PTF Lightcurve Database Schema, v1.3, 2/26/2016

Objects

o_key
o_htm20 (new)
field
ccdid
fid
ra
dec
variable [T or F]
lcmetric_1
lcmetric_2
…

Associations

o_key
o_htm20 (new)
s_key (= sid)
s_htm20 (new)

Sources

s_key (= sid)
s_htm20 (new)
e_key (= pid)
number
hjd
ccdid
fid
mag_auto
magerr_auto
srcmetric_1
srcmetric_2
…

Epochs

e_key (= pid)
hjd
field
ccdid
fid
deltazp
maglim

Objects — 1 … K — Associations — 1 … 1 — Sources

Objects — 1 … N — Epochs — 1 … M — Sources
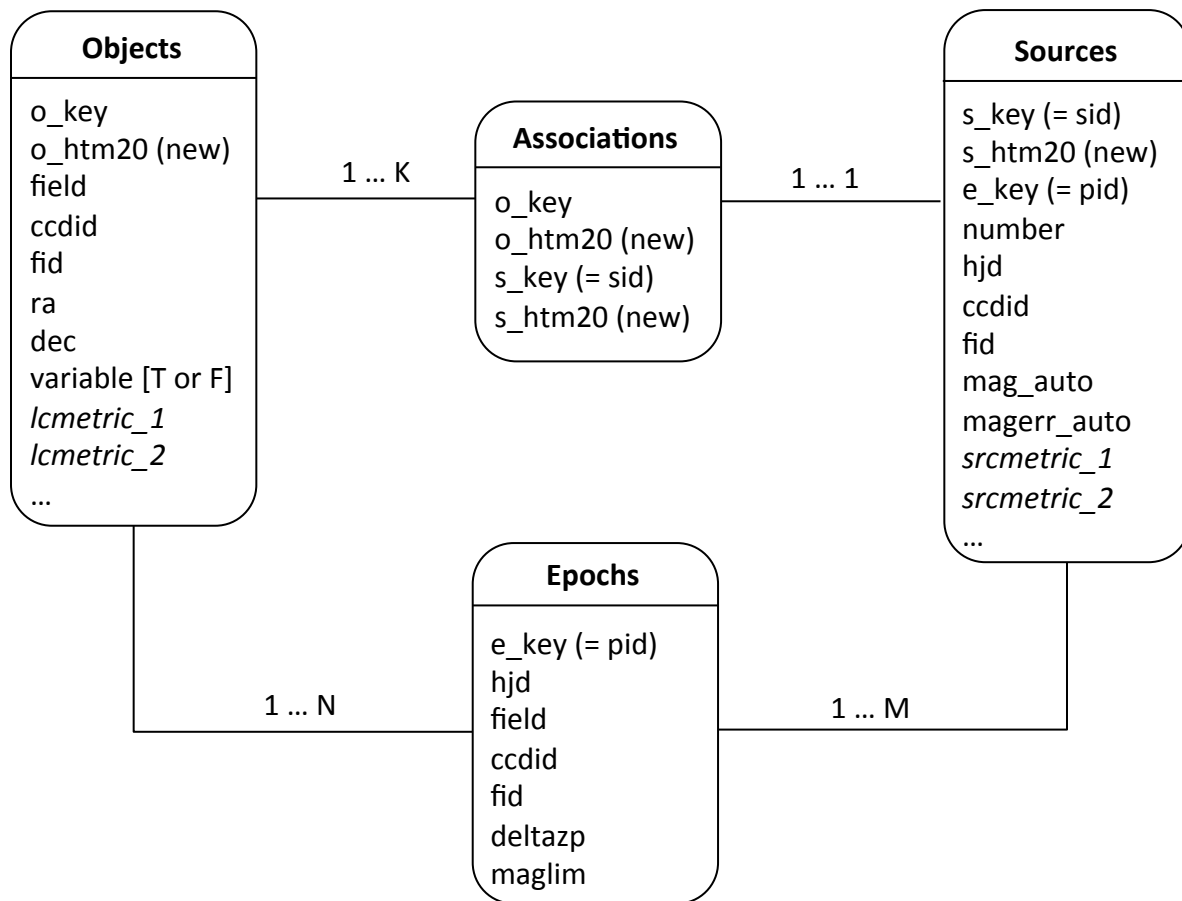
Notes and TBRs:

1. o_key = unique object (or lightcurve) identifier; s_key = unique epochal source identifier (= "sid" from the nightly *.ds files); e_key = unique identifier for epochal image (= "pid" from nightly *.ds files).
2. K = number of sources (epochal detections) associated with o_key.
3. N = number of epochs <u>covered</u> by o_key, regardless if epochal sources were detected.
4. M = number of detected sources for a given field, chip, fid, and hjd (or per e_key).
5. Except for s_htm20, all columns shown in the *Sources* table are already in the nightly *.ds files. All other metrics from these files are denoted by *srcmetric_i.*
6. Database-load files and data-dictionaries for the *Objects*, *Associations*, and *Epochs* tables will be constructed by the PTF operations team. This includes the computation of o_htm20 and s_htm20. The s_htm20 values in particular may not be consistent with those inserted by IRSA into the *Sources* table. IRSA will check these and do some magic to ensure consistency.
7. *variable = F* in the *Objects* table refers to "transients", i.e., objects with no associated reference image detection (hence position). In this case, their ra, dec will be an average across all epochal detections.
8. The purpose of the *Epochs* table is twofold: (i) provide the zeropoint correction (*deltazp*) per epoch to be applied in the sense: *mag_auto + deltazp*; (ii) provide an upper limit (*maglim*) per epoch to use for e_key records that cover o_key but have <u>no</u> corresponding s_key measurements.