Comparison between HR and LR configurations

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HR

CMBP						
del nu/nu	0.25		del center	1.2		
nu1	30	GHz				
	nu	**nu_low**	**nu_high**	**del nu**	**FWHM**	**PolWeight**
Band#	**(GHz)**	**(GHz)**	**(GHz)**	**(GHz)**	**(arcmin)**	**(uk*arcmin)**
1	21	18.2	23.4	5.2	40.9	50
2	25	21.9	28.1	6.3	34.1	33
3	30	26.3	33.8	7.5	28.4	22.4
4	36.0	31.5	40.5	9.0	23.7	15
5	43.2	37.8	48.6	10.8	19.7	9.1
6	51.8	45.4	58.3	13.0	16.4	7
7	62.2	54.4	70.0	15.6	13.7	5
8	74.6	65.3	84.0	18.7	11.4	4
9	89.6	78.4	100.8	22.4	9.5	3.2
10	107.5	94.1	120.9	26.9	7.9	2.9
11	129.0	112.9	145.1	32.2	6.6	2.7
12	154.8	135.4	174.1	38.7	5.5	2.6
13	185.8	162.5	209.0	46.4	4.6	3.6
14	222.9	195.0	250.8	55.7	3.8	5.3
15	267.5	234.0	300.9	66.9	3.2	9
16	321.0	280.9	361.1	80.2	2.7	16.0
17	385.2	337.0	433.3	96.3	2.2	32
18	462.2	404.4	520.0	115.6	1.8	75
19	554.7	485.3	624.0	138.7	1.5	220.0
20	665.6	582.4	748.8	166.4	1.3	1100
21	798.7	698.9	898.5	199.7	1.1	10000.0

LR

CMBP						
del nu/nu	0.25		del center	1.2		
						Open Dragone
nu1	30	GHz				**4 K primary**
	nu	**nu_low**	**nu_high**	**del nu**	**FWHM**	**PolWeight**
Band#	**(GHz)**	**(GHz)**	**(GHz)**	**(GHz)**	**(arcmin)**	**(uk*arcmin)**
1	20.8	18.2	23.4	5.2	114.5	22.6
2	25.0	21.9	28.1	6.3	95.2	13.4
3	30.0	26.3	33.8	7.5	89.2	16.6
4	36.0	31.5	40.5	9.0	74.4	9.8
5	43.2	37.8	48.6	10.8	76.5	13.7
6	51.8	45.4	58.3	13.0	63.6	8.2
7	62.2	54.4	70.0	15.6	38.3	6.3
8	74.6	65.3	84.0	18.7	31.9	5.6
9	89.6	78.4	100.8	22.4	29.9	4.8
10	107.5	94.1	120.9	26.9	24.9	4.3
11	129.0	112.9	145.1	32.2	25.6	4.3
12	154.8	135.4	174.1	38.7	21.3	4.0
13	185.8	162.5	209.0	46.4	12.8	4.1
14	222.9	195.0	250.8	55.7	10.7	5.2
15	267.5	234.0	300.9	66.9	10.0	4.2
16	321.0	280.9	361.1	80.2	8.3	6.0
17	385.2	337.0	433.3	96.3	8.6	6.9
18	462.2	404.4	520.0	115.6	7.1	12.5
19	554.7	485.3	624.0	138.7	4.3	54.5
20	665.6	582.4	748.8	166.4	3.6	150.1
21	798.7	698.9	898.5	199.7	3.0	475.1

Method

Foreground model

- Synchrotron with power spectrum consistent with Planck/WMAP
- Finkbeiner 2-component dust model consistent with Planck

Foreground reduction

- Minimum variance ILC

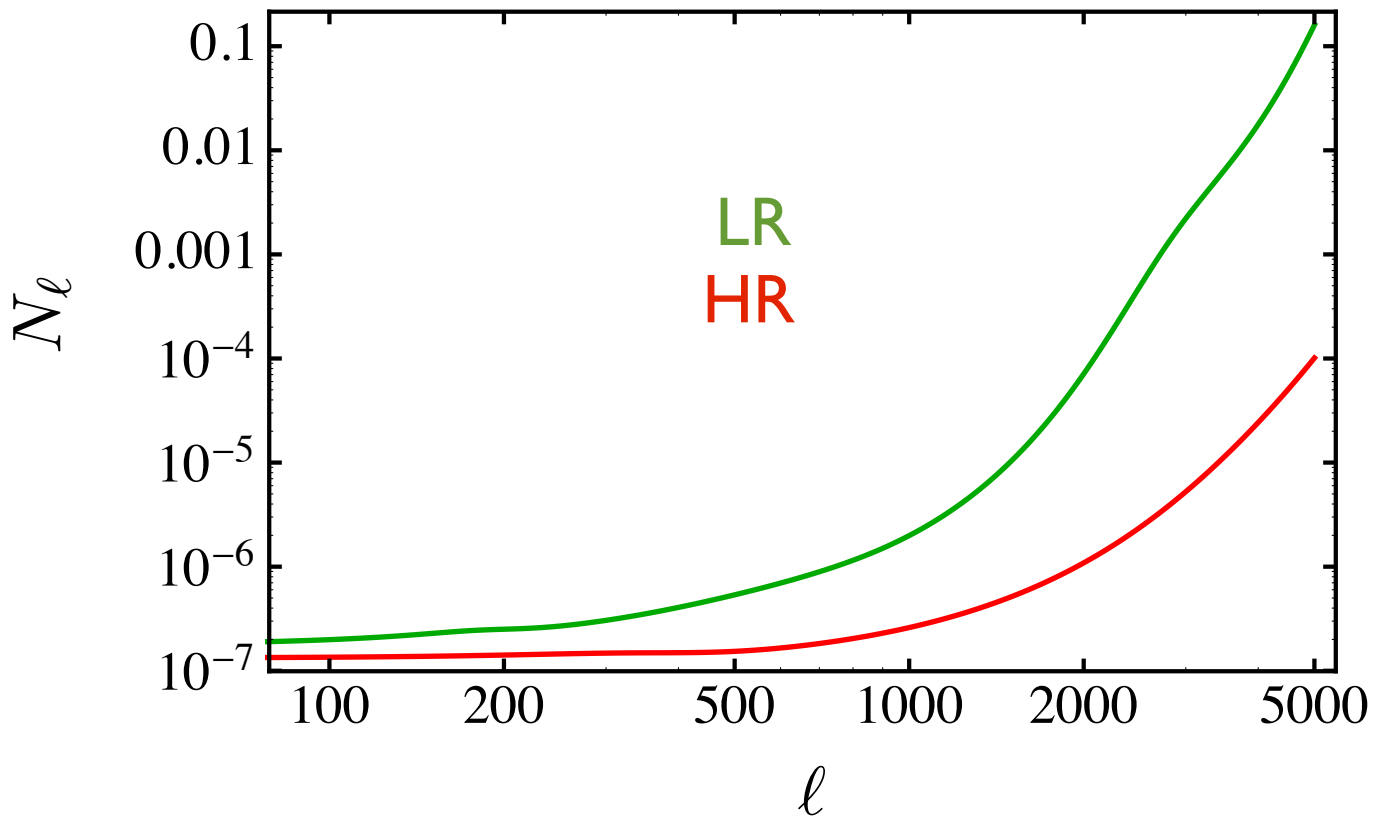
Noise levels

Effective white noise levels in μK-arcmin

	Optimal combination	Including Foregrounds
HR	1.18	1.25
LR	1.38	1.45

Noise spectra

Noise power spectra of cleaned maps



Parameter forecasts

LCDM

HR

X	$\sigma(X)$
$\Omega_b h^2$	0.000029
$\Omega_c h^2$	0.00023
h	0.088
τ	0.0019
A_s	0.0073
n_s	0.0013

LR

X	$\sigma(X)$
$\Omega_b h^2$	0.000048
$\Omega_c h^2$	0.00029
h	0.12
τ	0.0019
A_s	0.0076
n_s	0.0016

Parameter forecasts

LCDM+X

HR

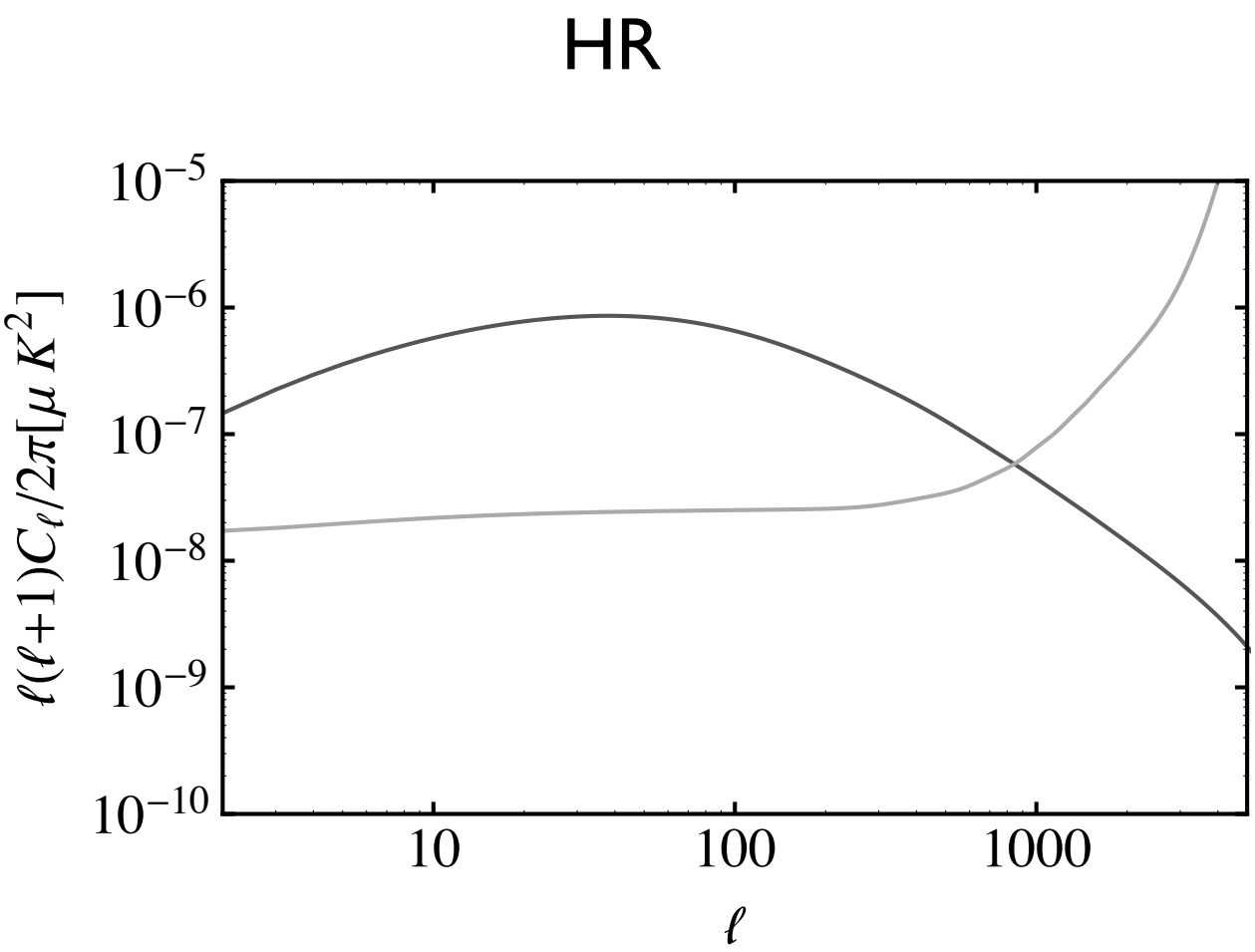
X	$\sigma(X)$
$n_{\rm run}$	0.0021
m_ν	$0.036\,{\rm eV}$
$N_{\rm eff}$	0.030
Ω_k	0.0017

LR

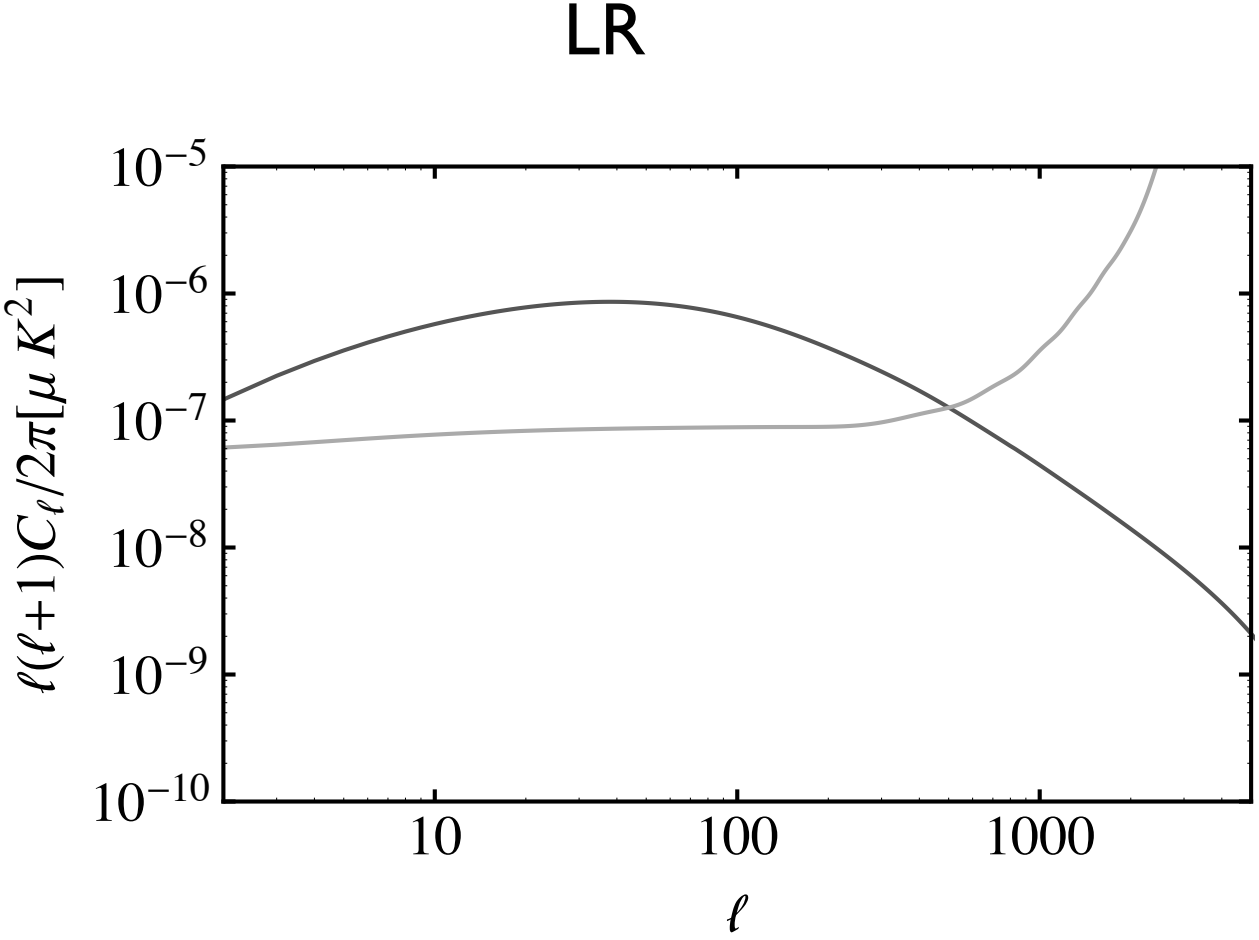
X	$\sigma(X)$
$n_{\rm run}$	0.0028
m_ν	$0.042\,{\rm eV}$
$N_{\rm eff}$	0.054
Ω_k	0.0019

The LR configuration sacrifices $N_{\rm eff}$ and most likely the delensing performance (and hence r)

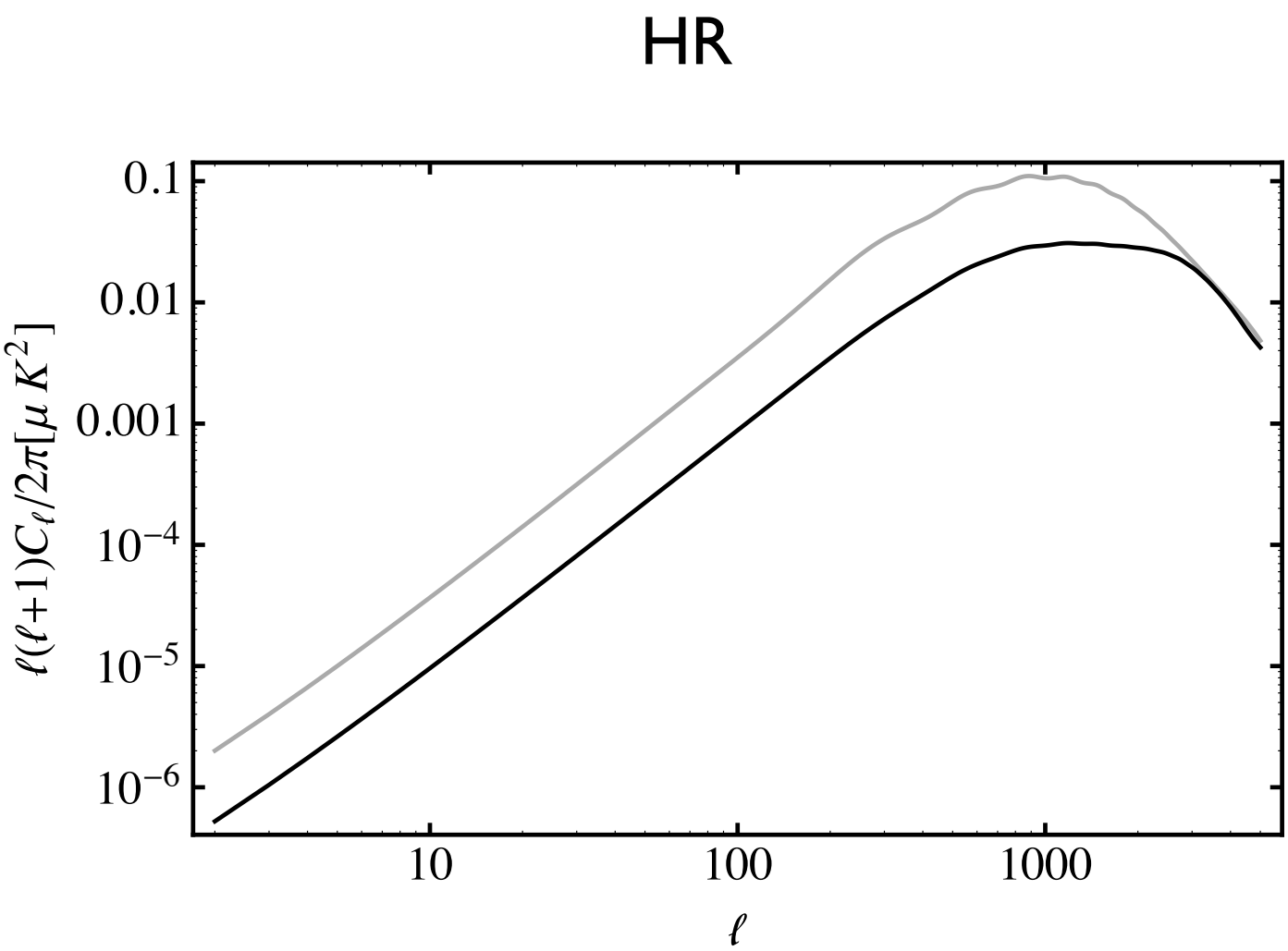
Lensing noise



Lensing noise



Delensing performance



Delensing performance