

Can we make a
"Contribute Detections"
button?

but leads
to a dedicated
instructional
page?
That page
then links
to this &
the form
entry pages,
and has detailed
instructions
on the
database
entry info.

[View Database](#)

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[Go to Admin](#)

File Upload Form Submitting Entries from a File

[Click here to download sample CSV](#)

[Download sample CSV](#)

Make symmetric the default
* assymetric the alternative

Alternatively, here you can download the sample for entries with symmetrical uncertainties (Negative uncertainty assumed equal to positive) if you have any assymetric uncertainties, use this template upload file instead.

[Download sample CSV for symmetrical](#)

uncertainties

Choose file No file chosen

Submit for Upload

[Back to Database](#)

space!

- Entry 4:
- Multiple possible lines identified within the submitted frequency precision. Please double check the species name and/or add additional digits of precision to the frequency, then resubmit. Here is the full error you may want to consider:
This frequency (337.0605132), also represented as this quantum number (3) for this species (C17O). This frequency (345.7959899), also represented as this quantum number (3) for this species (CO).
 - Please reenter file with appropriate values
^{submit} the file once corrected.
File not uploaded.

Species ()
() has a
transition ()
at a rest frequency
of () GHz.

In order to upload multiple detections from a file, you must use a CSV file with correct format. Please download one of the template files below (for symmetric or assymetric uncertainties). Files that do not match the required format will be automatically rejected. If your submission is rejected, please see the output warnings for possible corrections, and then resubmit. If you have further issues, please contact the database admin. All submissions will be manually approved before becoming publicly accessible.

Main Page The High-z FIR/radio Spectral Line Detection Database

This is the content for the main page.

[Add](#) [Create a New Galaxy](#) [Add a Line to an Existing Galaxy](#) [Enter Values Through a File](#) [Advanced Search](#)

Search

Database sorted by galaxy name

Galaxy (click on each galaxy name to view associated lines)

Name	Right Ascension	Declination	Lines per Species	Redshift	Classification
Cloverleaf	213.94267916666666	11.49545	('CO', 17)	2.5579	QSO_RQ
SMMJ14011+0252	210.27054166666667	2.8733611111111111	('CO', 3)	2.5652999999999997	SMM/QSO2
PSSJ2322+1944	350.5298375	19.739694444444446	('CO', 2)	4.1184	QSO_RQ

[Download All Galaxies as CSV](#) [Download All Galaxies and Lines as CSV](#)

(no lines)

Click on the galaxy's name to view its detected spectral lines.

Note that each galaxy's RA, Dec. and z are the mean values from all reported line detections in the database. To see contributing values, please download the relevant entries.

View?

can we round to 4 digits after the decimal?

is it possible to display in sexagesimal?
(ie: 12h 13m 4.675s etc)

This is a public database of all published detections of atomic and molecular spectral lines for galaxies at $z \geq 1$. In addition to searching for line detections based on your criteria (redshift range, position, etc) you are encouraged to add your own (or others') published detections to the database.

↑ We'll have to add later: "If you use this database in your paper, please cite [TBD] and reference the date of catalog download. We encourage you to cite the original papers of the detections as well! Citation information is supplied in the downloads."

Home Page

A Database for CO Line Emission Data

This is the content for the home page introduction to the database.

[Login to view and edit data](#)

Please click View Database to view, search, or download the database. You must create an account to submit new detections/make corrections.

do we have an obvious button for this?

User: admin

Developer profile name

Role: contributor, admin (I don't think there are others...)

Does this button exist for everyone, or just once you're logged in as an admin?

[Edit your profile](#)[Back to database](#)

Application

University: Yale-NUS

Website:

Email address: ?

To see lines' individual positions, please download.

(& add a "download line entries
for this galaxy" button)
& add a "submit a new detection" button

so much space?

Galaxy Details																		
ID	Name	Average R.A.			Average Dec.			Coordinate System	Edit	Delete	Lensed?	Lensing	Classification	Notes				
		Right Ascension	Declination	J2000	2.5579	I	L											
1	Cloverleaf	213.94267916666666	11.49545															
Lines in this Galaxy																		
115.2712018	CO	1.378	0.25	0.25	2.78	0.4	0.4	468.0	94.0	94.0	32.41232757845012	856.697447121559	IF	3.7	2.1	None	2011ApJ...739L..32RA VLA, no beam angle Update Line Information	
115.2712018	CO	1.358	0.065	0.065	2.72	0.12	0.12	470.0	27.0	27.0	32.399573275619765	245.87904841242727	None	SD	23.0	23.0	None	2011ApJ...739L..32RA GBT/Spectrometer, "This yields a typical beam size of a'>23'", no beam angle Update Line Information
115.2712018	CO	1.406	0.053	0.053	3.14	0.11	0.11	422.0	19.0	19.0	32.40321633777478	173.0649098829822	None	SD	23.0	23.0	None	2011ApJ...739L..32RA GBT/Spectrometer, "This yields a typical beam size of a'>23'", no beam angle Update Line Information
345.7959899	CO	11.1	1.1	1.1	29.0	4.0	4.0	359.0	36.0	36.0	97.18830519955031	983.355332163608	None	SD	None	None	None	1994Natur.371..586B 30m telescope, Single-dish number; flux unc derived by fit params in Fig.1 caption; suggests 15% unc., beam size and angle not found Update Line Information
345.7959899	CO	7.98	1.21	1.21	23.0	3.0	3.0	326.0	25.0	25.0	97.17464940283827	682.6938977296493	None	IF	8.6	7.1	22.0	1994Natur.371..586B IRAM IF, Interferometer number; flux unc derived by fit params in Fig.1 caption; suggests 15% unc. Update Line Information
345.7959899	CO	15.4	4.6	4.6	41.0	8.0	8.0	352.0	81.0	81.0	97.19103681947216	2212.6743254102826	None	IF	2.8	2.4	-67.0	1996ADIL...DW..01W BIMA, Flux unc derived from Fit values; no flux cal unc I had to calc. z from offset v, BIMA Update Line Information
345.7959899	CO	9.9	0.6	0.6	25.8	1.6	1.6	362.0	23.0	23.0	97.19923260062964	628.3962080656853	None	SD	None	None	None	1997ApJ...484..695B IRAM 30m, No flux cal unc., no beam size and angle Update Line Information
345.7959899	CO	13.2	0.2	0.2	30.0	1.7	1.7	416.0	6.0	6.0	97.19267586513165	163.90733006284427	None	IF	None	None	None	2003A&A...409L..41W IRAM IF, Best of the CO(3-2) detections; no flux cal unc suggested 10%, synthesized beams of 7.5''-4.4'' and 3.5''-1.7'' For the 3 mm and 1 mm bands respectively! I think it's the first one but I don't know for sure, no beam angle Update Line Information
461.0407682	CO	21.1	0.8	0.8	52.7	2.0	2.0	375.0	16.0	16.0	129.57717400591338	582.690128299461	None	SD	None	None	None	1997ApJ...484..695B IRAM 30m, No flux cal unc., no beam size and angle Update Line Information
576.2679305	CO	24.0	1.4	1.4	55.6	3.2	3.2	398.0	25.0	25.0	161.96400519955031	1138.027017984474	None	SD	None	None	None	1997ApJ...484..695B IRAM 30m, No flux cal unc., no beam size and angle Update Line Information
691.4730763	CO	37.0	8.1	8.1	None	None	None	None	None	None	194.3	None	None	SD	0.25	0.71	30.0	2009ApJ...705..112B C50, z from simultaneous fit to all lines; FWHMs assumed; suggests 15% flux cal unc., no peak values, beam size and angle for this line and 3 others obtained from 'inclined by 30°--'. The lens is formed with two galaxies of comparable mass at 0.25±0.04 and 0.71±0.04 from the line of sight, no unc for obs freq Update Line Information

So this may have gotten lost some place... But technically each line detection has a unique RA & Dec, & a galaxy's RA & Dec should be the mean of those values, dynamically updated like the redshift. We don't have to display those lines' positions on the website, but we do need to store them, and make them downloadable.

Galaxy Entry Form - Add a New Galaxy

Galaxy Name

Right Ascension

Declination

Coordinate System

J2000

ICRS

Is it gravitationally lensed?

Lensed

Unlensed

Either

Unknown

Classification

Notes

Submit

If you want to add a line to this galaxy, you must first click Submit to add the galaxy to the database. Then click the Add a New Line to this Galaxy button.

[Add Line to this Galaxy](#)

+New

Note that all entries will be cross matched w/ existing database entries to prevent duplication.

Fiducial position.

This is used for duplication checking.

Note that the database will store the RA.

↑ Dec. of the detection in the database

while the fiducial position is not stored.

Accepted formats: decimal degrees or

sexagesimal ($09h32m16.35s - 1d20'13.567''$).

no spaces, ex:

This should probably be a drop-down menu where people can be advised
"click shift to select all that apply" or something.

List should include:

- LBG (Lyman break galaxy)
- MS (Main Sequence galaxy)
- SMA (Submillimeter galaxy)
- DSFG (dusty star-forming galaxy)
- SB (starburst)
- AGN (contains a known active galactic nucleus)
- OBD (optically bright AGN)
- quasar (optical & radio bright AGN)
- RQ-AGN (radio quiet AGN)
- RL-AGN (radio loud AGN)
- RG (radio galaxy)
- B2K (B2K-sketched galaxy)

I think that's it...

Detected Frequency
(Either as redshift, z, or as observed frequency in GHz)

Does this update based on the selection above?
If not, change to: Observed frequency / redshift
& Observed frequency / redshift uncertainty

Telescope type used for detection

Axes FWHM in arcsec
Observed Beam Major (strongly recommend)

Axes FWHM in arcsec
Observed Beam Minor (strongly recommend)

Position Angle in degrees
Observed Beam Angle (strongly recommend)

Reference Citation (use ADS bibcode, re: _____)

Notes

Submit

[View Database](#) [Logout](#) [My Profile](#) [Go to Admin](#)

Advanced Search

Note that search parameters are combined with a strict "and", so leave unnecessary

Galaxy Name

Right Ascension min: Right Ascension max:

Declination min: Declination max:

Alternatively, you can search within a radius:

Centroid Right Ascension Centroid Declination deg arcmin arcsec

Redshift min: Redshift max: put under add label: Search Radius

Lensing Flag Gravitational lensing

+ Lensed
+ Unlensed
+ Either
+ Unknown
+ Any

Position
Coordinates may be decimal degrees or sexagesimal (ex: ---)
↑ see prev. examples

Search within a rectangular region

Here you can additionally sort galaxies that have at least one line that falls under the specified Line parameters.

Emitted Frequency from: **Emitted Frequency to:** Select Species

rest (GHz) min: **rest (GHz) max:** CO
Other
Either

Hold "Shift" to select multiple just list them all

Integrated Line Flux (Jy) min: **Integrated Line Flux (Jy) max:**

Peak Line Flux (Jy) min: **Peak Line Flux (Jy) max:**

Line FWHM (km s⁻¹) min: **Line FWHM (km s⁻¹) max:**

Line Width from: **Line Width to:**

Observed Line Frequency (GHz) min: **Observed Line Frequency (GHz) max:**

Telescope

Detection Type

Single Dish
Interferometric
Either

Observed Beam Major from: Observed Beam Major to: **FWHM (arcsec) min:** **FWHM (arcsec) max:**

Observed Beam Minor from: Observed Beam Minor to: add FWHM (arcsec) etc.

Reference Citation (use ADS bibcode, re: _____)

[Search for Galaxies](#) [Search for Lines](#)

Does 2 buttons make sense?
How do you search for lines w/o galaxies?
Maybe "Return list sorted by galaxy"
& "Return list sorted by line"
if that's anything still?

if just database, then remove? or is it editable? then keep & call it "Edit Galaxy" & "Edit Line"

Admin	Index	User	Roles	Galaxy	Line	Posts	Post	New Entries	New Edits
Submissions									
List (2)	Create	With selected	→ options? Edit/delete						Affiliation
	Email	Username	Password	Active	Confirmed At				University Website About Me
<input type="checkbox"/>	member@example.com	member	member	<input checked="" type="radio"/>	2021-11-17 08:34:29.443693				
<input type="checkbox"/>	admin@example.com	admin	admin	<input checked="" type="radio"/>	2021-11-17 08:34:29.451754	Yale-NUS			Developer

Do we collect proper names?

One of these is a Change log, right? Maybe change to "recent changes"?

Should we be able to see passwords?
Seems unsafe...
Maybe "send password reset" email?

what would we put there?

Admin	Index	User	Role	Galaxy	Line	Posts	Post	New Entries	New Edits
List (1)	Create	With selected							
	Name								
<input type="checkbox"/>	admin								

Hm, don't recall the functionality here...

These should not be editable values

Admin	Index	User	Role	Galaxy	Line	Posts	Post	New Entries	New Edits
List (3)	Create	With selected							
	Name	Is Similar to:	Is Edited	Right Ascension	Declination	Coordinate System	Redshift	Redshift Error	Lensing Flag
<input type="checkbox"/>	Cloverleaf		<input checked="" type="radio"/>	213.94267916666666	11.49545	J2000	2.5579	70.0	I QS
<input type="checkbox"/>	SMMJ1401+0252		<input checked="" type="radio"/>	210.27054166666667	2.8733611111111111	J2000	2.5652999999999997	79.99999999999999	I SN
<input type="checkbox"/>	PSSJ2322+1944			350.5298375	19.739694444444446	J2000	4.1184	92.00000000000001	I QS

Don't remember what this means...

options?

← options

	f_{em} (Hz)	Emitted Frequency	Species	S _{AV} (Jy km s ⁻¹)	+ $\sigma_{S_{AV}}$ <u>Integrated Line Flux</u>	- $\sigma_{S_{AV}}$ <u>Integrated Line Flux</u>	Speck (mJy)	+ σ_{speck} Peak Line Flux	- σ_{speck} Peak Line Flux	F _{FWHM} (km s ⁻¹)	+ $\sigma_{F_{FWHM}}$ Line Width Uncertainty	etc. <u>Line Width Uncertainty</u>	δ_{obs} (Hz)	Observed Line Frequency
□														
□	115.2712018	CO	1.378	0.25	0.25	2.78	0.4	0.4	468.0	94.0	94.0	32.4123275784501		
□	115.2712018	CO	1.358	0.065	0.065	2.72	0.12	0.12	470.0	27.0	27.0	32.3995732756197		
□	115.2712018	CO	1.406	0.053	0.053	3.14	0.11	0.11	422.0	19.0	19.0	32.4032163377741		
□	345.7959899	CO	11.1	1.1	1.1	29.0	4.0	4.0	359.0	36.0	36.0	97.1883051995503		
□	345.7959899	CO	7.98	1.21	1.21	23.0	3.0	3.0	326.0	25.0	25.0	97.1746494028382		
□	345.7959899	CO	15.4	4.6	4.6	41.0	8.0	8.0	352.0	81.0	81.0	97.1910368194721		
□	345.7959899	CO	9.9	0.6	0.6	25.8	1.6	1.6	362.0	23.0	23.0	97.1992326006296		

Just change column titles to be the short versions from prev. edits

options? ↑
↓ roll back/undo?
others?

↑ "Recent Changes"?
Galaxy ID?
Line ID?

Approved by * date stamp?

With selected - Change ID

List #	nbsp;>	PostID	Type of entry	ID of entry	About	User's email	Date and time
	<input type="checkbox"/>	23	New Line	21	<ul style="list-style-type: none"> SMMJ14011+0252 345.7959899 96.9920312745428 	admin@example.com	2021-11-17 09:03:19.997375
	<input type="checkbox"/>	24	New Line	22	<ul style="list-style-type: none"> SMMJ14011+0252 806.651806 226.26344450366048 	admin@example.com	2021-11-17 09:03:20.019856
	<input type="checkbox"/>	28	New Line	25	<ul style="list-style-type: none"> PSSJ2322+1944 115.2712018 22.517424949210813 	admin@example.com	2021-11-17 09:03:20.079134
	<input type="checkbox"/>	29	New Line	26	<ul style="list-style-type: none"> PSSJ2322+1944 230.538 45.034869410638585 	admin@example.com	2021-11-17 09:03:20.099719
	<input type="checkbox"/>	30	New Line	27	<ul style="list-style-type: none"> PSSJ2322+1944 461.0407682 90.0470250390625 	admin@example.com	2021-11-17 09:03:20.120342
	<input type="checkbox"/>	31	New Galaxy	4	<ul style="list-style-type: none"> PSSJ2322+1944 350.53020833333335 19.739466666666667 	admin@example.com	2021-11-17 09:03:20.130499
	<input type="checkbox"/>	32	New Line	28	<ul style="list-style-type: none"> PSSJ2322+1944 461.0407682 90.04878380437117 	admin@example.com	2021-11-17 09:03:20.146843
	<input type="checkbox"/>	33	New Line	29	<ul style="list-style-type: none"> PSSJ2322+1944 576.2679305 112.55452850641613 	admin@example.com	2021-11-17 09:03:20.164082
	<input type="checkbox"/>	34	New Galaxy	5	<ul style="list-style-type: none"> BR1202-0725N 181.346375 -7.709094444444444 	admin@example.com	2021-11-17 09:03:20.175634

↑
Can be info that is displayed
change depending on this info?

eg if "New Galaxy", display
Name, RA, Dec, redshift

if "New Line", display
Name, species, frost