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------Dot-roach analysis-----convergenceId=v103701 dotRoachId0=v103702 darkRoachId0=v103807 mod4Id0=v103836

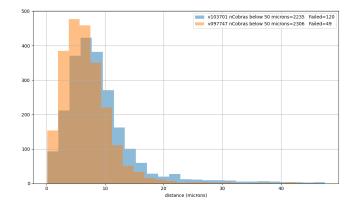
Arnaud Le Fur

auto 2024-02-15

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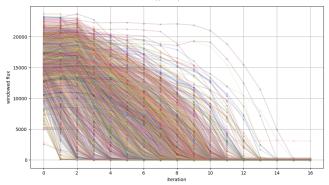
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Near-dot convergence results



Convergence results are worst than july.

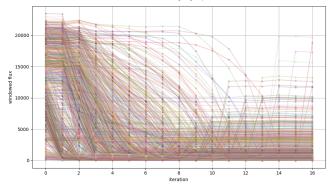
Cobras stopped in phase 1



v103702 1371 / 2355 cobras stopped in phase1 attenuationGoal=0.003

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

Cobras going to phase 2



v103702 1371 / 2355 going to phase2

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

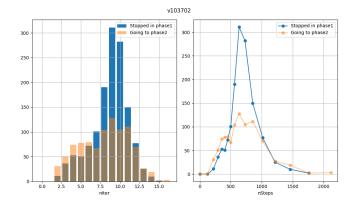
--- cobid 1730 d=3478 - cobid 148 d=1552 - cobid 68 d=3 - cobid 1228 d=1646 - cobid 1684 d=6 20000 - cohid 49 d=3748 cobid 843 d=4339 - cobid 1897 d=11 - cobid 571 d=3496 - cobid 77 d=2289 ---- cobid 2121 d=4 - cobid 1691 d=62 15000 cobid 541 du4 - cobid 1416 d=4101 ---- cobid 552 d=7 ndowed flux - cobid 892 d=6 - cobid 1477 d=1417 - cobid 732 d=3000 -- cobid 662 d=2060 - cobid 1325 d=9 10000 - cobid 2366 d=961 - cobid 2151 d=318 cobid 1365 d=11 - cobid 912 d=7 - cobid 2008 d=1036 cobid 2265 d=1360 5000 - cobid 1663 d=22 - cobid 516 d=7 ---- cobid 765 d=4 ---- cobid 750 d=9 ---- cohid 393 d=776 --- cobid 744 d=15 ---- cobid 747 d=136 cobid 615 d=1279 0.0 2.5 50 7.5 10.0 12.5 15.0 17.5 20.0 iteration

v103702 35 / 2355 cobras misbehaving

- ▶ 17 cobras started in the shadow of the dot.
- 7 Some cobras did not cross the dot.
- 8 cobras cross the dot partly.
- ▶ 3 cobras were going in but late.

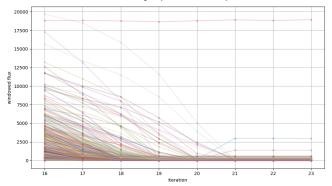
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How many iteration required to enter the dot



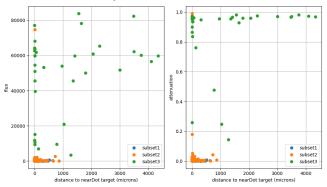
Right figure show you in terms of phi steps.

Cobras in phase 2



v103702 941 / 949 got improved attenuation wrt phase 1

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

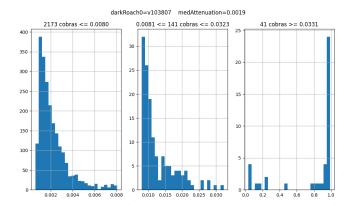


convergenceVisit=v103701 darkRoach0=v103807

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

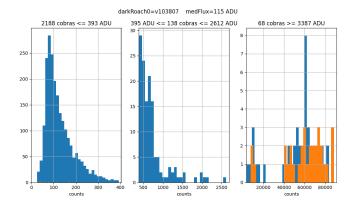
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Final Attenuation for working cobras



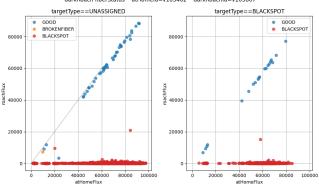
 Intrisic problem due to the extraction (bright neighbours, scattered light) can bias the results.

Final flux for all cobras



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

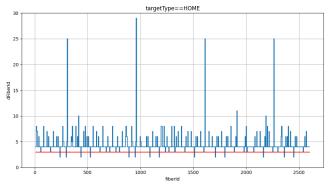
DarkRoach PfsConfig fiberStatus wrt targetType



darkRoach fiberStatus atHomeId=v103402 darkRoachId=v103807

- 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.

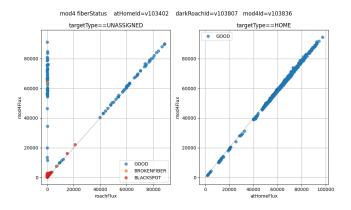
Mod4 PfsDesign



mod4 pfsConfig0=103835,0x140ef4462d6cc4aa

- This show you dFiberld(fiberld[i+1] fiberld[i]) for the fibers that are revealed.
- In the context of MOD4, it should be at least 4.
- ▶ The PfsDesign is incorrect ! 33 do not respect that rule.

Mod4 PfsConfig fiberStatus wrt targetType

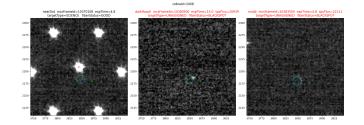


- TargetType is wrong, 56 UNASSIGNED fibers was moved from dot.
- FiberStatus looks mostly correct, 2 fibers with high sps flux is labelled BLACKSPOT.

Conclusion

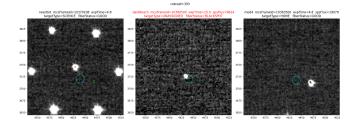
- Convergence was worst than July.
- DotRoach worked OK
- DarkRoach pfsConfig.targetType is wrong, UNASSIGNED cobras are driven behind BLACKSPOT.
- DarkRoach pfsConfig.fiberStatus is correct, mcs is matching cobras correctly.
- Mod4 PfsDesign is wrong, misindentified cobras are driven back to HOME.
- Mod4 PfsConfig.targetType is wrong, fps sent UNASSIGNED cobras to HOME
- Mod4 PfsConfig.fiberStatus is correct, mcs is matching cobras correctly.

Cobrald 2008



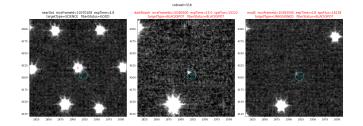
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Cobrald 393



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Cobrald 516



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