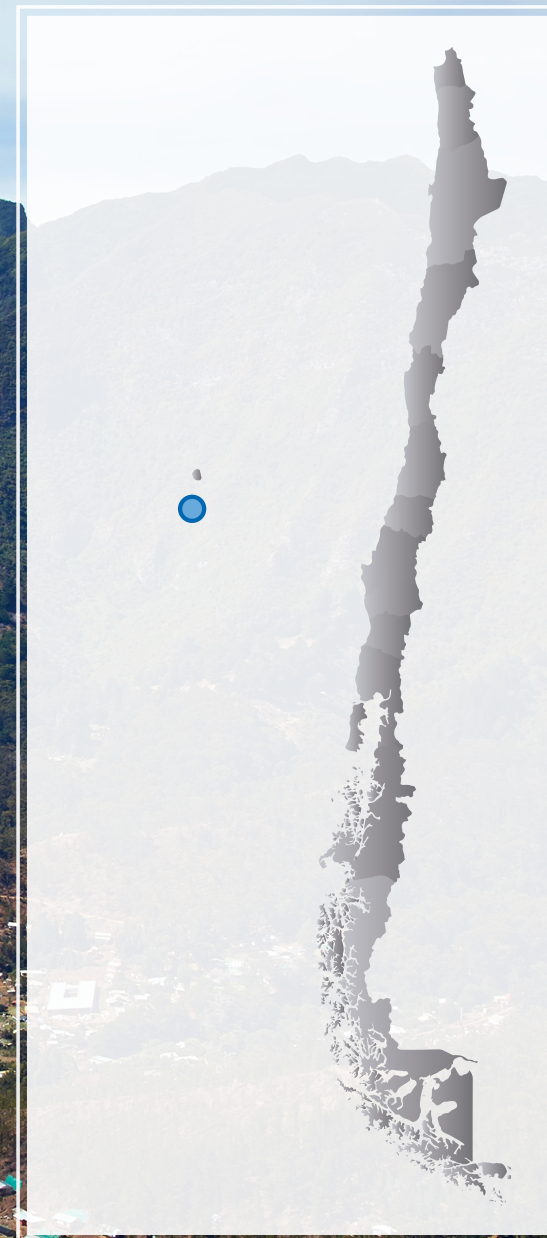


DISTRIBUCIÓN DEL ERROR



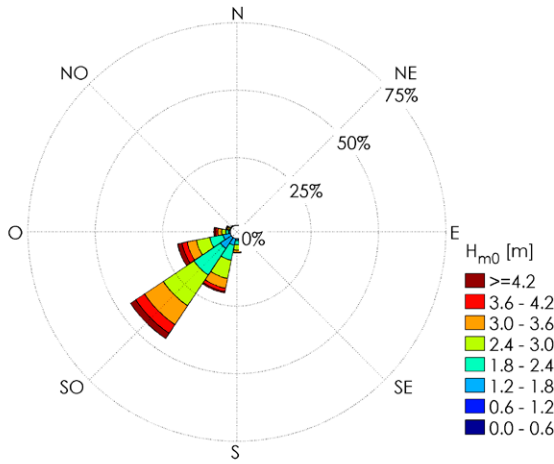
NODO_22 ARCHIPIÉLAGO JUAN FERNÁNDEZ

Coordenadas del Nodo: 35°S, 81°O

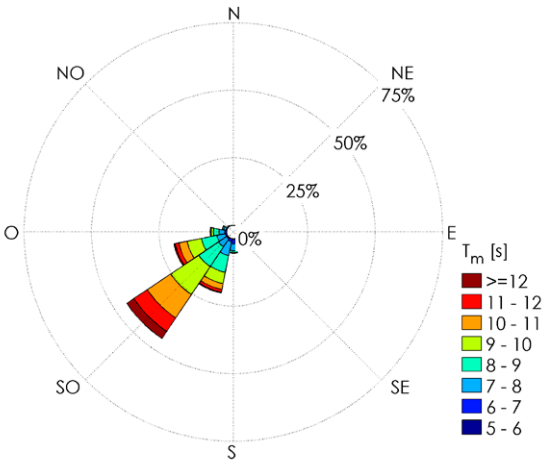


NODO 22: ARCHIPIÉLAGO JUAN FERNÁNDEZ / CLIMA MEDIO

ROSA DE H_{m0}



ROSA DE T_m



ESPECTRO POLAR PROMEDIO

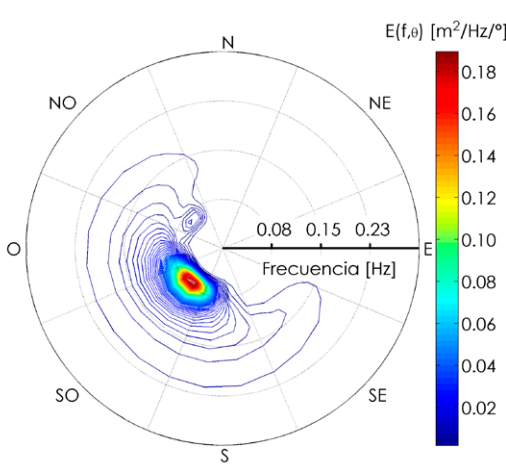
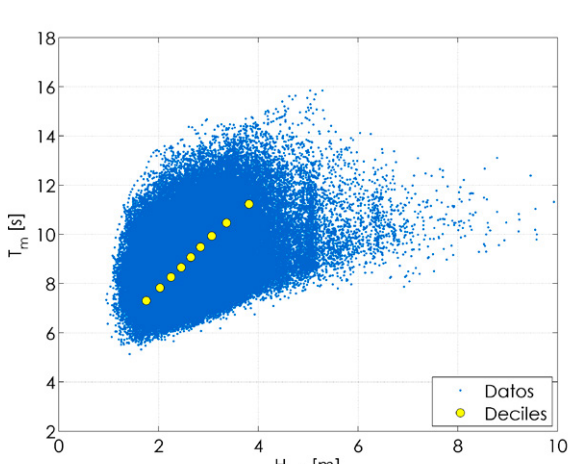


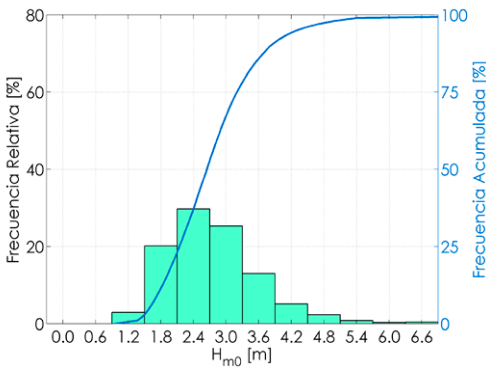
GRÁFICO DE DISPERSIÓN T_m vs H_{m0}



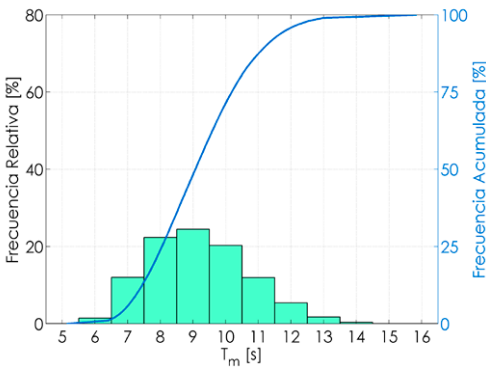
PARÁMETROS PROMEDIO

H_{m0} [m]	2.75
T_z [s]	8.2
T_e [s]	10.7
T_m [s]	9.2
T_p [s]	13.1
D_m [°]	226
D_p [°]	225
ε	0.81
ν	0.51
Q_p	2.08
γ	1.47
s	18.0

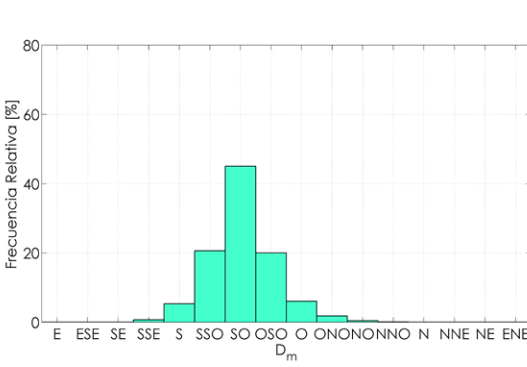
HISTOGRAMA DE H_{m0}



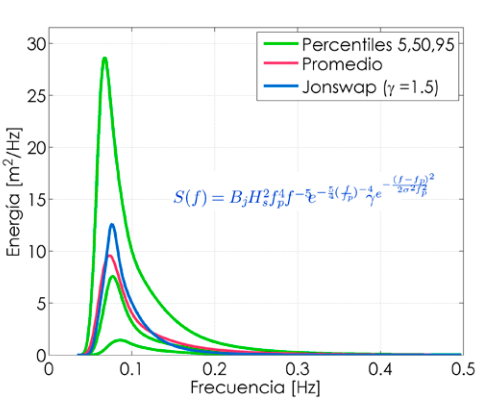
HISTOGRAMA DE T_m



HISTOGRAMA DE D_m



ESPECTRO DE FRECUENCIAS



ESPECTRO DE DIRECCIONES

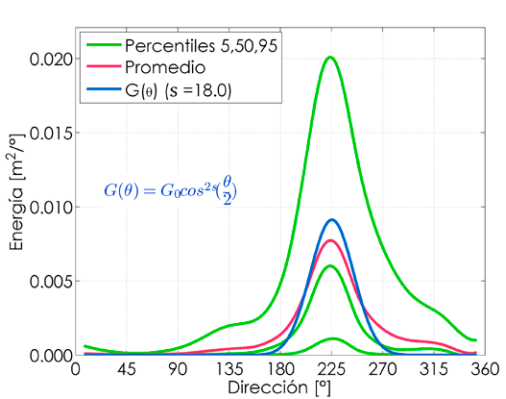


TABLA DE FRECUENCIA H_{m0} y D_m [%]

H_{m0} [m]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[0-0.6[									0.0
[0.6-1.2[			<0.1	<0.1	<0.1				0.1
[1.2-1.8[		<0.1	1.5	8.1	1.6	<0.1		<0.1	11.2
[1.8-2.4[		<0.1	3.7	19.1	2.7	0.1	<0.1	<0.1	25.7
[2.4-3[	<0.1	<0.1	4.7	21.6	3.5	0.2	<0.1	<0.1	30.1
[3-3.6[	<0.1	<0.1	2.1	13.2	3.0	0.3	<0.1	<0.1	18.6
[3.6-4.2[		<0.1	0.6	6.0	1.7	0.2	<0.1	<0.1	8.4
[4.2-4.8[		<0.1	0.2	3.8	1.6	0.2	<0.1		5.8
TOTAL	0.0	0.1	12.8	71.9	14.1	1.0	0.0	0.0	100.0

TABLA DE FRECUENCIA T_m y D_m [%]

T_m [s]	D_m [°]								TOTAL
	E	SE	S	SO	O	NO	N	NE	
[5-6[			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
[6-7[		<0.1	<0.1	2.9	1.1	1.2	0.3	<0.1	5.5
[7-8[		<0.1	<0.1	5.6	7.8	4.2	0.5	<0.1	18.2
[8-9[		<0.1	<0.1	2.8	16.6	4.6	0.2	<0.1	24.3
[9-10[			1.1	19.5	2.6	<0.1			23.2
[10-11[			0.3	14.7	1.0				16.1
[11-12[			<0.1	8.0	0.3				8.4
[12-13[			<0.1	4.1	<0.1	<0.1			4.2
TOTAL	0.0	0.1	12.8	71.9	14.1	1.0	0.0	0.0	100.0

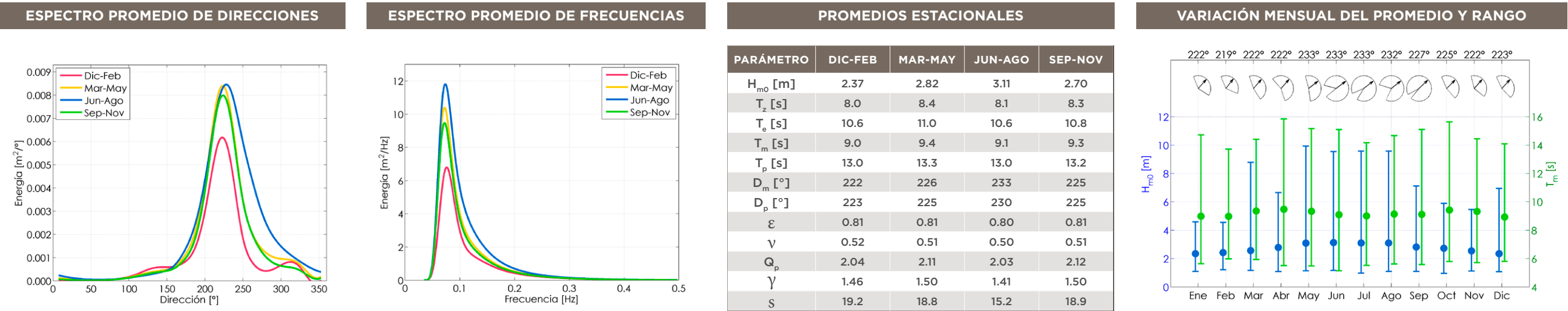
TABLA DE FRECUENCIA H_{m0} y T_m [%]

H_{m0} [m]	T_m [s]								TOTAL
	[5-6[	[6-7[	[7-8[	[8-9[	[9-10[	[10-11[	[11-12[	[12-13[	
[0-0.6[									0.0
[0.6-1.2[	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			0.1
[1.2-1.8[	0.1	1.2	2.8	3.4	2.4	1.0	0.2	<0.1	11.2
[1.8-2.4[	<0.1	2.5	5.5	6.6	6.1	3.6	1.1	0.3	25.7
[2.4-3[		1.6	6.0	7.2	7.0	4.9	2.6	0.9	30.1
[3-3.6[		0.2	3.0	3.9	4.1	3.6	2.4	1.4	18.6
[3.6-4.2[		<0.1	0.8	1.8	2.0	1.7	1.2	1.0	8.4
[4.2-4.8[			0.1	1.2	1.7	1.2	0.9	0.7	5.8
TOTAL	0.2	5.5	18.2	24.3	23.2	16.1	8.4	4.2	100.0

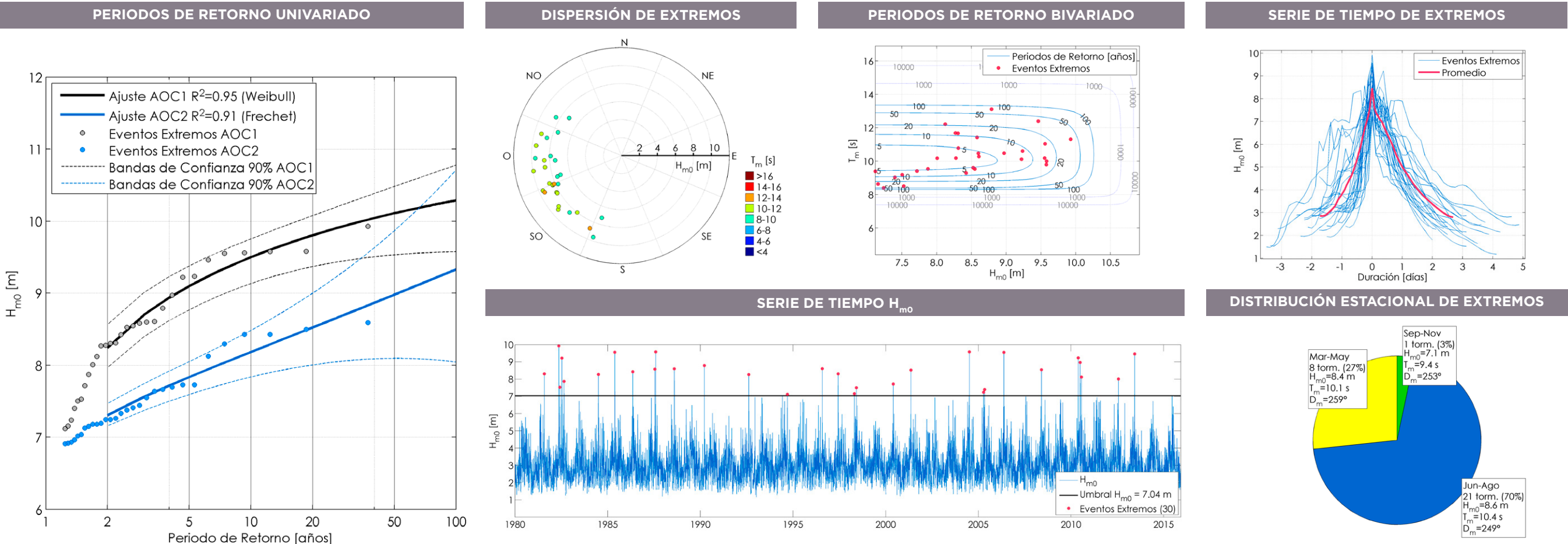
PERCENTILES DE H_{m0} POR DIRECCIÓN

	Prob. Dir.	$H_{m0} 50\%$ [m]	$H_{m0} 90\%$ [m]	$H_{m0} 99\%$ [m]	$H_{m0} 12\%$ [m]
E	<0.1%	2.94	3.16	3.16	3.16
ESE	<0.1%	2.79	3.80	3.85	3.85
SE	<0.1%	3.08	3.58	3.79	3.79
SSE	0.7%	2.68	3.62	4.29	4.94
S	5.3%	2.54	3.33	4.33	5.88
SSO	20.6%	2.57	3.53	4.81	6.41
SO	45.0%	2.65	3.79	5.19	6.50
OSO	20.0%	2.65	4.08	6.12	7.71
O	6.1%	2.94	4.29	6.18	8.21
ONO	1.8%	3.12	4.57	6.18	8.52
NO	0.4%	3.21	4.41	6.09	7.14
NNO	<0.1%	2.85	3.60	5.27	5.29
N	<0.1%	2.43	3.61	4.80	4.80
NNE	<0.1%	2.66	4.24	4.24	4.24
NE	<0.1%	2.31	4.01	4.01	4.01
ENE	<0.1%	2.91	3.50	3.50	3.50

NODO 22: ARCHIPIÉLAGO JUAN FERNÁNDEZ / CLIMA MEDIO ESTACIONAL



NODO 22: ARCHIPIÉLAGO JUAN FERNÁNDEZ / CLIMA EXTREMO



NODO 22: ARCHIPIÉLAGO JUAN FERNÁNDEZ / ANÁLISIS MODAL

DISTRIBUCIÓN DE MODOS POR TIPO Y DIRECCIÓN [%]

				E	SE	S	SO	O	NO	N	NE
Unimodal 25.3	primer modo	mar de fondo	98.8			1.7	80.9	17.3	<0.1	<0.1	
		mar de viento	1.2			7.6	33.3	49.4	9.7		
Bimodal 37.8	primer modo	mar de fondo	97.9	<0.1	1.1	4.9	77.3	14.9	1.7	<0.1	
		mar de viento	2.1	0.1	27.8	13.5	8.5	15.5	29.6	4.6	0.5
	segundo modo	mar de fondo	95.7	0.5	10.9	7.4	14.4	8.3	57.9	0.5	<0.1
		mar de viento	4.3	4.5	26.2	16.5	6.9	10.4	19.5	12.3	3.7
Trimodal 28.0	primer modo	mar de fondo	97.0	<0.1	5.5	9.6	69.4	13.4	1.9	<0.1	<0.1
		mar de viento	3.0	1.4	46.9	15.4	5.3	6.7	16.2	6.6	1.5
	segundo modo	mar de fondo	93.1	0.4	27.7	13.2	20.9	10.7	26.4	0.7	<0.1
		mar de viento	6.9	4.0	34.8	20.1	6.2	7.9	18.2	6.6	2.1
	tercer modo	mar de fondo	96.7	1.1	17.6	9.1	5.4	6.9	58.4	1.2	0.4
		mar de viento	3.3	6.4	8.6	21.7	13.7	17.1	18.2	10.3	3.9

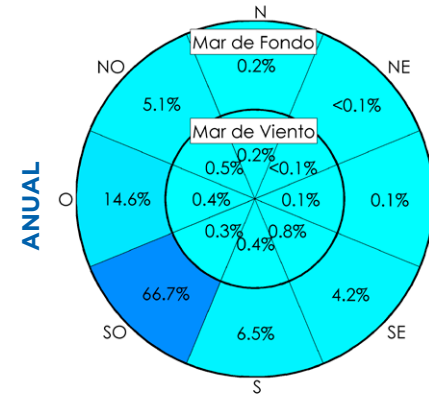
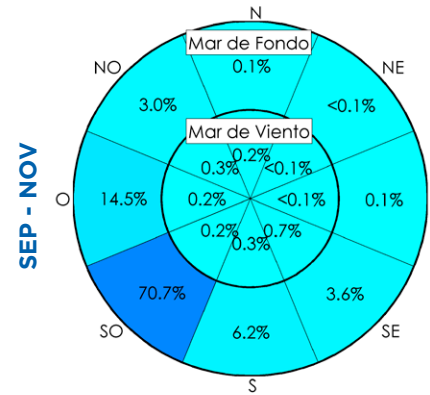
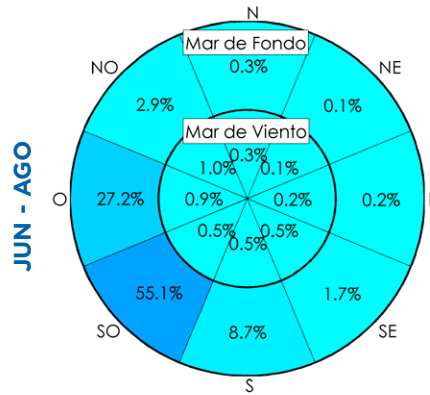
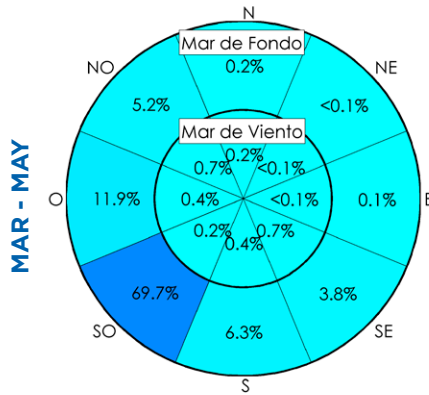
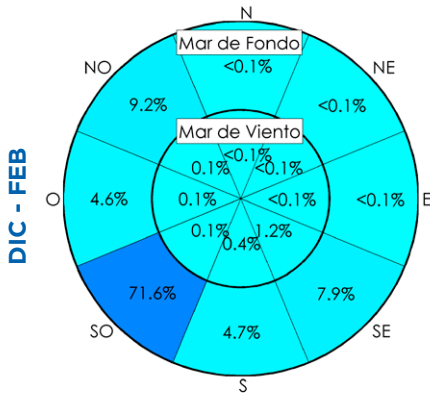
NOTA: estados de mar con más de 3 modos abarcan el 8.8% de la totalidad de casos.

DISTRIBUCIÓN DE CASOS DE OLEAJE MÁS RECURRENTES [%]

	DIC-FEB	MAR-MAY	JUN-AGO	SEP-NOV	ANUAL
MF del SO	3.7	18.7	32.1	26.3	20.2
MF del SO + MF del NO	35.4	23.8	3.3	17.8	20.0
MF del SE + MF del SO + MF del NO	26.5	11.4	0.3	7.2	11.3
MF del SO + MF del O	0.1	3.0	11.4	5.5	5.0
MF del O	<0.1	2.4	11.2	3.6	4.3
MF del S + MF del SO + MF del NO	7.5	5.6	1.1	3.0	4.3
MF del SE + MF del SO	1.9	3.6	3.8	6.7	4.0
MF del SO + MF del O + MF del NO	4.1	4.8	1.1	4.1	3.5
MF del S + MF del SO	0.5	1.8	4.2	3.2	2.4
MF del S + MF del O	<0.1	0.6	4.4	1.3	1.6
Otros	20.2	24.5	27.1	21.4	23.3
SUMA	100	100	100	100	100

MF: Mar de Fondo, MV: Mar de Viento.

PORCENTAJE DE ENERGÍA POR MODO Y POR ESTACIÓN DEL AÑO

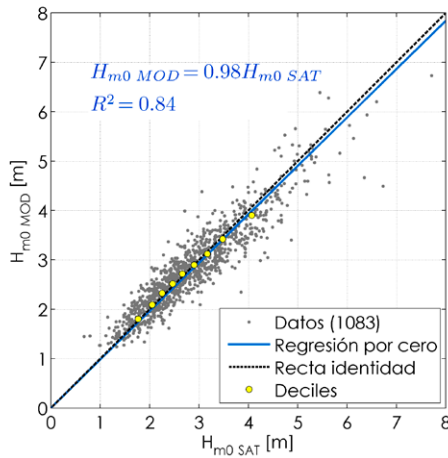


NODO 22: ARCHIPIÉLAGO JUAN FERNÁNDEZ / INCERTIDUMBRE

ESTADÍSTICOS DE INCERTIDUMBRE

Promedio H_{m0} satélite [m]	2.81	Intercepto mejor regresión lineal [m]	0.44
Promedio H_{m0} modelo [m]	2.80	Pendiente mejor regresión lineal	0.84
Desviación estándar H_{m0} satélite [m]	0.93	R^2 mejor regresión lineal	0.86
Desviación estándar H_{m0} modelo [m]	0.84	Mínimo error relativo (RE_{min})	-39%
Error absoluto medio (MAE) [m]	0.26	Máximo error relativo (RE_{max})	116%
Raíz del error cuadrático medio (RMSE) [m]	0.35	Error relativo medio (RE_{mean})	1%
Sesgo (BIAS) [m]	-0.01	Mínimo error relativo absoluto (ARE_{min})	0.013%
Habilidad de pronóstico (SS)	0.88	Máximo error relativo absoluto (ARE_{max})	116%
Índice de dispersión (SI)	0.12	Error relativo absoluto medio (AARE)	10%

GRÁFICO DE DISPERSIÓN



DISTRIBUCIÓN DEL ERROR

