

A possible niche for CoRoT/Exoplanet 2010-2013 A working hypothesis

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CoRoT Extension 2010-2013:

which strategy for pointing directions, length of runs, etc?

Several aspects already addressed:

- scientific interest (priveledge small planets? long periods? Increase statistics? etc)
- SNR,
- duration of repointing etc.

Here: comparison with Kepler

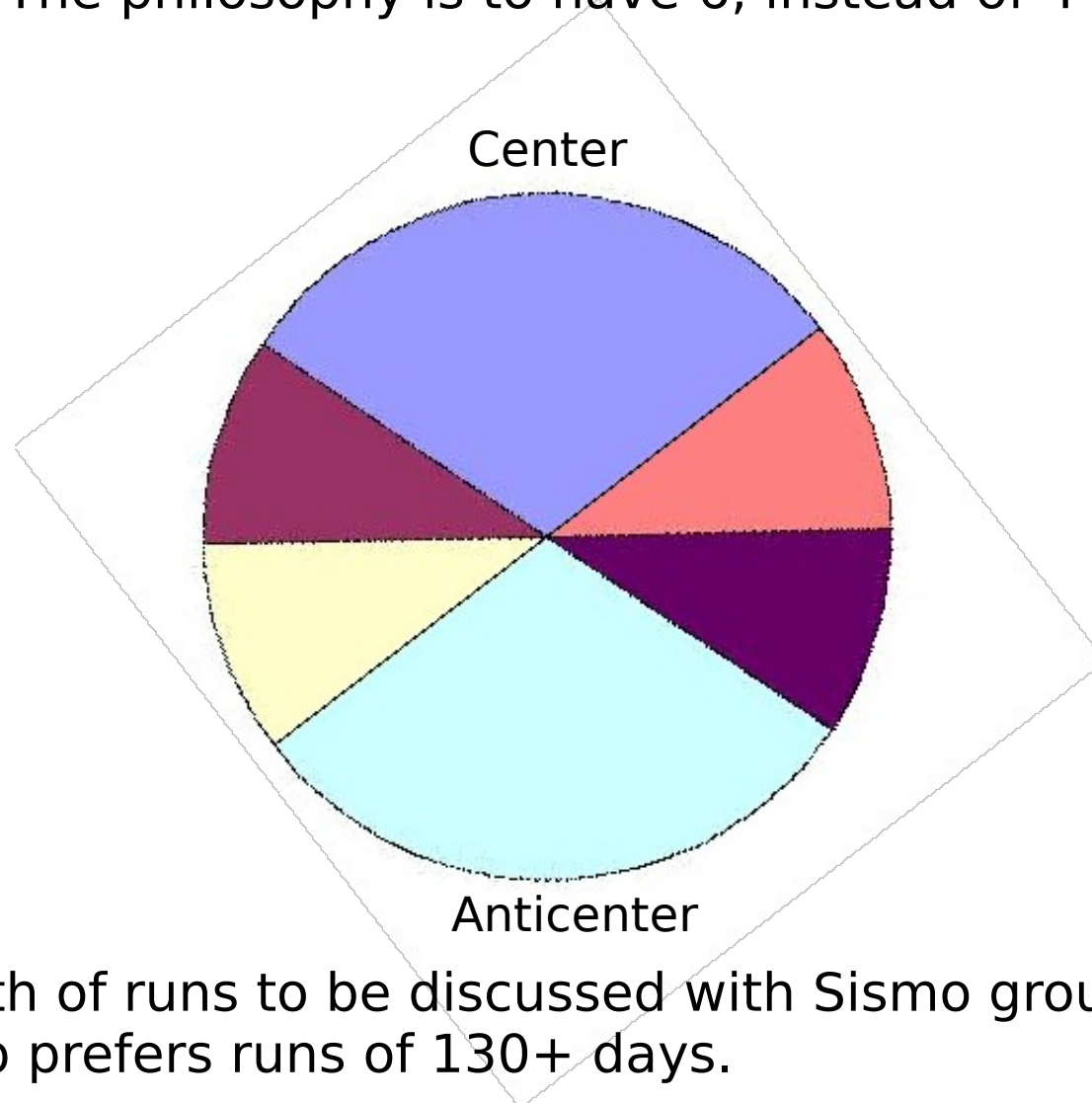
For planets with periods of weeks to months Kepler better than CoRoT (forgetting colour in CoRoT here)

2010-2013 two CoRoT niches:

- possibility of 12 more runs of <150 days each (« medium » runs), in addition to short runs

==> statistics of « hot » super-Earths (**total of 288,000 stars for the 2007-2013 period, compared to ~ 120,000** (max 220,000) **stars** ($m < 14$) **for Kepler, assuming 6000 stars per CCD**)

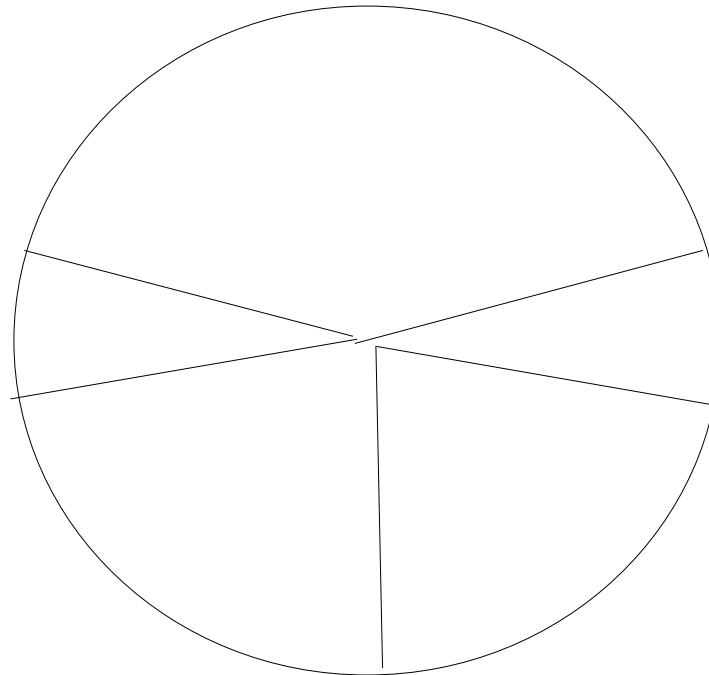
- The duration of short and medium runs can be adapted to each field. The philosophy is to have 6, instead of 4 runs/year:



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Center



Anticenter

It would result 252,000 stars for the whole CoRoT mission

2010-2013 two CoRoT niches:

- End with a (few) revisit of initial fields (with planets) to have a time span of 2013-2007 = 6 years (Kepler: 3.5, max. 5 yr ==> **at least one year more than Kepler**):
 - Long period planets
 - TTVs and TDVs: search for second perturbing planet, exomoons

Remark: long runs do not increase much the efficiency to detect short period planets

