SQL Queries:

#standardSQL

--1) Overall temperature over time

SELECT date,

  DATE(

    DIV(date,10000),

    DIV(MOD(date,10000),100),

        MOD(date,100)

  ) as formatted\_date,

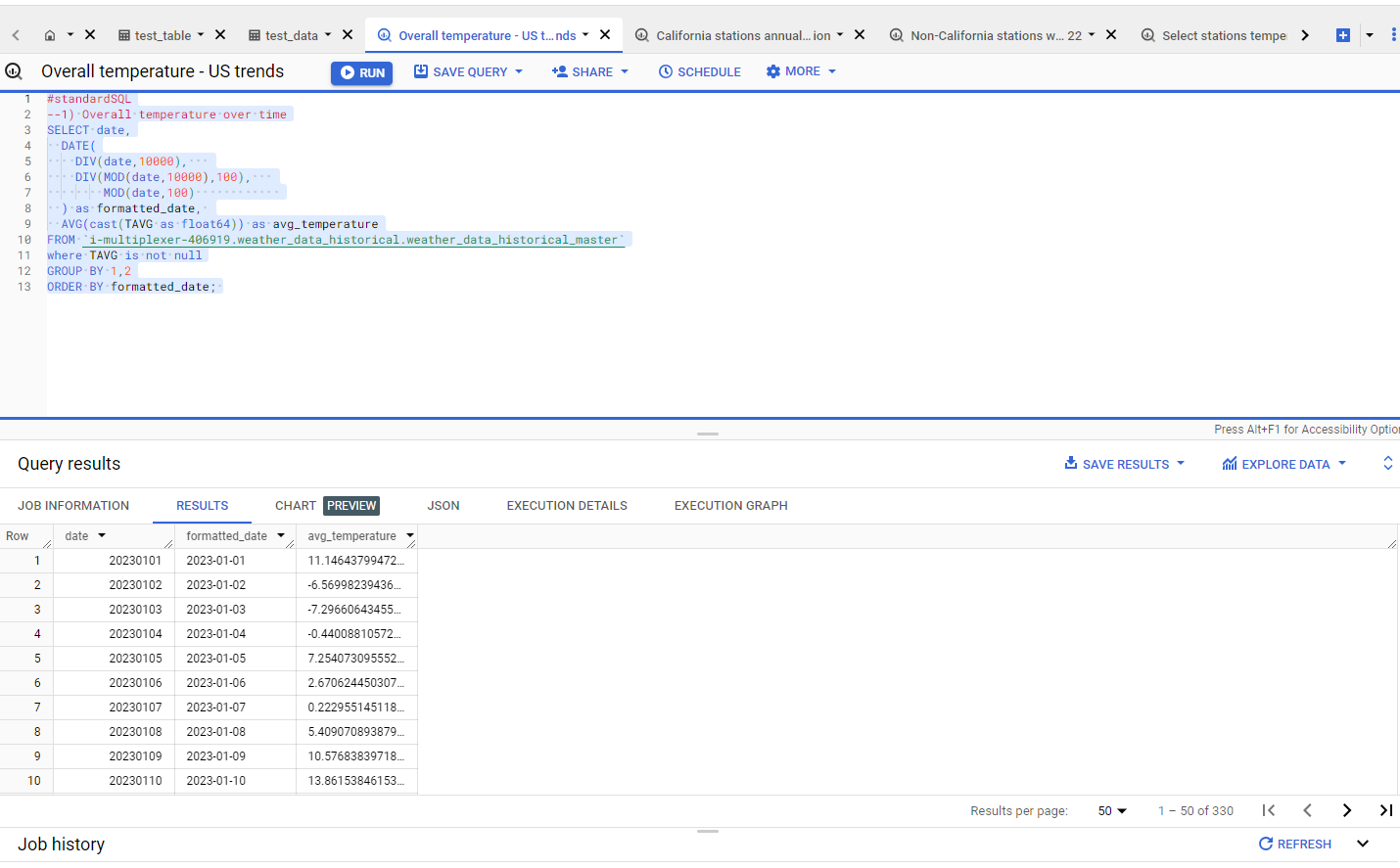
  AVG(cast(TAVG as float64)) as avg\_temperature

FROM `i-multiplexer-406919.weather\_data\_historical.weather\_data\_historical\_master`

where TAVG is not null

GROUP BY 1,2

ORDER BY formatted\_date;



#standardSQL

--2) Total precipitation across each station in California across year

select extract(year from date\_formatted) as year, station\_name, SUM(total\_precipitation) as total\_precipitation from

  (SELECT   DATE(

    DIV(date,10000),

    DIV(MOD(date,10000),100),

        MOD(date,100)

  ) as  date\_formatted, s.station\_name, SUM(coalesce(PRCP,0)) as total\_precipitation

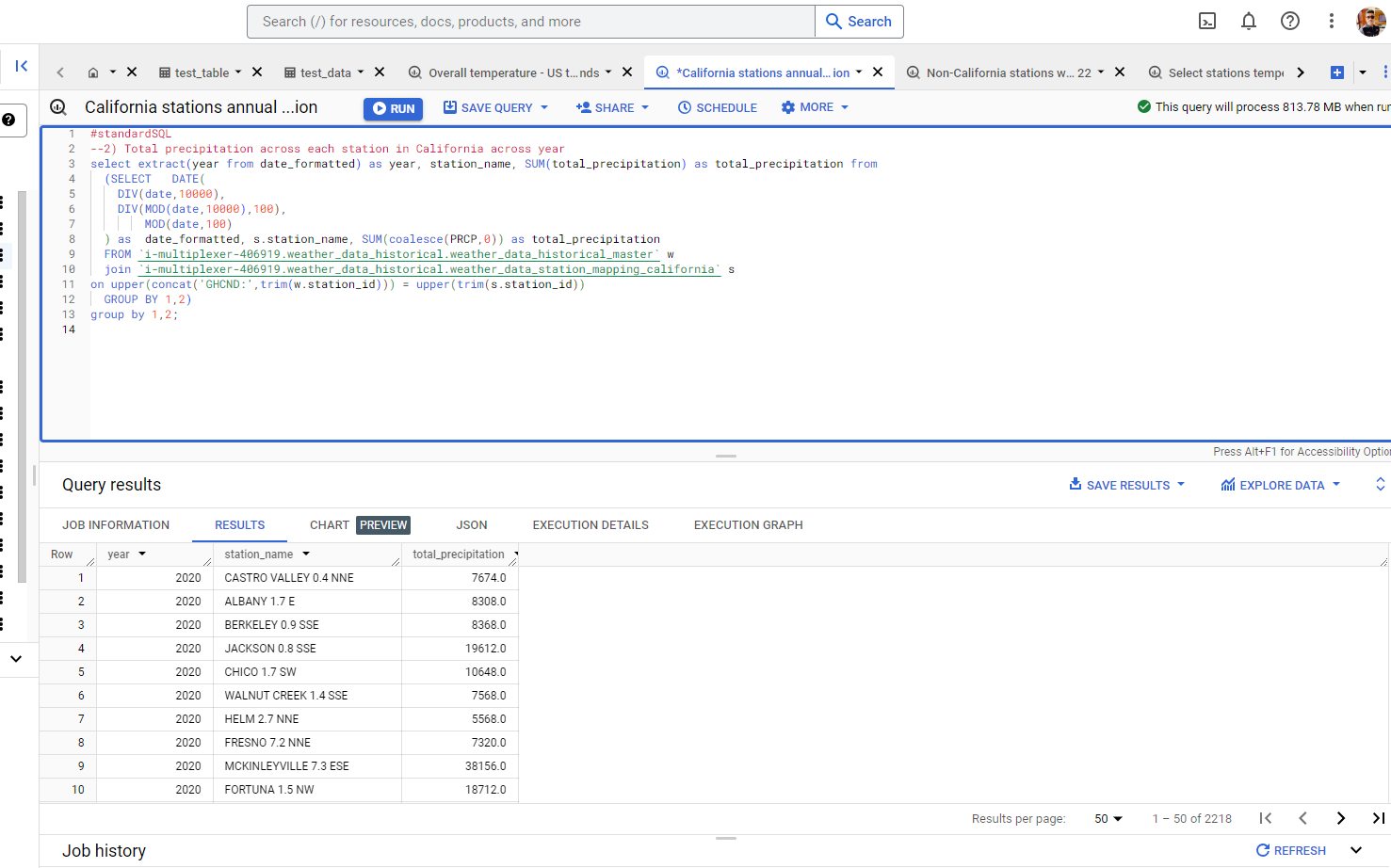
  FROM `i-multiplexer-406919.weather\_data\_historical.weather\_data\_historical\_master` w

  join `i-multiplexer-406919.weather\_data\_historical.weather\_data\_station\_mapping\_california` s

on upper(concat('GHCND:',trim(w.station\_id))) = upper(trim(s.station\_id))

  GROUP BY 1,2)

group by 1,2;



--3) Avg temperature of non California weather stations with reports of no snow in December for 2022

SELECT w.station\_id, AVG(cast (TAVG as FLOAT64)) as avg\_temperature

FROM `i-multiplexer-406919.weather\_data\_historical.weather\_data\_historical\_master` w

  left join `i-multiplexer-406919.weather\_data\_historical.weather\_data\_station\_mapping\_california` s

on upper(concat('GHCND:',trim(w.station\_id))) = upper(trim(s.station\_id))

where (coalesce(SNOW,0) = 0 or SNOW is null)

and s.station\_id is null

and DATE(

    DIV(date,10000),

    DIV(MOD(date,10000),100),

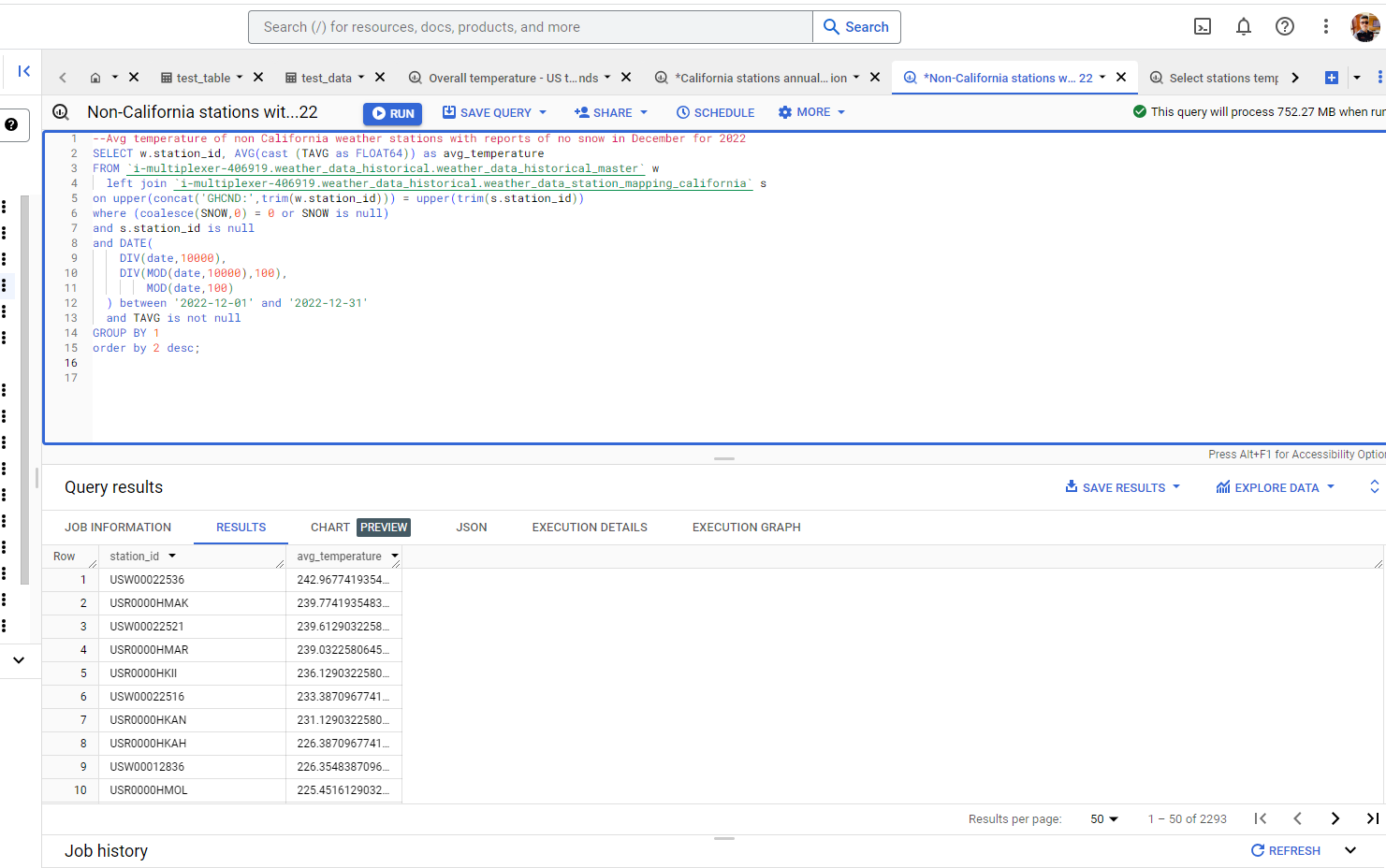
        MOD(date,100)

  ) between '2022-12-01' and '2022-12-31'

  and TAVG is not null

GROUP BY 1

order by 2 desc;



#standardSQL

--4) Total precipitation and avg temperature for select stations for the year 2022

select LEFT(station\_id,5) AS state\_code,

AVG(cast(TAVG as float64)) as avg\_temperature,

SUM(coalesce(cast(PRCP as float64),0) ) as total\_precipitation

FROM `i-multiplexer-406919.weather\_data\_historical.weather\_data\_historical\_master`

where DATE(

    DIV(date,10000),

    DIV(MOD(date,10000),100),

        MOD(date,100)

  ) between '2022-01-01' and '2022-12-31'

  and TAVG is not null

GROUP BY 1;

