Solstice optimizes thermal growing season

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Outline

1. New (recent) exciting findings! Solstice, "*celestial starting gun*"
   (Bad) consequences for climate change forecasting: plants are stuck?
   → But leave an open question: why solstice?

2. Plants need to balance transition to events at best moment vs end-of-season constraint, i.e. choose when to transition without full info
   → Need to optimize predictions!

3. (Thermal) GDD as a critical integrator
   Critical both to crops and wild plants
   Plants want to grow as much as possible during warm years, and benefit from warm years to set many flowers (flower differentiation?)

4. Given GDD is so important, plants should thus transition into events when they can best predict GDD_{total} within growing season – while still having enough time/energy *to do what they need to do*

5. We found this optimal point in Europe to be the solstice(ish)

   (a) If this true widely, then evolution towards an universal solstice trigger could make sense, right?

   (b) But our results also suggest we cannot teasee appart solstice and thermal optimum-predictability cue

6. Supporting this we found important variation over space (and time?)

7. This means:

   (a) critical need for experiment to disentangle daylength vs temp.

   (b) researcher need to more clearly test for (i) trends estimated at local scale across gradient and (ii) how they scale up to (sub)continental/global scales