

Case Study

Learning Cases/Amblyopia

CSO 102 2021

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Learning Case/Amblyopia

Basic Premises

Learning difficulty. Usually small symmetric fields. Treat 90% as chronic with unless history suggests increased sympathetic activity. AO/MD 10/10 to start

Asymmetry with fields think TBI and Strabismus.

Asymmetry is a hallmark of amblyopia but not necessarily in the field. Chronic, Cause, ANS usually subdued. Treat on "red" side.

Learning Case/Amblyopia

Basic Premises

Amblyopia occurs in the brain. Usually significant asymmetry found in evaluation especially spatial. Dissimilar images cannot be fused leading to suppression to avoid confusion.

Ultimately to permanently improve amblyopia (visual acuity) symmetry must be provided to the brain that includes equality in spatial localization.

Syntonics will not be the only treatment but does need to come first.

Learning Case/Amblyopia

Discovering Asymmetry

Refraction

Ocular Alignment

Dynamic Retinoscopy

Tests of Localization – Cap test

VO Star

Kinetic Visual Fields

Amblyopia

Case Study – Chris P

History

05/07/2018, First eye examination

Age – 7.2, First grade,

Reason for Examination - Reading delays – 1 year

Development: Normal pregnancy/delivery, no developmental delays, history of falling off couch at one-year-old. Nail biting, perfectionist, stable demeanor.

Amblyopia

Case Study – Chris P

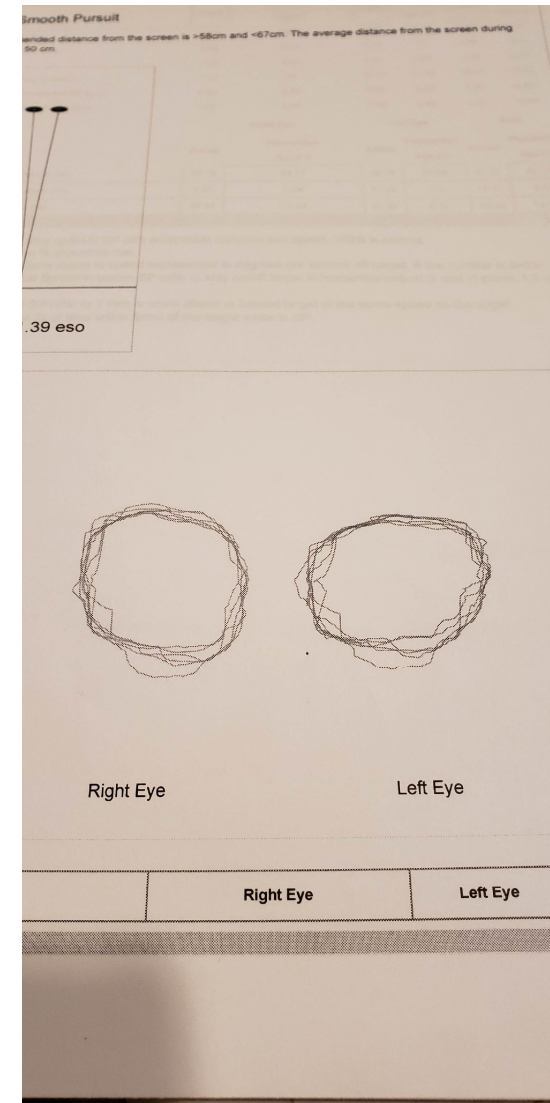
Diagnosis

1. High Exophoria with V pattern
2. Saccadic and Pursuit Dysfunction, moderate
3. Kinetic Visual Field Deficit, moderate
4. Anisometropia, Amblyopia, OD
5. Visual Processing Deficit
6. Visual-Spatial impairment

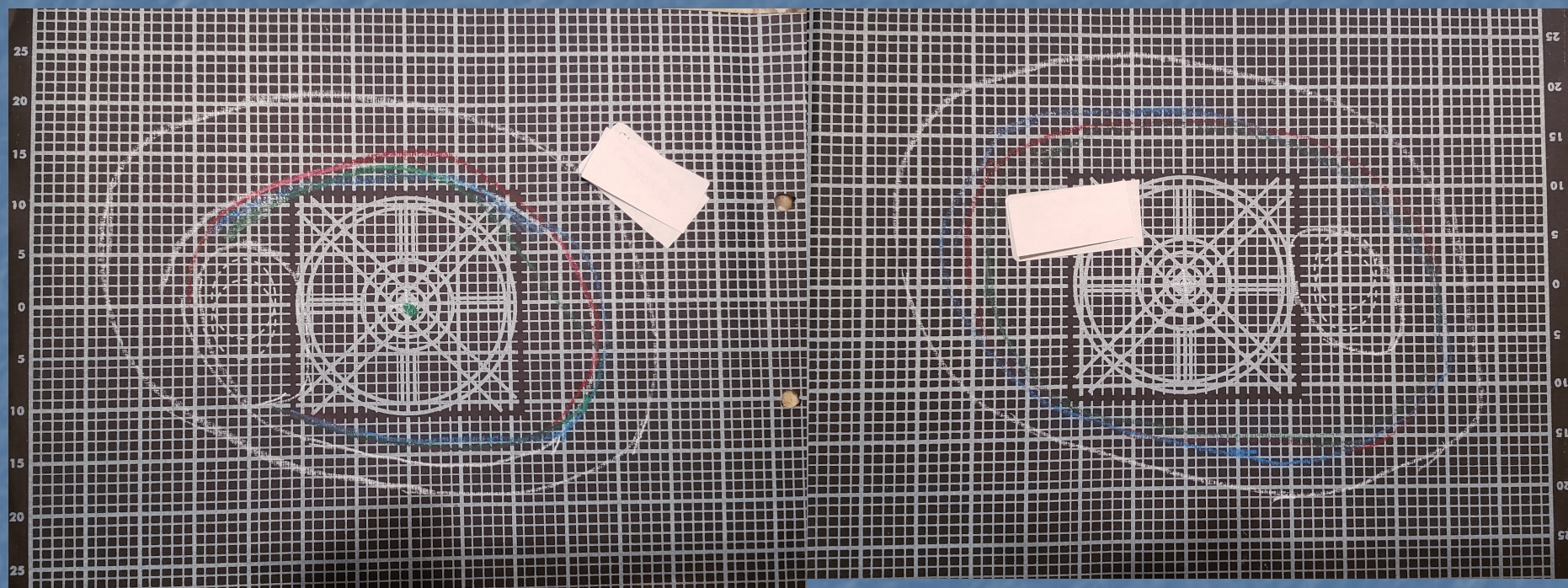
Case Study – Chris P

Pertinent Examination Results

Date	6/18/18
Acuity	Sc 20/200 Cc 20/70 20/20 20/20
Static	+375-075 180 Plano
Refraction	+200-050 180 Plano
Dynamic	+225-050 180 ½ in +025 ½ in
Alignment	2XP/15XP
Cap Test	1" O Target +175 ¼" O/I +025
Prescribed	+200-050 180 ½ in +025 ½ in
Other	DEM No Horiz Vertical 1yr above



Initial Fields



Syntonic Treatment Options

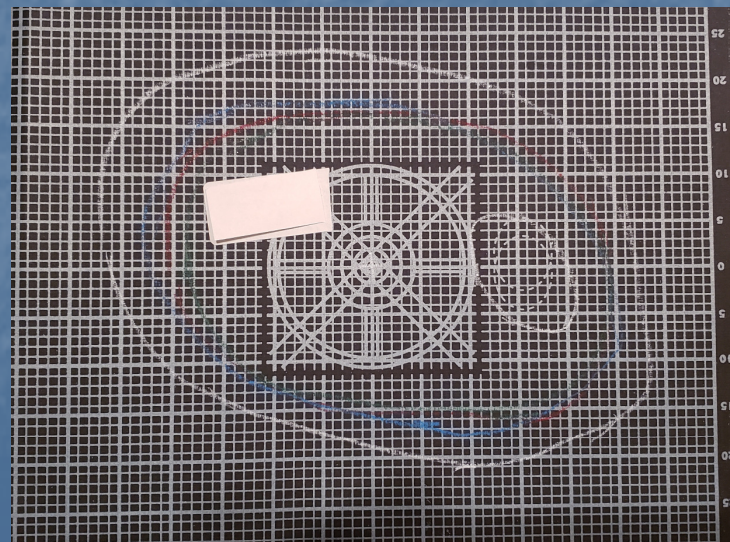
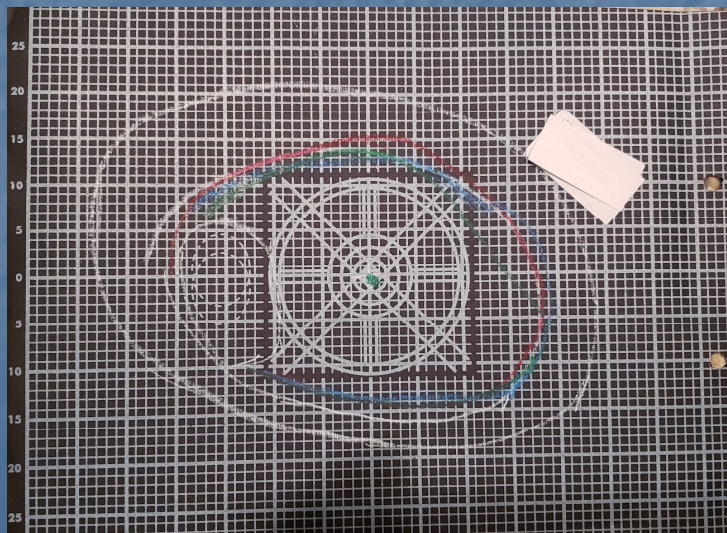
What are your thoughts?

What closed the field?

Chronic or Acute?

State of ANS?

Other Factors of History?

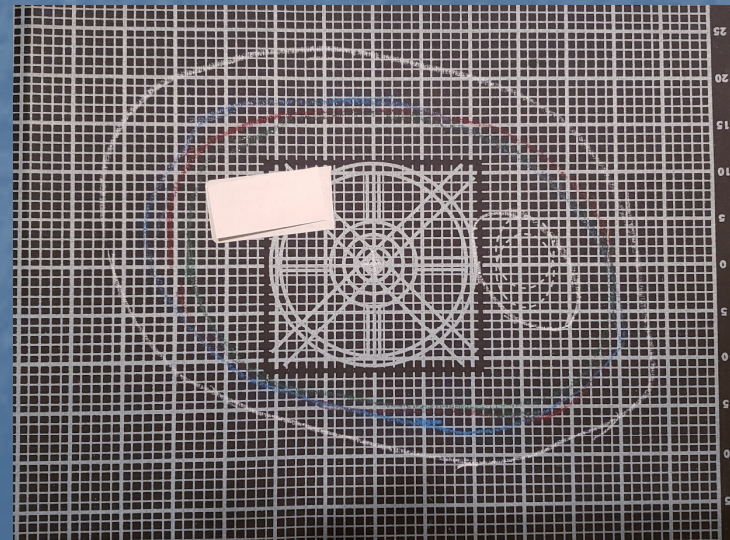
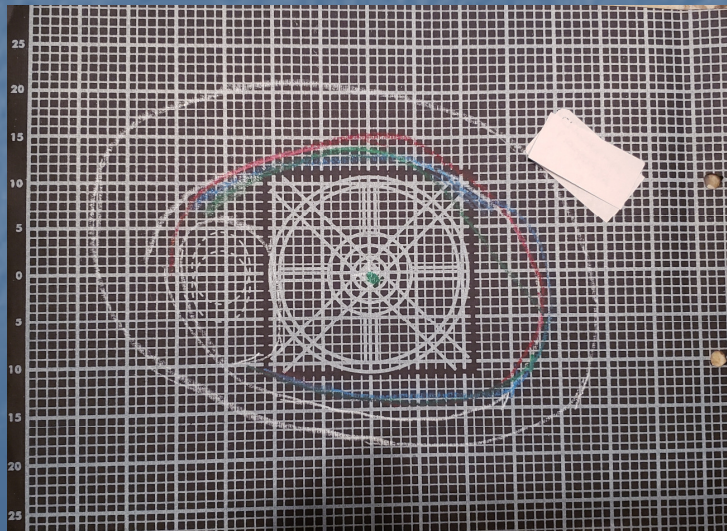


Treatment Chris P

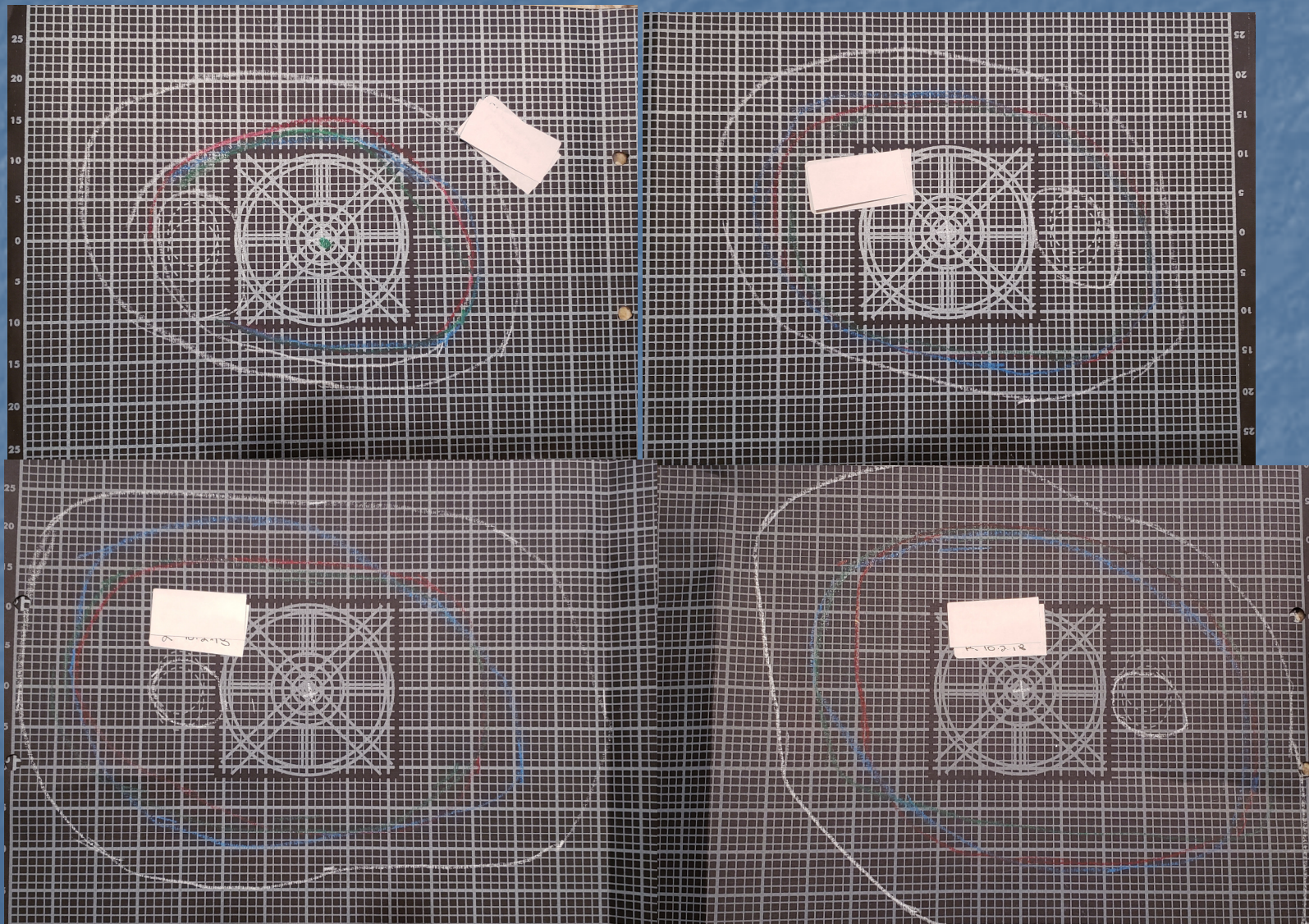
Home Therapy

Start 09/07/2018

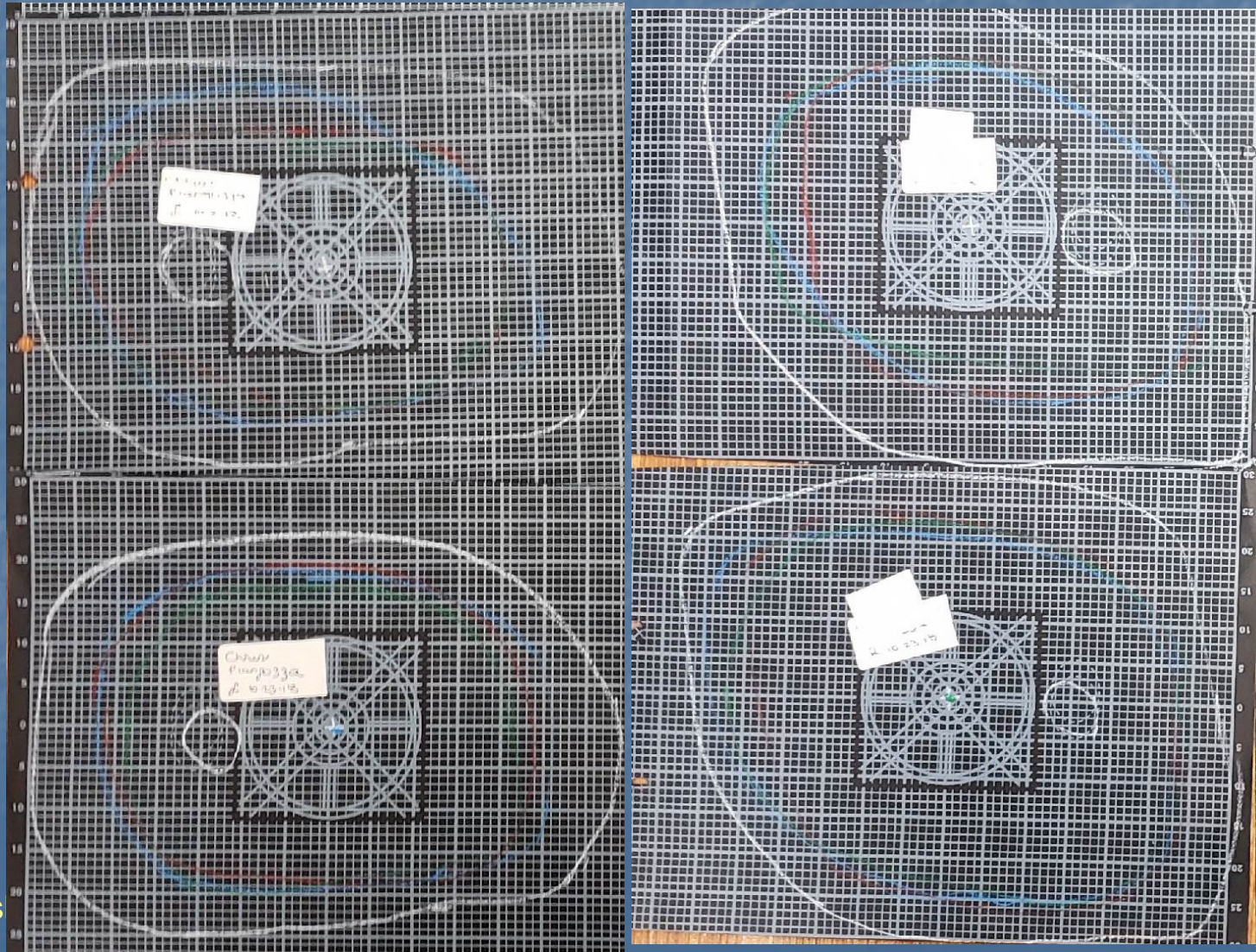
Filters AO 10 min MD 10 min



18 Days 10/02/2018



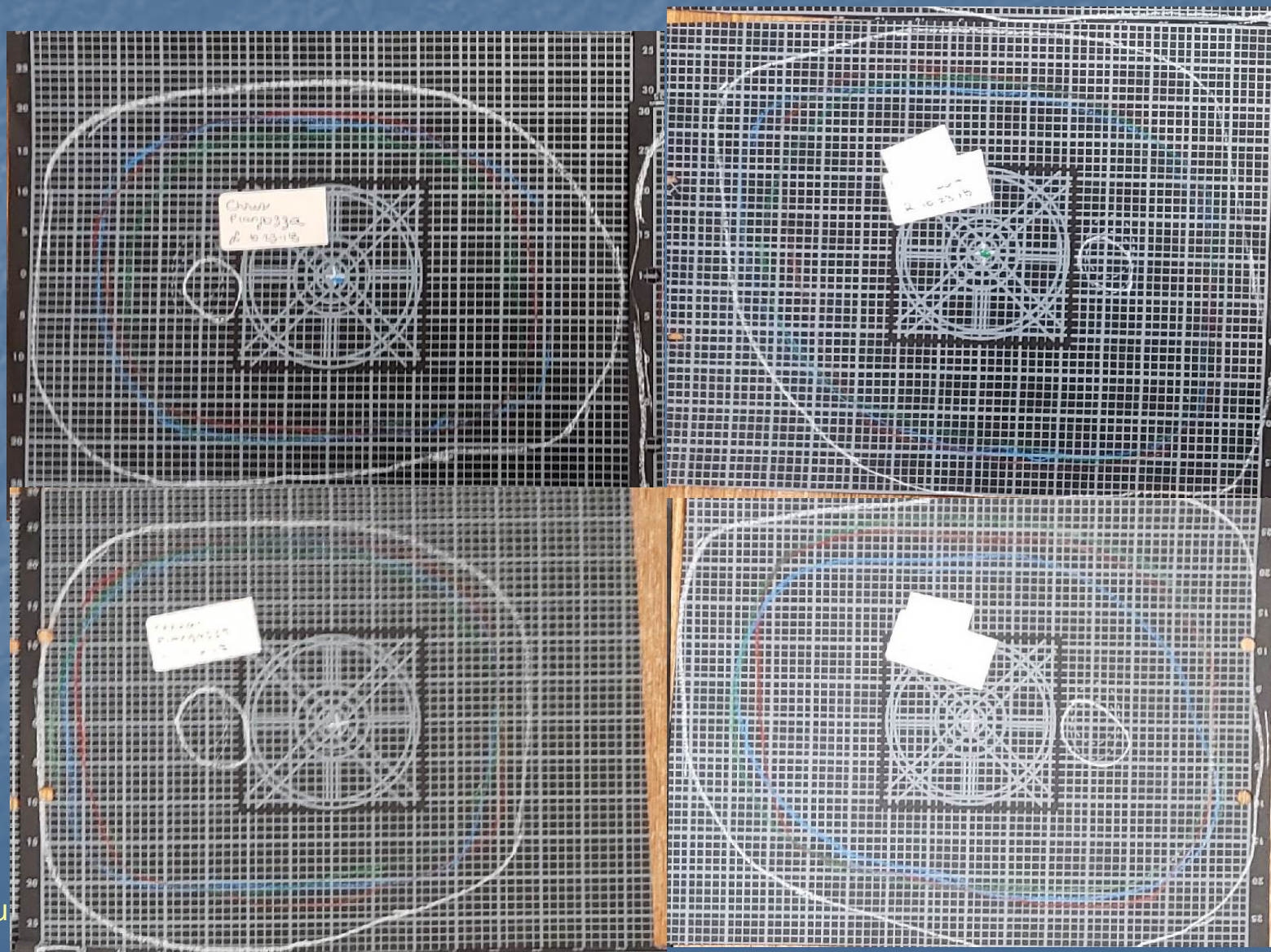
36 Days 10/23/2018



Fox/Pulas

50 Days 11/06/2018

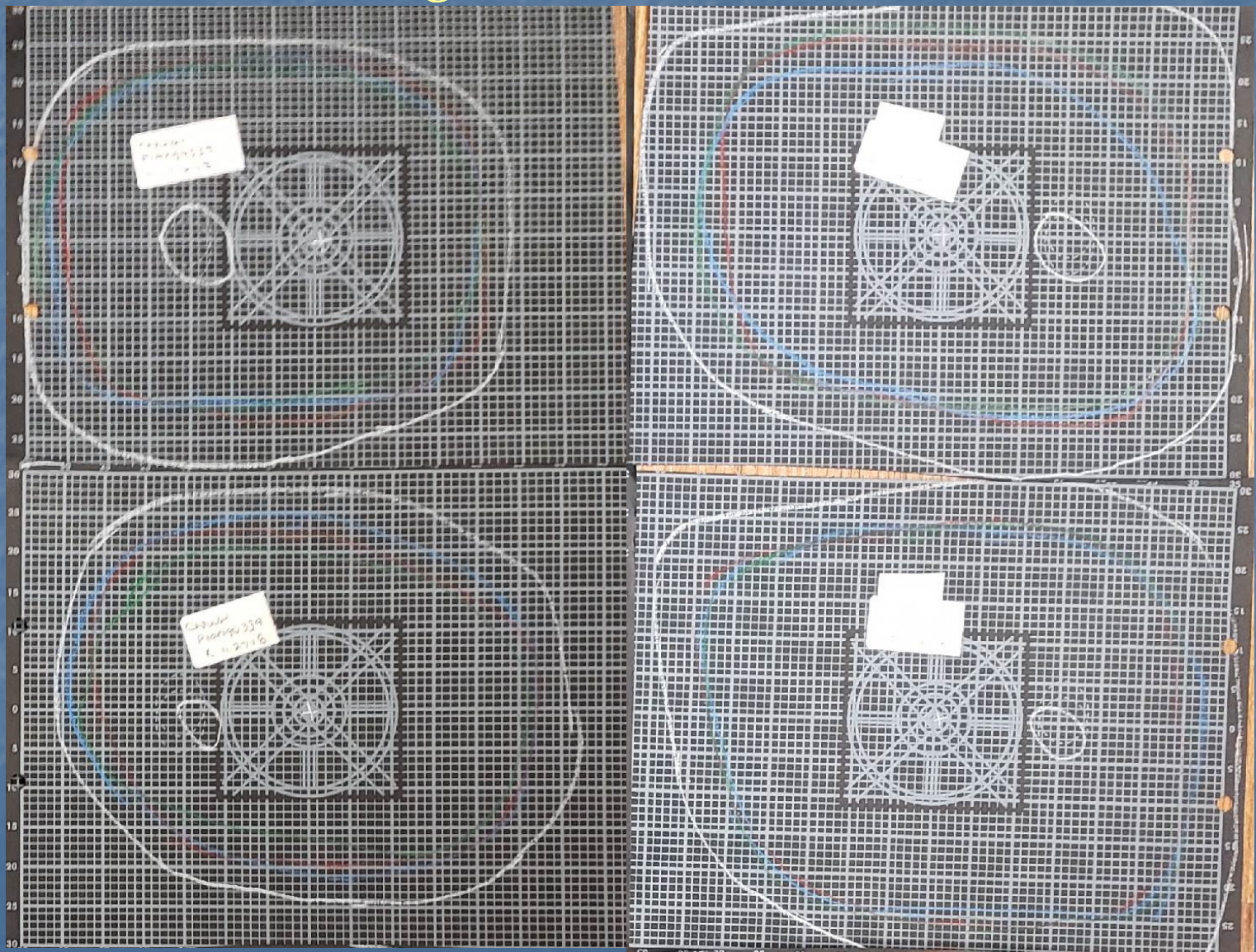
Change MU 20 min



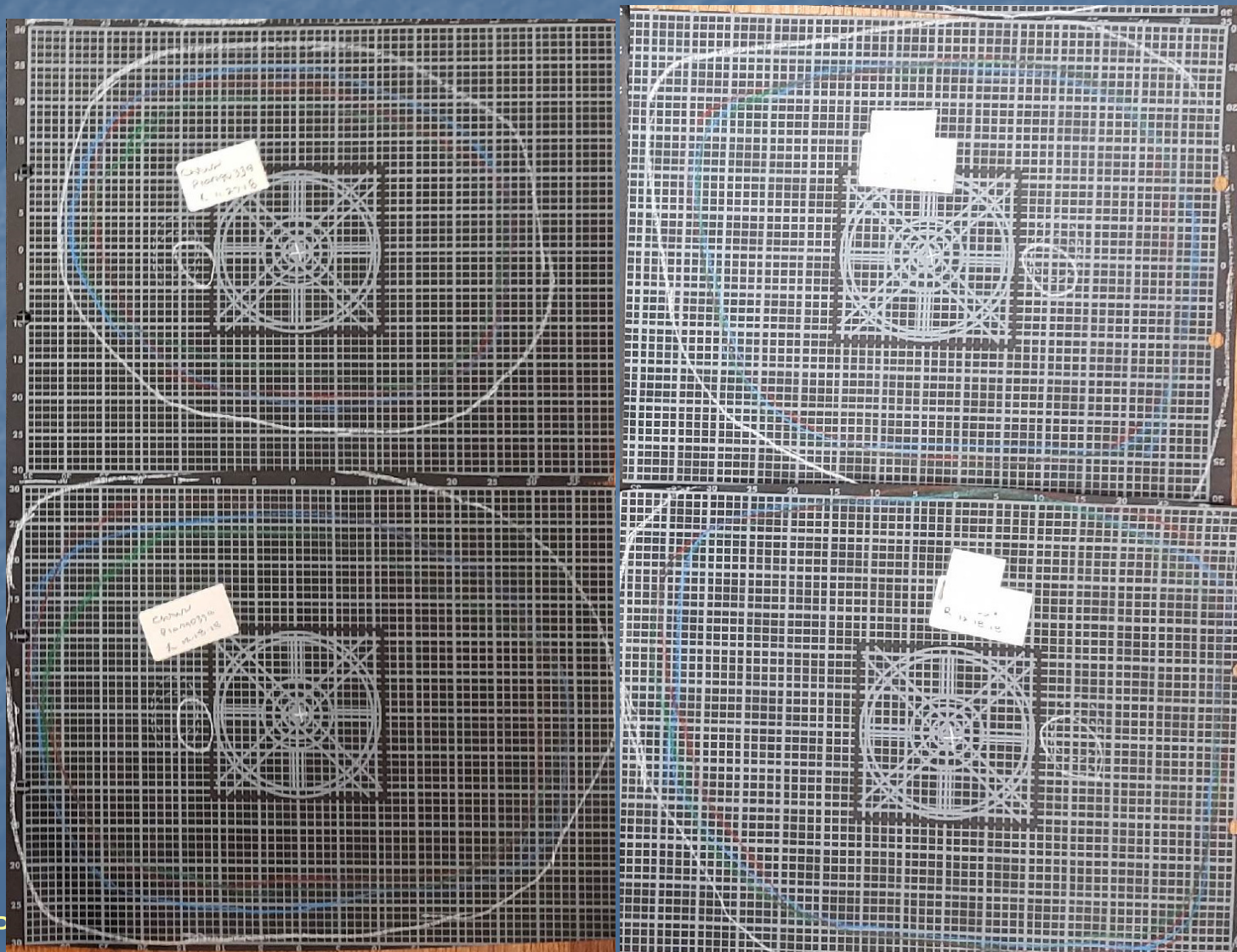
71 Days 11/27/2018

Blind Spot Better/Asymmetry

Change UO 10 MU 10



92 Days 12/18/2018



Fox/F

AO/MD 10/10

MU 20 min

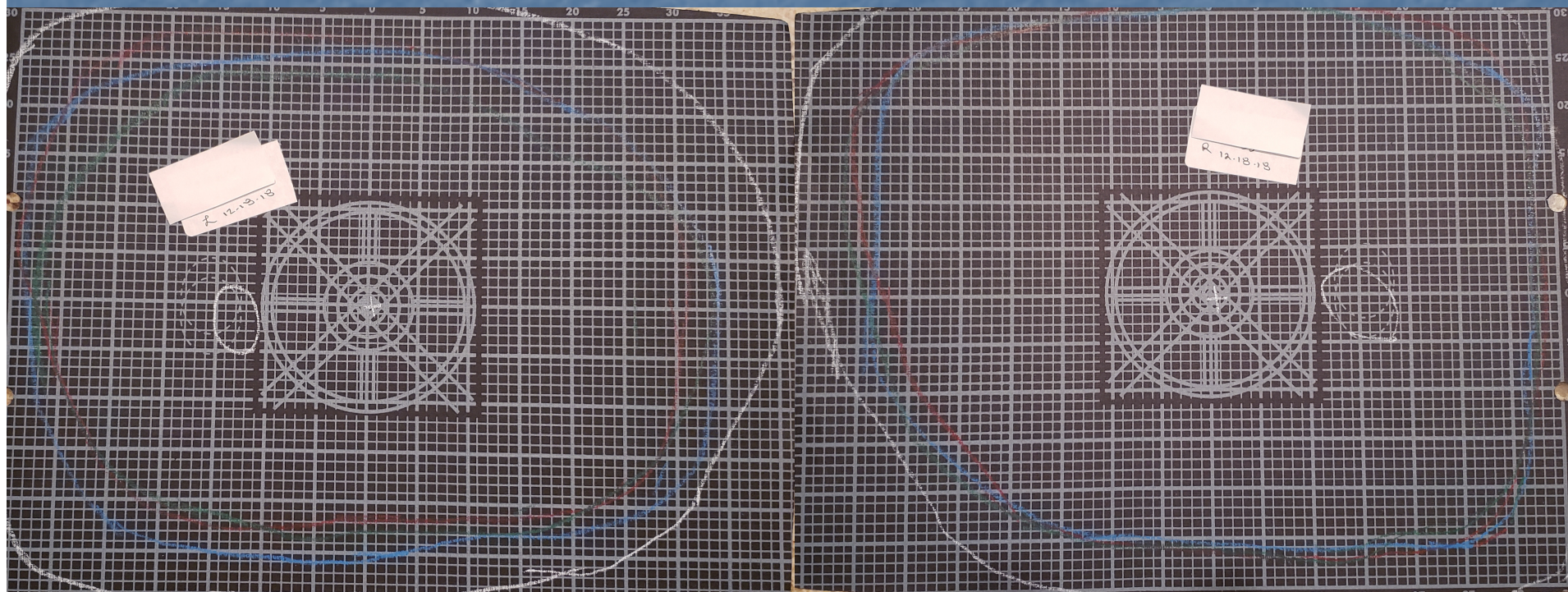
UO/MU

50 Days

21 Days

21 Days

Patience



Case Study – Chris P

Pertinent Examination Results

Date	5/07/18	Post FXT	05/28/19
Acuity	Sc 20/200 Cc 20/70 20/20 20/20		Sc 20/50 Cc 20/40 20/20-3 20/20
Static	+375-075 180 Plano		+350 Plano
Refraction	+200-050 180 Plano		+225-025 160 Plano
Dynamic	+225-050 180 ½ in +025 ½ in		+225-025 160 ½ in Plano ½ in
Alignment	2XP/15XP		3XP/9XP
Cap Test	1" O Target +175 ¼" O/I +025		½ " O Target Dyn Target
Prescribed	+200-050 180 ½ in +025 ½ in		+225-025 180 ½ in Plano ½ in
Other	DEM No Horiz Vertical 1yr above		DEM Horiz on age Vertical 1yr above

Case Study – Chris P

Pertinent Examination Results

Date	11/12/2019
	Not using Rx 2mo
Acuity	Sc 20/250 Cc 20/40 20/20 20/20
Static	+375-025 180 -050
Refraction	+225-050 160 Plano
Dynamic	+225-050 180 ½ in Plano ½ in
Alignment	
Cap Test	On Target w/Rx
Prescribed	No Change – Use Rx Suggest CL
Other	VO Star

Case Study – Chris P

Pertinent Examination Results

Date	11/12/2019	02/13/2020	06/23/2020
	Not using Rx 2mo	Using Rx	
Acuity	Sc 20/250 Cc 20/40 20/20 20/20	Sc 20/70 Cc 20/30+ 20/20 20/20	Sc 20/50 Cc 20/30+ 20/20 20/20
Static	+375-025 180 -050		
Refraction	+225-050 160 Plano		
Dynamic	+225-050 180 ½ in Plano ½ in	No Change	+250-050 180 ½ in Plano
Alignment			
Cap Test	On Target w/Rx	On Target Sc OnTarget Sc	On Target OU
Prescribed	No Change – Use Rx	No Change	No Change
Other	VO Star	VEP	VO Star

Case Study – Chris P

Pertinent Examination Results

Date	10/20/2020	11/03/2020
Acuity	Sc 20/40-2 Cc 20/30+ 20/20 20/20	Cc 20/30+ 20/20
Static	+325-050 180 +050-025 180	+375-075 180 +025-050 180
Refraction	+250-050 180 +025-025 180	+300-075 180 +025-050 180
Dynamic	+275-050 180 ½ in +025 ½ in	+300-050 180 ½ in +025-025 180 ½ in
Alignment	3XP/14XP	
Cap Test	+275-025 180 +025	+275-050 180 +025-025 180
Prescribed		Rx + VT
Other	VO Star	VO Star