

Focal Plane Update

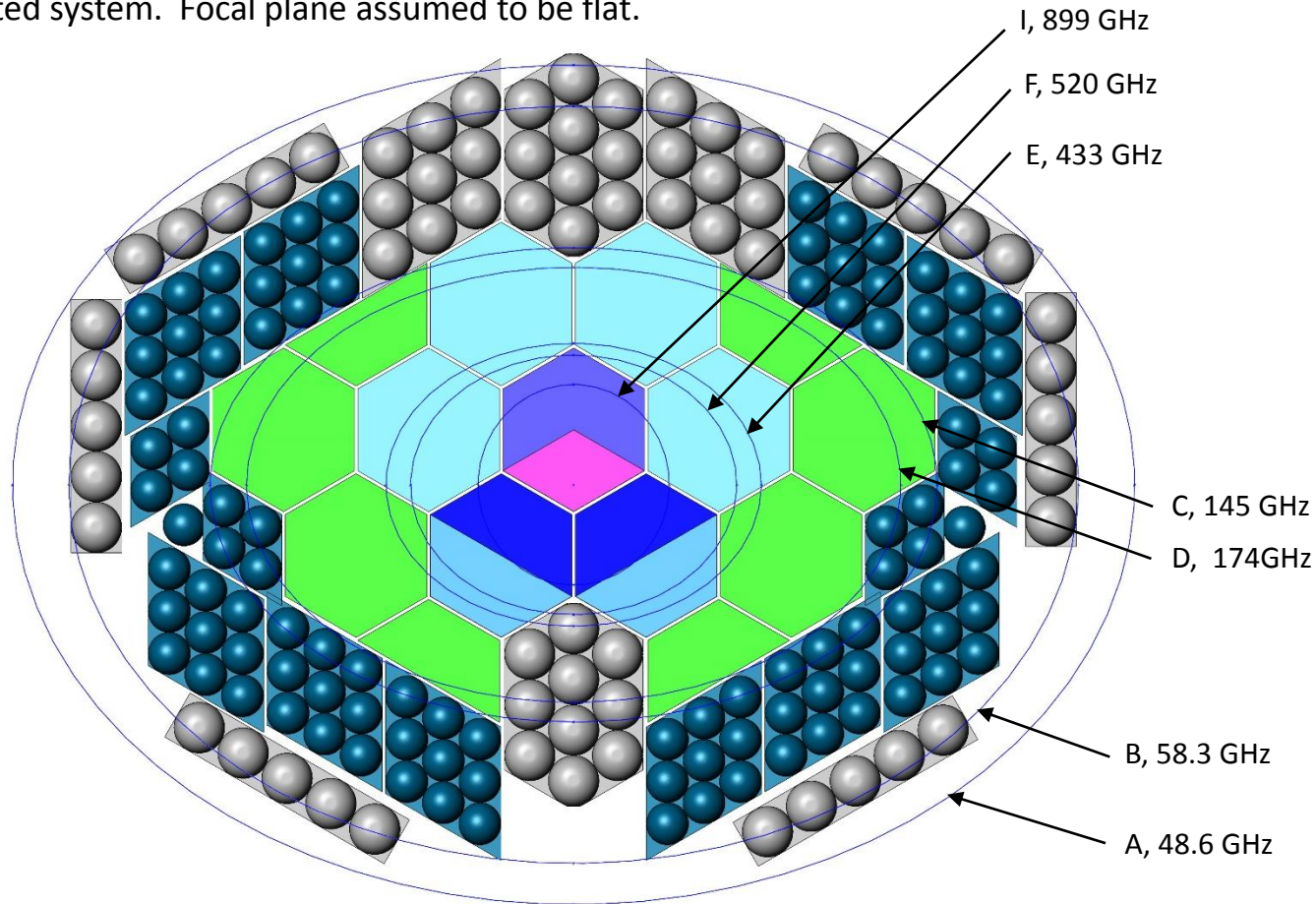
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Focal Plane

- 12356 bolometers, 2298 pixels.
- 17.5 x 12 deg, 60 x 47 cm. expanded by 1.5 degree in X to fit all low frequency pixels
- Contours are Strehl = 0.8. System has Gaussian illumination with 10dB edge taper
 - Using UMN coma corrected system. Focal plane assumed to be flat.

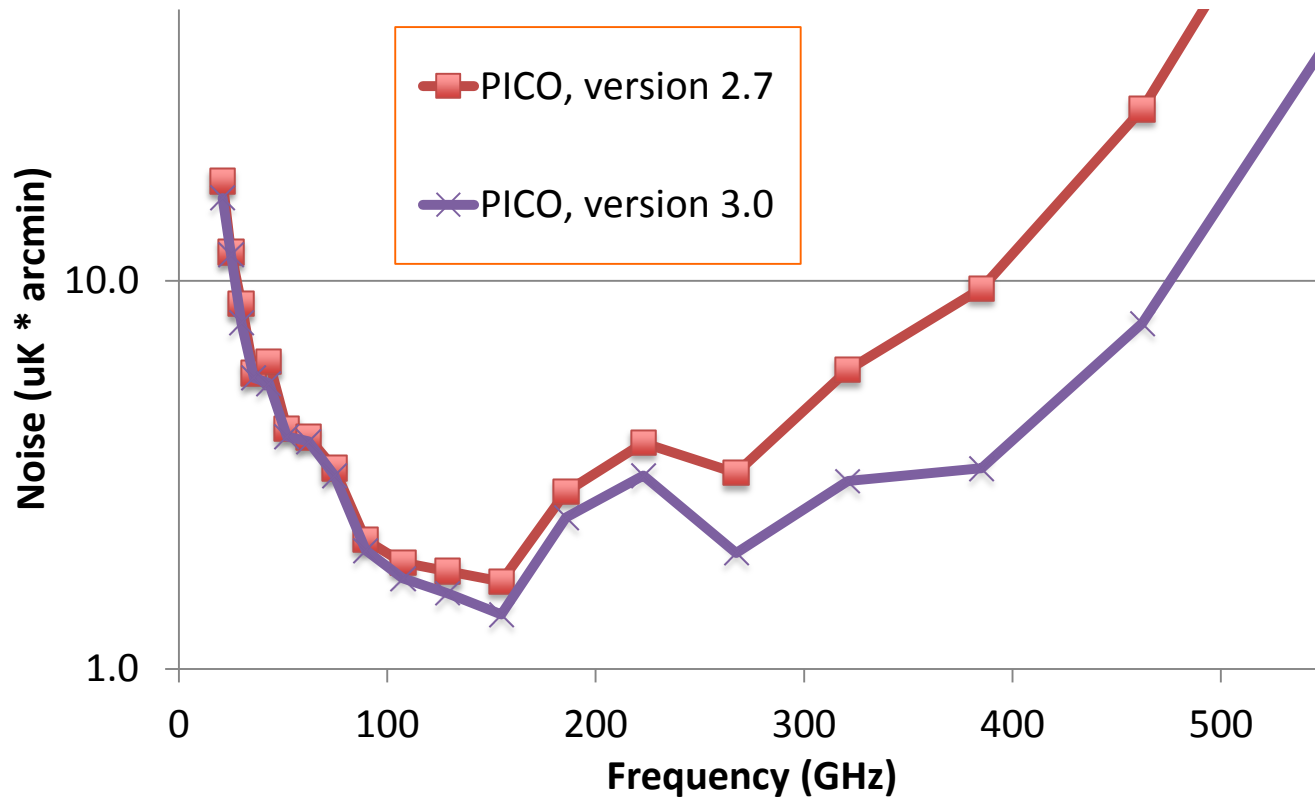
Pixel	Highest Frequency (GHz)	Number
A	48.6	68
B	58.3	108
C	145	360
D	174	450
E	433	546
F	520	408
G	624	135
H	749	132
I	899	91



- 2 extra 48 mm per side equilateral triangles of empty space on central wafer.
 - Can add 136 F pixels, or double the G,H,I pixels. Or rearrange to add pixels at some other frequency.

Sensitivity

- Using this focal plane and
 - 40 K mirrors, 0.07 % emissivity,
 - 4 yrs at 95% observing efficiency,
 - 4 K stop and secondary,
- 0.62 uK arcmin total sensitivity



Specs, V3.0

- Will be uploaded to wiki later today.

Band#	nu (GHz)	nu_low (GHz)	nu_high (GHz)	del nu (GHz)	FWHM (arcmin)	PolWeight (uK*arcmin)	Single bolometer NET (uK_CMB)
1	21	18.2	23.4	5.2	38.4	16.3	94.7
2	25	21.9	28.1	6.3	32.0	11.7	86.6
3	30	26.3	33.8	7.5	28.3	7.8	54.9
4	36.0	31.5	40.5	9.0	23.6	5.6	50.2
5	43.2	37.8	48.6	10.8	22.2	5.4	40.3
6	51.8	45.4	58.3	13.0	18.4	4.0	37.1
7	62.2	54.4	70.0	15.6	12.8	3.9	56.5
8	74.6	65.3	84.0	18.7	10.7	3.2	52.7
9	89.6	78.4	100.8	22.4	9.5	2.0	33.8
10	107.5	94.1	120.9	26.9	7.9	1.7	32.1
11	129.0	112.9	145.1	32.3	7.4	1.6	26.7
12	154.8	135.4	174.1	38.7	6.2	1.4	26.3
13	185.8	162.5	209.0	46.5	4.3	2.5	49.9
14	222.9	195.0	250.8	55.7	3.6	3.1	56.0
15	267.5	234.0	300.9	66.9	3.2	2.0	41.7
16	321.0	280.9	361.1	80.3	2.6	3.0	55.3
17	385.2	337.0	433.3	96.3	2.5	3.3	69.0
18	462.2	404.4	520.0	115.6	2.1	7.8	141.0
19	554.7	485.3	624.0	138.7	1.5	44.1	460.5
20	665.6	582.4	748.8	166.4	1.3	176.9	1826.0
21	798.7	698.9	898.5	199.7	1.1	1260.7	10806.1