



——Dot-roach analysis——

convergenId=v103993 dotRoachId0=v103994
darkRoachId0=v104095 mod4Id0=v104105

Arnaud Le Fur

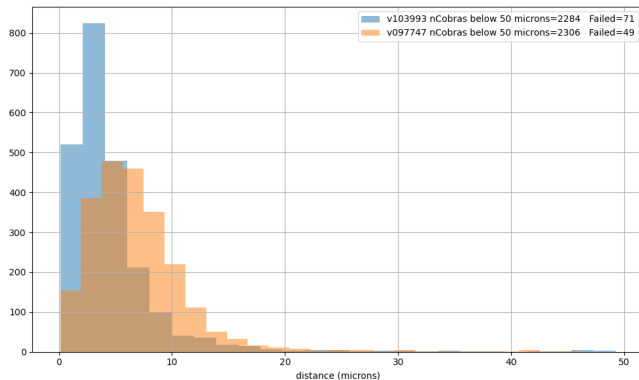
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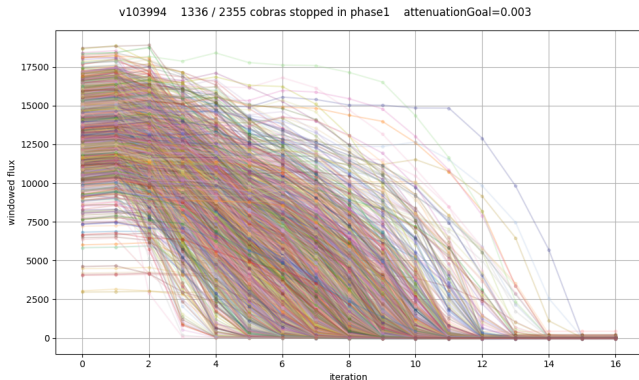
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Near-dot convergence results



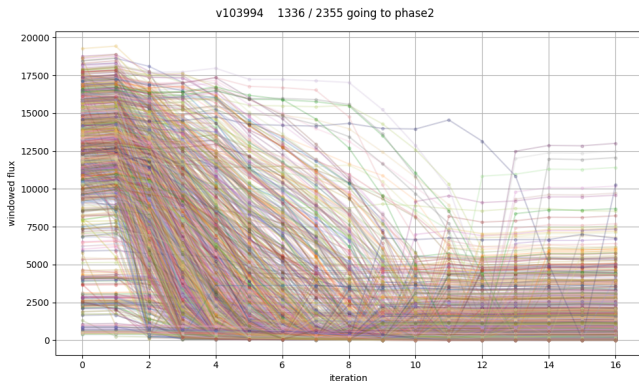
- ▶ There are more cobras below 10 microns
- ▶ There are more cobras with larger residuals

Cobras stopped in phase 1



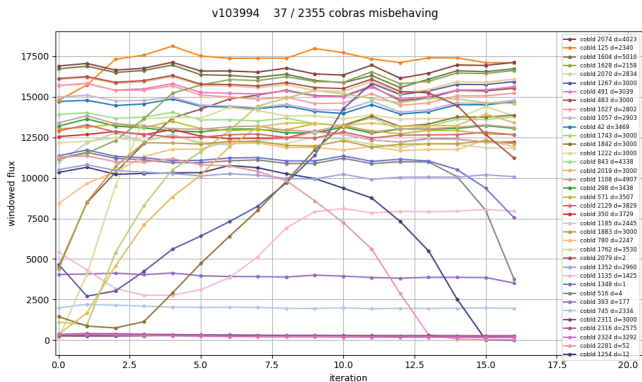
That's the cobras that reached a sufficient attenuation going through the dot moving phi in one direction.

Cobras going to phase 2



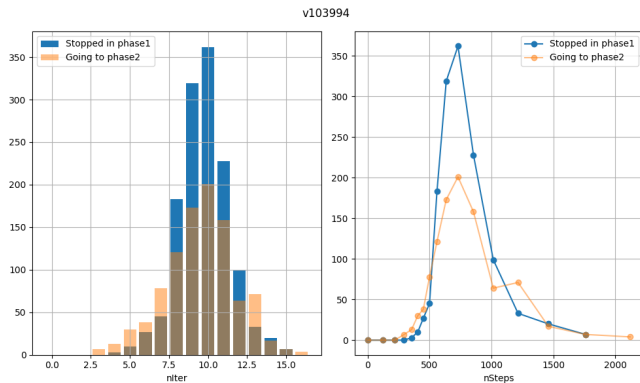
That's the cobras that have overshoot during phase 1, phi will go in the opposite direction in the next phase.

Cobras that did not behave as expected



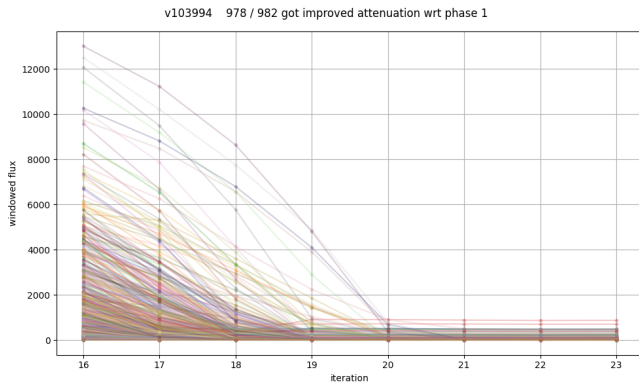
- ▶ 6 cobras started in the shadow of the dot.
- ▶ 15 cobras did not cross the dot.
- ▶ 15 cobras cross the dot partly.
- ▶ 1 cobras were going in but late.

How many iteration required to enter the dot

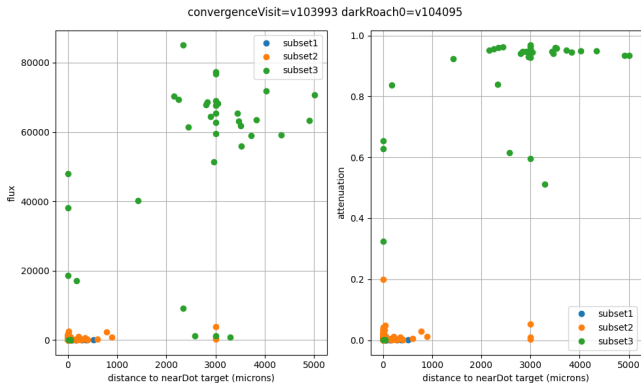


Right figure show you in terms of phi steps.

Cobras in phase 2

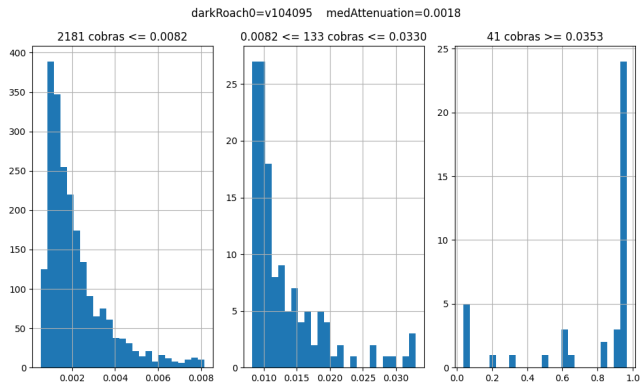


Flux in dark-roach vs distance in near-dot convergence



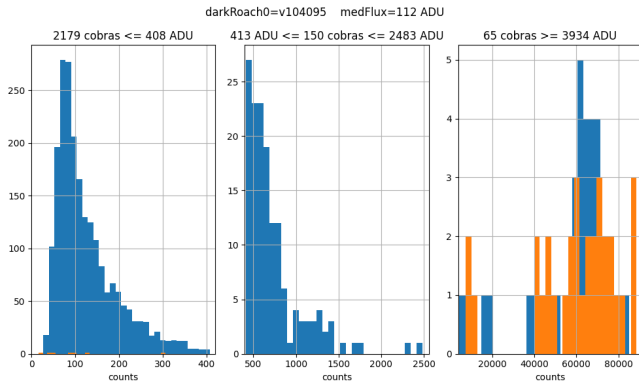
- ▶ We can observe that the tolerance to distance is quite high, problems start to appear when distance >0.7 mm.
- ▶ We can also see there are a few converged cobras that end up having a high flux.

Final Attenuation for working cobras



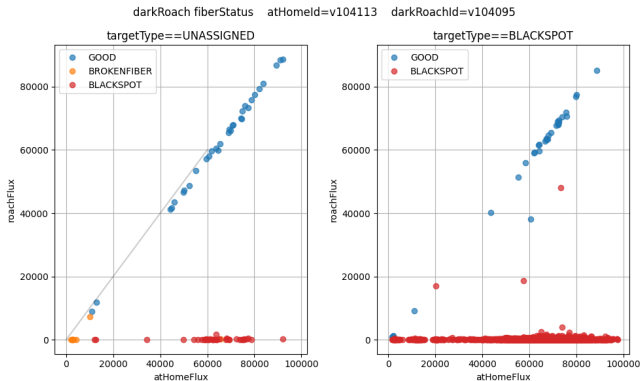
- ▶ Intrinsic problem due to the extraction (bright neighbours, scattered light) can bias the results.

Final flux for all cobras



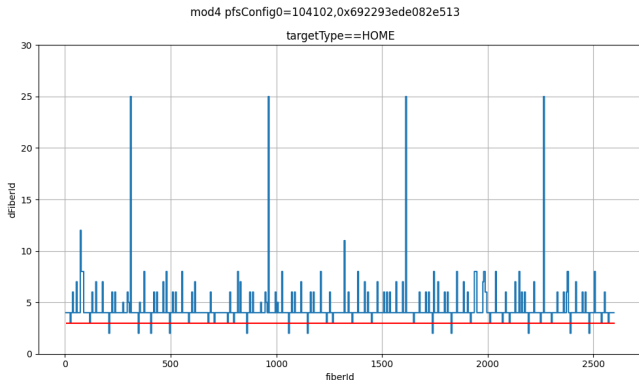
- ▶ Same conclusion as previous slide.
- ▶ intrinsic problem due to the extraction (bright neighbours, scattered light) can increase the apparent flux.

DarkRoach PfsConfig fiberStatus wrt targetType



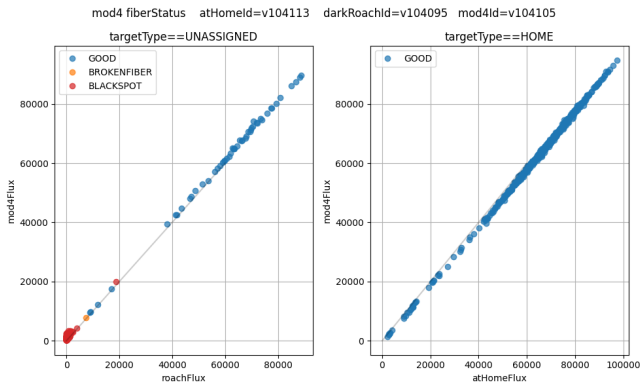
- ▶ Only one spectrograph targetType is set correctly, dotRoach was done SM by SM.
- ▶ FiberStatus looks mostly correct, 3 fibers with high sps flux is labelled BLACKSPOT.

Mod4 PfsDesign



- ▶ This show you $dFiberId(fiberId[i+1] - fiberId[i])$ for the fibers that are revealed.
- ▶ In the context of MOD4, it should be at least 4.
- ▶ The PfsDesign is incorrect ! 32 do not respect that rule.

Mod4 PfsConfig fiberStatus wrt targetType

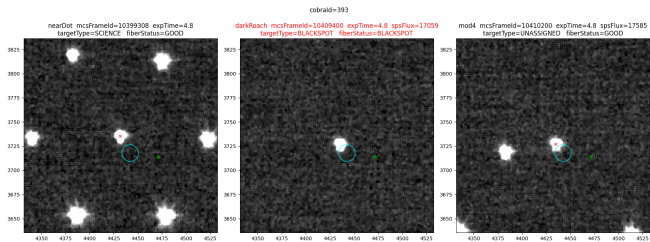


- ▶ TargetType is correct, 1 UNASSIGNED fibers was moved from dot.
- ▶ FiberStatus looks mostly correct, 2 fibers with high sps flux is labelled BLACKSPOT.

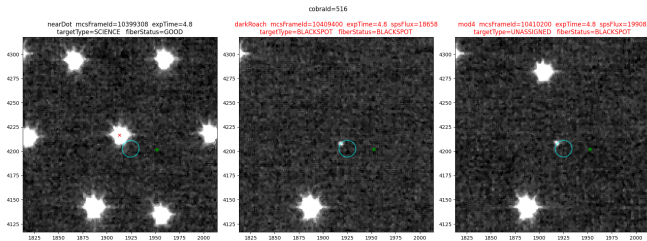
Conclusion

- ▶ In the context of dotRoach, convergence was worst than July.
- ▶ DotRoach worked OK
- ▶ DarkRoach pfsConfig.targetType is wrong, UNASSIGNED cobras are driven behind BLACKSPOT.
- ▶ DarkRoach pfsConfig.fiberStatus is correct, mcs is matching cobras correctly.
- ▶ Mod4 PfsDesign is wrong, misidentified cobras are driven back to HOME.
- ▶ Mod4 PfsConfig.targetType is correct, fps is driving only HOME cobras to HOME
- ▶ Mod4 PfsConfig.fiberStatus is correct, mcs is matching cobras correctly.

CobraId 393



CobraId 516



CobraId 2079

