3D-HST Documentation

Release 4.1

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CHAPTER

ONE

INTRODUCTION

3D-HST is an HST Treasury program to provide WFC3 and ACS grism spectroscopy over four extra-galactic fields (AEGIS, COSMOS, GOODS-South, and UDS), augmented with previously obtained data in GOODS-North. In addition to the grism spectroscopy, the project provides reduced WFC3 images in all five fields, extensive multi-wavelength photometric catalogs, and catalogs of derived parameters such as redshifts and stellar masses. These ancillary data come from a wide range of other public programs, most notably the CANDELS Multi-Cycle Treasury program (Grogin et al. 2011, Koekemoer et al. 2011).

This document describes the first comprehensive photometry release of 3D-HST, dubbed version 4.1. This release includes reduced WFC3 F125W, F140W, and F160W image mosaics of all five CANDELS/3D-HST fields; all ancillary imaging at other wavelengths that was used in the analysis; multi-wavelength photometric catalogs; and various derived parameters including photometric redshifts and stellar masses. In this document we provide an overview of the data products; the data and analysis are described fully in Skelton et al. (2014).

This release follows the initial v0.5 release that accompanied the survey description paper (Brammer et al. 2012) and the v3.0 release which included the deepest near-IR HST grism spectra currently in existence, extracted from the 8-17 orbit depth observations in the Hubble Ultra Deep Field (van Dokkum et al., 2013, arxiv:1305.2140). The next release will focus on the grism spectroscopy (Momcheva et al., in preparation). As described in Skelton et al. (2014), the grism spectra are tied directly to the photometric catalogs described here.

When using data from the 3D-HST survey, please include the following acknowledgement: "This work is based on observations taken by the 3D-HST Treasury Program (HST-GO-12177 and HST-GO-12328) with the NASA/ESA Hubble Space Telescope, which is operated by the Association of Universities for Research in Astronomy, Inc., under NASA contract NAS5-26555." and cite the following papers: "3D-HST WFC3-Selected Photometric Catalogs in the Five CANDELS/3D-HST Fields: Photometry, Photometric Redshifts and Stellar Masses", Skelton et al., 2014, ApJS, submitted (arXiv:1403.3689), and "3D-HST: A Wide-Field Grism Spectroscopic Survey with the Hubble Space Telescope", Brammer et al., 2012, ApJS, 200, 13. If the UDF spectra are used please also cite Brammer et al., 2013, ApJ, 765, L2.

The v4.1 release is currently located at: http://3dhst.research.yale.edu/Data.html For question regarding this release, please contact Ivelina Momcheva (ivelina.momcheva at yale.edu)

CHAPTER

TWO

KNOWN ISSUES AND CHANGES

The following are the currently known issues:

- The GOODS-N photometric catalog contains negative errors and contamination values in the IRAC-1 and IRAC-2 bands for ~1500 objects. We are investigating the issue.
- The transmission curves for the Subaru B, V, and z' bands in GOODS-N use the sensitivity for the MIT CCD rather than the older SIT CCD. Additionally, the i' and r' filter transmission curves were used for the Ic and Rc filters. These issues are likely mostly accounted for by the zero-point corrections. Updated transmission curves will be used in future releases.
- The transmission curves for the Subaru B, Rc, i', and z' bands in UDS did not include the atmospheric transmission. This issue was likely mostly accounted for by the zero-point corrections. Updated transmission curves will be used in future releases.
- The abbreviations for the GOODS-N and GOODS-S fields in the master photometric catalog are both "g". We suggest the use of RA and Dec alone or in combination with the "field" column to select objects from either field.

August 22, 2014 changes:

- A major update has been made to the UDS photometric catalog, EAZY and FAST outputs. We traced a bug being reported in the released v4.1 UDS catalogs to a difference between the catalog available for download from the 3D-HST website and the one for internal use. The photometric catalog provided on the website contained an obvious bug which affected the fluxes in F125W, F140W, J, H, K and all IRAC bands, the tot_cor and wmin_wfc3 columns, as well as the EAZY and FAST outputs derived from it. The RF colors and the master catalog were not affected. Note that the plots in the accompanying paper all use the correct version. The UDS catalog has been updated to the correct version, which will be called v4.2 to avoid confusion.

May 19, 2014 changes: the following changes were applied in situ.

- The UDS FAST translate file (uds_3dhst.v4.1.translate) originally corresponded to an older version of the catalog. This file has been updated to the correct v4.1 file. The correct file lists the IRAC filters in capital letters. Redownload the UDS catalog tar ball to update.
- The master catalog FITS file listed all fluxes as integers. This problem was restricted to the FITS file; the ASCII version was not affected. Redownload the master tar ball to update.
- In the master ASCII and FITS catalogs the column "e_F606W" was erroneously listed as "eF606W". Both the ASCI and FITS files have been corrected. Redownload the master tar ball to update.
- Kernel images were added to the ACS and WFC3 PSF tar balls for GOODS-N, GOODS-S and UDS. Redownload the tar balls.
- Column numbers were added for all catalogs in the README files.

- The last column in all photometric catalogs “nexp_f160w” was not described in the README files. It has been added in all relevant tables.

CHAPTER

THREE

3D-HST PHOTOMETRIC CATALOGS

We present WFC3-selected catalogs of objects from the 3D-HST Survey. Full details of the image processing, matching, and photometry can be found in the catalog release paper by R. E. Skelton et al. (2014). Please cite this paper when using the catalogs or images provided in this 3D-HST release.

Photometric redshifts and rest-frame colors, calculated with the EAZY code (Brammer, van Dokkum, & Coppi 2008; www.astro.yale.edu/eazy/) are provided. We also include stellar population parameters calculated with the FAST code (Kriek et al. 2009; https://www.cfa.harvard.edu/~mkriek/FAST.html).

3.1 The Photometric Catalogs

The photometric catalogs are produced using psf-matched aperture photometry for the space-based data and Ivo Labbe's MOPHONGO (Multiresolution Object PHotometry oN Galaxy Observations) software for the ground-based and IRAC data. The detection image for each of the fields is a noise-equalized combination of the F125W, F140W, and F160W images.

A PSF was created for each of the HST images by stacking a number of isolated stars across the image. The HST ACS and WFC3 images were convolved to match the F160W image, which has the broadest PSF. SExtractor (Bertin & Arnouts 1996) was run in dual-image mode using an aperture of 0.7 arcseconds.

Ground-based optical, NIR and IRAC data was processed using the MOPHONGO software, which takes into account large differences in the psfs and the blending of neighboring sources in lower resolution images. A combination of the F125W, F140W psf-matched and F160W original images was used as the high resolution prior. For the ground-based data with good seeing (<0.8"), photometry was performed in an aperture of 1". A 1.2" aperture was used for the bands with seeing 0.8 - 1", a 1.5" aperture for seeing of 1 - 1.2" and a 3" aperture for the IRAC bands. As we use different size apertures, we apply a correction from the aperture used for photometry to the color aperture of 0.7" using the ratio of flux in an aperture of 0.7" to the flux in the larger aperture in the reference band (F160W where available, F140W otherwise). e.g. F160W(0.7")/F160W(X"), where X is the size of the aperture.

All the color measurements are then converted to total fluxes using a correction based on the ratio of the aperture to total flux in the reference image (F160W where available, F140W otherwise). The total flux in reference band is given by the SExtractor AUTO magnitude with a correction to total estimated from the (empirical) growth curve of the F160W PSF. The correction to total is the inverse of the fraction of light enclosed within the circularized Kron radius. The growth curve is normalized at 2 arcseconds.

We apply the Galactic extinction correction given by NED at the center of the field (based on the dust maps from Schlafly & Finkbeiner 2011) to each band.

We calculate the errors for the WFC3/ACS, ground-based images/IRAC, and total error in the detection band as follows:

WFC3/ACS bands: we calculate the errors using the "empty apertures" method. We place many 0.7" apertures at random positions across the image, removing any that overlap with the segmentation map, and fit the distribution of resulting aperture fluxes to estimate the error for each band. We use the noise-equalized image to determine the error and then weight the error at each object's position based on the weight map (exposure time) at that position. Ground-based images/IRAC: The errors are derived using MOPHONGO. The same scaling from the aperture used for photometry to the color aperture is applied to both the errors and fluxes. Finally, all the flux errors (both ground based, IRAC and HST) are scaled to "total" errors using the same scaling as for the fluxes (f_F160W/faper_F160W). Total Flux error for Detection Band (e_F160W): The total error for F160W is determined differently to the other bands. We run the empty apertures routine in a whole series of apertures that are then fit with a power-law function (Eq. 2 in Skelton et al. 2014). The "total" error can then be read off for each object at the circularized Kron radius, making the "total" error in the detection band typically larger than the color error. Therefore e_F160W will be determined in a different way than the e_FILTER for all other bands, which are just scaled color errors. You can also derive the "total color error" for the detection band if you take eaper_F160W * (f_F160W/faper_F160W).

The equations for all of the above are listed in Skelton et al. (2014) equations 1-3, and Whitaker et al. 2011 equations 5-7, with the difference that we do not include the Poisson noise term here, and that we only use the empty aperture method for the HST bands. Whitaker et al. also provide an equation to determine the full error in the total magnitude for a single band in isolation (including systematics), which would be sqrt(e_FILTER^2+e_F160W^2-eaper_F160W^2). This can be calculated for each band from the given columns as desired.

Adjustments to the zeropoints were calculated iteratively from the difference between the observed and best-fit EAZY template in a similar way to that described in Whitaker et al. 2011. We now use all objects for the fit, rather than just those with spectroscopic redshifts, and it is done in two iterations - in the first round only the HST bands are fitted, to determine any small shifts that should be applied to them. Then the HST bands are fixed and the ground-based and IRAC data is fitted. The F160W band was taken as reference and has an offset of zero in all cases.

All fluxes are converted to total with an aperture correction and normalized to an AB zeropoint of 25, such that:

magAB = -2.5*log10(flux)+25.0

A standard selection of galaxies can be obtained by selecting use_phot=1, which is equivalent to nexp_f160w >2, nexp_f125w > 2, near_star = 0 and star flag=0. Also note that an additional S/N cut is optimal, depending on your science goals. This selection can be applied with the use flag provided in the catalogs.

The catalog is available in ascii format (.cat) and fits format (.cat.FITS). The contents of each catalogs for each field are described in their respective sections below.

3.2 Photometric Redshift Catalogs

Photometric redshifts were estimated using EAZY (Rev:34, Brammer et al. 2008). These are provided in the field_3dhst.v4.1.zout and field_3dhst.v4.1.zout.FITS files. **A maximum redshift z=6 is set in the photometric redshift fits.**

See the EAZY documentation (http://www.astro.yale.edu/eazy and Brammer, van Dokkum & Coppi 2008) for more information on the EAZY output

The first line of the catalog is a header with all the column names as shown here.

```
# id z_spec z_a z_m1 chi_a z_p chi_p z_m2 odds l68 u68  l95 u95  l99 u99  nfilt q_z z_peak
peak_prob z_mc
# EAZY $Rev: 34 $
```

Below is a brief summary of the columns of the photo-z catalog.

Column Name	Column Content
1 # id	Unique identifier within a given field
2 # z_spec	Spectroscopic redshift from photometric catalog, if it exists; If no zspec = -1
3 # z_a	Redshift where chi2 is minimized for all template linear combination modes before applying prior
4 # z_m1	Marginalized Redshift without prior
5 # chi_a	Minimum chi squared for all template linear combinations
6 # z_p	Redshift where likelihood is maximized after applying prior
7 # chi_p	Original chi squared at z_p
8 # z_m2	Marginalized redshift including prior
9 # odds	Redshift quality parameter from Benitez 2000 - fraction of probability within 0.2 of zphot
10 # l68	lower limit of 1 sigma confidence interval
11 # u68	upper limit of 1 sigma confidence interval
12 # l95	lower limit of 2 sigma confidence interval
13 # u95	upper limit of 2 sigma confidence interval
14 # l99	lower limit of 3 sigma confidence interval
15 # u99	upper limit of 3 sigma confidence interval
16 # nfilt	Number of filters used in fit
17 # q_z	Redshift quality parameter; see Brammer et al. 2008
18 # z_peak	Photometric redshift at peak probability distribution
19 # peak_prob	Value of peak probability
20 # z_mc	Monte Carlo photometric redshift drawn randomly from probability distribution

We point out in detail the difference between **z_peak** and **z_mc**:

z_peak: Hybrid between z_p and z_m2 to address the pathological case where you have two widely-separated peaks in p(z) that have similar integrated probabilities. ** This is the default photometric redshift **

z_mc: Redshift value drawn randomly from p(z), which has the property that the distribution of these redshifts for a given sample of objects very closely follows the summed p(z) distribution of those same objects.

3.3 Rest-Frame Colors

Rest-frame colors were calculated following Brammer et al. (2011) . The first line of the catalog is a header with all column names as shown here. The header also lists the central wavelength of each filter:

```
# id z DM L153 n_153 L154 n_154 L155 n_155 L161 n_161 L162 n_162 L163 n_163 L156 n_156
L157 n_157 L158 n_158 L159 n_159 L160 n_160 L135 n_135 L136 n_136 L137 n_137 L138 n_138
L139 n_139 L270 n_270 L271 n_271 L272 n_272 L273 n_273 L274 n_274 L275 n_275
#
# 153: REST_FRAME/maiz-apellaniz_Johnson_U.res,   3.59854e+03
# 154: REST_FRAME/maiz-apellaniz_Johnson_B.res,   4.38592e+03
# 155: REST_FRAME/maiz-apellaniz_Johnson_V.res,   5.49056e+03
# 161: 2MASS/J.res,   1.23751e+04
# 162: 2MASS/H.res,   1.64763e+04
# 163: 2MASS/K.res,   2.16203e+04
# 156: SDSS/u.dat,   3.56179e+03
# 157: SDSS/g.dat,   4.71887e+03
# 158: SDSS/r.dat,   6.18519e+03
# 159: SDSS/i.dat,   7.49966e+03
# 160: SDSS/z.dat,   8.96122e+03
# 135: REST_FRAME/Bessel_UX.dat,   3.59291e+03
# 136: REST_FRAME/Bessel_B.dat,   4.38477e+03
# 137: REST_FRAME/Bessel_V.dat,   5.48882e+03
# 138: REST_FRAME/Bessel_R.dat,   6.48893e+03
# 139: REST_FRAME/Bessel_I.dat,   8.03337e+03
```

```
# 270: RestUV/Tophat_1400_200.dat,   1.39971e+03
# 271: RestUV/Tophat_1700_200.dat,   1.69989e+03
# 272: RestUV/Tophat_2200_200.dat,   2.20011e+03
# 273: RestUV/Tophat_2700_200.dat,   2.70000e+03
# 274: RestUV/Tophat_2800_200.dat,   2.80016e+03
# 275: RestUV/Tophat_5500_200.dat,   5.50055e+03
#
# z = z_peak / z_spec
#
```

The filters are numbered in the EAZY format and listed in uds_3dhst.v4.1.master.RF.

All fluxes are normalized to an AB zeropoint of 25, such that: magAB = 25.0-2.5*log10(flux).

Rest-frame colors are calculated as color = -2.5*log(Lfilter1/Lfilter2)

For each individual field the RF color files field_3dhst.v4.1.master.RF and field_3dhst.v4.1.master.RF.FITS have the following columns:

Column Name	Column Content
1 # id	Unique identifier within a given field
2 # z	Redshift z_spec if it exists, z_peak from EAZY otherwise
3 # DM	Distance modulus for a W_M/W_L/H0 = 0.3/0.7/70 cosmology
4 # L153	Fnu flux density for filter REST_FRAME/maiz-apellaniz_Johnson_U.res with an AB zeropoint of 25
5 # n_153	Number of filters considered in RF fit for L153
6 # L154	Fnu flux density for filter REST_FRAME/maiz-apellaniz_Johnson_B.res with an AB zeropoint of 25
7 # n_154	Number of filters considered in RF fit for L154
8 # L155	Fnu flux density for filter RREST_FRAME/maiz-apellaniz_Johnson_V.res with an AB zeropoint of 25
9 # n_155	Number of filters considered in RF fit for L155
10 # L161	Fnu flux density for filter 2MASS/J.res with an AB zeropoint of 25
11 # n_161	Number of filters considered in RF fit for L161
12 # L162	Fnu flux density for filter 2MASS/H.res with an AB zeropoint of 25
13 # n_162	Number of filters considered in RF fit for L162
14 # L163	Fnu flux density for filter 2MASS/K.res with an AB zeropoint of 25
15 # n_163	Number of filters considered in RF fit for L163
16 # L156	Fnu flux density for filter SDSS/u.dat with an AB zeropoint of 25
17 # n_156	Number of filters considered in RF fit for L156
18 # L157	Fnu flux density for filter SDSS/g.da with an AB zeropoint of 25
19 # n_157	Number of filters considered in RF fit for L157
20 # L158	Fnu flux density for filter SDSS/r.dat with an AB zeropoint of 25
21 # n_158	Number of filters considered in RF fit for L158
22 # L159	Fnu flux density for filter SDSS/i.dat with an AB zeropoint of 25
23 # n_159	Number of filters considered in RF fit for L159
24 # L160	Fnu flux density for filter SDSS/z.dat with an AB zeropoint of 25
25 # n_160	Number of filters considered in RF fit for L160
26 # L135	Fnu flux density for filter REST_FRAME/Bessel_UX.dat with an AB zeropoint of 25
27 # n_135	Number of filters considered in RF fit for L135
28 # L136	Fnu flux density for filter REST_FRAME/Bessel_B.dat with an AB zeropoint of 25
29 # n_136	Number of filters considered in RF fit for L136
30 # L137	Fnu flux density for filter REST_FRAME/Bessel_V.da with an AB zeropoint of 25
31 # n_137	Number of filters considered in RF fit for L137
32 # L138	Fnu flux density for filter REST_FRAME/Bessel_R.dat with an AB zeropoint of 25
33 # n_138	Number of filters considered in RF fit for L138
34 # L139	Fnu flux density for filter REST_FRAME/Bessel_I.dat with an AB zeropoint of 25

Continued on next page

Table 3.1 – continued from previous page

Column Name	Column Content
35 # n_139	Number of filters considered in RF fit for L139
36 # L270	Fnu flux density for filter RestUV/Tophat_1400_200.dat with an AB zeropoint of 25
37 # n_270	Number of filters considered in RF fit for L270
38 # L271	Fnu flux density for filter RestUV/Tophat_1700_200.dat with an AB zeropoint of 25
39 # n_271	Number of filters considered in RF fit for L271
40 # L272	Fnu flux density for filter RestUV/Tophat_2200_200.dat with an AB zeropoint of 25
41 # n_272	Number of filters considered in RF fit for L272
42 # L273	Fnu flux density for filter RestUV/Tophat_2700_200.dat with an AB zeropoint of 25
43 # n_273	Number of filters considered in RF fit for L273
44 # L274	Fnu flux density for filter RestUV/Tophat_2800_200.dat with an AB zeropoint of 25
45 # n_274	Number of filters considered in RF fit for L274
46 # L275	Fnu flux density for filter RestUV/Tophat_5500_200.dat with an AB zeropoint of 25
47 # n_275	Number of filters considered in RF fit for L275

3.4 Stellar Population Parameters

We calculated the stellar population parameters using the FAST code version 0.8d. Below is a brief summary of the columns, specifying the default and additional optional settings. For a list of frequently asked questions, please see https://www.cfa.harvard.edu/~mkriek/FAST_FAQ.html.

We stress that the star formation rates, dust absorption, and star formation histories of the galaxies are uncertain when they are derived solely from optical – near-IR photometry (see, e.g., Wuyts et al. 2012). By contrast, stellar masses and M/L ratios are relatively well-constrained as they mostly depend on the rest-frame optical colors of the galaxies, and these are well-covered by our photometry.

Default Settings:

```
# Template error function: TEMPLATE_ERROR.fast.v0.2
# AB ZP:          25.00
# Library:        Bruzual & Charlot (2003)
# SFH:            Exponentially declining SFH: SFR ~ exp(-t/tau)
# Stellar IMF:    Chabrier
# metallicity:    0.020
# log(tau/yr):    7.0    - 10.0, in steps of 0.20
# log(age/yr):    7.6    - 10.1, in steps of 0.10
# A_V:            0.0    -  4.0, in steps of 0.10
# z:              0.0100 -  4.0000, in steps of 0.0100
```

Additional Settings Available: (settings the same as above unless otherwise noted):

```
# Library:        Maraston (2005)
# SFH:            Exponentially declining SFH: SFR ~ exp(-t/tau)
# Stellar IMF:    Kroupa
# Library:        Bruzual & Charlot (2003)
# SFH:            Delayed exponential SFH: SFR ~ t exp(-t/tau)
# Stellar IMF:    Chabrier
# Library:        Maraston (2005)
# SFH:            Delayed exponential SFH: SFR ~ t exp(-t/tau)
# Stellar IMF:    Kroupa
```

Output from FAST (see Kriek et al. 2009 for details) are provided in the are provided in the field_3dhst.v4.1.fout and field_3dhst.v4.1.zout.FITS files.

The header of the .fout file is as follows:

```
#    id         z      ltau     metal      lage        Av     lmass      lsfr     lssfr
la2t      chi2
# FAST version: 0.9b
# Photometric catalog file: uds_3dhst.v4.1.cat
# Photometric redshift file: uds_3dhst.v4.1.zout
# Template error function: TEMPLATE_ERROR.fast.v0.2
# AB ZP:         25.00
# Library:       Bruzual & Charlot (2003)
# SFH:           Exponentially declining SFH: SFR ~ exp(-t/tau)
# Stellar IMF:   Chabrier
# metallicity:   0.020
# log(tau/yr):   7.0    - 10.0, in steps of 0.20
# log(age/yr):   7.6    - 10.1, in steps of 0.10
# A_V:           0.0    -  4.0, in steps of 0.10
# z:             0.0100 -  6.0000, in steps of 0.0100
# Filters:      205  88 122  79 236 123 124 239 125 203 263 204 264 265  18  19  20  21
# ltau: log[tau/yr], lage: log[age/yr], lmass: log[mass/Msol], lsfr: log[sfr/(Msol/yr)],
lssfr: log[ssfr*yr], la2t: log[age/tau]
# For sfr=0. lsfr is set to -99
#    id         z      ltau     metal      lage        Av     lmass      lsfr     lssfr
la2t      chi2
```

Below is a brief description of each of the columns:

Column Name	Column Content
1 # id	Unique identifier within a given field
2 # z	Redshift used in fit z_spec if exists in input catalog, z_peak from eazy otherwise
3 # ltau	logtau/yr
4 # metal	metallicity
5 # lage	logage/yr
6 # Av	Dust attenuation in the V-band
7 # lmass	log Mstar/Msun
8 # lsfr	log SFR/Msun/yr
9 # lssfr	log SSFR * yr
10 # la2t	log age/tau
11 # chi2	chi squared of fit

3.5 Individual Fields

Following is information about the photometric catalogs for each individual field and the combined master catalog.

3.5.1 AEGIS

RELEASE: V4.1

DATE: MARCH 15TH, 2014

SOURCE: http://3dhst.research.yale.edu

Downloads

CATALOG DOWNLOAD: aegis_3dhst.v4.1.cats.tar

This file opens into a directory: aegis_3dhst.v4.1.cats. The following are the contents of this directory:

- Catalog/
  - aegis_3dhst.v4.1.cat: photometric catalog, ASCII format
  - aegis_3dhst.v4.1.cat.FITS: photometric catalog, FITS format
- Eazy/
  - aegis_3dhst.v4.1.coeff:
  - aegis_3dhst.v4.1.param:
  - aegis_3dhst.v4.1.pz:
  - aegis_3dhst.v4.1.readbin.pro
  - aegis_3dhst.v4.1.temp_sed
  - aegis_3dhst.v4.1.tempfilt
  - aegis_3dhst.v4.1.translate
  - aegis_3dhst.v4.1.zbin
  - aegis_3dhst.v4.1.zout: EAZY output file, ASCII format
  - aegis_3dhst.v4.1.zout.FITS: EAZY output file, FITS format
- Fast/
  - aegis_3dhst.v4.1.fout: FAST output file, ASCII format
  - aegis_3dhst.v4.1.fout.FITS: FAST output file, FITS format
  - aegis_3dhst.v4.1.param: input parameter file for FAST
  - aegis_3dhst.v4.1.translate: filter translate file for FAST
- Restframe/
  - aegis_3dhst.v4.1.master.RF: rest frame colors, ASCII format
  - aegis_3dhst.v4.1.master.RF.FITS: rest frame colors, fits format

The contents of each file are explained below.

Photometric Catalog

The detailed methods for creating the catalogs are described in a companion paper - Skelton et al. (2014). The photometric catalog for the aegis field contains the following datasets:

Bands	Survey	Reference
u,g,r,i,z	CFHTLS	Erben et al. (2009), Hildebrandt et al. (2009)
F606W,F814W	CANDELS	Grogin et al. 2011, Koekemoer et al. 2011
J1,J2,J3, H1,H2,K	NMBS	Whitaker et al. (2011)
J, H, Ks	WIRDS	Bielby et al. (2012)
F140W	3D-HST	Brammer et al. 2012
F125W,F160W	CANDELS	Grogin et al. 2011, Koekemoer et al. 2011
3.6,4.5um	SEDS	Ashby et al. (2013)
5.8,8.0um	EGS	Bramby et al. (2008)

The catalog has a single line header with all column names as shown here. The ASCII and the FITS versions of the catalog contain the same columns.

```
# id x y ra dec faper_F160W eaper_F160W faper_F140W eaper_F140W f_F160W e_F160W w_F160W
f_U e_U w_U f_G e_G w_G f_F606W e_F606W w_F606W f_R e_R w_R f_I e_I w_I f_F814W e_F814W
w_F814W f_Z e_Z w_Z f_F125W e_F125W w_F125W f_J1 e_J1 w_J1 f_J2 e_J2 w_J2 f_J3 e_J3 w_J3
f_J e_J w_J f_F140W e_F140W w_F140W f_H1 e_H1 w_H1 f_H2 e_H2 w_H2 f_H e_H w_H f_K e_K w_
K f_Ks e_Ks w_Ks f_IRAC1 e_IRAC1 w_IRAC1 f_IRAC2 e_IRAC2 w_IRAC2 f_IRAC3 e_IRAC3 w_IRAC3
f_IRAC4 e_IRAC4 w_IRAC4 tot_cor wmin_ground wmin_hst wmin_irac z_spec star_flag
kron_radius a_image b_image theta_J2000 class_star flux_radius fwhm_image flags
IRAC1_contam IRAC2_contam IRAC3_contam IRAC4_contam contam_flag f140w_flag use_phot
near_star nexp_f125w nexp_f140w nexp_f160w
# aegis_3dhst.v4.0.cat:
```

by K.E. Whitaker (10/12/2013)

All fluxes are normalized to an AB zeropoint of 25, such that: magAB = 25.0-2.5*log10(flux)

Column Name	Column Content
1 #id	Unique identifier within a given field
2 #x	X centroid in image coordinates
3 #y	Y centroid in image coordinates
4 #ra	RA J2000 degrees
5 #dec	Dec J2000 degrees
6 #faper_F160W	Flux within a 0.7 arcsecond aperture in F160W zeropoint 25.0
7 #eaper_F160W	1 sigma error within a 0.7 arcsecond aperture in F160W zeropoint 25.0
8 #faper_F140W	Flux within a 0.7 arcsecond aperture in F140W zeropoint 25.0
9 #eaper_F140W	1 sigma error within a 0.7 arcsecond aperture in F140W zeropoint 25.0
10 # f_F160W	Total flux in F160W zeropoint 25
11 # e_F160W	1 sigma error in F160W total flux zeropoint 25
12 # w_F160W	Weight relative to 95th percentile within F160W weight map
13 # f_U	Total flux in U zeropoint 25
14 # e_U	1 sigma error in U total flux zeropoint 25
15 # w_U	Weight relative to 95th percentile within U weight map
16 # f_G	Total flux in G zeropoint 25
17 # e_G	1 sigma error in G total flux zeropoint 25
18 # w_G	Weight relative to 95th percentile within G weight map
19 # f_F606W	Total flux in F606W zeropoint 25
20 # e_F606W	1 sigma error in F606W total flux zeropoint 25
21 # w_F606W	Weight relative to 95th percentile within F606W weight map
22 # f_R	Total flux in R zeropoint 25
23 # e_R	1 sigma error in R total flux zeropoint 25
24 # w_R	Weight relative to 95th percentile within R weight map
25 # f_I	Total flux in I zeropoint 25
26 # e_I	1 sigma error in I total flux zeropoint 25
27 # w_I	Weight relative to 95th percentile within I weight map
28 # f_F814W	Total flux in F814W zeropoint 25
29 # e_F814W	1 sigma error in F814W total flux zeropoint 25
30 # w_F814W	Weight relative to 95th percentile within F814W weight map
31 # f_Z	Total flux in Z zeropoint 25
32 # e_Z	1 sigma error in Z total flux zeropoint 25
33 # w_Z	Weight relative to 95th percentile within Z weight map
34 # f_F125W	Total flux in F125W zeropoint 25
35 # e_F125W	1 sigma error in F125W total flux zeropoint 25
36 # w_F125W	Weight relative to 95th percentile within F125W weight map
37 # f_J1	Total flux in J1zeropoint 25

Continued on next page

Table 3.2 – continued from previous page

Column Name	Column Content
38 # e_J1	1 sigma error in J1 total flux zeropoint 25
39 # w_J1	Weight relative to 95th percentile within J1 weight map
40 # f_J2	Total flux in J2zeropoint 25
41 # e_J2	1 sigma error in J2 total flux zeropoint 25
42 # w_J2	Weight relative to 95th percentile within J2 weight map
43 # f_J3	Total flux in J3 zeropoint 25
44 # e_J3	1 sigma error in J3 total flux zeropoint 25
45 # w_J3	Weight relative to 95th percentile within J3 weight map
46 # f_J	Total flux in Jzeropoint 25
47 # e_J	1 sigma error in J total flux zeropoint 25
48 # w_J	Weight relative to 95th percentile within J weight map
49 # f_F140W	Total flux in zeropoint 25
50 # e_F140W	1 sigma error in total flux zeropoint 25
51 # w_F140W	Weight relative to 95th percentile within weight map
52 # f_H1	Total flux in H1 zeropoint 25
53 # e_H1	1 sigma error in H1 total flux zeropoint 25
54 # w_H1	Weight relative to 95th percentile within H1 weight map
55 # f_H2	Total flux in H2zeropoint 25
56 # e_H2	1 sigma error in H2 total flux zeropoint 25
57 # w_H2	Weight relative to 95th percentile within H2 weight map
58 # f_H	Total flux in H zeropoint 25
59 # e_H	1 sigma error in H total flux zeropoint 25
60 # w_H	Weight relative to 95th percentile within H weight map
61 # f_K	Total flux in K zeropoint 25
62 # e_K	1 sigma error in K total flux zeropoint 25
63 # w_K	Weight relative to 95th percentile within K weight map
64 # f_Ks	Total flux in Ks zeropoint 25
65 # e_Ks	1 sigma error in Ks total flux zeropoint 25
66 # w_Ks	Weight relative to 95th percentile within Ks weight map
67 # f_IRAC1	Total flux in IRAC1 zeropoint 25
68 # e_IRAC1	1 sigma error in IRAC1 total flux zeropoint 25
69 # w_IRAC1	Weight relative to 95th percentile within IRAC1 weight map
70 # f_IRAC2	Total flux in IRAC2 zeropoint 25
71 # e_IRAC2	1 sigma error in IRAC2 total flux zeropoint 25
72 # w_IRAC2	Weight relative to 95th percentile within IRAC2 weight map
73 # f_IRAC3	Total flux in IRAC3 zeropoint 25
74 # e_IRAC3	1 sigma error in IRAC3 total flux zeropoint 25
75 # w_IRAC3	Weight relative to 95th percentile within IRAC3 weight map
76 # f_IRAC4	Total flux in IRAC4 zeropoint 25
77 # e_IRAC4	1 sigma error in IRAC4 total flux zeropoint 25
78 # w_IRAC4	Weight relative to 95th percentile within IRAC4 weight map
79 # tot_cor	Correction from AUTO to total flux based on F160W F140W
80 # wmin_ground	Minimum weight for all ground-based photometry
81 # wmin_hst	Minimum weight for ACS/WFC3 bands excluding no coverage
82 # wmin_irac	Minimum weight for IRAC bands excluding no coverage
83 # wmin_wfc3	Minimum weight for F160W, F125W and F140W excluding no coverage
84 # z_spec	Spectroscopic redshift, when available see Skelton et al., 2014 for sources
85 # star_flag	For F160W<25, star=1 and galaxy=0; for F160W>25, flag=2
86 # kron_radius	KRON_RADIUS

Continued on next page

Table 3.2 – continued from previous page

Column Name	Column Content
87 # a_image	A_IMAGE semi-major axis, pixels
88 # b_image	B_IMAGE semi-minor axis, pixels
89 # theta_J2000	Position angle of the major axis counter-clockwise, 0.0 = X world axis
90 # class_star	Sextractor stellarity-index CLASS_STAR
91 # flux_radius	Circular aperture radius enclosing half the total flux
92 # fwhm_image	FWHM pixels from a gaussian fit to the core
93 # flags	SExtractor extraction flags measured
94 # IRAC1_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH1
95 # IRAC2_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH2
96 # IRAC3_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH3
97 # IRAC4_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH4
98 # contam_flag	A flag for IRAC phot contam ratio >50% all bands . 0=OK, 1=bad
99 # f140w_flag	Set if F140W is used for the corrections to total i.e., no F160W coverage
100 # use_phot	Use flag: 1=USE, 0=DON'T USE; see Skelton et al. 2014 for definition
101 # near_star	1=Close to a star
102 # nexp_f125w	Number of individual exposures in F125W, based on NEXP maps
103 # nexp_f140w	Number of individual exposures in F140W, based on NEXP maps
104 # nexp_f160w	Number of individual exposures in F160W, based on NEXP maps

3.5.2 COSMOS

RELEASE: V4.1

DATE: MARCH 15TH, 2014

SOURCE: http://3dhst.research.yale.edu

Downloads

CATALOG DOWNLOAD: cosmos_3dhst.v4.1.cats.tar

This file opens into a directory: cosmos_3dhst.v4.1.cats. The following are the contents of this directory:

- Catalog/
  - cosmos_3dhst.v4.1.cat: photometric catalog, ASCII format
  - cosmos_3dhst.v4.1.cat.FITS: photometric catalog, FITS format
- Eazy/
  - cosmos_3dhst.v4.1.coeff:
  - cosmos_3dhst.v4.1.param:
  - cosmos_3dhst.v4.1.pz:
  - cosmos_3dhst.v4.1.readbin.pro
  - cosmos_3dhst.v4.1.temp_sed
  - cosmos_3dhst.v4.1.tempfilt
  - cosmos_3dhst.v4.1.translate
  - cosmos_3dhst.v4.1.zbin

  - cosmos_3dhst.v4.1.zout: EAZY output file, ASCII format
  - cosmos_3dhst.v4.1.zout.FITS: EAZY output file, FITS format
- Fast/
  - cosmos_3dhst.v4.1.fout: FAST output file, ASCII format
  - cosmos_3dhst.v4.1.fout.FITS: FAST output file, FITS format
  - cosmos_3dhst.v4.1.param: input parameter file for FAST
  - cosmos_3dhst.v4.1.translate: filter translate file for FAST
- Restframe/
  - cosmos_3dhst.v4.1.master.RF: rest frame colors, ASCII format
  - cosmos_3dhst.v4.1.master.RF.FITS: rest frame colors, fits format

The contents of the photometric catalogs are explained below. The EAZY and FAST outputs as well as the rest-frame colors are described in their respective sections above.

Photometric Catalog

The detailed methods for creating the catalogs are described in a companion paper - Skelton et al. (2014). The photometric catalog for the COSMOS field contains the following datasets:

Bands	Survey	Reference
u,g,r,i,z	CFHTLS	Erben et al. (2009) Hildebrandt et al. (2009)
Bj, Vj, r+,i+,z+, 12 medium bands		Taniguchi et al. (2007)
F606W,F814W	CANDELS	Grogin et al. 2011, Koekemoer et al. 2011
J1,J2,J3 H1,H2,K	NMBS	Whitaker et al. (2011)
J, H, Ks	UltraVISTA	McCracken et al. (2012)
Y, J, H, Ks	WIRDS	Bielby et al. (2012)
F140W	3D-HST	Brammer et al. 2012
F125W,F160W	CANDELS	Grogin et al. 2011, Koekemoer et al. 2011
3.6,4.5um	SEDS	Ashby et al. (2013)
5.8,8.0um	EGS	Bramby et al. (2008)

The catalog has a single line header with all column names as shown here. The ASCII and the FITS versions of the catalog contain the same columns.:

```
# id x y ra dec faper_F160W eaper_F160W faper_F140W eaper_F140W f_F160W e_F160W w_F160W f_U
e_U w_U f_B e_B w_B f_G e_G w_G f_V e_V w_V f_F606W e_F606W w_F606W f_R e_R w_R f_Rp e_Rp w_Rp
f_I e_I w_I f_Ip e_Ip w_Ip f_F814W e_F814W w_F814W f_Z e_Z w_Z f_Zp e_Zp w_Zp
f_UVISTA_Y e_UVISTA_Y w_UVISTA_Y f_F125W e_F125W w_F125W f_J1 e_J1 w_J1 f_J2 e_J2 w_J2
f_J3 e_J3 w_J3 f_J e_J w_J f_UVISTA_J e_UVISTA_J w_UVISTA_J f_F140W e_F140W w_F140W
f_H1 e_H1 w_H1 f_H2 e_H2 w_H2 f_H e_H w_H f_UVISTA_H e_UVISTA_H w_UVISTA_H f_K e_K w_K
f_Ks e_Ks w_Ks f_UVISTA_Ks e_UVISTA_Ks w_UVISTA_Ks f_IRAC1 e_IRAC1 w_IRAC1 f_IRAC2 e_IRAC2 w_IRAC2
f_IRAC3 e_IRAC3 w_IRAC3 f_IRAC4 e_IRAC4 w_IRAC4 f_IA427 e_IA427 f_IA464 e_IA464 f_IA484 e_IA484
f_IA505 e_IA505 f_IA527 e_IA527 f_IA574 e_IA574 f_IA624 e_IA624 f_IA679 e_IA679 f_IA709 e_IA709
f_IA738 e_IA738 f_IA767 e_IA767 f_IA827 e_IA827 tot_cor wmin_ground wmin_hst wmin_irac wmin_wfc3
z_spec star_flag  kron_radius a_image b_image theta_J2000 class_star flux_radius fwhm_image flags
IRAC1_contam IRAC2_contam IRAC3_contam IRAC4_contam contam_flag f140w_flag use_phot near_star
nexp_f125w nexp_f140w nexp_f160w
# cosmos_3dhst.v4.1.cat:
# by K.E. Whitaker (3/11/2014)
```

All fluxes are normalized to an AB zeropoint of 25, such that: magAB = 25.0-2.5*log10(flux)

Column Name	Column Content
1 #id	Unique identifier within a given field
2 #x	X centroid in image coordinates
3 #y	Y centroid in image coordinates
4 #ra	RA J2000 degrees
5 #dec	Dec J2000 degrees
6 #faper_F160W	Flux within a 0.7 arcsecond aperture in F160W zeropoint 25.0
7 #eaper_F160W	1 sigma error within a 0.7 arcsecond aperture in F160W zeropoint 25.0
8 #faper_F140W	Flux within a 0.7 arcsecond aperture in F140W zeropoint 25.0
9 #eaper_F140W	1 sigma error within a 0.7 arcsecond aperture in F140W zeropoint 25.0
10 #f_F160W	Total flux in F160W zeropoint 25
11 #e_F160W	1 sigma error in F160W total flux zeropoint 25
12 #w_F160W	Weight relative to 95th percentile within F160W weight map
13 #f_U	Total flux in U zeropoint 25
14 #e_U	1 sigma error in U total flux zeropoint 25
15 #w_U	Weight relative to 95th percentile within U weight map
16 #f_B	Total flux in B zeropoint 25
17 #e_B	1 sigma error in B total flux zeropoint 25
18 #w_B	Weight relative to 95th percentile within B weight map
19 #f_G	Total flux in G zeropoint 25
20 #e_G	1 sigma error in G total flux zeropoint 25
21 #w_G	Weight relative to 95th percentile within G weight map
22 #f_V	Total flux in V zeropoint 25
23 #e_V	1 sigma error in V total flux zeropoint 25
24 #w_V	Weight relative to 95th percentile within V weight map
25 #f_F606W	Total flux in F606W zeropoint 25
26 #e_F606W	1 sigma error in F606W total flux zeropoint 25
27 #w_F606W	Weight relative to 95th percentile within F606W weight map
28 #f_R	Total flux in R zeropoint 25
29 #e_R	1 sigma error in R total flux zeropoint 25
30 #w_R	Weight relative to 95th percentile within R weight map
31 #f_Rp	Total flux in Rpzeropoint 25
32 #e_Rp	1 sigma error in Rp total flux zeropoint 25
33 #w_Rp	Weight relative to 95th percentile within Rp weight map
34 #f_I	Total flux in I zeropoint 25
35 #e_I	1 sigma error in I total flux zeropoint 25
36 #w_I	Weight relative to 95th percentile within I weight map
37 #f_Ip	Total flux in Ip zeropoint 25
38 #e_Ip	1 sigma error in Ip total flux zeropoint 25
39 #w_Ip	Weight relative to 95th percentile within Ip weight map
40 #f_F814W	Total flux in F814W zeropoint 25
41 #e_F814W	1 sigma error in F814W total flux zeropoint 25
42 #w_F814W	Weight relative to 95th percentile within F814W weight map
43 #f_Z	Total flux in Z zeropoint 25
44 #e_Z	1 sigma error in Z total flux zeropoint 25
45 #w_Z	Weight relative to 95th percentile within Z weight map
46 #f_Zp	Total flux in Zp zeropoint 25
47 #e_Zp	1 sigma error in Zp total flux zeropoint 25
48 #w_Zp	Weight relative to 95th percentile within Zp weight map
49 #f_UVISTA_Y	Total flux in UVISTA_Y zeropoint 25
50 #e_UVISTA_Y	1 sigma error in UVISTA_Y total flux zeropoint 25

Continued on next page

Table 3.3 – continued from previous page

Column Name	Column Content
51 #w_UVISTA_Y	Weight relative to 95th percentile within UVISTA_Y weight map
52 #f_F125W	Total flux in F125W zeropoint 25
53 #e_F125W	1 sigma error in F125W total flux zeropoint 25
54 #w_F125W	Weight relative to 95th percentile within F125W weight map
55 #f_J1	Total flux in J1zeropoint 25
56 #e_J1	1 sigma error in J1 total flux zeropoint 25
57 #w_J1	Weight relative to 95th percentile within J1 weight map
58 #f_J2	Total flux in J2zeropoint 25
59 #e_J2	1 sigma error in J2 total flux zeropoint 25
60 #w_J2	Weight relative to 95th percentile within J2 weight map
61 #f_J3	Total flux in J3 zeropoint 25
62 #e_J3	1 sigma error in J3 total flux zeropoint 25
63 #w_J3	Weight relative to 95th percentile within J3 weight map
64 #f_J	Total flux in Jzeropoint 25
65 #e_J	1 sigma error in J total flux zeropoint 25
66 #w_J	Weight relative to 95th percentile within J weight map
67 #f_UVISTA_J	Total flux in UVISTA_J zeropoint 25
68 #e_UVISTA_J	1 sigma error in UVISTA_J total flux zeropoint 25
69 #w_UVISTA_J	Weight relative to 95th percentile within UVISTA_J weight map
70 #f_F140W	Total flux in zeropoint 25
71 #e_F140W	1 sigma error in total flux zeropoint 25
72 #w_F140W	Weight relative to 95th percentile within weight map
73 #f_H1	Total flux in H1 zeropoint 25
74 #e_H1	1 sigma error in H1 total flux zeropoint 25
75 #w_H1	Weight relative to 95th percentile within H1 weight map
76 #f_H2	Total flux in H2zeropoint 25
77 #e_H2	1 sigma error in H2 total flux zeropoint 25
78 #w_H2	Weight relative to 95th percentile within H2 weight map
79 #f_H	Total flux in H zeropoint 25
80 #e_H	1 sigma error in H total flux zeropoint 25
81 #w_H	Weight relative to 95th percentile within H weight map
82 #f_UVISTA_H	Total flux in UVISTA_H zeropoint 25
83 #e_UVISTA_H	1 sigma error in UVISTA_H total flux zeropoint 25
84 #w_UVISTA_H	Weight relative to 95th percentile within UVISTA_H weight map
85 #f_K	Total flux in K zeropoint 25
86 #e_K	1 sigma error in K total flux zeropoint 25
87 #w_K	Weight relative to 95th percentile within K weight map
88 #f_Ks	Total flux in Ks zeropoint 25
89 #e_Ks	1 sigma error in Ks total flux zeropoint 25
90 #w_Ks	Weight relative to 95th percentile within Ks weight map
91 #f_UVISTA_Ks	Total flux in UVISTA_Ks zeropoint 25
92 #e_UVISTA_Ks	1 sigma error in UVISTA_Ks total flux zeropoint 25
93 #w_UVISTA_Ks	Weight relative to 95th percentile within UVISTA_Ks weight map
94 #f_IRAC1	Total flux in IRAC1 zeropoint 25
95 #e_IRAC1	1 sigma error in IRAC1 total flux zeropoint 25
96 #w_IRAC1	Weight relative to 95th percentile within IRAC1 weight map
97 #f_IRAC2	Total flux in IRAC2 zeropoint 25
98 #e_IRAC2	1 sigma error in IRAC2 total flux zeropoint 25
99 #w_IRAC2	Weight relative to 95th percentile within IRAC2 weight map

Continued on next page

Table 3.3 – continued from previous page

Column Name	Column Content
100 #f_IRAC3	Total flux in IRAC3 zeropoint 25
101 #e_IRAC3	1 sigma error in IRAC3 total flux zeropoint 25
102 #w_IRAC3	Weight relative to 95th percentile within IRAC3 weight map
103 #f_IRAC4	Total flux in IRAC4 zeropoint 25
104 #e_IRAC4	1 sigma error in IRAC4 total flux zeropoint 25
105 #w_IRAC4	Weight relative to 95th percentile within IRAC4 weight map
106 #f_IA427	Total flux in zeropoint 25
107 #e_IA427	1 sigma error in total flux zeropoint 25
108 #f_IA464	Total flux in zeropoint 25
109 #e_IA464	1 sigma error in total flux zeropoint 25
110 #f_IA484	Total flux in zeropoint 25
111 #e_IA484	1 sigma error in total flux zeropoint 25
112 #f_IA505	Total flux in zeropoint 25
113 #e_IA505	1 sigma error in total flux zeropoint 25
114 #f_IA527	Total flux in zeropoint 25
115 #e_IA527	1 sigma error in total flux zeropoint 25
116 #f_IA574	Total flux in zeropoint 25
117 #e_IA574	1 sigma error in total flux zeropoint 25
118 #f_IA624	Total flux in zeropoint 25
119 #e_IA624	1 sigma error in total flux zeropoint 25
120 #f_IA679	Total flux in zeropoint 25
121 #e_IA679	1 sigma error in total flux zeropoint 25
122 #f_IA709	Total flux in zeropoint 25
123 #e_IA709	1 sigma error in total flux zeropoint 25
124 #f_IA738	Total flux in zeropoint 25
125 #e_IA738	1 sigma error in total flux zeropoint 25
126 #f_IA767	Total flux in zeropoint 25
127 #e_IA767	1 sigma error in total flux zeropoint 25
128 #f_IA827	Total flux in zeropoint 25
129 #e_IA827	1 sigma error in total flux zeropoint 25
130 #tot_cor	Correction from AUTO to total flux based on F160W F140W
131 #wmin_ground	Minimum weight for all ground-based photometry
132 #wmin_hst	Minimum weight for ACS/WFC3 bands excluding no coverage
133 #wmin_irac	Minimum weight for IRAC bands excluding no coverage
134 #wmin_wfc3	Minimum weight for F160W, F125W and F140W excluding no coverage
135 #z_spec	Spectroscopic redshift, when available see Skelton et al., 2014 for sources
136 #star_flag	For F160W<25, star=1 and galaxy=0; for F160W>25, flag=2
137 #kron_radius	KRON_RADIUS
138 #a_image	A_IMAGE semi-major axis, pixels
139 #b_image	B_IMAGE semi-minor axis, pixels
140 #theta_J2000	Position angle of the major axis counter-clockwise, 0.0 = X world axis
141 #class_star	Sextractor stellarity-index CLASS_STAR
142 #flux_radius	Circular aperture radius enclosing half the total flux
143 #fwhm_image	FWHM pixels from a gaussian fit to the core
144 #flags	SExtractor extraction flags measured
145 #IRAC1_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH1
146 #IRAC2_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH2
147 #IRAC3_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH3
148 #IRAC4_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH4

Continued on next page

Table 3.3 – continued from previous page

Column Name	Column Content
149 #contam_flag	A flag for IRAC phot contam ratio >50% all bands . 0=OK, 1=bad
150 #f140w_flag	Set if F140W is used for the corrections to total i.e., no F160W coverage
151 #use_phot	Use flag: 1=USE, 0=DON'T USE; see Skelton et al. 2014 for definition
152 #near_star	1=Close to a star
153 #nexp_f125w	Number of individual exposures in F125W, based on NEXP maps
154 #nexp_f140w	Number of individual exposures in F140W, based on NEXP maps
155 #nexp_f160w	Number of individual exposures in F160W, based on NEXP maps

3.5.3 GOODS-N

RELEASE: V4.1

DATE: MARCH 15TH, 2014

SOURCE: http://3dhst.research.yale.edu

Downloads

CATALOG DOWNLOAD: goodsn_3dhst.v4.1.cats.tar

This file opens into a directory: goodsn_3dhst.v4.1.cats. The following are the contents of this directory:

- Catalog/
  - goodsn_3dhst.v4.1.cat: photometric catalog, ASCII format
  - goodsn_3dhst.v4.1.cat.FITS: photometric catalog, FITS format
- Eazy/
  - goodsn_3dhst.v4.1.coeff:
  - goodsn_3dhst.v4.1.param:
  - goodsn_3dhst.v4.1.pz:
  - goodsn_3dhst.v4.1.readbin.pro
  - goodsn_3dhst.v4.1.temp_sed
  - goodsn_3dhst.v4.1.tempfilt
  - goodsn_3dhst.v4.1.translate
  - goodsn_3dhst.v4.1.zbin
  - goodsn_3dhst.v4.1.zout: EAZY output file, ASCII format
  - goodsn_3dhst.v4.1.zout.FITS: EAZY output file, FITS format
- Fast/
  - goodsn_3dhst.v4.1.fout: FAST output file, ASCII format
  - goodsn_3dhst.v4.1.fout.FITS: FAST output file, FITS format
  - goodsn_3dhst.v4.1.param: input parameter file for FAST
  - goodsn_3dhst.v4.1.translate: filter translate file for FAST
- Restframe/

– goodsn_3dhst.v4.1.master.RF: rest frame colors, ASCII format
– goodsn_3dhst.v4.1.master.RF.FITS: rest frame colors, fits format

The contents of each file are explained below.

Photometric Catalog

The detailed methods for creating the catalogs are described in a companion paper - Skelton et al. (2014).

The photometric catalog for the goodsn field contains the following datasets:

Bands	Survey	Reference
U	HHDFN	Capak et al. 2004
G, Rs	Keck	Steidel et al. 2003
F435W, F606W, F775W, F850LP	GOODS	Giavalisco et al. 2004
B, V, R, i, z	HHDFN	Capak et al. 2004
F140W	3D-HST	Brammer et al. 2012
F125W,F160W	CANDELS	Grogin et al. 2011, Koekemoer et al. 2011
J, H, Ks	MODS	Kajisawa et al. 2011
3.6,4.5um	SEDS	Ashby et al. (2013)
5.8,8.0um	GOODS	Dickinson et al. 2003

The catalog has a single line header with all column names as shown here. The ASCII and the

FITS versions of the catalog contain the same columns.

```
# id x y ra dec faper_F160W eaper_F160W faper_F140W eaper_F140W f_F160W e_F160W
w_F160W f_U e_U w_U f_F435W e_F435W w_F435W f_B e_B w_B f_G e_G w_G f_V e_V w_V
f_F606W e_F606W w_F606W f_R e_R w_R f_Rs e_Rs w_Rs f_I e_I w_I f_F775W e_F775W w_F775W
f_Z e_Z w_Z f_F850LP e_F850LP w_F850LP f_F125W e_F125W w_F125W f_J e_J w_J f_F140W
e_F140W w_F140W f_H e_H w_H f_Ks e_Ks w_Ks f_IRAC1 e_IRAC1 w_IRAC1 f_IRAC2 e_IRAC2
w_IRAC2 f_IRAC3 e_IRAC3 w_IRAC3 f_IRAC4 e_IRAC4 w_IRAC4 tot_cor wmin_ground wmin_hst
wmin_wfc3 wmin_irac z_spec star_flag kron_radius a_image b_image theta_J2000 class_star
flux_radius fwhm_image flags IRAC1_contam IRAC2_contam IRAC3_contam IRAC4_contam
contam_flag f140w_flag use_phot near_star nexp_f125w nexp_f140w nexp_f160w
# goodsn_3dhst.v4.1.cat:
# by R.E. Skelton (2014/03/11)
```

All fluxes are normalized to an AB zeropoint of 25, such that: magAB = 25.0-2.5*log10(flux).

Column Name	Column Content
1 # id	Unique identifier within a given field
2 # x	X centroid in image coordinates
3 # y	Y centroid in image coordinates
4 # ra	RA J2000 degrees
5 # dec	Dec J2000 degrees
6 # faper_F160W	Flux within a 0.7 arcsecond aperture in F160W zeropoint 25.0
7 # eaper_F160W	1 sigma error within a 0.7 arcsecond aperture in F160W zeropoint 25.0
8 # faper_F140W	Flux within a 0.7 arcsecond aperture in F140W zeropoint 25.0
9 # eaper_F140W	1 sigma error within a 0.7 arcsecond aperture in F140W zeropoint 25.0
10 # f_F160W	Total flux in F160W zeropoint 25
11 # e_F160W	1 sigma error in F160W total flux zeropoint 25
12 # w_F160W	Weight relative to 95th percentile within F160W weight map
13 # f_U	Total flux in U zeropoint 25
14 # e_U	1 sigma error in U total flux zeropoint 25

Continued on next page

Table 3.4 – continued from previous page

Column Name	Column Content
15 # w_U	Weight relative to 95th percentile within U weight map
16 # f_F435W	Total flux in ACS F435W zeropoint 25
17 # e_F435W	1 sigma error in ACS F435W total flux zeropoint 25
18 # w_F435W	Weight relative to 95th percentile within F435W weight map
19 # f_B	Total flux in B zeropoint 25
20 # e_B	1 sigma error in B total flux zeropoint 25
21 # w_B	Weight relative to 95th percentile within B weight map
22 # f_G	Total flux in G zeropoint 25
23 # e_G	1 sigma error in G total flux zeropoint 25
24 # w_G	Weight relative to 95th percentile within G weight map
25 # f_V	Total flux in V zeropoint 25
26 # e_V	1 sigma error in V total flux zeropoint 25
27 # w_V	Weight relative to 95th percentile within V weight map
28 # f_F606W	Total flux in F606W GOODS zeropoint 25
29 # e_F606W	1 sigma error in F606W GOODS total flux zeropoint 25
30 # w_F606W	Weight relative to 95th percentile within F606W GOODS weight map
31 # f_R	Total flux in R zeropoint 25
32 # e_R	1 sigma error in R total flux zeropoint 25
33 # w_R	Weight relative to 95th percentile within R weight map
34 # f_Rs	Total flux in Rc zeropoint 25
35 # e_Rs	1 sigma error in Rc total flux zeropoint 25
36 # w_Rs	Weight relative to 95th percentile within Rc weight map
37 # f_I	Total flux in I zeropoint 25
38 # e_I	1 sigma error in I total flux zeropoint 25
39 # w_I	Weight relative to 95th percentile within I weight map
40 # f_F775W	Total flux in F775W GOODS zeropoint 25
41 # e_F775W	1 sigma error in F775W GOODS total flux zeropoint 25
42 # w_F775W	Weight relative to 95th percentile within F775W GOODS weight map
43 # f_Z	Total flux in Z zeropoint 25
44 # e_Z	1 sigma error in Z total flux zeropoint 25
45 # w_Z	Weight relative to 95th percentile within Z weight map
46 # f_F850LP	Total flux in F850LP GOODS zeropoint 25
47 # e_F850LP	1 sigma error in F850LP GOODS total flux zeropoint 25
48 # w_F850LP	Weight relative to 95th percentile within F850LP GOODS weight map
49 # f_F125W	Total flux in F125W zeropoint 25
50 # e_F125W	1 sigma error in F125W total flux zeropoint 25
51 # w_F125W	Weight relative to 95th percentile within F125W weight map
52 # f_J	Total flux in Jzeropoint 25
53 # e_J	1 sigma error in J total flux zeropoint 25
54 # w_J	Weight relative to 95th percentile within J weight map
55 # f_F140W	Total flux in zeropoint 25
56 # e_F140W	1 sigma error in total flux zeropoint 25
57 # w_F140W	Weight relative to 95th percentile within weight map
58 # f_H	Total flux in H zeropoint 25
59 # e_H	1 sigma error in H total flux zeropoint 25
60 # w_H	Weight relative to 95th percentile within H weight map
61 # f_Ks	Total flux in K zeropoint 25
62 # e_Ks	1 sigma error in K total flux zeropoint 25
63 # w_Ks	Weight relative to 95th percentile within K weight map

Continued on next page

Table 3.4 – continued from previous page

Column Name	Column Content
64 # f_IRAC1	Total flux in IRAC1 zeropoint 25
65 # e_IRAC1	1 sigma error in IRAC1 total flux zeropoint 25
66 # w_IRAC1	Weight relative to 95th percentile within IRAC1 weight map
67 # f_IRAC2	Total flux in IRAC2 zeropoint 25
68 # e_IRAC2	1 sigma error in IRAC2 total flux zeropoint 25
69 # w_IRAC2	Weight relative to 95th percentile within IRAC2 weight map
70 # f_IRAC3	Total flux in IRAC3 zeropoint 25
71 # e_IRAC3	1 sigma error in IRAC3 total flux zeropoint 25
72 # w_IRAC3	Weight relative to 95th percentile within IRAC3 weight map
73 # f_IRAC4	Total flux in IRAC4 zeropoint 25
74 # e_IRAC4	1 sigma error in IRAC4 total flux zeropoint 25
75 # w_IRAC4	Weight relative to 95th percentile within IRAC4 weight map
76 # tot_cor	Correction from AUTO to total flux based on F160W F140W
77 # wmin_ground	Minimum weight for all ground-based photometry
78 # wmin_hst	Minimum weight for ACS/WFC3 bands excluding no coverage
79 # wmin_wfc3	Minimum weight for F160W, F125W and F140W excluding no coverage
80 # wmin_irac	Minimum weight for IRAC bands excluding no coverage
81 # z_spec	Spectroscopic redshift, when available see Skelton et al., 2014 for sources
82 # star_flag	For F160W<25, star=1 and galaxy=0; for F160W>25, flag=2
83 # kron_radius	KRON_RADIUS
84 # a_image	A_IMAGE semi-major axis, pixels
85 # b_image	B_IMAGE semi-minor axis, pixels
86 # theta_J2000	Position angle of the major axis counter-clockwise, 0.0 = X world axis
87 # class_star	Sextractor stellarity-index CLASS_STAR
88 # flux_radius	Circular aperture radius enclosing half the total flux
89 # fwhm_image	FWHM pixels from a gaussian fit to the core
90 # flags	SExtractor extraction flags measured
91 # IRAC1_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH1
92 # IRAC2_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH2
93 # IRAC3_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH3
94 # IRAC4_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH4
95 # contam_flag	A flag for IRAC phot contam ratio >50% all bands . 0=OK, 1=bad
96 # f140w_flag	Set if F140W is used for the corrections to total i.e., no F160W coverage
97 # use_phot	Use flag: 1=USE, 0=DON'T USE; see Skelton et al. 2014 for definition
98 # near_star	1=Close to a star
99 # nexp_f125w	Number of individual exposures in F125W, based on NEXP maps
100 # nexp_f140w	Number of individual exposures in F140W, based on NEXP maps
101 # nexp_f160w	Number of individual exposures in F160W, based on NEXP maps

3.5.4 GOODS-S

RELEASE: V4.1

DATE: MARCH 15TH, 2014

SOURCE: http://3dhst.research.yale.edu

Downloads

CATALOG DOWNLOAD: goodss_3dhst.v4.1.cats.tar

This file opens into a directory: goodss_3dhst.v4.1.cats. The following are the contents of this directory:

- Catalog/
  - goodss_3dhst.v4.1.cat: photometric catalog, ASCII format
  - goodss_3dhst.v4.1.cat.FITS: photometric catalog, FITS format
- Eazy/
  - goodss_3dhst.v4.1.coeff:

Coefficients of fits for all objects

- goodss_3dhst.v4.1.param:

Parameter file containing all of the parameter values used to compute goodss_3dhst.v4.1.zout, as well as information on the individual filters and templates used.

- goodss_3dhst.v4.1.pz: Binary output file containing redshift z, chi squared at z, prior, probability distribution pz
- goodss_3dhst.v4.1.readbin.pro: IDL code demonstrating how to read in the binary output from EAZY
- goodss_3dhst.v4.1.temp_sed
- goodss_3dhst.v4.1.tempfilt
- goodss_3dhst.v4.1.translate: Eazy translate file listing the flux and error columns and corresponding filter number in filter transmission file FILTERS.res.latest
- goodss_3dhst.v4.1.zbin: Binary output file containing observed and best-fit template for each object
- goodss_3dhst.v4.1.zout: EAZY output file, ASCII format
- goodss_3dhst.v4.1.zout.FITS: EAZY output file, FITS format
- Fast/
  - goodss_3dhst.v4.1.fout: FAST output file, ASCII format
  - goodss_3dhst.v4.1.fout.FITS: FAST output file, FITS format
  - goodss_3dhst.v4.1.param: input parameter file for FAST
  - goodss_3dhst.v4.1.translate: filter translate file for FAST
- Restframe/
  - goodss_3dhst.v4.1.master.RF: rest frame colors, ASCII format
  - goodss_3dhst.v4.1.master.RF.FITS: rest frame colors, fits format

The contents of each file are explained below.

Photometric Catalog

The detailed methods for creating the catalogs are described in a companion paper - Skelton et al. (2014). The photometric catalog for the goodss field contains the following datasets:

Bands	Survey	Reference
U, R	ESO GOODS	Nonino et al. 2009
U38, B, V, Rc, I	GaBoDs	Hildebrandt et al. 2006, Erben 2005
14 medium band filters	MUSYC	Cardamone et al. 2010
F435W, F606W, F775W, F850LP	GOODS	Giavalisco et al. 2004
F606W,F814W	CANDELS	Koekemoer et al. 2011
J, H, Ks	ESO/GOODS	Retzlaff et al. 2010, Wuyts et al. 2008
J, Ks	TENIS	Hsieh et al. 2012
F140W	3D-HST	Brammer et al. 2012
F125W,F160W	CANDELS	Grogin et al. 2011, Koekemoer et al. 2011
3.6,4.5um	SEDS	Ashby et al. (2013)
5.8,8.0um	GOODS	Dickinson et al. 2003

The catalog has a single line header with all column names as shown here. The ASCII and the FITS versions of the catalog contain the same columns.

```
#id x y ra dec faper_F160W eaper_F160W faper_F140W eaper_F140W f_F160W e_F160W w_F160W
f_U38 e_U38 w_U38 f_U e_U w_U f_F435W e_F435W w_F435W f_B e_B w_B f_V e_V w_V f_F606Wcand
e_F606Wcand w_F606Wcand f_F606W e_F606W w_F606W f_R e_R w_R f_Rc e_Rc w_Rc f_F775W e_F775W
w_F775W f_I e_I w_I f_F814Wcand e_F814Wcand w_F814Wcand f_F850LP e_F850LP w_F850LP f_F850LPcand
e_F850LPcand w_F850LPcand f_F125W e_F125W w_F125W f_J e_J w_J f_tenisJ e_tenisJ w_tenisJ
f_F140W e_F140W w_F140W f_H e_H w_H f_tenisK e_tenisK w_tenisK f_Ks e_Ks w_Ks f_IRAC1
e_IRAC1 w_IRAC1 f_IRAC2 e_IRAC2 w_IRAC2 f_IRAC3 e_IRAC3 w_IRAC3 f_IRAC4 e_IRAC4 w_IRAC4
f_IA427 e_IA427 f_IA445 e_IA445 f_IA505 e_IA505 f_IA527 e_IA527 f_IA550 e_IA550 f_IA574
e_IA574 f_IA598 e_IA598 f_IA624 e_IA624 f_IA651 e_IA651 f_IA679 e_IA679 f_IA738 e_IA738
f_IA767 e_IA767 f_IA797 e_IA797 f_IA856 e_IA856 tot_cor wmin_ground wmin_hst wmin_irac
wmin_wfc3 z_spec star_flag  kron_radius a_image b_image theta_J2000 class_star flux_radius
fwhm_image flags IRAC1_contam IRAC2_contam IRAC3_contam IRAC4_contam contam_flag f140w_flag
use_phot near_star nexp_f125w nexp_f140w nexp_f160w
# goodss_3dhst.v4.1.cat:
# by R. E. Skelton (3/11/2014)
```

All fluxes are normalized to an AB zeropoint of 25, such that: magAB = 25.0-2.5*log10(flux).

Column Name	Column Content
1 # id	Unique identifier within a given field
2 # x	X centroid in image coordinates
3 # y	Y centroid in image coordinates
4 # ra	RA J2000 degrees
5 # dec	Dec J2000 degrees
6 # faper_F160W	Flux within a 0.7 arcsecond aperture in F160W zeropoint 25.0
7 # eaper_F160W	1 sigma error within a 0.7 arcsecond aperture in F160W zeropoint 25.0
8 # faper_F140W	Flux within a 0.7 arcsecond aperture in F140W zeropoint 25.0
9 # eaper_F140W	1 sigma error within a 0.7 arcsecond aperture in F140W zeropoint 25.0
10 # f_F160W	Total flux in F160W zeropoint 25
11 # e_F160W	1 sigma error in F160W total flux zeropoint 25
12 # w_F160W	Weight relative to 95th percentile within F160W weight map
13 # f_U38	Total flux in U38 zeropoint 25
14 # e_U38	1 sigma error in U38 total flux zeropoint 25
15 # w_U38	Weight relative to 95th percentile within U38 weight map
16 # f_U	Total flux in U zeropoint 25
17 # e_U	1 sigma error in U total flux zeropoint 25
18 # w_U	Weight relative to 95th percentile within U weight map
19 # f_F435W	Total flux in ACS F435W zeropoint 25

Continued on next page

Table 3.5 – continued from previous page

Column Name	Column Content
20 # e_F435W	1 sigma error in ACS F435W total flux zeropoint 25
21 # w_F435W	Weight relative to 95th percentile within F435W weight map
22 # f_B	Total flux in B zeropoint 25
23 # e_B	1 sigma error in B total flux zeropoint 25
24 # w_B	Weight relative to 95th percentile within B weight map
25 # f_V	Total flux in V zeropoint 25
26 # e_V	1 sigma error in V total flux zeropoint 25
27 # w_V	Weight relative to 95th percentile within V weight map
28 # f_F606Wcand	Total flux in F606W CANDELS zeropoint 25
29 # e_F606Wcand	1 sigma error in F606W CANDELS total flux zeropoint 25
30 # w_F606Wcand	Weight relative to 95th percentile within F606W CANDELS weight map
31 # f_F606W	Total flux in F606W GOODS zeropoint 25
32 # e_F606W	1 sigma error in F606W GOODS total flux zeropoint 25
33 # w_F606W	Weight relative to 95th percentile within F606W GOODS weight map
34 # f_R	Total flux in R zeropoint 25
35 # e_R	1 sigma error in R total flux zeropoint 25
36 # w_R	Weight relative to 95th percentile within R weight map
37 # f_Rc	Total flux in Rc zeropoint 25
38 # e_Rc	1 sigma error in Rc total flux zeropoint 25
39 # w_Rc	Weight relative to 95th percentile within Rc weight map
40 # f_F775W	Total flux in F775W GOODS zeropoint 25
41 # e_F775W	1 sigma error in F775W GOODS total flux zeropoint 25
42 # w_F775W	Weight relative to 95th percentile within F775W GOODS weight map
43 # f_I	Total flux in I zeropoint 25
44 # e_I	1 sigma error in I total flux zeropoint 25
45 # w_I	Weight relative to 95th percentile within I weight map
46 # f_F814Wcand	Total flux in F814W CANDELS zeropoint 25
47 # e_F814Wcand	1 sigma error in F814W CANDELS total flux zeropoint 25
48 # w_F814Wcand	Weight relative to 95th percentile within F814W CANDELS weight map
49 # f_F850LP	Total flux in F850LP GOODS zeropoint 25
50 # e_F850LP	1 sigma error in F850LP GOODS total flux zeropoint 25
51 # w_F850LP	Weight relative to 95th percentile within F850LP GOODS weight map
52 # f_F850LPcand	Total flux in F850LP CANDELS zeropoint 25
53 # e_F850LPcand	1 sigma error in F850LP CANDELS total flux zeropoint 25
54 # w_F850LPcand	Weight relative to 95th percentile within F850LP CANDELS weight map
55 # f_F125W	Total flux in F125W zeropoint 25
56 # e_F125W	1 sigma error in F125W total flux zeropoint 25
57 # w_F125W	Weight relative to 95th percentile within F125W weight map
58 # f_J	Total flux in Jzeropoint 25
59 # e_J	1 sigma error in J total flux zeropoint 25
60 # w_J	Weight relative to 95th percentile within J weight map
61 # f_tenisJ	Total flux in TENIS J zeropoint 25
62 # e_tenisJ	1 sigma error in TENIS J total flux zeropoint 25
63 # w_tenisJ	Weight relative to 95th percentile within TENIS J weight map
64 # f_F140W	Total flux in zeropoint 25
65 # e_F140W	1 sigma error in total flux zeropoint 25
66 # w_F140W	Weight relative to 95th percentile within weight map
67 # f_H	Total flux in H zeropoint 25
68 # e_H	1 sigma error in H total flux zeropoint 25

Continued on next page

Table 3.5 – continued from previous page

Column Name	Column Content
69 # w_H	Weight relative to 95th percentile within H weight map
70 # f_tenisK	Total flux in TENIS K zeropoint 25
71 # e_tenisK	1 sigma error in TENIS K total flux zeropoint 25
72 # w_tenisK	Weight relative to 95th percentile within TENIS K weight map
73 # f_Ks	Total flux in K zeropoint 25
74 # e_Ks	1 sigma error in K total flux zeropoint 25
75 # w_Ks	Weight relative to 95th percentile within K weight map
76 # f_IRAC1	Total flux in IRAC1 zeropoint 25
77 # e_IRAC1	1 sigma error in IRAC1 total flux zeropoint 25
78 # w_IRAC1	Weight relative to 95th percentile within IRAC1 weight map
79 # f_IRAC2	Total flux in IRAC2 zeropoint 25
80 # e_IRAC2	1 sigma error in IRAC2 total flux zeropoint 25
81 # w_IRAC2	Weight relative to 95th percentile within IRAC2 weight map
82 # f_IRAC3	Total flux in IRAC3 zeropoint 25
83 # e_IRAC3	1 sigma error in IRAC3 total flux zeropoint 25
84 # w_IRAC3	Weight relative to 95th percentile within IRAC3 weight map
85 # f_IRAC4	Total flux in IRAC4 zeropoint 25
86 # e_IRAC4	1 sigma error in IRAC4 total flux zeropoint 25
87 # w_IRAC4	Weight relative to 95th percentile within IRAC4 weight map
88 # f_IA427	Total flux in IA427 zeropoint 25
89 # e_IA427	1 sigma error in IA427 total flux zeropoint 25
90 # f_IA445	Total flux in IA445 zeropoint 25
91 # e_IA445	1 sigma error in IA445 total flux zeropoint 25
92 # f_IA505	Total flux in IA505 zeropoint 25
93 # e_IA505	1 sigma error in IA505 total flux zeropoint 25
94 # f_IA527	Total flux in IA527 zeropoint 25
95 # e_IA527	1 sigma error in IA527 total flux zeropoint 25
96 # f_IA550	Total flux in IA550 zeropoint 25
97 # e_IA550	1 sigma error in IA550 total flux zeropoint 25
98 # f_IA574	Total flux in IA574 zeropoint 25
99 # e_IA574	1 sigma error in IA574 total flux zeropoint 25
100 # f_IA598	Total flux in IA598 zeropoint 25
101 # e_IA598	1 sigma error in IA598 total flux zeropoint 25
102 # f_IA624	Total flux in IA624 zeropoint 25
103 # e_IA624	1 sigma error in IA624 total flux zeropoint 25
104 # f_IA651	Total flux in IA651 zeropoint 25
105 # e_IA651	1 sigma error in IA651 total flux zeropoint 25
106 # f_IA679	Total flux in IA679 zeropoint 25
107 # e_IA679	1 sigma error in IA679 total flux zeropoint 25
108 # f_IA738	Total flux in IA738 zeropoint 25
109 # e_IA738	1 sigma error in IA738 total flux zeropoint 25
110 # f_IA767	Total flux in IA767 zeropoint 25
111 # e_IA767	1 sigma error in IA767 total flux zeropoint 25
112 # f_IA797	Total flux in IA797 zeropoint 25
113 # e_IA797	1 sigma error in IA797 total flux zeropoint 25
114 # f_IA856	Total flux in IA856 zeropoint 25
115 # e_IA856	1 sigma error in IA856 total flux zeropoint 25
116 # tot_cor	Correction from AUTO to total flux based on F160W F140W
117 # wmin_ground	Minimum weight for all ground-based photometry

Continued on next page

Table 3.5 – continued from previous page

Column Name	Column Content
118 # wmin_hst	Minimum weight for ACS/WFC3 bands excluding no coverage
119 # wmin_wfc3	Minimum weight for F160W, F125W and F140W excluding no coverage
120 # wmin_irac	Minimum weight for IRAC bands excluding no coverage
121 # z_spec	Spectroscopic redshift, when available see Skelton et al., 2014 for sources
122 # star_flag	For F160W<25, star=1 and galaxy=0; for F160W>25, flag=2
123 # kron_radius	KRON_RADIUS
124 # a_image	A_IMAGE semi-major axis, pixels
125 # b_image	B_IMAGE semi-minor axis, pixels
126 # theta_J2000	Position angle of the major axis counter-clockwise, 0.0 = X world axis
127 # class_star	Sextractor stellarity-index CLASS_STAR
128 # flux_radius	Circular aperture radius enclosing half the total flux
129 # fwhm_image	FWHM pixels from a gaussian fit to the core
130 # flags	SExtractor extraction flags measured
131 # IRAC1_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH1
132 # IRAC2_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH2
133 # IRAC3_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH3
134 # IRAC4_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH4
135 # contam_flag	A flag for IRAC phot contam ratio >50% all bands . 0=OK, 1=bad
136 # f140w_flag	Set if F140W is used for the corrections to total i.e., no F160W coverage
137 # use_phot	Use flag: 1=USE, 0=DON'T USE; see Skelton et al. 2014 for definition
138 # near_star	1=Close to a star
139 # nexp_f125w	Number of individual exposures in F125W, based on NEXP maps
140 # nexp_f140w	Number of individual exposures in F140W, based on NEXP maps
141 # nexp_f160w	Number of individual exposures in F160W, based on NEXP maps

3.5.5 UDS

RELEASE: V4.1

DATE: MARCH 15TH, 2014

SOURCE: http://3dhst.research.yale.edu

August 22, 2014 changes:

- A major update has been made to the UDS photometric catalog, EAZY and FAST outputs. We traced a bug being reported in the released v4.1 UDS catalogs to a difference between the catalog available for download from the 3D-HST website and the one for internal use. The photometric catalog provided on the website contained an obvious bug which affected the fluxes in F125W, F140W, J, H, K and all IRAC bands, the tot_cor and wmin_wfc3 columns, as well as the EAZY and FAST outputs derived from it. The RF colors and the master catalog were not affected. Note that the plots in the accompanying paper all use the correct version. The UDS catalog has been updated to the correct version, which will be called v4.2 to avoid confusion.

Downloads

CATALOG DOWNLOAD: uds_3dhst.v4.2.cats.tar

This file opens into a directory: uds_3dhst.v4.2.cats. The following are the contents of this directory:

- Catalog/
  - uds_3dhst.v4.2.cat: photometric catalog, ASCII format

    - uds_3dhst.v4.2.cat.FITS: photometric catalog, FITS format

- Eazy/

    - uds_3dhst.v4.2.coeff: Coefficients of fits for all objects
    - uds_3dhst.v4.2.param: Parameter file containing all of the parameter values used

  to compute uds_3dhst.v4.2.zout, as well as information on the individual filters and templates used.

    - uds_3dhst.v4.2.pz: Binary output file containing redshift z, chi squared at z, prior, probability distribution pz
    - uds_3dhst.v4.2.readbin.pro: IDL code demonstrating how to read in the binary output from EAZY
    - uds_3dhst.v4.2.temp_sed
    - uds_3dhst.v4.2.tempfilt
    - uds_3dhst.v4.2.translate: Eazy translate file listing the flux and error columns and corresponding filter number in filter transmission file FILTERS.res.latest
    - uds_3dhst.v4.2.zbin: Binary output file containing observed and best-fit template for each object
    - uds_3dhst.v4.2.zout: EAZY output file, ASCII format
    - uds_3dhst.v4.2.zout.FITS: EAZY output file, FITS format

- Fast/

    - uds_3dhst.v4.2.fout: FAST output file, ASCII format
    - uds_3dhst.v4.2.fout.FITS: FAST output file, FITS format
    - uds_3dhst.v4.2.param: input parameter file for FAST
    - uds_3dhst.v4.2.translate: filter translate file for FAST

- RF_colors/

    - uds_3dhst.v4.2.master.RF: rest frame colors, ASCII format
    - uds_3dhst.v4.2.master.RF.FITS: rest frame colors, fits format

The contents of each file are explained below.

Photometric Catalog

The detailed methods for creating the catalogs are described in a companion paper - Skelton et al. (2014).

The photometric catalog for the uds field contains the following datasets:

Bands	Survey	Reference
U	CFHT	Almaini/Foucaud in prep.
B,V,R,i,z	SXDS	Furusawa et al. (2008)
F606W, F814W	CANDELS	Koekemoer et al. 2011
J, H, Ks	UKIDSS	Almaini et al .in prep.
F140W	3D-HST	Brammer et al. 2012
F125W, F160W	CANDELS	Koekemoer et al. 2011
3.6,4.5um	SEDS	Ashby et al. (2013)
5.8, 8.0um	SpUDS	Dunlop et al. in prep.

The catalog has a single line header with all column names as shown here. The ASCII and the

FITS versions of the catalog contain the same columns.

```
# id x y ra dec faper_F160W eaper_F160W faper_F140W eaper_F140W f_F160W e_F160W w_F160W
f_u e_u w_u f_B e_B w_B f_V e_V w_V f_F606W e_F606W w_F606W f_R e_R w_R f_i e_i w_i
f_F814W e_F814W w_F814W f_z e_z w_z f_F125W e_F125W w_F125W f_J e_J w_J f_F140W e_F140W w_F140W
f_H e_H w_H f_K e_K w_K f_IRAC1 e_IRAC1 w_IRAC1 f_IRAC2 e_IRAC2 w_IRAC2 f_IRAC3 e_IRAC3 w_IRAC3
f_IRAC4 e_IRAC4 w_IRAC4 tot_cor wmin_ground wmin_hst wmin_irac wmin_wfc3 z_spec star_flag
kron_radius a_image b_image theta_J2000 class_star flux_radius fwhm_image flags IRAC1_contam
IRAC2_contam IRAC3_contam IRAC4_contam contam_flag f140w_flag use_phot near_star nexp_f125w
nexp_f140w nexp_f160w
# uds_3dhst.v4.1.cat:
# by R. E. Skelton (2014/03/12)
```

All fluxes are normalized to an AB zeropoint of 25, such that: magAB = 25.0-2.5*log10(flux)

Column Name	Column Content
1 # id	Unique identifier within a given field
2 # x	X centroid in image coordinates
3 # y	Y centroid in image coordinates
4 # ra	RA J2000 degrees
5 # dec	Dec J2000 degrees
6 # faper_F160W	Flux within a 0.7 arcsecond aperture in F160W zeropoint 25.0
7 # eaper_F160W	1 sigma error within a 0.7 arcsecond aperture in F160W zeropoint 25.0
8 # faper_F140W	Flux within a 0.7 arcsecond aperture in F140W zeropoint 25.0
9 # eaper_F140W	1 sigma error within a 0.7 arcsecond aperture in F140W zeropoint 25.0
10 # f_F160W	Total flux in F160W zeropoint 25
11 # e_F160W	1 sigma error in F160W total flux zeropoint 25
12 # w_F160W	Weight relative to 95th percentile within F160W weight map
13 # f_u	Total flux in U zeropoint 25
14 # e_u	1 sigma error in U total flux zeropoint 25
15 # w_u	Weight relative to 95th percentile within U weight map
16 # f_B	Total flux in B zeropoint 25
17 # e_B	1 sigma error in B total flux zeropoint 25
18 # w_B	Weight relative to 95th percentile within B weight map
19 # f_V	Total flux in V zeropoint 25
20 # e_V	1 sigma error in V total flux zeropoint 25
21 # w_V	Weight relative to 95th percentile within V weight map
22 # f_F606W	Total flux in F606W zeropoint 25
23 # e_F606W	1 sigma error in F606W total flux zeropoint 25
24 # w_F606W	Weight relative to 95th percentile within F606W weight map
25 # f_R	Total flux in R zeropoint 25
26 # e_R	1 sigma error in R total flux zeropoint 25
27 # w_R	Weight relative to 95th percentile within R weight map
28 # f_i	Total flux in I zeropoint 25
29 # e_i	1 sigma error in I total flux zeropoint 25
30 # w_i	Weight relative to 95th percentile within I weight map
31 # f_F814W	Total flux in F814W zeropoint 25
32 # e_F814W	1 sigma error in F814W total flux zeropoint 25
33 # w_F814W	Weight relative to 95th percentile within F814W weight map
34 # f_z	Total flux in Z zeropoint 25
35 # e_z	1 sigma error in Z total flux zeropoint 25
36 # w_z	Weight relative to 95th percentile within Z weight map
37 # f_F125W	Total flux in F125W zeropoint 25

Continued on next page

Table 3.6 – continued from previous page

Column Name	Column Content
38 # e_F125W	1 sigma error in F125W total flux zeropoint 25
39 # w_F125W	Weight relative to 95th percentile within F125W weight map
40 # f_J	Total flux in Jzeropoint 25
41 # e_J	1 sigma error in J total flux zeropoint 25
42 # w_J	Weight relative to 95th percentile within J weight map
43 # f_F140W	Total flux in zeropoint 25
44 # e_F140W	1 sigma error in total flux zeropoint 25
45 # w_F140W	Weight relative to 95th percentile within weight map
46 # f_H	Total flux in H zeropoint 25
47 # e_H	1 sigma error in H total flux zeropoint 25
48 # w_H	Weight relative to 95th percentile within H weight map
49 # f_K	Total flux in K zeropoint 25
50 # e_K	1 sigma error in K total flux zeropoint 25
51 # w_K	Weight relative to 95th percentile within K weight map
52 # f_IRAC1	Total flux in IRAC1 zeropoint 25
53 # e_IRAC1	1 sigma error in IRAC1 total flux zeropoint 25
54 # w_IRAC1	Weight relative to 95th percentile within IRAC1 weight map
55 # f_IRAC2	Total flux in IRAC2 zeropoint 25
56 # e_IRAC2	1 sigma error in IRAC2 total flux zeropoint 25
57 # w_IRAC2	Weight relative to 95th percentile within IRAC2 weight map
58 # f_IRAC3	Total flux in IRAC3 zeropoint 25
59 # e_IRAC3	1 sigma error in IRAC3 total flux zeropoint 25
60 # w_IRAC3	Weight relative to 95th percentile within IRAC3 weight map
61 # f_IRAC4	Total flux in IRAC4 zeropoint 25
62 # e_IRAC4	1 sigma error in IRAC4 total flux zeropoint 25
63 # w_IRAC4	Weight relative to 95th percentile within IRAC4 weight map
64 # tot_cor	Correction from AUTO to total flux based on F160W F140W
65 # wmin_ground	Minimum weight for all ground-based photometry
66 # wmin_hst	Minimum weight for ACS/WFC3 bands excluding no coverage
67 # wmin_irac	Minimum weight for IRAC bands excluding no coverage
68 # wmin_wfc3	Minimum weight for F160W, F125W and F140W excluding no coverage
69 # z_spec	Spectroscopic redshift, when available see Skelton et al., 2014 for sources
70 # star_flag	For F160W<25, star=1 and galaxy=0; for F160W>25, flag=2
71 # kron_radius	KRON_RADIUS
72 # a_image	A_IMAGE semi-major axis, pixels
73 # b_image	B_IMAGE semi-minor axis, pixels
74 # theta_J2000	Position angle of the major axis counter-clockwise, 0.0 = X world axis
75 # class_star	Sextractor stellarity-index CLASS_STAR
76 # flux_radius	Circular aperture radius enclosing half the total flux
77 # fwhm_image	FWHM pixels from a gaussian fit to the core
78 # flags	SExtractor extraction flags measured
79 # IRAC1_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH1
80 # IRAC2_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH2
81 # IRAC3_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH3
82 # IRAC4_contam	Ratio of contaminating flux from neighbors to the object's flux IRAC CH4
83 # contam_flag	A flag for IRAC phot contam ratio >50% all bands . 0=OK, 1=bad
84 # f140w_flag	Set if F140W is used for the corrections to total i.e., no F160W coverage
85 # use_phot	Use flag: 1=USE, 0=DON'T USE; see Skelton et al. 2014 for definition
86 # near_star	1=Close to a star

Continued on next page

Table 3.6 – continued from previous page

Column Name	Column Content
87 # nexp_f125w	Number of individual exposures in F125W, based on NEXP maps
88 # nexp_f140w	Number of individual exposures in F140W, based on NEXP maps
89 # nexp_f160w	Number of individual exposures in F160W, based on NEXP maps

3.6 Master Catalog

We combine the catalogs for the five individual fields into a master catalog which contains a subset of parameters common to all of them. This joint catalog is provided in both ASCII and FITS format. Below we show the header for this file and a description of the columns. The id column in this catalog is no longer unique. An unique identifier can be created from a combination of the id and the field name.

```
# id field ra dec x y z_spec z_peak faper_F140W eaper_F140W faper_F160W eaper_F160W f_F606W
eF606W f_F814W e_F814W f_F125W e_F125W f_F140W e_F140W f_F160W e_F160W tot_cor kron_radius
a_image b_image flux_radius fwhm_image flags f140w_flag star_flag use_phot near_star
nexp_f125w nexp_f140w nexp_f160w lmass Av
```

All fluxes are normalized to an AB zeropoint of 25, such that: magAB = 25.0-2.5*log10(flux)

Column Name	Column Content
1 # id	Unique identifier within a given field
2 # field	Field
3 # x	X centroid in image coordinates
4 # y	Y centroid in image coordinates
5 # ra	RA J2000 degrees
6 # dec	Dec J2000 degrees
7 # z_spec	Spectroscopic redshift, when available see Skelton et al., 2014 for sources
8 # z_peak	Photometric redshift from EAZY fit
9 # faper_F160W	Flux within a 0.7 arcsecond aperture in F160W zeropoint 25.0
10 # eaper_F160W	1 sigma error within a 0.7 arcsecond aperture in F160W zeropoint 25.0
11 # faper_F140W	Flux within a 0.7 arcsecond aperture in F140W zeropoint 25.0
12 # eaper_F140W	1 sigma error within a 0.7 arcsecond aperture in F140W zeropoint 25.0
13 # f_F160W	Total flux in F160W zeropoint 25
14 # e_F160W	1 sigma error in F160W total flux zeropoint 25
15 # w_F160W	Weight relative to 95th percentile within F160W weight map
16 # f_F606W	Total flux in F606W zeropoint 25
17 # e_F606W	1 sigma error in F606W total flux zeropoint 25
18 # w_F606W	Weight relative to 95th percentile within F606W weight map
19 # f_F814W	Total flux in F814W zeropoint 25
20 # e_F814W	1 sigma error in F814W total flux zeropoint 25
21 # w_F814W	Weight relative to 95th percentile within F814W weight map
22 # f_F125W	Total flux in F125W zeropoint 25
23 # e_F125W	1 sigma error in F125W total flux zeropoint 25
24 # w_F125W	Weight relative to 95th percentile within F125W weight map
25 # f_F140W	Total flux in zeropoint 25
26 # e_F140W	1 sigma error in total flux zeropoint 25
27 # w_F140W	Weight relative to 95th percentile within weight map
28 # f_F160W	Total flux in F160W zeropoint 25
29 # e_F160W	1 sigma error in F160W total flux zeropoint 25
30 # w_F160W	Weight relative to 95th percentile within F160W weight map

Continued on next page

Table 3.7 – continued from previous page

Column Name	Column Content
31 # tot_cor	Correction from AUTO to total flux based on F160W F140W
32 # kron_radius	KRON_RADIUS
33 # a_image	A_IMAGE semi-major axis, pixels
34 # b_image	B_IMAGE semi-minor axis, pixels
35 # class_star	Sextractor stellarity-index CLASS_STAR
36 # flux_radius	Circular aperture radius enclosing half the total flux
37 # fwhm_image	FWHM pixels from a gaussian fit to the core
38 # flags	SExtractor extraction flags measured
39 # f140w_flag	Set if F140W is used for the corrections to total i.e., no F160W coverage
40 # star_flag	For F160W<25, star=1 and galaxy=0; for F160W>25, flag=2
41 # use_phot	Use flag: 1=USE, 0=DON'T USE; see Skelton et al. 2014 for definition
42 # near_star	1=Close to a star
43 # nexp_f125w	Number of individual exposures in F125W, based on NEXP maps
44 # nexp_f140w	Number of individual exposures in F140W, based on NEXP maps
45 # nexp_f160w	Number of individual exposures in F160W, based on NEXP maps
46 # lmass	LogMstar/Msun from FAST fit
47 # Av	Dust attenuation in the V-band from FAST fit

CHAPTER

FOUR

ACS/WFC3 MOSAICS

The WFC3 mosaics are produced by the 3D-HST collaboration from public HST data available from the MAST archive. For a detailed description of the WFC3 mosaics, the datasets included and the procedure we follow to produce them, please refer to Skelton et al. (2014). The ACS images are from the GOODS and CANDELS surveys. Again, please refer to Skelton et al. (2014) for full description.

For all ACS images as well as the WFC3 F125W and F140W bands we provide images which have been PSF-convolved to the WFC3/W160W band. PSFs for all the bands are also provided as separate downloads.

The catalog detection was done on a noise-equalized combination of F125W+F140W+F160W. We provide the detection image and the segmentation maps.

Finally, a mask image is also available for download. Areas near stars and areas of less than 2 exposures in both F125W and F160W are set to 0, while the rest of the image is set to 1. These masks were used to produce the **use_phot** flag in the photometric catalogs.

All images are available as archived (.gz) individually or within a tar ball for each filter. Here we list all the images available for download for each of the fields with a short description.

4.1 AEGIS

- **aegis_3dhst_v4.0_f125w.tar**
    - aegisaegis_3dhst.v4.0.F125W_conv_sci.fits.gz: science image psf-matched to F160W
    - aegis_3dhst.v4.0.F125W_exp.fits.gz: exposure map
    - aegis_3dhst.v4.0.F125W_nexp.fits.gz: number of exposures map
    - aegis_3dhst.v4.0.F125W_orig_sci.fits.gz: science image
    - aegis_3dhst.v4.0.F125W_orig_wht.fits.gz: weight map
- aegis_3dhst_v4.0_f140w.tar
    - aegis_3dhst.v4.0.F140W_conv_sci.fits.gz: science image psf-matched to F160W
    - aegis_3dhst.v4.0.F140W_exp.fits.gz: exposure map
    - aegis_3dhst.v4.0.F140W_nexp.fits.gz: number of exposures map
    - aegis_3dhst.v4.0.F140W_orig_sci.fits.gz: science image
    - aegis_3dhst.v4.0.F140W_orig_wht.fits.gz: weight map
- aegis_3dhst_v4.0_f160w.tar
    - aegis_3dhst.v4.0.F160W_exp.fits.gz: exposure map

- aegis_3dhst.v4.0.F160W_nexp.fits.gz: number of exposures map
- aegis_3dhst.v4.0.F160W_orig_sci.fits.gz: science image
- aegis_3dhst.v4.0.F160W_orig_wht.fits.gz: weight map

- aegis_3dhst_v4.0_f606w.tar
  - aegis_3dhst.v4.0.F606W_conv_sci.fits.gz: science image psf-matched to F160W
  - aegis_3dhst.v4.0.F606W_orig_sci.fits.gz: science image
  - aegis_3dhst.v4.0.F606W_orig_wht.fits.gz: weight map
- aegis_3dhst_v4.0_f814w.tar
  - aegis_3dhst.v4.0.F814W_conv_sci.fits.gz: science image psf-matched to F160W
  - aegis_3dhst.v4.0.F814W_orig_sci.fits.gz: science image
  - aegis_3dhst.v4.0.F814W_orig_wht.fits.gz: weight map

4.2 COSMOS

- **cosmos_3dhst_v4.0_f125w.tar**
  - cosmos_3dhst.v4.0.F125W_conv_sci.fits.gz: science image psf-matched to F160W
  - cosmos_3dhst.v4.0.F125W_exp.fits.gz: exposure map
  - cosmos_3dhst.v4.0.F125W_nexp.fits.gz: number of exposures map
  - cosmos_3dhst.v4.0.F125W_orig_sci.fits.gz: science image
  - cosmos_3dhst.v4.0.F125W_orig_wht.fits.gz: weight map
- **cosmos_3dhst_v4.0_f140w.tar**
  - cosmos_3dhst.v4.0.F140W_conv_sci.fits.gz: science image psf-matched to F160W
  - cosmos_3dhst.v4.0.F140W_exp.fits.gz: exposure map
  - cosmos_3dhst.v4.0.F140W_nexp.fits.gz: number of exposures map
  - cosmos_3dhst.v4.0.F140W_orig_sci.fits.gz: science image
  - cosmos_3dhst.v4.0.F140W_orig_wht.fits.gz: weight map
- **cosmos_3dhst_v4.0_f160w.tar**
  - cosmos_3dhst.v4.0.F160W_exp.fits.gz: exposure map
  - cosmos_3dhst.v4.0.F160W_nexp.fits.gz: number of exposures map
  - cosmos_3dhst.v4.0.F160W_orig_sci.fits.gz: science image
  - cosmos_3dhst.v4.0.F160W_orig_wht.fits.gz: weight map
- **cosmos_3dhst_v4.0_f606w.tar**
  - cosmos_3dhst.v4.0.F606W_conv_sci.fits.gz: science image psf-matched to F160W
  - cosmos_3dhst.v4.0.F606W_orig_sci.fits.gz: science image
  - cosmos_3dhst.v4.0.F606W_orig_wht.fits.gz: weight map
- **cosmos_3dhst_v4.0_f814w.tar**

  - cosmos_3dhst.v4.0.F814W_conv_sci.fits.gz: science image psf-matched to F160W
  - cosmos_3dhst.v4.0.F814W_orig_sci.fits.gz: science image
  - cosmos_3dhst.v4.0.F814W_orig_wht.fits.gz: weight map

4.3 GOODS-N

- **goodsn_3dhst_v4.0_f125w.tar**
  - goodsn_3dhst.v4.0.F125W_conv_sci.fits.gz: science image psf-matched to F160W
  - goodsn_3dhst.v4.0.F125W_exp.fits.gz: exposure map
  - goodsn_3dhst.v4.0.F125W_nexp.fits.gz: number of exposures map
  - goodsn_3dhst.v4.0.F125W_orig_sci.fits.gz: science image
  - goodsn_3dhst.v4.0.F125W_orig_wht.fits.gz: weight map
- **goodsn_3dhst_v4.0_f140w.tar**
  - goodsn_3dhst.v4.0.F140W_conv_sci.fits.gz: science image psf-matched to F160W
  - goodsn_3dhst.v4.0.F140W_exp.fits.gz: exposure map
  - goodsn_3dhst.v4.0.F140W_nexp.fits.gz: number of exposures map
  - goodsn_3dhst.v4.0.F140W_orig_sci.fits.gz: science image
  - goodsn_3dhst.v4.0.F140W_orig_wht.fits.gz
- **goodsn_3dhst_v4.0_f160w.tar**
  - goodsn_3dhst.v4.0.F160W_exp.fits.gz: exposure map
  - goodsn_3dhst.v4.0.F160W_nexp.fits.gz: number of exposures map
  - goodsn_3dhst.v4.0.F160W_orig_sci.fits.gz: science image
  - goodsn_3dhst.v4.0.F160W_orig_wht.fits.gz: weight map
- **goodsn_3dhst_v4.0_f435w.tar**
  - goodsn_3dhst.v4.0.F435W_conv_sci.fits.gz: science image psf-matched to F160W
  - goodsn_3dhst.v4.0.F435W_orig_sci.fits.gz: science image
  - goodsn_3dhst.v4.0.F435W_orig_wht.fits.gz: weight map
- **goodsn_3dhst_v4.0_f606w.tar**
  - goodsn_3dhst.v4.0.F606W_conv_sci.fits.gz: science image psf-matched to F160W
  - goodsn_3dhst.v4.0.F606W_orig_sci.fits.gz: science image
  - goodsn_3dhst.v4.0.F606W_orig_wht.fits.gz: weight map
- **goodsn_3dhst_v4.0_f775w.tar**
  - goodsn_3dhst.v4.0.F775W_conv_sci.fits.gz: science image psf-matched to F160W
  - goodsn_3dhst.v4.0.F775W_orig_sci.fits.gz: science image
  - goodsn_3dhst.v4.0.F775W_orig_wht.fits.gz: weight map
- **goodsn_3dhst_v4.0_f850lp.tar**

    - goodsn_3dhst.v4.0.F850LP_conv_sci.fits.gz: science image psf-matched to F160W
    - goodsn_3dhst.v4.0.F850LP_orig_sci.fits.gz: science image
    - goodsn_3dhst.v4.0.F850LP_orig_wht.fits.gz: weight map

4.4 GOODS-S

- **goodss_3dhst_v4.0_f125w.tar**
    - goodss_3dhst.v4.0.F125W_conv_sci.fits.gz: science image psf-matched to F160W
    - goodss_3dhst.v4.0.F125W_exp.fits.gz: exposure map
    - goodss_3dhst.v4.0.F125W_nexp.fits.gz: number of exposures map
    - goodss_3dhst.v4.0.F125W_orig_sci.fits.gz: science image
    - goodss_3dhst.v4.0.F125W_orig_wht.fits.gz: weight map

goodss_3dhst_v4.0_f140w.tar

- goodss_3dhst.v4.0.F140W_conv_sci.fits.gz: science image psf-matched to F160W
- goodss_3dhst.v4.0.F140W_exp.fits.gz: exposure map
- goodss_3dhst.v4.0.F140W_nexp.fits.gz: number of exposures map
- goodss_3dhst.v4.0.F140W_orig_sci.fits.gz: science image
- goodss_3dhst.v4.0.F140W_orig_wht.fits.gz: weight map

goodss_3dhst_v4.0_f160w.tar

- goodss_3dhst.v4.0.F160W_exp.fits.gz: exposure map
- goodss_3dhst.v4.0.F160W_nexp.fits.gz: number of exposures map
- goodss_3dhst.v4.0.F160W_orig_sci.fits.gz: science image
- goodss_3dhst.v4.0.F160W_orig_wht.fits.gz: weight map

goodss_3dhst_v4.0_f435w.tar

- goodss_3dhst.v4.0.F435W_conv_sci.fits.gz: science image psf-matched to F160W
- goodss_3dhst.v4.0.F435W_orig_sci.fits.gz: science image
- goodss_3dhst.v4.0.F435W_orig_wht.fits.gz: weight map

- **goodss_3dhst_v4.0_f606w.tar**
    - goodss_3dhst.v4.0.F606W_conv_sci.fits.gz: science image psf-matched to F160W
    - goodss_3dhst.v4.0.F606W_orig_sci.fits.gz: science image
    - goodss_3dhst.v4.0.F606W_orig_wht.fits.gz: weight map
- **goodss_3dhst_v4.0_f606wcand.tar**
    - goodss_3dhst.v4.0.F606Wcand_conv_sci.fits.gz: science image psf-matched to F160W
    - goodss_3dhst.v4.0.F606Wcand_orig_sci.fits.gz: science image
    - goodss_3dhst.v4.0.F606Wcand_orig_wht.fits.gz: weight map
- **goodss_3dhst_v4.0_f775w.tar**

  - goodss_3dhst.v4.0.F775W_conv_sci.fits.gz: science image psf-matched to F160W
  - goodss_3dhst.v4.0.F775W_orig_sci.fits.gz: science image
  - goodss_3dhst.v4.0.F775W_orig_wht.fits.gz: weight map
- **goodss_3dhst_v4.0_f814wcand.tar**
  - goodss_3dhst.v4.0.F814Wcand_conv_sci.fits.gz: science image psf-matched to F160W
  - goodss_3dhst.v4.0.F814Wcand_orig_sci.fits.gz: science image
  - goodss_3dhst.v4.0.F814Wcand_orig_wht.fits.gz: weight map
- **goodss_3dhst_v4.0_f850lp.tar**
  - goodss_3dhst.v4.0.F850LP_conv_sci.fits.gz: science image psf-matched to F160W
  - goodss_3dhst.v4.0.F850LP_orig_sci.fits.gz: science image
  - goodss_3dhst.v4.0.F850LP_orig_wht.fits.gz: weight map
- **goodss_3dhst_v4.0_f850lpcand.tar**
  - goodss_3dhst.v4.0.F850LPcand_conv_sci.fits.gz: science image psf-matched to F160W
  - goodss_3dhst.v4.0.F850LPcand_orig_sci.fits.gz: science image
  - goodss_3dhst.v4.0.F850LPcand_orig_wht.fits.gz: weight map

4.5 UDS

- **uds_3dhst_v4.0_f125w.tar**
  - uds_3dhst.v4.0.F125W_conv_sci.fits.gz: science image psf-matched to F160W
  - uds_3dhst.v4.0.F125W_exp.fits.gz: exposure map
  - uds_3dhst.v4.0.F125W_nexp.fits.gz: number of exposures map
  - uds_3dhst.v4.0.F125W_orig_sci.fits.gz: science image
  - uds_3dhst.v4.0.F125W_orig_wht.fits.gz: weight map
- **uds_3dhst_v4.0_f140w.tar**
  - uds_3dhst.v4.0.F140W_conv_sci.fits.gz: science image psf-matched to F160W
  - uds_3dhst.v4.0.F140W_exp.fits.gz: exposure map
  - uds_3dhst.v4.0.F140W_nexp.fits.gz: number of exposures map
  - uds_3dhst.v4.0.F140W_orig_sci.fits.gz: science image
  - uds_3dhst.v4.0.F140W_orig_wht.fits.gz: weight map

uds_3dhst_v4.0_f160w.tar

- uds_3dhst.v4.0.F160W_exp.fits.gz: exposure map
- uds_3dhst.v4.0.F160W_nexp.fits.gz: number of exposures map
- uds_3dhst.v4.0.F160W_orig_sci.fits.gz: science image
- uds_3dhst.v4.0.F160W_orig_wht.fits.gz: weight map

- **uds_3dhst_v4.0_f606w.tar**

  - uds_3dhst.v4.0.F606W_conv_sci.fits.gz: science image psf-matched to F160W
  - uds_3dhst.v4.0.F606W_orig_sci.fits.gz: science image
  - uds_3dhst.v4.0.F606W_orig_wht.fits.gz: weight map
- **uds_3dhst_v4.0_f814w.tar**
  - uds_3dhst.v4.0.F814W_conv_sci.fits.gz: science image psf-matched to F160W
  - uds_3dhst.v4.0.F814W_orig_sci.fits.gz: science image
  - uds_3dhst.v4.0.F814W_orig_wht.fits.gz: weight map

CHAPTER

FIVE

ANCILLARY MOSAICS

All ancillary mosaics used to produce the photometric are also available for download. A science and a weight image is available for each filter. These can be downloaded as tar balls which contains the archived (.gz) images. Below we list the images available for each field.

See Section 2.5 above and Table 3 in Skelton et al. (2014) for the sources and appropriate citations for these images.

5.1 AEGIS

- **AEGIS_CH1_SEDS.tar**
  - AEGIS_CH1_SEDS_exp.fits.gz: weight map
  - AEGIS_CH1_SEDS_sci.fits.gz: science image
- **AEGIS_CH2_SEDS.tar**
  - AEGIS_CH2_SEDS_exp.fits.gz: weight map
  - AEGIS_CH2_SEDS_sci.fits.gz: science image
- **AEGIS_CH3.tar**
  - AEGIS_CH3_exp.fits.gz: weight map
  - AEGIS_CH3_sci.fits.gz: science image
- **AEGIS_CH4.tar**
  - AEGIS_CH4_exp.fits.gz: weight map
  - AEGIS_CH4_sci.fits.gz: science image
- **AEGIS_G.tar**
  - AEGIS_G_exp.fits.gz: weight map
  - AEGIS_G_sci.fits.gz: science image
- **AEGIS_H.tar**
  - AEGIS_H_exp.fits.gz: weight map
  - AEGIS_H_sci.fits.gz: science image
- **AEGIS_H1.tar**
  - AEGIS_H1_exp.fits.gz: weight map
  - AEGIS_H1_sci.fits.gz: science image

- **AEGIS_H2.tar**
  - AEGIS_H2_exp.fits.gz: weight map
  - AEGIS_H2_sci.fits.gz: science image
- **AEGIS_I.tar**
  - AEGIS_I_exp.fits.gz: weight map
  - AEGIS_I_sci.fits.gz: science image
- **AEGIS_J.tar**
  - AEGIS_J_exp.fits.gz: weight map
  - AEGIS_J_sci.fits.gz: science image
- **AEGIS_J1.tar**
  - AEGIS_J1_exp.fits.gz: weight map
  - AEGIS_J1_sci.fits.gz: science image
- **AEGIS_J2.tar**
  - AEGIS_J2_exp.fits.gz: weight map
  - AEGIS_J2_sci.fits.gz: science image
- **AEGIS_J3.tar**
  - AEGIS_J3_exp.fits.gz: weight map
  - AEGIS_J3_sci.fits.gz: science image
- **AEGIS_K.tar**
  - AEGIS_K_exp.fits.gz : weight map
  - AEGIS_K_sci.fits.gz : science image
- **AEGIS_Ks.tar**
  - AEGIS_Ks_exp.fits.gz: weight map
  - AEGIS_Ks_sci.fits.gz: science image
- **AEGIS_R.tar**
  - AEGIS_R_exp.fits.gz: weight map
  - AEGIS_R_sci.fits.gz: science image
- **AEGIS_U.tar**
  - AEGIS_U_exp.fits.gz: weight map
  - AEGIS_U_sci.fits.gz: science image
- **AEGIS_Z.tar**
  - AEGIS_Z_exp.fits.gz: weight map
  - AEGIS_Z_sci.fits.gz: science image

5.2 COSMOS

- **cosmos_B.tar**
  - cosmos_B_exp.fits.gz: weight map
  - cosmos_B_sci.fits.gz: science image
- **cosmos_CH1_SEDS.tar**
  - cosmos_CH1_SEDS_exp.fits.gz: weight map
  - cosmos_CH1_SEDS_sci.fits.gz: science image
- **cosmos_CH2_SEDS.tar**
  - cosmos_CH2_SEDS_exp.fits.gz: weight map
  - cosmos_CH2_SEDS_sci.fits.gz: science image
- **cosmos_CH3.tar**
  - cosmos_CH3_exp.fits.gz: weight map
  - cosmos_CH3_sci.fits.gz: science image
- **cosmos_CH4.tar**
  - cosmos_CH4_exp.fits.gz: weight map
  - cosmos_CH4_sci.fits.gz: science image
- **cosmos_G.tar**
  - cosmos_G_exp.fits.gz: weight map
  - cosmos_G_sci.fits.gz: science image
- **cosmos_H.tar**
  - cosmos_H_exp.fits.gz: weight map
  - cosmos_H_sci.fits.gz: science image
- **cosmos_H1.tar**
  - cosmos_H1_exp.fits.gz: weight map
  - cosmos_H1_sci.fits.gz: science image
- **cosmos_H2.tar**
  - cosmos_H2_exp.fits.gz: weight map
  - cosmos_H2_sci.fits.gz: science image
- **cosmos_I.tar**
  - cosmos_I_exp.fits.gz: weight map
  - cosmos_I_sci.fits.gz: science image
- **cosmos_IA427.tar**
  - cosmos_IA427_exp.fits.gz: weight map
  - cosmos_IA427_sci.fits.gz: science image
- **cosmos_IA464.tar**

  - cosmos_IA464_exp.fits.gz: weight map
  - cosmos_IA464_sci.fits.gz: science image
- **cosmos_IA484.tar**
  - cosmos_IA484_exp.fits.gz: weight map
  - cosmos_IA484_sci.fits.gz: science image
- **cosmos_IA505.tar**
  - cosmos_IA505_exp.fits.gz: weight map
  - cosmos_IA505_sci.fits.gz: science image
- **cosmos_IA527.tar**
  - cosmos_IA527_exp.fits.gz: weight map
  - cosmos_IA527_sci.fits.gz: science image
- **cosmos_IA574.tar**
  - cosmos_IA574_exp.fits.gz: weight map
  - cosmos_IA574_sci.fits.gz: science image
- **cosmos_IA624.tar**
  - cosmos_IA624_exp.fits.gz: weight map
  - cosmos_IA624_sci.fits.gz: science image
- **cosmos_IA679.tar**
  - cosmos_IA679_exp.fits.gz: weight map
  - cosmos_IA679_sci.fits.gz: science image
- **cosmos_IA709.tar**
  - cosmos_IA709_exp.fits.gz: weight map
  - cosmos_IA709_sci.fits.gz: science image
- **cosmos_IA738.tar**
  - cosmos_IA738_exp.fits.gz: weight map
  - cosmos_IA738_sci.fits.gz: science image
- **cosmos_IA767.tar**
  - cosmos_IA767_exp.fits.gz: weight map
  - cosmos_IA767_sci.fits.gz: science image
- **cosmos_IA827.tar**
  - cosmos_IA827_exp.fits.gz: weight map
  - cosmos_IA827_sci.fits.gz: science image
- **cosmos_Ip.tar**
  - cosmos_Ip_exp.fits.gz: weight map
  - cosmos_Ip_sci.fits.gz: science image
- **cosmos_J.tar**

  - cosmos_J_exp.fits.gz: weight map
  - cosmos_J_sci.fits.gz: science image
- **cosmos_J1.tar**
  - cosmos_J1_exp.fits.gz: weight map
  - cosmos_J1_sci.fits.gz: science image
- **cosmos_J2.tar**
  - cosmos_J2_exp.fits.gz: weight map
  - cosmos_J2_sci.fits.gz: science image
- **cosmos_J3.tar**
  - cosmos_J3_exp.fits.gz: weight map
  - cosmos_J3_sci.fits.gz: science image
- **cosmos_K.tar**
  - cosmos_K_exp.fits.gz: weight map
  - cosmos_K_sci.fits.gz: science image
- **cosmos_Ks.tar**
  - cosmos_Ks_exp.fits.gz: weight map
  - cosmos_Ks_sci.fits.gz: science image
- **cosmos_R.tar**
  - cosmos_R_exp.fits.gz: weight map
  - cosmos_R_sci.fits.gz: science image
- **cosmos_Rp.tar**
  - cosmos_Rp_exp.fits.gz: weight map
  - cosmos_Rp_sci.fits.gz: science image
- **cosmos_U.tar**
  - cosmos_U_exp.fits.gz: weight map
  - cosmos_U_sci.fits.gz: science image
- **cosmos_UVISTA_H.tar**
  - cosmos_UVISTA_H_sci.fits.gz: science image
  - cosmos_UVISTA_H_wht.fits.gz: weight map
- **cosmos_UVISTA_J.tar**
  - cosmos_UVISTA_J_sci.fits.gzv: science image
  - cosmos_UVISTA_J_wht.fits.gz: weight map
- **cosmos_UVISTA_Ks.tar**
  - cosmos_UVISTA_Ks_sci.fits.gz: science image
  - cosmos_UVISTA_Ks_wht.fits.gz: weight map
- **cosmos_UVISTA_Y.tar**

- cosmos_UVISTA_Y_sci.fits.gz: science image
- cosmos_UVISTA_Y_wht.fits.gz: weight map

- **cosmos_V.tar**
  - cosmos_V_exp.fits.gz: weight map
  - cosmos_V_sci.fits.gz: science image
- **cosmos_Z.tar**
  - cosmos_Z_exp.fits.gz: weight map
  - cosmos_Z_sci.fits.gz: science image
- **cosmos_Zp.tar**
  - cosmos_Zp_exp.fits.gz: weight map
  - cosmos_Zp_sci.fits.gz: science image

5.3 GOODS-N

- **GOODS-N_HDF.B.tar**
  - GOODS-N_HDF.B_exp.fits.gz: weight map
  - GOODS-N_HDF.B_sci.fits.gz: science image
- **GOODS-N_HDF.I.tar**
  - GOODS-N_HDF.I_exp.fits.gz: weight map
  - GOODS-N_HDF.I_sci.fits.gz: science image
- **GOODS-N_HDF.R.tar**
  - GOODS-N_HDF.R_exp.fits.gz: weight map
  - GOODS-N_HDF.R_sci.fits.gz: science image
- **GOODS-N_HDF.V0201.tar**
  - GOODS-N_HDF.V0201_exp.fits.gz: weight map
  - GOODS-N_HDF.V0201_sci.fits.gz
- **GOODS-N_HDF.Z.tar**
  - GOODS-N_HDF.Z_exp.fits.gz: weight map
  - GOODS-N_HDF.Z_sci.fits.gz: science image
- **GOODS-N_SEDS1.tar**
  - GOODS-N_SEDS1_exp.fits.gz: weight map
  - GOODS-N_SEDS1_sci.fits.gz: science image
- **GOODS-N_SEDS2.tar**
  - GOODS-N_SEDS2_exp.fits.gz: weight map
  - GOODS-N_SEDS2_sci.fits.gz: science image
- **GOODS-N_convH.tar**

  - GOODS-N_convH_exp.fits.gz: weight map
  - GOODS-N_convH_sci.fits.gz: science image
- **GOODS-N_convJ.tar**
  - GOODS-N_convJ_exp.fits.gz: weight map
  - GOODS-N_convJ_sci.fits.gz: science image
- **GOODS-N_convK.tar**
  - GOODS-N_convK_exp.fits.gz: weight map
  - GOODS-N_convK_sci.fits.gz: science image
- **GOODS-N_hdfnU.tar**
  - GOODS-N_hdfnU_exp.fits.gz: weight map
  - GOODS-N_hdfnU_sci.fits.gz: science image
- **GOODS-N_irac3.tar**
  - GOODS-N_irac3_s1_exp.fits.gz: weight map
  - GOODS-N_irac3_s2_exp.fits.gz: science image
  - GOODS-N_irac3_s1_sci.fits.gz: weight map
  - GOODS-N_irac3_s2_sci.fits.gz: science image
- **GOODS-N_irac4.tar**
  - GOODS-N_irac4_s1_exp.fits.gz: weight map
  - GOODS-N_irac4_s2_exp.fits.gz: weight map
  - GOODS-N_irac4_s1_sci.fits.gz: science image
  - GOODS-N_irac4_s2_sci.fits.gz: science image
- **GOODS-N_lrisG.tar**
  - GOODS-N_lrisG_sci.fits.gz: science image
  - GOODS-N_lrisG_unity_exp.fits.gz: weight map
- **GOODS-N_lrisRs.tar**
  - GOODS-N_lrisRs_sci.fits.gz: science image
  - GOODS-N_lrisRs_unity_exp.fits.gz: weight map

5.4 GOODS-S

- **GOODS-S_IA427.tar**
  - GOODS-S_IA427_exp.fits.gz: weight map
  - GOODS-S_IA427_sci.fits.gz: science image
- **GOODS-S_IA445.tar**
  - GOODS-S_IA445_exp.fits.gz: weight map
  - GOODS-S_IA445_sci.fits.gz: science image

- **GOODS-S_IA464.tar**
  - GOODS-S_IA464_exp.fits.gz: weight map
  - GOODS-S_IA464_sci.fits.gz: science image
- **GOODS-S_IA484.tar**
  - GOODS-S_IA484_exp.fits.gz: weight map
  - GOODS-S_IA484_sci.fits.gz: science image
- **GOODS-S_IA505.tar**
  - GOODS-S_IA505_exp.fits.gz: weight map
  - GOODS-S_IA505_sci.fits.gz: science image
- **GOODS-S_IA527.tar**
  - GOODS-S_IA527_exp.fits.gz: weight map
  - GOODS-S_IA527_sci.fits.gz: science image
- **GOODS-S_IA550.tar**
  - GOODS-S_IA550_exp.fits.gz: weight map
  - GOODS-S_IA550_sci.fits.gz: science image
- **GOODS-S_IA574.tar**
  - GOODS-S_IA574_exp.fits.gz: weight map
  - GOODS-S_IA574_sci.fits.gz: science image
- **GOODS-S_IA598.tar**
  - GOODS-S_IA598_exp.fits.gz: weight map
  - GOODS-S_IA598_sci.fits.gz: science image
- **GOODS-S_IA624.tar**
  - GOODS-S_IA624_exp.fits.gz: weight map
  - GOODS-S_IA624_sci.fits.gz: science image
- **GOODS-S_IA651.tar**
  - GOODS-S_IA651_exp.fits.gz: weight map
  - GOODS-S_IA651_sci.fits.gz: science image
- **GOODS-S_IA679.tar**
  - GOODS-S_IA679_exp.fits.gz: weight map
  - GOODS-S_IA679_sci.fits.gz: science image
- **GOODS-S_IA709.tar**
  - GOODS-S_IA709_exp.fits.gz: weight map
  - GOODS-S_IA709_sci.fits.gz: science image
- **GOODS-S_IA738.tar**
  - GOODS-S_IA738_exp.fits.gz: weight map
  - GOODS-S_IA738_sci.fits.gz: science image

- **GOODS-S_IA767.tar**
  - GOODS-S_IA767_exp.fits.gz: weight map
  - GOODS-S_IA767_sci.fits.gz: science image
- **GOODS-S_IA797.tar**
  - GOODS-S_IA797_exp.fits.gz: weight map
  - GOODS-S_IA797_sci.fits.gz: science image
- **GOODS-S_IA827.tar**
  - GOODS-S_IA827_exp.fits.gz: weight map
  - GOODS-S_IA827_sci.fits.gz: science image
- **GOODS-S_IA856.tar**
  - GOODS-S_IA856_exp.fits.gz: weight map
  - GOODS-S_IA856_sci.fits.gz: science image
- **GOODS-S_R.tar**
  - GOODS-S_R_exp.fits.gz: weight map
  - GOODS-S_R_sci.fits.gz: science image
- **GOODS-S_SEDS1.tar**
  - GOODS-S_SEDS1_cov.fits.gz: weight map
  - GOODS-S_SEDS1_sci_sub.fits.gz: science image
- **GOODS-S_SEDS2.tar**
  - GOODS-S_SEDS2_cov.fits.gz: weight map
  - GOODS-S_SEDS2_sci_sub.fits.gz: science image
- **GOODS-S_U.tar**
  - GOODS-S_U_exp.fits.gz: weight map
  - GOODS-S_U_sci.fits.gz: science image
- **GOODS-S_WFI_B.tar**
  - GOODS-S_WFI_B_exp.fits.gz: weight map
  - GOODS-S_WFI_B_sci.fits.gz: science image
- **GOODS-S_WFI_I.tar**
  - GOODS-S_WFI_I_exp.fits.gz: weight map
  - GOODS-S_WFI_I_sci.fits.gz: science image
- **GOODS-S_WFI_Rc.tar**
  - GOODS-S_WFI_Rc_exp.fits.gz: weight map
  - GOODS-S_WFI_Rc_sci.fits.gz: science image
- **GOODS-S_WFI_U38.tar**
  - GOODS-S_WFI_U38_exp.fits.gz: weight map
  - GOODS-S_WFI_U38_sci.fits.gz: science image

- **GOODS-S_WFI_V.tar**
  - GOODS-S_WFI_V_exp.fits.gz: weight map
  - GOODS-S_WFI_V_sci.fits.gz: science image
- **GOODS-S_convH.tar**
  - GOODS-S_convH_exp.fits.gz: weight map
  - GOODS-S_convH_sci.fits.gz: science image
- **GOODS-S_convJ.tar**
  - GOODS-S_convJ_exp.fits.gz: weight map
  - GOODS-S_convJ_sci.fits.gz: science image
- **GOODS-S_convK.tar**
  - GOODS-S_convK_exp.fits.gz: weight map
  - GOODS-S_convK_sci.fits.gz: science image
- **GOODS-S_irac3.tar**
  - GOODS-S_irac3_s1_exp.fits.gz: weight map
  - GOODS-S_irac3_s2_exp.fits.gz: weight map
  - GOODS-S_irac3_s1_sci.fits.gz: science image
  - GOODS-S_irac3_s2_sci.fits.gz: science image
- **GOODS-S_irac4.tar**
  - GOODS-S_irac4_s1_exp.fits.gz: weight map
  - GOODS-S_irac4_s2_exp.fits.gz: weight map
  - GOODS-S_irac4_s1_sci.fits.gz: science image
  - GOODS-S_irac4_s2_sci.fits.gz: science image
- **GOODS-S_tenisJ.tar**
  - GOODS-S_tenisJ_exp.fits.gz: weight map
  - GOODS-S_tenisJ_sci.fits.gz: science image
- **GOODS-S_tenisK.tar**
  - GOODS-S_tenisK_exp.fits.gz: weight map
  - GOODS-S_tenisK_sci.fits.gz: science image
- **UDS_SEDS1.tar**
  - UDS_SEDS1_exp.fits.gz: weight map
  - UDS_SEDS1_sci.fits.gz: science image

5.5 UDS

- **UDS_SEDS2.tar**
  - UDS_SEDS2_exp.fits.gz: weight map

  - UDS_SEDS2_sci.fits.gz: science image
- **UDS_SXDS_B.tar**
  - UDS_SXDS_B_exp.fits.gz: weight map
  - UDS_SXDS_B_sci.fits.gz: science image
- **UDS_SXDS_R.tar**
  - UDS_SXDS_R_exp.fits.gz: weight map
  - UDS_SXDS_R_sci.fits.gz: science image
- **UDS_SXDS_V.tar**
  - UDS_SXDS_V_exp.fits.gz: weight map
  - UDS_SXDS_V_sci.fits.gz: science image
- **UDS_SXDS_i.tar**
  - UDS_SXDS_i_exp.fits.gz: weight map
  - UDS_SXDS_i_sci.fits.gz: science image
- **UDS_SXDS_z.tar**
  - UDS_SXDS_z_exp.fits.gz: weight map
  - UDS_SXDS_z_sci.fits.gz: science image
- **UDS_U.tar**
  - UDS_U_exp.fits.gz: weight map
  - UDS_U_sci.fits.gz: science image
- **UDS_UKIDSS_H.tar**
  - UDS_UKIDSS_H_exp.fits.gz: weight map
  - UDS_UKIDSS_H_sci.fits.gz: science image
- **UDS_UKIDSS_J.tar**
  - UDS_UKIDSS_J_exp.fits.gz: weight map
  - UDS_UKIDSS_J_sci.fits.gz: science image
- **UDS_UKIDSS_K.tar**
  - UDS_UKIDSS_K_exp.fits.gz: weight map
  - UDS_UKIDSS_K_sci.fits.gz: science image
- **UDS_irac3.tar**
  - UDS_irac3_exp.fits.gz: weight map
  - UDS_irac3_sci.fits.gz: science image
- **UDS_irac4.tar**
  - UDS_irac4_exp.fits.gz: weight map
  - UDS_irac4_sci.fits.gz: science image