

# Calculating C/S for filters of Ultraviolet Imaging Telescope (UVIT) for given model-SED

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**Abstract:** This note provides input data required for estimating expected C/S for various filters of Ultraviolet Imaging Telescope (UVIT) for any given SED of a point source.

**Introduction:** Ultraviolet Imaging Telescope (UVIT) is an ultraviolet telescope onboard ASTROSAT – the Indian satellite for multi-wavelength astronomy launched in September 2015. The primary aim of UVIT is to make images in NUV (200 – 300 nm) and FUV (130-180 nm) with a FWHM < 1.5" over a field of ~ 28' diameter. For each of the two channels, a set of filters is provided to select a narrower band. In order to compare photometric observations of a source with a model-SED an estimate of the expected C/S is required. Such an estimate can be made from the effective areas for the relevant filter at different wavelengths. The ground calibrations for various components/subsystems were used to estimate the effective areas as a function of wavelength. These estimates needed verification, and corrections if indicated, through observations in the orbit. We have used photometric observations of the standard WD – Hz4 for verification/correction of the effective areas. As these observations only provide one parameter (C/S – corrected for saturation etc. and normalised to centre of the field by applying flat-field correction) for each filter, only an average correction factor for the effective areas is obtained. (For more details, please refer to Tandon et al (2017) and Tandon et al (2019)).

**Estimates of C/S and the correction factors:** The expected C/S for Hz4 are estimated using the tables of effective areas obtained in the ground calibrations. The observed C/S for each filter are corrected for saturation and flat-field variations (*as well as any counts in large pedestal of the PSF outside the window of integration*) to get normalised C/S at centre of the field. Ratio of observed C/S to estimated C/S gives the correction factors for effective areas. The correction factors for various filters are shown in Table 1:

**Table 1: Average correction factors are listed for various filters. The corrected effective areas are obtained by multiplying the values estimated in ground calibrations by "Correction" for the filter. The corrected effective areas can be used to estimate expected C/S for a model-SED.**

Filter	F148W	F154W	F169M	F172M	N242W	N245M	N263M	N219M	N279N
Correction	0.779	0.787	0.876	0.892	0.814	0.805	0.824	0.540	0.848

**Input data for estimating C/S:** For ease of traceability, and implementation of any changes/corrections, all the inputs used for calculating C/S as per the ground calibrations are provided in Table 2 and Table 3. Values of the observed C/S for Hz4 are shown in Table 4.

Table 2: The effective areas obtained in the ground calibrations are shown for the various filters.

Filter	$\lambda$ (Å)	Eff. Area Sq. Cm	Filter	$\lambda$ (Å)	Eff. Area Sq. Cm	Filter	$\lambda$ (Å)	Eff. Area Sq. Cm
F148W	1250	0	N245M	2275.2	14.5368	N219M	2231.5	12.756
F148W	1270	12.1104	N245M	2282.3	16.3008	N219M	2283.5	11.7876
F148W	1300	12.1104	N245M	2289.4	17.8416	N219M	2295.2	11.2656
F148W	1360	11.88	N245M	2294.1	19.6056	N219M	2310.8	10.4784
F148W	1400	11.9844	N245M	2301.1	21.3708	N219M	2318.6	9.168
F148W	1440	10.356	N245M	2308.2	23.1348	N219M	2366.6	0.7572
F148W	1480	11.7024	N245M	2312.9	25.3344	N219M	2382.2	0.252
F148W	1540	13.2888	N245M	2320	26.6568	N219M	2395.2	0.252
F148W	1600	11.6088	N245M	2369.4	37.1316	N219M	2409.5	0.252
F148W	1650	11.7756	N245M	2381.1	39.2556	N279N	2704.7	0.096
F148W	1700	10.5768	N245M	2388.2	40.9548	N279N	2712.2	0.1872
F148W	1750	7.3704	N245M	2400	42.648	N279N	2718.9	0.1728
F148W	1800	0	N245M	2409.4	44.1384	N279N	2727.8	0.4716
F148Wa	1250	0	N245M	2440	44.904	N279N	2733.3	0.9816
F148Wa	1270	10.8684	N245M	2451.7	46.3116	N279N	2736.7	1.7556
F148Wa	1300	10.8684	N245M	2465.8	47.7192	N279N	2738.9	2.5308
F148Wa	1360	10.7568	N245M	2484.7	48.5256	N279N	2741	3.7404
F148Wa	1400	10.9788	N245M	2505.8	48.7188	N279N	2742.6	5.4684
F148Wa	1440	9.4572	N245M	2520	49.914	N279N	2743.1	4.5156
F148Wa	1480	11.1192	N245M	2541.1	49.626	N279N	2743.3	6.4188
F148Wa	1540	13.0452	N245M	2560	49.8192	N279N	2744.8	7.4568
F148Wa	1600	11.4828	N245M	2569.4	49.9836	N279N	2746.3	8.4072
F148Wa	1650	11.6424	N245M	2576.4	45.7416	N279N	2746.4	9.3612
F148Wa	1700	10.464	N245M	2578.8	42.9528	N279N	2747.1	10.3992
F148Wa	1750	7.296	N245M	2581.1	40.53	N279N	2747.9	11.5224
F154W	1340	0	N245M	2583.5	35.6964	N279N	2748	12.4764
F154W	1360	4.8936	N245M	2585.8	32.5356	N279N	2749	14.6376
F154W	1400	13.1532	N245M	2588.2	30.3072	N279N	2749.5	13.338
F154W	1440	11.946	N245M	2590.5	27.33	N279N	2749.7	15.4176
F154W	1480	11.6856	N245M	2590.5	25.8408	N279N	2751.2	16.4532
F154W	1540	12.4356	N245M	2592.9	21.0072	N279N	2751.3	17.6676
F154W	1650	11.4168	N245M	2595.2	18.0348	N279N	2752.1	18.8796
F154W	1700	10.2828	N245M	2597.6	17.1072	N279N	2752.2	19.656
F154W	1750	7.1556	N245M	2600	13.7568	N279N	2753	20.5212
F154W	1800	0	N245M	2602.3	9.1056	N279N	2753.7	21.4716
F172M	1620	0	N245M	2604.7	7.806	N279N	2755.2	22.3368
F172M	1620	0.7908	N245M	2607	6.5064	N279N	2756	23.2872

F172M	1650	3.6516	N245M	2609.4	5.0208	N279N	2757.4	24.1524
F172M	1670	6.6228	N245M	2616.4	3.1608	N279N	2758.9	25.0176
F172M	1700	8.6184	N245M	2618.8	1.8588	N279N	2761	25.8792
F172M	1720	9.5652	N245M	2632.9	0.5004	N279N	2763.8	26.7408
F172M	1750	7.0224	N245M	2656.4	0.3336	N279N	2770	27.4212
F172M	1770	7.1832	N245M	2684.7	0.1536	N279N	2777.5	24.012
F172M	1800	1.842	N245M	2710.5	0	N279N	2786.3	24.2232
F172M	1830	0	N263M	2461.5	0.1116	N279N	2794.4	24.0612
F169M	1420	0	N263M	2496.1	12.1152	N279N	2799.1	23.6088
F169M	1440	0.2784	N263M	2496.5	10.1496	N279N	2803.1	23.0796
F169M	1480	11.25	N263M	2498.2	13.8	N279N	2807.1	22.4784
F169M	1540	11.6928	N263M	2499	15.4908	N279N	2812.5	22.1736
F169M	1600	10.0584	N263M	2499.9	17.4504	N279N	2818.7	22.5372
F169M	1650	10.1676	N263M	2501.9	19.2816	N279N	2822.1	23.1264
F169M	1700	9.1392	N263M	2503.7	22.5096	N279N	2826.2	18.1428
F169M	1750	6.336	N263M	2536.3	38.6124	N279N	2830.2	17.676
F169M	1780	2.736	N263M	2551.3	40.2372	N279N	2831.5	17.1564
F169M	1800	0	N263M	2601.7	41.0748	N279N	2832.8	16.6356
N242W	1700	4.08	N263M	2648.8	38.2776	N279N	2833.4	16.1724
N242W	1750	2.364	N263M	2703.2	35.9676	N279N	2834	15.7704
N242W	1823	0.678	N263M	2751.7	29.3052	N279N	2834.6	15.1908
N242W	1879	1.284	N263M	2796.5	11.8536	N279N	2835.8	14.2104
N242W	1937	1.968	N263M	2798	10.7196	N279N	2835.8	14.6712
N242W	2000	6.408	N263M	2798.3	9.8868	N279N	2837	13.4568
N242W	2030	27.6492	N263M	2799.8	8.8284	N279N	2837.6	12.822
N242W	2067	51.9684	N263M	2800.1	7.9956	N279N	2838	11.4948
N242W	2138	53.6076	N263M	2800.4	7.0104	N279N	2838.2	12.186
N242W	2214	56.2548	N263M	2801.9	6.18	N279N	2839.3	10.9152
N242W	2296	58.0116	N263M	2804.6	5.1252	N279N	2839.9	10.224
N242W	2385	59.106	N263M	2845.5	0	N279N	2840.5	9.6456
N242W	2461	56.0868	N219M	1937	0.012	N279N	2841.1	9.1248
N242W	2499	55.3896	N219M	2000	0.804	N279N	2841.6	8.49
N242W	2499	55.512	N219M	2001.1	1.5624	N279N	2842.2	7.9128
N242W	2537	54.756	N219M	2008.9	2.0424	N279N	2843.5	7.1604
N242W	2550	54.2904	N219M	2019.4	2.4036	N279N	2844	6.5832
N242W	2600	51.9048	N219M	2046.7	3.7212	N279N	2845.3	5.9484
N242W	2650	46.6092	N219M	2055.8	6.7464	N279N	2845.9	5.3136
N242W	2700	43.074	N219M	2065	7.1424	N279N	2847.1	4.56
N242W	2750	35.0088	N219M	2074.1	7.7388	N279N	2849	3.75
N242W	2800	30.0996	N219M	2087.1	8.1396	N279N	2850.9	3.0564
N242W	2850	23.3196	N219M	2114.4	10.824	N279N	2852.2	2.4792
N242W	2900	16.9284	N219M	2123.5	11.0568	N279N	2854.1	1.842
N242W	2950	11.3628	N219M	2132.6	11.5164	N279N	2856.1	1.3788
N242W	3000	7.146	N219M	2147	11.976	N279N	2859.4	1.086
N242W	3050	5.0376	N219M	2158.7	12.4356	N279N	2866.8	0.6156
N245M	2148.2	0.3876	N219M	2191.2	13.716	N279N	2873.6	0.3192

N245M	2190.5	0.4044	N219M	2201.6	13.716	N279N	2882.4	0.1824
N245M	2209.4	1.2144	N219M	2215.9	12.9924	N279N	2889.1	0.0936
N245M	2221.1	2.226				N279N	2896.6	0.0864
N245M	2235.2	3.4404						

Table 3: The values of flux for Hz4 (erg/(sq cm A)) are shown as per “hz4\_stis\_005.fits” from HST-CALSPEC .

$\lambda$ (A)	Flux	$\lambda$ (A)	Flux	$\lambda$ (A)	Flux	$\lambda$ (A)	Flux	$\lambda$ (A)	Flux
1250	6.41E-15	1552	8.70E-14	1857	4.77E-14	2256	3.27E-14	2656	2.12E-14
1251	7.77E-15	1553	8.38E-14	1859	5.23E-14	2258	3.37E-14	2657	2.36E-14
1252	7.21E-15	1554	8.01E-14	1860	4.26E-14	2259	3.38E-14	2659	2.43E-14
1253	6.26E-15	1555	7.35E-14	1862	5.33E-14	2261	3.29E-14	2660	2.46E-14
1254	7.93E-15	1556	7.78E-14	1863	4.85E-14	2262	3.14E-14	2662	2.23E-14
1255	9.88E-15	1557	8.55E-14	1865	5.01E-14	2264	3.30E-14	2664	2.33E-14
1257	9.04E-15	1558	8.41E-14	1867	5.48E-14	2266	3.17E-14	2665	2.32E-14
1258	9.04E-15	1560	7.99E-14	1868	4.74E-14	2267	3.20E-14	2667	2.48E-14
1259	7.24E-15	1561	7.90E-14	1870	5.24E-14	2269	3.48E-14	2668	2.72E-14
1260	1.01E-14	1562	7.72E-14	1871	5.24E-14	2270	3.36E-14	2670	2.19E-14
1261	1.73E-14	1563	7.52E-14	1873	4.91E-14	2272	3.30E-14	2671	2.23E-14
1262	1.92E-14	1564	7.62E-14	1874	4.58E-14	2273	3.43E-14	2673	2.38E-14
1264	1.66E-14	1566	8.20E-14	1876	5.17E-14	2275	3.17E-14	2674	2.23E-14
1265	1.36E-14	1567	7.86E-14	1877	5.23E-14	2276	3.42E-14	2676	2.33E-14
1266	1.52E-14	1568	7.56E-14	1879	5.17E-14	2278	3.34E-14	2677	1.95E-14
1267	1.60E-14	1569	6.79E-14	1880	5.20E-14	2279	3.19E-14	2679	2.40E-14
1268	1.88E-14	1570	7.21E-14	1882	4.83E-14	2281	3.16E-14	2681	2.25E-14
1270	2.06E-14	1571	7.68E-14	1884	4.78E-14	2283	3.11E-14	2682	2.35E-14
1271	2.02E-14	1573	7.86E-14	1885	4.79E-14	2284	2.83E-14	2684	2.36E-14
1272	2.32E-14	1574	8.36E-14	1887	5.35E-14	2286	3.26E-14	2685	2.36E-14
1273	1.98E-14	1575	7.85E-14	1888	4.77E-14	2287	3.14E-14	2687	2.02E-14
1274	2.27E-14	1576	7.80E-14	1890	4.86E-14	2289	3.21E-14	2688	2.44E-14
1275	2.17E-14	1577	8.33E-14	1891	5.04E-14	2290	3.35E-14	2690	2.42E-14
1276	2.60E-14	1578	7.75E-14	1893	5.36E-14	2292	2.92E-14	2691	2.41E-14
1278	2.78E-14	1580	7.32E-14	1894	4.94E-14	2293	3.35E-14	2693	2.25E-14
1279	2.46E-14	1581	7.82E-14	1896	5.16E-14	2295	3.08E-14	2695	2.29E-14
1280	2.73E-14	1582	7.79E-14	1897	5.13E-14	2296	3.28E-14	2696	2.33E-14
1281	2.79E-14	1583	7.72E-14	1899	4.66E-14	2298	3.28E-14	2698	2.38E-14
1282	3.34E-14	1584	7.88E-14	1901	5.02E-14	2300	3.02E-14	2699	2.17E-14
1284	3.06E-14	1586	7.63E-14	1902	4.54E-14	2301	3.49E-14	2701	2.08E-14
1285	2.76E-14	1587	7.66E-14	1904	5.28E-14	2303	3.64E-14	2702	2.04E-14
1286	2.96E-14	1588	7.27E-14	1905	4.76E-14	2304	3.19E-14	2704	2.30E-14
1287	3.01E-14	1589	7.33E-14	1907	4.92E-14	2306	3.19E-14	2705	2.19E-14
1288	2.90E-14	1590	7.37E-14	1908	4.74E-14	2307	3.33E-14	2707	2.06E-14
1289	3.18E-14	1592	6.91E-14	1910	4.41E-14	2309	3.31E-14	2708	2.38E-14
1291	3.63E-14	1593	7.04E-14	1911	4.75E-14	2310	3.19E-14	2710	2.18E-14
1292	3.52E-14	1594	7.22E-14	1913	4.94E-14	2312	3.31E-14	2712	2.00E-14

1293	3.60E-14	1595	7.29E-14	1914	4.78E-14	2314	2.88E-14	2713	2.38E-14
1294	3.71E-14	1596	7.28E-14	1916	4.11E-14	2315	3.36E-14	2715	2.26E-14
1293	3.60E-14	1597	7.41E-14	1918	4.93E-14	2317	2.99E-14	2716	2.24E-14
1294	3.71E-14	1599	7.12E-14	1919	4.91E-14	2318	3.08E-14	2718	2.40E-14
1295	3.68E-14	1600	7.60E-14	1921	4.39E-14	2320	3.06E-14	2719	2.23E-14
1297	3.59E-14	1601	7.60E-14	1922	5.02E-14	2321	3.05E-14	2721	2.02E-14
1298	3.82E-14	1602	7.71E-14	1924	4.91E-14	2323	3.12E-14	2722	2.14E-14
1299	4.27E-14	1603	7.67E-14	1925	5.30E-14	2324	2.94E-14	2724	2.19E-14
1300	4.02E-14	1604	7.29E-14	1927	4.39E-14	2326	3.20E-14	2726	2.21E-14
1301	3.90E-14	1606	7.02E-14	1928	4.52E-14	2327	3.17E-14	2727	2.04E-14
1302	3.88E-14	1607	7.04E-14	1930	4.61E-14	2329	3.21E-14	2729	2.15E-14
1304	3.93E-14	1608	7.05E-14	1931	4.94E-14	2331	3.38E-14	2730	2.17E-14
1305	4.31E-14	1609	7.15E-14	1933	4.94E-14	2332	2.84E-14	2732	2.10E-14
1306	4.78E-14	1610	6.57E-14	1935	5.14E-14	2334	3.05E-14	2733	2.08E-14
1307	4.41E-14	1612	6.55E-14	1936	4.87E-14	2335	2.85E-14	2735	2.21E-14
1308	4.94E-14	1613	6.47E-14	1938	4.47E-14	2337	3.14E-14	2736	2.22E-14
1310	4.97E-14	1614	6.87E-14	1939	4.29E-14	2338	3.36E-14	2738	2.01E-14
1311	4.89E-14	1615	7.12E-14	1941	5.07E-14	2340	3.13E-14	2739	2.24E-14
1312	5.19E-14	1616	6.45E-14	1942	4.84E-14	2341	3.20E-14	2741	2.05E-14
1313	5.53E-14	1617	6.68E-14	1944	4.44E-14	2343	2.92E-14	2743	1.98E-14
1314	5.90E-14	1619	6.72E-14	1945	4.36E-14	2344	3.08E-14	2744	1.81E-14
1315	5.47E-14	1620	7.20E-14	1947	4.76E-14	2346	3.04E-14	2746	1.99E-14
1317	4.95E-14	1621	7.49E-14	1948	5.04E-14	2348	3.24E-14	2747	2.19E-14
1318	5.08E-14	1622	7.05E-14	1950	4.91E-14	2349	2.93E-14	2749	2.12E-14
1319	5.26E-14	1623	6.87E-14	1952	4.31E-14	2351	2.73E-14	2750	2.16E-14
1320	4.58E-14	1624	6.94E-14	1953	4.59E-14	2352	2.92E-14	2752	2.32E-14
1321	5.25E-14	1626	7.26E-14	1955	4.66E-14	2354	3.29E-14	2753	1.91E-14
1322	5.36E-14	1627	6.87E-14	1956	4.37E-14	2355	2.85E-14	2755	2.24E-14
1324	5.37E-14	1628	7.55E-14	1958	4.73E-14	2357	3.22E-14	2757	2.06E-14
1325	5.38E-14	1629	7.49E-14	1959	5.12E-14	2358	2.74E-14	2758	2.04E-14
1326	5.39E-14	1631	6.53E-14	1961	4.35E-14	2360	2.93E-14	2760	1.88E-14
1327	5.16E-14	1632	6.41E-14	1962	4.63E-14	2361	3.22E-14	2761	2.16E-14
1328	5.79E-14	1633	6.48E-14	1964	4.60E-14	2363	2.87E-14	2763	1.79E-14
1330	5.49E-14	1634	7.45E-14	1965	4.42E-14	2365	3.15E-14	2764	2.21E-14
1331	5.22E-14	1635	6.74E-14	1967	4.33E-14	2366	3.07E-14	2766	2.24E-14
1332	5.80E-14	1636	6.62E-14	1969	4.65E-14	2368	3.03E-14	2767	1.96E-14
1333	5.81E-14	1637	7.72E-14	1970	5.44E-14	2369	2.78E-14	2769	2.08E-14
1334	5.68E-14	1639	8.02E-14	1972	4.88E-14	2371	3.00E-14	2770	2.12E-14
1335	6.07E-14	1640	7.72E-14	1973	4.63E-14	2372	3.17E-14	2772	2.16E-14
1337	6.50E-14	1641	7.25E-14	1975	4.11E-14	2374	3.04E-14	2774	1.89E-14
1338	6.35E-14	1642	6.48E-14	1976	4.85E-14	2375	3.06E-14	2775	2.20E-14
1339	6.84E-14	1643	6.67E-14	1978	4.53E-14	2377	3.05E-14	2777	1.96E-14
1340	6.42E-14	1645	6.90E-14	1979	4.91E-14	2379	3.32E-14	2778	1.85E-14
1342	6.28E-14	1646	6.90E-14	1981	4.45E-14	2380	3.29E-14	2780	1.89E-14
1343	5.94E-14	1647	6.87E-14	1982	4.65E-14	2382	3.02E-14	2781	2.04E-14
1344	5.69E-14	1648	6.82E-14	1984	4.46E-14	2383	3.04E-14	2783	2.19E-14

1345	6.57E-14	1649	6.77E-14	1986	4.43E-14	2385	3.11E-14	2784	2.06E-14
1346	6.53E-14	1651	6.53E-14	1987	4.23E-14	2386	3.01E-14	2786	2.05E-14
1347	6.42E-14	1652	7.03E-14	1989	4.44E-14	2388	2.75E-14	2788	2.15E-14
1348	6.19E-14	1653	6.68E-14	1990	4.23E-14	2389	3.07E-14	2789	2.01E-14
1350	6.76E-14	1654	6.55E-14	1992	4.53E-14	2391	2.89E-14	2791	2.23E-14
1351	6.77E-14	1655	7.16E-14	1993	4.47E-14	2392	2.96E-14	2792	2.06E-14
1352	6.86E-14	1657	7.14E-14	1995	4.62E-14	2394	2.66E-14	2794	1.82E-14
1353	7.10E-14	1658	7.17E-14	1996	4.30E-14	2396	2.88E-14	2795	2.03E-14
1354	6.89E-14	1659	7.00E-14	1998	4.16E-14	2397	2.71E-14	2797	2.11E-14
1356	6.62E-14	1660	6.83E-14	1999	4.52E-14	2399	3.03E-14	2798	1.94E-14
1357	6.56E-14	1661	7.02E-14	2001	4.37E-14	2400	2.79E-14	2800	2.12E-14
1358	6.57E-14	1662	7.22E-14	2003	4.28E-14	2402	3.18E-14	2801	2.19E-14
1359	6.65E-14	1663	6.93E-14	2004	4.26E-14	2403	2.90E-14	2803	1.93E-14
1360	6.41E-14	1665	7.05E-14	2006	4.79E-14	2405	2.92E-14	2805	2.02E-14
1361	6.37E-14	1666	6.91E-14	2007	4.32E-14	2406	2.72E-14	2806	2.03E-14
1363	6.09E-14	1667	6.42E-14	2009	4.03E-14	2408	3.20E-14	2808	2.25E-14
1364	6.11E-14	1668	6.53E-14	2010	4.76E-14	2409	2.94E-14	2809	1.77E-14
1365	6.43E-14	1669	7.18E-14	2012	4.51E-14	2411	2.78E-14	2811	1.99E-14
1366	6.76E-14	1671	6.78E-14	2013	4.64E-14	2413	2.90E-14	2812	1.97E-14
1368	6.76E-14	1672	6.66E-14	2015	4.58E-14	2414	2.91E-14	2814	2.14E-14
1368	6.47E-14	1673	6.84E-14	2016	4.37E-14	2416	2.84E-14	2815	1.90E-14
1370	5.92E-14	1674	6.16E-14	2018	4.13E-14	2417	2.94E-14	2817	2.04E-14
1371	6.07E-14	1675	5.67E-14	2020	4.30E-14	2419	2.69E-14	2819	2.32E-14
1372	6.25E-14	1677	6.06E-14	2021	3.91E-14	2420	2.73E-14	2820	2.05E-14
1373	6.37E-14	1678	6.41E-14	2023	4.09E-14	2422	2.92E-14	2822	1.97E-14
1374	5.97E-14	1679	6.76E-14	2024	4.04E-14	2423	2.82E-14	2823	1.90E-14
1376	6.01E-14	1680	6.51E-14	2026	4.36E-14	2425	2.78E-14	2825	1.81E-14
1377	6.23E-14	1681	6.14E-14	2027	4.14E-14	2427	2.75E-14	2826	1.96E-14
1378	6.35E-14	1682	6.60E-14	2029	4.10E-14	2428	2.93E-14	2828	2.21E-14
1379	5.78E-14	1683	6.90E-14	2030	4.24E-14	2430	2.75E-14	2829	1.99E-14
1380	5.35E-14	1685	6.90E-14	2032	4.56E-14	2431	2.78E-14	2831	1.98E-14
1382	5.48E-14	1686	6.48E-14	2033	4.19E-14	2433	2.88E-14	2833	1.87E-14
1383	5.15E-14	1687	5.67E-14	2035	4.65E-14	2434	3.09E-14	2834	1.74E-14
1384	5.34E-14	1688	5.76E-14	2037	3.98E-14	2436	2.60E-14	2836	2.05E-14
1385	5.59E-14	1689	6.43E-14	2038	4.11E-14	2437	2.84E-14	2837	1.83E-14
1386	5.20E-14	1691	6.55E-14	2040	4.28E-14	2439	2.65E-14	2839	1.87E-14
1387	5.58E-14	1692	6.30E-14	2041	3.72E-14	2440	3.05E-14	2840	1.95E-14
1389	5.36E-14	1693	6.34E-14	2043	4.02E-14	2442	3.12E-14	2842	2.04E-14
1390	5.10E-14	1694	6.17E-14	2044	4.54E-14	2444	2.82E-14	2843	1.93E-14
1391	4.91E-14	1695	5.90E-14	2046	4.41E-14	2445	2.69E-14	2845	2.02E-14
1392	5.77E-14	1696	6.05E-14	2047	4.33E-14	2447	2.87E-14	2846	2.03E-14
1393	5.14E-14	1698	6.08E-14	2049	4.49E-14	2448	2.99E-14	2848	1.82E-14
1394	5.20E-14	1699	6.00E-14	2051	4.07E-14	2450	2.76E-14	2850	2.30E-14
1396	5.54E-14	1700	6.10E-14	2052	4.49E-14	2451	2.72E-14	2851	2.00E-14
1397	5.26E-14	1701	6.40E-14	2054	4.01E-14	2453	2.65E-14	2853	1.89E-14
1398	5.58E-14	1702	6.53E-14	2055	4.56E-14	2454	2.72E-14	2854	1.85E-14

1399	5.32E-14	1704	6.11E-14	2057	3.59E-14	2456	2.90E-14	2856	2.18E-14
1400	6.21E-14	1705	5.93E-14	2058	3.97E-14	2457	2.75E-14	2857	1.79E-14
1402	6.63E-14	1706	6.21E-14	2060	4.03E-14	2459	2.72E-14	2859	1.93E-14
1403	6.78E-14	1707	6.22E-14	2061	4.18E-14	2461	2.64E-14	2860	1.82E-14
1404	6.93E-14	1708	6.02E-14	2063	4.04E-14	2462	2.61E-14	2862	1.99E-14
1405	7.06E-14	1709	6.29E-14	2064	3.68E-14	2464	2.64E-14	2864	2.07E-14
1406	6.69E-14	1711	6.40E-14	2066	4.18E-14	2465	2.55E-14	2865	2.03E-14
1407	7.47E-14	1712	6.17E-14	2068	4.10E-14	2467	2.66E-14	2867	1.67E-14
1409	7.03E-14	1713	5.83E-14	2069	3.86E-14	2468	2.68E-14	2868	1.79E-14
1410	7.63E-14	1714	6.29E-14	2071	4.61E-14	2470	2.57E-14	2870	1.95E-14
1411	8.26E-14	1716	6.98E-14	2072	4.59E-14	2471	2.75E-14	2871	1.72E-14
1412	8.09E-14	1717	6.73E-14	2074	4.33E-14	2473	2.71E-14	2873	1.85E-14
1413	8.10E-14	1718	6.57E-14	2075	4.05E-14	2475	2.73E-14	2874	1.85E-14
1414	7.98E-14	1719	6.28E-14	2077	4.27E-14	2476	2.63E-14	2876	2.05E-14
1416	8.56E-14	1720	5.92E-14	2078	4.63E-14	2478	2.58E-14	2877	2.07E-14
1417	8.27E-14	1721	5.70E-14	2080	4.38E-14	2479	2.62E-14	2879	2.25E-14
1418	8.50E-14	1723	5.67E-14	2081	3.94E-14	2481	2.69E-14	2881	2.04E-14
1419	8.71E-14	1724	6.03E-14	2083	4.06E-14	2482	2.68E-14	2882	1.94E-14
1421	8.59E-14	1725	6.14E-14	2085	4.07E-14	2484	2.70E-14	2884	2.00E-14
1422	8.32E-14	1726	6.00E-14	2086	4.14E-14	2485	2.48E-14	2885	1.75E-14
1423	8.27E-14	1727	6.04E-14	2088	3.85E-14	2487	2.63E-14	2887	1.77E-14
1424	8.27E-14	1729	5.97E-14	2089	4.07E-14	2488	2.58E-14	2888	1.93E-14
1425	8.95E-14	1729	6.11E-14	2091	3.90E-14	2490	2.79E-14	2890	1.99E-14
1426	8.93E-14	1731	6.13E-14	2092	4.23E-14	2492	2.50E-14	2891	1.77E-14
1427	8.23E-14	1732	6.02E-14	2094	3.99E-14	2493	2.61E-14	2893	1.82E-14
1429	9.05E-14	1733	6.17E-14	2095	4.08E-14	2495	2.65E-14	2895	2.02E-14
1430	9.24E-14	1734	6.37E-14	2097	3.87E-14	2496	2.72E-14	2896	1.78E-14
1431	9.07E-14	1735	6.26E-14	2098	4.18E-14	2498	2.59E-14	2898	1.80E-14
1432	9.70E-14	1737	6.26E-14	2100	3.74E-14	2499	2.53E-14	2899	1.88E-14
1433	9.53E-14	1738	6.10E-14	2102	4.03E-14	2501	2.72E-14	2901	1.89E-14
1435	9.28E-14	1739	5.76E-14	2103	4.04E-14	2502	2.65E-14	2902	2.04E-14
1436	9.27E-14	1740	5.61E-14	2105	4.05E-14	2504	2.49E-14	2904	2.01E-14
1437	8.83E-14	1741	6.05E-14	2106	3.78E-14	2505	2.70E-14	2905	1.79E-14
1438	8.44E-14	1743	6.08E-14	2108	4.06E-14	2507	2.69E-14	2907	1.88E-14
1439	8.83E-14	1744	5.83E-14	2109	3.83E-14	2509	2.76E-14	2909	1.72E-14
1441	8.52E-14	1745	5.96E-14	2111	4.01E-14	2510	2.44E-14	2910	1.76E-14
1442	8.35E-14	1746	6.25E-14	2112	4.11E-14	2512	2.93E-14	2912	1.56E-14
1443	8.85E-14	1747	6.27E-14	2114	3.91E-14	2513	2.59E-14	2913	1.85E-14
1444	8.82E-14	1749	6.27E-14	2115	4.14E-14	2515	2.50E-14	2915	1.89E-14
1445	8.26E-14	1750	5.95E-14	2117	3.92E-14	2516	2.81E-14	2916	1.90E-14
1447	8.22E-14	1751	5.96E-14	2119	3.65E-14	2518	2.77E-14	2918	1.93E-14
1448	8.95E-14	1752	6.14E-14	2120	3.90E-14	2519	2.54E-14	2919	1.85E-14
1449	8.95E-14	1753	6.22E-14	2122	3.96E-14	2521	2.52E-14	2921	1.93E-14
1450	8.54E-14	1754	6.37E-14	2123	4.09E-14	2523	2.43E-14	2922	2.11E-14
1451	8.98E-14	1756	6.34E-14	2125	3.70E-14	2524	2.77E-14	2924	1.74E-14
1452	9.15E-14	1757	6.27E-14	2126	3.84E-14	2526	2.67E-14	2926	1.91E-14

1453	8.55E-14	1758	6.24E-14	2128	3.92E-14	2527	2.63E-14	2927	1.72E-14
1455	8.14E-14	1759	6.10E-14	2129	3.65E-14	2529	2.49E-14	2929	1.88E-14
1456	8.55E-14	1760	6.04E-14	2131	3.99E-14	2530	2.59E-14	2930	1.70E-14
1457	8.76E-14	1762	6.16E-14	2132	3.91E-14	2532	2.54E-14	2932	1.55E-14
1458	8.88E-14	1763	5.78E-14	2134	3.88E-14	2533	2.76E-14	2933	1.81E-14
1459	8.87E-14	1764	5.65E-14	2136	3.86E-14	2535	2.56E-14	2935	1.87E-14
1461	8.54E-14	1765	5.88E-14	2137	3.63E-14	2536	2.65E-14	2936	1.66E-14
1462	8.76E-14	1766	6.01E-14	2139	4.16E-14	2538	2.48E-14	2938	2.12E-14
1463	8.21E-14	1767	6.05E-14	2140	3.60E-14	2540	2.49E-14	2940	1.55E-14
1464	8.60E-14	1769	6.09E-14	2142	3.71E-14	2541	2.50E-14	2941	2.05E-14
1465	8.92E-14	1770	5.98E-14	2143	3.96E-14	2543	2.50E-14	2943	1.54E-14
1467	8.85E-14	1771	6.00E-14	2145	3.91E-14	2544	2.70E-14	2944	2.01E-14
1468	8.87E-14	1772	5.75E-14	2146	3.93E-14	2546	2.94E-14	2946	1.81E-14
1469	9.27E-14	1773	5.74E-14	2148	3.51E-14	2547	2.54E-14	2947	1.79E-14
1470	9.44E-14	1774	5.69E-14	2149	3.81E-14	2549	2.35E-14	2949	2.05E-14
1471	9.12E-14	1776	5.79E-14	2151	3.98E-14	2550	2.59E-14	2950	1.67E-14
1472	9.67E-14	1777	5.88E-14	2153	3.78E-14	2552	2.75E-14	2952	1.83E-14
1474	9.32E-14	1778	5.87E-14	2154	3.94E-14	2554	2.44E-14	2953	1.80E-14
1475	9.01E-14	1779	5.92E-14	2156	3.75E-14	2555	2.48E-14	2955	1.87E-14
1476	9.38E-14	1780	5.82E-14	2157	3.76E-14	2557	2.54E-14	2957	1.95E-14
1477	9.20E-14	1782	5.63E-14	2159	3.76E-14	2558	2.50E-14	2958	1.70E-14
1478	8.89E-14	1783	5.58E-14	2160	4.04E-14	2560	2.43E-14	2960	1.82E-14
1479	8.38E-14	1784	5.77E-14	2162	3.64E-14	2561	2.50E-14	2961	1.89E-14
1481	8.56E-14	1785	5.68E-14	2163	3.82E-14	2563	2.56E-14	2963	1.70E-14
1482	8.83E-14	1786	5.66E-14	2165	3.65E-14	2564	2.53E-14	2964	1.80E-14
1483	8.69E-14	1788	6.01E-14	2167	3.77E-14	2566	2.52E-14	2966	1.86E-14
1484	8.90E-14	1788	6.37E-14	2168	3.50E-14	2567	2.58E-14	2967	1.67E-14
1485	9.24E-14	1790	6.13E-14	2170	3.86E-14	2569	2.43E-14	2969	1.81E-14
1487	8.79E-14	1791	5.98E-14	2171	3.73E-14	2571	2.54E-14	2971	1.86E-14
1488	8.60E-14	1792	6.04E-14	2173	3.60E-14	2572	2.55E-14	2972	1.97E-14
1489	8.92E-14	1793	6.03E-14	2174	3.88E-14	2574	2.39E-14	2974	1.59E-14
1490	9.00E-14	1794	6.02E-14	2176	3.43E-14	2575	2.41E-14	2975	1.48E-14
1491	8.68E-14	1796	6.01E-14	2177	3.45E-14	2577	2.27E-14	2977	1.65E-14
1493	8.80E-14	1797	5.72E-14	2179	3.78E-14	2578	2.60E-14	2978	1.81E-14
1494	8.43E-14	1798	5.85E-14	2180	3.61E-14	2580	2.32E-14	2980	1.85E-14
1495	8.56E-14	1799	5.83E-14	2182	3.48E-14	2581	2.52E-14	2981	1.70E-14
1496	9.06E-14	1800	5.76E-14	2184	3.18E-14	2583	2.45E-14	2983	1.74E-14
1497	8.46E-14	1801	5.61E-14	2185	3.38E-14	2584	2.42E-14	2985	1.69E-14
1498	8.63E-14	1803	5.47E-14	2187	3.56E-14	2586	2.65E-14	2986	1.75E-14
1499	9.23E-14	1804	5.35E-14	2188	3.48E-14	2588	2.55E-14	2988	1.71E-14
1501	9.31E-14	1805	5.40E-14	2190	3.74E-14	2589	2.51E-14	2989	1.55E-14
1502	8.62E-14	1806	5.65E-14	2191	3.68E-14	2591	2.33E-14	2991	1.84E-14
1503	8.77E-14	1807	5.34E-14	2193	3.51E-14	2592	2.57E-14	2992	1.59E-14
1504	8.17E-14	1809	5.49E-14	2194	3.94E-14	2594	2.23E-14	2994	1.55E-14
1506	7.46E-14	1810	5.59E-14	2196	3.61E-14	2595	2.33E-14	2995	1.68E-14
1507	7.82E-14	1811	5.72E-14	2197	3.54E-14	2597	2.63E-14	2997	1.58E-14



1508	7.79E-14	1812	5.64E-14	2199	3.66E-14	2598	2.25E-14	2998	1.95E-14
1509	7.77E-14	1813	5.53E-14	2201	3.52E-14	2600	2.40E-14	3000	1.73E-14
1510	7.88E-14	1814	5.59E-14	2202	3.41E-14	2602	2.47E-14	3002	2.02E-14
1511	8.01E-14	1816	5.64E-14	2204	3.79E-14	2603	2.58E-14	3003	1.93E-14
1512	8.24E-14	1817	5.69E-14	2205	3.64E-14	2605	2.64E-14	3005	1.86E-14
1514	9.20E-14	1818	5.54E-14	2207	3.42E-14	2606	2.24E-14	3006	1.56E-14
1515	8.82E-14	1819	5.47E-14	2208	3.49E-14	2608	2.75E-14	3008	1.65E-14
1516	8.41E-14	1821	5.51E-14	2210	3.32E-14	2609	2.69E-14	3009	1.85E-14
1517	8.16E-14	1822	5.37E-14	2211	3.69E-14	2611	2.59E-14	3011	1.73E-14
1518	7.71E-14	1823	5.31E-14	2213	3.54E-14	2612	2.49E-14	3012	1.56E-14
1519	7.92E-14	1824	5.49E-14	2214	3.76E-14	2614	2.29E-14	3014	1.68E-14
1521	7.77E-14	1825	5.55E-14	2216	3.51E-14	2615	2.49E-14	3016	1.89E-14
1522	8.15E-14	1826	5.61E-14	2218	3.78E-14	2617	2.43E-14	3017	1.69E-14
1523	8.16E-14	1827	5.50E-14	2219	3.42E-14	2619	2.44E-14	3019	1.87E-14
1524	7.63E-14	1829	5.49E-14	2221	3.36E-14	2620	2.23E-14	3020	1.69E-14
1526	7.82E-14	1830	5.66E-14	2222	3.64E-14	2622	2.32E-14	3022	1.52E-14
1527	7.85E-14	1831	5.54E-14	2224	3.67E-14	2623	2.10E-14	3023	1.67E-14
1528	8.44E-14	1832	5.39E-14	2225	3.35E-14	2625	2.27E-14	3025	2.18E-14
1529	8.69E-14	1833	5.48E-14	2227	3.53E-14	2626	2.42E-14	3026	1.97E-14
1530	8.25E-14	1834	5.40E-14	2228	3.42E-14	2628	2.46E-14	3028	1.67E-14
1531	8.03E-14	1836	5.34E-14	2230	3.54E-14	2629	2.23E-14	3030	1.72E-14
1532	8.14E-14	1837	5.14E-14	2231	3.09E-14	2631	2.40E-14	3031	1.61E-14
1534	7.85E-14	1838	5.01E-14	2233	3.26E-14	2633	2.42E-14	3033	1.52E-14
1535	7.79E-14	1839	5.02E-14	2235	3.09E-14	2634	2.48E-14	3034	1.64E-14
1536	7.51E-14	1840	5.15E-14	2236	3.39E-14	2636	2.40E-14	3036	1.66E-14
1537	8.10E-14	1842	5.32E-14	2238	3.34E-14	2637	2.42E-14	3037	1.70E-14
1538	8.39E-14	1843	5.44E-14	2239	3.62E-14	2639	2.43E-14	3039	1.67E-14
1540	8.54E-14	1844	5.41E-14	2241	3.68E-14	2640	2.44E-14	3040	1.65E-14
1541	8.05E-14	1845	5.38E-14	2242	3.27E-14	2642	2.30E-14	3042	1.94E-14
1542	7.90E-14	1846	5.30E-14	2244	3.47E-14	2643	2.03E-14	3044	1.46E-14
1543	8.11E-14	1848	5.45E-14	2245	3.12E-14	2645	2.12E-14	3045	1.68E-14
1544	8.46E-14	1849	5.40E-14	2247	3.09E-14	2646	2.31E-14	3047	1.45E-14
1546	8.25E-14	1850	5.33E-14	2249	3.20E-14	2648	2.43E-14	3048	1.64E-14
1547	8.42E-14	1851	4.87E-14	2250	3.35E-14	2650	2.23E-14	3050	1.81E-14
1548	8.05E-14	1853	5.29E-14	2252	3.33E-14	2651	2.45E-14	3051	1.70E-14
1549	8.31E-14	1854	5.34E-14	2253	3.31E-14	2653	2.38E-14		
1550	8.26E-14	1856	5.31E-14	2255	3.21E-14	2654	2.26E-14		

Table 4: Values of C/S for Hz4 are shown for various filters. The estimated values are based on the effective areas obtained in the ground calibrations. The observed values are obtained after applying the corrections for saturation and flat-field (*and any counts of the large pedestal in the PSF outside the window of integration*) to the raw observed counts.

Filter	F148W	F154W	F169M	F172M	N242W	N245M	N263M	N219M	N279N
C/S Estimated	30.18	26.28	18.44	6.12	157.0	45.91	32.98	13.63	6.33

C/S Observed	23.52	20.68	16.16	5.46	127.8	36.97	27.16	7.36	5.37
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**Conclusion:** For several filters of UVIT, average correction factors have been calculated for effective areas obtained in the ground calibrations. For a model-SED, expected C/S can be calculated by first estimating C/S as per effective areas obtained in the ground calibrations, and multiplying this estimate with correction factor for the filter. It is to be noted that the C/S thus calculated should be compared with the observations after correcting the observed C/S for saturation and flat-field variations (*as well as any counts in large pedestal of the PSF outside the window of integration*).

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