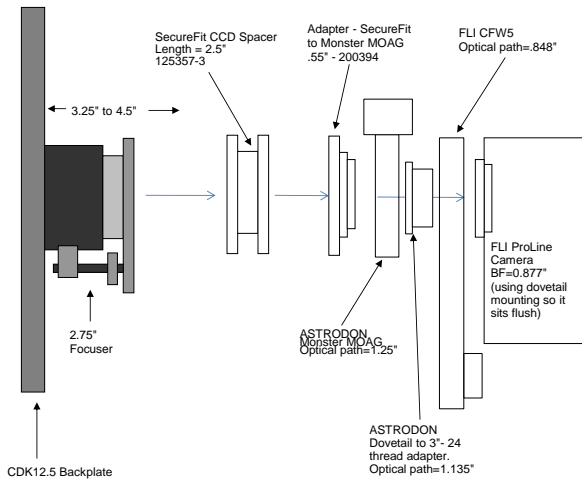


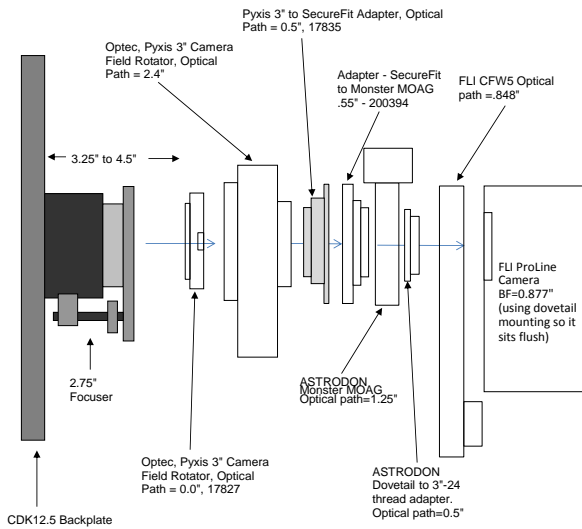
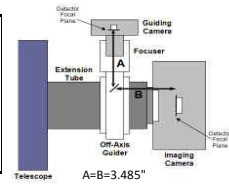
CDK12.5 - OPTICAL TRAIN: for FINGERLAKES PROLINE CAMERA AND FILTERWHEEL

Distance to Focuser Mounting Surface

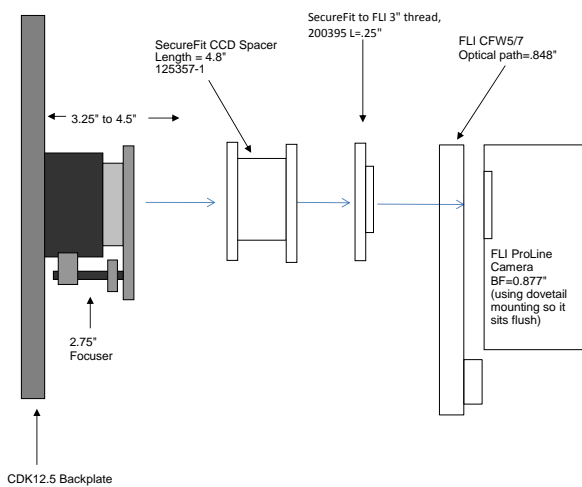
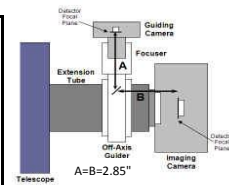
10.445



FLI Proline, CFW5, and MonsterMOAG	10.445 remaining BF	
2.75" Focuser (racked in)	3.25	7.195
Focus position (0 to 1.3")	0.035	
SecureFit CCD Spacer - 125357-3	2.5	4.66
Adapter SecureFit to Monster MOAG - 200394	0.55	4.11
Monster MOAG - MMOAG	1.25	2.86
AstroDon Adapter 3" -24 (MMOAG-3-L)	1.135	1.725
FLI CFW5 Filter Wheel	0.848	0.877
FLI Proline Camera Body	0.877	0



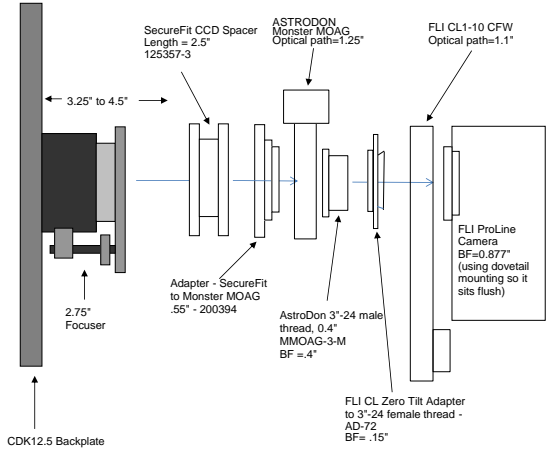
FLI Proline, CFW5, Monster MOAG, Pyxis	10.445 remaining BF	
2.75" Focuser (racked in)	3.25	7.195
Focus position (0 to 1.3")	0.27	
PW 12.5 to Optec-3600 dovetail adapter - 17827	0	6.925
Optec Pyxis 3" Camera Rotator	2.4	4.525
Optec Pyxis 3" to SecureFit Adapter - 17835	0.5	4.025
Adapter SecureFit to Monster MOAG - 200394	0.55	3.475
Monster MOAG - MMOAG	1.25	2.225
AstroDon Adapter to 3" -24 thread, .5" long	0.5	1.725
FLI CFW5 Filter Wheel	0.848	0.877
FLI Proline Camera Body	0.877	0



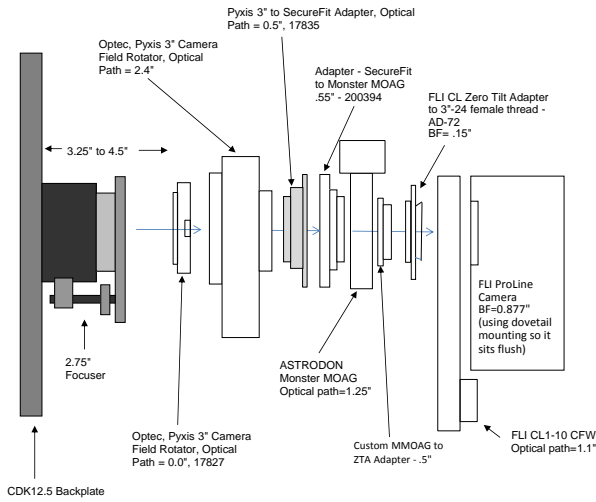
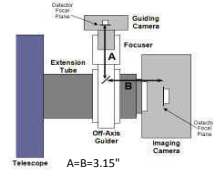
FLI Proline with CFW5/7	10.445 remaining BF	
2.75" Focuser (racked in)	3.25	7.195
Focus position (0 to 1.3")	0.42	
SecureFit CCD Spacer - 125357-3	4.8	1.975
SecureFit FLI 3" CCD Adapter - 200395	0.25	1.725
FLI CFW5 Filter Wheel	0.848	0.877
FLI Proline Camera Body	0.877	0

CDK12.5 - OPTICAL TRAIN: for FINGERLAKES PROLINE CAMERA AND CENTERLINE FILTERWHEEL

Distance to Focuser Mounting Surface 10.445

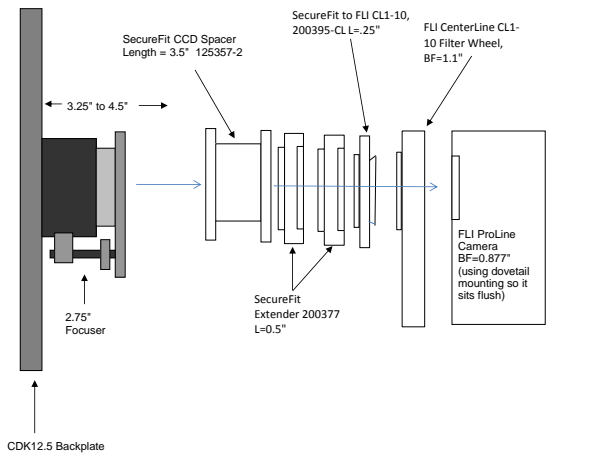
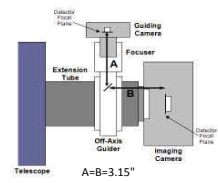


Component	Distance	Remaining BF
FLI Proline, CL1-10, and MonsterMOAG	10.445	remaining BF
2.75" Focuser (racked in)	3.25	7.195
Focus position (0 to 1.3")	0.368	6.827
SecureFit CCD Spacer - 125357-3	2.5	4.327
Adapter SecureFit to Monster MOAG - 200394	0.55	3.777
Monster MOAG - MMOAG	1.25	2.527
AstroDon 3"-24 male thread, 0.4" MMOAG-3-M	0.4	2.127
FLI CL Zero Tilt Adapter to 3"-24 female thread -AD-72	0.15	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI Proline Camera Body	0.877	0



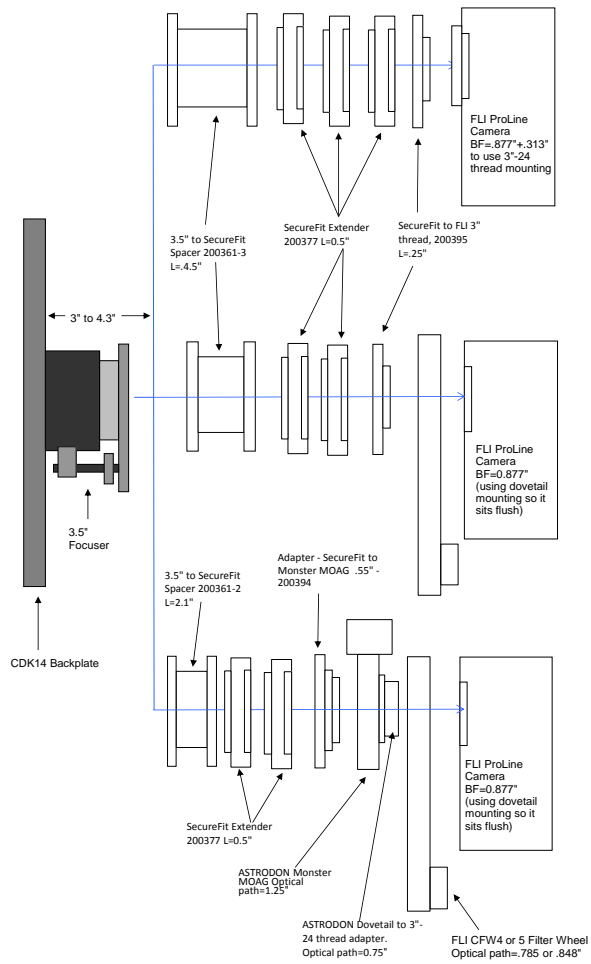
This configuration does not reach focus without the use of a custom adapter

Component	Distance	Remaining BF
FLI Proline, CL1-10, Monster MOAG, Pyxis	10.445	remaining BF
2.75" Focuser (racked in)	3.25	7.195
Focus position (0 to 1.3")	0	7.195
PW 12.5 to Optec-3600 dovetail adapter - 17827	0	7.195
Optec Pyxis 3" Camera Rotator	2.4	4.795
Optec Pyxis 3" to SecureFit Adapter - 17835	0.5	4.295
Adapter SecureFit to Monster MOAG - 200394	0.55	3.745
Monster MOAG - MMOAG	1.25	2.495
AstroDon 3"-24 male thread, 0.4" MMOAG-3-M	0.4	2.095
FLI CL Zero Tilt Adapter to 3"-24 female thread -AD-72	0.15	1.945
FLI CL1-10 Filter Wheel	1.1	0.845
FLI Proline Camera Body	0.877	-0.032



Component	Distance	Remaining BF
FLI Proline with CL1-10 filter wheel	10.445	remaining BF
2.75" Focuser (racked in)	3.25	7.195
Focus position (0 to 1.3")	0.468	6.727
SecureFit CCD Spacer - 125357-2	3.5	3.227
SecureFit CCD Extender - 200377	0.5	2.727
SecureFit CCD Extender - 200377	0.5	2.227
SecureFit to FLI Centerline CFW - 200395-CL	0.25	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI Proline Camera Body	0.877	0

CDK14 - OPTICAL TRAIN: FINGERLAKES CAMERA'S AND FILTER WHEELS



FLI ProLine Camera Body	11.09	remaining BF
3.5" Focuser - 200340 (racked in)	3	8.09
Focus position (0 to 1.3")	0.65	7.44
3.5" to SecureFit, 4.5" - 200361-3	4.5	2.94
SecureFit 1/2" Extender - 200377	0.5	2.44
SecureFit 1/2" Extender - 200377	0.5	1.94
SecureFit 1/2" Extender - 200377	0.5	1.44
SecureFit to FLI 3" Threads - 200395	0.25	1.19
FLI ProLine Camera	1.19	0

Using the Rotating Focuser 600180

FLI ProLine Camera Body	11.09	remaining BF
3.5" Focuser - 600180 (racked in)	3.5	7.59
Focus position (0 to 1.3")	0.65	6.94
3.5" to SecureFit, 4.5" - 200361-3	4.5	2.44
SecureFit 1/2" Extender - 200377	0.5	1.94
SecureFit 1/2" Extender - 200377	0.5	1.44
SecureFit to FLI 3" Threads - 200395	0.25	1.19
FLI ProLine Camera	1.19	0

FLI ProLine Camera Body and CFWS filter wheel	11.09	remaining BF
3.5" Focuser - 200340 (racked in)	3	8.09
Focus position (0 to 1.3")	0.615	7.475
3.5" to SecureFit, 4.5" - 200361-3	4.5	2.975
SecureFit CCD Extender - 200377	0.5	2.475
SecureFit CCD Extender - 200377	0.5	1.975
SecureFit to FLI 3" Threads - 200395	0.25	1.725
FLI CFWS Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

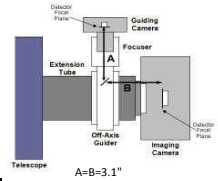
Using the Rotating Focuser 600180

FLI ProLine Camera Body and CFWS filter wheel	11.09	remaining BF
Rotating Focuser - 600180 (racked in)	3.5	7.59
Focus position (0 to 1.3")	0.615	6.975
3.5" to SecureFit, 4.5" - 200361-3	4.5	2.475
SecureFit CCD Extender - 200377	0.5	1.975
SecureFit to FLI 3" Threads - 200395	0.25	1.725
FLI CFWS Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

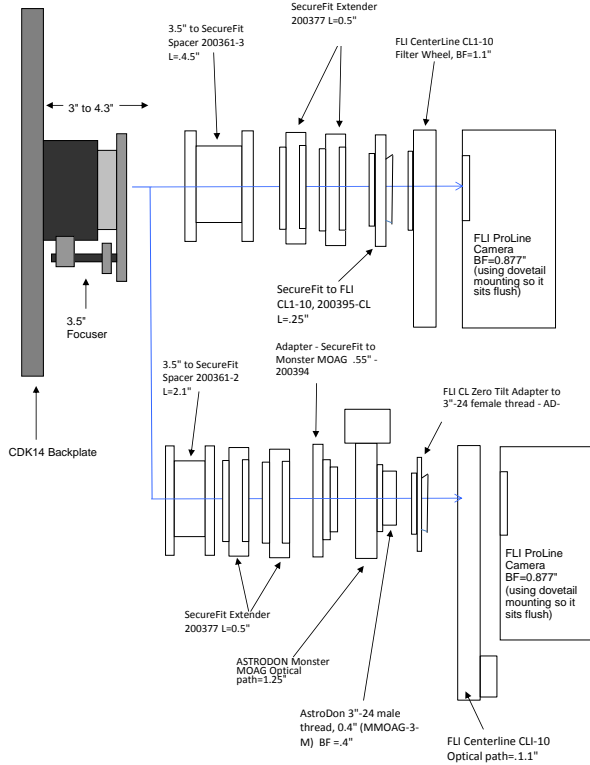
FLI ProLine Camera, CFWS filter wheel & MonsterMOAG	11.09	remaining BF
3.5" Focuser - 200340 (racked in)	3	8.09
Focus position (0 to 1.3")	0.715	7.375
3.5" to SecureFit, 2.1" - 200361-2	2.1	5.275
SecureFit CCD Extender - 200377	0.5	4.775
SecureFit CCD Extender - 200377	0.5	4.275
Adapter SecureFit to Monster MOAG - 200394	0.55	3.725
Monster MOAG - MMOAG	1.25	2.475
AstroDon Adapter to 3"-24 threads x .75" (MMOAG-3-L)	0.75	1.725
FLI CFWS Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

Using the Rotating Focuser 600180

FLI ProLine Camera, CFWS filter wheel & MonsterMOAG	11.09	remaining BF
Rotating Focuser- 600180 (racked in)	3.5	7.59
Focus position (0 to 1.3")	0.33	7.26
3.5" to SecureFit, 2.1" - 200361-2	2.1	5.16
SecureFit CCD Extender - 200377	0.5	4.66
Adapter SecureFit to Monster MOAG - 200394	0.55	4.11
Monster MOAG - MMOAG	1.25	2.86
AstroDon Adapter to 3"-24 threads x .75" (MMOAG-3-L)	1.135	1.725
FLI CFWS or 5 Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0



CDK14 - OPTICAL TRAIN: FINGERLAKES CAMERA'S AND CENTERLINE FILTER WHEELS



FI ProLine Camera Body and CL1-10 filter wheel		11.09	remaining BF
3.5" Focuser - 200340 (racked in)		3	8.09
Focus position (0 to 1.3")	0.363		7.727
3.5" to SecureFit, 4.5" - 200361-3		4.5	3.227
SecureFit CCD Extender - 200377		0.5	2.727
SecureFit CCD Extender - 200377		0.5	2.227
SecureFit to FI Centerline CFW - 200395-CL		0.25	1.977
FI CL1-10 Filter Wheel		1.1	0.877
FI ProLine Camera		0.877	0

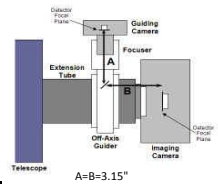
Using the Rotating Focuser 600180

FI ProLine Camera Body and CL1-10 filter wheel		11.09	remaining BF
Rotating Focuser - 600180 (racked in)		3.5	7.59
Focus position (0 to 1.3")	0.363		7.227
3.5" to SecureFit, 4.5" - 200361-3		4.5	2.727
SecureFit CCD Extender - 200377		0.5	2.227
SecureFit CCD Extender - 200377		0.5	1.727
SecureFit to FI Centerline CFW - 200395-CL		0.25	1.477
FI CL1-10 Filter Wheel		1.1	0.377
FI ProLine Camera		0.877	0

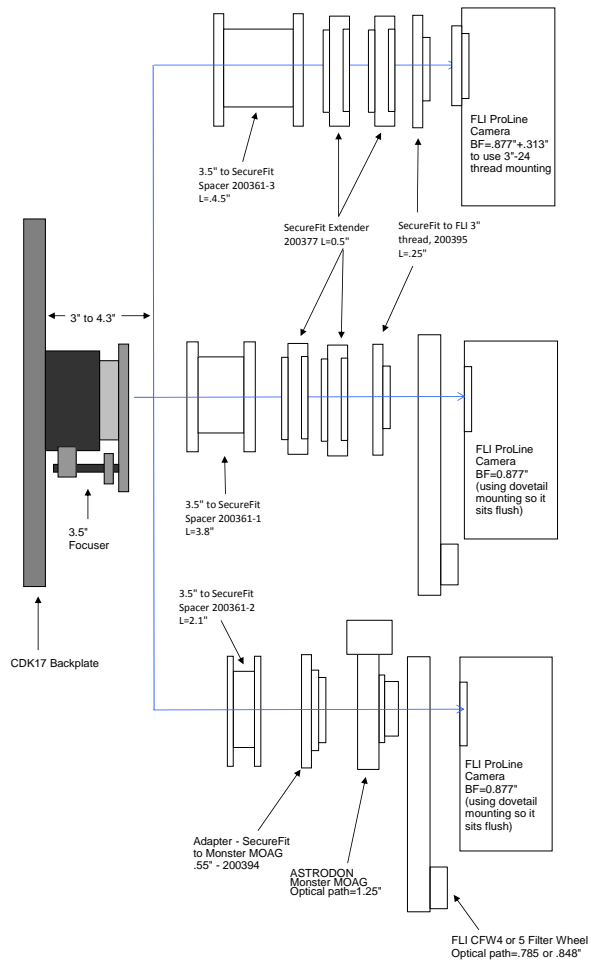
FI ProLine Camera, CL1-10 filter wheel & MonsterMOAG		11.09	remaining BF
3.5" Focuser - 200340 (racked in)		3	8.09
Focus position (0 to 1.3")	0.663		7.427
3.5" to SecureFit, 2.1" - 200361-2		2.1	5.327
SecureFit CCD Extender - 200377		0.5	4.827
SecureFit CCD Extender - 200377		0.5	4.327
Adapter SecureFit to Monster MOAG - 200394		0.55	3.777
Monster MOAG - MMOAG		1.25	2.527
AstroDon 3" -24 male thread, 0.4" - MMOAG-3-M		0.4	2.127
FI CL Zero Tilt Adapter to 3" -24 female thread - AD-72		0.15	1.977
FI CL1-10 Filter Wheel		1.1	0.877
FI ProLine Camera		0.877	0

Using the Rotating Focuser 600180

FI ProLine Camera, CL1-10 filter wheel & MonsterMOAG		11.09	remaining BF
Rotating Focuser - 600180 (racked in)		3.5	7.59
Focus position (0 to 1.3")	0.663		6.927
3.5" to SecureFit, 2.1" - 200361-2		2.1	4.827
SecureFit CCD Extender - 200377		0.5	4.327
Adapter SecureFit to Monster MOAG - 200394		0.55	3.777
Monster MOAG - MMOAG		1.25	2.527
AstroDon 3" -24 male thread, 0.4" - MMOAG-3-M		0.4	2.127
FI CL Zero Tilt Adapter to 3" -24 female thread - AD-72		0.15	1.977
FI CL1-10 Filter Wheel		1.1	0.877
FI ProLine Camera		0.877	0



CDK17 - OPTICAL TRAIN: FINGERLAKES CAMERA'S AND FILTER WHEELS



FLI ProLine Camera Body		10.24 remaining BF
3.5" Focuser - 200340 (racked in)	3	7.24
Focus position (0 to 1.3")	0.3	6.94
3.5" to SecureFit, 4.5" - 200361-3	4.5	2.44
SecureFit 1/2" Extender - 200377	0.5	1.94
SecureFit 1/2" Extender - 200377	0.5	1.44
SecureFit to FLI 3" Threads - 200395	0.25	1.19
FLI ProLine Camera	1.19	0

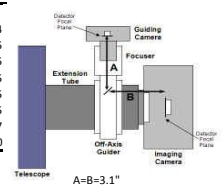
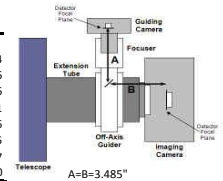
Using the Rotating Focuser 600180		10.24 remaining BF
FLI ProLine Camera Body		
3.5" Focuser - 600180 (racked in)	3.5	6.74
Focus position (0 to 1.3")	0.3	6.44
3.5" to SecureFit, 4.5" - 200361-3	4.5	1.94
SecureFit 1/2" Extender - 200377	0.5	1.44
SecureFit to FLI 3" Threads - 200395	0.25	1.19
FLI ProLine Camera	1.19	0

FLI ProLine Camera Body and CFWS filter wheel		10.24 remaining BF
3.5" Focuser - 200340 (racked in)	3	7.24
Focus position (0 to 1.3")	0.465	6.775
3.5" to SecureFit, 3.8" - 200361-1	3.8	2.975
SecureFit CCD Extender - 200377	0.5	2.475
SecureFit CCD Extender - 200377	0.5	1.975
SecureFit to FLI 3" Threads - 200395	0.25	1.725
FLI CFWS Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

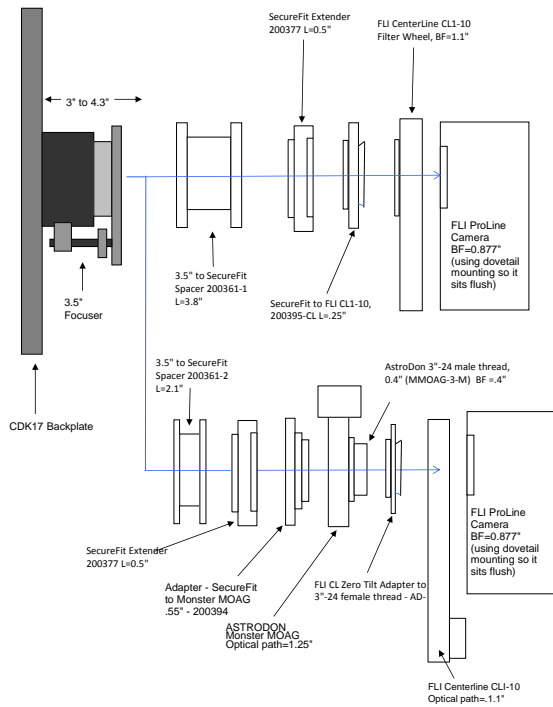
Using the Rotating Focuser 600180		10.24 remaining BF
FLI ProLine Camera Body and CFWS filter wheel		
Rotating Focuser - 600180 (racked in)	3.5	6.74
Focus position (0 to 1.3")	0.465	6.275
3.5" to SecureFit, 3.8" - 200361-1	3.8	2.475
SecureFit CCD Extender - 200377	0.5	1.975
SecureFit to FLI 3" Threads - 200395	0.25	1.725
FLI CFWS Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

FLI ProLine Camera, CFWS filter wheel & MonsterMOAG		10.24 remaining BF
3.5" Focuser - 200340 (racked in)	3	7.24
Focus position (0 to 1.3")	0.48	6.76
3.5" to SecureFit, 2.1" - 200361-2	2.1	4.66
Adapter SecureFit to Monster MOAG - 200394	0.55	4.11
Monster MOAG - MMOAG	1.25	2.86
AstroDon Adapter to FLI thread - 3"-24 (MMOAG-3-LL)	1.135	1.725
FLI CFWS Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

Using the Rotating Focuser 600180		10.24 remaining BF
FLI ProLine Camera, CFWS filter wheel & MonsterMOAG		
Rotating Focuser - 600180 (racked in)	3.5	6.74
Focus position (0 to 1.3")	0.365	6.375
3.5" to SecureFit, 2.1" - 200361-2	2.1	4.275
Adapter SecureFit to Monster MOAG - 200394	0.55	3.725
Monster MOAG - MMOAG	1.25	2.475
AstroDon Adapter to 3"-24 threads x .75" (MMOAG-3-L)	0.75	1.725
FLI CFWS or 5 Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0



CDK17 - OPTICAL TRAIN: FINGERLAKES CAMERA'S AND CENTERLINE FILTER WHEELS



FLI ProLine Camera Body and CL1-10 filter wheel	10.24	remaining BF
3.5" Focuser - 200340 (racked in)	3	7.24
Focus position (0 to 1.3")	0.713	6.527
3.5" to SecureFit, 3.8" - 200361-1	3.8	2.727
SecureFit CCD Extender - 200377	0.5	2.227
SecureFit to FLI Centerline CFW - 200395-CL	0.25	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0

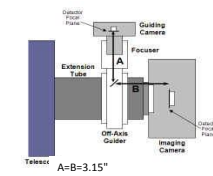
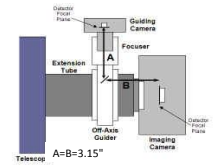
Using the Rotating Focuser 600180

FLI ProLine Camera Body and CL1-10 filter wheel	10.24	remaining BF
Rotating Focuser - 600180 (racked in)	3.5	6.74
Focus position (0 to 1.3")	0.213	6.527
3.5" to SecureFit, 3.8" - 200361-1	3.8	2.727
SecureFit CCD Extender - 200377	0.5	2.227
SecureFit to FLI Centerline CFW - 200395-CL	0.25	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0

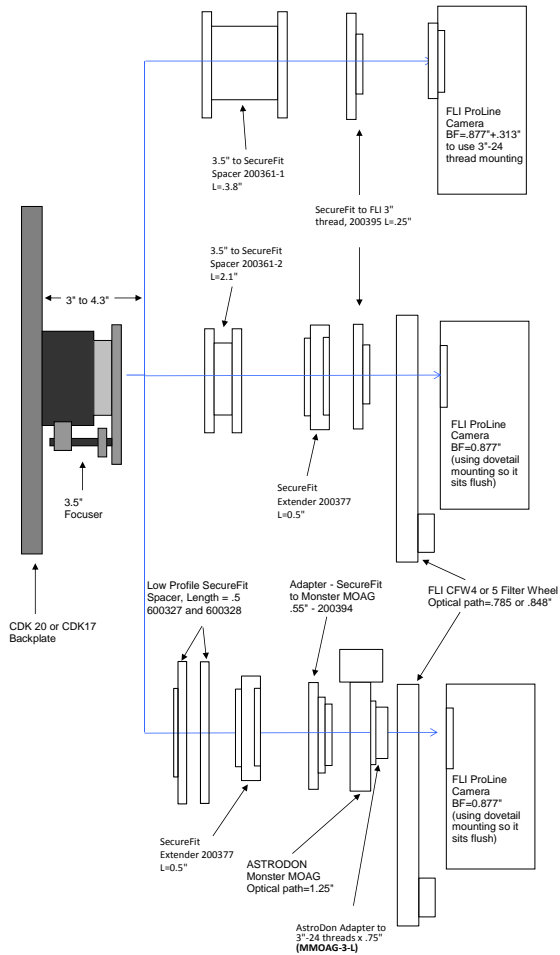
FLI ProLine Camera, CL1-10 filter wheel & MonsterMOAG	10.24	remaining BF
3.5" Focuser - 200340 (racked in)	3	7.24
Focus position (0 to 1.3")	0.313	6.927
3.5" to SecureFit, 2.1" - 200361-2	2.1	4.827
SecureFit Extender, .5" - 200377	0.5	4.327
Adapter SecureFit to Monster MOAG - 200394	0.55	3.777
Monster MOAG - MMOAG	1.25	2.527
AstroDon 3"-24 male thread, 0.4" - MMOAG-3-M	0.4	2.127
FLI CL Zero Tilt Adapter to 3"-24 female thread - AD-72	0.15	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0

Using the Rotating Focuser 600180

FLI ProLine Camera, CL1-10 filter wheel & MonsterMOAG	10.24	remaining BF
Rotating Focuser - 600180 (racked in)	3.5	6.74
Focus position (0 to 1.3")	0.313	6.427
3.5" to SecureFit, 2.1" - 200361-2	2.1	4.327
Adapter SecureFit to Monster MOAG - 200394	0.55	3.777
Monster MOAG - MMOAG	1.25	2.527
AstroDon 3"-24 male thread, 0.4" (MMOAG-3-M)	0.4	2.127
FLI CL Zero Tilt Adapter to 3"-24 female thread - AD-72	0.15	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0



CDK20 and 24 - OPTICAL TRAIN: FINGERLAKES CAMERA'S AND FILTER WHEELS



FLI ProLine Camera Body	8.81	remaining BF
3.5" Focuser (racked in)	3	5.81
Focus position (0 to 1.3")	0.57	5.24
3.5" to SecureFit, 3.8" - 200361-1	3.8	1.44
SecureFit to FLI 3" Threads - 200395	0.25	1.19
FLI ProLine Camera	1.19	0

Using the Rotating Focuser 600180

FLI ProLine Camera Body	8.81	remaining BF
3.5" Focuser (racked in)	3.5	5.31
Focus position (0 to 1.3")	0.77	4.54
3.5" to SecureFit, 2.1" - 200361-2	2.1	2.44
SecureFit 1/2" Extender - 200377	0.5	1.94
SecureFit 1/2" Extender - 200377	0.5	1.44
SecureFit to FLI 3" Threads - 200395	0.25	1.19
FLI ProLine Camera	1.19	0

FLI ProLine Camera Body and CFW5 filter wheel	8.81	remaining BF
3.5" Focuser (racked in)	3	5.81
Focus position (0 to 1.3")	0.835	4.975
3.5" to SecureFit, 2.1" - 200361-2	2.5	2.475
SecureFit CCD Extender - 200377	0.5	1.975
SecureFit to FLI 3" Threads - 200395	0.25	1.725
FLI CFW5 Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

Using the Rotating Focuser 600180

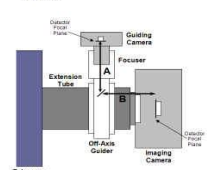
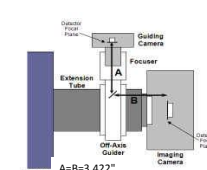
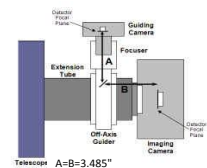
FLI ProLine Camera Body and CFW5 filter wheel	8.81	remaining BF
Rotating Focuser (racked in)	3.5	5.31
Focus position (0 to 1.3")	0.335	4.975
3.5" to SecureFit, 2.1" - 200361-2	2.5	2.475
SecureFit CCD Extender - 200377	0.5	1.975
SecureFit to FLI 3" Threads - 200395	0.25	1.725
FLI CFW5 Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

FLI ProLine Camera, CFW5 filter wheel & MonsterMOAG	8.81	remaining BF
3.5" Focuser (racked in)	3	5.81
Focus position (0 to 1.3")	0.535	5.275
Low Profile SecureFit Spacer - 600327 and 600328	0.5	4.775
SecureFit CCD Extender - 200377	0.5	4.275
Adapter SecureFit to Monster MOAG - 200394	0.55	3.725
Monster MOAG - MMOAG	1.25	2.475
AstroDon Adapter to 3"-24 threads x .75" (MMOAG-3-L)	0.75	1.725
FLI CFW5 Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0

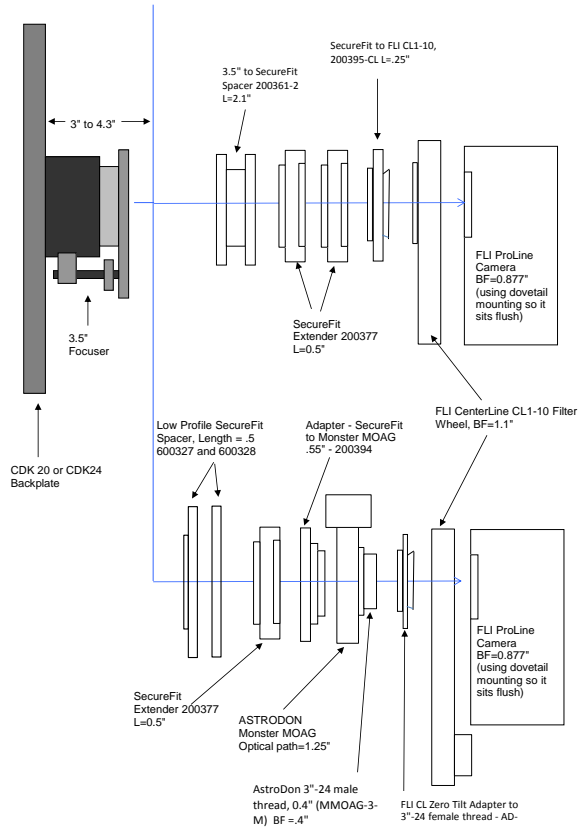
FLI ProLine Camera, CFW4 filter wheel & MonsterMOAG	8.81	remaining BF
3.5" Focuser (racked in)	3	5.81
Focus position (0 to 1.3")	0.348	5.462
Low Profile SecureFit Spacer - 600327 and 600328	0.5	4.962
SecureFit CCD Extender - 200377	0.5	4.462
Adapter SecureFit to Monster MOAG - 200394	0.55	3.912
Monster MOAG - MMOAG	1.25	2.662
AstroDon Adapter to 3"-24 threads x .75" (MMOAG-3-LL)	1	1.662
FLI CFW4 Filter Wheel	0.785	0.877
FLI ProLine Camera	0.877	0

Using the Rotating Focuser 600180

FLI ProLine Camera, CFW5 filter wheel & MonsterMOAG	8.81	remaining BF
Rotating Focuser (racked in)	3.5	5.31
Focus position (0 to 1.3")	0.535	4.775
Low Profile SecureFit Spacer - 600327 and 600328	0.5	4.275
Adapter SecureFit to Monster MOAG - 200394	0.55	3.725
Monster MOAG - MMOAG	1.25	2.475
AstroDon Adapter to 3"-24 threads x .75" (MMOAG-3-L)	0.75	1.725
FLI CFW5 Filter Wheel	0.848	0.877
FLI ProLine Camera	0.877	0



CDK20 and 24 - OPTICAL TRAIN: FINGERLAKES CAMERA'S AND CENTERLINE FILTER WHEELS



FLI ProLine Camera Body and CL1-10 filter wheel		8.81 remaining BF
3.5" Focuser (racked in) -200340	3	5.81
Focus position (0 to 1.3")	0.483	5.327
3.5" to SecureFit, 2.1" - 200361-2	2.1	3.227
SecureFit CCD Extender - 200377	0.5	2.727
SecureFit CCD Extender - 200377	0.5	2.227
SecureFit to FLI Centerline CFW - 200395-CL	0.25	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0

Using the Rotating Focuser 600180		8.81 remaining BF
FLI ProLine Camera Body and CL1-10 filter wheel		
Rotating Focuser (racked in) -600180	3.5	5.31
Focus position (0 to 1.3")	0.483	4.827
3.5" to SecureFit, 2.1" - 200361-2	2.1	2.727
SecureFit CCD Extender - 200377	0.5	2.227
SecureFit to FLI Centerline CFW - 200395-CL	0.25	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0

FLI ProLine Camera, CL1-10 filter wheel & MonsterMOAG		8.81 remaining BF
3.5" Focuser (racked in)	3	5.81
Focus position (0 to 1.3")	0.483	5.327
Low Profile SecureFit Spacer - 600327 and 600328	0.5	4.827
SecureFit CCD Extender - 200377	0.5	4.327
Adapter SecureFit to Monster MOAG - 200394	0.55	3.777
Monster MOAG - MMOAG	1.25	2.527
AstroDon 3" -24 male thread, 0.4" -MMOAG-3-M	0.4	2.127
FLI CL Zero Tilt Adapter to 3" -24 female thread -AD-72	0.15	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0

Using the Rotating Focuser 600180		8.81 remaining BF
FLI ProLine Camera, CL1-10 filter wheel & MonsterMOAG		
Rotating Focuser - 600180 (racked in)	3.5	5.31
Focus position (0 to 1.3")	0.483	4.827
Low Profile SecureFit Spacer - 600327 and 600328	0.5	4.327
Adapter SecureFit to Monster MOAG - 200394	0.55	3.777
Monster MOAG - MMOAG	1.25	2.527
AstroDon 3" -24 male thread, 0.4" -MMOAG-3-M	0.4	2.127
FLI CL Zero Tilt Adapter to 3" -24 female thread -AD-72	0.15	1.977
FLI CL1-10 Filter Wheel	1.1	0.877
FLI ProLine Camera	0.877	0

