CHFP -The **C**limate-system **H**istorical **F**orecast **P**roject-archive at CIMA

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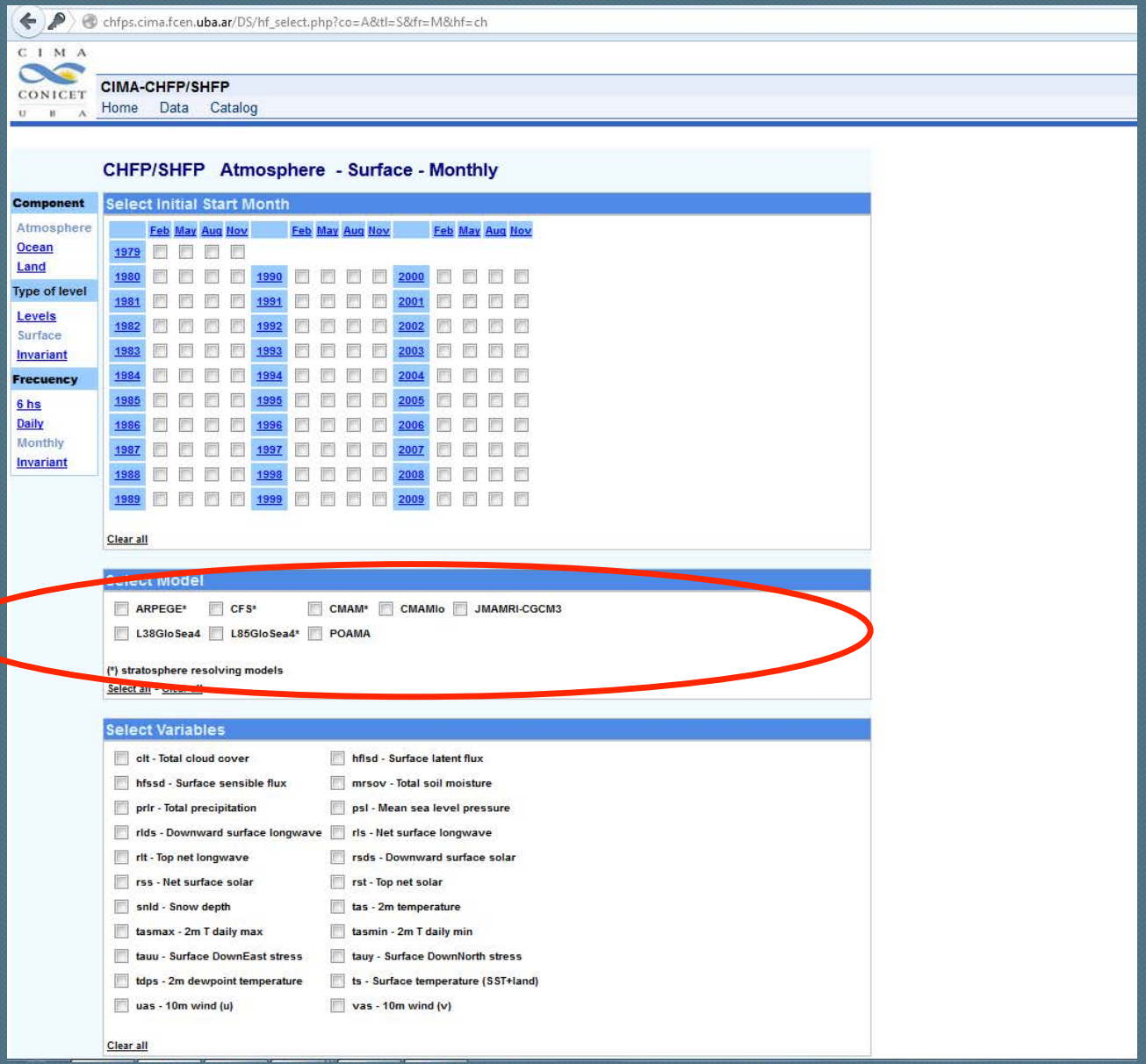
CHFP/SHFP

- Agenda:
  - ✓CHFP archive: progress and status (C. Saulo)
  - ✓CHFP analysis: activity so far (C. Saulo, B. Kirtman, A. Scaife)
  - ✓Documenting the archive in a peer reviewed study: results so far, which data, designation of tasks, CLIVAR Exchanges Special Issue(All)
  - ✓Evolution of CHFP (C. Saulo and F. Doblas-Reyes)
- Current status
- A predictability analysis
- CHFP and WCRP future research activities

Current status

8 models available



Current status

CIMA CHFP datasets availables by: Component - TyLevel - Frecuency

Atmosphere

Frecuency	Surface Monthly																					
Model/Vble	clt	hflsd	hfssd	mrsov	prlr	psl	rlds	rls	rlt	rsds	rss	rst	snld	tas	tasmax	tasmin	tauu	tauy	tpds	ts	uas	vas	
ARPEGE					174	174														174			522
CFS					53	53								53						53			212
CMAM					60	60								60						60			240
CMAMlo					60	60								60						60			240
JMAMRI-CGCM3	128	128	128		128	128	128	128	128	128	128	128	116	128	128	128				128	128	128	2292
L38GloSea4					56	56							56	56						56			280
L85GloSea4					84	84							84	84						84			420
poama		120	360		360	360	360		360			360	360	360			360	360		360			4080
Total:	128	248	488	0	975	975	488	128	488	128	128	488	616	801	128	128	360	360	0	975	128	128	8286

Frecuency	Levels Monthly					
Model/Vble	g	hus	ta	ua	va	
ARPEGE	174	174	174	174	174	870
CFS	53	53	53	53	53	265
CMAM	60		60	60	60	240
CMAMlo	60		60	60	60	240
JMAMRI-CGCM3	128	128	128	128	128	640
L38GloSea4	56		56	56	56	224
L85GloSea4	84		84	84	84	336
poama		360	360	360	360	1440
Total:	615	715	975	975	975	4255

Frecuency	Surface Daily																					
Model/Vble	clt	hflsd	hfssd	mrsov	prlr	psl	rlds	rls	rlt	rsds	rss	rst	snld	tas	tasmax	tasmin	tauu	tauy	tpds	ts	uas	vas	
CFS					53	53								53									159
CMAM					60	60								60									180
CMAMlo					60	60								60									180
JMAMRI-CGCM3		112	112		112	112	112	112	112	112	112	112	112		112	112				112			1568
Total:	0	112	112	0	285	285	112	112	112	112	112	112	112	173	112	112	0	0	0	112	0	0	2087

Current status

Frecuency	Levels Daily					
Model/Vble	g	hus	ta	ua	va	
CMAM	60		60	60		180
CMAMlo	60		60	60		180
JMAMRI-CGCM3	112	112	112	112	112	560
Total:	232	112	232	232	112	920

Ocean

Frecuency	Surface Monthly							
Model/Vble	shfo	swhfo	tauxo	tauyo	wo	zoh	zmlo	
JMAMRI-CGCM3						128	128	256
Total:	0	0	0	0	0	128	128	256

Frecuency	Levels Monthly					
Model/Vble	thetao	saltfo	so	uo	vo	
JMAMRI-CGCM3	128		128	128	128	512
Total:	0	0	0	0	0	512

Frecuency	Surface Daily							
Model/Vble	shfo	swhfo	tauxo	tauyo	wo	zoh	zmlo	
Total:	0	0	0	0	0	0	0	0

Frecuency	Levels Daily					
Model/Vble	thetao	saltfo	so	uo	vo	
JMAMRI-CGCM3	112		112	112	112	448
Total:	0	0	0	0	0	448

Total CHFP files: 16764

Current status (cont.)

- CIMA originally allocated 5 Tb to this project, but with CanCM3 and 4 (arrived in June) we had to update our storage. We are working on this, going to aprox. 10 Tb
- MIROC test files are ok and we are figuring out how to get the discs with the full data set

Registered users

CIMA-CHFP List of registered people

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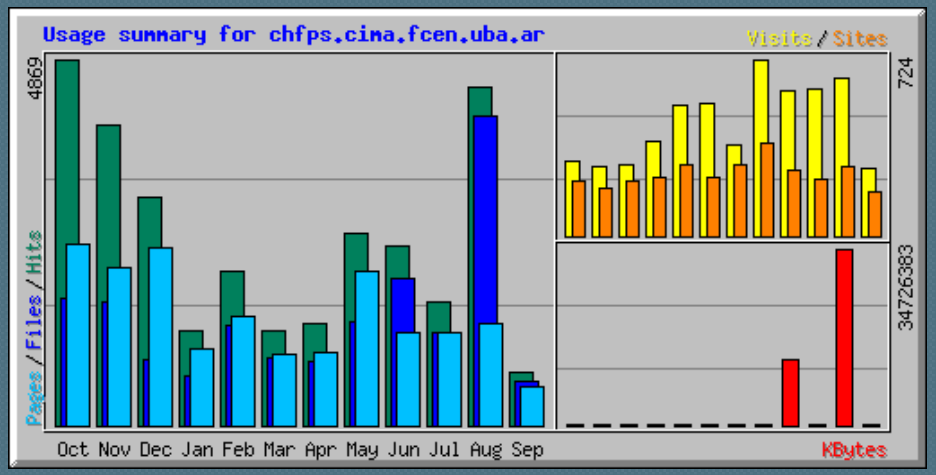
28	pengzhaoliang@gmail.com	Zhaoliang Peng	AU	CSIRO Land & Water

Statistics of usage

Summary by Month										
Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
Sep 2012	50	41	36	19	179	10069	274	504	576	709
Aug 2012	145	132	43	20	281	34726383	647	1362	4116	4505
Jul 2012	53	40	39	19	234	5010	600	1239	1246	1647
Jun 2012	79	64	41	19	266	12772867	597	1245	1949	2376
May 2012	82	44	66	23	380	12452	724	2062	1377	2553
Apr 2012	45	28	32	12	293	3979	372	971	857	1352
Mar 2012	40	29	30	17	238	209517	545	955	907	1258
Feb 2012	70	45	49	18	292	11770	536	1449	1326	2053
Jan 2012	40	21	33	12	242	20735	387	1028	663	1263
Dec 2011	98	28	76	9	227	121264	291	2364	887	3046
Nov 2011	132	54	69	9	199	17258	282	2090	1647	3985
Oct 2011	157	54	78	9	226	8027	306	2421	1689	4869
Totals						47919331	5561	17690	17240	29616



33,9 Gb in August

Predictability Study with SHFP Models - Marisol Osman and C. Vera

- The aim of this study is to analyze the potential predictability of circulation variables and the influence of El Niño and La Niña Events on this predictability (following Wu and Kirtman 2006)
- This study is intended to provide a preliminary framework for the selection of potential predictors of South America summertime precipitation based on models ability to reproduce regional circulation patterns.

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SHFP Models

Institution	Model	Ensemble Members	Lead Months	Starting Month	Hindcast Period
NCEP	CFS v1	7	9	May, nov	1989-2006
Meteo France	ARPEGE	11	4	May, nov	1989-2007
MRI	JMA/MRI-CGCM	10	6	May, nov	1989-2007
Met Office	GloSea4	9	5	May, nov	1989-2007
CMC	CMAM	10	4	May, nov	1989-2007
ECMWF	IFS-HOPE	9	5	May, nov	1989-2007

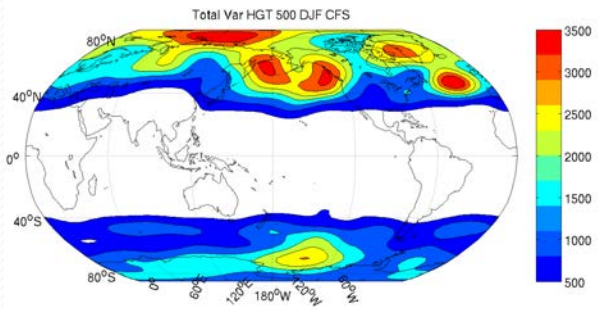
HGT 500 hPa DJF

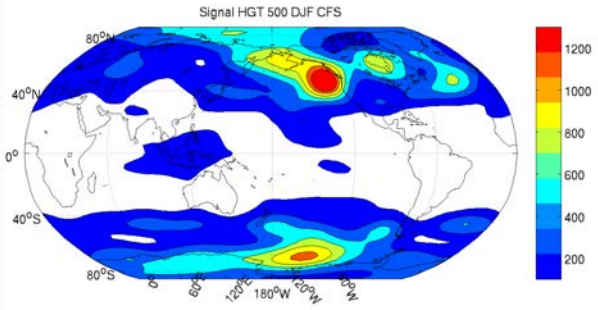
Total Variance

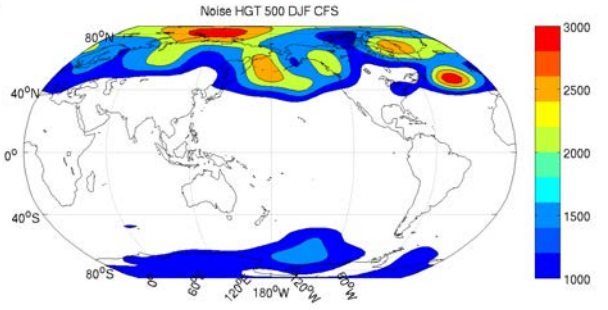
Signal

Noise

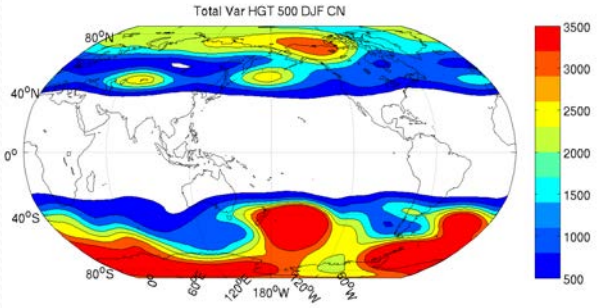
NCEP Model

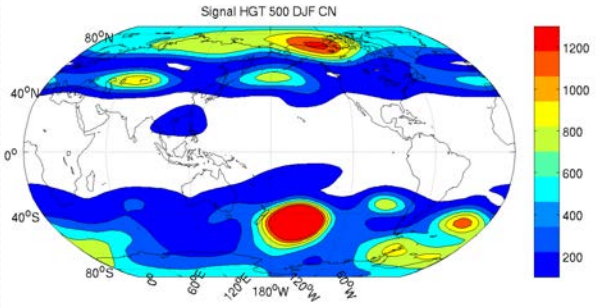


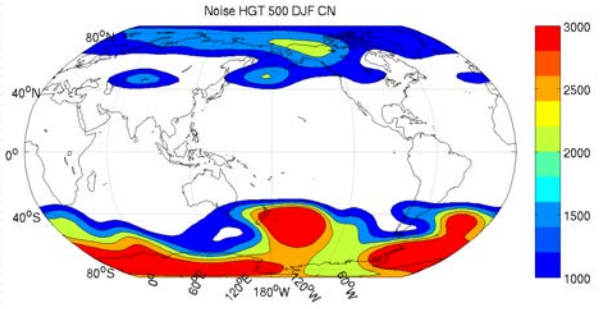




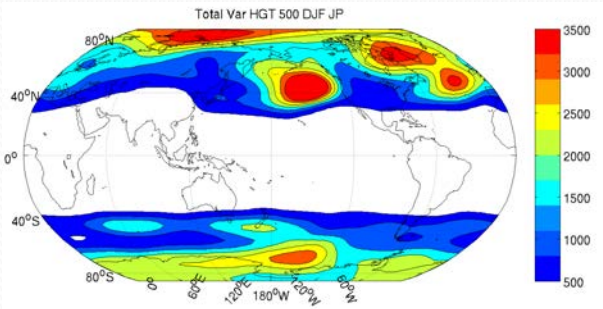
CMC Model

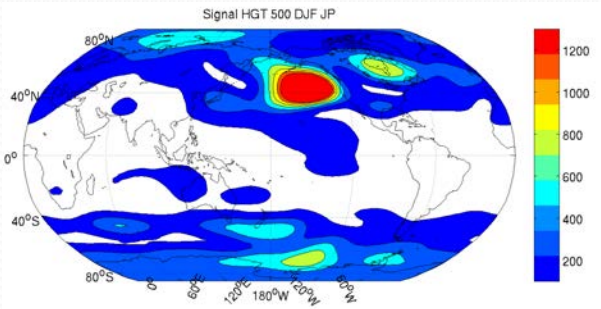


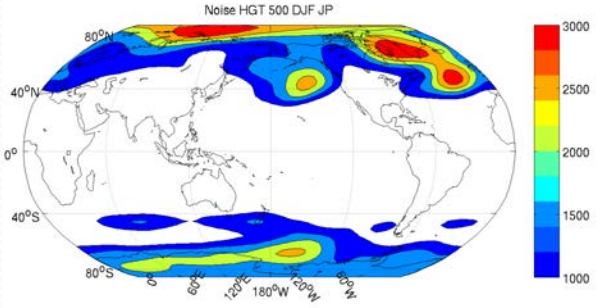




MRI Model







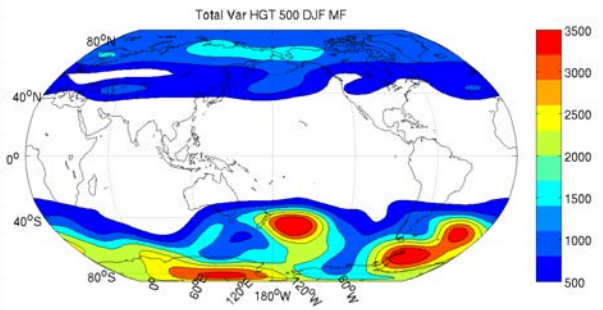
HGT 500 hPa DJF

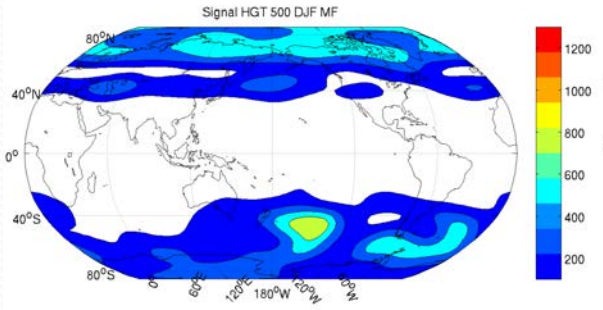
Total Variance

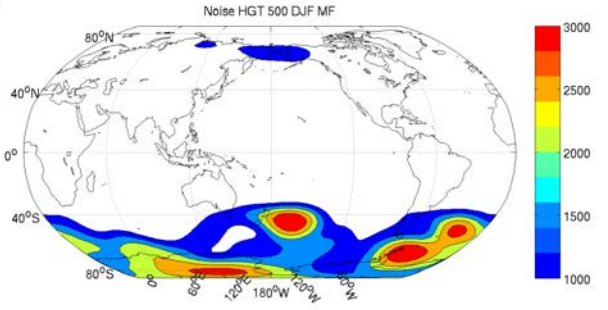
Signal

Noise

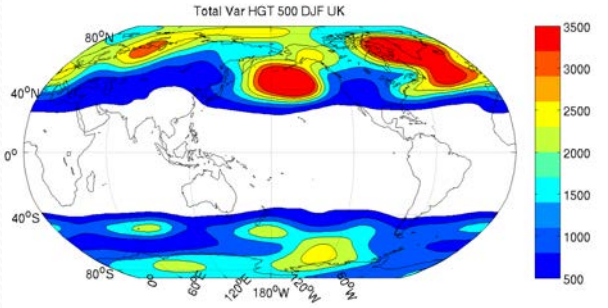
Meteo France Model

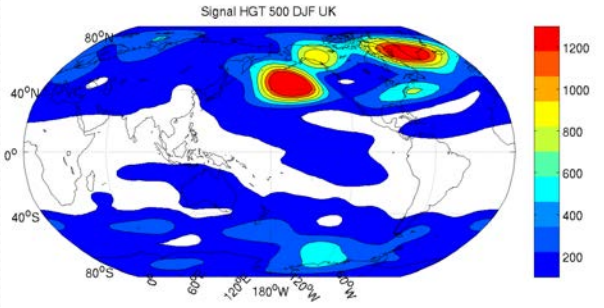


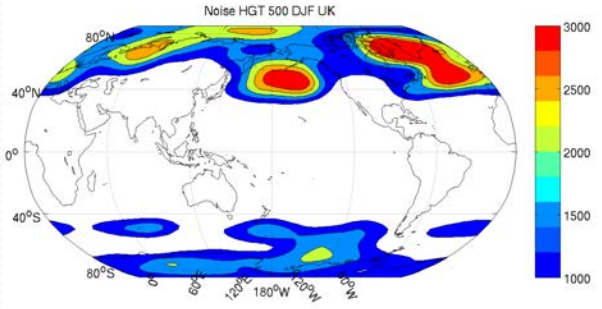




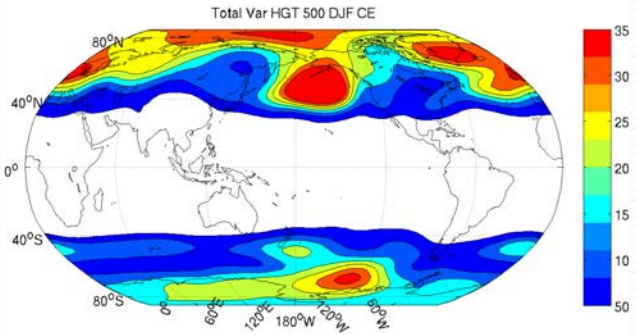
Met Office Model

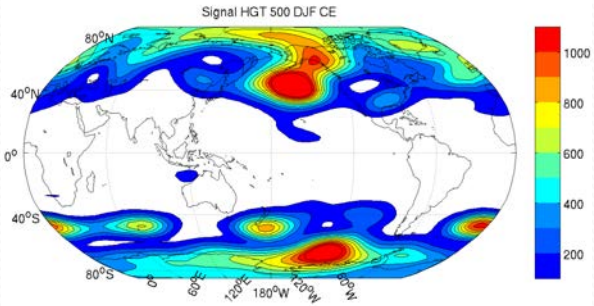


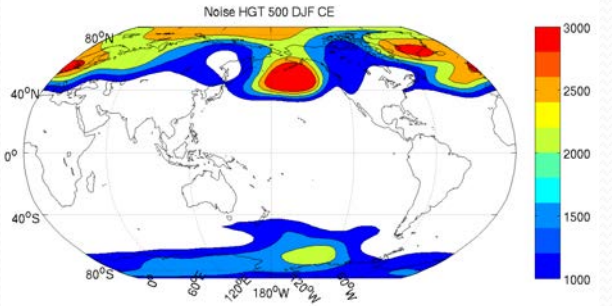




ECMWF Model







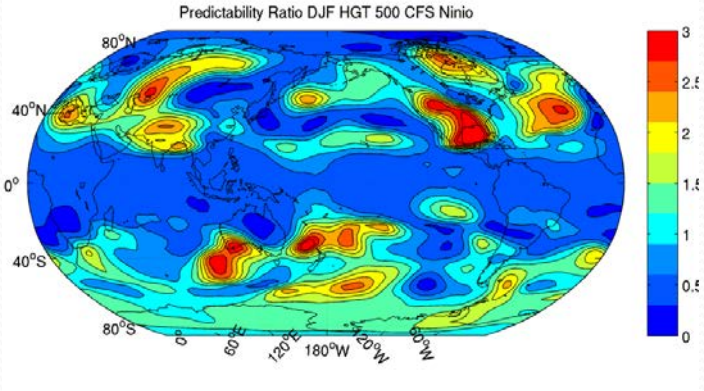
Predictability Changes HGT 500 hPa DJF

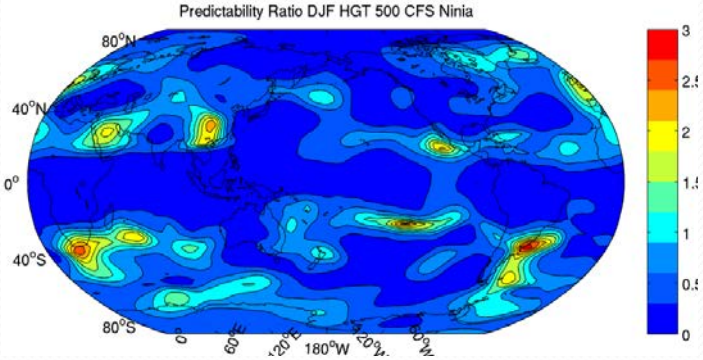
El Niño

NCEP Model

La Niña

Predictability Ratio





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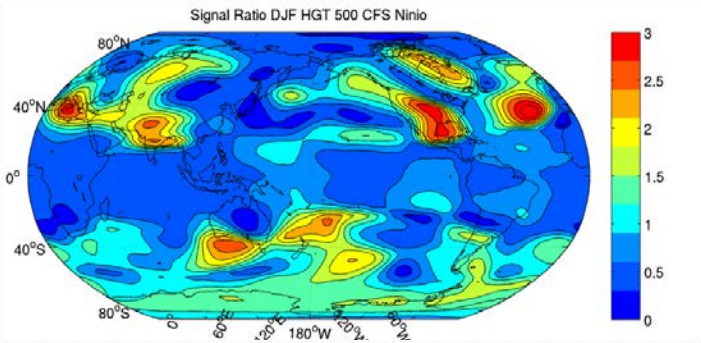
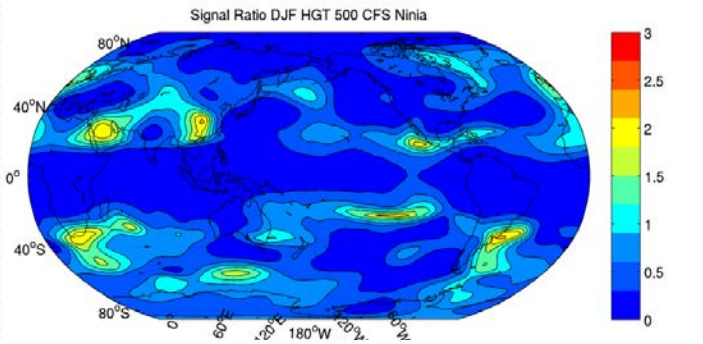


ENSO/tot



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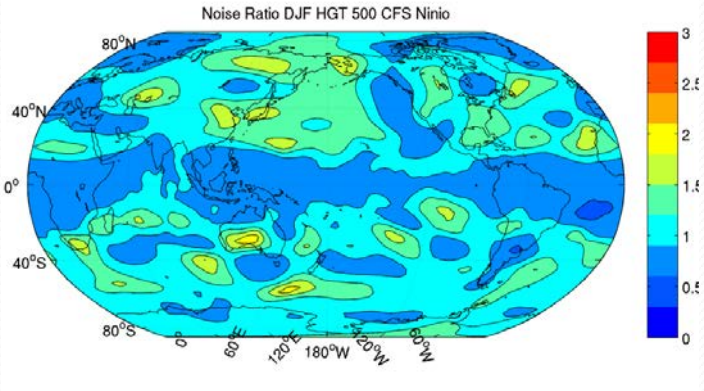
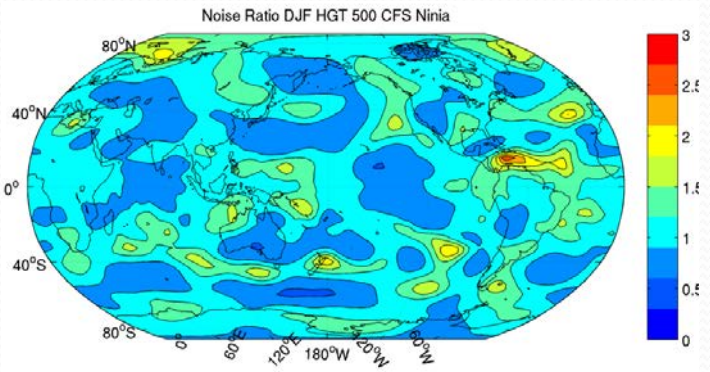


tot/ENSO



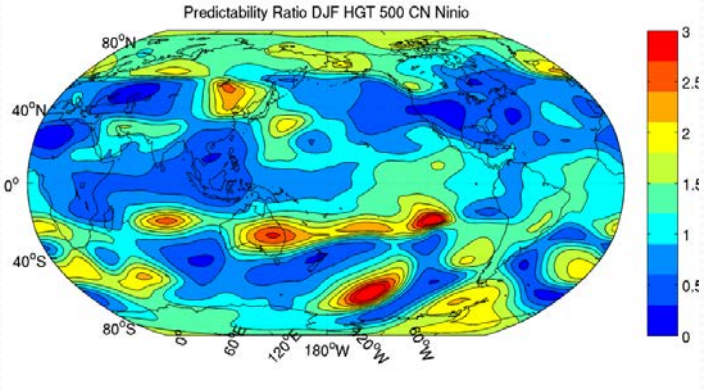
Predictability Changes HGT 500 hPa DJF

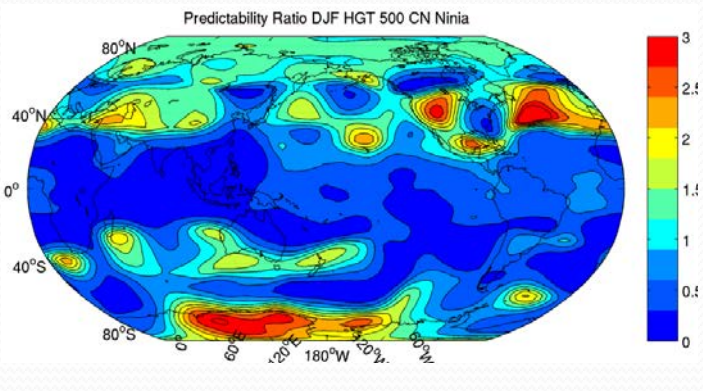
El Niño

CMC Model

La Niña

Predictability Ratio





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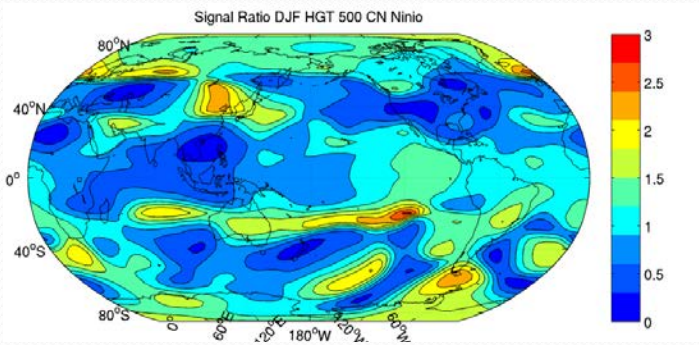

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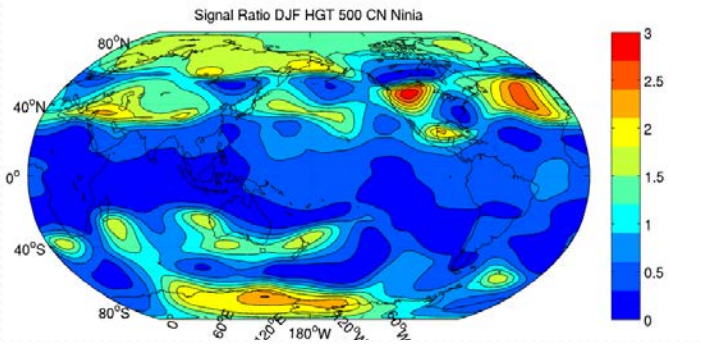

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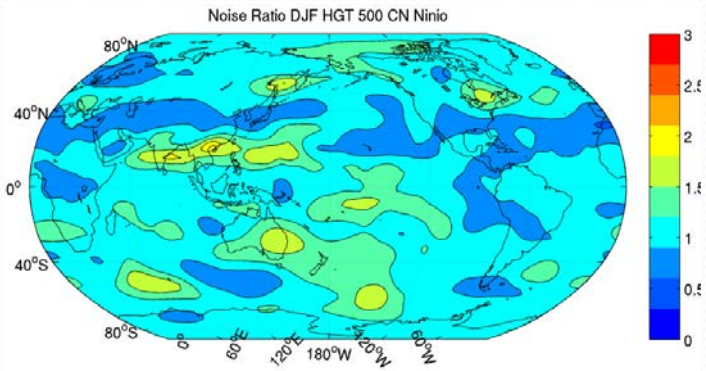

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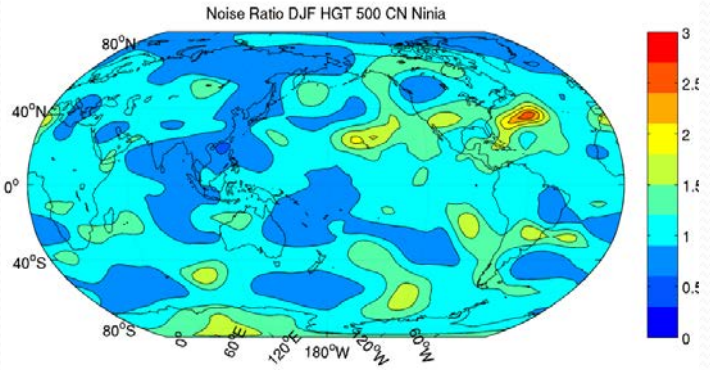


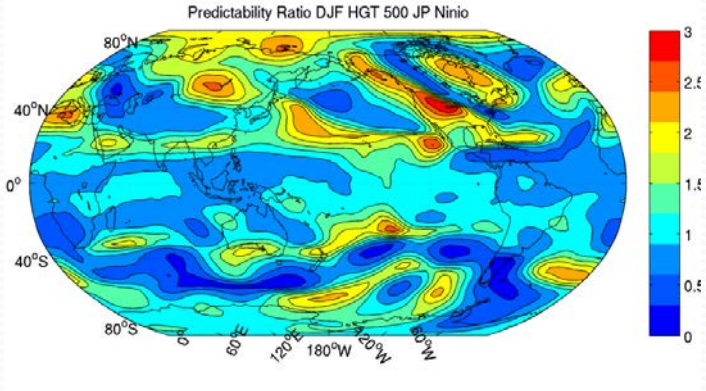
Predictability Changes HGT 500 hPa DJF

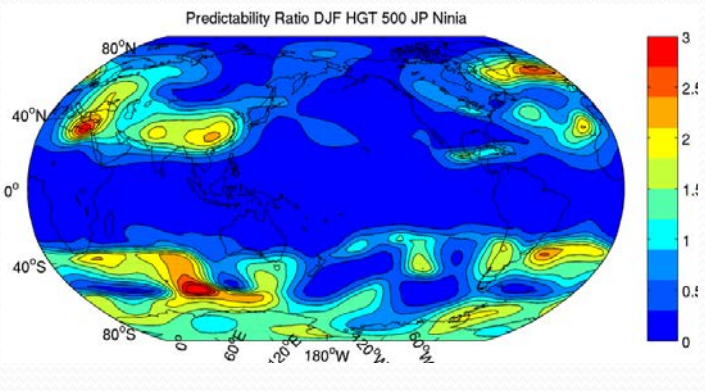
El Niño

MRI Model

La Niña

Predictability Ratio





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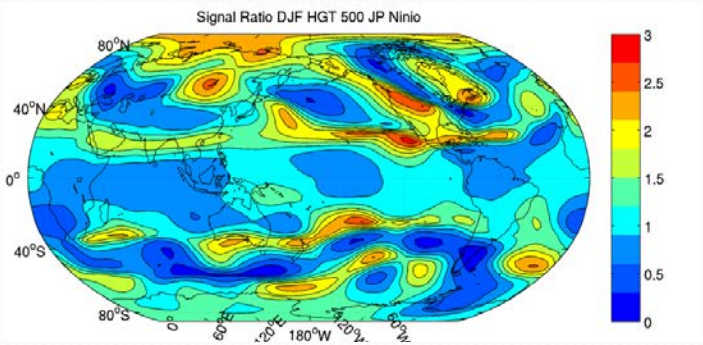
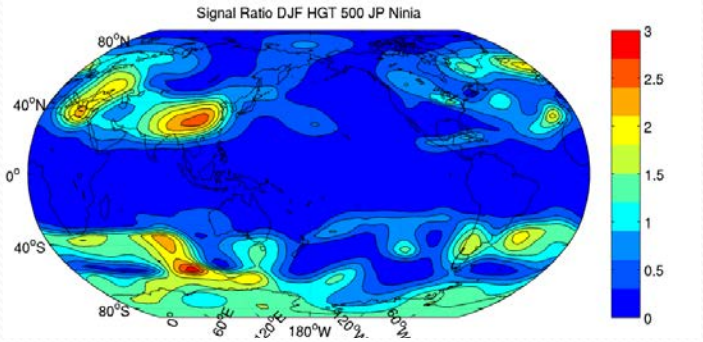


ENSO/tot



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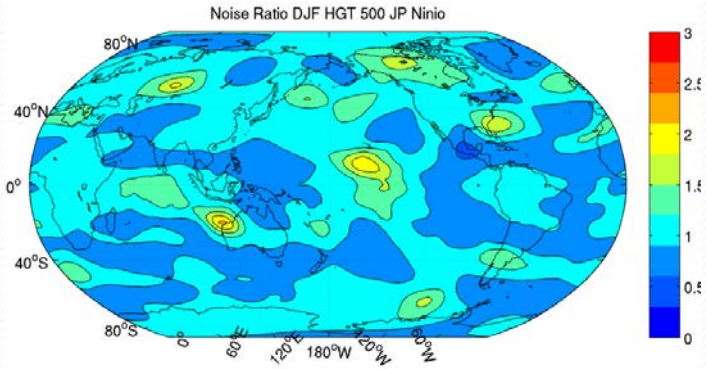
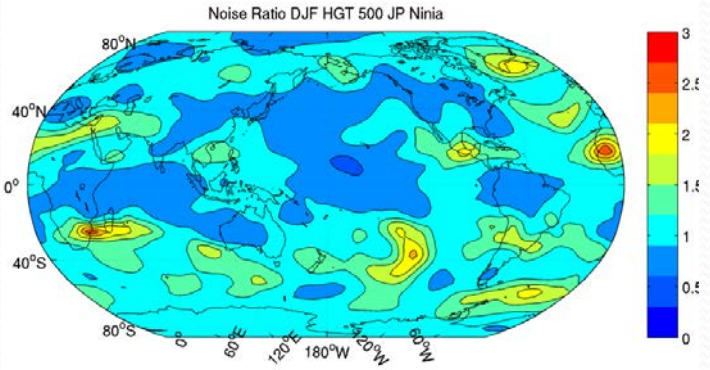


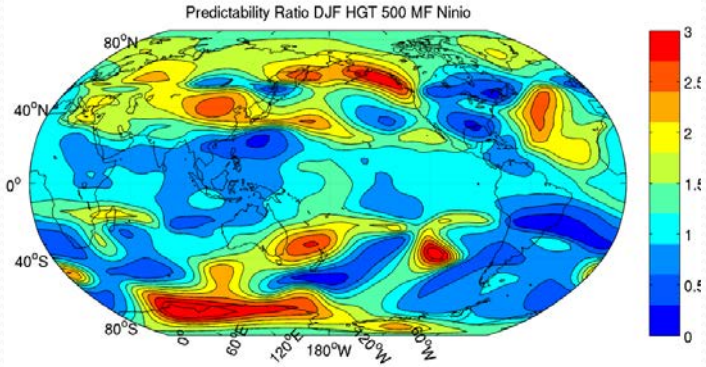
tot/ENSO

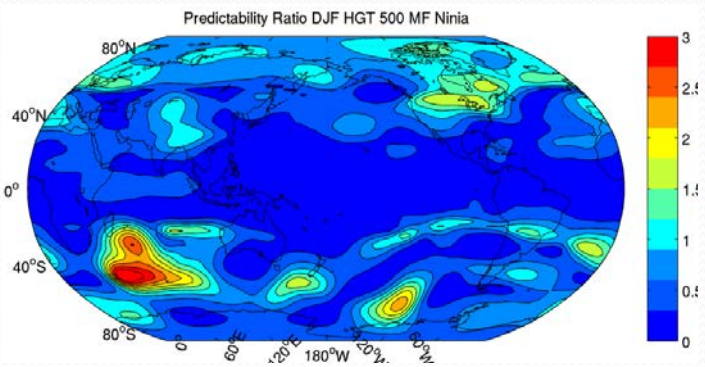


Predictability Changes HGT 500 hPa DJF

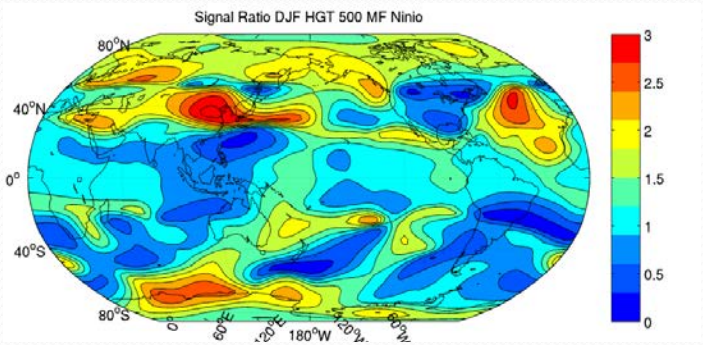
El Niño — Meteo France Model — La Niña

Predictability Ratio

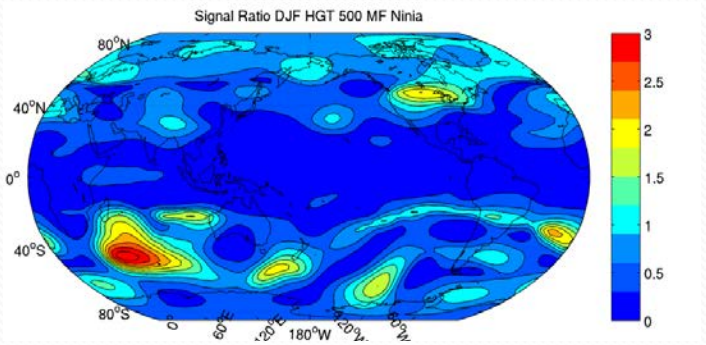




S/S0



ENSO/tot



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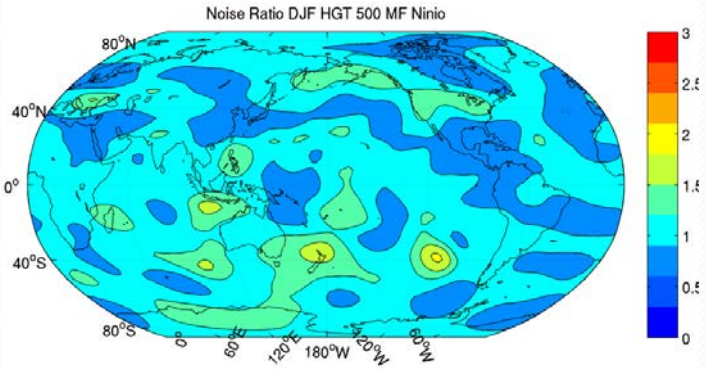
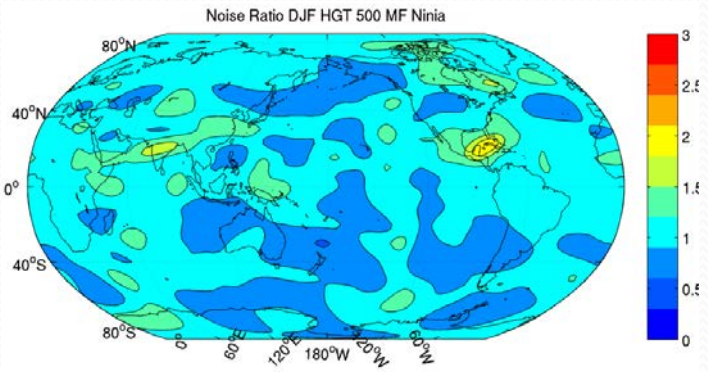


tot/ENSO



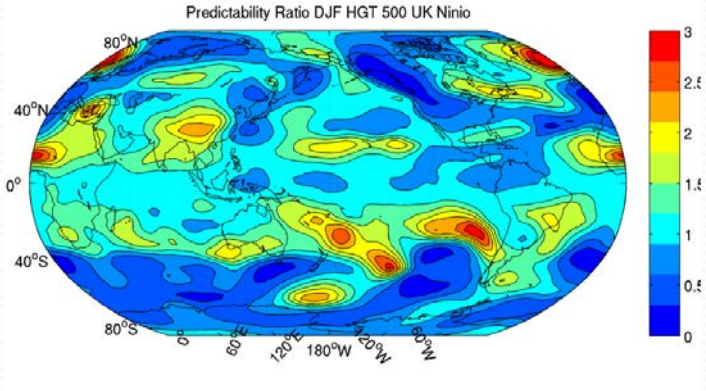
Predictability Changes HGT 500 hPa DJF

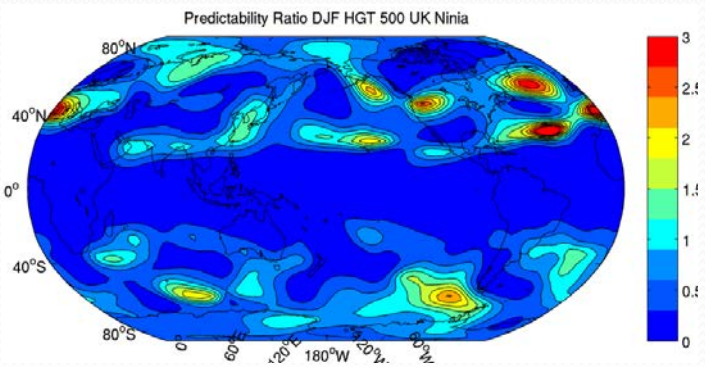
El Niño

Met Office Model

Predictability Ratio

La Niña





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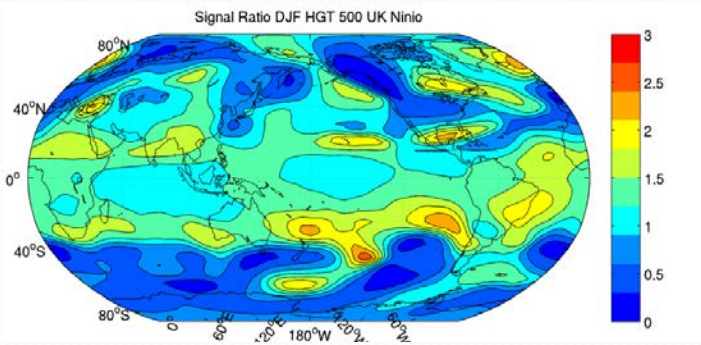

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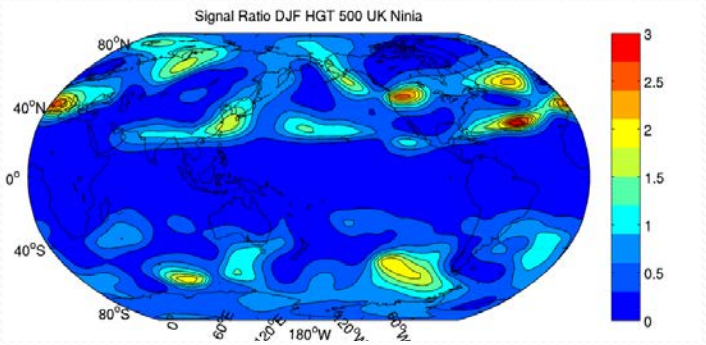

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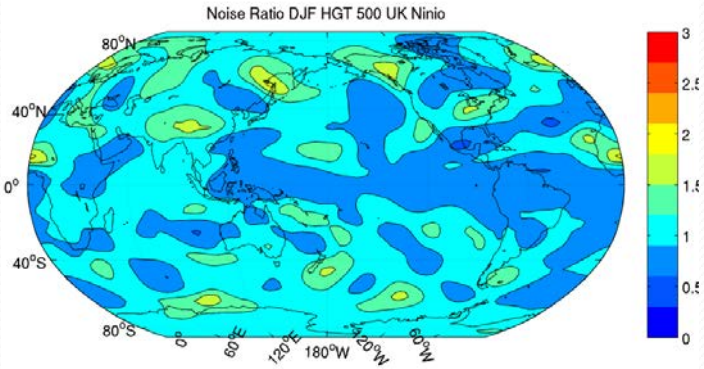

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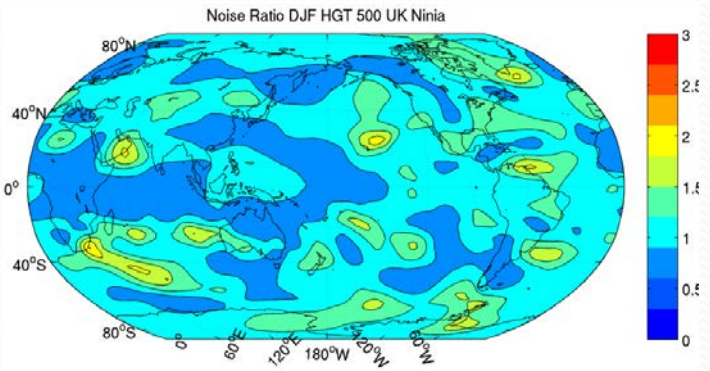


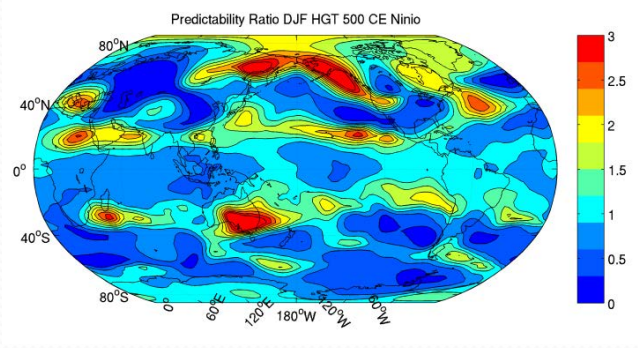
Predictability Changes HGT 500 hPa DJF

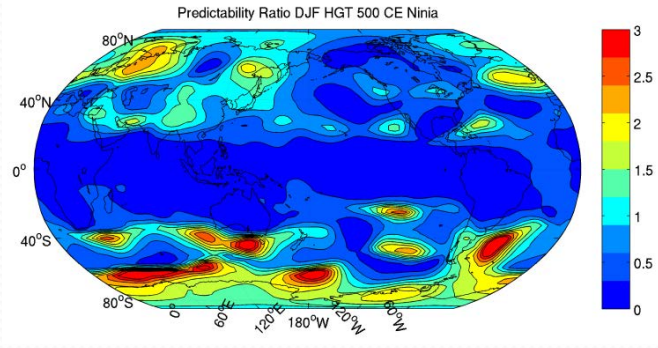
El Niño

ECMWF Model

La Niña

Predictability Ratio





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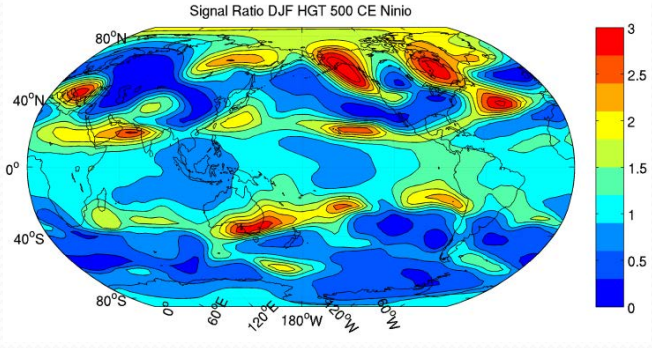

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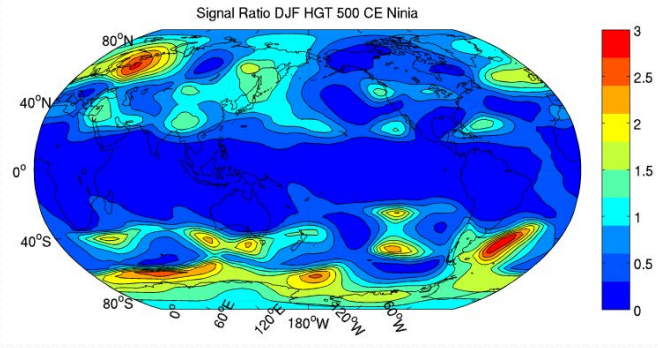

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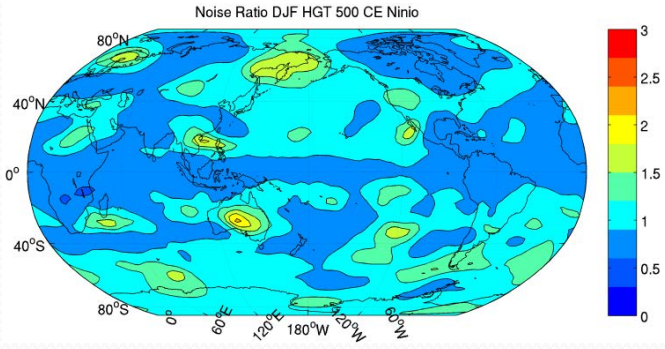

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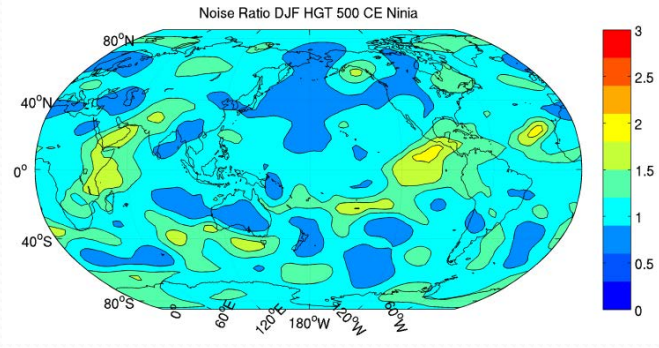

CHFP and WCRP future research priorities in Latin America

- WCRP has taken the challenge of promoting research needed to underpin the provision of skilfull future climate information on regional scales

Research focused in improving climate predictions at regional scales

Research oriented by demands of socio-economic sectors sensitive to climate

- To achieve these goals, WCRP-JSC endorsed the organization of two "Scoping" Workshops (one in South America and another in Africa) for identifying/organizing key actions needed (at the regional level) to accomplish WCRP grand challenges.

The VAMOS panel is involved in the organization of this Scoping Workshop (Walter Baethgen and Celeste Saulo co-chairs)

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WGSIP
CHFP

Questions? Suggestions?

Thank you!