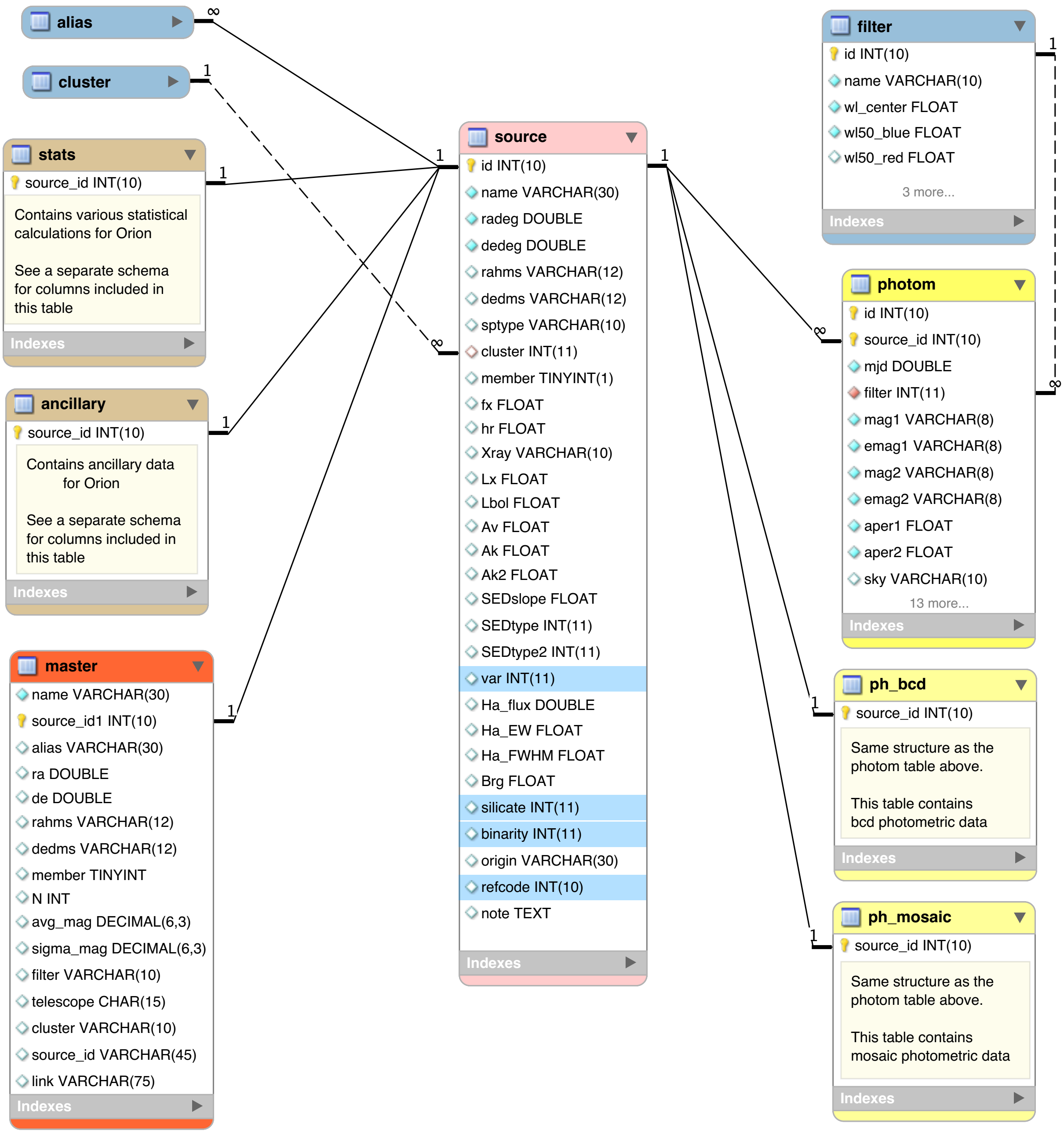
YSOVAR Database Schema: V2.0 9/16/2011



SHORT DESCRIPTIONS FOR THE DATABASE SCHEMA

The database skeleton is formed by several tables that share a source ID column and provide different kinds of information. There are currently 10 tables in the database: source, alias, cluster, filter, photom, ph_bcd, ph_mosiac, master, stats, and ancillary. See http://ysovardb.ipac.caltech.edu/Public/DBschema.pdf for a schema on how these tables are built.

Inside each table there are a number of parameters and below is a short description on each quantity available through the database (see http://ysovardb.ipac.caltech.edu/Public/DBschema.pdf for exact formats).

Source Table: this is the main table of the database and contains general information on each source.

name	Target name: stars are named following the IAU convention using an acronym (Initial Spitzer Orion Ysovar: ISOY) followed by the J2000 coordinates -e.g. ISOY_J053508.53-052518.0. Note that the database is case sensitive, use the command 'case' for your custom queries to override that.
radeg	Right ascension in degrees (J2000).
decdeg	Declination in degrees (J2000).
npos	Number of entries for each source.
cluster	1=AFGL 490; 2=Ceph C; 3=;GGD 1215 4=IC 1396; 5=IRAS 20050; 6=;Rho Oph 7=Mon R2; 8=NGC1333; 9=NGC2264; 10=Orion; 11=Serpens Main; 12=Serpens South
member	1=IR excess sources according to Gutermuth et al. 2009 ApJS, 184, 18; 2= otherwise known members; 0= Non mebers or unknown membership
pos	Currently this column is empty.

Alias Table: this table contains an alias name used internally by the YSOVAR group.

name	Alias name: this is an internal name which as of April 2012 it only exists for Orionl. It ooks like: ORION-ClassI-*, ORION-ClassII-*, ORION-Mem-*, or ORION-* depending on if the source is ClassI, ClassII, an object that have been specifically claimed to be members (based on proper motion or spectroscopic studies) with no IR excess detected, or a member of the cluster selected from some reason different from proper motion (such as variability or spectroscopic signatures) with no IR excess detected. The alias name is generally not known by the public. Note that the database is case sensitive, use the command 'case' for your custom queries to override that. In the future NGC2264 sources will be assigned an internal name too. It will look like: Mon* where * stands for a running number.
tmass	Spaced available to include 2MASS names. This column is currently empty.
usno	Spaced available to include USNO names. This column is currently empty.
other1	Spaced available to include other names. This column is currently empty.
other2	Spaced available to include other names. This column is currently empty.

note	Spaced available to include notes regarding names. This column is currently empty.

Cluster Table: this is the table containing information about each cluster.

name	Cluster name. Currently available clusters are: 1=AFGL 490; 2=Ceph C; 3=;GGD 1215 4=IC 1396; 5=IRAS 20050; 6=;Rho Oph 7=Mon R2; 8=NGC1333; 9=NGC2264; 10=Orion; 11=Serpens Main; 12=Serpens South
age	Age of the cluster. Currently this column is empty.
dist	Distance to the cluster. Currently this column is empty.
radius	Radius of the cluster. Currently this column is empty.
radeg	Approximate right ascension of the center of the cluster.
dedeg	Approximate declination of the center of the cluster.
N	Number of sources in the cluster. Currently this column is set to 0.0.
note	Note on the FOV observed with IRAC
short_name	Short name of the cluster used within the DB.

Photom table, ph_bcd, and ph_mosaic: this are the tables that contain the photometry (where the time series data are stored). The three tables have essentially the same format but contain different types of photometry: **Photom** contains the by bcd per AOR photometry (photometry measured in each individual bcd but averaged for every AOR); **ph_bcd** contains the bcd photometry (photometry on every frame available); **ph_mosaic** contains the mosaic photometry (measured on the mosaic buit for each epoch). The data shown by default in the DB is the by bcd per AOR photometry stored in the **Photom** table.

source	Source ID: Running number automatically assigned to a source when first ingested in the database. Note that this number has no scientific meaning and will change if there is a need of repopulating the database. It is strongly advised to keep note of the Target Name or coordinates of any source you want to keep track on.
mjd	Modified Julian Date of each entry in days.
hmjd	Modified Heliocentric Julian Date of each entry in days.
filter	Filter id for each photometric entry. Filter options are I, J, H, K, IRAC1 or IRAC2 which correspond to filter ids: 9,1,2,3,4, or 5 respectively. As of April 2012 only the IRAC photometry (filters 4 and 5 are ingested in the DB).
mag1	Magnitude for measured with an aperture equal to Aper1 in magnitudes.
emag1	Error in Mag1 in magnitudes.
mag2	Magnitude for measured with an aperture equal to Aper2 in magnitudes.
emag2	Error in Mag2 in magnitudes.
aper1	Aperture to measure Mag1 in arcsec.
aper2	Aperture to measure Mag2 in arcsec.

sky	Sky brightness in DN.
origin	Origin of the data. Options are: AOR ID (for Spitzer data), UKIRT pipeline, CFHT, APO, Lowell and SLotis.
telescope	Telescope where the data was taken. Options are Spitzer, UKIRT, CFHT, NMSU-APO 1m, Lowell 31 and Super Lotis.
inst	Instrument used for taking the data. Options are IRAC, WFCAM, WIRCAM, and CCD.
datafile	Fits file from which the photometry was extracted.
redux	Contact person and date of the photometry extraction.
tradeg	Right ascension in each individual datafile in degrees. Note that Radeg in the source table is computed by averaging the individual Tradeg for each source.
tdedeg	Declination in each individual datafile in degrees. Note that Dedeg in the source table is computing by averaging the individual Tradeg for each source.
detx	X position in each individual datafile.
dety	Y position in each individual datafile.
seeing	Seeing during observations. This column is currently empty.
zeropoint	Zeropoint applied to the photometry. This column is currently empty.
useful	Flag: 0 (photometry could be affected by some issue) or 1 (photometry is ok).
kind	Integer describing the type of photometry of each entry as follows: in table **photom:** 0 stands for mapping mode, 3 for staring mode; in table **ph_bcd:** 1 for mapping mode, 4 for staring mode; in table **ph_mosaic:** 2 for mapping mode, 4 for staring mode.
maxval	long HDR BCD's peak pixel value in the aperture in DN. This is used to choose when to swap in short HDR photometry.
epidx	source-epoch index meant to allow cross-matching of entries in the by-mosaic, by-aor, and by-bcd catalogs.
note	When Useful=0 either the source was undetected in that specific datafile or there will be a note specifying the cause of the flag: low_re: low redundancy, sat: saturation,

Filter table: this table contains all the information related to band passes.

name	Name of the filter.
wl_center	Central wavelength of the filter in micron.
wl50_blue	First value of λ when the normalized transmission is over 0.5 in micron.
wl50_red	Last value of λ when the normalized transmission is over 0.5 in micron.
curve	Transmission curve. This column is currently empty.
transmission	Transmission curve values. This column is currently empty.
notes	Notes on the filter.

Master table: this table contains some information taken from other tables, some quantities calculated from the light curves and some interesting light curves.

name	Corresponds to the column 'name' in the source table: stars are named following the IAU convention using an acronym (Initial Spitzer Orion Ysovar: ISOY) followed by the J2000 coordinates -e.g. ISOY_J053508.53-052518.0. Note that the database is case sensitive, use the command 'case' for your custom queries to override that.
alias	Corresponds to the column 'name' in the alias table: this is an internal name which as of April 2012 it only exists for Orionl. It ooks like: ORION-ClassI-*, ORION-ClassII-*, ORION-Mem-*, or ORION-* depending on if the source is ClassI, ClassII, an object that have been specifically claimed to be members (based on proper motion or spectroscopic studies) with no IR excess detected, or a member of the cluster selected from some reason different from proper motion (such as variability or spectroscopic signatures) with no IR excess detected. The alias name is generally not known by the public. Note that the database is case sensitive, use the command 'case' for your custom queries to override that. In the future NGC2264 sources will be assigned an internal name too. It will look like: Mon* where * stands for a running number.
ra	Corresponds to the column 'radeg' in the source table. Right ascension in degrees (J2000).
de	Corresponds to the column 'dedeg' in the source table. Declination in degrees (J2000).
rahms	Right ascension in sexagesimal units (HMS)
dedms	Declination in sexagesimal units (DMS)
member	Corresponds to the column 'member' in the source table. 1=IR excess sources according to Gutermuth et al. 2009 ApJS, 184, 18; 2= otherwise known members; 0= Non mebers or unknown membership
N	Number of data points in the light curve.
Avg_mag	Average magnitude (only useful=1 datapoints are used)
Sigma_mag	RMS in the light curve (only useful=1 datapoints are used)
filter	Corresponds to the column 'name' in the filter table. Name of the filter.
telescope	Corresponds to the column 'telescope' in the photometry tables photon, ph_bcd, and ph_mosaic. Telescope where the data was taken. Options are Spitzer, UKIRT, CFHT, NMSU-APO 1m, Lowell 31 and Super Lotis.
cluster	Corresponds to the column 'short_name' in the cluster table. Short cluster name used within the DB.
source_id	Running number automatically assigned to a source when first ingested in the database. Note that this number has no scientific meaning and will change if there is a need of repopulating the database. It is strongly advised to keep note of the Target Name or coordinates of any source you want to keep track on.
links	There are three links in this column: '*' shows all the information available for that source; '1' shows the light curve for the specific source and filter; 'N' shows the light curves for the specific source in all available filters. The light curves are offset in the Y axis and scaled so they have approximately the same amplitudes at all bands.

Stats table: this table contains all the statistical quantities we measured for Orion with the 2009 data.

Source_id	Running number automatically assigned to a source when first ingested in the database. The source ID is the first column of every table in the database. Note that this number has no scientific meaning and will change if there is a need of repopulating the database. It is strongly advised to keep note of the Target Name or coordinates of any source you want to keep track on.
did	Integer part of Name (see next field: Name)
Name	Alias name: this is an internal name which looks like: ORION-ClassI-*, ORION-ClassII-*, ORION-Mem-*, or ORION-* depending on if the source is ClassI, ClassII, an object that have been specifically claimed to be members (based on proper motion or spectroscopic studies) with no IR excess detected, or a member of the cluster selected from some reason different from proper motion (such as variability or spectroscopic signatures) with no IR excess detected. The alias name is generally not known by the public. Note that the database is case sensitive, use the command 'case' for your custom queries to override that.
RA_I1	Right ascention of the source in IRAC Ch1 or IRAC Ch2 (when the source is not detected or out of FoV in Ch1).
DEC_I1	Declination of the source in IRAC Ch1 or IRAC Ch2 (when the source is not detected or out of FoV in Ch1).
Mean_I1	mean magnitude at [3.6] when only data fulfilling: $mag_i - \overline{mag} \leq 2.5\ \sigma_{mag}$ (1) are taken into account.
Median_I1	median magnitude at [3.6] when only data fulfilling (1) are taken into account.
Mode_I1	mode of the magnitude at [3.6] when only data fulfilling (1) are taken into account.
Sdev_I1	standard deviation at [3.6] when only data fulfilling (1) are taken into account.
MAD_I1	median absolute deviation at [3.6] calculated as: MAD=$\sum_{i=2}^{N} \frac{\lvert mag_i - mag_{(i-1)} \rvert}{N-1}$ (2)
Mean(ShortSdev)_I1	The standard deviation is calculated for every 3 days group of data (Shortdev). Mean(ShortSdev) is the average of all those measurements.
Sdev(ShortSdev)_I1	The standard deviation is calculated for every 3 days group of data (Shortdev). Sdev(ShortSdev) is the standard deviation of all those measurements.
Skew_I1	skewness of the magnitude at [3.6] calculated as the third moment of the magnitude: $SKEW = \frac{1}{N} \sum_{i=0}^{N-1} \left(\frac{mag_i - \overline{mag}}{\sigma_{mag}} \right)^3$ (3)
Kurto_I1	kurtosis of the magnitude at [3.6] calculated as the fourth moment of the magnitude: $KURTOSIS = \frac{1}{N} \sum_{i=0}^{N-1} \left(\frac{mag_i - \overline{mag}}{\sigma_{mag}} \right)^4 - 3$ (4)
Max_I1	maximum magnitude at [3.6] when only data fulfilling (1) are taken into account.
Min_I1	minimum magnitude at [3.6] when only data fulfilling (1) are taken into account.
RangeI1	range of magnitudes at [3.6] when only data fulfilling (1) are taken into account: RangeI1 = Max_I1-Min_I1

MinJD_I1	minimum modified julian date (MJD) at at [3.6] when only data fulfilling (1) are taken into account.
MaxJD_I1	maximum modified julian date (MJD) at [3.6] when only data fulfilling (1) are taken into account.
RangeJDI1	range of dates observed at [3.6] when only data fulfilling (1) are taken into account: RangeJDI1 = MaxJD_I1-MinJD_I1
NI1	number of data points in the [3.6] light curve fulfilling (1).
3sig_I1	number of data points > 3σ deviant from the mean in the [3.6] light curve.
5sig_I1	number of data points > 5σ deviant from the mean in the [3.6] light curve.
ChiSq_I1	χ^2 value at [3.6] calculated as: $\chi^2 = \frac{1}{N-1}\sum_{i=1}^{N}\frac{(mag_i-\overline{mag})^2}{\sigma_i^2}$ (5)
Coherence_I1	autocorrelation coherence time at [3.6] (the time for the autocorrelation function value to drop below 0.5). To calculate the auto-correlation function I used the following expression: $P_{mag}(L) = P_{mag}(-L) = \frac{\sum_{i=0}^{N-L-1}(mag_i-\overline{mag})(mag_{i+L}-\overline{mag})}{\sum_{i=0}^{N-1}(mag_i-\overline{mag})^2}$ (6) Previously the lightcurve is interpolated to have equally spaced data points. Only data fulfilling (1) are taken into account and the lag is expressed in units of MJD.
Timescale_I1	autocorrelation timescale at [3.6] (after the coherence time, the time for the autocorrelation function value to show a maximun). The timescale is only kept if the value of the autocorrelation function at the maximun is ≥0.2. The auto- correlation function is calculated as in (6). The lightcurve is previously interpolated to have equally spaced data points and the lag is expressed in units of MJD.
AutoCorr_I1	autocorrelation value at [3.6] (value of the autocorrelation function at the first maximun after the coherence time). The auto-correlation function is calculated as in (6). The lightcurve is previously interpolated to have equally spaced data points and the lag is expressed in units of MJD.
Coherence_I1random	Same as Coherence_I1 but calculated on a randomized light curve.
Timescale_I1random	Same as Timescale_I1 but calculated on a randomized light curve.
AutoCorr_I1random	Same as AutoCorr_I1 but calculated on a randomized light curve.
Mean_I2	mean magnitude at [4.5] when only data fulfilling (1) are taken into account.
Median_I2	median magnitude at [4.5] when only data fulfilling (1) are taken into account.
Mode_I2	mode of the magnitude at [4.5] when only data fulfilling (1) are taken into account.
Sdev_I2	standard deviation at [4.5] when only data fulfilling (1) are taken into account.
MAD_I2	median absolute deviation at [4.5] calculated as in (2)
Mean(ShortSdev)_I2	The standard deviation is calculated for every 3 days group of data (Shortdev). Mean(ShortSdev) is the average of all those measurements.
Sdev(ShortSdev)_I2	The standard deviation is calculated for every 3 days group of data (Shortdev). Sdev(ShortSdev) is the standard deviation of all those measurements.
Skew_I2	skewness of the magnitude at [4.5] calculated as the third moment of the magnitude calculated as in (3).
Kurto_I2	kurtosis of the magnitude at [4.5] calculated as the fourth moment of the magnitude calculated as in (4).

Max_I2	maximum magnitude at [4.5] when only data fulfilling (1) are taken into account.
Min_I2	minimum magnitude at [4.5] when only data fulfilling (1) are taken into account.
RangeI2	range of magnitudes at [4.5] when only data fulfilling (1) are taken into account: RangeI2 = Max_I2-Min_I2
MinJD_I2	minimum modified julian date (MJD) at at [4.5] when only data fulfilling (1) are taken into account.
MaxJD_I2	maximum modified julian date (MJD) at [4.5] when only data fulfilling (1) are taken into account.
RangeJDI2	range of dates observed at [4.5] when only data fulfilling (1) are taken into account: RangeJDI2 = MaxJD_I2-MinJD_I2
NI2	number of data points in the [4.5] light curve fulfilling (1).
3sig_I2	number of data points > 3σ deviant from the mean in the [4.5] light curve.
5sig_I2	number of data points > 5σ deviant from the mean in the [4.5] light curve.
ChiSq_I2	χ^2 value at [4.5] calculated as in (5).
Coherence_I2	autocorrelation coherence time at [4.5] (the time for the autocorrelation function value to drop below 0.5). To calculate the auto-correlation function I used the following expression (6) Previously the lightcurve is interpolated to have equally spaced data points. Only data fulfilling (1) are taken into account and the lag is expressed in units of MJD.
Timescale_I2	autocorrelation timescale at [4.5] (after the coherence time, the time for the autocorrelation function value to show a maximun). The timescale is only kept if the value of the autocorrelation function at the maximun is ≥0.2. The auto- correlation function is calculated as in (6). The lightcurve is previously interpolated to have equally spaced data points and the lag is expressed in units of MJD.
AutoCorr_I2	autocorrelation value at [4.5] (value of the autocorrelation function at the first maximun after the coherence time). The auto-correlation function is calculated as in (6). The lightcurve is previously interpolated to have equally spaced data points and the lag is expressed in units of MJD.
Coherence_I2random	Same as Coherence_I2 but calculated on a randomized light curve.
Timescale_I2random	Same as Timescale_I2 but calculated on a randomized light curve.
AutoCorr_I2random	Same as AutoCorr_I2 but calculated on a randomized light curve.
Mean_I12	average color [3.6] - [4.5] when only data fulfilling: $(magfilter1 - magfilter2)_i - \overline{(magfilter1 - magfilter2)} \leq 2.5\ \sigma_{(magfilter1-magfilter2)}$ (7) are taken into account.
Sdev_I12	standard deviation of color [3.6] - [4.5] when only data fulfilling (7) are taken into account.
Range_I12	range of color [3.6] - [4.5]: RangeI12 = maximun(mag1 – mag2) – minimun(mag1 – mag2) (8) when only data fulfilling (7) are taken into account.
ChiSq_I12	χ^2 value of [3.6] - [4.5] calculated as in (5) when only data fulfilling (7) are taken into account.
I1vsI12slope	slope of a line fit to [3.6] vs. [3.6] - [4.5] (an object that gets redder when fainter will have a positive slope).
I1vsI12slopedeg	slope angle of a line fit to [3.6] vs. [3.6] - [4.5] in degrees (an object that gets redder when fainter will have a positive slope).

corrI1I12	linear Pearson correlation coefficient between [3.6] and [3.6]- [4.5]. The correlation between two quantities X and Y is expressed as: $r = \frac{covariance\ of\ X\ and\ Y}{\sigma_X \sigma_Y}$ (9)
rmsI1I12	RMS around the fit to [3.6] and [3.6]-[4.5].
I2vsI12slope	slope of a line fit to [4.5] vs. [3.6] - [4.5] (an object that gets redder when fainter will have a positive slope).
I2vsI12slopedeg	slope angle of a line fit to [4.5] vs. [3.6] - [4.5] in degrees (an object that gets redder when fainter will have a positive slope).
corrI2I12	linear Pearson correlation coefficient between [4.5] vs. [3.6] - [4.5]. The correlation between two quantities X and Y is expressed as in (9).
rmsI2I12	RMS around the fit to [4.5] and [3.6]-[4.5].
StetsonIRAC12	Stetson Index (taking both IRAC channels into account). The Stetson variability index was computed for each star as: $S = \frac{\sum_{i=1}^{p} g_i sgn(P_i)\sqrt{\lvert P_i \rvert}}{\sum_{i=1}^{N} g_i}$ (10) where p is the number of pairs of observations for a star taken at the same time, P_i is the product of the normalized residuals of two observations, and g_i is the weight assigned to each normalized residual. In our case the weights are all equal to one. The normalized residual for a given band is computed as: $\delta_i = \sqrt{\frac{N}{N-1}} \frac{mag_i - \overline{mag}}{\sigma_i}$ (11) where N is the number of measurements used to determine the mean magnitude and σ_i is the photometric uncertainty.
Npairs	number of pairs for the calculation of Stetson index.
meanJ	mean magnitude at J when only data fulfilling (1) are taken into account.
MedianJ	median magnitude at J when only data fulfilling (1) are taken into account.
ModeJ	mode of the magnitude at J when only data fulfilling (1) are taken into account.
SdevJ	standard deviation at J when only data fulfilling (1) are taken into account.
MADJ	median absolute deviation at J calculated as in (2)
SkewJ	skewness of the magnitude at J calculated as the third moment of the magnitude calculated as in (3).
KurtoJ	kurtosis of the magnitude at J calculated as the fourth moment of the magnitude calculated as in (4).
MaxJ	maximum magnitude at J when only data fulfilling (1) are taken into account.
MinJ	minimum magnitude at J when only data fulfilling (1) are taken into account.
RangeJ	range of magnitudes at J when only data fulfilling (1) are taken into account: RangeJ = MaxJ-MinJ
MinMJDJ	minimum modified julian date (MJD) at at J when only data fulfilling (1) are taken into account.
MaxMJDJ	maximum modified julian date (MJD) at J when only data fulfilling (1) are taken into account.
RangeMJDJ	range of dates observed at J when only data fulfilling (1) are taken into account: RangeMJDJ = MaxMJDJ-MinMJDJ

NJ	number of data points in the J light curve fulfilling (1).
3sigDevJ	number of data points > 3σ deviant from the mean in the J light curve.
5sigDevJ	number of data points > 5σ deviant from the mean in the J light curve.
ChiSqJ	χ^2 value at J calculated as in (5).
CoherenceJ	autocorrelation coherence time at J (the time for the autocorrelation function value to drop below 0.5). To calculate the auto-correlation function I used the following expression (6) Previously the lightcurve is interpolated to have equally spaced data points. Only data fulfilling (1) are taken into account and the lag is expressed in units of MJD.
TimescaleJ	autocorrelation timescale at J (after the coherence time, the time for the autocorrelation function value to show a maximun). The timescale is only kept if the value of the autocorrelation function at the maximun is ≥0.2. The auto- correlation function is calculated as in (6). The lightcurve is previously interpolated to have equally spaced data points and the lag is expressed in units of MJD.
AutocorrJ	autocorrelation value at J (value of the autocorrelation function at the first maximun after the coherence time). The auto-correlation function is calculated as in (6). The lightcurve is previously interpolated to have equally spaced data points and the lag is expressed in units of MJD.
StetsonIRAC-J	Stetson Index (taking both IRAC channels plus J into account). The Stetson variability index is calculated as expressed in (10).
Nstetson	number of pairs for the calculation of Stetson index for IRAC and J bands.
Mean_JI1	mean color J - [3.6] when only data fulfilling (7) are taken into account.
Sdev JI1	standard deviation of color J - [3.6] when only data fulfilling (7) are taken into account.
Amplitude_JI1	range of color J - [3.6] as in (8).
ChiSq_JI1	χ^2 value of J - [3.6] calculated as in (5) when only data fulfilling (7) are taken into account.
Mean_JI2	mean color J - [4.5] when only data fulfilling (7) are taken into account.
Sdev_JI2	standard deviation of color J - [4.5] when only data fulfilling (7) are taken into account.
Amplitude_JI2	range of color J - [4.5] as in (8).
ChiSq _I2	χ^2 value of J - [4.5] calculated as in (5) when only data fulfilling (7) are taken into account.
JvsJI1slope	slope of a line fit to J vs. J - [3.6] (an object that gets redder when fainter will have a positive slope).
JvsJI1slopedeg	slope angle of a line fit toJ vs. J - [3.6] in degrees (an object that gets redder when fainter will have a positive slope).
corrJJI1	linear Pearson correlation coefficient between J and J - [3.6]. The correlation between two quantities X and Y is expressed as in (9).
rmsJJI1_1	RMS around the fit to J and J - [3.6].
JvsJI2slope	slope of a line fit to J vs. J - [4.5] (an object that gets redder when fainter will have a positive slope).
JvsJI2slopedeg	slope angle of a line fit toJ vs. J - [4.5] in degrees (an object that gets redder when fainter will have a positive slope).
corrJJI2	linear Pearson correlation coefficient between J and J - [4.5]. The correlation between two quantities X and Y is

	expressed as in (9).
rmsJJI2	RMS around the fit to J and J - [4.5]
MeanI	mean magnitude at I when only data fulfilling (1) are taken into account.
MedianI	median magnitude at I when only data fulfilling (1) are taken into account.
ModeI	mode of the magnitude at I when only data fulfilling (1) are taken into account.
SdevI	standard deviation at I when only data fulfilling (1) are taken into account.
MAD_I	median absolute deviation at I calculated as in (2)
SkewI	skwewness of the magnitude at I calculated as the third moment of the magnitude calculated as in (3).
KurtoI	kurtosis of the magnitude at I calculated as the fourth moment of the magnitude calculated as in (4).
MaxI	maximum magnitude at I when only data fulfilling (1) are taken into account.
MinI	minimum magnitude at I when only data fulfilling (1) are taken into account.
RangeI	range of magnitudes at I when only data fulfilling (1) are taken into account: RangeI = MaxI-MinI
MinJD_I	minimum modified julian date (MJD) at at I when only data fulfilling (1) are taken into account.
MaxJD_I	maximum modified julian date (MJD) at I when only data fulfilling (1) are taken into account.
RangeJD_I	range of dates observed at I when only data fulfilling (1) are taken into account: RangeMJD_I = MaxMJD_I-MinMJD_I
N_I	number of data points in the I light curve fulfilling (1).
3sigI	number of data points > 3σ deviant from the mean in the I light curve.
5sigI	number of data points > 5σ deviant from the mean in the I light curve.
ChiSqI	χ^2 value at I calculated as in (5).
StetsonIRAC-I	Stetson Index (taking both IRAC channels plus I into account). The Stetson variability index is calculated as expressed in (10).
NpairsStet	number of pairs for the calculation of Stetson index for IRAC and I bands.
Mean_II1	mean color I - [3.6] when only data fulfilling (7) are taken into account.
Sdev_II1	standard deviation of color I - [3.6] when only data fulfilling (7) are taken into account.
Amplitude_II1	range of color I - [3.6] as in (8).
ChiSq_II1	χ^2 value of I - [3.6] calculated as in (5) when only data fulfilling (7) are taken into account.
MeanII2	mean color I - [4.5] when only data fulfilling (7) are taken into account.
Sdev_II2	standard deviation of color I - [4.5] when only data fulfilling (7) are taken into account.
Amplitude_II2	range of color I - [4.5] as in (8).
ChiSq_II2	χ^2 value of I - [4.5] calculated as in (5) when only data fulfilling (7) are taken into account.
IvsII1slope	slope of a line fit to I vs. I - [3.6] (an object that gets redder when fainter will have a positive slope).
IvsII1slopedeg	slope angle of a line fit to I vs. I - [3.6] in degrees (an object that gets redder when fainter will have a positive slope).
corrIII1	linear Pearson correlation coefficient between I and I - [3.6]. The correlation between two quantities X and Y is expressed as in (9).

rmsIII1	RMS around the fit to I and I - [3.6].
IvsII2slope	slope of a line fit to I vs. I - [4.5] (an object that gets redder when fainter will have a positive slope).
IvsII2slopedeg	slope angle of a line fit to I vs. I - [4.5] in degrees (an object that gets redder when fainter will have a positive slope).
corrIII2	linear Pearson correlation coefficient between I and I - [4.5]. The correlation between two quantities X and Y is expressed as in (9).
rmsIII2	RMS around the fit to I and I - [4.5]
SourceI	Source of I data (for now only SLotis and APO are included).
Pobs	Period (days) – only for members. 99 means that there is a believable timescale but not period was found (this is done by eye).
ZerosI1	Number of times that the [3.6] lightcurve crosses the mean mag- nitude value – another estimation for timescales.
ZerosI2	Number of times that the [4.5] lightcurve crosses the mean magnitude value – another estimation for timescales.
ZerosJ	Number of times that the J lightcurve crosses the mean mag- nitude value – another estimation for timescales.
ZerosI	Number of times that the I lightcurve crosses the mean magni- tude value – another estimation for timescales.
RA_megeath, DEC_Megeath	Coordinates from Megeath's catalog (degrees).
RA2000, DEC2000	Coordinates from Megeath catalog – HMS,DMS.
IRACslope	IRAC slope between [3.6] and [8] from Megeath's catalog.
MEM	String label: ClassI or ClassII as in Megeath et al. 2011 in prep., MEM for sources that have been labeled as members by previous studies but are not know to have IR excess, NM: sources that are not known to be members.
SOYname	SOY name to crossmatch with the database. Note that the DB updates the SOY name when new data is included so there might be slight changes.
rmsVSlamdaSLOPE	Slope of a linear fit to rms vs. lambda (an object with larger rms at longer wavelengths will have a positive slope).
rmsVSlambdaSLOPEdeg	Slope angle of a linear fit to rms vs. lambda in degrees(an object with larger rms at longer wavelengths will have a positive slope).
rmsVSlambdaCORR	linear Pearson correlation coefficient between rms and lambda. The correlation between two quantities X and Y is expressed as in (9).
rmsVSlambdaRMS	RMS around the fit to rms vs lambda
Nrms	number of points for the fit to rms vs. lambda.
ampVSlambdaSLOPE	Slope of a linear fit to amplitude vs. lambda (an object with larger amplitude at longer wavelengths will have a positive slope).
ampVSlambdaSLOPEdeg	Slope angle of a linear fit to amplitude vs. lambda in degrees (an object with larger amplitude at longer wavelengths will have a positive slope).

ampVSlambdaCORR	linear Pearson correlation coefficient between amplitude and lambda. The correlation between two quantities X and Y is expressed as in (9).
ampVSlambdaRMS	RMS around the fit to amplitude vs lambda.
Namp	number of points for the fit to amplitude vs. lambda.

Notes: For deriving colors, and since the data is not simultaneous we have taken the band with more sparse data and interpolated the IRAC band to get the color. In any column -100. is a placeholder for no data. In Pobs 0. is also a placeholder.

Ancillary table: this table contains all the information retrieved from the literature for Orion.

source_id	Running number automatically assigned to a source when first ingested in the database. The source ID is the first column of every table in the database. Note that this number has no scientific meaning and will change if there is a need of repopulating the database. It is strongly advised to keep note of the Target Name or coordinates of any source you want to keep track on.
name	Additional names found in the literature. The first name in this column correspond to the Alias name.
raSPITZER	J 200 R. A. from Spitzer/IRAC in degrees (Megeath et al. 2012)
decSPITZER	J 200 DEC. from Spitzer/IRAC in degrees (Megeath et al. 2012)
ra_Optical	J 200 R. A. from optical studies in degrees
dec_Optical	J 200 DEC. from optical studies in degrees
coosrc_Optical	Source of the optical coordinates
ra_NIR	J 200 R. A. from NIR studies in degrees
dec_NIR	J 200 DEC. from NIR studies in degrees
coosrc_NIR	Source of the NIR coordinates
ra_Xray	J 200 R. A. from X ray studies in degrees
dec_Xray	J 200 DEC. from X ray studies in degrees
coosrc_Xray	Source of the X ray coordinates
memb	Membership Flag: -999 is no data. Anything else between 0 and 100 is the real probability of membership. 100 means member according to a survey that doesn't give you a probability. • 200: Variable in CHS01 • 300:ONC: sources lightly absorbed with log NH < 22.0 cm-2; most of these are probably new low-mass members of the ONC. Several are concentrated within 0.5 arcmin around thetas1C Ori, while others are distributed across the ACIS field. • 301:OMC_1: deeply embedded or behind the cloud with log NH > 22.0 cm-2. They lie on the OMC 1 molecular

	core and are likely new members of the BN/KL young stellar cluster. • 302:OMC_1S: deeply embedded or behind the cloud with log NH > 22.0 cm-2. They lie on the OMC 1S molecular core. • 303:OMC_1N: deeply embedded or behind the cloud with log NH > 22.0 cm-2. They lie along the dense molecular filament running north from OMC 1 toward OMC 2/3. • 304: Embd/Bk: heavily absorbed ACIS sources which do not coincide with dense molecular cloud cores. Roughly 20 of the 51 of these are contaminants and the others are likely new PMS stars, perhaps embedded low-mass ONC members or somewhat older members of the star-forming cores. From COUP: Getman 2005: • 400: ONC • 401: OMC
membsrc	Source of the membership flag.
BINARYFLAG	Binarity Flag: • A= Component A, • B= component B, • Y=yes it is a binary, • N=no, it's not a binary, • SB = spectroscopic binary.
binarysrc	Source of the binarity flag.
umag, uerr, usrc	U band magnitude, error and source.
bmag, berr, bsrc	B band magnitude, error and source.
vmag, verr,vsrc	V band magnitude, error and source.
rmag, rerr, esrc	R band magnitude, error and source.
imag, ierr, isrc	I band magnitude, error and source.
jmag, jerr, jsrc	J band magnitude, error and source.
hmag, herr, hsrc	H band magnitude, error and source.
kmag, kerr, ksrc	K band magnitude, error and source.
lmag, lerr, lsrc	L band magnitude, error and source.
mmag, merr, msrc	M band magnitude, error and source.
nmag, nerr, nsrc	N band magnitude, error and source.
qmag, qerr, qsrc	Q band magnitude, error and source.

I1, eI1	IRAC [3.6] magnitude and error
I2, eI2	IRAC [4.5] magnitude and error
I3, eI3	IRAC [5.8] magnitude and error
I4, eI4	IRAC [8.0] magnitude and error
M1, eM1	MIPS 24 micron magnitude and error
SPITZERsrc	Source of the Spitzer (IRAC + MIPS) photometry
Loglx, LOGLXLIM, XRAYSRC	X ray Luminosity, Flag (>, <, or =), and source of the X ray information
av, ai	Visual extinction and I band extinction
spty, sptysrc	Spectral type and source for the spectral type
haeqw, hapos, HaProf, hasrc	H alpha equivalent width, position of the H alpha line, notes on the H alpha profile, and source of information on H alpha. Definition of HaProf codes: from Furesz and Tobin: • C = CTTS; • W = WTTS; • CW = rather CTTS, but could be WTTS; • WC = rather WTTS, but could be CTTS; • W+ = assymetry in line profile/wing: likley WTTS; • W- = assymetry in wings, but wings at low intensity: could be WTTS; • D = resolved or unresolved double gaussian profile, no excess H{alpha} emission (likley non-TTS); • CD = resolved or unresolved double gaussian profile, likely CTTS; • WD = resolved or unresolved double gaussian profile, likely WTTS; • R = obviously shifted H{alpha} absorption : high RV stars; • X = very wide H{alpha} absorption with nebular emissions; • CX = CTTS, with strange emission profiles; • AE = stellar absorption and nebular emission together; • NS = very strong nebular component component, no wings, no asymmetry; • NSC = like NS, but if intensity logscaled wide wings/assymetry is visible and suggest CTTS emission signature under the strong nebular component; • NSW = like NS, but if intensity logscaled narrow wings/assymetry is visible and suggest WTTS emission signature under the strong nebular component; • SAT = saturated, or neighbour saturated.

	and from Sicilia-Aguilar: • PC = P Cygni profile; (winds) • IPC = inverse P Cygni profile (infall); • SB2s = new double-lined binary; • nIR = star with near-IR excess in 2MASS; • NM = non-member from proper motions.
lieqw, lifwhm, lipos, li_src	Lithium equivalent width, FWHM, position of the lithium line and source for the lithium information.
Vsinilimit, vsini, vsinierr, vsinisrc	Rotation velocity: flag if vsini is an upper limit, vsini, error, and source.
Vrad, eVrad, VradSrc	Radial velocity, error, and source.
period_Optical	Optical orbital period.
psrc_Optical	Source of optical orbital period.
period_NIR	NIR orbital period.
psrc_NIR	Source of NIR orbital period.
period_Xray	Xray orbital period.
psrc_Xray	Source of Xray orbital period.
RangeI	Range of variation at I band
VarFlag	Variability flag: CHS01 has 6 flags (either a 0 or a 1); for each position a 1 means: • Flag1 - Variable on 16 nights common to entire area • Flag2 - Variable in March-April 2000 data • Flag3 - Long-term variability in 2000 February and/or 1998 March • Flag4 - Periodic variable • Flag5 - Eclipsing candidate • Flag6 - Selected as variable from subjective inspection of light curve From Feigelson 2002 there are the following variability flags: • Const. -- The source is approximately constant in all available observations (for weak sources this is not a strong constraint). • LT var.-- No variation is seen within an observation, but the average count rates in the 1999 October and 2000 April observations differ at a level of significance greater than 3 sigma. Note that most sources designated "Flare"

	or "Possible flare" also show long-term variation. • Pos fl. -- variation is seen within an observation, but with lower signal-to-noise ratio so that quantitative descriptions are not readily obtained. • Flare. -- highly significant variation on timescales of hours is present within one or both observations. A wide variety of flare morphologies are seen, e.g., there is no "typical" flare. From Ramirez04 there are the following flags: • v = Variable star; • f = Flarelike light curve; • p = Possible flare in the light curve; • s = Steady increase or decrease in the light curve; • c = Source confusion (see details in Section 4.1); • x = Source detected only in X-rays (see details in Section 4.2). From Rodriguez-Ledesma09 there are the following flags: • NV = non-variable • IV = irregular variable • PV = periodic variable • PPV = possible periodic variable • PES = possible eclipsing system
rmsJ	RMS at J band
rmsH	RMS at H band
rmsK	RMS at K band
Stetson	Stetson index (for JHK) from Carpenter et al. 2001.
AmpX	Amplitude of variations in X rays
Pchisq	Probability of the source being
VarSrc	Source of the variability information.