

# NPRs SQL Notes

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## **Abstract**

This is my (NPR's) set of SQL notes. You will be able to find the latest version of these notes and indeed the .tex file at:  
[https://github.com/d80b2t/Research\\_Notes](https://github.com/d80b2t/Research_Notes).

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## 1 Real basics

## 2 Real basics

<http://skyserver.sdss.org/dr8/en/help/docs/realquery.asp>

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```
-- Determine area of sky targeted by v3_1_0 or later of the target
-- selection algorithm
-- Note that the "min" just happens to work, it is not robust to
-- changes in the min value.
-- (from Gordon Richards). This query also contains examples of
-- setting the output
-- precision of columns with STR.

select sum(area)
FROM Region
where regionid in (
select b.boxid
FROM region2box b JOIN tilinggeometry g on b.id = g.tilinggeometryid
where b.boxttype = 'SECTOR'
and b.regiontype = 'TIPRIMARY'
group by b.boxid
having min(g.targetversion) >= 'v3_1_0'
)

-- Extract all quasars and quasar candidates from that area

SELECT
dbo.fSDSS(p.objId) as oid,
p.objId,
str(p.ra,10,6) as ra,
str(p.dec,10,6) as dec,
dbo.fHMS(p.ra) as raHMS,
dbo.fDMS(p.dec) as decDMS,
str(s.z,6,4) as z,
r.area as regarea,
r.regionid,
ti.targetID,
seg.segmentid,
seg.photoVersion
-- Start with list of all DR7 targeted objects (BESTDR7..Target)
FROM Target AS t
-- Need the region info to restrict to >=v3_1_0
inner JOIN Region as r on t.regionid = r.regionid
-- Need targetobjid to get photometry. Must get this from
targetInfo table
inner JOIN TargetInfo as ti on t.targetid = ti.targetid
inner join TARGDR7..PhotoTag as p on ti.targetobjid = p.objid
-- Pull out spectral information
left outer join SpecObj as s on s.targetid = t.targetid
-- I want to know the photoVersion, so we need to join the next two
```

```

    tables
inner join TARGDR7..field as f on p.fieldid = f.fieldid
inner join TARGDR7..segment as seg on f.segmentid = seg.segmentid
WHERE
(
-- restrict objects to be in regions where target selection was
  >=v3_1_0
r.regionid in (
select b.boxid
FROM region2box b JOIN tilinggeometry g on b.id = g.tilinggeometryid
where b.boxttype = 'SECTOR'
and b.regiontype = 'TIPPRIMARY'
group by b.boxid
having min(g.targetversion) >= 'v3_1_0'
)
AND
-- primary objects only, since we are selecting from PhotoTag
( (p.mode = 1) AND ((p.status & 0x10) > 0) AND ((p.status & 0x2000)
  > 0) )
AND
-- quasar candidates only
((p.primTarget & 0x0000001f) > 0)
)
ORDER by p.ra

```

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