# Subscans Table

The subscans table holds the most specific scientific metadata in the archive.

## Definition:

```
      Column      |       Type        | Collation | Nullable |                     Default
------------------+-------------------+-----------+----------+---------------------------------------------
 subscan_id       | integer           |           | not null | nextval('subscans_subscan_id_seq'::regclass)
 scan_id          | integer           |           | not null |
 file_id          | integer           |           |          |
 ost_subscan_id   | integer           |           |          |
 obstype          | character varying |           | not null |
 starttime        | double precision  |           | not null |
 endtime          | double precision  |           | not null |
 sourcename       | character varying |           | not null |
 sourcetype       | character varying |           | not null |
 ra               | double precision  |           | not null |
 dec              | double precision  |           | not null |
 exposure_time    | double precision  |           | not null |
 integration_time | double precision  |           | not null |
 receiver_id      | integer           |           | not null |
 backend          | character varying |           | not null |
 intent           | character varying |           |          |
 configuration_id | integer           |           | not null |
Indexes:
    "subscan_pk" PRIMARY KEY, btree (subscan_id)
Foreign-key constraints:
    "configurations_subscans_fk" FOREIGN KEY (configuration_id) REFERENCES configurations(configuration_id) ON
UPDATE CASCADE ON DELETE CASCADE
    "files_subscans_fk" FOREIGN KEY (file_id) REFERENCES files(file_id) ON UPDATE CASCADE ON DELETE CASCADE
    "receivers_subscans_fk" FOREIGN KEY (receiver_id) REFERENCES receivers(receiver_id)
    "scans_subscans_fk" FOREIGN KEY (scan_id) REFERENCES scans(scan_id) ON UPDATE CASCADE ON DELETE CASCADE
Referenced by:
    TABLE "subscan_intents" CONSTRAINT "subscans_scan_intents_fk" FOREIGN KEY (subscan_id) REFERENCES subscans
(subscan_id) ON UPDATE CASCADE ON DELETE CASCADE
    TABLE "subscan_data_descriptions" CONSTRAINT "subscans_subscan_data_descriptions_fk" FOREIGN KEY (subscan_id)
REFERENCES subscans(subscan_id)
```

## Columns:

**subscan_id:** an auto-generated id.

**scan_id:** foreign key linking subscans to scans table.

**file_id:** foreign key linking subscan to the file that holds the actual data.

**ost_subscan_id**:the id of this subscan in the Observation Scheduling Tool, if it exists.

**obstype:** the type of observation that generated this subscan, eg: "POINT", "TRACK", "OTHER".

**starttime** and **endtime:** the start and end time of the observation, in mjd.

**sourcename:** the radio source being observed,

**sourcetype:** the type of object.  in the current data, this is not very useful, as the values are "STAR" or "none".

**ra:** the central right ascension.  Units: Degrees

**dec:** the central declination.  Units: Degrees

**exposure_time:** the total exposure time of the observation.

**integration_time:** the temporal resolution.

**receiver_id:** theoretically the front-end receiver hardware that was used for the observation.  in practice, all values are 0.  Potential values are in receivers table.

**backend:** the back end hardware that processed the observation, eg: DCR, GUPPI

**intent:** a string containing multiple intent codes, eg: "OBSERVE_TARGET CALIBRATE_AMPLI CALIBRATE_FLUX CALIBRATE_PHASE"

**configuration_id:** the id of the configuration for this observation.  see configurations table for details.