Abstract
We release coadded tiles and related source lists from data collected within the ESO Public Survey GCAV (198.A-2008). Data have been obtained with VISTA/VIRCAM in Y, J, and Ks bands. GCAV targeted 20 massive galaxy clusters which have been observed in many ground based and spaced based programs (e.g. CLASH, RELICS, HFF/BUFFALO). This is the third data release (DR3), and contains all the 525 OBs collected in the survey with ESO grade A and B.
Stacks and source lists of OBs released in DR1 (224 files) and DR2 (616 files) are replaced in DR3.
Full stack images and catalogues will be part of a future release. The total area covered by the observations is ~38deg^2. The volume of the released data, images and catalogues, is ~2.3 Tb.

Overview of Observations
Observations for the ESO Programme 198.A-2008 have been carried out in Obs 63.25 min long in Y and J, and 61.25 min long in Ks. The pattern is the Tile6n with on sky exposures of 48 min in Y and J, and 42 min in Ks. For each Y and J exposure, DIT is set to 30s., NDIT to 2 and NJITTER to 8; for Ks exposures DIT is 10s., NDIT is 6, and NJITTER is 7.

The 20 galaxy clusters are:
Abell 370, Abell 1300, Abell 2163, Abell 2744, ACT-CLJ0102-49151, EMMS0451-0306, MACSJ0416.1-2403, MACSJ0553.4-3342, PLCKG004.5-19.15, PLCKG287.0+32.9, RCSJ2327.6-020437, RXCJ0600.1-2007, RXCJ1347.5-1145, RXCJ1514.9-1523, RXCJ2129.6-0005, RXCJ2211.7-0350, RXCJ2248.7-4431, SMACSJ0723.3-7327, SPTCLJ0254-5857, WHLJ243324-8.477.

Release Content
Table 1. Summary of the released images and source lists per cluster at OB level:

<table>
<thead>
<tr>
<th>Cluster FieldID</th>
<th>RJ2000 DECJ2000</th>
<th>Filter</th>
<th>N. OBs</th>
<th>Total exptime (sec.)</th>
<th>Eptime per pixel (sec.)</th>
<th>Psf FWHM,min:max, arcsec</th>
<th>MagLim(AB),min:max</th>
<th>Size images+weights+source lists (Gb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abell 370</td>
<td>02:40:00 -01:35:00.0</td>
<td>Y</td>
<td>8</td>
<td>22500</td>
<td>7500</td>
<td>0.80:1.21</td>
<td>23.64-23.97</td>
<td>34.885</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J</td>
<td>10</td>
<td>25980</td>
<td>8660</td>
<td>0.71:1.30</td>
<td>23.15-23.89</td>
<td>43.612</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ks</td>
<td>10</td>
<td>25200</td>
<td>8400</td>
<td>0.78:1.01</td>
<td>22.45-22.91</td>
<td>43.582</td>
</tr>
<tr>
<td></td>
<td>RA</td>
<td>Dec</td>
<td>Y</td>
<td>J</td>
<td>Ks</td>
<td>Y</td>
<td>J</td>
<td>Ks</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------</td>
<td>--------------</td>
<td>----</td>
<td>----</td>
<td>-----</td>
<td>----</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Abell 1300</td>
<td>11:32:20.0</td>
<td>-19:45:00.0</td>
<td>8</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23040</td>
<td>7680</td>
<td>0.79:1.20</td>
<td>23.19-23.60</td>
<td>33.006</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20100</td>
<td>6700</td>
<td>0.79:1.28</td>
<td>23.10-23.67</td>
<td>30.675</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12600</td>
<td>4200</td>
<td>0.66:0.90</td>
<td>22.32-22.56</td>
<td>21.794</td>
</tr>
<tr>
<td>Abell 2163</td>
<td>16:15:50</td>
<td>-06:09:10.0</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20160</td>
<td>6720</td>
<td>0.72:1.28</td>
<td>23.03-23.79</td>
<td>44.631</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20160</td>
<td>6720</td>
<td>0.87:1.07</td>
<td>23.19-23.53</td>
<td>31.179</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20160</td>
<td>6720</td>
<td>0.75:0.97</td>
<td>22.45-22.71</td>
<td>35.604</td>
</tr>
<tr>
<td>Abell 2744</td>
<td>00:14:15.0</td>
<td>-30:35:30.0</td>
<td>10</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28800</td>
<td>9600</td>
<td>0.74:1.30</td>
<td>23.32-23.85</td>
<td>31.186</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28800</td>
<td>9600</td>
<td>0.87:1.13</td>
<td>23.21-23.66</td>
<td>33.762</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24840</td>
<td>8220</td>
<td>0.70:1.11</td>
<td>22.30-22.56</td>
<td>44.438</td>
</tr>
<tr>
<td>ACT-CLJ 0102-491 51</td>
<td>01:04:30.0</td>
<td>-49:09:30.0</td>
<td>9</td>
<td>2</td>
<td>9</td>
<td>2</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24960</td>
<td>8320</td>
<td>0.76:1.07</td>
<td>23.21-23.58</td>
<td>39.764</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25740</td>
<td>8580</td>
<td>0.86:1.17</td>
<td>22.87-23.79</td>
<td>39.744</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27720</td>
<td>9240</td>
<td>0.78:1.07</td>
<td>22.26-22.63</td>
<td>48.382</td>
</tr>
<tr>
<td>EMM-S0451-03 06</td>
<td>04:54:17.0</td>
<td>-03:00:15.0</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>2</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28620</td>
<td>9540</td>
<td>0.83:1.28</td>
<td>23.31-23.86</td>
<td>44.883</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22860</td>
<td>7620</td>
<td>0.82:1.07</td>
<td>23.26-23.61</td>
<td>35.906</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24240</td>
<td>8080</td>
<td>0.78:1.08</td>
<td>22.33-22.73</td>
<td>44.855</td>
</tr>
<tr>
<td>MACSJ 0416.1-24 03</td>
<td>04:16:30.0</td>
<td>-24:02:30.0</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>2</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28800</td>
<td>9600</td>
<td>0.81:1.21</td>
<td>23.25-23.57</td>
<td>44.615</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>23040</td>
<td>7680</td>
<td>0.75:1.17</td>
<td>23.09-23.53</td>
<td>35.698</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25200</td>
<td>8400</td>
<td>0.72:1.10</td>
<td>22.30-22.49</td>
<td>44.598</td>
</tr>
<tr>
<td>MACSJ 0553.4-33 42</td>
<td>05:53:55.0</td>
<td>-33:35:00.0</td>
<td>8</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22500</td>
<td>7500</td>
<td>0.79:1.22</td>
<td>23.12-23.78</td>
<td>35.933</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28800</td>
<td>9600</td>
<td>0.68:0.91</td>
<td>23.22-23.71</td>
<td>44.952</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24660</td>
<td>8220</td>
<td>0.76:1.06</td>
<td>22.28-22.58</td>
<td>44.909</td>
</tr>
<tr>
<td>PLCK-G004.5-19 .15</td>
<td>19:18:00.0</td>
<td>-33:25:30.0</td>
<td>12</td>
<td>2</td>
<td>10</td>
<td>2</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34560</td>
<td>11520</td>
<td>0.83:1.24</td>
<td>22.96-23.57</td>
<td>54.569</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34500</td>
<td>11500</td>
<td>0.77:1.01</td>
<td>23.06-23.44</td>
<td>54.592</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27720</td>
<td>9240</td>
<td>0.70:0.85</td>
<td>22.33-22.50</td>
<td>49.775</td>
</tr>
<tr>
<td>PLCGK287 .0+32.9</td>
<td>11:51:00.0</td>
<td>-28:10:00.0</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28800</td>
<td>9600</td>
<td>0.77:1.05</td>
<td>23.26-23.72</td>
<td>44.508</td>
</tr>
<tr>
<td>Source</td>
<td>RA</td>
<td>Dec</td>
<td>J</td>
<td>Ks</td>
<td>r</td>
<td>d</td>
<td>a</td>
<td>t</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
<td>---------------</td>
<td>---</td>
<td>----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>RCSZJ 2327.6-020437</td>
<td>23:27:00.0 -02:02:15.0</td>
<td>Y</td>
<td>13</td>
<td>37440</td>
<td>12480</td>
<td>0.76:1.33</td>
<td>23.00-23.61</td>
<td>53.143</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>23040</td>
<td>7680</td>
<td>0.78:1.23</td>
<td>23.22-23.54</td>
<td>35.617</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ks</td>
<td>7</td>
<td>17640</td>
<td>5880</td>
<td>0.72:1.11</td>
<td>22.20-22.47</td>
<td>31.131</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCSJ 0600.1-2007</td>
<td>06:00:35.0 -19:59:45.0</td>
<td>Y</td>
<td>10</td>
<td>28380</td>
<td>9460</td>
<td>0.79:1.33</td>
<td>22.99-23.64</td>
<td>44.366</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>22980</td>
<td>7660</td>
<td>0.76:1.18</td>
<td>23.17-23.53</td>
<td>35.500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ks</td>
<td>7</td>
<td>17640</td>
<td>5880</td>
<td>0.75:0.93</td>
<td>22.30-22.69</td>
<td>31.021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCSJ 1347.5-1145</td>
<td>13:47:30.0 -11:45:10.0</td>
<td>Y</td>
<td>10</td>
<td>28800</td>
<td>9600</td>
<td>0.78:1.35</td>
<td>23.10-23.80</td>
<td>44.047</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>23040</td>
<td>7680</td>
<td>0.78:1.34</td>
<td>23.27-23.73</td>
<td>35.246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ks</td>
<td>8</td>
<td>20160</td>
<td>6720</td>
<td>0.68:1.08</td>
<td>22.44-22.69</td>
<td>35.230</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RXCJ 1514.9-1523</td>
<td>15:15:00.0 -15:21:25.0</td>
<td>Y</td>
<td>8</td>
<td>23040</td>
<td>7680</td>
<td>0.80:1.33</td>
<td>23.12-23.71</td>
<td>35.341</td>
</tr>
<tr>
<td>J</td>
<td>7</td>
<td>20160</td>
<td>6720</td>
<td>0.80:1.16</td>
<td>22.97-23.64</td>
<td>30.960</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ks</td>
<td>5</td>
<td>12900</td>
<td>4300</td>
<td>0.70:0.95</td>
<td>22.52-22.63</td>
<td>22.104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RXCJ 2129.6+0005</td>
<td>21:29:45.0 00:05:00.0</td>
<td>Y</td>
<td>7</td>
<td>20160</td>
<td>6720</td>
<td>0.78:1.08</td>
<td>23.22-23.68</td>
<td>31.414</td>
</tr>
<tr>
<td>J</td>
<td>6</td>
<td>17280</td>
<td>5760</td>
<td>0.91:1.06</td>
<td>23.08-23.43</td>
<td>26.923</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ks</td>
<td>5</td>
<td>12600</td>
<td>4200</td>
<td>0.72:0.96</td>
<td>22.32-22.50</td>
<td>22.424</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RXCJ 2211.7-0350</td>
<td>22:12:30.0 -03:45:00.0</td>
<td>Y</td>
<td>10</td>
<td>28800</td>
<td>9600</td>
<td>0.77:0.95</td>
<td>23.33-23.93</td>
<td>43.963</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>23040</td>
<td>7680</td>
<td>0.68:1.11</td>
<td>23.22-23.57</td>
<td>35.176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ks</td>
<td>7</td>
<td>17640</td>
<td>5880</td>
<td>0.67:0.93</td>
<td>22.35-22.40</td>
<td>30.760</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RXCJ 2248.7-4431</td>
<td>22:49:30.0 -44:22:30.0</td>
<td>Y</td>
<td>10</td>
<td>28800</td>
<td>9600</td>
<td>0.74:1.1</td>
<td>23.29-23.86</td>
<td>44.529</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>23040</td>
<td>7680</td>
<td>0.70:1.28</td>
<td>22.92-24.00</td>
<td>35.642</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ks</td>
<td>10</td>
<td>25200</td>
<td>8400</td>
<td>0.71:1.08</td>
<td>22.13-22.53</td>
<td>44.496</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMACSJ 0723.3-7327</td>
<td>07:25:00.0 -73:20:00.0</td>
<td>Y</td>
<td>8</td>
<td>23040</td>
<td>7680</td>
<td>0.86:1.18</td>
<td>23.26-23.57</td>
<td>35.326</td>
</tr>
<tr>
<td>J</td>
<td>8</td>
<td>23040</td>
<td>7680</td>
<td>0.76:1.47</td>
<td>22.74-23.60</td>
<td>35.330</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The limiting mag is 5σ within 1″ radius aperture and includes aperture correction to 5″ aperture radius: \[ \text{MagLim} = ZP - 2.5 \log_{10}(5 \sqrt{\pi \times 25} \times \text{skyrms}) - \text{APCORR1} \]

The plots show the distribution of the estimated FWHM and 5σ depth of the released tiles.
Release Notes

Data Reduction and Calibration

- Data reduction has been performed with a pipeline written in Julia (www.julialang.org) which develops e.g. Nonino et al. 2009, and performs the following steps:
- Dark correction, subtracting the associated dark image, created from median combination of nightly darks, and matching the DIT value of the given science exposures.
- De-striping, which removes the low-level horizontal striping due to VIRCAM detector readout electronic.
- Flat field correction, dividing by a median of twilight sky images also compensating for different gain in the different detectors.
- Creation of statics masks which flag pixels with substantial deviates in the dark and flat calibration images. These pixels are assigned weight 0.
- Astrometric solution is performed against GAIA EDR3 sources (https://gea.esac.esa.int/archive), using Scamp (v2.0.4,Bertin 2006) Using GAIA proper motion information, reference sources coordinates have been corrected to the epoch of VIRCAM observations. The systematics in the coadded images are at the level of 10 mas and less, and rms ~20 mas with respect to GAIA sources. The density of used GAIA sources per VIRCAM ranges from ~100 to 500 depending upon the cluster.
- Photometry: the zero point of each coadded tile has been derived from comparison of aperture corrected magnitudes of bright but unsaturated sources with the aperture corrected magnitude from the source lists delivered by the VISTA Data Flow System (Irwin et al. 2004, Hambly et al. 2008, Cross et al., 2012). This has also been used to apply a final illumination correction (at the level of the stack). For a very detailed analysis of the VISTA photometric system, including Vega to AB conversion, we refer to Gonzales-Fernandez et al. (2018, MNRAS,474). The comparison of bright unsaturated sources results in a median and mean rms of 0.037 indicative of the limits of photometric systematics of the released data. Further comparisons of aperture corrected magnitudes against VIKING, VHS observations partly overlapping released clusters confirm this result. Further check on the photometric calibration has been performed stacking chip by chip each OB. This resulted in 96 stacks for each OB, for which PSF has been estimated, using PSFex (v3.21.1, Bertin, 2011): photometry of bright, not saturated stars has been compared with 2MASS sources, confirming the obtained zero points (RMS <0.05) in the AB interval ~13.5-16.
- Background subtraction: this step is performed using the astrometric solutions to mask each pixel, in the dark and flat corrected images, which in the coadded stack has been mapped into a detected object. Defect such as satellite tracks have been masked with the mask incorporated in the single image weight map.
- Tile and deep stacks are obtained using a slightly modified version of Swarp (v2.19.1, Bertin et al. 2002).
- Psf obtained via PSFex (v3.2.11,Bertin, 2011).

Released source lists have been obtained using Sextractor (v2.19.5, Bertin & Arnouts 1996). Purity has been preferred to completeness, in order to minimize spurious detections. Running Sextractor on the inverted images (additive inverse) result in a fraction of < .001 of spurious sources, due to noise in the image background, see also Know Issues below, for the selected parameters. Relevant parameters:

```
  DETECT_MINAREA 9
  DETECT_THRESH 4
  THRESH_TYPE RELATIVE
  FILTER Y
  FILTER_NAME gauss_1.5_3x3.conv
  DEBLEND_NTHRESH 32
  DEBLEND_MINCONT 0.00005
```
Data Quality

- The astrometry has been performed using GAIA3 as reference: systematics and random errors are listed in the header of the images CSYER1, CSYER2, CRDER1, CRDER2 (units degrees).
- Adopted conversions to AB (Gonzales-Fernandez et al. 2018, D3, D4 and D6): Y_AB(+0.600), J_AB(+0.916), Ks_AB(+1.827)
- Magnitudes from aperture radii of 1",1.5",2",2.5",3",4" and PSFMag have been corrected to aperture radius 5", for each stacked tile. Magnitudes have NOT been corrected for Galactic extinction.
- The zeropoints are uniform across each tile.

Known issues

Varying quantum efficiency in detector 16 result in problematic regions in the coadded images as can be seen in the 5 sigma depth figure (top left region). In the current release, the most common source of spurious objects in source lists is associated with diffraction halos and filter-reflection ghosts around bright stars; these are easily recognized in the parent images since they are mostly localized around bright stars.

Previous Releases

This Release replaces DR1 and DR2, with new astrometric reference system (GAIA-EDR3)

Data Format

Files Types

The naming convention for the released data is

- science image
  gcav_$CLUSTER_NAME$_$FILTER$_$OBID$_g3sw.fits
- associated weight image
  gcav_$CLUSTER_NAME$_$FILTER$_$OBID$_g3sw.weight.fits
- associated source list
  gcav_$CLUSTER_NAME$_$FILTER$_$OBID$_g3sw_cat.fits

Catalogue Columns

<table>
<thead>
<tr>
<th>No</th>
<th>Column Name</th>
<th>Column Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SOURCENAME</td>
<td>IAU-formatted name, prefixed with “GCAV”</td>
</tr>
<tr>
<td></td>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>SOURCEID</td>
<td>Running object number</td>
</tr>
<tr>
<td>3</td>
<td>RA2000</td>
<td>Right ascension of barycenter (J2000)</td>
</tr>
<tr>
<td>4</td>
<td>DEC2000</td>
<td>Declination of barycenter (J2000)</td>
</tr>
<tr>
<td>5</td>
<td>MAG_AUTO</td>
<td>Kron-like elliptical aperture magnitude</td>
</tr>
<tr>
<td>6</td>
<td>MAGERR_AUTO</td>
<td>RMS error for Kron-like elliptical aperture magnitude</td>
</tr>
<tr>
<td>7</td>
<td>KRON_RADIUS</td>
<td>Kron aperture</td>
</tr>
<tr>
<td>8</td>
<td>MAG_ISO</td>
<td>Isophotal magnitude</td>
</tr>
<tr>
<td>9</td>
<td>MAGERR_ISO</td>
<td>RMS error for isophotal magnitude</td>
</tr>
<tr>
<td>10</td>
<td>MAG_APER1</td>
<td>Aperture corrected magnitude within 1&quot; radius</td>
</tr>
<tr>
<td>11</td>
<td>MAG_APER2</td>
<td>Aperture corrected magnitude within 1.5&quot; radius</td>
</tr>
<tr>
<td>12</td>
<td>MAG_APER3</td>
<td>Aperture corrected magnitude within 2&quot; radius</td>
</tr>
<tr>
<td>13</td>
<td>MAG_APER4</td>
<td>Aperture corrected magnitude within 2.5&quot; radius</td>
</tr>
<tr>
<td>14</td>
<td>MAG_APER5</td>
<td>Aperture corrected magnitude within 3&quot; radius</td>
</tr>
<tr>
<td>15</td>
<td>MAG_APER6</td>
<td>Aperture corrected magnitude within 4&quot; radius</td>
</tr>
<tr>
<td>16</td>
<td>MAG_APER7</td>
<td>Aperture magnitude within 5&quot; radius</td>
</tr>
<tr>
<td>17</td>
<td>MAG_APER8</td>
<td>Aperture magnitude within 7.5&quot; radius</td>
</tr>
<tr>
<td>18</td>
<td>MAG_APER9</td>
<td>Aperture magnitude within 10&quot; radius</td>
</tr>
<tr>
<td>19</td>
<td>MAGERR_APER1</td>
<td>RMS error for aperture 1</td>
</tr>
<tr>
<td>20</td>
<td>MAGERR_APER2</td>
<td>RMS error for aperture 2</td>
</tr>
<tr>
<td>21</td>
<td>MAGERR_APER3</td>
<td>RMS error for aperture 3</td>
</tr>
<tr>
<td>22</td>
<td>MAGERR_APER4</td>
<td>RMS error for aperture 4</td>
</tr>
<tr>
<td>23</td>
<td>MAGERR_APER5</td>
<td>RMS error for aperture 5</td>
</tr>
<tr>
<td>24</td>
<td>MAGERR_APER6</td>
<td>RMS error for aperture 6</td>
</tr>
<tr>
<td>25</td>
<td>MAGERR_APER7</td>
<td>RMS error for aperture 7</td>
</tr>
<tr>
<td>26</td>
<td>MAGERR_APER8</td>
<td>RMS error for aperture 8</td>
</tr>
<tr>
<td>27</td>
<td>MAGERR_APER9</td>
<td>RMS error for aperture 9</td>
</tr>
<tr>
<td>28</td>
<td>FRAD90</td>
<td>Fraction-of-light radius at 90%</td>
</tr>
<tr>
<td>29</td>
<td>FLAGS</td>
<td>SExtractor flag</td>
</tr>
<tr>
<td>30</td>
<td>CLASS_STAR</td>
<td>SExtractor Star/Galaxy classification (0-galaxy,1-star)</td>
</tr>
<tr>
<td>31</td>
<td>FWHM_IMAGE</td>
<td>FWHM assuming a gaussian core (pixels)</td>
</tr>
<tr>
<td>32</td>
<td>BACKGROUND</td>
<td>Background at centroid position</td>
</tr>
<tr>
<td>33</td>
<td>A_IMAGE</td>
<td>Isophotal major axis</td>
</tr>
<tr>
<td>34</td>
<td>B_IMAGE</td>
<td>Isophotal minor axis</td>
</tr>
<tr>
<td>35</td>
<td>THETA_IMAGE</td>
<td>Isophotal image position angle</td>
</tr>
<tr>
<td></td>
<td>Column Name</td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>---------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>36</td>
<td>MAG_PSF</td>
<td>Magnitude from PSF-fitting</td>
</tr>
<tr>
<td>37</td>
<td>MAGERR_PSF</td>
<td>RMS error from PSF-fitting</td>
</tr>
<tr>
<td>38</td>
<td>MAG_MODEL</td>
<td>Magnitude from model-fitting</td>
</tr>
<tr>
<td>39</td>
<td>MAGERR_MODEL</td>
<td>RMS error for model-fitting magnitude</td>
</tr>
<tr>
<td>40</td>
<td>SPREAD_MODEL</td>
<td>Spread parameter from model-fitting</td>
</tr>
<tr>
<td>41</td>
<td>SPREADERR_MODEL</td>
<td>RMS error for spread parameter from model-fitting</td>
</tr>
<tr>
<td>42</td>
<td>MAG_POINTSOURCE</td>
<td>Point source total magnitude from fitting</td>
</tr>
<tr>
<td>43</td>
<td>MAGERR_POINTSOURCE</td>
<td>RMS error for fitted point source total magnitude</td>
</tr>
<tr>
<td>44</td>
<td>MAG_PETRO</td>
<td>Petrosian-like aperture magnitude</td>
</tr>
<tr>
<td>45</td>
<td>MAGERR_PETRO</td>
<td>RMS error for Petrosian-like aperture magnitude</td>
</tr>
<tr>
<td>46</td>
<td>PETRO_RADIUS</td>
<td>Petrosian radius</td>
</tr>
</tbody>
</table>

**Acknowledgements**


- Based on data obtained from the ESO Science Archive Facility with DOI(s): [https://doi.org/10.18727/archive/26](https://doi.org/10.18727/archive/26)

- This work has made use of the **CANDIDE Cluster** at the Institut d'Astrophysique de Paris and made possible by grants from the PNCG and the DIM-ACAV.

Science data products from the ESO archive may be distributed by third parties, and disseminated via other services, according to the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/). Credit to the ESO origin of the data must be acknowledged, and the file headers preserved.