

SVA1 Photo-z Catalogs

Overview

Details on the production of the SVA1 photo-z catalogs, including tests of the accuracy of the photo-z estimates in 3 tomographic bins used in the lensing analysis, can be found in [Bonnett et al. \(2015\)](#). Users should see that paper for any questions about the content of the catalogs. Further questions can be addressed to Christopher Bonnett, the corresponding author of that paper, whose email address is given therein. On this page, we merely describe the structure of the files being distributed, including brief descriptions of each of the columns included in the files

We release files for the 4 photo-z techniques described in [Bonnett et al. \(2015\)](#):

- ANNZ2 – [Sadeh et al.\(2015\)](#)
- BPZ – [Benítez \(2000\)](#), [Coe et al. \(2006\)](#)
- SKYNET – [Graff et al. \(2014\)](#), [Bonnett \(2015\)](#)
- TPZ – [Carrasco Kind & Brunner \(2013\)](#)

For each photo-z technique, we release two types of files:

- The first file type contains only the COADD_OBJECTS_ID and the mean value of the pdf for each object.
- The second file type contains the full PDF(z) for each object.

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Download

Point estimates:

- [sva1_gold_r1.0_annz2_point.fits.gz](#)
- [sva1_gold_r1.0_bpz_point.fits.gz](#)
- [sva1_gold_r1.0_skynet_point.fits.gz](#)
- [sva1_gold_r1.0_tpz_point.fits.gz](#)

Full PDFs:

- [sva1_gold_r1.0_annz2_pdf.fits.gz](#)
- [sva1_gold_r1.0_bpz_pdf.fits.gz](#)
- [sva1_gold_r1.0_skynet_pdf.fits.gz](#)
- [sva1_gold_r1.0_tpz_pdf.fits.gz](#)

Point estimates

The structure of the point estimate files are identical. They each contain two columns: the SVA1 unique object identifier and the mean photo-z for that object.

Column Name	Data Type (bytes)	Description
COADD_OBJECTS_ID	INT (8)	Unique object identifier
Z_MEAN	FLOAT (4)	Mean value of the PDF

Full PDF estimates

The PDF files have a variable number of columns depending on the redshift binning used by each photo-z technique when generating the PDFs. All PDFs are normalized to sum to 1.

ANNZ2 Catalog – [Sadeh et al. \(2015\)](#)

The PDFs have the following binning in redshift:

$z_{\text{min}} = 0.00$, $z_{\text{max}} = 1.8$, nbins = 180

ANNZ2 binning

```
import numpy as np
skynet_bin_edges = np.linspace(0.0, 1.8, 181)
```

Column Name	Data Type (bytes)	Description
COADD_OBJECTS_ID	INT (8)	Unique object identifier
Z_MEAN	FLOAT (4)	Mean value of the PDF
Z_PEAK	FLOAT (4)	Mode value of the PDF
PDF_0	FLOAT (4)	First value of PDF
...	...	
PDF_179	FLOAT (4)	180th value of PDF

BPZ Catalog – [Benítez\(2000\)](#), [Coe et al.\(2006\)](#)

The PDF's have the following binning in redshift:

z_min = 0.005, z_max = 2.505 , nbins = 250

BPZ binning

```
import numpy as np
bpz_bin_edges = np.linspace(0.005, 2.505, 251)
```

Column Name	Data Type (bytes)	Description
COADD_OBJECTS_ID	INT (8)	Unique object identifier
Z_MEAN	FLOAT (8)	Mean value of the PDF
Z_PEAK	FLOAT (4)	Mode value of the PDF
PDF_0	FLOAT (4)	First value of PDF
...	...	...
PDF_249	FLOAT (4)	250th value of PDF

Skynet Catalog – [Graff et al. \(2014\)](#), [Bonnett \(2015\)](#)

The PDF's have the following binning in redshift:

z_min = 0.005, z_max = 1.8, nbins = 200

Skynet binning

```
import numpy as np
skynet_bin_edges = np.linspace(0.005, 1.8, 201)
```

Column Name	Data Type (bytes)	Description
COADD_OBJECTS_ID	INT (8)	Unique object identifier
Z_MEAN	FLOAT (8)	Mean value of the PDF
Z_PEAK	FLOAT (4)	Mode value of the PDF
PDF_0	FLOAT (4)	First value of PDF
...	...	...

PDF_199	FLOAT (4)	200th value of PDF
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TPZ Catalog – Carrasco Kind & Brunner (2013)

The PDF's have the following binning in redshift:

$z_{\min} = 0.0012625$, $z_{\max} = 1.9962625$, $n_{\text{bins}} = 200$

TPZ binning
<pre>import numpy as np dz = 0.007475 tpz_bin_edges = np.linspace(0.005-dz/2, 2.0-dz/2, 201)</pre>

Column Name	Data Type (bytes)	Description
COADD_OBJECTS_ID	INT (8)	Unique object identifier
Z_MEAN	FLOAT (8)	Mean value of the PDF
Z_PEAK	FLOAT (4)	Mode value of the PDF
PDF_0	FLOAT (4)	First value of PDF
...	...	...
PDF_199	FLOAT (4)	200th value of PDF

<script type="text/javascript"> AJS.toInit(function(){ AJS.\$('#comments-section').hide(); }); for (var i=0; i<nr_li; i++) { // if the element has the class fom 'clasa' parameter if(tags_li[i].getAttribute('class') == 'innerCell'){ tags_li[i].style.overflow = 'visible'; //tags_li[i].style.overflow-y= 'visible'; } } </script>

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