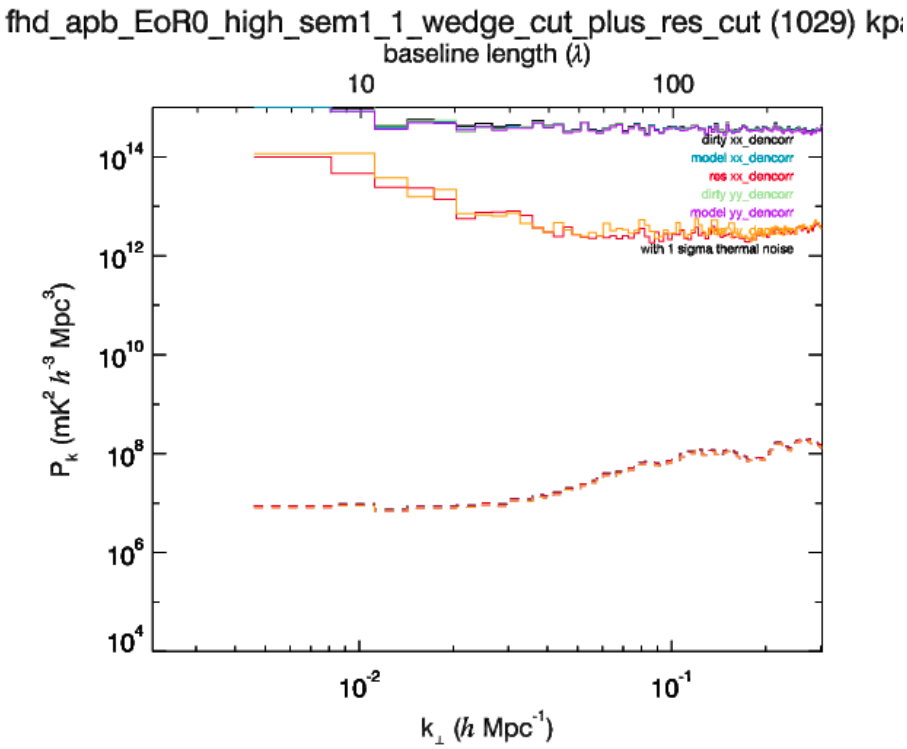
From: **Adam Beardsley** adam.p.beardsley@gmail.com
Subject: Re: better FG subtraction in 32 hour set than in golden set ?
Date: March 13, 2017 at 1:53 PM
To: Abraham Richard Neben abrahamn@mit.edu

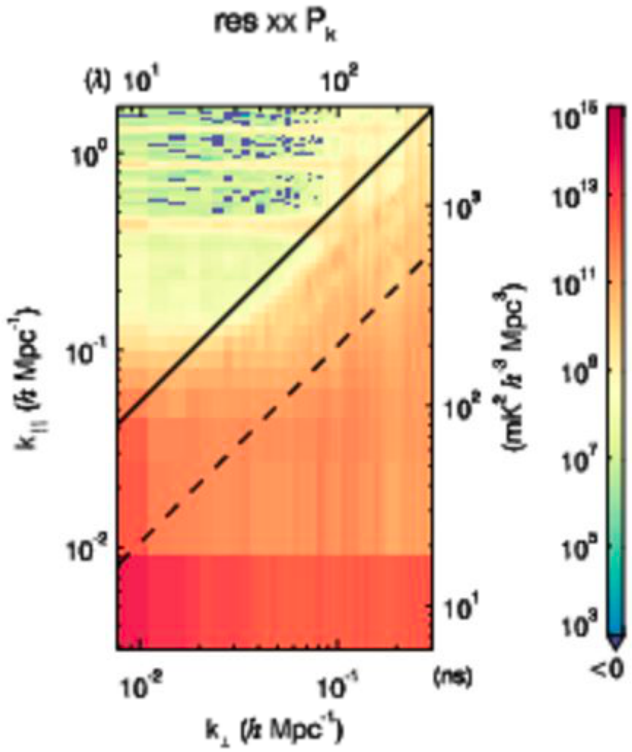
AB

Hi Abraham

Sorry it took a while to respond. I think I remember there being a plotting bug with these kpar=0 plots. I reran the plotting code and got the plot below:



And here is the corresponding 2d plot:



I think these match much better now, though I don't remember exactly what the bug was.

And these are 30MHz.

-Adam

On Sat, Mar 11, 2017 at 7:12 PM Abraham Richard Neben <abrahamn@mit.edu> wrote:

> Also, what is the bandwidth of these power spectra? 10MHz or 30MHz?
>
> > On Oct 6, 2016, at 5:01 PM, Adam Beardsley <adam.p.beardsley@gmail.com> wrote:
> >
> > Hi Abraham
> >
> > I don't think I looked at the k//=0 part as closely, so it's possible I missed weird things there.
> > Fig 2 was simply an example PS to show the shape, and I don't think it had the diffuse model. In other words, it doesn't correspond to the cube you grabbed.
> > Here's a more apples to apples comparison:
> >
> > <pasted1.png>
> > The left is the golden set, right is the 32 hour integration. It's a little less obvious, but I think you're right that the k//=0 bin is lower.
> > Here are the cuts along k//=0:
> > <pasted2.png>
> > At low kperp the long integration does look lower, but they are pretty consistent at higher kperp. What range of kperp do you l's correspond to?
> >
> > Sorry, I don't have a good answer for you.
> > -Adam
> >
> >
> > On Thu, Oct 6, 2016 at 1:46 PM Abraham Neben <abraham.neben@icloud.com> wrote:
> > Hi Adam,
> >
> > I screenshotted figures 2 and 13 from your paper an placed them next to each other, and you can definitely see the same thing. At k//=0, the 32hour residual (right) is definitely yellower than the 3 hour residual (left)
> >
> > <Screen Shot 2016-10-06 at 4.44.33 PM.png>
> >
> > Abraham
> >
> >> On Oct 6, 2016, at 4:37 PM, Adam Beardsley <adam.p.beardsley@gmail.com> wrote:
> >>
> >> Hi Abraham
> >>
> >> That is a bit surprising. If you're drawing the cubes from the same directory, they should be identical FHD runs - so the foreground model should be the same. I wonder if there's a slowly varying noise term from something like the ionosphere, which would cause FG subtraction errors, but average out over longer time periods? Though I don't remember ever seeing something like this in my analysis, and I'm about 70% confident I would have actually compared the 3hr and 32hr integrations. What does the rest of your pipeline look like?
> >>
> >> -Adam
> >>
> >> On Thu, Oct 6, 2016 at 1:28 PM Abraham Neben <abraham.neben@icloud.com> wrote:
> >> Hi Adam,
> >>
> >> I've plotted power spectra of the frequency averaged golden day cubes and deep 32 hour cubes. The noise is higher on the 3 hour cubes, as expected, but strangely the FG subtraction is better (lower res) on the 32 hour cubes. Is the FG model different between the different analyses?
> >>
> >> I used these 32 hour cubes
> >> /nfs/mwa-03/r1/EoR2013/fhd_apb_EoR0_high_sem1_1/Healpix/Combined_obs_wedge_cut_plus_res_cut_even_cubeXX.sav
> >> /nfs/mwa-03/r1/EoR2013/fhd_apb_EoR0_high_sem1_1/Healpix/Combined_obs_wedge_cut_plus_res_cut_odd_cubeXX.sav
> >>
> >> and these golden cubes
> >> /nfs/mwa-03/r1/EoR2013/fhd_apb_EoR0_high_sem1_1/Healpix/Combined_obs_golden_even_cubeXX.sav
> >> /nfs/mwa-03/r1/EoR2013/fhd_apb_EoR0_high_sem1_1/Healpix/Combined_obs_golden_odd_cubeXX.sav
> >>
> >> Abraham
> >>
> >>
> >> <attachment.png><attachment.png>
> >