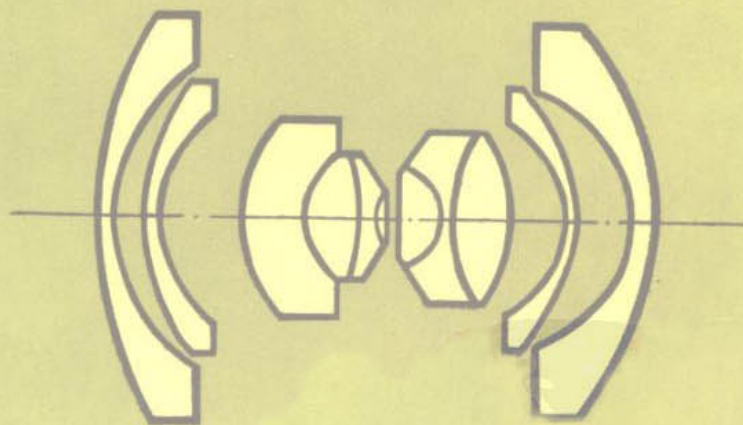


# 光学镜头手册

## 第一册

福建光学技术研究所 编译  
国营红星机电厂



国防工业出版社

71.641  
706

# 光学镜头手册

第一册

福建光学技术研究所

编译

国营红星机电厂



国防工业出版社

## 内 容 简 介

本手册收集和整理了美、英、德、日等国从1811年至现在历年来的光学镜头资料。

第一册的内容为大相对孔径物镜，共125个。每个镜头都有光学镜头的结构图、各种主要参数及象差曲线图。

本手册可供研究所和工厂的光学设计人员和大院校光学专业的师生参考。

## 光 学 镜 头 手 册

### 第 一 册

福建光学技术研究所 编译  
国营红星机电厂

国防工业出版社 出版

新华书店北京发行所发行 各地新华书店经售  
国防工业出版社印刷厂印装

787×1092<sup>1</sup>/<sub>16</sub> 印张 8<sup>1</sup>/<sub>4</sub> 184 千字

1980年6月第一版 1980年6月第一次印刷 印数：0,001—4,800册

统一书号：15034·1970 定价：1.05元

(限国内发行)

## 编译者说明

由于电子工业和电影、电视事业的飞速发展，近年来，我国在光学镜头设计及加工方面取得了很大进展。成系列的各类镜头已经设计和试制出来，有些并已进入成批生产阶段。但在品种、数量和质量方面，跟世界先进水平相比，差距还是比较大。

近年来，我们收集了美、英、德、日等国从 1811 年到现在的 optical 镜头资料共 3000 多种。现挑选其中的一部分经补充整理之后，将其出版，以供我国从事光学镜头设计的人员参考。

我们准备分成“大相对孔径物镜”、“中等视场中等孔径物镜”、“广角物镜”、“制版及投影物镜”、“显微物镜”、“变焦距物镜”、“目镜”、“非球面系统”和其它等九类进行整理，预计分成十册。每册收集的镜头数约为 100~200 个。

原资料中，大多没有给出象差曲线图，我们均重新计算给予补上。由于原资料的光阑位置大多没有给出，我们计算时只能根据我们主观给定的光阑位置进行计算，因此相应的象差曲线图仅供参考。

本册的内容为大相对孔径物镜。

由于我们水平有限，时间仓促，力量不足，所以只能一部分一部分地整理出版，而且在整理过程中一定会存在不少缺点和错误，分类也可能不完全合理，望读者批评指正。

参加本册编译工作的有林茂智、杨魁田、叶恩霖、刘淑栓等四人。

编译者

# 目 录

符号说明	1
摄影物镜	2
六组元大相对孔径摄影镜头	3
透镜系统	4
透镜系统	5
用于电子象管的透镜系统	6
共轴光学系统的改进	7
摄影物镜	8
摄影物镜	9
双高斯型	10
双高斯型	11
大孔径长工作截距摄影镜头	12
大孔径长工作截距摄影镜头	13
摄影或电影摄影物镜	14
摄影或电影摄影物镜	15
高斯型摄影物镜	16
改进的珀兹伐物镜系统	17
摄影镜头	18
光学物镜	19
光学物镜	20
高速摄影机物镜	21
高速摄影机物镜	22
用于电影摄影的大孔径物镜	23
摄影物镜	24
摄影物镜	25
六片式物镜	26
六片式物镜	27
高斯型摄影物镜	28
高斯型摄影物镜	29
广角镜头	30
广角镜头	31
四组元物镜	32
四组元物镜	33

红外光学系统.....	34
摄影物镜.....	35
改型珀兹伐摄影物镜.....	36
改型珀兹伐摄影物镜.....	37
广角摄影物镜.....	38
大相对孔径的折反射光学系统.....	39
大相对孔径的折反射光学系统.....	39
大孔径放映镜头.....	40
大孔径放映镜头.....	41
消象散的四镜片物镜.....	42
消象散的四镜片物镜.....	43
摄影或电影摄影用的大孔径望远物镜.....	44
摄影或电影摄影用的大孔径望远物镜.....	45
三片式物镜.....	46
四片式物镜.....	47
四片式物镜.....	48
单镜头反射式照相机镜头.....	49
单镜头反射式照相机镜头.....	50
带有平象场镜及至少三个正透镜的珀兹伐物镜.....	51
广角长工作截距摄影物镜.....	52
具有负前组与多镜片正后组的放映物镜.....	53
具有负前组与多镜片正后组的放映物镜.....	54
四组元摄影物镜.....	55
大孔径摄影镜头.....	56
六分离广角物镜.....	57
六片式珀兹伐型放映镜头.....	58
六片式珀兹伐型放映镜头.....	59
五组元物镜.....	60
高速摄影机物镜.....	61
七组元高速摄影机镜头.....	62
七组元高速摄影机镜头.....	63
五分离大相对孔径广角摄影物镜.....	64
五分离大相对孔径广角摄影物镜.....	65
扩展的高斯型大孔径物镜.....	66
扩展的高斯型大孔径物镜.....	67
柯克三片型摄影物镜.....	68
八片式对称式摄影物镜.....	69
改进的四组元高斯放映物镜.....	70

具有负前组及多镜片正组的广角物镜	71
具有负前组及多镜片正组的广角物镜	72
具有一个胶合组的三组元镜头	73
具有一个胶合组的三组元镜头	74
改型珀兹伐镜头	75
改型珀兹伐镜头	76
红外望远物镜	77
三片式物镜	78
三片式物镜	79
三片式物镜	80
三片式物镜	81
改进的三组元透镜系统	82
六片式大口径长工作截距摄影物镜	83
大口径七片式物镜	84
用于电视摄象机的大口径物镜	85
四片式大口径记录透镜系统	86
用于荧光影象的电子摄影复制的七片式镜头	87
三组四片摄影物镜	88
三组四片摄影物镜	89
四组元大口径镜头	90
四组元大口径镜头	91
短焦距长后截距摄影镜头	92
大口径摄影或电影摄影物镜	93
大口径双高斯型摄影或电影摄影物镜	94
五组元光学物镜	95
五组元光学物镜	96
双高斯型物镜	97
双高斯型物镜	98
改进的双高斯型物镜	99
广角镜头	100
大口径长工作截距摄影镜头	101
反远距型广角物镜	102
反远距型广角物镜	103
大口径摄影或电影摄影物镜	104
六片式珀兹伐型放映镜头	105
三组四片摄影物镜	106
1:1对称换向镜头	107
具有双分离负双透镜的高斯型摄影物镜	108

具有双分离负双透镜的高斯型摄影物镜.....	109
高分辨率透镜系统.....	110
大孔径折反射物镜.....	111
大孔径折反射物镜.....	111
六片式珀兹伐型放映镜头.....	112
摄影物镜.....	113
摄影物镜.....	114
摄影物镜.....	115
六片式改型高斯摄影物镜.....	116
六片式改型高斯摄影物镜.....	117
摄影物镜.....	118
摄影物镜.....	119
物镜.....	120
物镜.....	121
红外远摄物镜.....	122
透镜系统.....	123
透镜系统.....	124



## 符号说明

1. 凡数据后有符号“\*”，表示光栏位置或其值间有光栏。
2. 凡没有注明数值单位的，均以毫米为单位；若注明以英寸为单位，则在该镜头资料中均以英寸为单位。

### 3. 常用符号：

$\Sigma S_1$	球差系数和；
$\Sigma S_2$	彗差系数和；
$\Sigma S_3$	象散系数和；
$\Sigma S_4$	场曲系数和；
$\Sigma S_5$	畸变系数和；
$LA'$	球差；
$\Delta H'$	绝对畸变；
$x'_i$	细光束子午场曲；
$x'_i$	细光束弧矢场曲；
$x'_i - x'_i$	象散；
$K'_{T1}$	全口径的子午彗差；
$K'_{T0.7}$	0.707口径的子午彗差；
QP	相对畸变；
HI	理想象高；
E.F.L	焦距；
B.F.L	后截距；
FNo.	相对孔径倒数；
F.A.	视场角（有些资料中无 F.A. 数据，象差曲线是按 F.A. = 8° 来计算的，可扩大容限）；
$L'_p$	入瞳距离；
$\eta$	物高；
$\omega$	镜头视场。

编号: 01-00-001

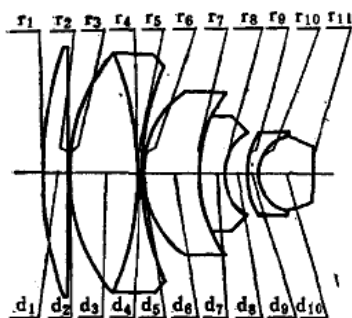
# 摄影物镜

E. F. L = 100

B. F. L = 7.12

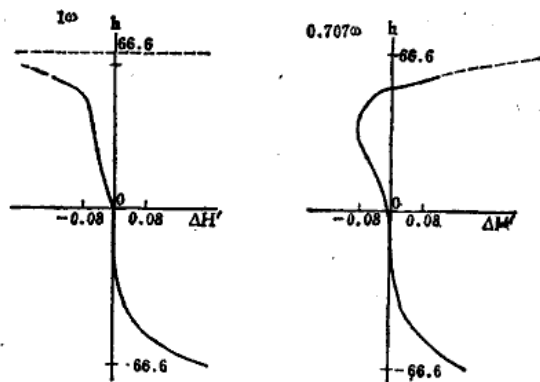
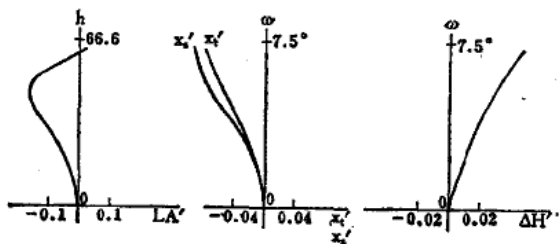
FNo. = 0.75

F. A. =  $\pm 7.5^\circ$



序号	r	d	n	v	序号	r	d	n	v
1	206.0	14.5	1.6940	54.6	7	71.7	14.50	1.7343	28.4
2	8390.0	0.2			8	24.19	13.42		
3	98.95	36.4	1.6725	44.7	9	57.5	5.44	1.6241	36.1
4	-165.4	2.43	1.7343	28.4	10	21.70	30.0	1.7922	50.2
5	130.0	0.2			11	$\infty$			
6	52.40	30.7	1.6940	54.6					

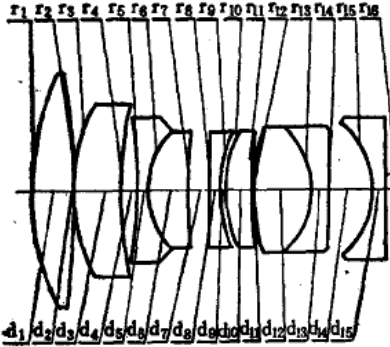
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.47	-0.15	0.0029	-0.18	0.12	13.15	0.34%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.01 $^\circ$	0.045	-0.079	-0.093	0.014	5.4	-0.0015
70	-0.16	0.028	-0.051	-0.075	0.024	0.67	-0.0094



编号: 01-00-002

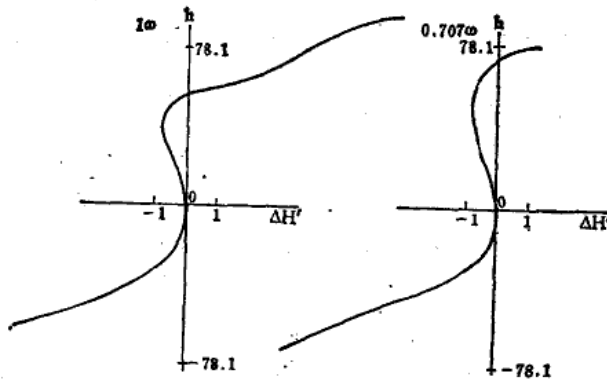
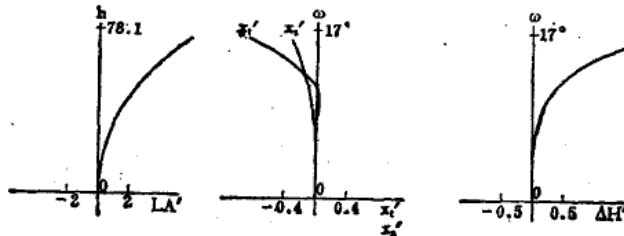
### 六组元大相对孔径摄影镜头

E.F.L.=125      B.F.L.=      FNo.=0.80      F.A.=34°       $Lp'_1 = 0$



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	221.138.3	1.6204	59.8		9	115.7	6.1		
2	-794.0	0.7			10	110.9	23.7	1.6242	47.0
3	143.242.2	1.6220	53.0		11	310.5	1.2		
4	570.910.1				12	137.0	50.4	1.6256	35.7
5	-428.312.7	1.6728	32.2		13	-74.7	14.2	1.7281	28.4
6	79.131.6	1.6202	60.3		14	7492.0	37.5		
7	481.317.6				15	-72.1	11.0	1.5686	56.1
8	-3913.011.7	1.6254	35.8		16	$\infty$			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	3.6	-2.5	0.14	-0.39	0.78	38	4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	5.8	1.5	-0.86	-0.35	-0.50	7.6	-2.2
70	2.6	0.34	0.017	-0.14	0.15	-8.1	-2.9



编号: 01-00-003

# 透 镜 系 统

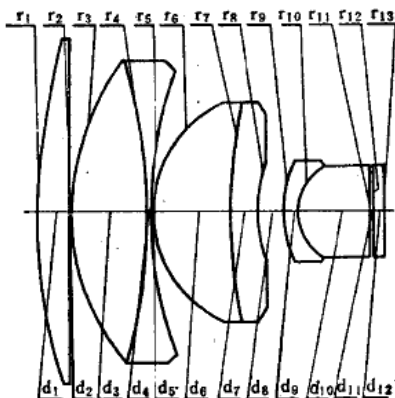
E. F. L = 100

B. F. L =

FNo. = 0.68

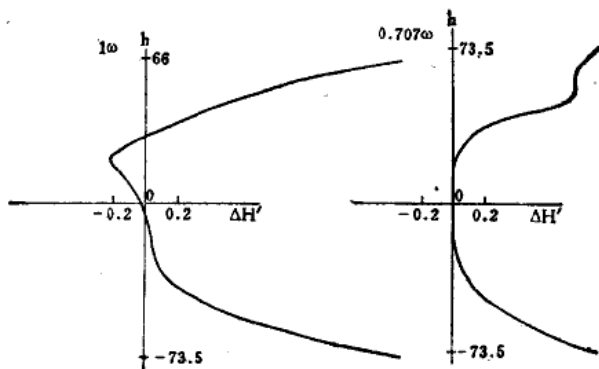
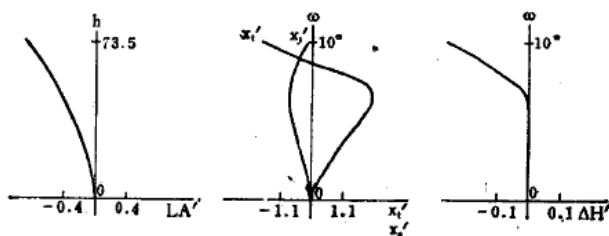
F. A. = 20°

Lp<sub>1</sub>' = 0



序号	r	d	n <sub>e</sub>	v <sub>e</sub>	序号	r	d	n <sub>e</sub>	v <sub>e</sub>
1	277.97	16.59	1.59424	58.02	8	27.21	13.19		
2	∞	0.34			9	64.25	7.45	1.58779	36.75
3	111.65	35.91	1.64129	55.15	10	26.67	34.04	1.84035	42.04
4	-274.08	3.62	1.67764	31.97	11	∞	1.20		
5	212.75	1.19			12	∞	5.11	1.50207	61.21
6	57.26	36.34	1.64514	57.70	13	∞			
7	274.08	13.79	1.72734	29.03					

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-1.2	0.050	0.22	-0.54	0.067	18	-1.4%
h 或 ω %	LA'	ΔH'	x <sub>t</sub> '	x <sub>s</sub> '	x <sub>t</sub> '-x <sub>s</sub> '	K <sub>T1</sub> '	K <sub>T0.7</sub> '
100	-0.85	-0.26	-0.16	-0.001	-0.16	5.5	3.7
70	-0.53	-0.0079	0.20	-0.077	0.278	7.9	0.59



编号: 01-00-004

# 透 镜 系 统

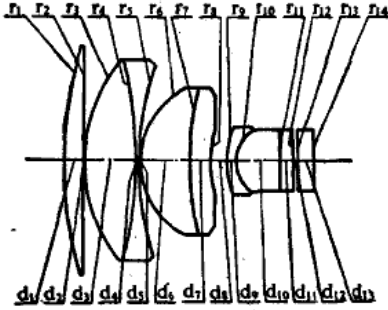
E. F. L = 100

B. F. L =

FNo. = 0.61

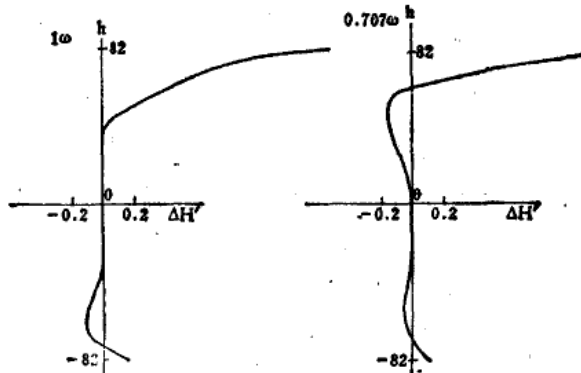
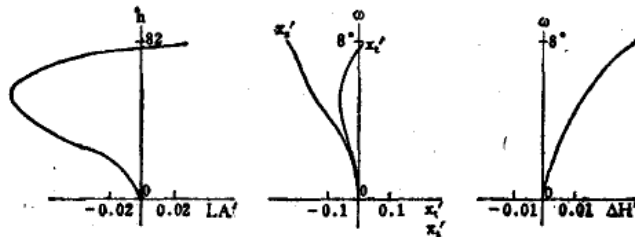
F. A. = 16°

$Lp'_1 = 0$



序号	r	d	$n_o$	$v_o$	序号	r	d	$n_o$	$v_o$
1	245.12	17.85	1.59424	58.02	8	29.80	13.05		
2	4460.43	0.37			9	65.97	8.12	1.62058	36.37
3	112.04	37.88	1.66152	50.59	10	29.47	20.17	1.92765	21.34
4	-456.43	3.51	1.73430	28.19	11	$\infty$	9.13	1.79190	25.55
5	213.49	0.37			12	$\infty$	1.61		
6	60.17	38.66	1.64304	59.85	13	$\infty$	11.59	1.50207	61.21
7	294.69	13.69	1.76859	26.31	14	$\infty$			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.52	-0.42	0.060	-0.54	0.068	14	0.21%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.028	0.03	0.0079	-0.23	0.24	7.8	0.090
70	-0.08	0.014	-0.069	-0.15	0.08	1.6	-0.094



编号, 01-00-005

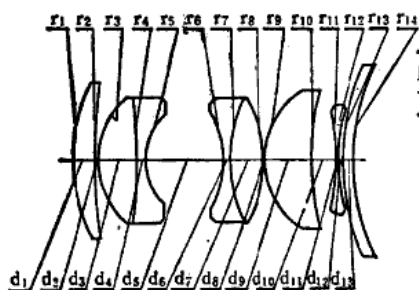
## 用于电子影象管的透镜系统

E. F. L = 100.0

B. F. L =

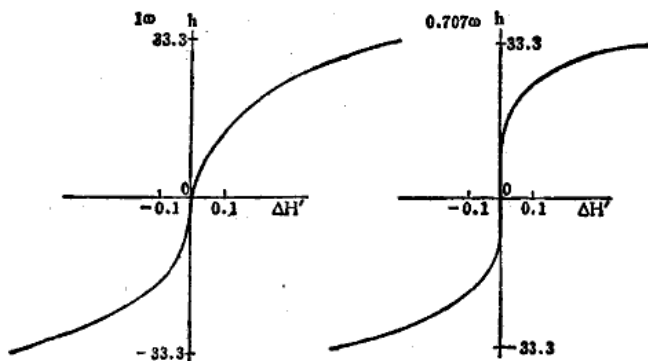
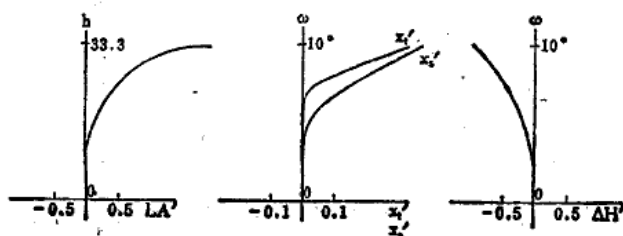
FNo. = 1.5

F. A. = 20°



序号	r	d	n	v	序号	r	d	n	v
1	73.0	14.0	1.694	54.6	8	-58.9	0.3		
2	410.0	0.3			9	41.1	23.8	1.673	47.0
3	44.4	17.9	1.694	54.6	10	132.3	12.55		
4	-170.0	4.8	1.813	25.3	11	-239.0	1.8	1.813	25.3
5	30.8	39.5			12	68.8	3.6		
6	-59.6	4.3	1.678	32.0	13	111.5	5.4	1.512	63.1
7	66.6	18.2	1.694	54.6	14	106.3			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	0.062	-0.050	-0.042	0.084	-0.56	18.21	-5.5%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_i$	$x'_i - x'_o$	$K'_{T1}$	$K'_{T0.7}$
100	2.03	-1.01	0.35	0.38	-0.029	-0.028	0.039
70	0.47	-0.33	0.033	0.14	-0.11	-0.21	-0.055



编号: 01-00-006

## 共轴光学系统的改进

E. F. L = 100.0

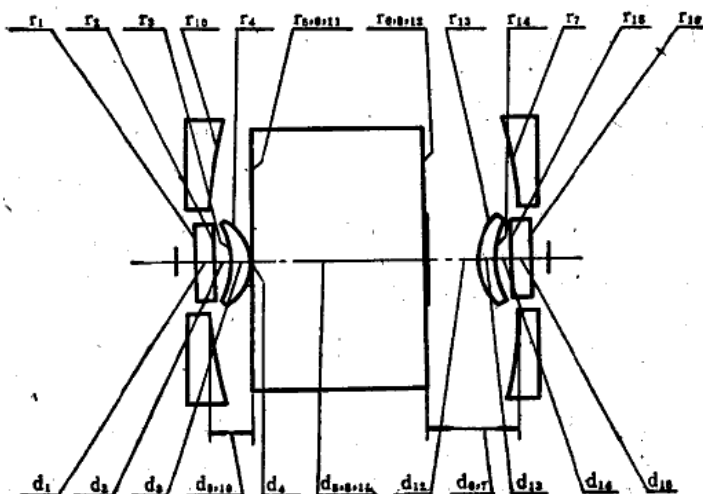
B. F. L =

FNo. = 0.7

F. A. =

物点 = 5.48

象点 = 5.48



序 号	r	d	$n_d$	$v$
1	$\infty$	10.40	1.503	51.0
2	$\infty$	6.58		
3	-55.04	11.00	1.540	56.0
4	-27.52	0.76		
5	$\infty$	93.33	1.603	38.0
6	$\infty$	53.08		
7	-308.94	-53.08	-1.0	
8	$\infty$	-93.33	-1.603	38.0
9	$\infty$	-23.87	-1.0	
10	308.94	23.87		
11	$\infty$	93.33	1.603	38.0
12	$\infty$	29.97		
13	27.52	11.00	1.540	56.0
14	55.04	6.58		
15	$\infty$	10.40	1.503	51.0
16	$\infty$			

编号: 01-00-007

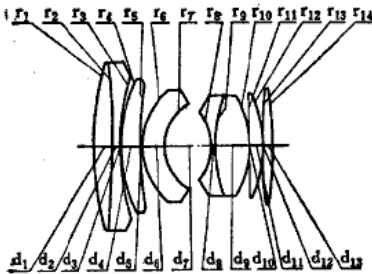
# 摄影物镜

E. F. L = 1.0

B. F. L = 0.675

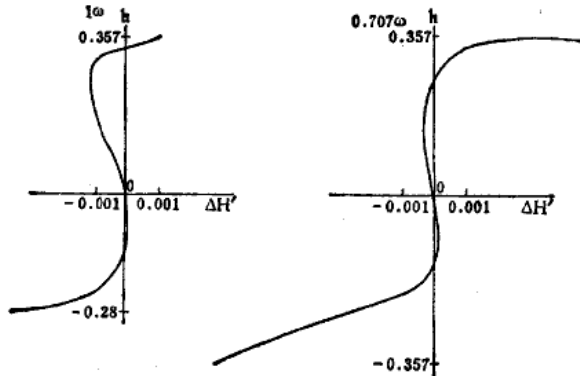
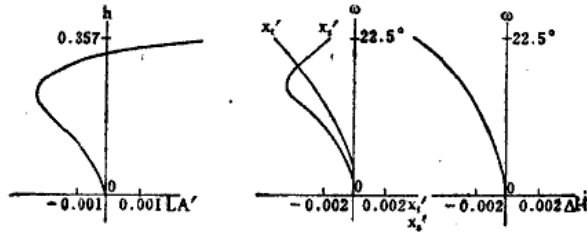
FNo. = 1.4

F. A. =  $\pm 22.5^\circ$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	2.11619	0.12629	1.78869	43.53	8	-0.39007	0.02870	1.81262	25.28
2	-6.13873	0.05741	1.72732	29.07	9	1.20731	0.21049	1.78869	43.53
3	1.80647	0.00191			10	-0.67409	0.00191		
4	0.93180	0.12246	1.78869	43.53	11	-8.18542	0.06889	1.78869	43.53
5	3.81787	0.00191			12	-0.87970	0.00096		
6	0.46701	0.15308	1.81262	25.28	13	3.03255	0.06697	1.78869	43.53
7	0.33301	0.28320			14	-2.20972			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0026	0.00118	0.00059	-0.0044	-0.0046	0.41	-1.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.0030	-0.0060	-0.0049	-0.00169	-0.0032	-0.014	-0.0025
70	-0.0023	-0.0025	-0.0026	-0.0045	0.0019	-0.011	-0.0011





编号: 01-00-008

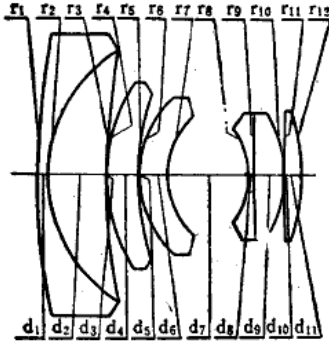
# 摄影物镜

E. F. L = 1.0

B. F. L = 0.675

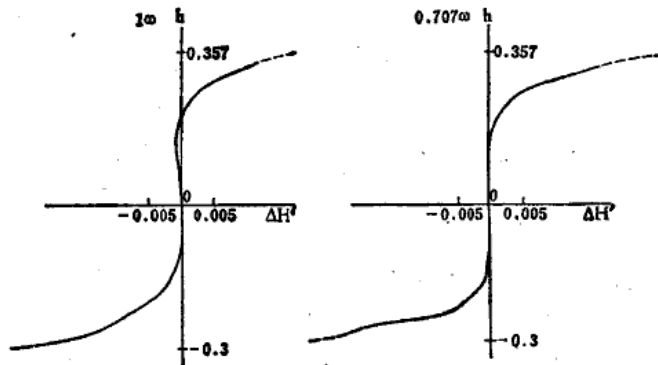
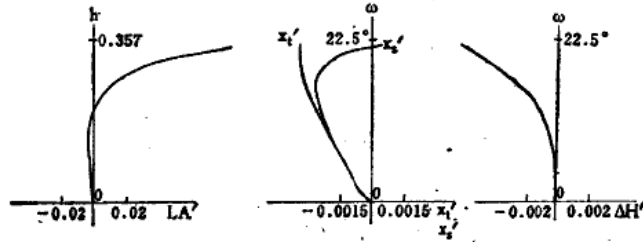
FNo. = 1.4

F. A. = ±22.5°



序号	r	d	n <sub>e</sub>	v <sub>e</sub>	序号	r	d	n <sub>e</sub>	v <sub>e</sub>
1	2.28020	0.03454	1.55156	45.17	7	0.25407	0.26861		
2	0.47847	0.19570	1.62287	60.06	8	-0.26903	0.02878	1.76846	26.78
3	2.15280	0.00192			9	5.17978	0.09977	1.78869	43.53
4	0.62001	0.10457	1.66151	50.69	10	-0.35881	0.00096		
5	1.21055	0.00192			11	8.20741	0.05372	1.78869	43.53
6	0.34612	0.09689	1.72732	29.07	12	-0.77488			

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.0059	0.0013	0.000021	-0.0026	-0.0025	0.41	-1.4%
h 或 ω%	LA'	ΔH'	x <sub>1</sub> '	x <sub>2</sub> '	x <sub>1</sub> ' - x <sub>2</sub> '	K <sub>T1</sub>	K <sub>T0.7</sub>
100	0.089	-0.0061	-0.0036	0.000037	-0.0036	-0.30	-0.013
70	0.0047	-0.0017	-0.0030	-0.0028	-0.00024	-0.23	-0.0056



1108699

编号: 01-00-009

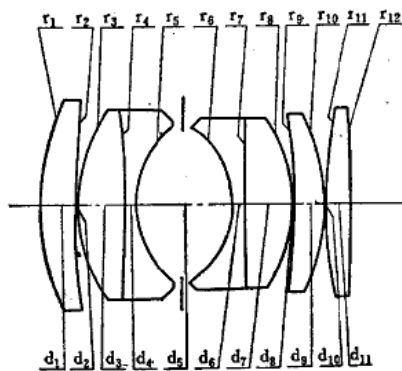
# 双 高 斯 型

E. F. L = 100

B. F. L = 71.06

FNo. = 1.4

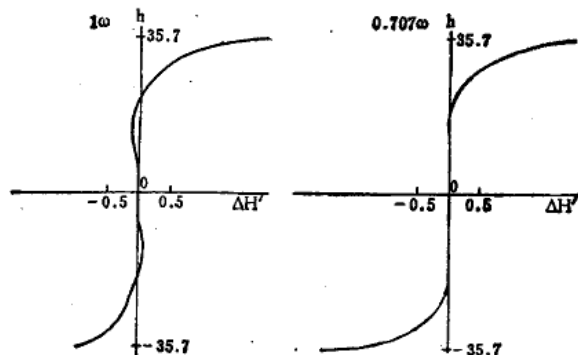
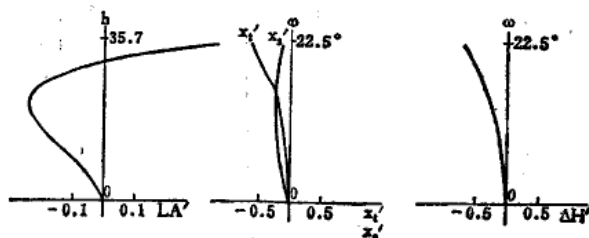
F. A. = ±22.5°



序号	r	d	n	v	序号	r	d	n	v
1	77.95	11.55	1.72342	37.9	7	577.29	15.18	1.734	51.3
2	263.05	0.19			8	-46.53	0.35		
3	52.07	15.78	1.72342	37.9	9	-216.04	9.51	1.66672	48.3
4	-327.13	3.46	1.71736	29.5	10	-61.27	0.19		
5	31.13	31.67*			11	156.14	7.04	1.66672	48.3
6	-29.94	3.66	1.71736	29.5	12	-657.55			

31.67\* = 15.21 + 16.46

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.311	0.027	0.070	-0.268	-0.477	41.412	-1.675
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.372	-0.693	-0.681	-0.092	-0.588	0.515	0.019
70	-0.244	-0.255	-0.179	-0.237	-0.057	-0.041	0.011



编号: 01-00-010

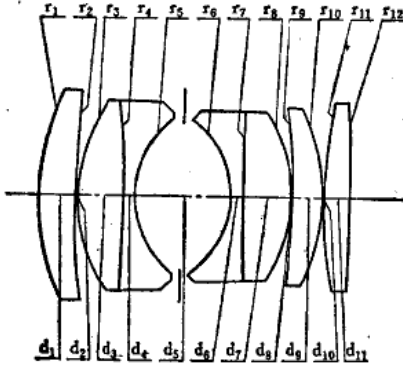
# 双 高 斯 型

E. F. L = 100

B. F. L = 73.42

FNo. = 1.4

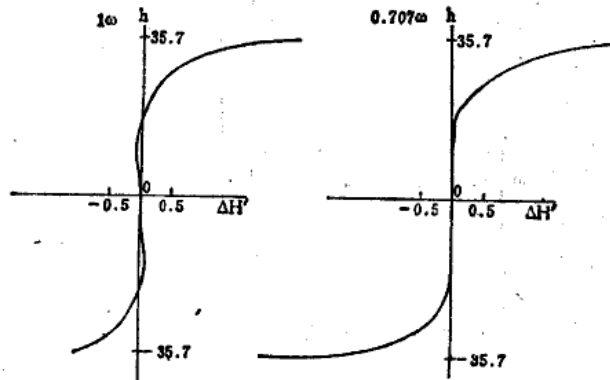
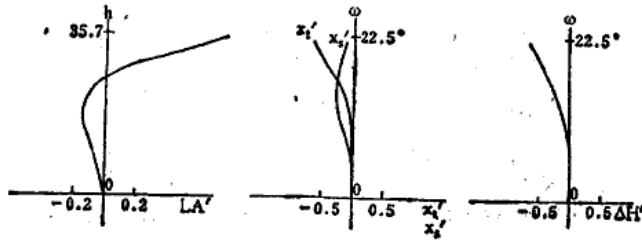
F. A. =  $\pm 22.5^\circ$



序号	r	d	n	v	序号	r	d	n	v
1	79.15	11.93	1.72342	37.9	7	1169.2	15.03	1.734	51.3
2	260.8	0.17			8	-48.57	0.36		
3	52.47	15.01	1.70154	41.1	9	-248.0	8.81	1.6935	50.7
4	-383.0	4.08	1.68893	31.0	10	-62.62	0.17		
5	31.1	30.41*			11	204.7	6.32	1.6935	50.7
6	-30.43	4.04	1.71736	29.5	12	-429.9			

$30.41^* = 15.21 + 15.20$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.262	0.108	0.045	-0.239	-0.498	41.722	-1.731
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_e$	$x'_i - x'_e$	$K'_{T1}$	$K'_{T0.7}$
100	0.837	-0.722	-0.654	0.007	-0.662	0.55	0.080
70	-0.075	-0.268	-0.186	-0.199	0.013	-0.006	0.100



编号: 01-00-011

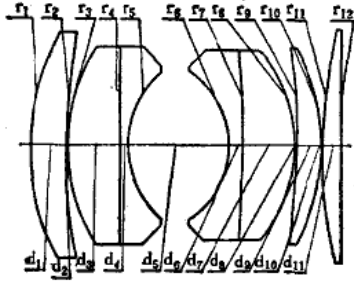
# 大孔径长工作截距摄影镜头

E. F. L = 1

B. F. L = 0.75

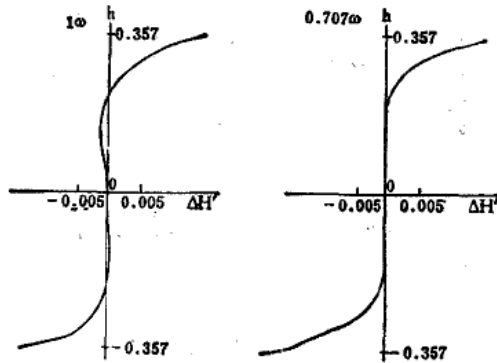
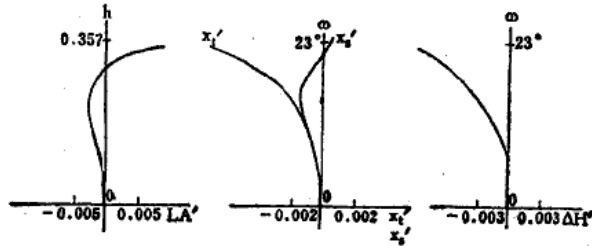
FNo. = 1.4

F. A. =  $\pm 23^\circ$



序号	r	d	n	v	序号	r	d	n	v
1	0.7655	0.1260	1.66446	35.9	7	-3.8760	0.1647	1.71300	53.9
2	2.5053	0.0019			8	-0.4535	0.0039		
3	0.5736	0.1686	1.69350	53.4	9	-2.3256	0.0833	1.67790	55.5
4	12.4041	0.0329	1.64831	33.8	10	-0.6357	0.0019		
5	0.3240	0.3256			11	1.5504	0.0620	1.71300	53.9
6	-0.2892	0.0407	1.69895	30.1	12	-16.8774			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0036	0.00013	0.00052	-0.0021	-0.0057	0.42	-2%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.0083	-0.0085	-0.0073	0.00079	-0.0080	0.0019	0.000074
70	-0.0027	-0.0031	-0.0020	-0.00159	-0.00040	-0.0073	-0.00061



编号: 01-00-012

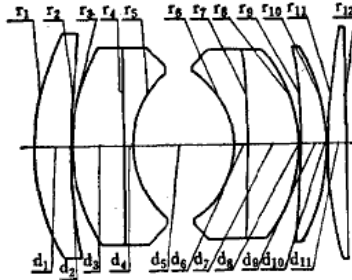
# 大孔径长工作截距摄影镜头

E. F. L = 1

B. F. L = 0.7442

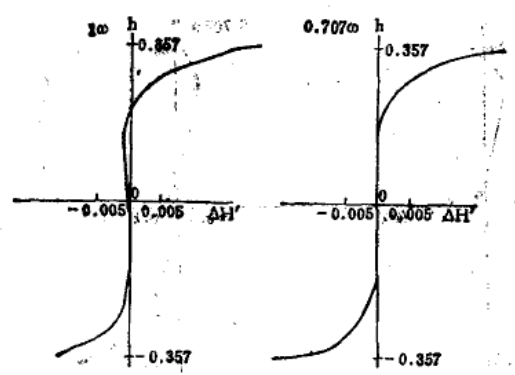
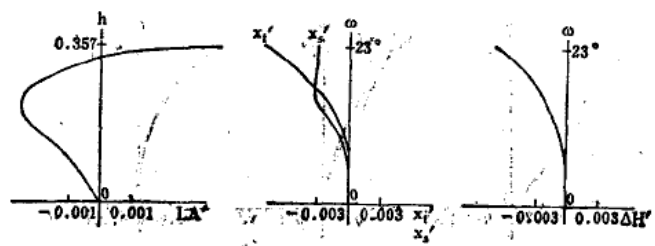
FNo. = 1.4

F. A. = ±23°



序号	r	d	n	v	序号	r	d	n	v
1	0.8140	0.0930	1.7495	35.0	7	-8.5727	0.1647	1.6779	55.5
2	2.6512	0.0019			8	-0.4953	0.0058		
3	0.5620	0.1202	1.744	44.9	9	-2.3256	0.0969	1.713	53.9
4	2.7132	0.0659	1.69895	30.1	10	-0.6610	0.0019		
5	0.3341	0.3333			11	1.5891	0.0620	1.713	53.9
6	-0.3227	0.0465	1.71736	29.5	12	-8.9028			

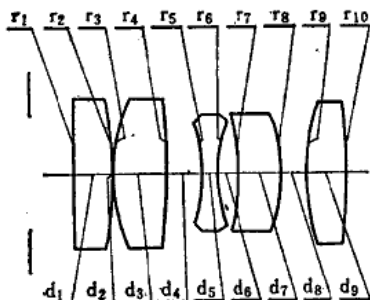
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0031	0.00025	0.00076	-0.0032	-0.0050	0.42	-1.5%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.0043	-0.0067	-0.0084	-0.0031	-0.0053	0.0056	0.00011
70	-0.0027	-0.0026	-0.0026	-0.0035	0.00089	0.0016	0.00025



编号: 01-00-013

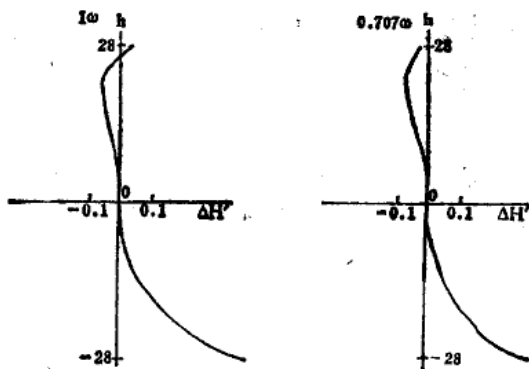
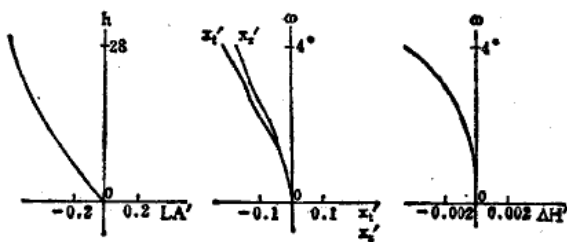
### 摄影或电影摄影物镜

E. F. L = 100    B. F. L = 44.7    FNo. = 1.8    F. A. = 8°     $Lp'_1 = -18.9$



序号	r	d	n	v	序号	r	d	n	v
		18.9*			6	95.61	7.5		
1	$\infty$	15.1	1.62	58.0	7	-159.36	19.6	1.66	57.0
2	-230.34	1.5			8	-62.21	11.7		
3	81.00	23.4	1.70	56.0	9	129.61	17.7	1.71	54.0
4	-368.11	14.6			10	-301.34			
5	-82.12	8.3	1.76	28.0					

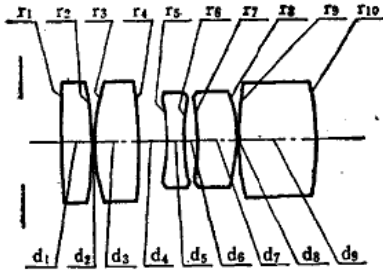
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.15	0.0073	-0.0032	-0.025	-0.0025	7.0	-0.065%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.61	-0.0045	-0.22	-0.18	-0.040	0.20	0.055
70	-0.41	-0.0016	-0.11	-0.09	-0.020	0.13	0.036



编号: 01-00-014

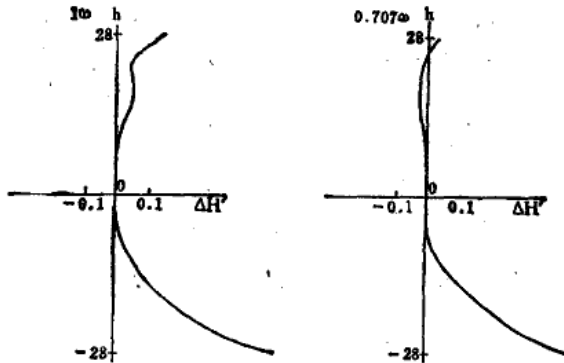
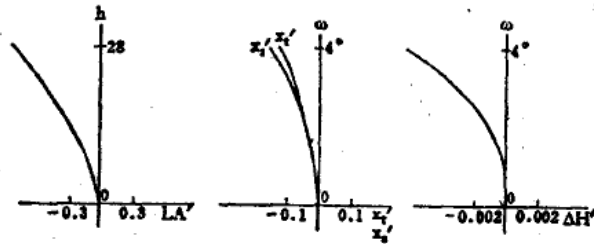
### 摄影或电影摄影物镜

E.F.L = 100    B.F.L = 46.2    FNo. = 1.8    F.A. = 8°     $Lp'_1 = -19.1$



序号	r	d	n	v	序号	r	d	n	v
	-	19.1*			6	96.88	7.6		
1	$\infty$	15.3	1.62	58.0	7	-161.47	19.9	1.66	57.0
2	-233.41	1.5			8	-70.75	1.5		
3	91.72	23.7	1.70	56.0	9	149.80	38.2	1.71	54.0
4	-245.34	14.1			10	-164.70			
5	-83.21	8.4	1.76	28.0					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.18	0.029	0.0013	-0.025	-0.0036	7	-0.093%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	-0.82	-0.0065	-0.13	-0.15	0.019	0.35	0.12
70	-0.52	-0.0023	-0.067	-0.077	0.0092	0.24	0.084



编号: 01-00-015

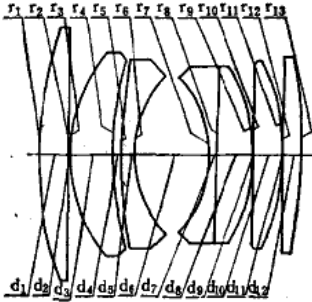
# 高斯型摄影物镜

E. F. L = 1.0

B. F. L = 0.6959

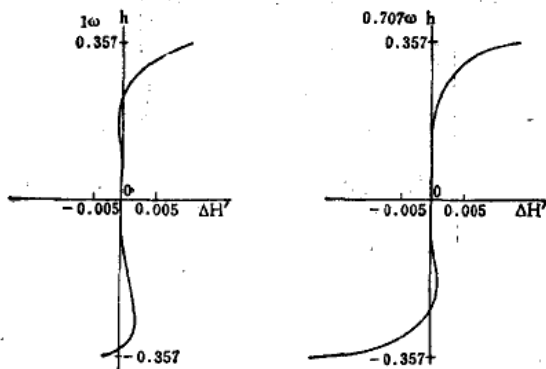
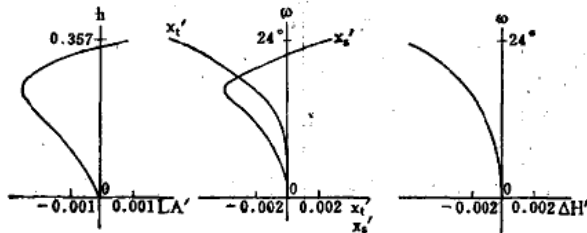
FNo. = 1.4

F. A. = ±24°



序号	r	d	$n_e$	$v$	序号	r	d	$n_e$	$v$
1	1.15720	0.1044	1.72055	47.69	8	-7.84738	0.1149	1.78868	43.62
2	-76.27345	0.0019			9	-0.57576	0.0010		
3	0.51319	0.1369	1.78868	43.62	10	-12.43738	0.0929	1.74795	44.49
4	0.98070	0.0306			11	-0.73012	0.0010		
5	1.75657	0.0440	1.72311	29.30	12	9.06032	0.0565	1.74795	44.49
6	0.35550	0.2346			13	-1.73148			
7	-0.36599	0.0287	1.79180	25.90					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0028	0.00045	0.0011	-0.0050	-0.0044	0.44	-1.3%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.00097	-0.0060	-0.0077	0.0029	-0.010	0.0052	0.0020
70	-0.0025	-0.0025	-0.0020	-0.0040	0.00199	-0.0027	0.00062





编号: 01-00-016

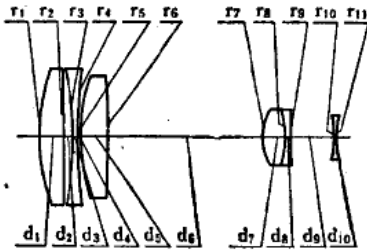
## 改进的珀兹伐物镜系统

E. F. L = 100

B. F. L =

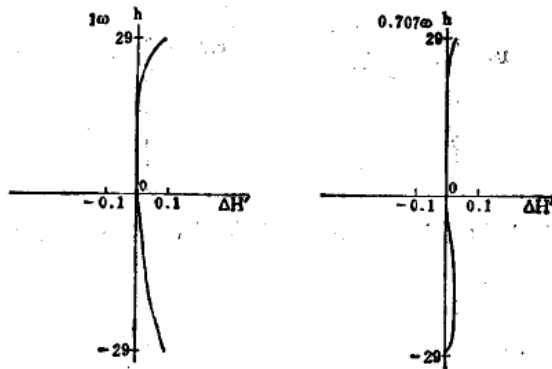
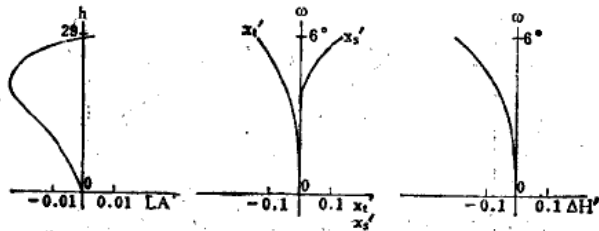
FNo. = 1.7

F. A. = 12°



序号	r	d	n	v	序号	r	d	n	v
1	100.2	13.4	1.605	60.4	7	35.65	10.3	1.625	56.6
2	4070	4.26			8	-57.7	2.71	1.702	38.3
3	-196.2	4.57	1.792	25.9	9	201.5	21.8		
4	498.5	1.3			10	-72.2	1.55	1.813	25.2
5	112.0	13.7	1.625	56.6	11	64.7			
6	3190	80.5							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.015	-0.00026	-0.0117	0.0095	-0.11	10.53	-1.9%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.0030	-0.20	-0.13	0.013	-0.14	0.077	0.037
70	-0.024	-0.071	-0.071	0.000029	-0.071	0.015	0.0096



编号: 01-00-017

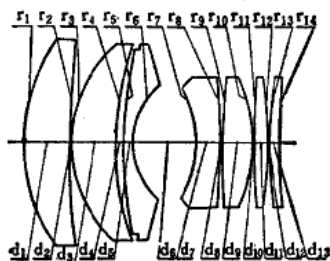
# 摄影镜头

E. F. L = 100.0

B. F. L =

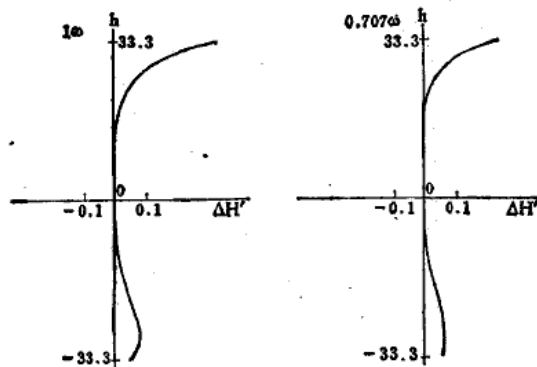
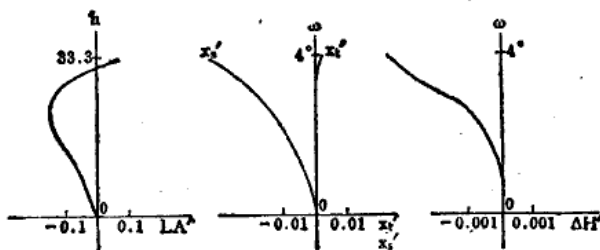
FNo. = 1.5

F. A. = 8°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	61.02	15.2	1.6779	55.5	8	-252.98	1.1		
2	331.2	0.07			9	482.13	9.9	1.6779	55.5
3	42.13	14.1	1.6779	55.5	10	-52.31	0.1		
4	94.96	2.8			11	260.23	4.8	1.6676	41.9
5	166.14	3.4	1.6990	30.1	12	-128.78	0.07		
6	25.03	20.4			13	134.14	4.0	1.6668	33.1
7	-37.40	7.1	1.7215	29.3	14	316.45			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.139	0.019	0.0039	-0.011	-0.0023	7.0	-0.052%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{f1}$	$K_{f0.7}$
100	0.065	-0.0036	0.00139	-0.033	0.034	0.20	0.055
70	-0.15	-0.0012	0.00059	-0.0169	0.017	0.14	0.039



编号: 01-00-018

# 光 学 物 镜

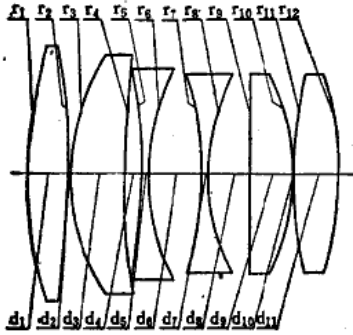
E. F. L = 100

B. F. L = 53.32

FNo. = 1.2

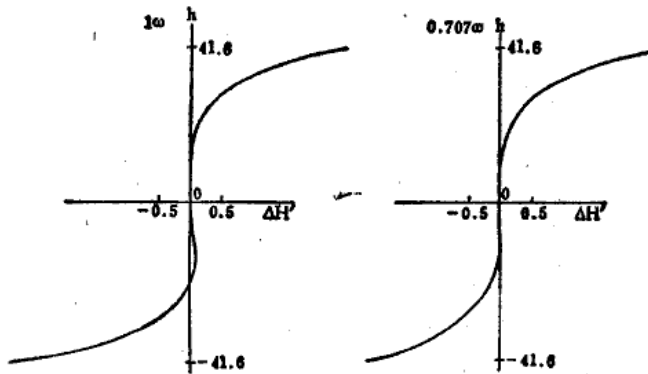
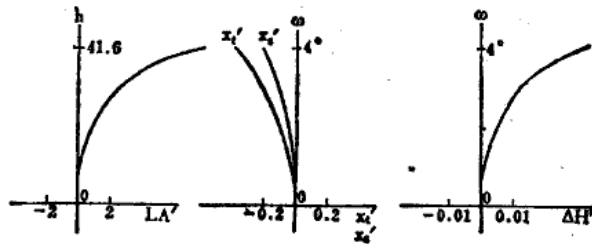
F. A. = 8°

$Lp'_s = 7$



序号	r	d	$n_D$	v	序号	r	d	$n_D$	v
1	140.90	18.32	1.6906	54.00	7	-107.09	2.82	1.6985	30.2
2	-246.94	0.35			8	73.62	13.39		
3	70.45	18.32	1.6906	54.00	9	462.87	14.09	1.6909	54.8
4	281.81	5.78			10	-73.27	0.35		
5	-176.13	2.82	1.6985	30.2	11	160.00	14.09	1.6909	54.8
6	75.81	17.61			12	-103.99			

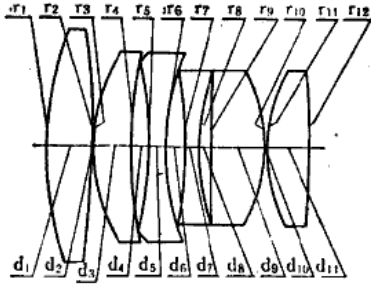
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	0.73	0.051	-0.026	-0.039	0.026	7.4	0.46%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	8.7	0.03	-0.40	-0.21	-0.18	-0.44	0.065
70	2.1	0.012	-0.19	-0.10	-0.089	-0.34	0.037



编号: 01-00-019

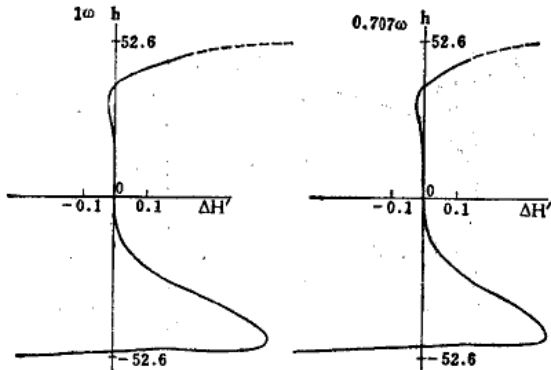
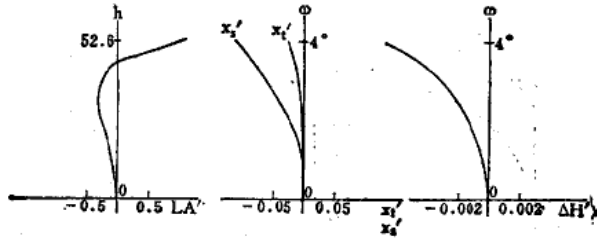
# 光 学 物 镜

E. F. L = 100    B. F. L = 54.14    FNo. = 0.95    F. A. = 8°     $Lp'_s = 2.5$



序号	r	d	$n_D$	$v$	序号	r	d	$n_D$	$v$
1	210.63	21.91	1.7439	44.9	7	-302.07	8.80	1.7877	25.5
2	-585.34	0.91			8	125.41	5.61		
3	91.74	21.91	1.7129	53.8	9	572.45	28.05	1.6966	55.8
4	368.19	8.49			10	-86.44	0.91		
5	-200.17	8.80	1.7877	25.5	11	86.44	20.17	1.6966	55.8
6	122.07	10.24			12	-505.57			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.56	0.037	0.024	-0.086	-0.0070	7	-0.097%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	1.1	-0.0068	-0.022	-0.109	0.087	0.26	0.19
70	-0.34	-0.0024	-0.011	-0.055	0.044	0.19	0.13



编号: 01-00-020

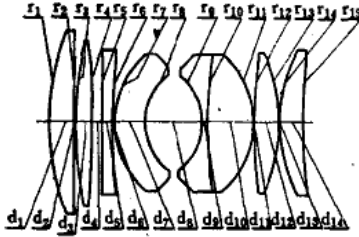
# 高速摄影机物镜

E. F. L = 100

B. F. L = 60.64

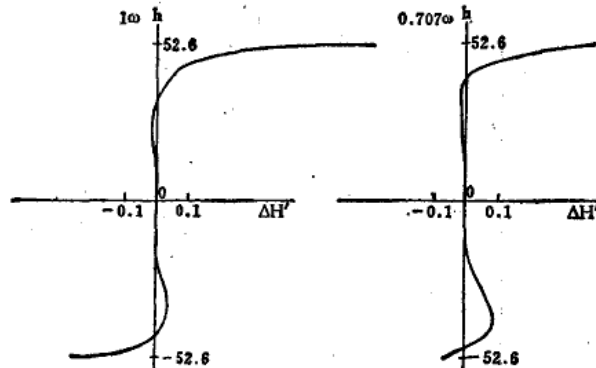
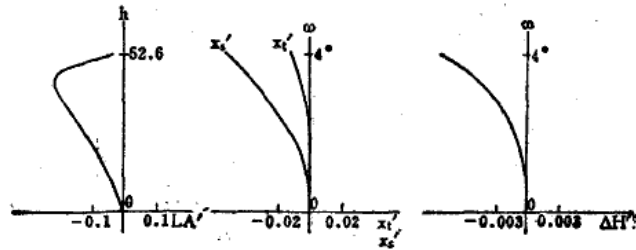
FNo. = 0.95

F. A. = 8°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	159.55	16.35	1.62287	60.1	9	-39.25	4.48	1.76846	28.8
2	3663.75	0.19			10	478.43	28.42	1.71615	53.7
3	229.09	10.32	1.66104	57.1	11	-57.62	0.19		
4	607.77	6.23			12	317.71	17.52	1.59142	61.0
5	$\infty$	8.37	1.58482	40.6	13	-116.06	0.19		
6	597.26	0.19			14	94.69	16.53	1.69400	54.6
7	57.82	20.05	1.79180	25.9	15	509.65			
8	39.05	36.21							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.35	0.023	0.011	-0.042	-0.0086	7.0	-0.11%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	-0.048	-0.0082	-0.013	-0.054	0.040	0.22	0.041
70	-0.21	-0.0029	-0.0065	-0.027	0.020	0.17	0.029



编号: 01-00-021

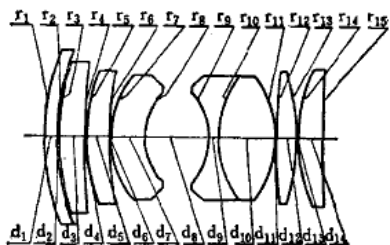
# 高速摄影机物镜

E. F. L = 100

B. F. L = 57.28

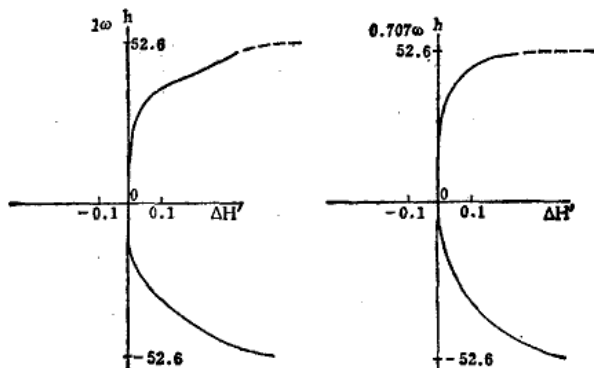
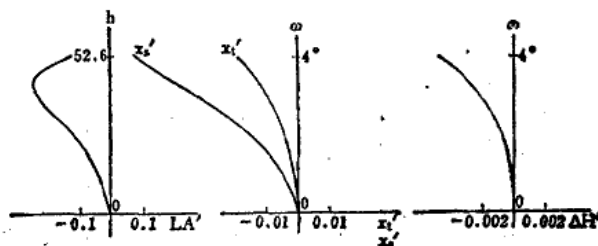
FNo. = 0.95

F. A. = 8°



序号	r	d	$n_s$	$v_s$	序号	r	d	$n_s$	$v_s$
1	142.76	8.72	1.67245	44.7	9	-44.42	6.10	1.74703	27.8
2	130.17	0.44			10	71.19	37.93	1.73692	50.8
3	139.32	17.44	1.62541	56.6	11	-71.19	0.44		
4	540.20	0.44			12	399.00	13.08	1.71615	53.7
5	114.51	15.69	1.62287	60.1	13	-149.56	0.44		
6	282.61	0.44			14	94.64	15.69	1.71615	53.7
7	66.70	20.92	1.74703	27.8	15	649.26			
8	39.28	40.54							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.26	0.034	0.010	-0.042	-0.0052	7.0	-0.070%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.15	-0.0049	-0.018	0.057	0.038	0.71	0.11
70	-0.21	-0.0017	-0.0090	0.028	0.019	0.49	0.085



编号: 01-00-022

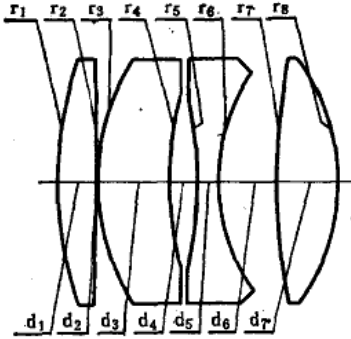
### 用于电影摄影的大孔径物镜

E. F. L = 100

B. F. L =

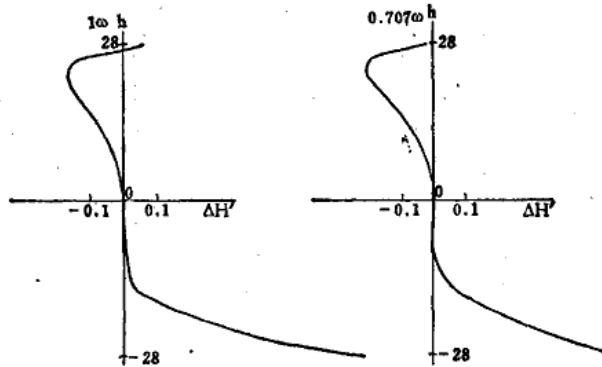
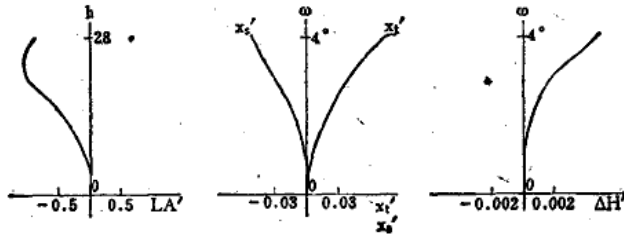
FNo. = 1.8

F. A. = 8°



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	89.19	8.95	1.61375	56.3	5	-97.66	5.16	1.71736	29.5
2	-521.30	0.69			6	42.24	12.39		
3	51.25	15.48	1.62041	60.3	7	173.49	12.39	1.62041	60.3
4	96.35	5.51			8	-45.47			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.26	-0.036	0.010	-0.018	0.0027	7.0	0.071%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.93	0.0049	0.079	-0.052	0.13	0.42	0.01
70	-0.89	0.0017	0.039	-0.026	0.066	0.29	0.0087



编号: 01-00-023

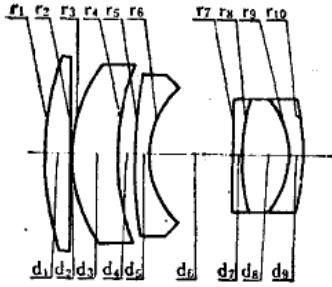
# 摄影物镜

E. F. L = 1.0

B. F. L = 0.501

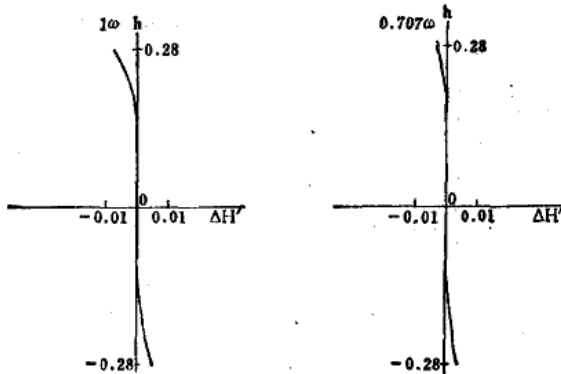
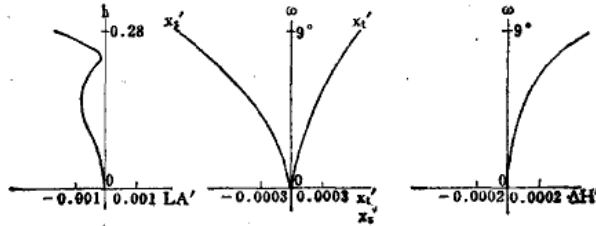
FNo. = 1.8

F. A. = 18°



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	0.72	0.0706	1.6031	65.6	6	0.2355	0.2194		
2	∞	0.002			7	12.61	0.0222	1.57492	41.5
3	0.3782	0.1275	1.75496	53.4	8	0.5492	0.1242	1.68609	53.5
4	0.6996	0.0456			9	-0.2136	0.0315	1.62039	60.35
5	1.733	0.0395	1.71749	29.55	10	-0.8032			

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.00086	-0.000080	0.00016	-0.00039	0.00031	0.15	0.34%
h 或 ω %	LA'	ΔH'	x' <sub>t</sub>	x' <sub>s</sub>	x' <sub>t</sub> - x' <sub>s</sub>	K <sub>T1</sub>	K <sub>T0.7</sub>
100	-0.0016	0.00054	0.000648	-0.0011	0.0017	-0.0018	0.000057
70	-0.00071	0.00019	0.00034	-0.00064	0.00099	-0.00048	0.000099





编号: 01-00-024

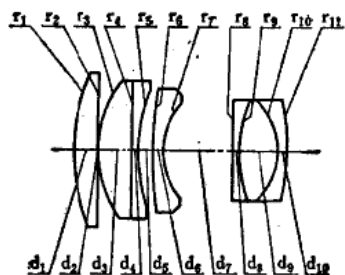
# 摄影物镜

E. F. L = 1.0

B. F. L = 0.501

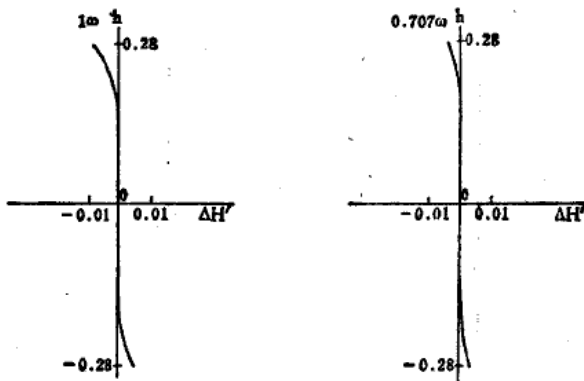
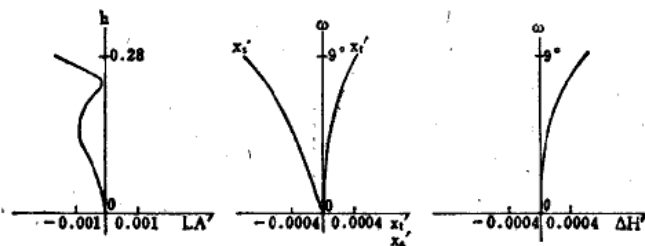
FNo. = 1.8

F. A. = 18°



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	0.7431	0.0706	1.61720	54.04	7	0.2348	0.2193		
2	∞	0.002			8	13.83	0.0222	1.57492	41.5
3	0.3768	0.1073	1.74400	44.9	9	0.5524	0.1242	1.68609	53.5
4	∞	0.0202	1.72151	29.28	10	-0.2136	0.0298	1.62039	60.35
5	0.6754	0.0456			11	-0.8193			
6	1.898	0.0395	1.68893	31.15					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00083	-0.000077	0.00014	-0.00035	0.000329	0.15	0.36%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.00159	0.00057	0.00040	-0.0010	0.0014	-0.0016	0.000089
70	-0.00065	0.00020	0.00021	-0.00060	0.00081	-0.00035	0.00011



编号: 01-00-025

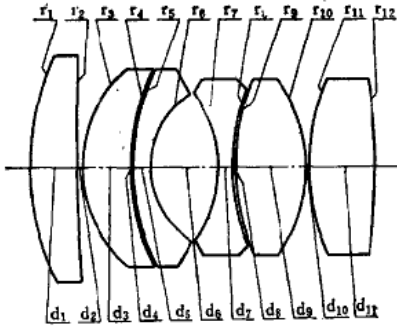
# 六片式物镜

E. F. L = 1

B. F. L = 0.46

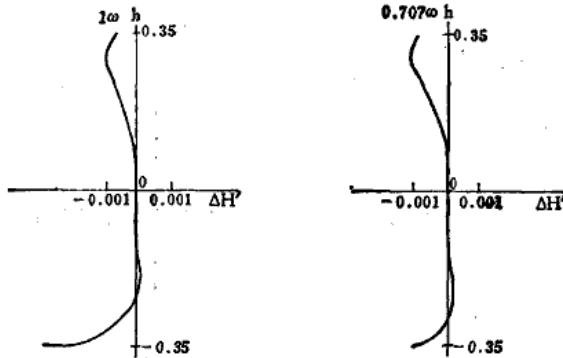
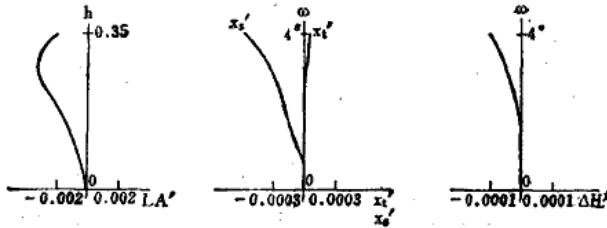
FNo. = 1.4

F. A. = 8°



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	0.832	0.15	1.73	51.0	7	-0.396	0.055	1.59	31.0
2	4.92	0.02			8	0.736	0.002		
3	0.403	0.16	1.49	57.0	9	0.774	0.22	1.49	57.0
4	0.766	0.004			10	-0.470	0.009		
5	0.766	0.055	1.59	31.0	11	0.744	0.21	1.70	56.0
6	0.275	0.21			12	-2.01			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0021	-0.000093	0.000085	-0.00023	-0.000076	0.07	-0.16%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0019	-0.00011	0.000062	-0.00058	0.00065	-0.0017	-0.00040
70	-0.0031	-0.000039	0.000043	-0.00029	0.00033	-0.0012	-0.00030



编号: 01-00-026

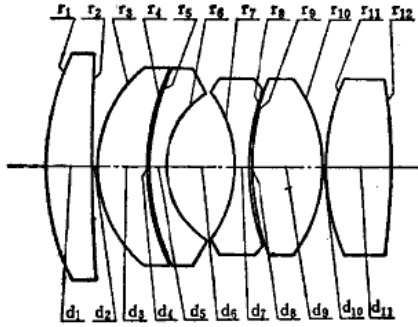
# 六片式物镜

E. F. L = 1

B. F. L = 0.49

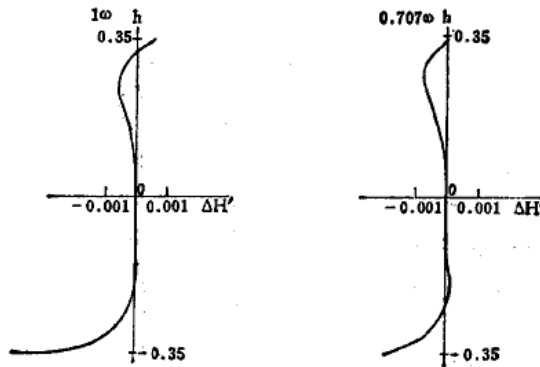
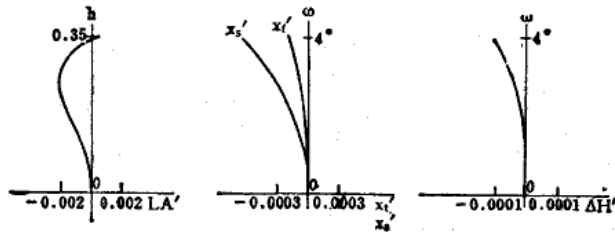
FNo. = 1.4

F. A. = 8°



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	0.829	0.15	1.73	51.0	7	-0.373	0.055	1.57	33.0
2	4.35	0.015			8	0.799	0.004		
3	0.424	0.16	1.49	57.0	9	0.883	0.22	1.49	57.0
4	1.66	0.004			10	-0.452	0.01		
5	1.42	0.055	1.57	33.0	11	0.772	0.21	1.70	56.0
6	0.282	0.21			12	-1.96			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0017	-0.00014	0.000062	-0.00022	-0.000073	0.069	-0.15%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{f1}$	$K'_{T0.7}$
100	0.00045	-0.00010	-0.00019	-0.00063	0.00044	-0.0016	-0.00045
70	-0.0022	-0.00037	-0.00084	-0.00032	0.00052	-0.0011	-0.00033



编号: 01-00-027

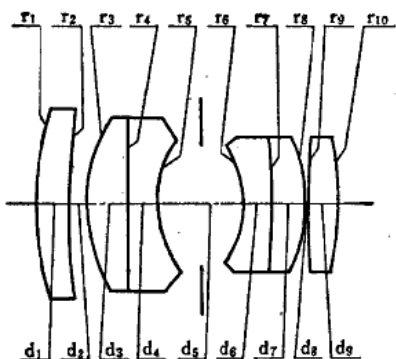
# 高斯型摄影物镜

E. F. L = 100

B. F. L = 61.56

FNo. = 1.8

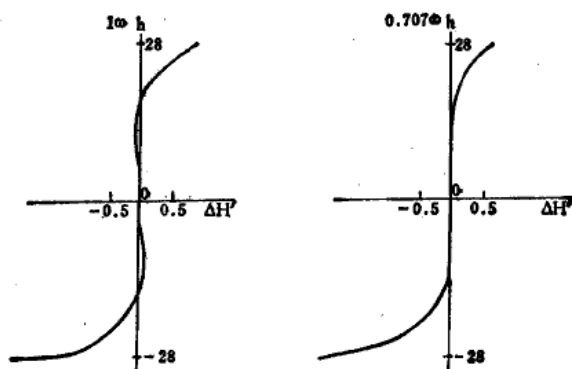
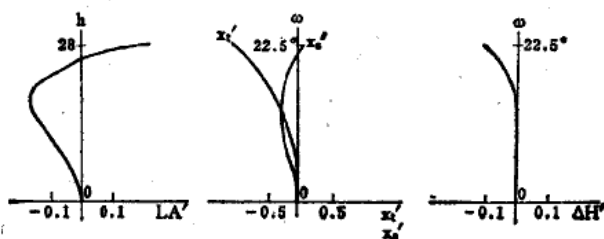
F. A. = 45°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	75.20	9.00	1.720	47.5	6	-28.72	7.0	1.605	38.0
2	271.65	4.03			7	-1023.62	8.97	1.657	57.2
3	42.71	10.59	1.720	42.0	8	-39.66	0.1		
4	∞	7.91	1.720	29.3	9	220.67	7.97	1.691	54.8
5	27.56	22.02*			10	-93.18			

22.02\* = 11.01 + 11.01

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.11	-0.0045	0.035	-0.19	0.046	41.41	-0.25%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	9.22	-0.10	-1.19	0.1	-1.30	-0.39	-0.028
70	-0.16	0.00082	-0.39	-0.28	-0.11	-0.61	-0.082



编号: 01-00-028

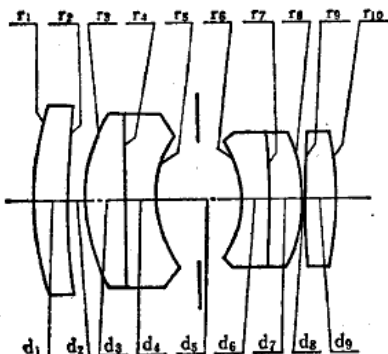
# 高斯型摄影物镜

E. F. L = 100

B. F. L = 63.38

FNo. = 1.8

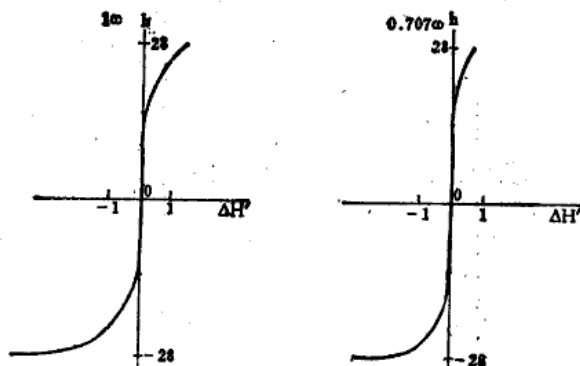
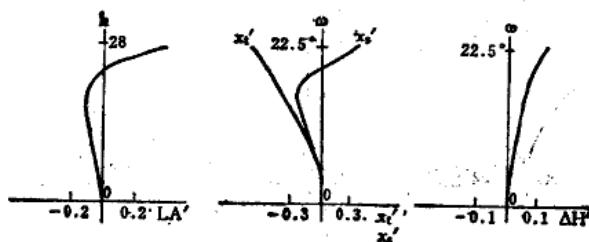
F. A. = 45°



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	75.46	9.01	1.744	45.5	6	-32.90	7.01	1.689	30.9
2	273.87	0.10			7	$\infty$	9.02	1.744	45.6
3	42.52	16.55	1.720	42.0	8	-45.22	0.10		
4	$\infty$	2.0	1.720	29.3	9	250.96	8.02	1.720	47.5
5	28.19	18.01*			10	-109.45			

18.01\* = 9.76 + 8.25

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.10	-0.0057	0.014	-0.18	0.12	41.41	0.29%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.39	0.12	-0.67	0.33	-1.01	-1.39	-0.15
70	-0.12	0.063	-0.38	-0.25	-0.13	-1.08	-0.14



编号: 01-00-029

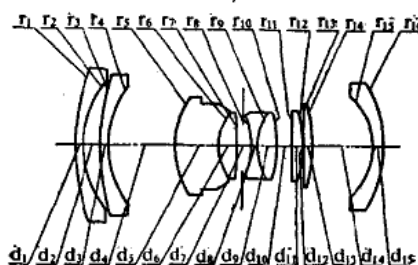
# 广 角 镜 头

E. F. L = 1.0

B. F. L = 0.47

FNo. = 2.8

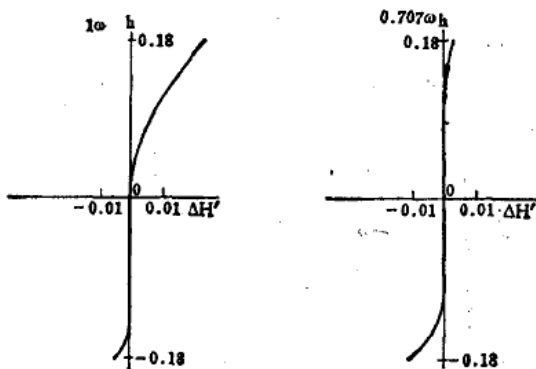
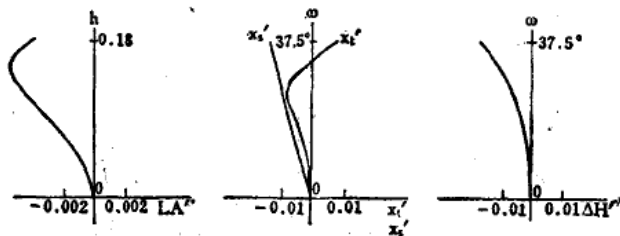
F. A. = 75°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	1.3412	0.0582	1.50559	66.7	9	0.4500	0.1455	1.74793	44.7
2	0.7192	0.1247			10	-0.9140	0.1071		
3	1.5744	0.0582	1.48915	69.9	11	8.5226	0.0728	1.69290	49.4
4	0.6888	0.4859			12	-1.4745	0.0014		
5	0.7057	0.2910	1.79128	47.4	13	-5.8307	0.0728	1.69290	49.4
6	0.4249	0.1455	1.66104	57.1	14	-1.4645	0.4365		
7	-1.7427	0.0972*			15	-0.4694	0.0780	1.69416	30.9
8	-0.5612	0.0488	1.75458	34.8	16	-0.8453			

$0.0972^* = 0.04886 + 0.0486$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00077	-0.00036	-0.00033	0.0013	0.0049	0.76	-2.11%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0041	-0.016	0.0077	-0.013	0.020	0.0093	-0.0053
70	-0.0047	-0.0061	-0.0095	-0.011	0.0020	-0.0033	-0.000033



编号: 01-00-030

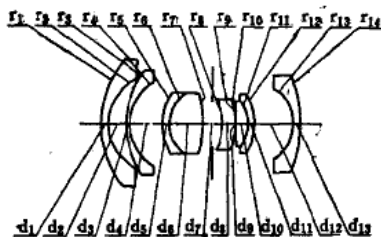
# 广 角 镜 头

E. F. L = 1.0

B. F. L = 0.50

FNo. = 2.8

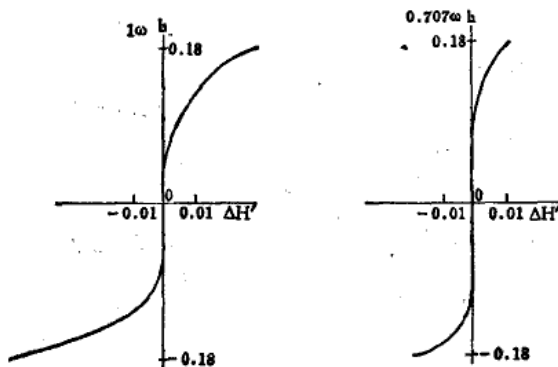
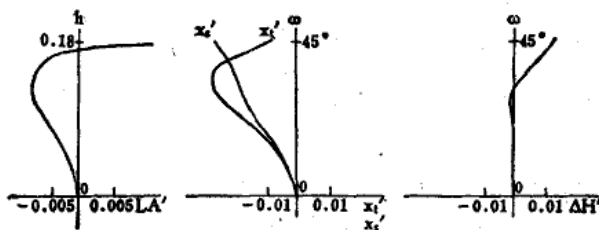
F. A. = 90°



序号	r	d	n	v	序号	r	d	n	v
1	1.024083	0.056881	1.51871	64.0	8	-0.825459	0.152294	1.79128	47.2
2	0.513349	0.181193			9	-0.981422	0.001835		
3	0.874908	0.056422	1.51871	64.0	10	4.178945	0.139450	1.62541	56.6
4	0.523899	0.348165			11	-0.389908	0.049541	1.80166	28.2
5	0.738716	0.080734	1.79128	47.2	12	-0.684312	0.417431		
6	0.413578	0.351835	1.62303	60.1	13	-0.460367	0.079358	1.62303	60.1
7	-1.312523	0.202752*			14	-1.740872			

0.202752\* = 0.100000 + 0.102752

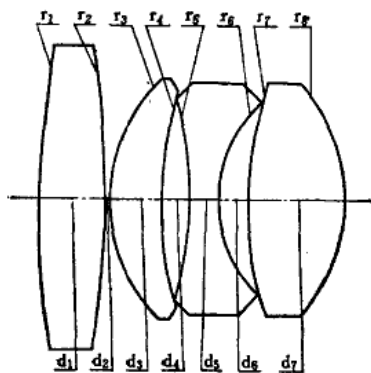
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0015	0.00040	0.0011	0.00075	0.0019	1.00	1.35%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.012	0.013	-0.0085	-0.028	0.017	-0.014	-0.0042
70	-0.0085	-0.00091	-0.028	-0.017	-0.011	-0.0036	-0.00026



编号: 01-00-031

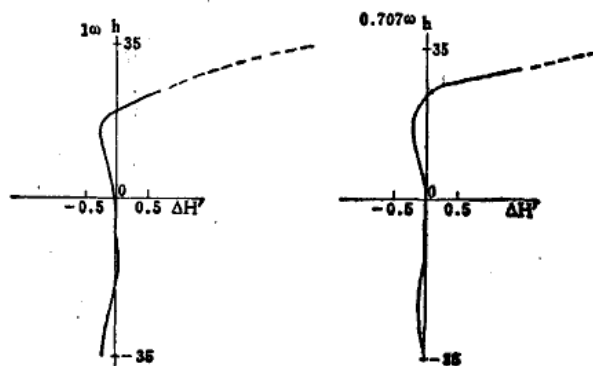
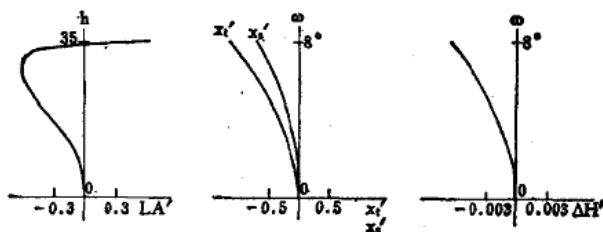
## 四组元物镜

E. F. L = 100    B. F. L = 59.39    FNo. = 1.4    F. A. = 16°     $Lp'_i = -5.0$



序号	r	d	$n_D$	$\nu_D$	序号	r	d	$n_D$	$\nu_D$
		5.0*							
1	288.7	20.0	1.697	56.0	5	-138.9	9.9	1.72	29.0
2	-288.7	1.4			6	42.2	9.1		
3	54.3	17.0	1.697	56.0	7	115.4	31.6	1.697	56.0
4	132.8	8.4			8	-55.7			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.31	-0.27	-0.066	-0.12	-0.0086	14.05	-0.045%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.62	-0.0063	-1.12	-0.72	-0.39	7.8	0.33
70	-0.59	-0.0033	-0.61	-0.38	-0.23	5.3	-0.033

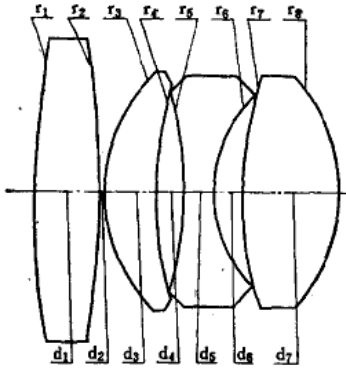




编号: 01-00-032

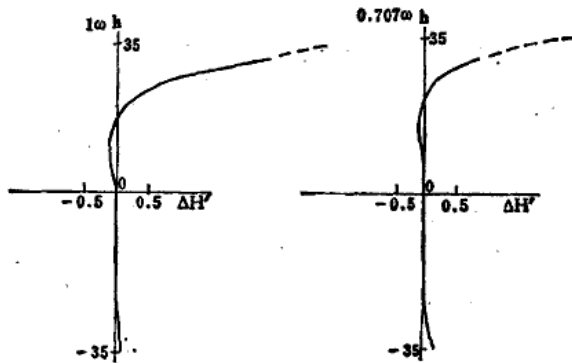
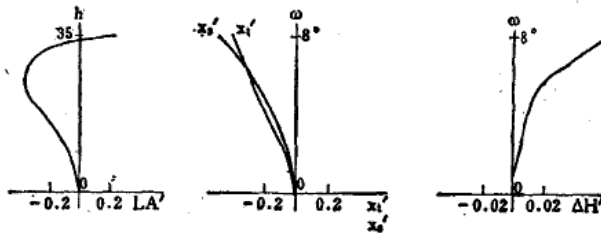
## 四组元物镜

E. F. L = 100    B. F. L = 48.09    FNo. = 1.4    F. A. = 16'     $Lp'_1 = -5.0$



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
		5.0*							
1	258.4	20.1	1.697	56.0	5	-308.7	12.2	1.720	29.0
2	-258.4	1.5			6	37.3	8.64		
3	48.6	17.1	1.697	56.0	7	93.75	31.7	1.697	56.0
4	87.81	8.87			8	-62.7			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.29	-0.15	-0.012	-0.12	0.034	14.06	0.43%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.24	0.060	-0.41	-0.49	0.079	5.28	0.33
70	-0.39	0.019	-0.27	-0.26	-0.0099	1.86	0.069

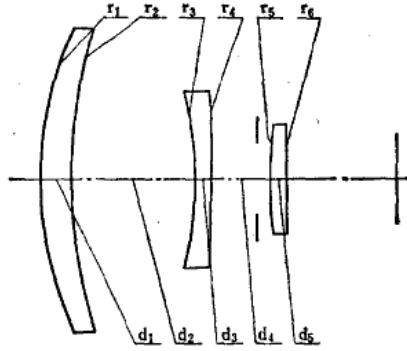


编号: 01-00-033

# 红外光学系统

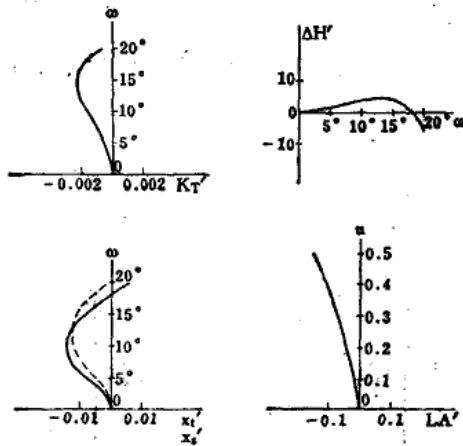
张

E. F. L = 2.0英寸 B. F. L = FNo. = 2 F. A. = 40° 光栏直径 = 0.618



序号	r	d	n (0.5μ)	v (2.7-11.0μ)	φ
1	2.498	0.267	3.4195	132.94	2.550
2	3.653	0.820			
3	-2.732	0.140	2.3964	29.09	1.220
4	-16.566	0.427*			
5	5.412	0.160	3.4195	132.94	0.900
6	-9.518				

0.427\* = 0.352 + 0.075



编号: 01-00-034

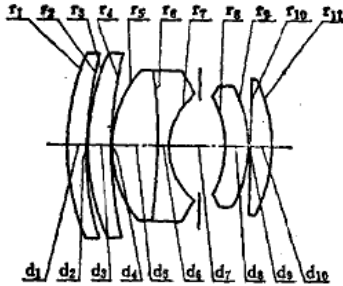
# 摄影物镜

E. F. L = 1

B. F. L = 0.52

FNo. = 1

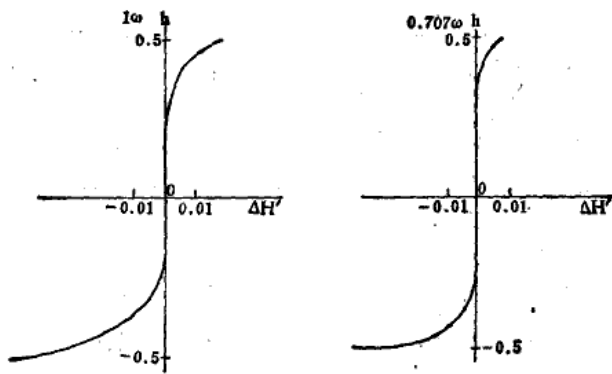
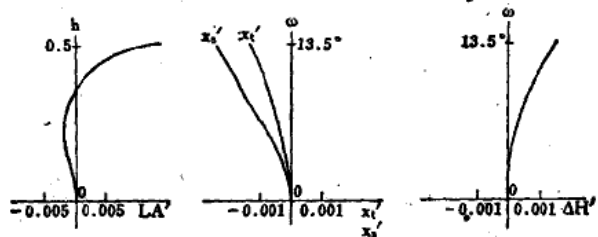
F. A. = 27°



序号	r	d	$n_e$	$v_e$	序号	r	d	$n_e$	$v_e$
1	0.69462	0.07244	1.69290	49.4	7	0.22854	0.18944*		
2	1.12979	0.002			8	-0.30830	0.07589	1.73431	28.4
3	0.69462	0.07244	1.69290	49.4	9	-0.46674	0.00978		
4	1.12979	0.003			10	3.25487	0.07211	1.69290	49.4
5	0.36534	0.13989	1.69290	49.4	11	-0.55524			
6	-2.42522	0.03967	1.69416	30.9					

$0.18944^* = 0.10000 + 0.08944$

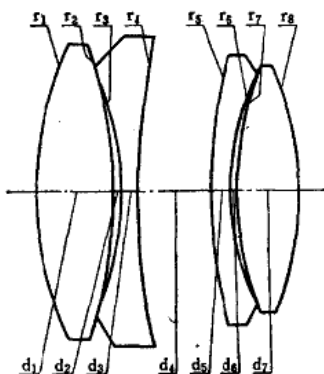
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0022	-0.00016	0.00014	-0.0010	0.0012	0.24	0.63%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x_s$	$x'_t - x'_s$	$K_{T1}$	$K'_{T0.7}$
100	0.011	-0.0015	-0.0013	-0.0024	0.0011	-0.036	-0.0026
70	-0.00049	0.00061	-0.0010	-0.0017	0.00063	-0.016	-0.0018



编号: 01-00-035

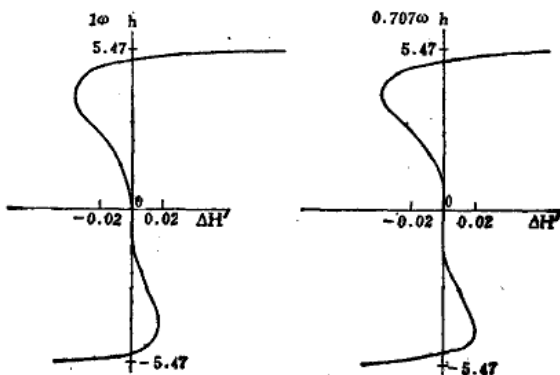
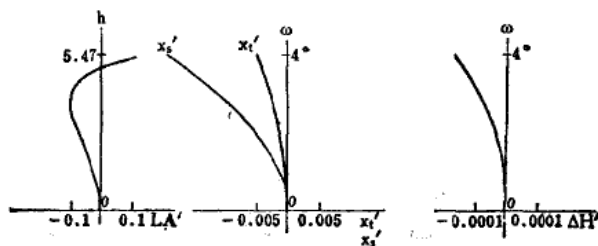
### 改型珀兹伐摄影物镜

E. F. L = 13.17    B. F. L = 5.20    FNo. = 1.2    F. A. = 8°     $Lp'_1 = -1.5$



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
		1.5*							
1	10.3753	3.68	1.691	54.8	5	10.1859	0.98	1.867	31.0
2	-26.0615	0.295			6	5.8613	1.00		
3	-17.7011	0.83	1.867	31.0	7	8.7902	4.61	1.691	54.8
4	$\infty$	3.60			8	-18.3654			

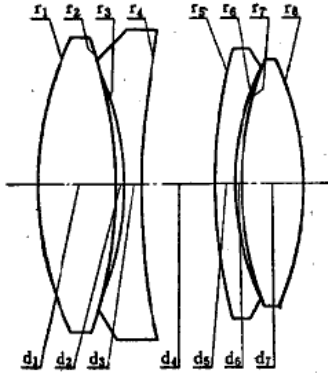
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.11	-0.0070	0.0023	-0.0093	-0.00016	0.92	-0.018%
h 或 $\omega$ %	LA'	$\Delta H'$	$x_1$	$x'_1$	$x'_1 - x_1$	$K_{T1}$	$K_{T0.7}$
100	0.10	-0.00016	-0.0053	-0.019	0.014	0.028	-0.0097
70	-0.10	-0.000065	-0.0030	-0.010	0.0070	0.016	-0.0077



编号: 01-00-036

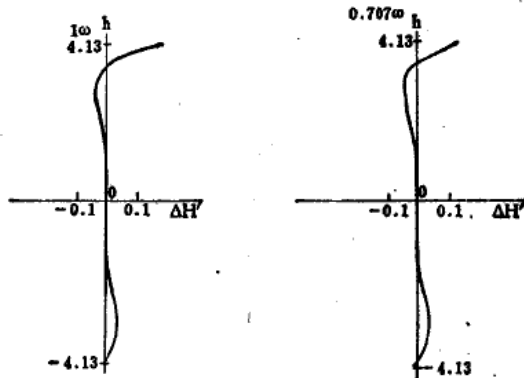
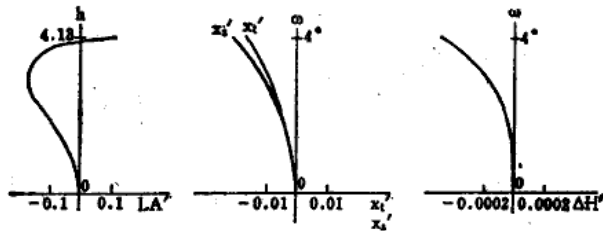
### 改型珀兹伐摄影物镜

E. F. L = 13.205    B. F. L = 9.82    FNo. = 1.6    F. A. = 8°     $Lp'_1 = -1.5$



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
		1.5*							
1	11.1686	2.5	1.657	50.9	5	44.4831	0.68	1.649	33.8
2	-14.9968	0.291			6	8.1658	0.257		
3	-10.000	0.62	1.649	33.8	7	11.8032	2.0	1.657	50.9
4	63.0952	2.4			8	-9.8174			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.099	-0.0055	0.00025	-0.0042	-0.00030	0.92	-0.050%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.11	-0.00046	-0.016	-0.020	0.0033	0.092	-0.0018
70	-0.17	-0.00016	-0.0086	-0.010	0.0014	0.059	-0.0022



编号: 01-00-037

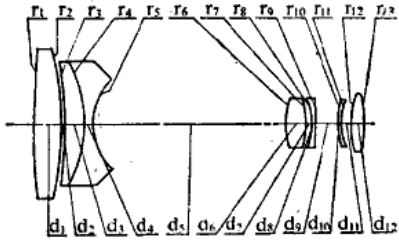
# 广角摄影物镜

E. F. L = 11.0

B. F. L = 22.2

FNo. = 2.8

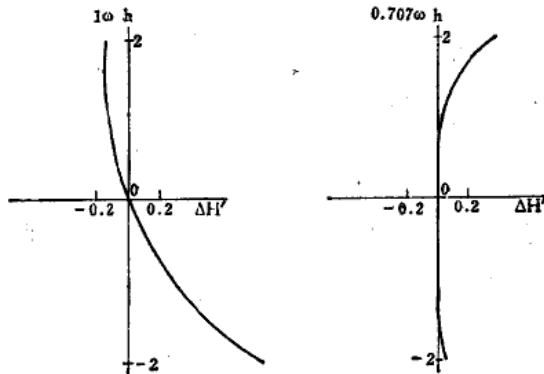
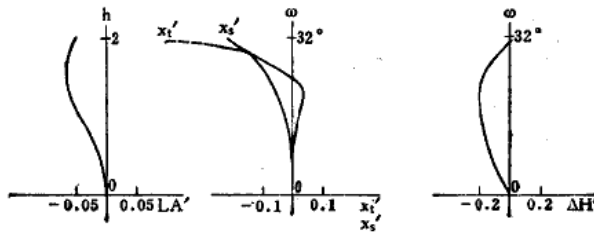
F. A. = 64°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	166.789	5.0	1.541	47.3	8	-11.32	0.76	1.621	36.2
2	-60.881	0.5			9	-46.23	4.25		
3	-100.016	3.5	1.617	36.6	10	17.25	0.76	1.649	33.8
4	-22.711	1.5	1.5582	67.8	11	10.83	1.32		
5	10.79	34.5*			12	15.399	2.10	1.511	63.6
6	17.99	3.64	1.511	63.5	13	-29.46			
7	-12.139	0.52							

34.5\* = 28.5 + 6.0

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.013	0.0057	0.0053	-0.014	-0.19	6.87	0.34%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.052	0.023	-12.07	-0.20	-11.86	0.32	0.13
70	-0.065	-0.19	0.040	-0.064	0.10	0.18	0.051



编号: 01-00-038

### 大相对孔径的折反射光学系统

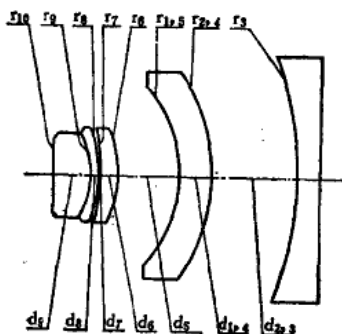
E. F. L = 1

B. F. L =

FNo. = 0.63

F. A. =

$$\beta = \left(\frac{1}{6.4}\right)^2$$



序号	r	d	n	v	序号	r	d	n	v
1	-0.89025	0.2	1.51633	64.1	6	-0.60387	-0.12	-1.51633	64.1
2	-1.12294	0.55879			7	-1.82836	-0.004		
3	-2.36770	-0.55879	-1		8	-1.05009	-0.04	-1.71736	29.5
4	-1.12294	-0.2	-1.51633	64.1	9	-0.51633	-0.25035	-1.51633	64.1
5	-0.89025	-0.40326			10	$\infty$			

编号: 01-00-039

### 大相对孔径的折反射光学系统

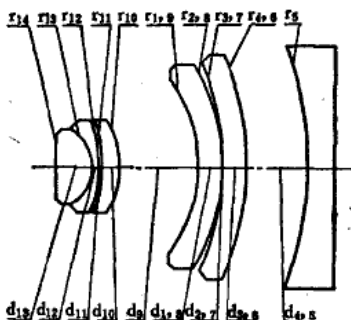
E. F. L = 1

B. F. L =

FNo. = 0.63

F. A. =

$$\beta = \left(\frac{1}{6.4}\right)^2$$



序号	r	d	n	v	序号	r	d	n	v
1	-0.95546	0.13011	1.51633	64.1	8	-1.37887	-0.13011	-1.51633	64.1
2	-1.37887	0.0043			9	-0.95546	-0.51095		
3	-1.91034	0.16129	1.62004	36.3	10	-0.50339	-0.12043	-1.51633	64.1
4	-1.68398	0.3823			11	-1.33064	-0.0043		
5	-2.38359	-0.3823	-1		12	-0.94432	-0.03978	-1.71736	29.5
6	-1.68398	-0.16129	-1.62004	36.3	13	-0.32242	-0.23726	-1.51633	64.1
7	-1.91034	-0.0043			14	-6.25930			

编号: 01-00-040

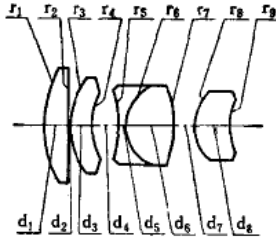
# 大孔径放映镜头

E. F. L = 100

B. F. L = 15.8

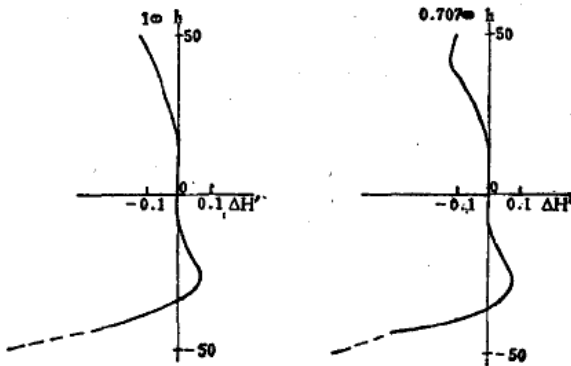
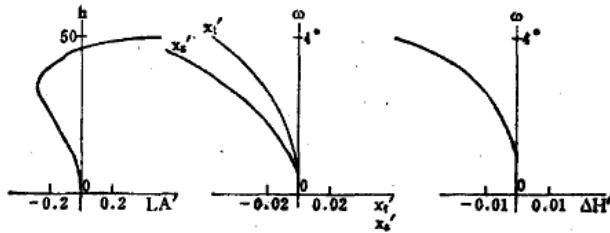
FNo. = 1.0

F. A. = 8°



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	109.2	22.4	1.617	54.9	6	40.1	45.8	1.670	47.2
2	8200.7	2.6			7	-88.3	18.8		
3	67.3	21.1	1.605	43.6	8	44.6	31.8	1.734	51.0
4	65.5	24.6			9	59.0			
5	-107.9	6.6	1.751	27.8					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.49	0.082	0.015	-0.066	-0.038	7	-0.55%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K'_{T0.7}$
100	0.50	-0.038	-0.055	-0.097	0.042	-4.15	-0.046
70	-0.27	-0.013	-0.023	-0.050	0.026	-1.46	-0.017





编号: 01-00-041

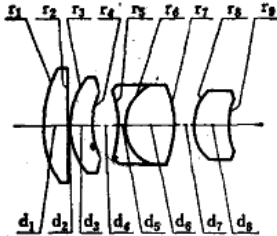
# 大孔径放映镜头

E. F. L = 100

B. F. L = 17.9

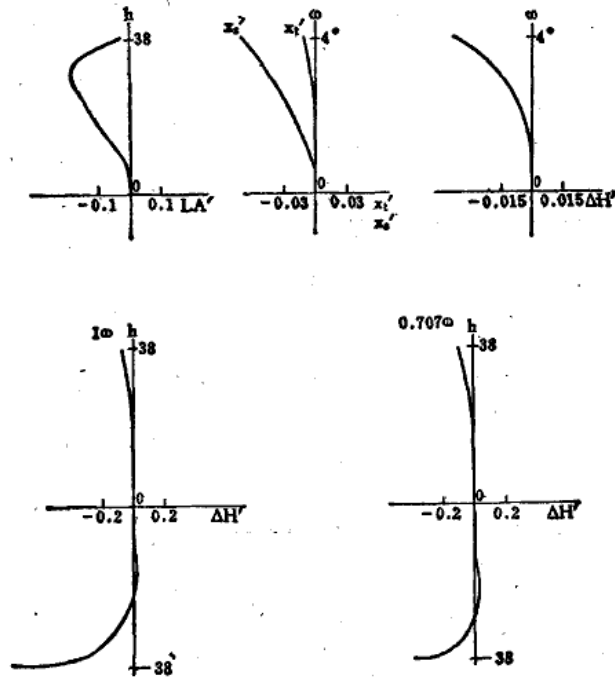
FNo. = 1.3

F. A. = 8°



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	98.3	21.4	1.611	58.8	6	32.6	35.2	1.611	58.8
2	1006.0	9.3			7	-86.1	5.2		
3	61.0	26.3	1.611	58.8	8	40.0	28.5	1.649	33.8
4	56.2	9.0			9	49.5			
5	-143.2	28.0	1.720	29.3					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.16	0.026	0.0138	-0.035	0.030	7	-0.55%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.042	-0.038	-0.0098	-0.073	0.063	-0.46	-0.025
70	-0.17	-0.013	0.0015	-0.037	0.039	-0.24	-0.0093



1108399

编号: 01-00-042

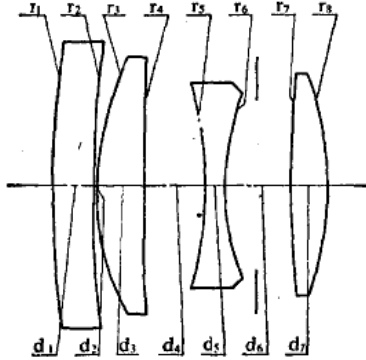
## 消象散的四镜片物镜

E. F. L = 100

B. F. L = 81

FNo. = 2.7

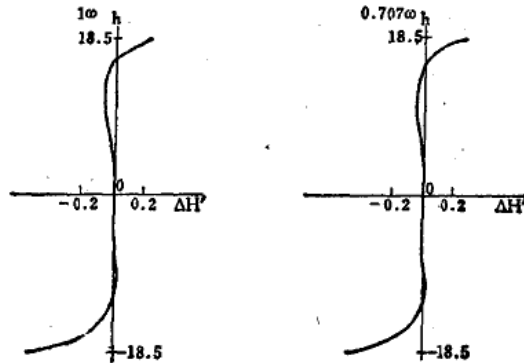
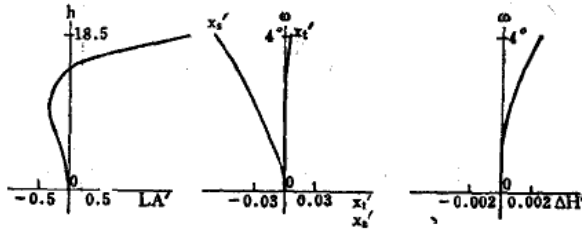
F. A. = 8°



序号	r	d	n	v	序号	r	d	n	v
1	116.31	5.59	1.610	58.9	5	-54.00	1.28	1.649	33.8
2	144.26	0.23			6	42.08	11.02*		
3	41.38	6.10	1.658	50.8	7	713.41	6.47	1.620	60.3
4	-563.55	8.27			8	-39.92			

11.02\* = 5.00 + 6.02

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.11	-0.0058	0.0026	-0.0073	0.00094	7	0.037%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{f1}$	$K_{T0.7}$
100	1.96	0.0025	0.0095	-0.067	0.077	-0.17	-0.040
70	-0.25	0.00091	0.0043	-0.034	0.038	-0.12	-0.027



编号: 01-00-043

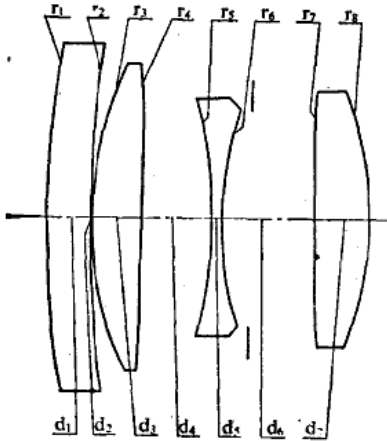
# 消象散的四镜片物镜

E. F. L = 100

B. F. L = 76

FNo. = 2.4

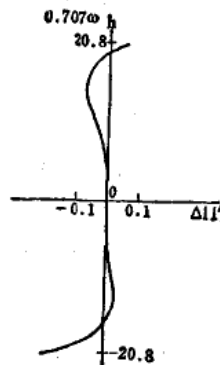
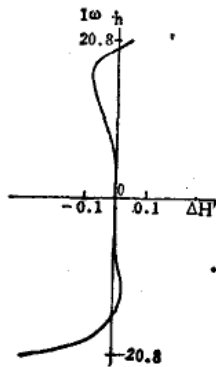
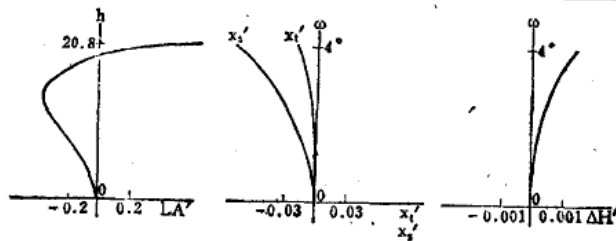
F. A. = 8°



序号	r	d	n	v	序号	r	d	n	v
1	146.94	7.4535	1.5890	61.0	5	-67.082	3.7268	1.7050	30.1
2	198.05	0.5324			6	47.916	11.180*		
3	47.916	8.5183	1.6930	53.3	7	198.05	6.9211	1.7300	44.5
4	1064.8	10.648			8	-51.429			

11.180\* = 5.000 + 6.180

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.13	-0.0055	0.0025	-0.0091	0.00058	7	0.020%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.66	0.0014	-0.014	-0.074	0.060	-0.13	-0.031
70	-0.37	0.00149	-0.0075	-0.037	0.030	-0.090	-0.021



编号: 01-00-044

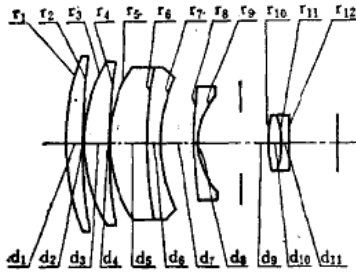
## 摄影或电影摄影用的大孔径望远物镜

E. F. L = 100

B. F. L = 29.1

FNo. = 2

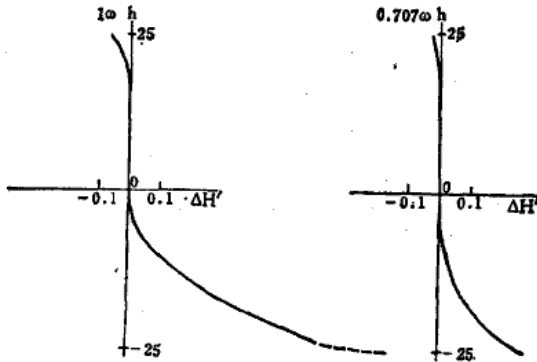
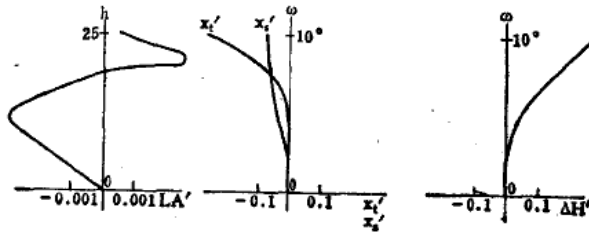
F. A. = 20°



序号	r	d	$n_e$	$v_e$	序号	r	d	$n_e$	$v_e$
1	80.59	6.08	1.51871	63.96	7	50.75	10.40		
2	581.56	0.06			8	99.39	1.55	1.70444	29.84
3	52.28	8.11	1.51871	63.96	9	20.06	22.22*		
4	174.19	0.11			10	62.49	4.56	1.67245	44.71
5	42.11	12.28	1.62287	60.06	11	-17.55	2.07	1.62554	57.87
6	441.68	4.15	1.70444	29.84	12	-259.70			

$\Sigma d = 71.59$   
 $22.22^* = 14.00 + 8.22$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0035	0.00044	0.010	-0.032	0.19	17.63	1.67%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_e$	$x'_i - x'_e$	$K_{T1}$	$K_{T0.7}$
100	0.00052	0.29	-0.26	-0.077	-0.18	0.43	0.16
70	-0.00091	0.12	-0.040	-0.064	0.024	0.12	0.046



编号: 01-00-045

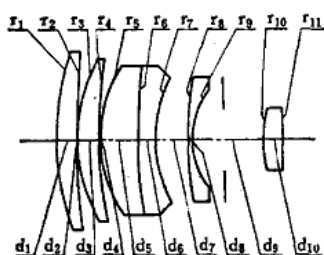
## 摄影或电影摄影用的大孔径望远镜

E. F. L = 100

B. F. L = 29.6

FNo. = 2

F. A. = 20°

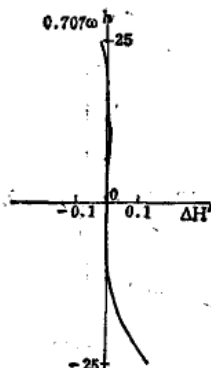
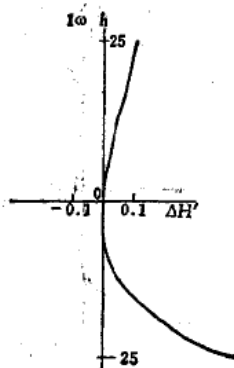
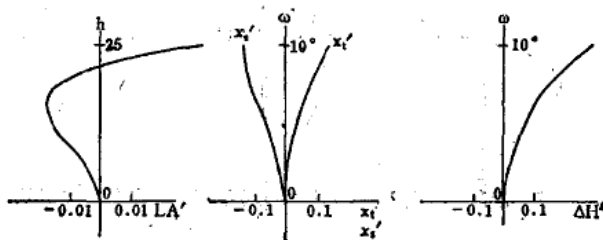


序号	r	d	n <sub>e</sub>	v <sub>e</sub>	序号	r	d	n <sub>e</sub>	v <sub>e</sub>
1	84.32	6.34	1.51871	63.96	7	49.03	10.48		
2	535.46	0.06			8	104.87	1.56	1.70444	29.84
3	52.64	7.94	1.51871	63.96	9	24.47	22.37*		
4	175.38	0.11			10	55.47	6.69	1.7044	29.84
5	43.86	12.36	1.62287	60.06	11	-3130.83			
6	377.84	4.18	1.70444	29.84					

$\Sigma d = 72.09$

$22.37^* = 10.00 + 12.37$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.011	-0.011	0.022	-0.056	0.19	17.63	1.65%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{F1}$	$K_{F0.7}$
100	0.033	0.29	0.135	-0.135	0.27	0.26	0.11
70	-0.017	0.12	0.062	-0.10	0.17	0.056	0.021



编号: 01-00-046

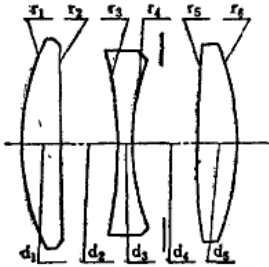
# 三片式物镜

E. F. L = 100

B. F. L = 82.79

FNo. = 2.8

F. A. = 47°

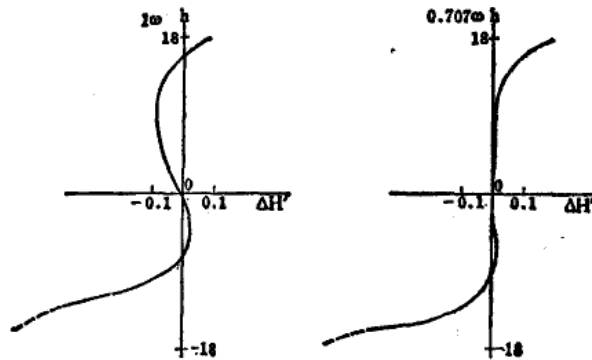
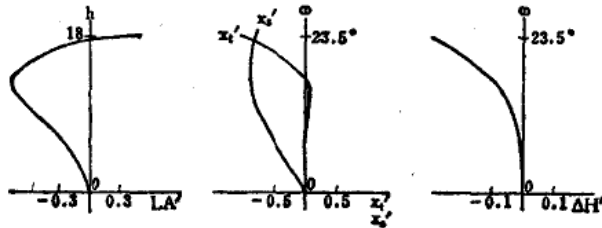


序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	38.4537	6.47945	1.67000	48.13	4	38.9151	10.43249*		
2	942.116	9.15967			5	149.969	6.40254	1.64650	47.50
3	-67.6785	2.37644	1.70445	29.84	6	-45.7984			

$\Sigma d = 34.85059$

$10.43249^* = 5.00000 + 5.43249$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.16	0.047	0.066	-0.23	-0.052	43.48	-0.66%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_e$	$x'_i - x'_e$	$K_{T1}$	$K_{T0.7}$
100	0.47	-0.29	-1.04	-0.84	-0.20	-1.38	-0.21
70	-0.73	-0.084	0.011	-0.90	0.91	-0.58	-0.034



编号: 01-00-047

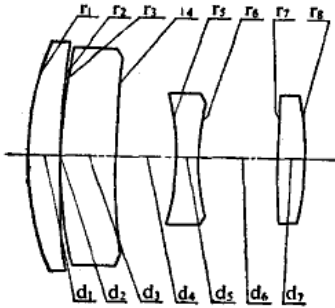
# 四片式物镜

E. F. L = 100

B. F. L = 72.53

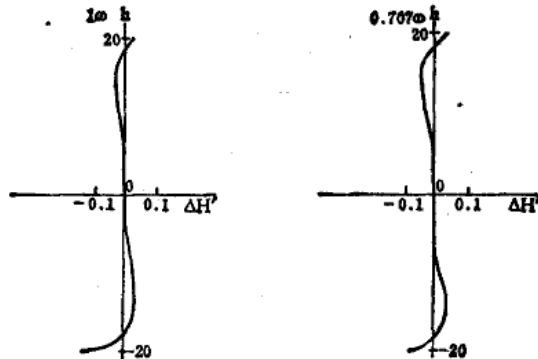
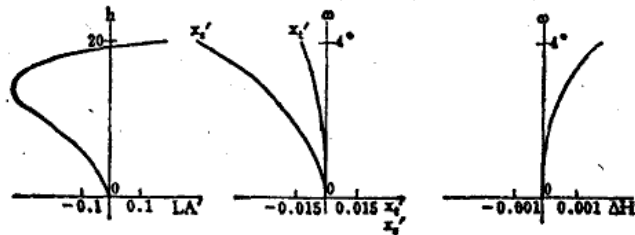
FNo. = 2.5

F. A. = 8°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	53.10	5.94	1.71300	53.89	5	-67.78	4.24	1.69895	30.05
2	308.51	0.11			6	41.09	14.24		
3	98.74	9.79	1.56873	63.12	7	159.17	5.03	1.71300	53.89
4	268.73	10.48			8	-49.69			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.090	0.0046	0.0020	-0.0072	0.00073	7	0.025%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.18	0.0018	-0.012	-0.063	0.050	-0.047	0.0029
70	-0.31	0.00063	-0.0069	-0.032	0.025	-0.029	0.0035



编号: 01-00-048

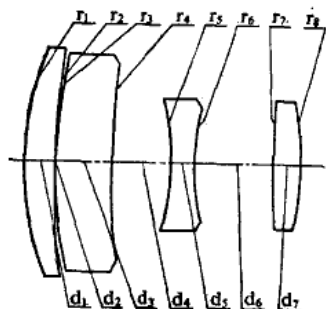
## 四片式物镜

E. F. L = 100

B. F. L = 72.70

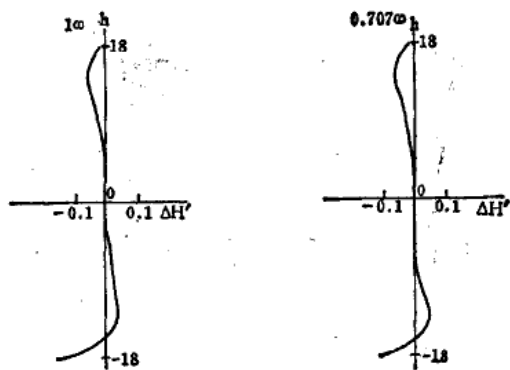
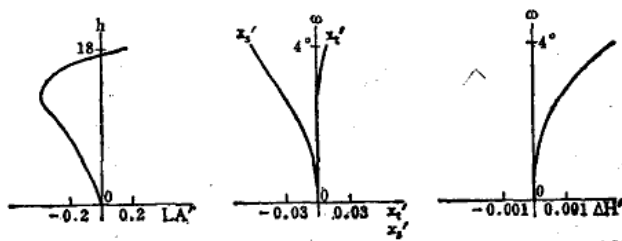
FN<sub>0</sub> = 2.8

F. A. = 8'



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	42.03	4.40	1.62299	60.29	5	-59.68	2.61	1.72151	29.28
2	199.95	0.11			6	38.08	10.55		
3	88.27	9.81	1.52300	59.6	7	118.60	5.64	1.66892	44.98
4	278.54	10.25			8	-44.41			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.091	0.0030	0.0024	-0.0066	0.00095	7	0.037%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.15	0.0026	0.0095	-0.064	0.074	-0.083	-0.0055
70	-0.41	0.00093	0.0045	-0.032	0.037	-0.055	-0.0028





编号: 01-00-049

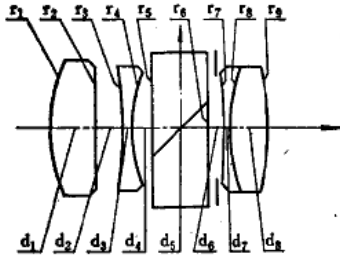
### 单镜头反射式照相机镜头

E.F.L=1.0

B.F.L=0.78

FNo.=2.8

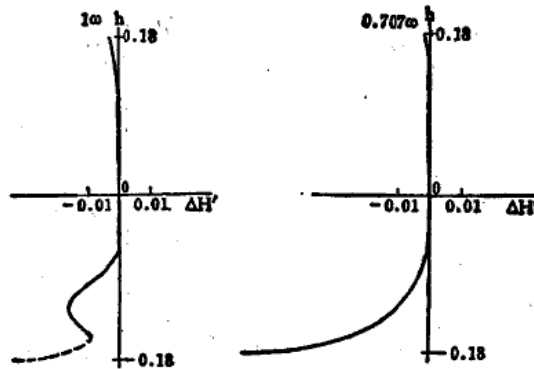
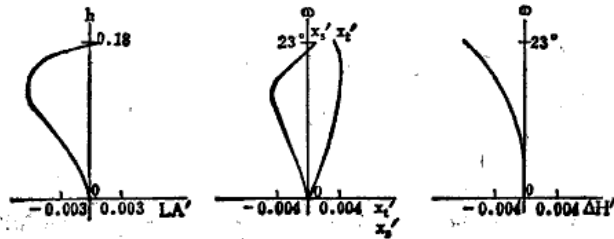
F.A.=±23°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	0.376	0.1	1.717	47.9	6	$\infty$	0.030*		
2	29.5	0.58			7	-4.0	0.018	1.603	38.0
3	-0.91	0.02	1.673	32.2	8	0.486	0.08	1.717	47.9
4	0.333	0.045			9	-0.610			
5	$\infty$	0.12	1.516	64.0					

0.030\* = 0.015 + 0.015

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.0013	0.00053	0.00045	-0.0015	-0.0023	0.41	-1.88%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K'_{T0.7}$
100	0.0013	-0.0079	0.0037	0.00077	0.0029	-0.20	-0.0094
70	-0.0062	-0.0028	0.0039	-0.0043	0.0082	-0.030	-0.0049



编号: 01-00-050

# 单镜头反射式照相机镜头

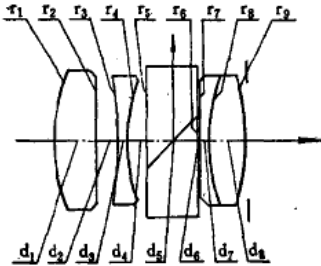
E. F. L = 1.0

B. F. L = 0.84

FNo. = 2.8

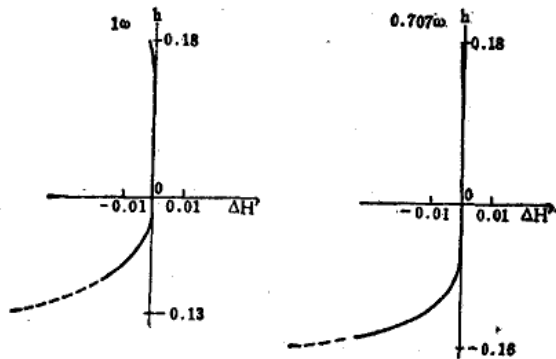
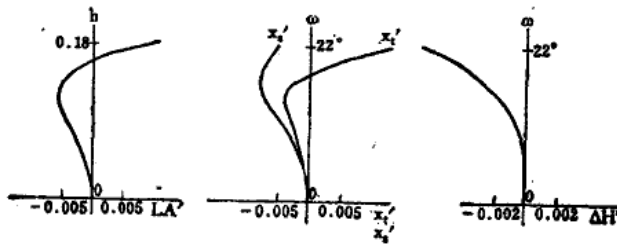
F. A. =  $\pm 22^\circ$

光栏位于最后表面的顶点处。



序号	r	d	n	v	序号	r	d	n	v
1	0.365	0.09	1.713	43.2	6	$\infty$	0.004		
2	12.2	0.046			7	$\infty$	0.018	1.603	38.0
3	-0.92	0.02	1.673	32.2	8	0.40	0.75	1.717	47.9
4	0.323	0.045			9	-0.546			
5	$\infty$	0.11	1.516	64.0					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0015	0.00097	-0.00010	-0.0013	-0.0014	0.40	1.62%
h 或 $\omega\%$	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.011	-0.0065	0.013	-0.0055	0.019	-0.35	-0.028
70	-0.0058	-0.0019	-0.0042	-0.0076	0.0034	-0.061	-0.0056



编号: 01-00-051

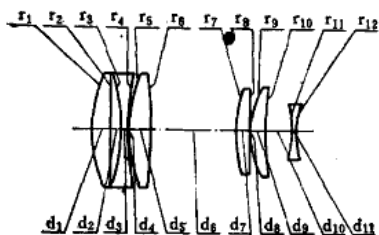
### 带有平象场镜及至少三个正透镜的珀兹伐物镜

E. F. L = 100

B. F. L = 17.04

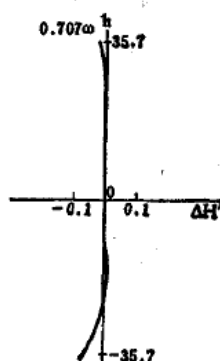
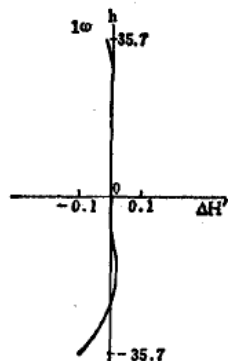
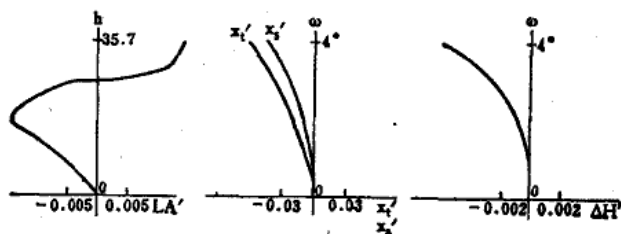
FNo. = 1.4

F. A = 8°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	89.6	12.7	1.611	58.8	7	88.3	9.0	1.611	58.8
2	∞	5.48			8	∞	0.587		
3	-120.2	4.89	1.720	29.3	9	56.9	9.4	1.611	58.8
4	257.3	0.587			10	170.2	16.9		
5	106.3	12.9	1.611	58.8	11	-71.8	2.54	1.720	29.3
6	-333	55.4			12	79.7			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.028	0.016	-0.0033	-0.0091	-0.0041	7	0.084%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.014	-0.0058	-0.071	-0.046	-0.025	-0.059	-0.0012
70	-0.0054	-0.0020	-0.036	-0.023	-0.012	-0.043	-0.0012



编号: 01-00-052

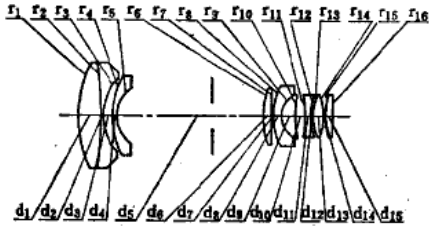
# 广角长工作截距摄影物镜

E. F. L = 10.0

B. F. L = 18.59

FNo. = 2.3

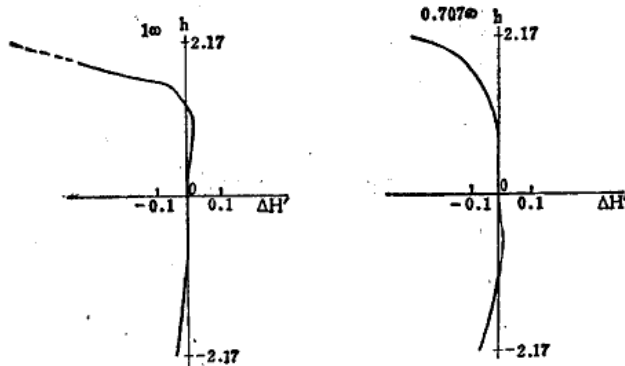
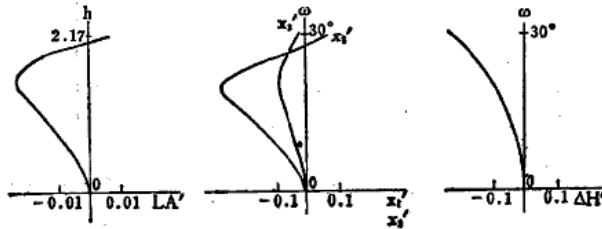
F. A. = 60°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	39.42	7.06	1.8037	41.8	9	7.91	4.28	1.698	54.8
2	-158.91	1.56	1.498	67.0	10	31.70	3.30		
3	14.52	3.21			11	-30.11	1.90	1.7506	27.8
4	29.46	1.36	1.720	29.3	12	16.48	0.65		
5	12.14	46.06*			13	26.58	2.77	1.657	57.2
6	34.24	2.97	1.720	50.0	14	-28.28	0.07		
7	325.94	0.07			15	21.92	2.22	1.657	57.2
8	19.23	2.30	1.651	55.8	16	-532.76			

46.06\* = 31.09 + 14.97

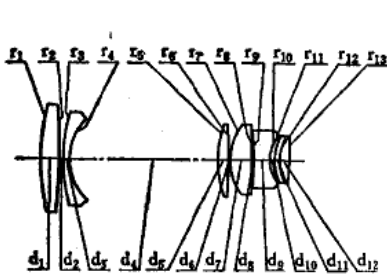
	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	0.0072	-0.033	0.025	0.0035	-0.13	6.24	-3.96%
h 或 ω %	LA'	ΔH'	x <sub>t</sub>	x <sub>s</sub>	x <sub>t</sub> ' - x <sub>s</sub> '	K <sub>T1</sub>	K <sub>T0.7</sub>
100	0.0069	-0.24	0.068	-0.011	0.079	-1.73	-0.017
70	-0.022	-0.12	-0.28	-0.089	-0.19	-0.18	-0.039



编号: 01-00-053

### 具有负前组与多镜片正后组的放映物镜

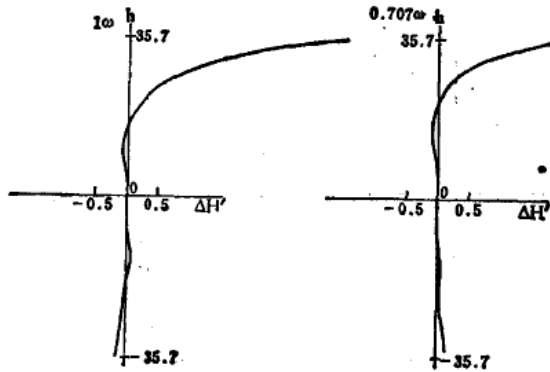
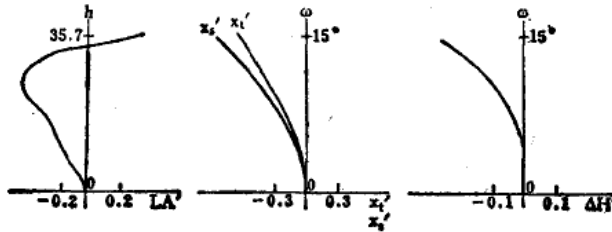
E. F. L = 100    B. F. L = 87.22    FNo. = 1.4    F. A. = 30°     $l_{p_4}' = 290$



序号	r	d	$n_s$	$v_s$	序号	r	d	$n_s$	$v_s$
1	555.40	30.0	1.65285	33.5	8	980.20	5.0		
2	$\infty$	10.0			9	-1697.50	35.0	1.76846	26.8
3	281.00	15.0	1.61521	58.4	10	64.50	7.0		
4	103.40	290.0			11	88°15'	10.0	1.52031	58.8
5	242.00	20.0	1.62287	60.1	12	71.02	20.0	1.73692	50.8
6	-566.50	0.5			13	-347.20			
7	110.20	40.0	1.62287	60.1					

$\Sigma d = 482.5$

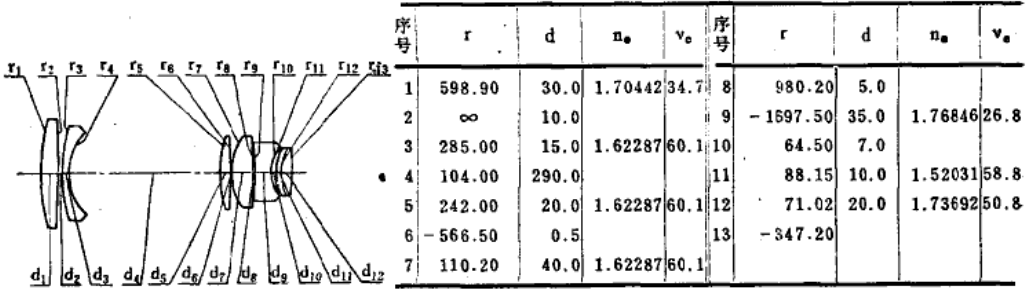
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.33	-0.092	0.029	-0.25	-0.17	26.92	-0.98%
h 或 $\omega$ %	LA'	$\Delta H'$	$x_t$	$x_s$	$x_t - x_s$	$K_{T1}$	$K'_{T0.7}$
100	0.35	-0.26	-0.65	-0.87	0.22	1.72	0.15
70	-0.41	-0.093	-0.36	-0.46	0.096	0.95	0.060



编号: 01-00-054

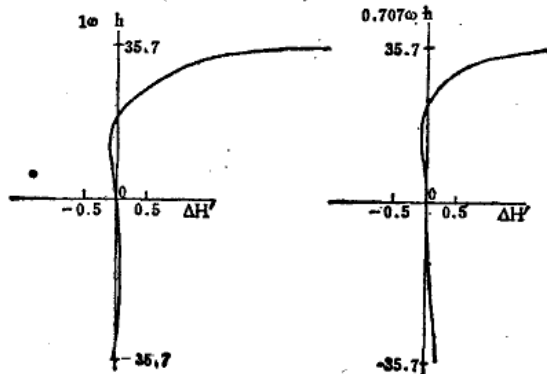
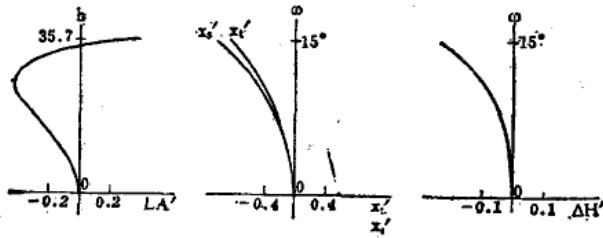
## 具有负前组与多镜片正后组的放映物镜

E. F. L = 100    B. F. L = 87.20    FNo. = 1.4    F. A. = 30°     $Lp'_4 = 290$



$\Sigma d = 482.5$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.36	-0.082	0.015	-0.25	-0.16	26.75	-0.91%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.38	-0.24	-0.81	-0.91	0.099	1.88	0.19
70	-0.43	-0.088	-0.43	-0.47	0.039	1.05	0.085



编号: 01-00-055

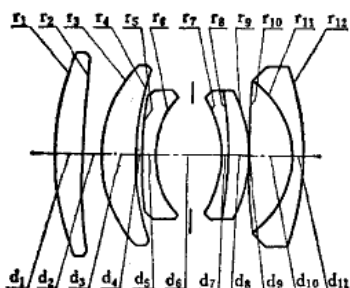
### 四组元摄影物镜

E. F. L = 1.0

B. F. L = 0.55

FNo. = 1.4

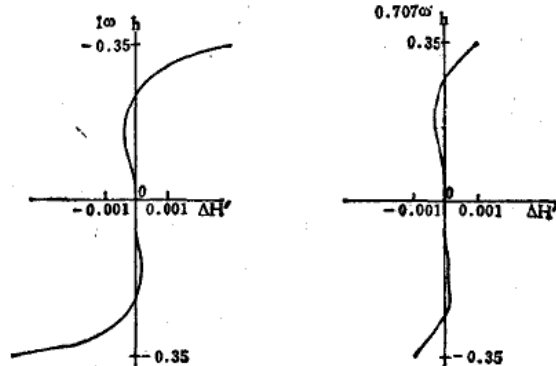
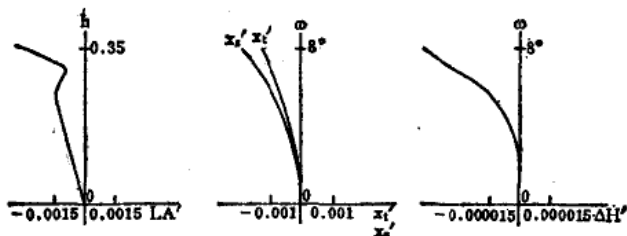
F. A. = 16°



序号	1/r	d	$n_g$	$v_g$	序号	1/r	d	$n_g$	$v_g$
1	1.2502	0.1022	1.7919	47.2	7	-2.7105	0.0232	1.7231	29.3
2	0.3569	0.0572			8	-0.6471	0.0676	1.7919	47.2
3	2.3802	0.1124	1.7919	47.2	9	-2.0842	0.0019		
4	1.1574	0.0145			10	0.5306	0.1352	1.7479	44.7
5	0.8644	0.0469	1.7685	26.8	11	-3.3400	0.0483	1.7205	48.0
6	3.4861	0.2125*			12	-1.0454			

$0.2125^* = 0.1000 + 0.1125$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0019	-0.000037	0.000088	-0.00061	-0.000018	0.14	-0.033%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0032	-0.000047	-0.0013	-0.0019	0.00068	-0.00029	-0.000076
70	-0.0014*	-0.000013	-0.00068	-0.0010	0.00035	0.00014	-0.000054



编号: 01-00-056

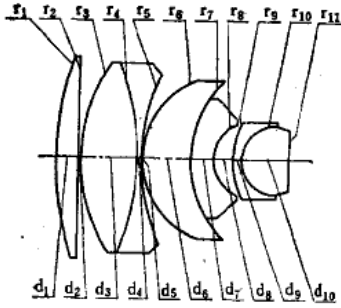
# 大孔径摄影镜头

E. F. L = 100

B. F. L = 7.12

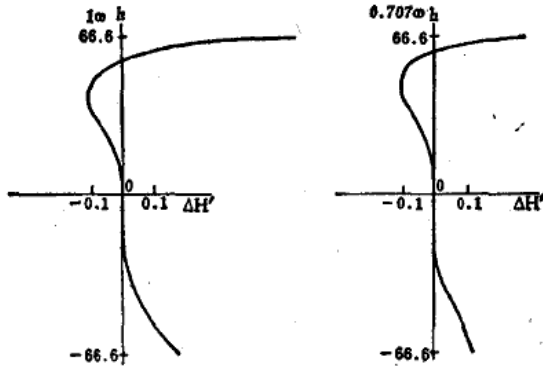
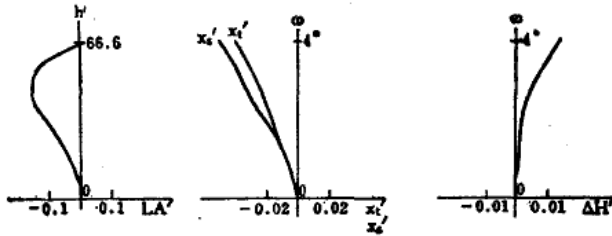
FNo. = 0.75

F. A. = 8°



序号	r	d	n	v	序号	r	d	n	v
1	206.0	14.5	1.6940	54.6	7	71.7	14.50	1.7343	28.4
2	8390.0	0.2			8	24.19	13.42		
3	98.95	36.4	1.6725	44.7	9	57.5	5.44	1.6241	36.1
4	-165.4	2.43	1.7343	28.4	10	21.70	30.0	1.7922	50.2
5	130.0	0.2			11	∞			
6	52.40	30.7	1.6940	54.6					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.47	-0.084	0.00083	-0.053	0.018	7	0.18%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.016	0.013	-0.040	-0.050	0.0098	0.36	-0.025
70	-0.16	0.0048	-0.024	-0.027	0.0030	0.20	-0.025





编号: 01-00-057

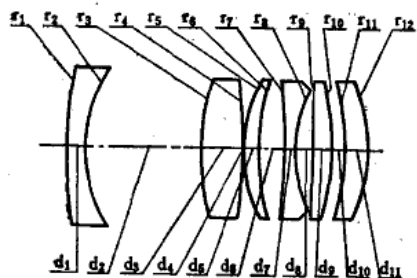
# 六分离广角物镜

E. F. L = 100

B. F. L = 103.11

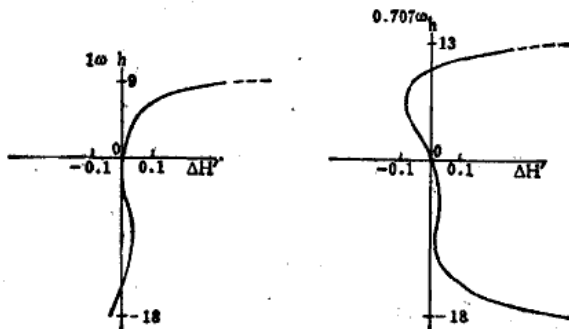
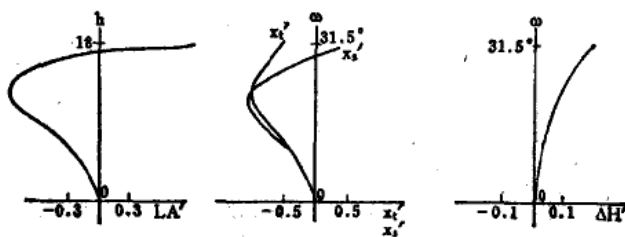
FNo. = 2.8

F. A. = 63°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	199.30	6.00	1.46456	65.79	7	-175.00	3.25	1.78470	26.10
2	47.20	37.68			8	44.17	5.46		
3	78.38	13.38	1.70180	41.14	9	398.04	6.28	1.58900	48.64
4	-183.65	0.96			10	-98.80	4.15		
5	40.32	5.02	1.61720	54.04	11	-84.60	7.45	1.72000	50.31
6	68.77	8.19			12	-47.39			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.18	-0.12	-0.0090	-0.21	-0.16	61.35	0.30%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.91	0.19	-0.58	0.25	-0.83	4.59	0.69
70	-0.90	-0.086	-1.07	-1.09	0.018	2.03	0.15



编号: 01-00-058

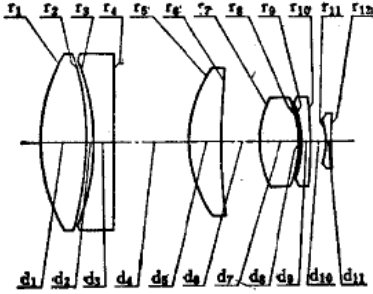
# 六片式珀兹伐型放映镜头

E. F. L = 100

B. F. L = 9.8

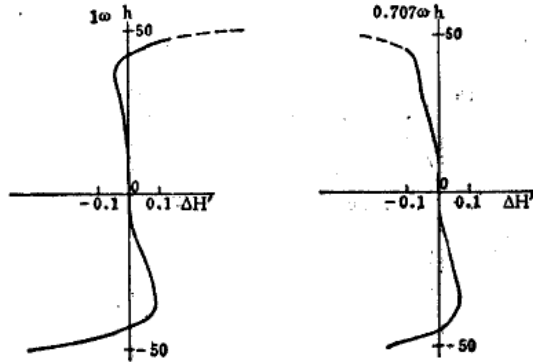
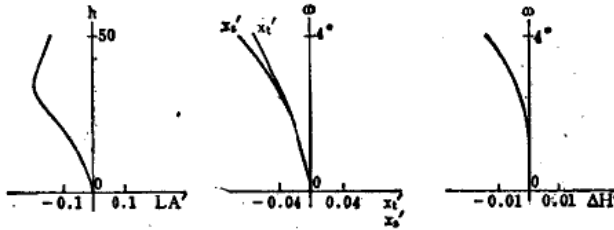
FNo. = 1.0

F. A. = 8°



序号	r	d	$n_D$	$v$	序号	r	d	$n_D$	$v$
1	111.4	28.0	1.517	64.5	7	64.6	25.8	1.620	60.3
2	-180.8	4.9			8	-69.1	0.17		
3	-136.0	13.3	1.720	29.3	9	-66.5	5.6	1.720	29.3
4	3240	48.1			10	-390	9.4		
5	76.6	22.4	1.588	61.2	11	-73.0	3.0	1.689	30.9
6	433.0	24.9			12	168.0			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.33	0.038	0.0019	-0.047	-0.013	7	-0.19%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.14	-0.013	-0.078	-0.090	0.012	6.93	0.012
70	-0.19	-0.0048	-0.040	-0.045	0.0050	-0.56	0.0067



编号: 01-00-059

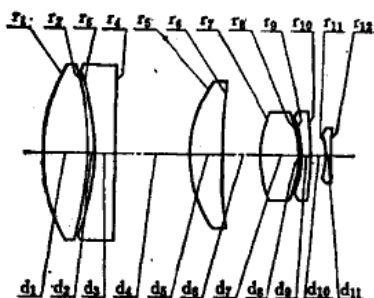
### 六片式珀兹伐型放映镜头

E. F. L = 100

B. F. L = 11.5

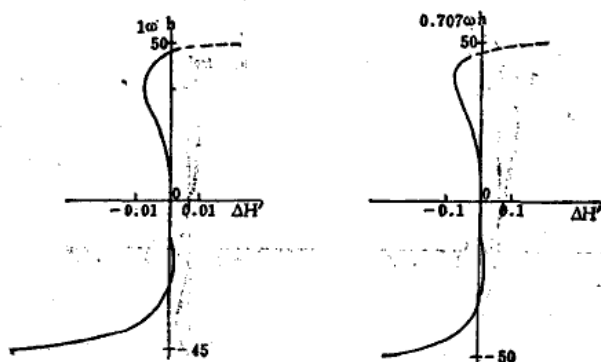
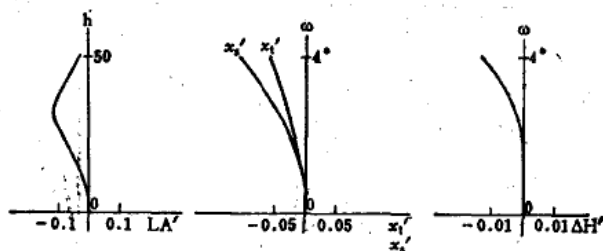
FNo. = 1.0

F. A. = 8°



序号	r	d	$n_D$	v	序号	r	d	$n_D$	v
1	111.4	28.0	1.517	64.5	7	64.6	25.8	1.620	60.3
2	-180.8	4.9			8	-69.1	0.17		
3	-136.0	13.3	1.720	29.3	9	-66.5	5.6	1.720	29.3
4	3240	48.1			10	-231	9.4		
5	76.6	22.4	1.588	61.2	11	-73.0	3.0	1.689	30.9
6	289	24.9			12	344			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.24	-0.0069	0.012	-0.066	-0.013	7	-0.19%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.044	-0.013	-0.052	-0.10	0.054	7.45	-0.062
70	-0.11	-0.0047	-0.027	-0.053	0.026	7.87	-0.045



编号: 01-00-060

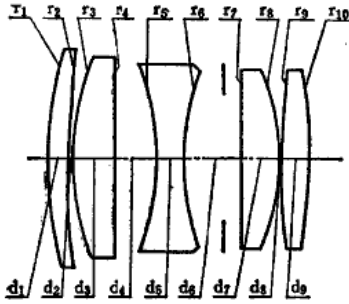
# 五组元物镜

E. F. L = 100

B. F. L = 68.51

FNo. = 1.8

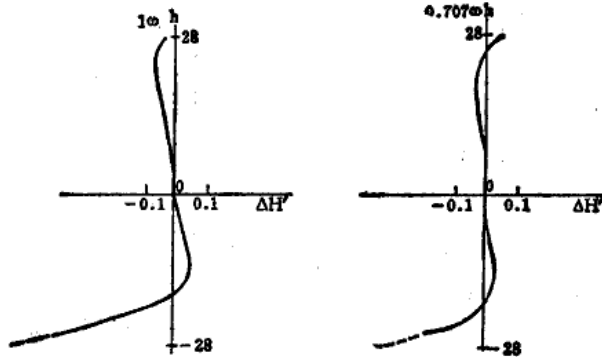
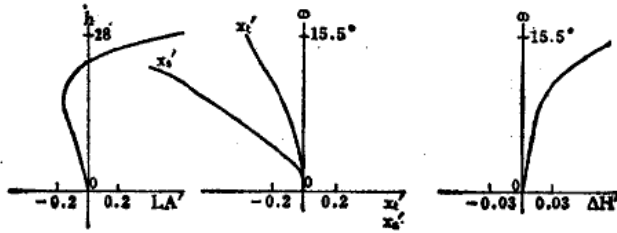
F. A. = 31°



序号	r	d	n	v	序号	r	d	n	v
1	146.14	7.87	1.6570	50.9	6	81.69	13.86*		
2	350.39	0.79			7	-900.00	12.60	1.6570	57.2
3	78.98	13.38	1.6570	50.9	8	-68.50	0.16		
4	-792.12	13.94			9	218.98	9.45	1.6200	60.3
5	-81.69	8.98	1.7200	29.3	10	-166.14			

$13.86^* = 9.45 + 4.41$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.12	0.046	0.081	-0.35	0.038	27.72	0.36%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K'_{T0.7}$
100	0.61	0.10	-0.38	-1.35	0.96	-0.72	-0.054
70	-0.12	0.026	-0.20	-0.77	0.56	-0.40	-0.016



编号: 01-00-061

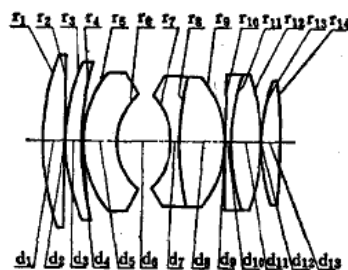
# 高速摄影机物镜'

E. F. L = 100

B. F. L = 60.58

FNo. = 0.95

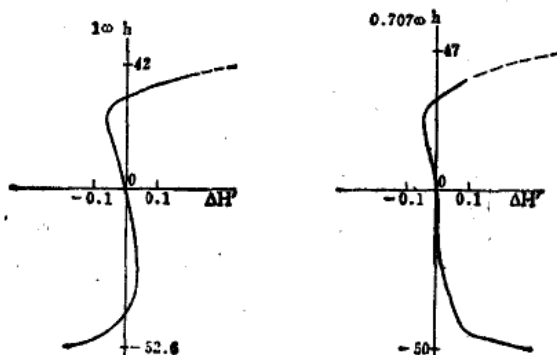
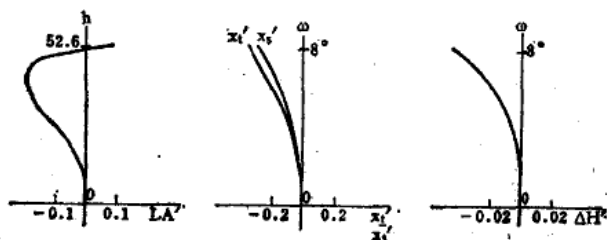
F. A. = 16°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	146.36	12.18	1.6200	60.3	8	203.10	28.42	1.7200	50.3
2	600.13	0.41			9	-61.98	0.41		
3	106.73	12.18	1.6200	60.3	10	-915.62	4.11	1.5960	39.2
4	263.48	0.41			11	132.13	18.27	1.6910	54.8
5	62.10	21.11	1.8410	28.1	12	-132.13	0.41		
6	36.36	35.53			13	116.00	12.18	1.6910	54.8
7	-41.54	5.08	1.7410	28.1	14	-406.86			

$\Sigma d = 150.70$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.24	-0.053	-0.0058	-0.15	-0.044	14.09	-0.30%
h 或 $\omega$ %	LA'	AH'	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K_{T0.7}$
100	0.067	-0.043	-0.35	-0.29	-0.065	1.98	0.096
70	-0.17	-0.015	-0.16	-0.14	-0.021	1.50	0.098



编号: 01-00-062

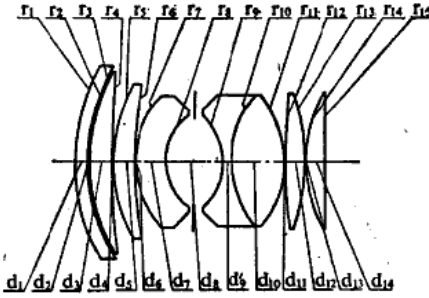
# 七组元高速摄影机镜头

E. F. L = 100

B. F. L = 60.64

FNo. = 0.95

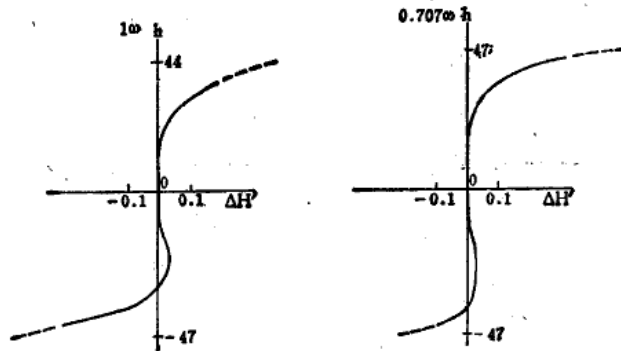
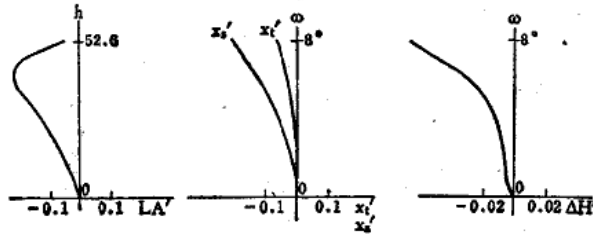
F. A. = 16°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	159.55	16.35	1.62287	60.1	9	-39.25	4.48	1.76846	26.8
2	3663.75	0.19			10	478.43	28.42	1.71615	53.7
3	229.09	10.32	1.66104	57.1	11	-57.62	0.19		
4	607.77	6.23			12	317.71	17.52	1.59142	61.0
5	$\infty$	8.37	1.58482	40.6	13	-116.06	0.19		
6	597.26	0.19			14	94.69	16.35	1.69400	54.6
7	57.82	20.05	1.79180	25.9	15	509.65			
8	39.05	36.21*							

$\Sigma d = 165.06$   
 $36.21^* = 18.00 + 18.21$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.35	0.047	0.045	-0.16	-0.068	14.05	-0.47%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.047	-0.066	-0.061	-0.21	0.148	0.34	0.080
70	-0.21	-0.023	-0.028	-0.10	0.079	0.29	0.057



编号: 01-00-063

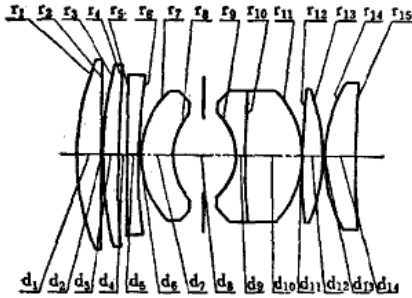
# 七组元高速摄影机镜头

E. F. L = 100

B. F. L = 57.28

FNo. = 0.95

F. A. = 16°

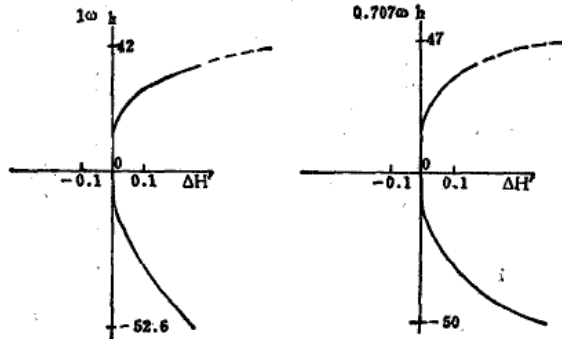
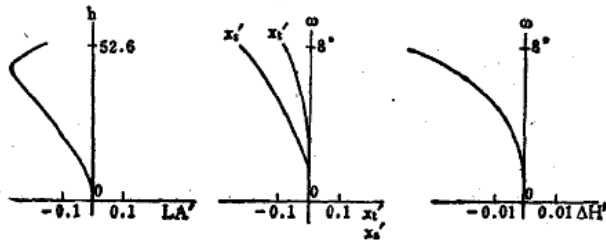


序号	r	d	n <sub>e</sub>	v <sub>e</sub>	序号	r	d	n <sub>e</sub>	v <sub>e</sub>
1	142.76	8.72	1.67245	44.7	9	-44.42	6.10	1.74703	27.8
2	130.17	0.44			10	71.19	37.93	1.73692	50.8
3	139.32	17.44	1.62541	56.6	11	-71.19	0.44		
4	540.20	0.44			12	399.00	13.08	1.71615	53.7
5	114.51	15.69	1.62287	60.1	13	-149.56	0.44		
6	282.61	0.44			14	94.64	15.69	1.71615	53.7
7	66.70	20.92	1.74703	27.8	15	649.26			
8	39.28	40.54*							

$\Sigma d = 178.31$

$40.54^* = 20.00 + 20.54$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.26	0.070	0.043	-0.17	-0.041	14.05	-0.26%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.15	-0.037	-0.078	-0.22	0.14	1.73	0.21
70	-0.21	-0.013	-0.036	-0.11	0.076	1.05	0.16



编号: 01-00-064

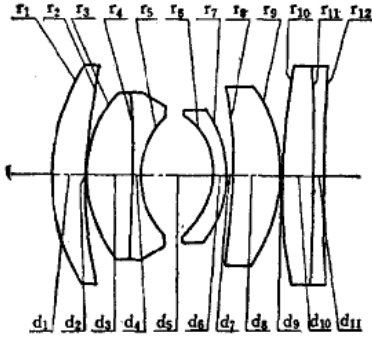
### 五分离大相对孔径广角摄影物镜

E. F. L = 1

B. F. L = 0.56

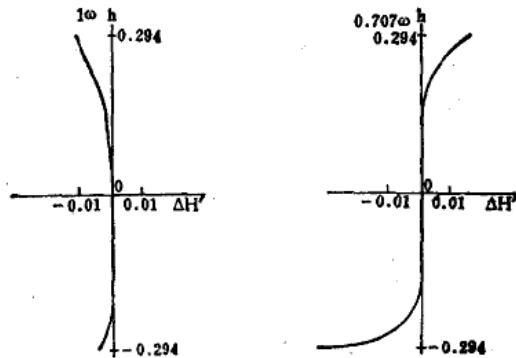
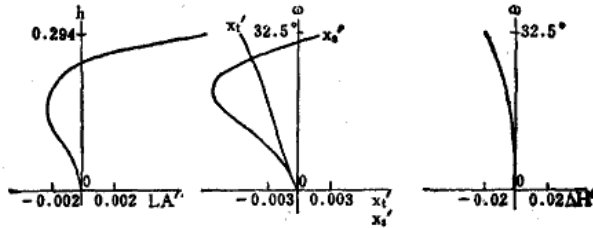
FNo. = 1.7

F. A. = 65°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	0.6329	0.1056	1.6937	53.5	7	-0.3600	0.0155		
2	1.5181	0.0023			8	-1.8252	0.1554	1.8038	46.8
3	0.4086	0.1414	1.6519	58.3	9	-0.4800	0.0016		
4	-4.692	0.0264	1.6131	37.0	10	1.9557	0.0948	1.6424	58.1
5	0.2548	0.2563			11	-3.0997	0.0365	1.7400	28.2
6	-0.2673	0.0451	1.7676	26.5	12	6.0439			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP( $\omega$ )
	-0.0023	0.00058	0.00082	-0.0058	-0.0040	0.63	-3.05%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.0084	-0.019	-0.0054	0.0017	-0.0072	-0.0076	-0.0030
70	-0.0018	-0.0049	-0.0038	-0.0077	0.0039	-0.0078	-0.00015





编号: 01-00-065

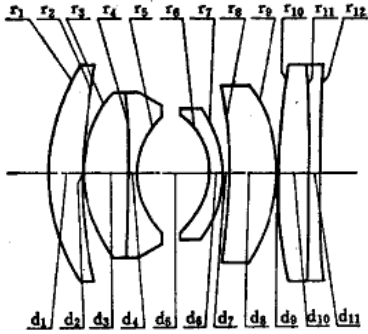
### 五分离大相对孔径广角摄影物镜

E. F. L = 1

B. F. L = 0.55

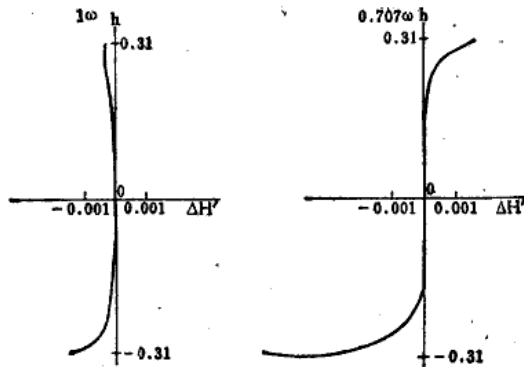
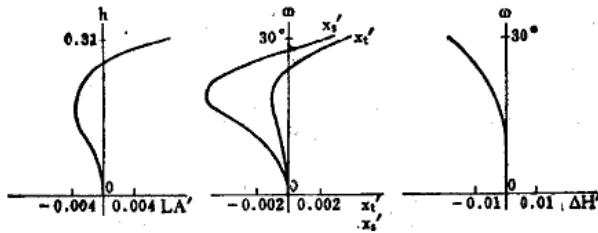
FNo. = 1.6

F. A. = 60°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	0.6208	0.1038	1.7338	51.0	7	-0.3573	0.0021		
2	1.3898	0.0014			8	-1.9632	0.1849	1.8038	46.8
3	0.4197	0.1436	1.6775	55.5	9	-0.4874	0.0021		
4	-5.0461	0.0277	1.6364	35.4	10	1.8744	0.0946	1.6424	58.1
5	0.2588	0.2560			11	-3.1115	0.0363	1.7400	28.2
6	-0.2658	0.0455	1.8055	25.5	12	5.5331			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0033	0.00011	0.0010	-0.0050	-0.0048	0.57	-3.15%
h 或 $\omega\%$	LA'	$\Delta H'$	$x_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.0083	-0.018	0.0040	0.0025	0.0015	-0.0080	-0.0017
70	-0.0028	-0.0047	-0.0011	-0.0055	0.0044	-0.021	-0.0012



编号: 01-00-066

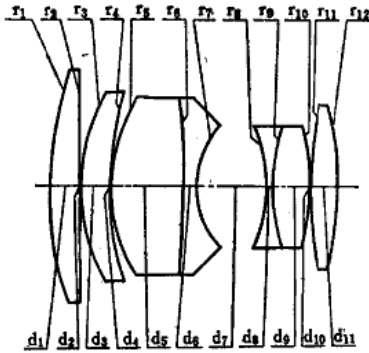
## 扩展的高斯型大孔径物镜

E. F. L = 100

B. F. L = 41.21

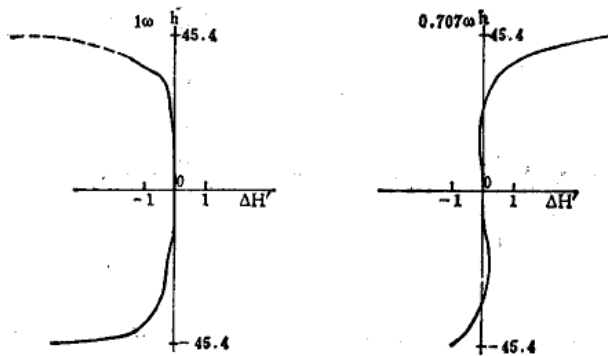
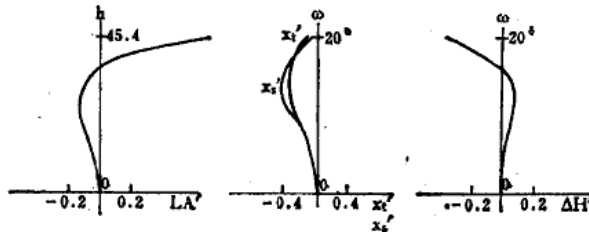
FNo. = 1.1

F. A. = 40°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	111.5	9.515	1.7201	50.3	7	28.0	22.235		
2	352.6	0.1			8	-44.4	1.8	1.5481	45.9
3	65.7	8.545	1.7342	51.0	9	80.8	11.36	1.7440	44.9
4	104.1	0.97			10	-75.4	0.1		
5	53.4	22.8	1.6422	58.1	11	150.4	7.96	1.7342	51.0
6	-329.1	4.175	1.7184	29.5	12	-106.5			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.33	0.078	-0.046	-0.63	0.48	36.39	-0.99%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.72	-0.36	-0.17	-0.015	-0.15	-10.78	-0.35
70	-0.13	0.058	-0.40	-0.47	0.064	1.59	0.20



编号: 01-00-067

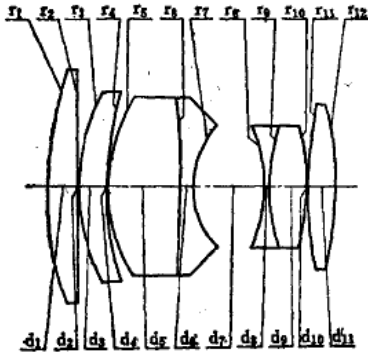
### 扩展的高斯型大孔径物镜

E. F. L = 100

B. F. L = 40.08

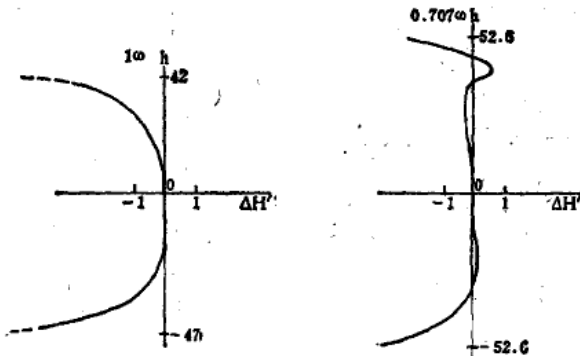
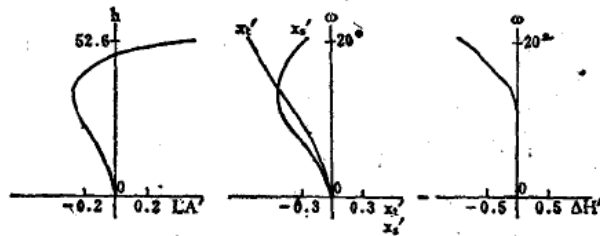
FNo. = 0.95

F. A. = 40°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	136.1	10.175	1.7550	53.3	7	29.8	24.6		
2	482.9	0.2			8	-41.1	1.73	1.5235	50.9
3	69.8	9.31	1.7885	50.45	9	92.0	10.57	1.7440	44.9
4	105.6	0.93			10	-71.4	0.2		
5	58.1	26.13	1.6516	58.5	11	136.3	8.24	1.7550	53.3
6	-215.7	4.12	1.7215	29.3	12	-105.6			

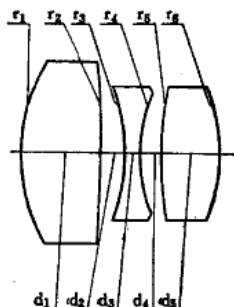
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.66	0.042	-0.090	-0.89	0.23	36.43	-2.74%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.50	-0.99	-0.77	-0.26	-0.50	-39.54	-1.95
70	-0.27	-0.11	-0.55	-0.55	-0.0081	-2.43	-0.15



编号: 01-00-068

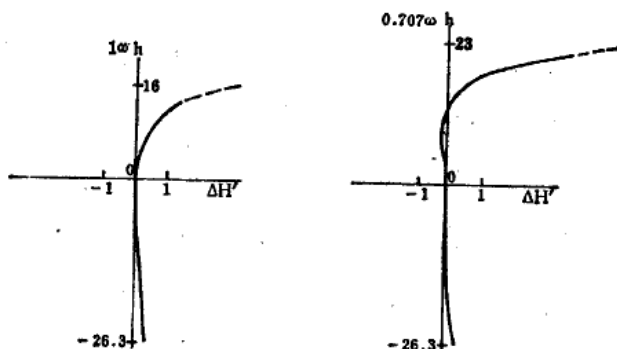
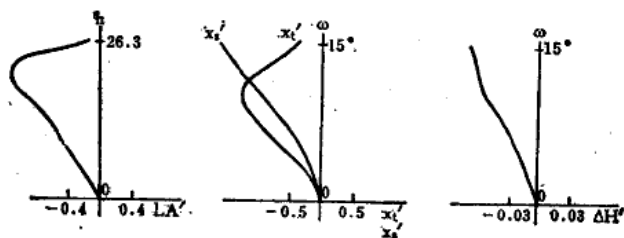
### 柯克三片型摄影物镜

E. F. L = 100    B. F. L = 71    FNo. = 1.9    F. A. =  $\pm 15^\circ$      $Lp'_1 = -22.0$



序号	r	d	$n_D$	$v$	序号	r	d	$n_D$	$v$
		22.0*							
1	57.4	25.5	1.70	56.0	4	48.6	6.6		
2	-351.0	7.7			5	119.0	19.7	1.70	56.0
3	-63.3	4.5	1.67	32.0	6	-53.5			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP( $\omega$ )
	-0.46	-0.26	-0.11	-0.22	-0.11	26.37	-0.25%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.23	-0.068	-0.40	-1.63	1.23	4.60	3.94
70	-1.19	-0.054	-1.32	-1.05	-0.26	5.69	0.62



编号: 01-00-069

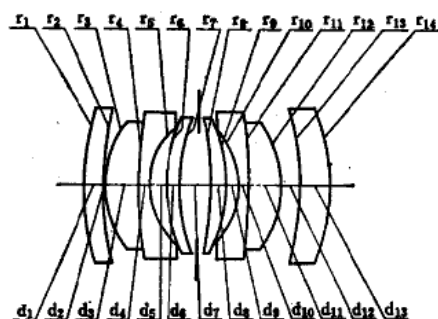
### 八片式对称式摄影物镜

E. F. L = 100

B. F. L = 69.09

FNo. = 2.0

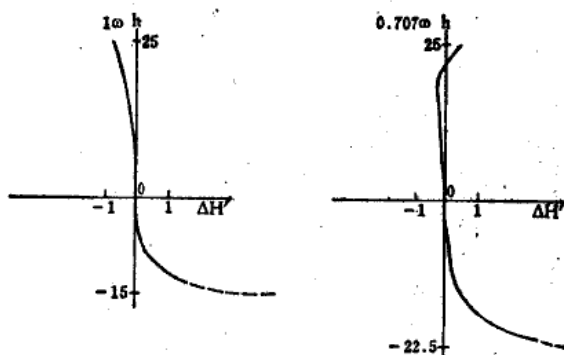
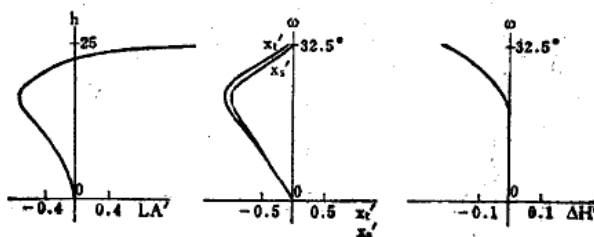
F. A. = 65°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	83.93	6.90	1.7200	42.0	8	-113.48	4.41	1.6910	54.8
2	117.03	0.08			9	-50.32	3.94		
3	32.11	10.40	1.7200	47.5	10	-25.32	2.99	1.6680	32.3
4	147.76	2.99	1.6490	33.8	11	-182.00	10.40	1.7200	47.5
5	23.64	5.40			12	-33.38	5.99		
6	47.36	4.41	1.6910	54.8	13	-84.72	8.99	1.7440	45.6
7	58.32	10.01*			14	-62.06			

10.01\* = 5.91 + 4.10

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.36	-0.072	0.061	-0.40	0.016	63.71	-0.34%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	1.54	-0.22	-0.14	-0.032	-0.11	-40.07	3.95
70	-0.70	-0.023	-1.12	-1.01	-0.11	-28.85	0.39



编号: 01-00-070

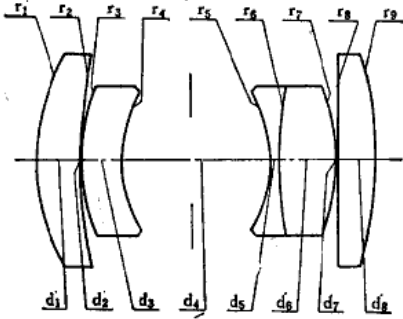
### 改进的四组元高斯放映物镜

E. F. L = 100

B. F. L = 71.28

FNo. = 2.8

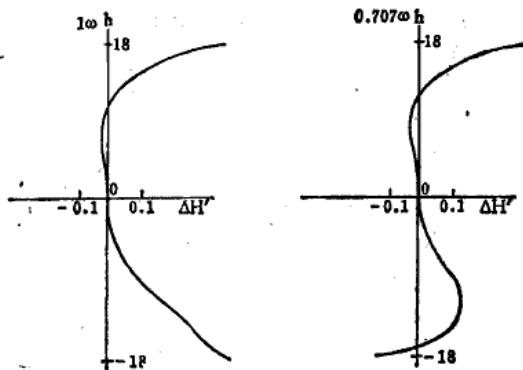
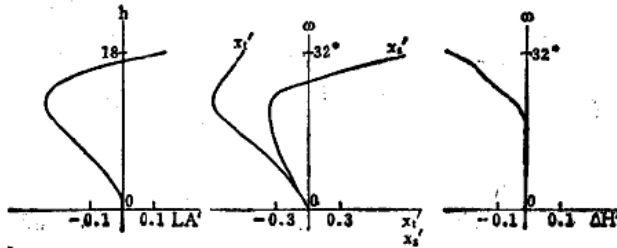
F. A. = 64°



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	33.14	7.43	1.6200	60.3	6	72.28	9.06	1.7200	47.5
2	83.45	0.14			7	-30.86	0.14		
3	29.71	6.29	1.7506	27.8	8	-331.43	6.03	1.7506	27.8
4	20.74	24.06*			9	-59.45			
5	-22.06	1.43	1.7200	29.3					

24.06\* = 12.03 + 12.03

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.063	0.029	-0.027	-0.11	0.024	62.45	-0.41%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.13	-0.25	-0.67	0.91	-1.58	0.38	0.13
70	-0.25	-0.036	-0.95	-0.43	-0.51	0.11	0.071



编号: 01-00-071

### 具有负前组及多镜片正组的广角物镜

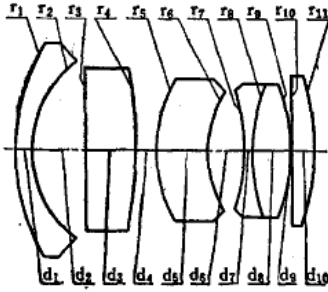
E. F. L = 100

B. F. L = 105.2

FNo. = 2.8

F. A. = 63°

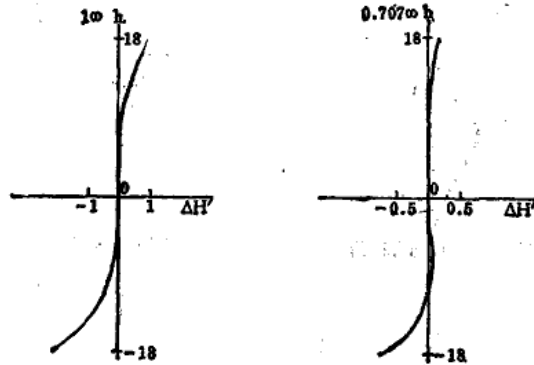
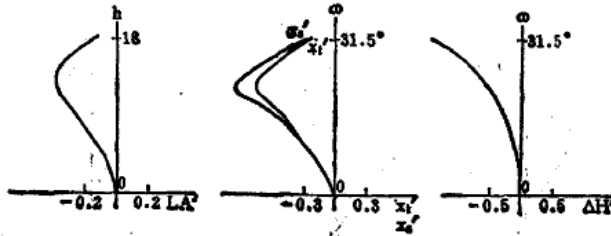
$Lp'_0 = 8$



序号	r	d	$n_d$	v	序号	r	d	$n_d$	v
1	67.56	5.62	1.47236	67.10	7	-59.18	2.25	1.62410	36.10
2	35.23	16.87			8	51.90	12.65	1.62287	60.06
3	-954.17	16.59	1.69660	53.18	9	-51.90	0.28		
4	-133.68	7.03			10	-478.21	7.03	1.69400	54.60
5	43.89	16.87	1.74793	44.65	11	-82.57			
6	39.19	11.25							

$\Sigma d = 96.44$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.089	0.027	0.011	-0.18	-0.45	61.28	-2.29%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.13	-1.40	-0.24	-0.23	-0.014	-0.65	-0.21
70	-0.40	-0.52	-0.72	-0.94	0.22	-0.34	-0.040



编号: 01-00-072

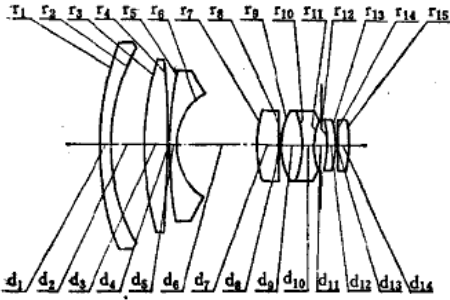
### 具有负前组及多镜片正组的广角物镜

E. F. L = 100

B. F. L = 146.58

FNo. = 2.8

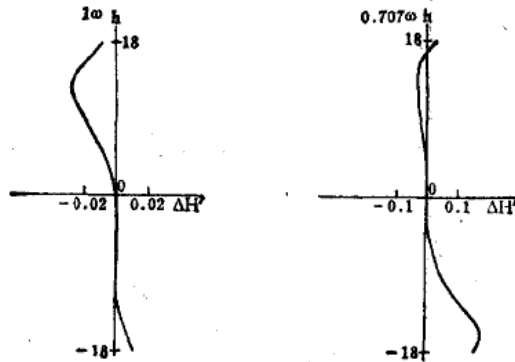
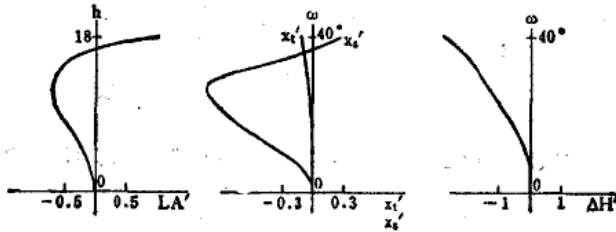
F. A. = 80°



序号	r	d	n <sub>e</sub>	v	序号	r	d	n <sub>e</sub>	v
1	266.77	9.81	1.51871	63.96	9	67.32	15.69	1.55440	63.22
2	121.58	31.38			10	-120.52	13.73	1.72732	29.07
3	286.39	23.54	1.72823	37.81	11	62.14	11.77*		
4	-1006.28	0.39			12	-127.78	9.81	1.62287	60.06
5	430.21	7.58	1.62287	60.06	13	-80.54	0.39		
6	59.63	76.50			14	366.69	9.81	1.62287	60.06
7	129.11	23.54	1.74703	27.82	15	-144.88			
8	∞	2.75							

$\Sigma d = 236.96$   
 $11.77^* = 6.00 + 5.77$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.16	0.068	0.012	-0.21	-1.11	83.88	-3.42%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	1.04	-2.86	-0.12	0.25	-0.37	0.0030	-0.0094
70	-0.69	-1.41	-0.064	-1.04	0.97	0.094	0.046





编号: 01-00-073

### 具有一个胶合组的三组元镜头

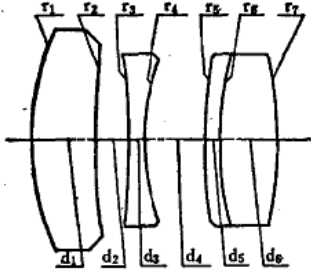
E. F. L = 100

B. F. L = 79.91

FNo. = 2.8

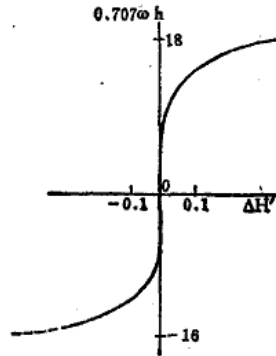
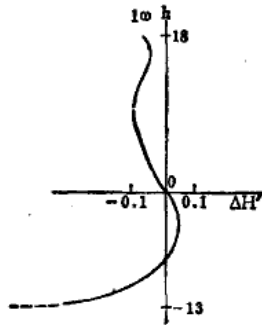
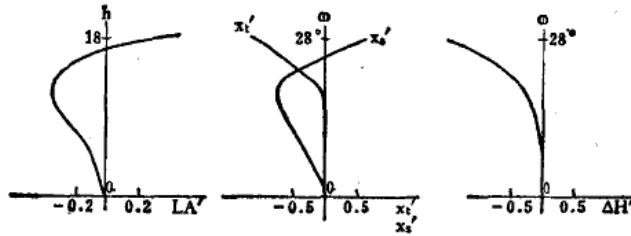
F. A. = 56°

$Lp'_4 = 0.5$



序号	r	d	$n_D$	v	序号	r	d	$n_D$	v
1	39.266	10.62	1.7130	53.89	5	263.753	2.39	1.6261	39.10
2	283.685	5.69			6	50.234	9.49	1.7550	53.28
3	-99.940	2.53	1.6236	36.75	7	-69.533			
4	35.715	9.63							

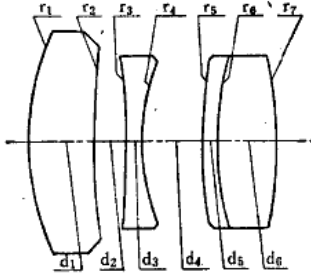
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.094	-0.00087	0.040	-0.22	-0.20	53.16	-2.81%
h 或 $\omega$ %	LA'	$\Delta H'$	$x_i$	$x'_i$	$x_i - x'_i$	$K_{T1}$	$K_{T0.7}$
100	0.42	-1.49	-1.21	0.67	-1.88	-0.96	-0.20
70	-0.36	-0.34	-0.14	-0.74	0.59	-0.20	-0.023



编号: 01-00-074

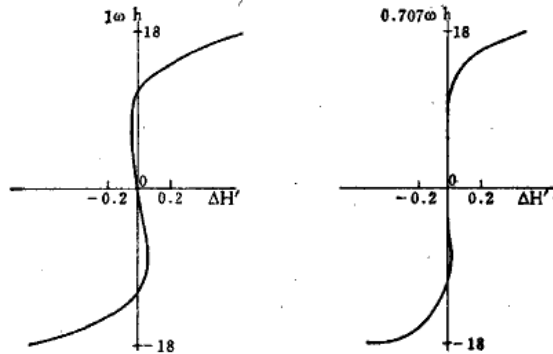
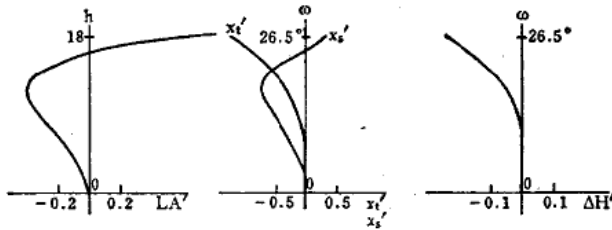
### 具有一个胶合组的三组元镜头

E. F. L = 100    B. F. L = 82.62    FNo. = 2.8    F. A. = 53°     $Lp'_1 = 0.5$



序号	r	d	$n_D$	$v$	序号	r	d	$n_D$	$v$
1	42.348	8.48	1.7335	51.04	5	$\infty$	2.55	1.6204	37.97
2	895.654	7.25			6	53.647	7.61	1.7440	44.90
3	-72.448	1.97	1.6547	32.87	7	-52.794			
4	39.706	8.95							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.11	0.0030	0.032	-0.19	-0.041	49.73	-0.47%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.79	-0.23	-1.21	0.27	-1.492	0.012	0.023
70	-0.39	-0.061	-0.30	-0.72	0.41	-0.0083	-0.0046



编号: 01-00-075

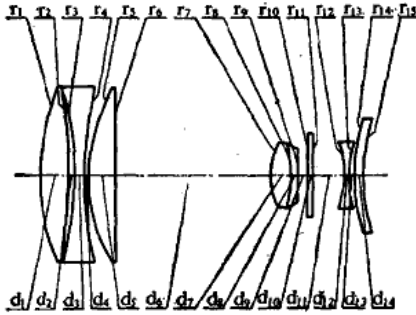
# 改型珀兹伐镜头

E. F. L = 1

B. F. L = 0

FNo. = 1.2

F. A. = 12°

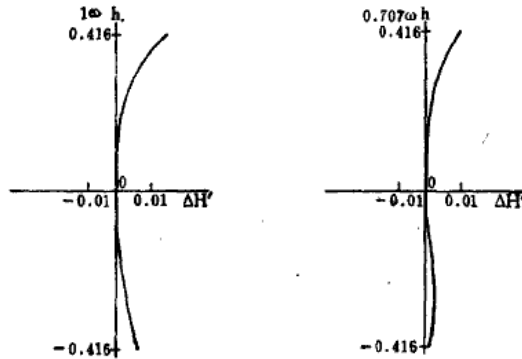
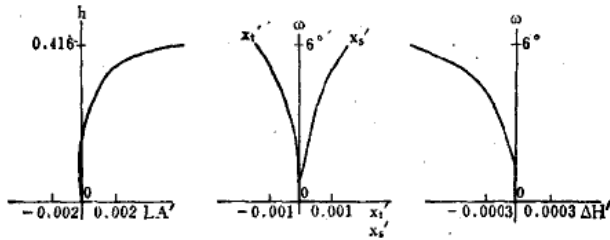


序号	r	d	$n_E$	$v_E$	序号	r	d	$n_E$	$v_E$
1	1.133	0.149	1.605	60.5	9	5.80	0.0516		
2	-2.712	0.030			10	$\infty^+$	0.030	1.51829	
3	-1.471	0.0485	1.792	25.9	11	$\infty$	0.1585		
4	2.117	0.015			12	-0.433	0.015	1.813	25.3
5	0.869	0.1365	1.623	60.1	13	0.640	0.0212		
6	$\infty$	0.786			14	0.948	0.046	1.51829	
7	0.358	0.103	1.625	58.6	15	0.948 <sup>++</sup>			
8	-0.564	0.0273	1.813	25.3					

\* 表示滤色片。

\*\* 表示靶面。

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00014	0.00099	-0.00039	0.00084	-0.00069	0.10	-0.88%
h 或 $\omega\%$	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.0067	-0.00097	-0.0014	0.0015	-0.0029	0.010	0.0037
70	0.0010	-0.00032	-0.00060	0.00074	-0.0013	0.0051	0.0019



编号: 01-00-076

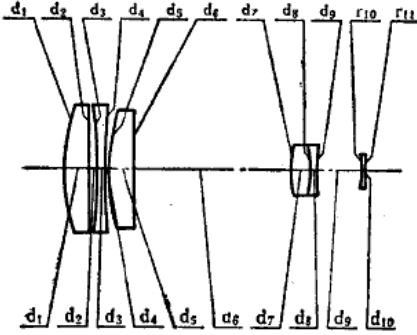
# 改型珀兹伐镜头

E. F. L = 100

B. F. L = 5.33

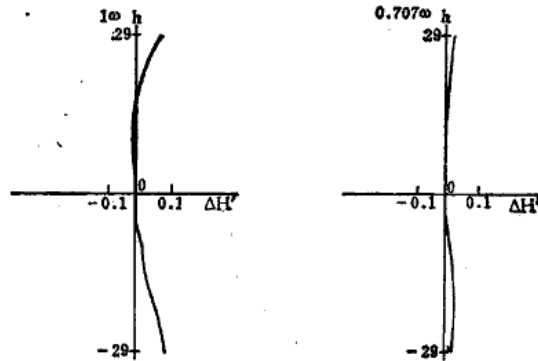
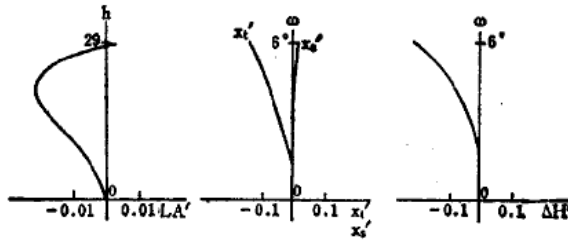
FNo. = 1.7

F. A. = 12°



序号	r	d	n <sub>E</sub>	v <sub>E</sub>	序号	r	d	n <sub>E</sub>	v <sub>E</sub>
1	100.2	13.4	1.605	60.4	7	35.65	10.3	1.625	56.6
2	4070.0	4.26			8	-57.7	2.71	1.702	38.3
3	-196.2	4.57	1.792	25.9	9	201.5	21.8		
4	498.5	1.3			10	-72.2	1.55	1.813	25.2
5	112.0	13.7	1.625	56.6	11	64.7			
6	3190	80.5							

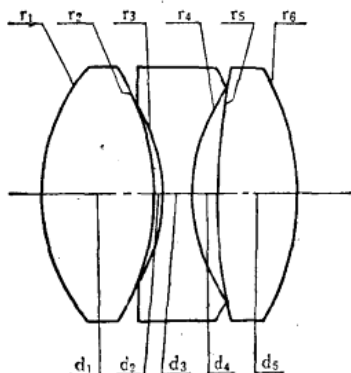
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.015	-0.00026	-0.011	0.0095	-0.11	10.53	-1.97%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.0030	-0.20	-0.13	0.013	-0.14	0.077	0.037
70	-0.024	-0.071	-0.071	0.000029	-0.071	0.015	0.0095



编号: 01-00-080

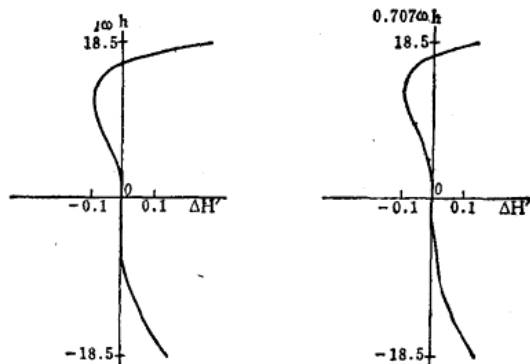
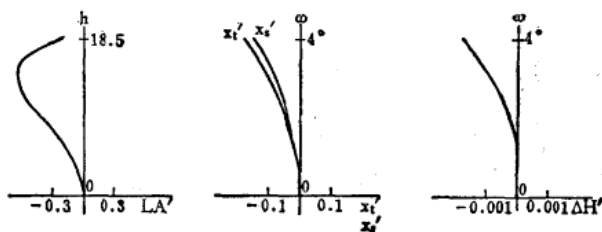
### 三片式物镜

E. F. L = 100    B. F. L = 65.83    FNo. = 2.7    F. A. = 8°     $Lp'_1 = -31.2$



序号	r	d	$n_D$	$\nu_D$	序号	r	d	$n_D$	$\nu_D$
		31.2*							
1	50.4	28.6	1.61	58.8	4	46.6	6.84		
2	-59.0	1.61			5	143	20.2	1.61	58.8
3	-46.6	7.61	1.62	36.6	6	-65.4			

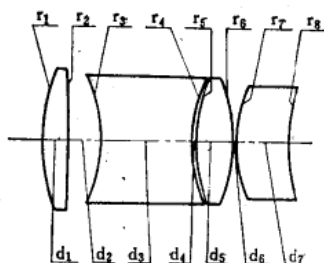
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.12	-0.016	-0.00081	-0.0099	-0.00074	7.07	-0.026%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.23	-0.0018	-0.17	-0.15	-0.017	0.21	-0.0070
70	-0.60	-0.00068	-0.090	-0.079	-0.010	0.13	-0.0082



编号: 01-00-090

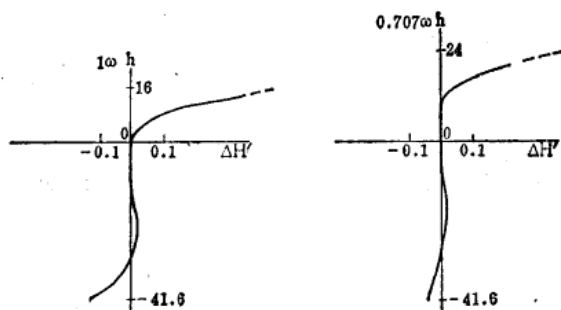
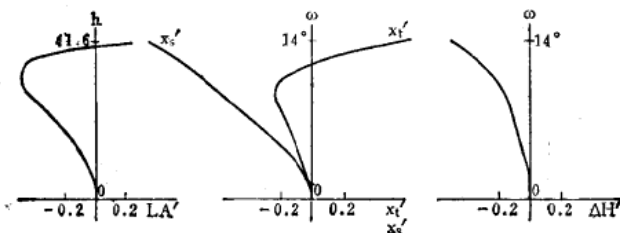
### 四组元大孔径镜头

E. F. L = 100    B. F. L = 53.97    FNo. = 1.2    F. A. = ± 14°     $Lp'_1 = -14.29$



序号	r	d	n	v	序号	r	d	n	v
		14.29*							
1	131.52	16.43	1.753	50.6	5	116.97	24.29	1.753	50.6
2	-737.93	20.71			6	-96.043	1.43		
3	-96.043	60.00	1.720	29.3	7	86.129	34.29	1.6968	56.2
4	94.329	2.02			8	154.39			

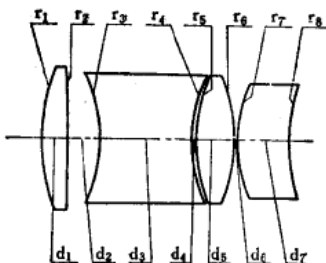
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.39	-0.23	0.030	-0.53	-0.50	24.93	-2.18%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_3 - x'_4$	$K_{T1}$	$K_{T0.7}$
100	0.22	-0.54	0.62	-1.08	1.70	18.40	11.03
70	-0.46	-0.20	-0.24	-0.65	0.41	18.20	0.82



编号: 01-00-091

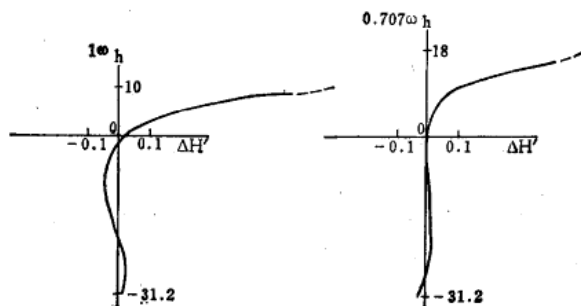
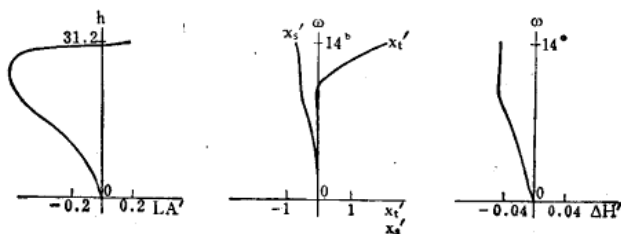
### 四组元大孔径镜头

E. F. L = 100    B. F. L = 53.37    FNo. = 1.6    F. A. =  $\pm 14^\circ$      $Lp_1' = -14.29$



序号	r	d	n	v	序号	r	d	n	v
		14.29*							
1	84.843	16.14	1.617	54.9	5	502.27	18.00	1.617	54.9
2	-310.43	20.93			6	-50.200	1.43		
3	-58.733	26.36	1.689	30.9	7	69.464	32.57	1.617	54.9
4	90.279	3.93			8	126.44			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.29	-0.20	-0.036	-0.29	-0.13	24.93	-0.18%
h 或 $\omega$ %	LA'	$\Delta H'$	$x_t'$	$x_s'$	$x_t' - x_s'$	$K_{T1}$	$K_{T0.7}$
100	0.16	-0.046	2.28	-0.75	3.04	10.31	3.34
70	-0.59	-0.047	-0.088	-0.64	0.55	8.36	0.94



编号: 01-00-094

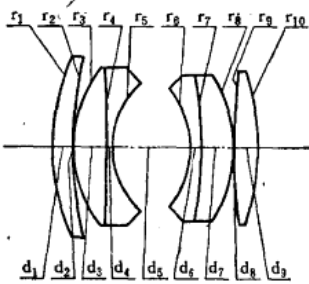
## 大孔径双高斯型摄影或电影摄影物镜

E. F. L = 100

B. F. L = 71.9

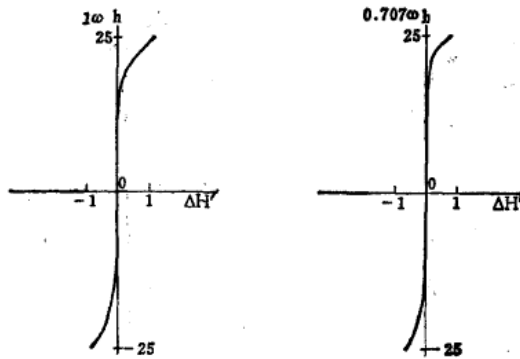
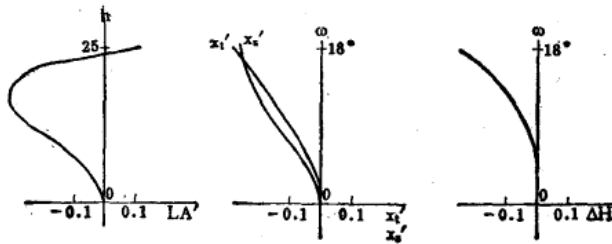
FNo. = 2

F. A. = 36°



序号	r	d	$n_e$	$v$	序号	r	d	$n_e$	$v$
1	63.05	6.13	1.78868	43.62	6	-30.88	3.83	1.81262	25.28
2	121.37	0.38			7	-134.40	10.35	1.78868	43.62
3	37.88	10.73	1.68081	55.31	8	-41.25	0.38		
4	575.52	2.30	1.59910	39.98	9	864.04	7.28	1.78868	43.62
5	25.52	24.91			10	-82.71			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.146	0.0093	0.010	-0.082	-0.10	32.49	-0.80%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.11	-0.26	-0.28	-0.26	-0.026	0.11	0.045
70	-0.31	-0.084	-0.17	-0.21	0.043	0.10	0.039





编号: 01-00-Q92

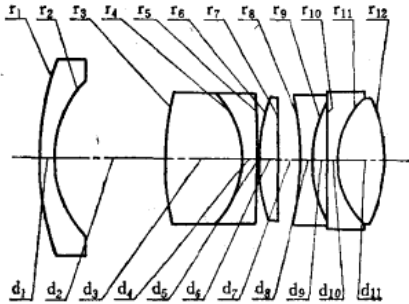
### 短焦距长后截距摄影镜头

E. F. L = 1.0

B. F. L = 1.0918

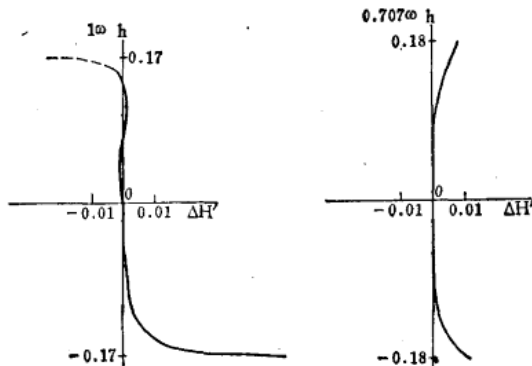
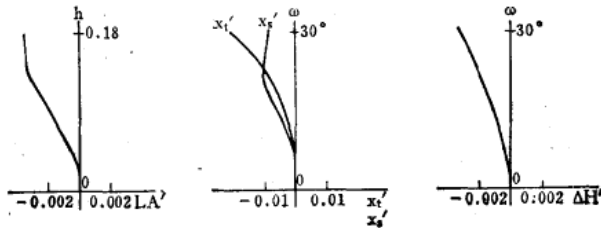
FNo. = 2.8

F. A. = 60°



序号	r	d	$n_e$	$v_e$	序号	r	d	$n_e$	$v_e$
1	1.115	0.064	1.4892	69.9	7	-17.428	0.095		
2	0.446	0.439			8	-1.141	0.043	1.7046	34.6
3	1.489	0.303	1.6713	41.6	9	0.541	0.056		
4	-0.368	0.053	1.6299	38.8	10	11.455	0.043	1.6734	46.9
5	-3.293	0.003			11	0.358	0.180	1.6940	54.6
6	0.674	0.085	1.6241	60.1	12	-0.575			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00049	-0.00044	0.00025	-0.0017	-0.0021	0.57	-0.60%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.0036	-0.0034	-0.020	-0.0095	-0.011	-0.018	0.0022
70	-0.0030	-0.0019	-0.0078	-0.0098	0.0019	0.0098	0.00098



编号: 01-00-095

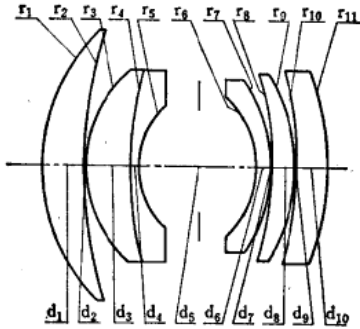
# 五组元光学物镜

E. F. L = 1.000

B. F. L = 0.5913

FNo. = 2.8

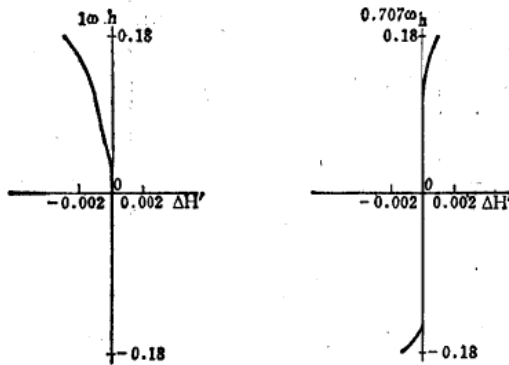
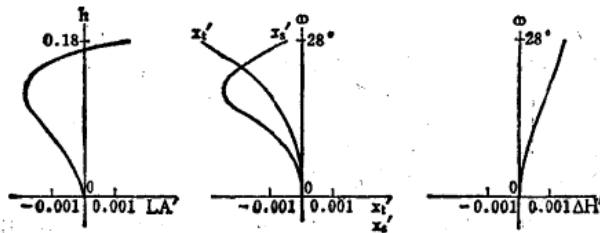
F. A. = 56°



序号	1/r	d	n <sub>d</sub>	v <sub>d</sub>	序号	1/r	d	n <sub>d</sub>	v <sub>d</sub>
1	2.4269	0.0900	1.6204	60.3	7	-2.8784	0.0020		
2	1.0077	0.0020			8	-1.3964	0.0500	1.6204	60.3
3	3.5754	0.1000	1.6204	60.3	9	-2.6644	0.0020		
4	1.2056	0.0200	1.6254	35.6	10	-1.2150	0.0700	1.8028	46.8
5	5.4002	0.2500*			11	-2.5585			
6	-4.7022	0.0300	1.8052	25.4					

0.2500\* = 0.1250 + 0.1250

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.00053	0.00011	0.000078	-0.00076	0.0013	0.53	0.27%
h 或 ω %	LA'	ΔH'	x' <sub>t</sub>	x' <sub>s</sub>	x' <sub>t</sub> -x' <sub>s</sub>	K <sub>T1</sub>	K <sub>T0.7</sub>
100	0.0014	0.0014	-0.0032	-0.00050	-0.0027	-0.0012	-0.00070
70	-0.0019	0.00097	-0.0013	-0.0026	0.0012	-0.00047	-0.000017



编号: 01-00-078

# 三片式物镜

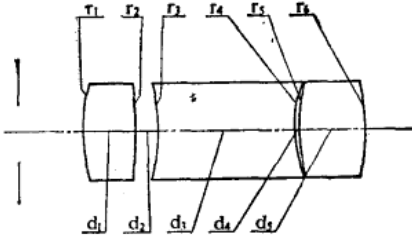
E. F. L = 100

B. F. L = 52.12

FNo. = 1.6

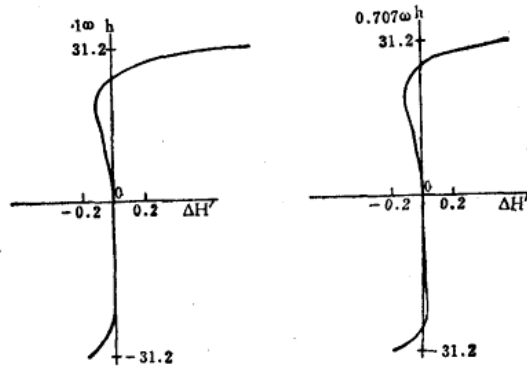
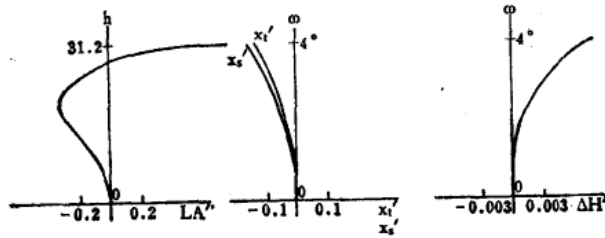
F. A. = 8°

$Lp'_1 = -14.3$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
		14.3*							
1	72.9	18.6	1.75	50.6	4	48.4	1.89		
2	-189.9	7.43			5	75.0	22.9	1.75	50.6
3	-90.3	48.6	1.72	29.3	6	-75.0			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.27	-0.057	0.00061	-0.029	0.0045	7.06	0.11%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.78	0.0078	-0.12	-0.14	0.021	0.35	-0.049
70	-0.32	0.0026	-0.068	-0.075	0.0068	0.19	-0.045



编号: 01-00-096

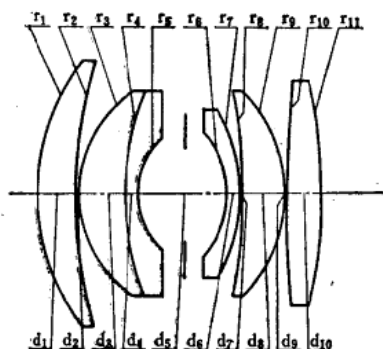
### 五组元光学物镜

E. F. L = 1.000

B. F. L = 0.4834

FNo. = 1.5

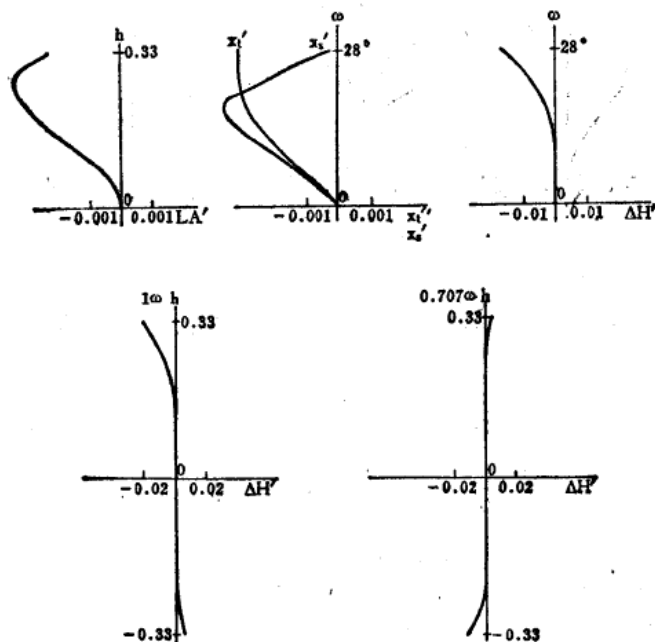
F. A. = 56°



序号	1/r	d	n <sub>d</sub>	v <sub>d</sub>	序号	1/r	d	n <sub>d</sub>	v <sub>d</sub>
1	1.4870	0.1300	1.8028	46.8	7	-1.9489	0.0030		
2	0.6046	0.0030			8	-0.5537	0.1300	1.8028	46.8
3	2.5267	0.1500	1.8028	46.8	9	-2.2409	0.0030		
4	1.1372	0.0400	1.7847	25.8	10	0.2944	0.1100	1.8028	46.8
5	4.0977	0.2800*			11	-0.6141			
6	-3.4392	0.0400	1.9176	21.5					

0.2800\* = 0.1400 + 0.1400

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.0025	0.00076	-0.00027	-0.0036	-0.0035	0.53	-3.31%
h 或 ω %	LA'	ΔH'	x <sub>i</sub> '	x <sub>s</sub> '	x <sub>i</sub> ' - x <sub>s</sub> '	K <sub>T1</sub>	K <sub>T0.7</sub>
100	-0.0024	-0.017	-0.0033	-0.00027	-0.0031	-0.0081	-0.0036
70	-0.0034	-0.0046	-0.0032	-0.0036	0.00034	-0.0038	0.00025



编号: 01-00-100

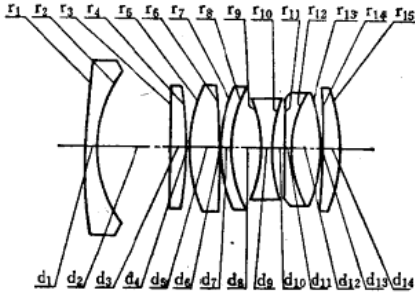
# 广 角 镜 头

E. F. L = 100

B. F. L = 103.96

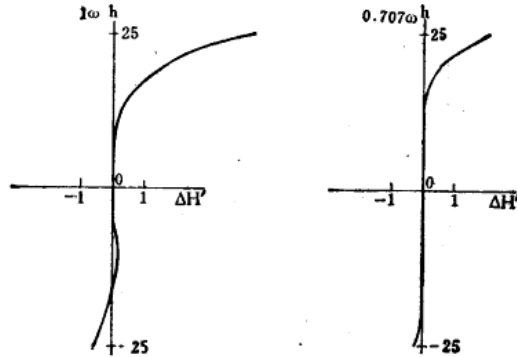
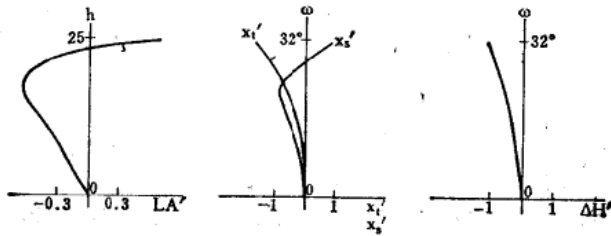
FNo. = 2.0

F. A. =  $\pm 32^\circ$



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	450.000	7.00	1.58913	61.2	9	-91.500	6.50	1.74077	27.7
2	80.137	47.00			10	98.025	8.00		
3	-2300.000	10.00	1.76200	40.3	11	1000.000	4.00	1.83400	37.2
4	-292.234	2.00			12	71.000	19.00	1.77252	49.6
5	95.700	18.00	1.77252	49.6	13	-89.354	0.50		
6	-707.468	1.00			14	-600.000	10.00	1.77251	49.6
7	80.000	8.00	1.53172	48.9	15	-110.648			
8	84.488	18.00							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.27	-0.067	0.046	-0.38	-0.81	62.48	-1.78%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.67	-1.11	-1.65	0.90	-2.56	2.00	0.48
70	-0.64	-0.58	-0.76	-0.80	0.035	0.95	0.10



编号: 01-00-099

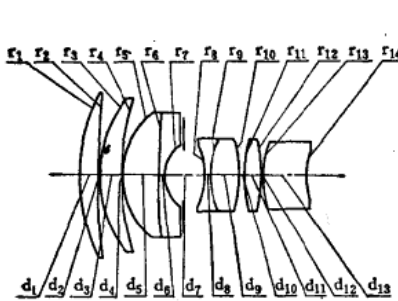
## 改进的双高斯型物镜

E. F. L = 1.000

B. F. L = 0.1000

FNo. = 1.0

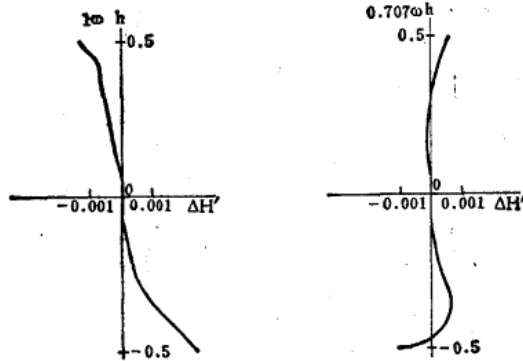
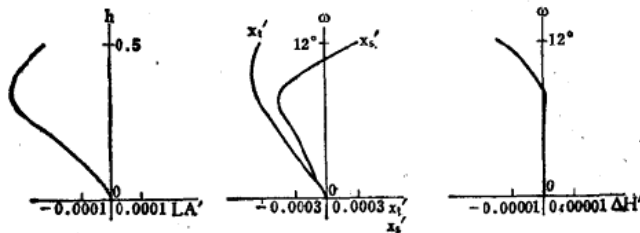
F. A. = 24°



序号	r	d	n	v	序号	r	d	n	v
1	1.1798	0.1420	1.64304	60.10	8	-0.5081	0.0400	1.64062	35.34
2	4.6838	0.0050			9	0.4614	0.2000	1.7480	44.77
3	0.7940	0.1420	1.64304	60.10	10	-0.8203	0.0247		
4	1.7662	0.0050			11	1.5931	0.1039	1.80688	46.76
5	0.5517	0.2450	1.64304	60.10	12	-2.2594	0.0010		
6	4.4326	0.0400	1.70445	30.07	13	0.7443	0.2969	1.80688	46.76
7	0.2925	0.2454*			14	0.6942			

$0.2454^* = 0.1064 + 0.1390$

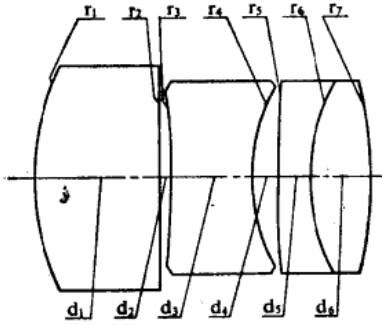
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00072	0.00026	-0.000055	-0.00096	0.00010	0.21	-0.0071%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.00021	-0.000015	-0.00065	0.00031	-0.00097	0.00051	0.00025
70	-0.00032	0.0000066	-0.00069	-0.00045	-0.00024	-0.00020	0.00031



编号: 01-00-088

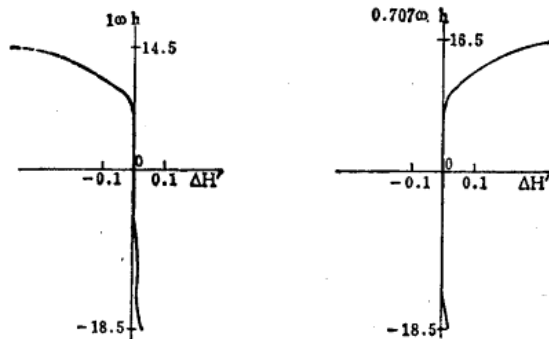
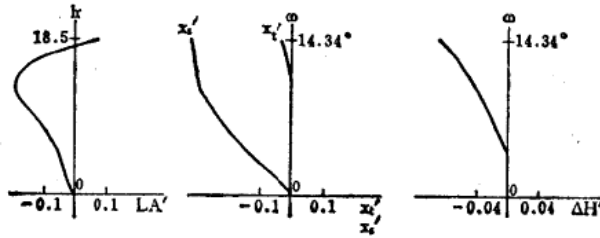
### 三组四片摄影物镜

E. F. L = 100    B. F. L = 69.47    FNo. = 2.7    F. A. = ± 14.34'     $Lp_1' = -17.4$



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
		17.4*							
1	49.2	22.1	1.75	52.4	5	150.0	5.7	1.53	51.6
2	1017.5	2.2			6	34.8	10.8	1.75	52.4
3	-121.1	14.6	1.69	31.1	7	-82.0			
4	34.9	4.2							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.047	-0.020	0.011	-0.066	-0.019	26.34	-0.33%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.060	-0.088	-0.035	-0.33	0.30	-1.94	-0.093
70	-0.19	-0.020	-0.0027	-0.303	0.30	0.40	0.081



编号: 01-00-082

## 改进的三组元透镜系统

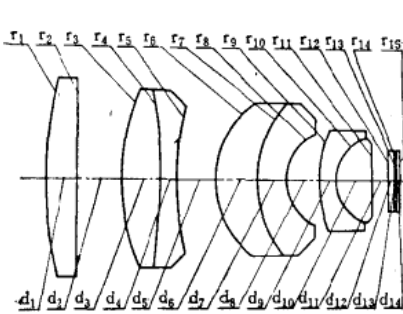
E. F. L = 1 英寸

B. F. L = 0

FNo. = 1.1

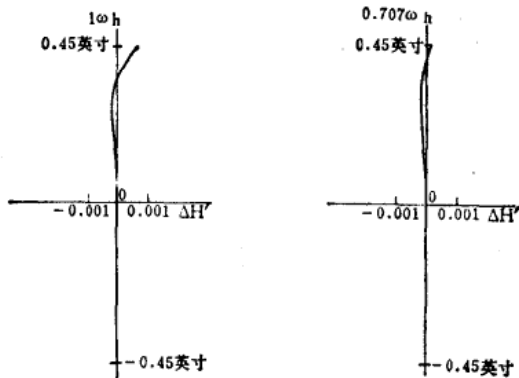
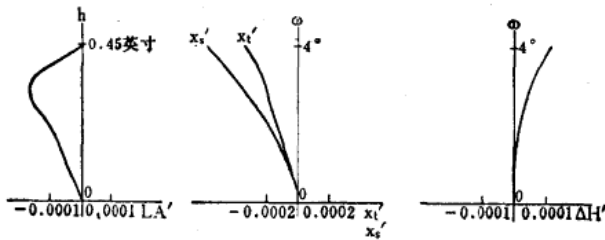
F. A. = 8°

非



序号	r	d	n <sub>E</sub>	v <sub>E</sub>	序号	r	d	n <sub>E</sub>	v <sub>E</sub>
1	2.08	0.142	1.721	47.7	9	0.621	0.082	1.592	52.9
2	23.6	0.21			10	0.2031	0.170	1.792	50.2
3	0.987	0.182	1.721	47.7	11	11.82	0.0758		
4	-2.035	0.078	1.813	25.3	12	∞	0.028	1.5163	
5	1.771	0.178			13	∞	0.00536		
6	0.435	0.194	1.694	54.6	14	∞	0.015	1.5163	
7	0.541	0.142	1.768	26.8	15	∞			
8	0.226	0.150							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00026	-0.00013	0.00025	0.00030	0.00012	0.069	0.16%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.0000074	0.00011	-0.00034	-0.00058	0.00023	0.00029	-0.000036
70	-0.00017	0.000044	-0.00022	-0.00032	0.000091	0.000092	-0.000064





编号: 01-00-093

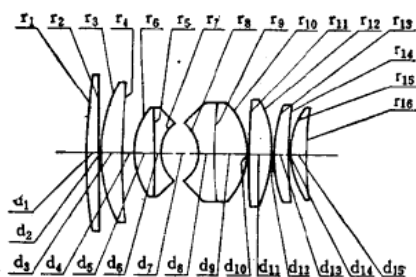
# 大孔径摄影或电影摄影物镜

E. F. L = 100

B. F. L = 68.42

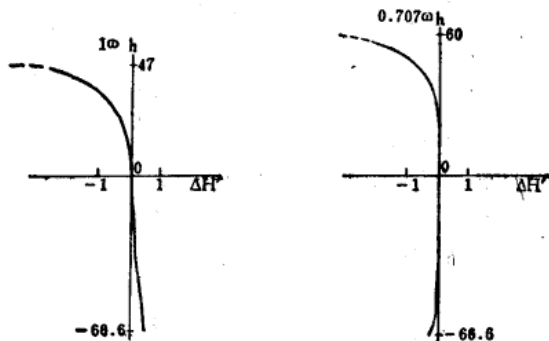
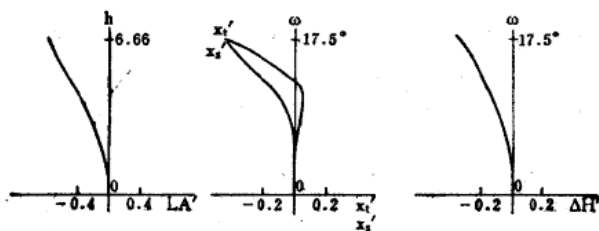
FNo. = 0.75

F. A. = 35°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	696.68	16.51	1.51978	51.9	9	414.82	42.45	1.73692	50.8
2	-2309.16	0.40			10	84.78	0.40		
3	185.20	28.10	1.51978	51.9	11	613.55	30.85	1.62287	60.1
4	836.41	13.76			12	-148.65	0.40		
5	87.02	28.49	1.68584	47.9	13	159.47	20.63	1.58990	68.0
6	-675.06	7.46	1.62075	52.3	14	854.49	0.40		
7	46.14	50.90			15	99.01	22.60	1.58990	68.0
8	-47.56	18.67	1.85504	23.6	16	302.96			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.66	-0.030	0.30	-0.56	-0.86	31.47	-1.14%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.79	-0.36	-0.44	-0.45	0.013	22.42	-1.24
70	-0.43	-0.19	0.052	-0.17	0.22	51.92	-0.29



编号: 01-00-098

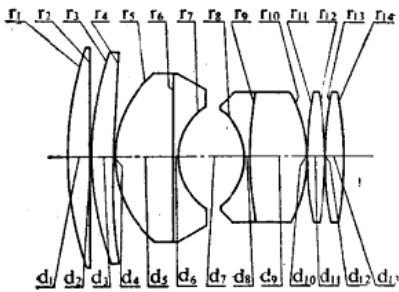
## 双高斯型物镜

E. F. L = 1

B. F. L = 0.3838

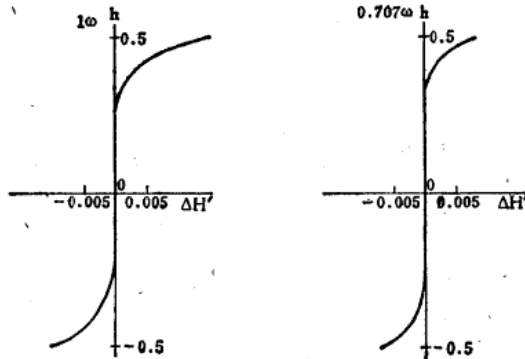
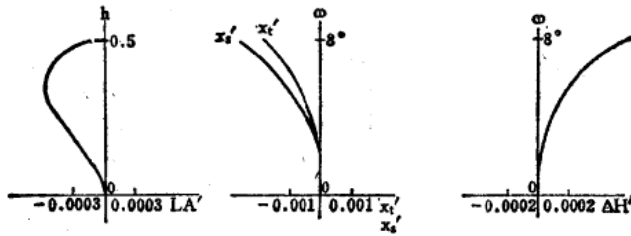
FNo. = 1.0

F. A. = 16'



序号	r	d	n	v	序号	r	d	n	v
1	1.5252	0.1023	1.6700	47.19	8	-0.3800	0.0252	1.6989	30.05
2	5.1743	0.0016			9	1.7633	0.2594	1.6204	60.29
3	1.2083	0.1067	1.6700	47.19	10	-0.5199	0.0016		
4	3.9145	0.0016			11	1.4108	0.0788	1.6910	54.80
5	0.4876	0.2572	1.7170	47.90	12	-2.2930	0.0016		
6	-10.376	0.0274	1.6989	30.05	13	1.4108	0.0788	1.6910	54.80
7	0.2736	0.2851			14	-2.2930			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0011	-0.00044	0.00038	-0.0016	0.00056	0.14	0.44%
h 或 $\omega$ %	LA'	$\Delta H'$	$x_t$	$x_s$	$x_t - x_s$	$K_{T1}$	$K_{T0.7}$
100	-0.00015	0.00062	-0.0018	-0.0025	0.00067	0.0027	-0.00010
70	-0.00057	0.00021	-0.00071	-0.0012	0.00056	0.0010	-0.00011



编号: 01-00-097

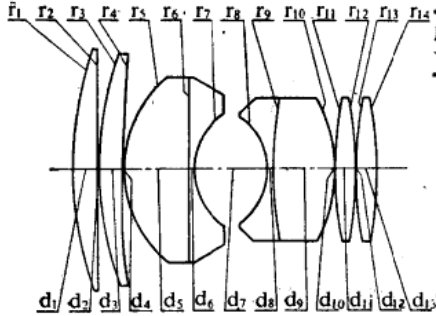
## 双高斯型物镜

E. F. L = 1

B. F. L = 0.3726

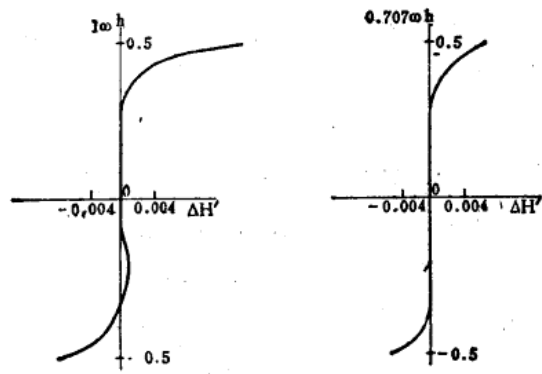
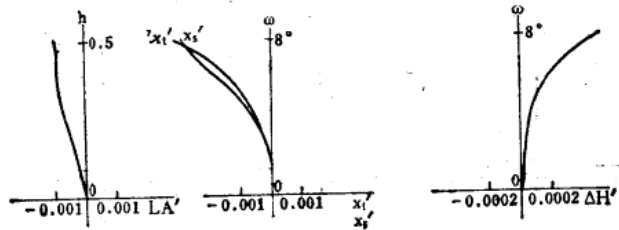
FNo. = 1.0

F. A. = 16°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	1.4859	0.1002	1.6700	47.19	8	-0.3968	0.0261	1.6989	30.05
2	5.0270	0.0044			9	1.6898	0.2439	1.7131	53.89
3	1.2175	0.1045	1.6700	47.19	10	-0.6325	0.0044		
4	3.8055	0.0044			11	1.7111	0.0784	1.6910	54.80
5	0.4783	0.2570	1.7130	53.89	12	-1.7111	0.0044		
6	-12.489	0.0261	1.6989	30.05	13	1.7111	0.0784	1.6910	54.80
7	0.2696	0.2788			14	-1.7111			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0018	-0.000051	0.00015	-0.0016	0.00045	0.14	0.36%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.00099	0.00051	-0.0031	-0.0029	-0.00014	0.0026	0.00013
70	-0.00097	0.00016	-0.0013	-0.0014	0.00013	0.0013	0.00014



编号: 01-00-083

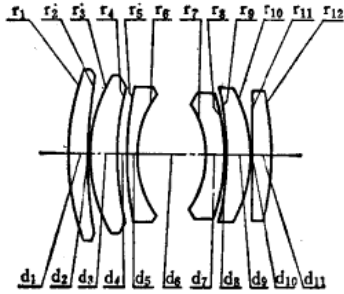
## 六片式大口径长工作截距摄影物镜

E. F. L = 100

B. F. L = 74.64

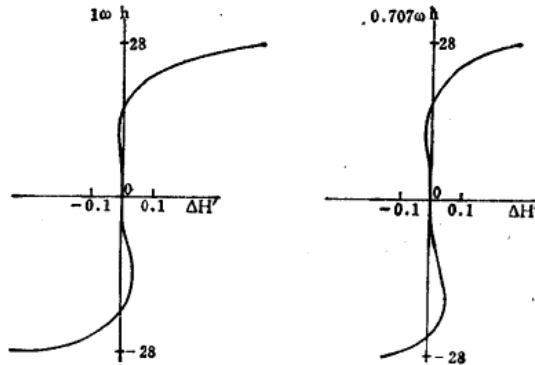
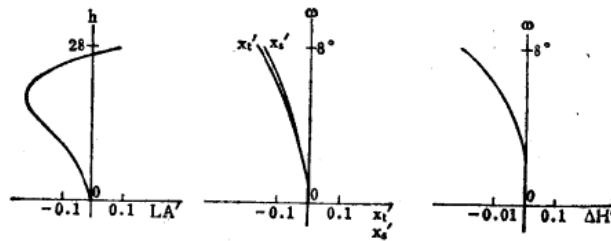
FNo. = 1.8

F. A. = 16°



序号	r	d	n	v	序号	r	d	n	v
1	71.750	7.0	1.8377	42.0	7	-31.500	6.10	1.7618	26.5
2	191.724	0.20			8	-70.335	0.20		
3	48.800	9.00	1.8372	43.3	9	-109.300	8.00	1.8042	46.6
4	102.065	3.00			10	-44.537	0.10		
5	135.000	3.00	1.7408	27.7	11	670.000	6.50	1.7130	53.9
6	31.162	22.00			12	-93.563			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.13	0.011	-0.00073	-0.026	-0.010	14.05	-0.14%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K'_{T0.7}$
100	0.080	-0.020	-0.16	-0.15	-0.0048	0.059	0.030
70	-0.21	-0.0069	-0.087	-0.083	-0.0034	0.063	0.024



编号: 01-00-086

### 四片式大孔径记录透镜系统

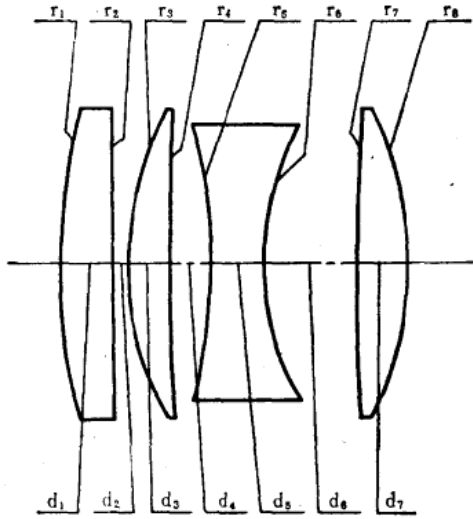
E. F. L = 100

B. F. L =

FNo. = 1.9

F. A. = 37.5° ~ 43° ~ 45°

$$\beta = \frac{7}{10} \sim \frac{9}{10} \sim 1.0^\circ$$

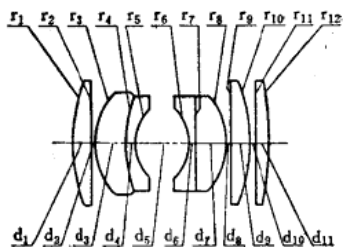


序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	99.39	9.05	1.6170	55.1
2	659.95	2.65		
3	53.63	7.95	1.6110	57.2
4	∞	6.95		
5	-102.7	9.25	1.6725	32.2
6	49.7	16.17		
7	310.1	8.60	1.6110	57.2
8	-57.82			

编号: 01-00-087

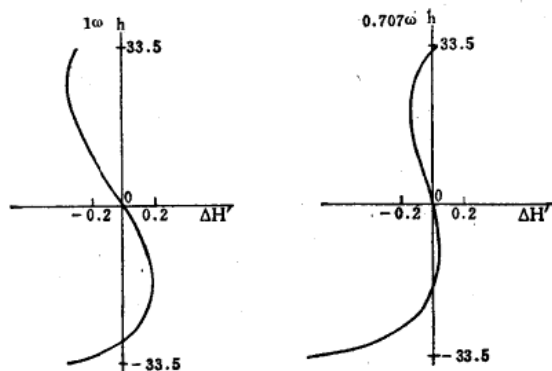
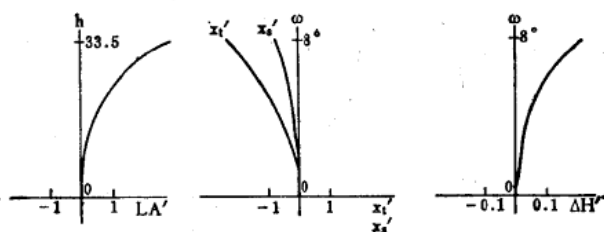
### 用于荧光影像的电子摄影复制的七片式镜头

E. F. L = 134.04    B. F. L = 51.80    FNo. = 2.0    F. A. = 16°     $\lambda = 4360 \text{ \AA}$



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	93.0	12.15	1.62031	60.3	7	$\infty$	19.8	1.62031	60.3
2	$\infty$	3.0			8	-46.5	3.0		
3	46.5	19.8	1.62031	60.3	9	$\infty$	12.15	1.62031	60.3
4	125.0	4.5	1.61992	36.3	10	-93.0	3.0		
5	30.686	34.0			11	$\infty$	9.72	1.62031	60.3
6	-30.686	4.5	1.61992	36.3	12	-290.07			

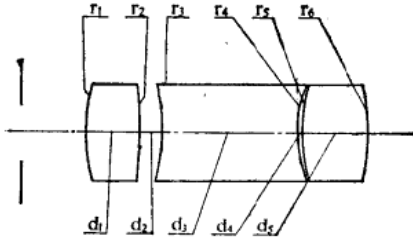
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	0.14	-0.048	-0.067	-0.023	0.10	18.95	1.14%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	2.91	0.21	-2.20	-0.79	-1.41	-0.31	-0.10
70	0.93	0.073	-1.01	-0.38	-0.63	-0.36	-0.11



编号: 01-00-079

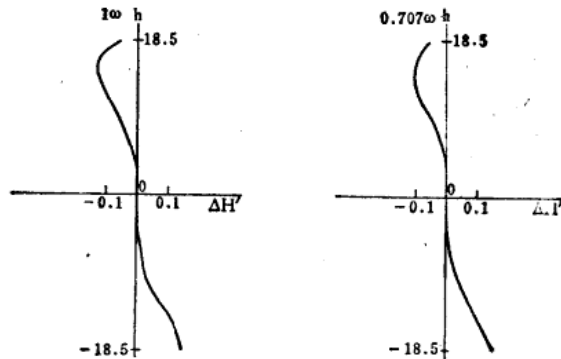
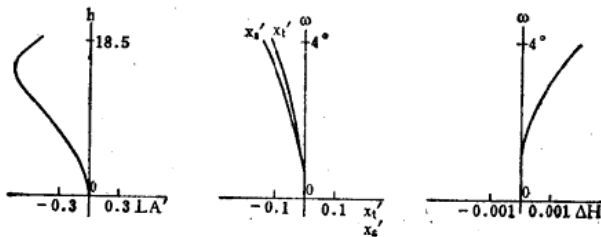
# 三片式物镜

E.F.L = 100    B.F.L = 70.28    FNo. = 2.7    F.A. = 8°     $Lp'_1 = -14.3$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
		14.3*							
1	-52.0	15.7	1.61	58.6	4	47.6	2.9		
2	-83.7	1.3			5	135	11.5	1.61	58.6
3	-63.4	21.6	1.61	37.0	6	-69.7			

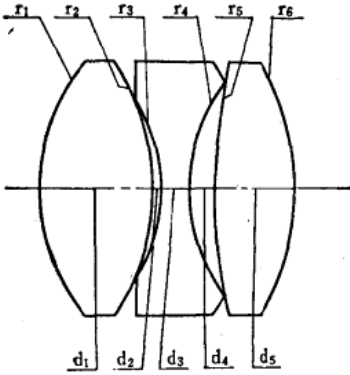
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.12	-0.0060	0.00058	-0.010	0.00062	7.01	0.026%
h 或 $\omega\%$	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.52	0.0018	-0.11	-0.14	0.020	0.045	-0.0078
70	-0.65	0.00062	-0.060	-0.070	0.0095	0.030	-0.0062



编号: 01-00-081

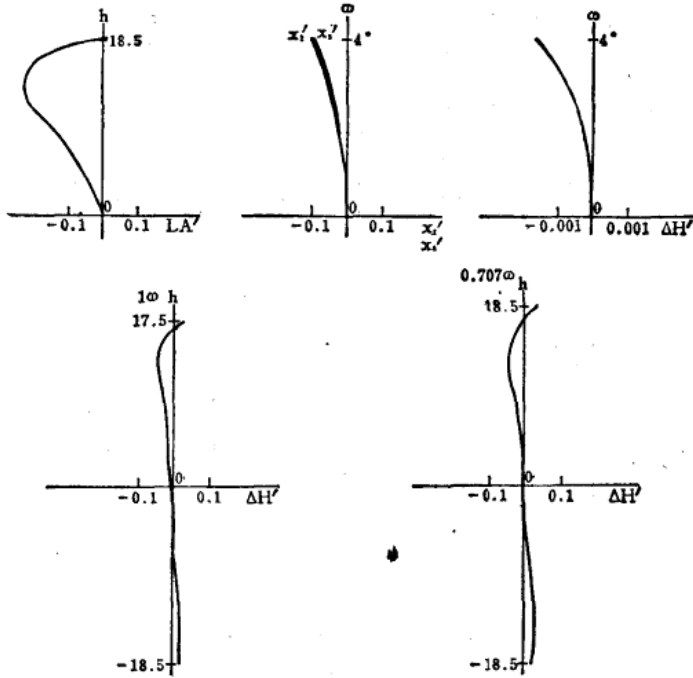
### 三片式物镜

E. F. L = 100    B. F. L = 69.14    FNo. = 2.7    F. A. = 8°     $Lp'_1 = -14.5$



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
		14.5*							
1	54.7	28.9	1.75	52.4	4	46.3	11.1		
2	-313	5.0			5	140	12.6	1.75	52.4
3	-69.3	5.0	1.72	29.3	6	-62.0			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.051	-0.0092	-0.00026	-0.0068	-0.00062	7.07	-0.023%
h 或 $\omega$	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.0090	-0.0016	-0.10	-0.10	-0.0018	0.046	-0.012
70	-0.22	-0.00058	-0.054	-0.052	-0.0024	0.026	-0.010





编号: 01-00-084

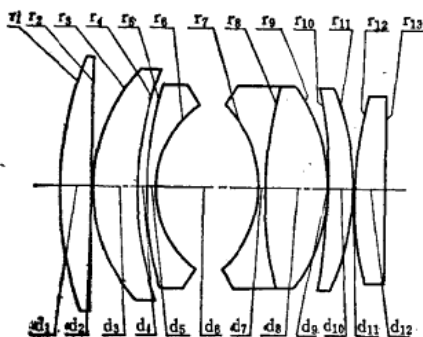
### 大孔径七片式物镜

E. F. L = 100

B. F. L = 63.43

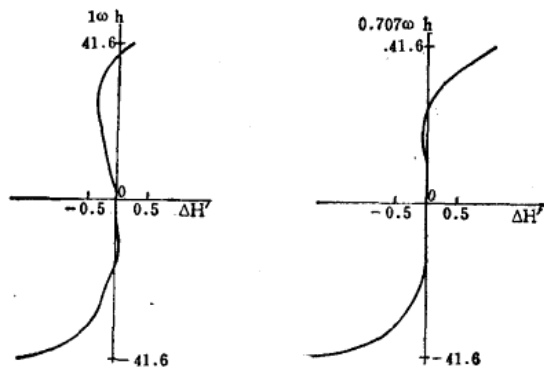
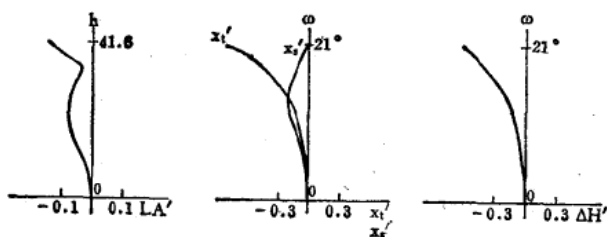
FNo. = 1.2

F. A. = 42°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	110.000	10.00	1.80416	46.6	8	131.500	20.00	1.77252	49.6
2	588.748	0.20			9	-56.806	0.20		
3	51.600	14.50	1.79446	45.4	10	-160.000	8.50	1.77252	49.6
4	100.426	3.50			11	-74.352	0.20		
5	119.000	3.00	1.71736	29.5	12	122.000	9.50	1.77252	49.6
6	32.792	32.50			13	2092.573			
7	-36.500	2.00	1.68893	31.1					

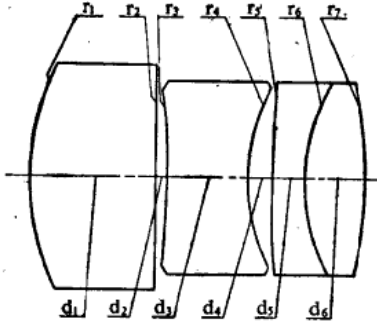
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.16	-0.053	0.071	-0.32	-0.48	38.38	-1.60%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{f1}$	$K'_{f0.7}$
100	-0.14	-0.61	-0.81	-0.00072	-0.81	-0.64	-0.27
70	-0.065	-0.22	-0.25	-0.21	-0.044	0.14	-0.092



编号: 01-00-089

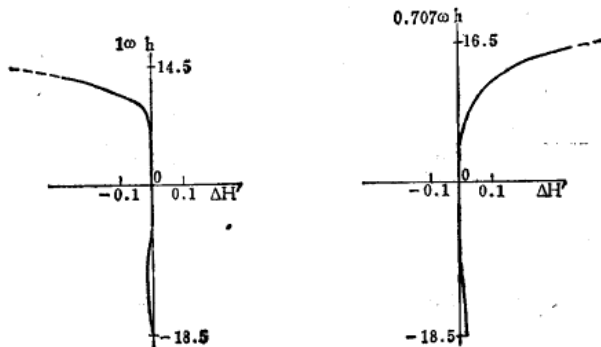
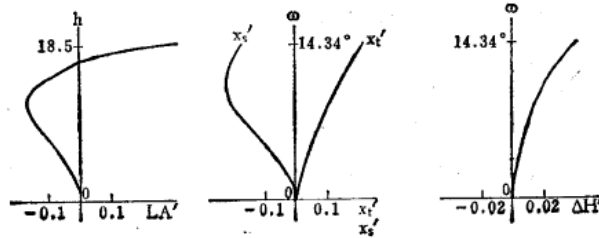
### 三组四片摄影物镜

E. F. L = 100    B. F. L = 69.71    FNo. = 2.7    F. A. =  $\pm 14.34^\circ$      $Lp'_1 = -18.3$



序号	r	d	$n_D$	$\nu_D$	序号	r	d	$n_D$	$\nu_D$
		18.3*							
1	50.3	22.0	1.75	50.6	5	434.8	5.7	1.53	51.6
2	-284.2	1.7			6	34.6	10.9	1.75	50.6
3	-93.2	14.7	1.69	30.9	7	-74.1			
4	34.6	3.8							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.050	-0.015	0.015	-0.060	0.014	26.40	0.15%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.31	0.040	0.22	-0.18	0.41	-2.00	-0.14
70	-0.16	0.019	0.12	-0.22	0.35	0.39	0.081



编号: 01-00-085

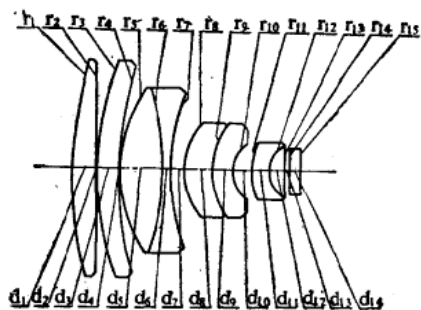
### 用于电视摄象机的大孔径物镜

E. F. L = 100

B. F. L = 6.1

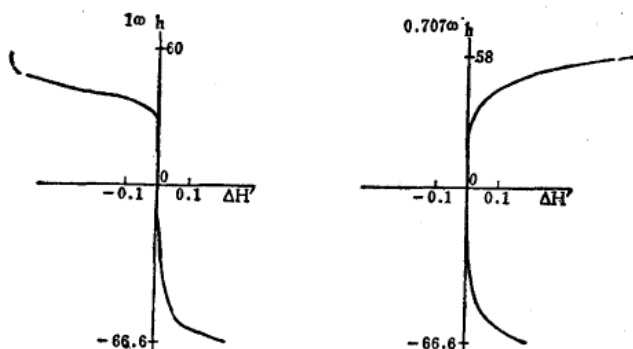
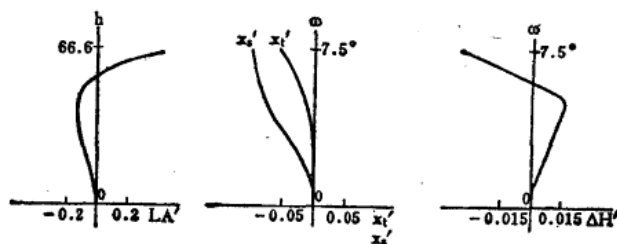
FNo. = 0.75

F. A. = 15°



序号	r	d	$n_E$	$v_E$	序号	r	d	$n_E$	$v_E$
1	280.1	16.35	1.694	54.5	9	51.65	14.5	1.768	26.7
2	$\infty$	0.15			10	22.90	14.4		
3	207.8	15.1	1.694	54.5	11	61.6	12.0	1.592	52.7
4	247	0.63			12	19.90	10.28	1.792	50.2
5	99.8	29.0	1.721	47.7	13	1547	2.5		
6	-206	7.8	1.813	25.2	14	$\infty$	6.55	1.525	59.2
7	161	8.7			15	$\infty$			
8	44.4	20.3	1.694	54.5					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.063	-0.058	0.024	-0.22	0.096	13.08	-0.27%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.042	-0.036	-0.051	-0.10	0.055	5.03	-0.19
70	-0.011	0.015	-0.020	-0.083	0.062	1.04	0.086



编号: 01-00-100

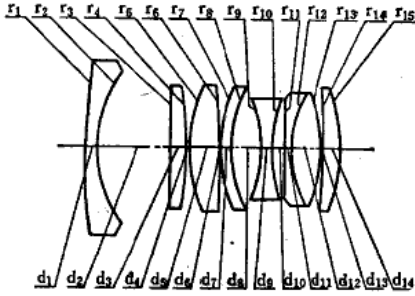
# 广 角 镜 头

E. F. L = 100

B. F. L = 103.96

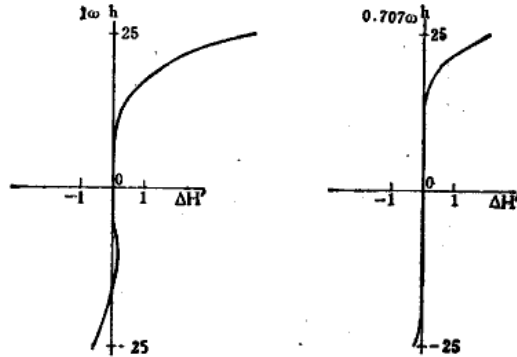
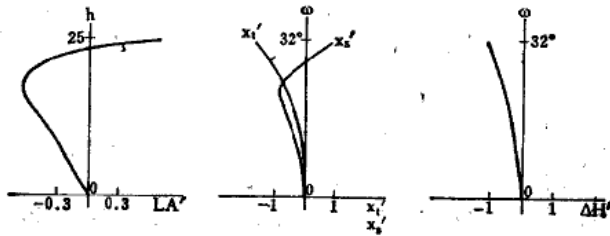
FNo. = 2.0

F. A. = ±32°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	450.000	7.00	1.58913	61.2	9	-91.500	6.50	1.74077	27.7
2	80.137	47.00			10	98.025	8.00		
3	-2300.000	10.00	1.76200	40.3	11	1000.000	4.00	1.83400	37.2
4	-292.234	2.00			12	71.000	19.00	1.77252	49.6
5	95.700	18.00	1.77252	49.6	13	-89.354	0.50		
6	-707.468	1.00			14	-600.000	10.00	1.77251	49.6
7	80.000	8.00	1.53172	48.9	15	-110.648			
8	84.488	18.00							

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.27	-0.067	0.046	-0.38	-0.81	62.48	-1.78%
h 或 ω %	LA'	ΔH'	x <sub>i</sub> '	x <sub>s</sub> '	x <sub>i</sub> '-x <sub>s</sub> '	K <sub>T1</sub>	K <sub>T0.7</sub>
100	0.67	-1.11	-1.65	0.90	-2.56	2.00	0.48
70	-0.64	-0.58	-0.76	-0.80	0.035	0.95	0.10



编号: 01-00-101

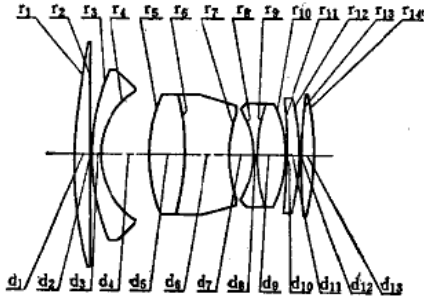
# 大孔径长工作截距摄影镜头

E. F. L = 1.0

B. F. L = 1.1337

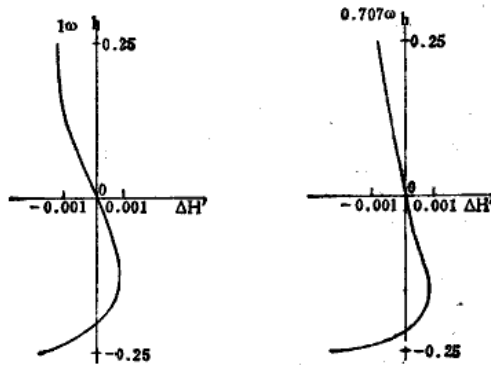
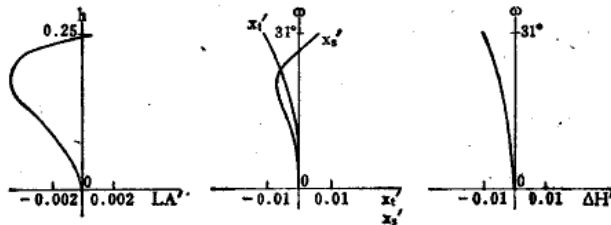
FNo. = 2

F. A. = 62°



序号	r	d	n <sub>D</sub>	v <sub>d</sub>	序号	r	d	n <sub>D</sub>	v <sub>d</sub>
1	3.2117	0.10833	1.71300	53.9	8	-0.5992	0.02778	1.78470	26.1
2	∞	0.00278			9	1.0775	0.19444	1.74443	49.4
3	1.3889	0.06111	1.51680	64.2	10	-0.7172	0.00278		
4	0.4778	0.31111			11	-3.0556	0.08333	1.76684	46.2
5	0.8945	0.22778	1.66755	41.9	12	-1.0691	0.00278		
6	-1.5278	0.29167	1.51454	54.62	13	3.6111	0.06944	1.74400	44.9
7	0.9444	0.14722			14	-2.1958			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0019	0.0010	0.00034	-0.0035	-0.0071	0.60	-1.73%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.00058	-0.011	-0.011	0.0048	-0.015	-0.0016	-0.00032
70	-0.0045	-0.0055	-0.0042	-0.0071	0.0029	-0.0017	0.00017



编号: 01-00-102

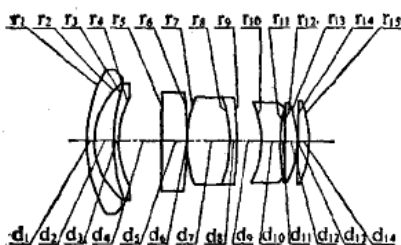
## 反远距型广角物镜

E. F. L = 100

B. F. L = 131.4

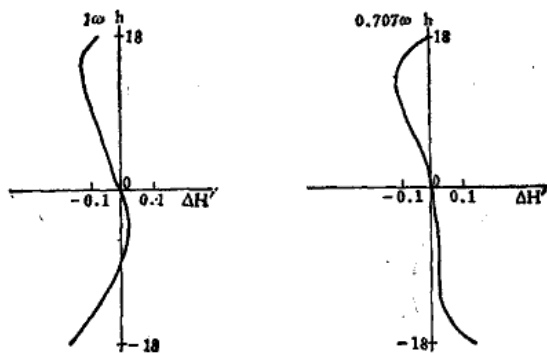
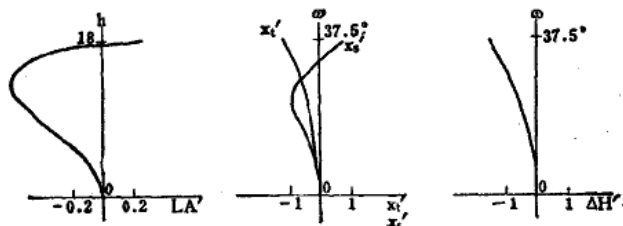
FNo. = 2.8

F. A. = 75°



序号	r	d	n	v	序号	r	d	n	v
1	100.52	5.59	1.64250	58.1	9	-301.4	17.66		
2	54.0	13.29			10	-64.0	14.0	1.75520	27.5
3	128.85	3.85	1.62041	60.3	11	176.57	3.5		
4	70.35	31.47			12	-300.0	7.7	1.69680	55.6
5	898.4	17.48	1.60342	37.8	13	-61.1	0.35		
6	-625.0	0.35			14	-1468.5	6.29	1.63854	55.5
7	97.17	30.0	1.71700	47.9	15	-100.8			
8	-80.42	4.55	1.50137	56.5					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.13	-0.0049	0.020	-0.17	-0.65	76.63	-1.95%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.27	-1.49	-1.15	0.62	-1.77	-0.11	-0.092
70	-0.61	-0.73	-0.63	-0.81	0.17	0.062	-0.045



编号: 01-00-103

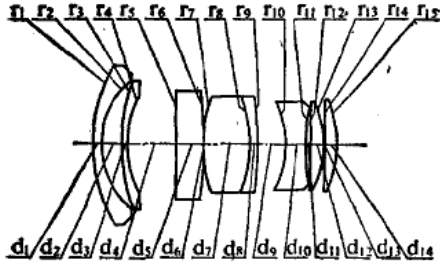
### 反远距型广角物镜

E. F. L = 100

B. F. L = 130.5

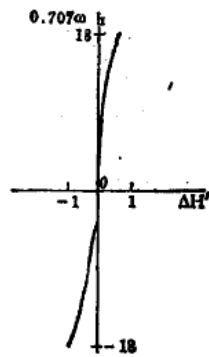
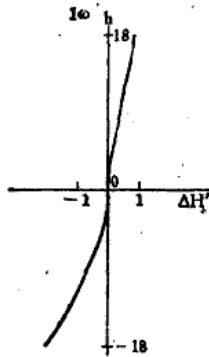
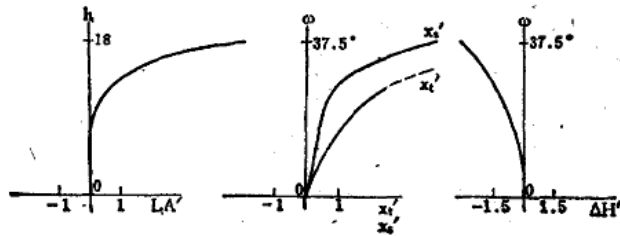
FNo. = 2.8

F. A. = 75°



序号	r	d	n	v	序号	r	d	n	v
1	103.15	5.99	1.65160	58.5	9	-302.45	17.58		
2	54.72	13.29			10	-63.29	14.0	1.72825	28.3
3	129.37	3.85	1.62230	53.1	11	176.6	3.5		
4	60.73	31.47			12	-234.26	7.0	1.71300	53.9
5	979.0	17.48	1.67270	32.3	13	-62.94	0.35		
6	-700.0	0.35			14	-1073.4	6.29	1.65160	58.5
7	97.2	31.12	1.72000	50.3	15	-93.7			
8	-80.4	4.55	1.50137	56.5					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.017	-0.028	0.062	-0.041	-0.87	78.32	-3.86%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	4.94	-3.03	8.70	4.30	4.40	-0.48	-0.27
70	0.73	-1.11	2.53	0.90	1.63	-0.093	-0.12



编号: 01-00-104

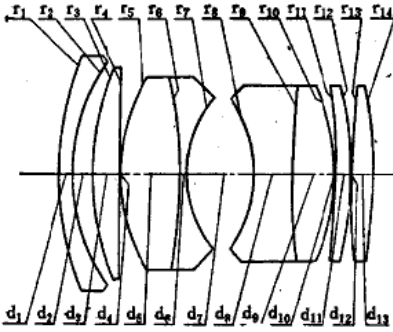
# 大孔径摄影或电影摄影物镜

E. F. L = 1

B. F. L = 0.7264

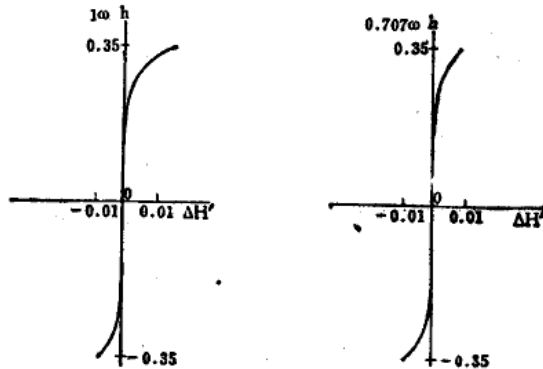
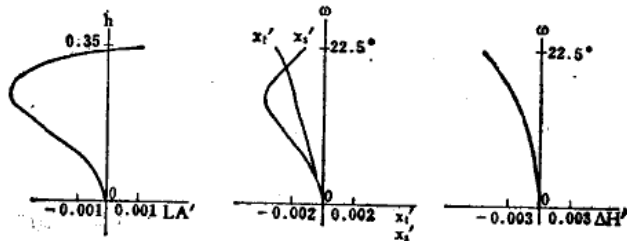
FNo. = 1.4

F. A. = 45°



序号	r	d	n <sub>D</sub>	v <sub>d</sub>	序号	r	d	n <sub>D</sub>	v <sub>d</sub>
1	0.9812	0.0479	1.56732	42.8	8	-0.4496	0.1245	1.80518	25.4
2	0.6297	0.0671			9	2.4979	0.1342	1.78443	43.9
3	0.9057	0.0862	1.78443	43.9	10	-0.7077	0.0019		
4	5.4044	0.0019			11	-3.2532	0.0575	1.78443	43.9
5	0.5554	0.1916	1.78179	37.1	12	-1.1153	0.0019		
6	-1.5370	0.0287	1.68893	31.2	13	3.5320	0.0671	1.78443	43.9
7	0.3789	0.2108			14	-1.6338			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0028	0.00043	0.00069	-0.0037	-0.0040	0.41	-1.39%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.0010	-0.0057	-0.0032	-0.0013	-0.0019	0.0038	0.00083
70	-0.0032	-0.0022	-0.0021	-0.0039	0.0018	-0.00029	0.00038





编号: 01-00-105

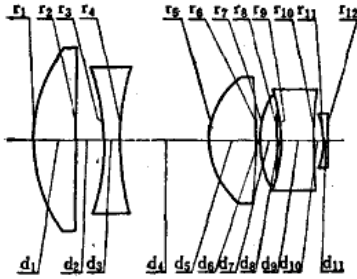
### 六片式珀兹伐型放映镜头

E. F. L = 100

B. F. L = 12.36

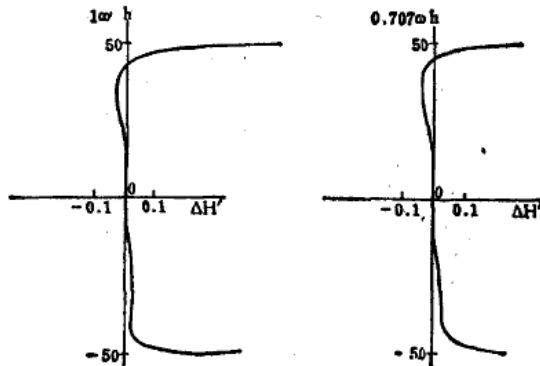
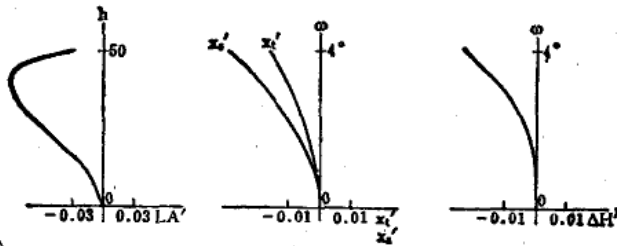
FNo. = 1.0

F. A. = 8°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	107.3	27.6	1.713	53.9	7	63.48	10.7	1.713	53.9
2	-870.3	17.1			8	-2845	1.99		
3	-114.3	11.4	1.728	28.3	9	-151.9	22.5	1.755	27.5
4	232.0	56.8			10	321.0	4.95		
5	51.24	30.0	1.516	64.0	11	-50.70	3.18	1.755	27.5
6	-325.1	2.27			12	∞			

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.16	0.0033	0.0034	-0.018	-0.021	7.00	-0.31%
h 或 ω%	LA'	ΔH'	x' <sub>1</sub>	x' <sub>2</sub>	x' <sub>1</sub> -x' <sub>2</sub>	K' <sub>r1</sub>	K' <sub>r0.7</sub>
100	-0.033	-0.022	-0.016	-0.029	0.013	0.43	-0.013
70	-0.086	-0.0078	-0.0083	-0.015	0.0068	0.25	-0.011



编号, 01-00-106

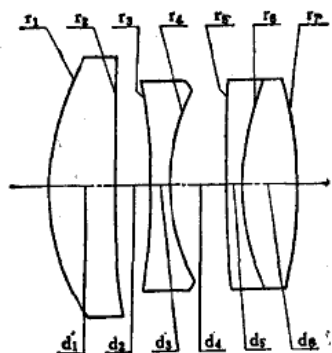
### 三组四片摄影物镜

E. F. L = 100

B. F. L = 79.77

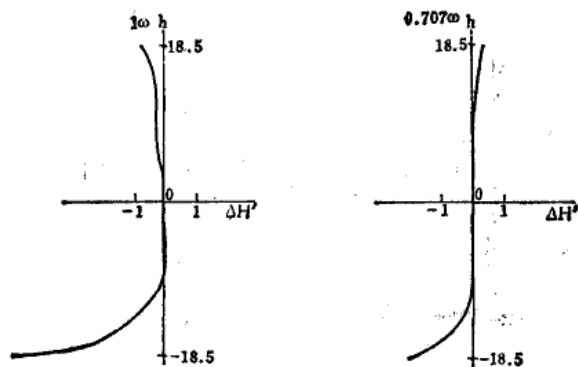
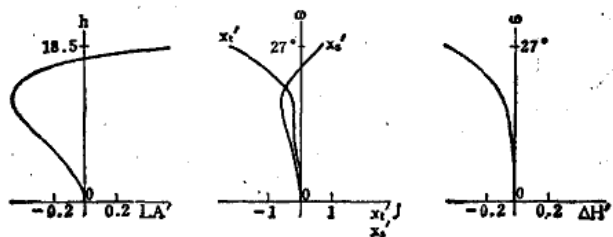
FNo. = 2.7

F. A. =  $\pm 27^\circ$



序号	r	d	n	v	序号	r	d	n	v
1	39.0	10.7	1.73	51.0	5	432.7	2.9	1.62	36.6
2	494.6	5.8			6	42.9	8.7	1.74	44.9
3	-98.6	3.4	1.67	32.2	7	-63.4			
4	34.5	8.9							

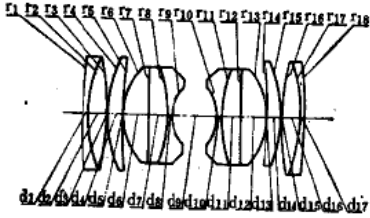
	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.12	0.056	0.032	-0.20	-0.012	52.01	-0.91%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{r1}$	$K'_{r0.7}$
100	0.54	-0.47	-2.10	0.60	-2.71	-2.63	-0.47
70	-0.47	-0.091	-0.27	-0.65	0.37	-0.87	-0.071



编号: 01-00-107

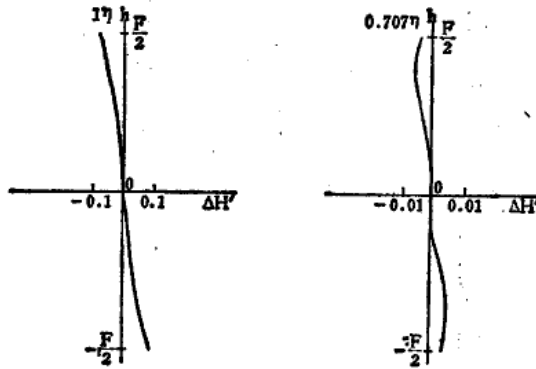
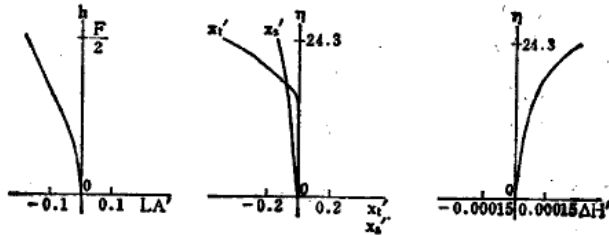
# 1:1 对称换向镜头

E.F.L=100 B.F.L=75.638 FNo.=2 F.A.=  $\beta=1'$   $\lambda=436\sim 656m\mu$



序号	r	d	n	v	序号	r	d	n	v
1	285.84	1.6	1.62004	36.3	10	-17.93	1.71	1.62004	36.3
2	71.95	8.0	1.62041	60.3	11	59.04	8.91	1.64831	33.8
3	-116.26	0.12			12	1027.80	10.85	1.62041	60.3
4	62.24	6.05	1.62041	60.3	13	-31.58	0.12		
5	544.73	0.12			14	-544.73	6.05	1.62041	60.3
6	31.58	10.85	1.62041	60.3	15	-62.24	0.12		
7	-1027.80	8.91	1.64831	33.8	16	116.26	8.0	1.62041	60.3
8	-59.04	1.71	1.62004	36.3	17	-71.95	1.6	1.62004	36.3
9	17.93	19.53			18	-285.84			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.0088	-0.0010	0.0094	-0.018	0.0011	-24.30	-0.0018%
h 或 $\omega\%$	LA'	$\Delta H'$	$x'_i$	$x'_e$	$x'_i - x'_e$	$K'_{T1}$	$K'_{T0.7}$
100	-0.19	0.00033	-0.49	-0.15	-0.34	-0.0028	-0.0011
70	-0.12	0.00010	-0.025	-0.11	0.084	0.00037	-0.000086



编号: 01-00-108

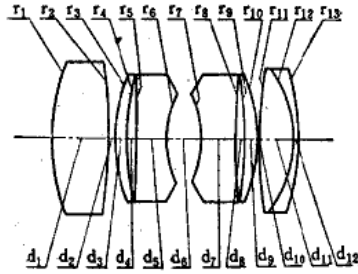
### 具有双分离负双透镜的高斯型摄影物镜

E. F. L = 100

B. F. L = 49.54

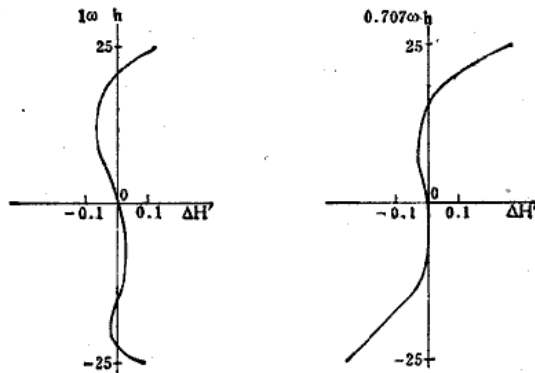
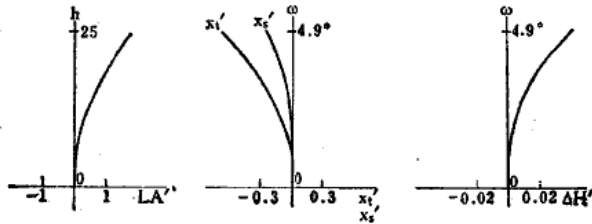
FNo. = 2

F. A. = ± 4.9°



序号	r	d	n <sub>D</sub>	v <sub>D</sub>	序号	r	d	n <sub>D</sub>	v <sub>D</sub>
1	66.300	17.42	1.75510	47.2	8	252.60	2.18		
2	-192.96	2.23			9	-133.01	4.63	1.69680	56.2
3	46.049	4.70	1.65820	57.2	10	-50.695	0.51		
4	108.97	2.36			11	138.25	10.95	1.68235	48.2
5	-352.51	10.06	1.69873	30.1	12	-37.751	1.41	1.62032	60.3
6	33.510	10.92			13	-73.381			
7	-33.285	12.15	1.61633	31.0					

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	0.22	-0.036	-0.023	-0.0048	0.020	8.61	0.49%
h 或 ω %	LA'	ΔH'	x <sub>t</sub> '	x <sub>s</sub> '	x <sub>t</sub> ' - x <sub>s</sub> '	K <sub>T1</sub>	K <sub>T0.7</sub>
100	1.83	0.042	-0.66	-0.23	-0.42	0.096	-0.086
70	0.93	0.014	-0.31	-0.11	-0.20	0.0075	-0.042



编号: 01-00-109

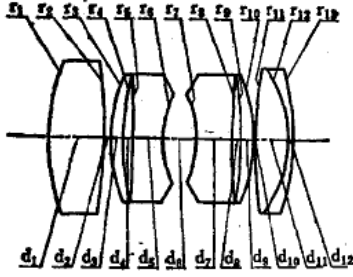
### 具有双分离负双透镜的高斯型摄影物镜

E. F. L = 100

B. F. L = 46.92

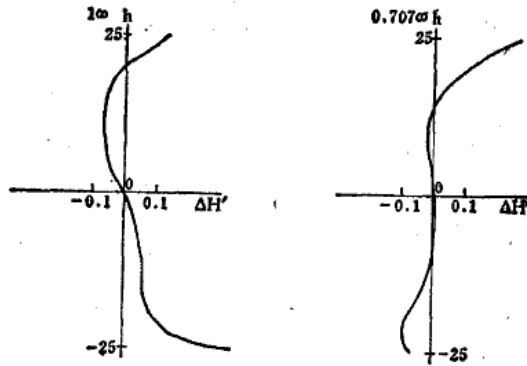
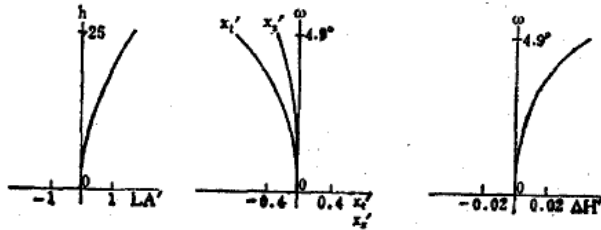
FNo. = 2

F. A. =  $\pm 4.9^\circ$



序号	r	d	n	v	序号	r	d	n	v
1	65.1067	12.84	1.71289	53.8	8	308.53	7.57		
2	-146.65	0.14			9	-139.36	4.76	1.69680	56.2
3	49.156	5.12	1.71289	53.8	10	-51.245	1.74		
4	153.739	2.17			11	203.18	11.00	1.71289	53.8
5	-250.53	10.72	1.67250	32.0	12	-35.499	1.38	1.63918	45.2
6	32.111	11.34			13	-111.72			
7	-37.637	8.55	1.61700	36.6					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP( $\infty$ )
	0.21	-0.021	-0.030	-0.0038	0.021	8.62	0.52%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	1.57	0.045	-0.81	-0.27	-0.53	0.23	0.011
70	0.85	0.015	-0.39	-0.13	-0.25	0.10	-0.0087



编号: 01-00-110

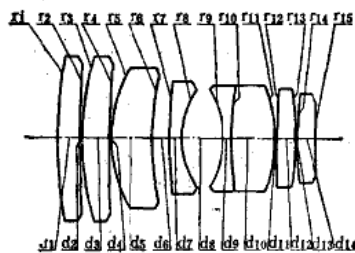
# 高分辨率透镜系统

E. F. L = 100

B. F. L = 45.94

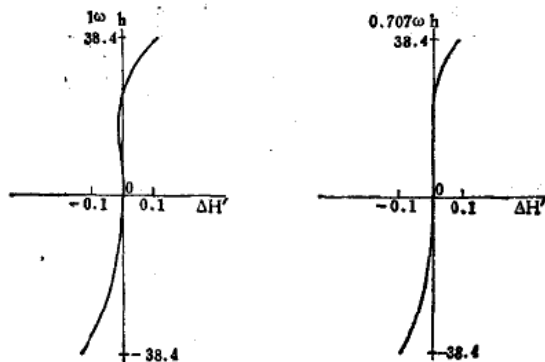
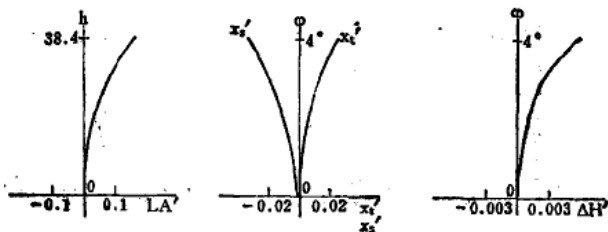
FNo. = 1.3

F. A. =  $\pm 4^\circ$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	155.0	10.20	1.77252	49.6	9	-41.5	4.00	1.57046	42.8
2	449.3	0.24			10	143.0	18.00	1.79025	50.1
3	123.0	12.00	1.73232	54.8	11	-68.8	0.20		
4	413.3	0.24			12	375.8	8.00	1.79025	50.1
5	57.0	17.70	1.67280	57.3	13	-153.3	0.20		
6	114.5	7.17			14	167.7	8.00	1.77752	50.6
7	220.4	5.40	1.81262	25.5	15	-2058.7			
8	36.8	18.00							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP( $1\omega$ )
	0.018	-0.018	0.0086	-0.019	0.0042	6.99	0.081%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.15	0.0057	0.023	-0.034	0.058	-0.0080	-0.023
70	0.061	0.0019	0.011	-0.018	0.029	-0.0038	-0.016



编号: 01-00-111

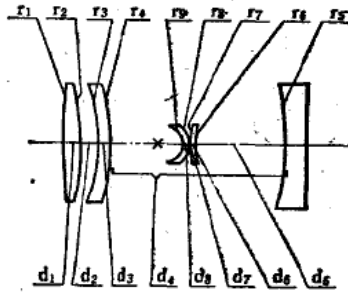
### 大孔径折反射物镜

E. F. L = 140

B. F. L = -12

FNo. = 0.95

F. A. = 5°



序号	r	d	n	v
1	1710.0	19.0	1.51872	64.17
2	-455.5	21.6		
3	-178.4	10.6	1.51872	64.17
4	-376.7	224.2		
5	-376.7*	-118.6		
6	145.6	-6.2		
7	147.5	-1.0	1.51872	64.17
8	-30.3	-6.2		
9	-25.5		1.51872	64.17

+ 表示反射面。

编号: 01-00-112

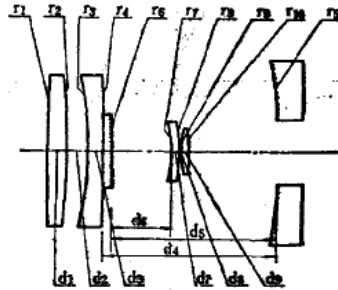
### 大孔径折反射物镜

E. F. L = 414

B. F. L = 40

FNo. = 1.2

F. A. = 5.8°



序号	r	d	n	v
1	2221.8	34	1.51872	64.71
2	-1313.0	35		
3	-609.9	25	1.51872	64.71
4	-2175.0	301		
5	-921.5*	-291		
6	∞*	103		
7	-170.6	12	1.72311	29.51
8	-276.4	3		
9	176.8	12	1.51872	64.17
10	-254.0			

+ 表示反射面。

编号: 01-00-113

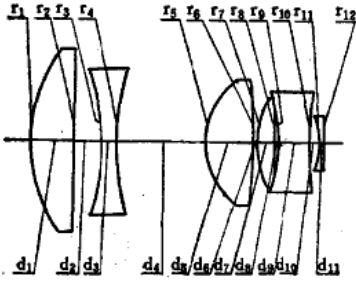
### 六片式珀兹伐型放映镜头

E. F. L = 100

B. F. L = 13.45

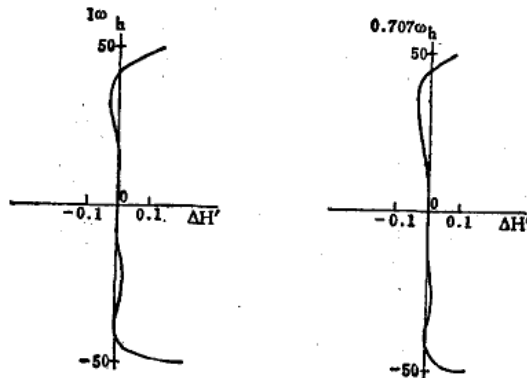
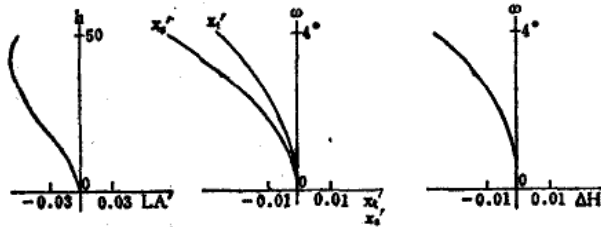
FNo. = 1.0

F. A. = 8°



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	107.3	27.6	1.713	53.9	7	63.48	10.7	1.713	53.9
2	-870.3	17.1			8	-2845	1.99		
3	-154.3	11.4	1.728	28.3	9	-151.9	22.5	1.755	27.5
4	232.0	56.8			10	321.0	4.95		
5	51.24	30.0	1.516	64.0	11	-50.70	3.18	1.755	27.5
6	-325.1	2.27			12	$\infty$			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.11	0.0029	0.0044	-0.026	-0.025	6.99	-0.37%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x_i$	$x'_i - x_i$	$K_{T1}$	$K'_{T0.7}$
100	-0.060	-0.026	-0.025	-0.043	0.017	0.16	-0.012
70	-0.060	-0.0091	-0.013	-0.021	0.0087	0.09	-0.011





编号: 01-00-114

# 摄影物镜

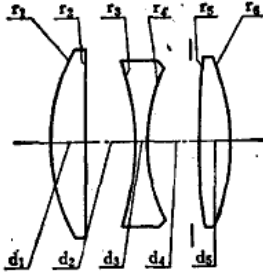
E. F. L. = 100

B. F. L. =

FNo. = 2.8

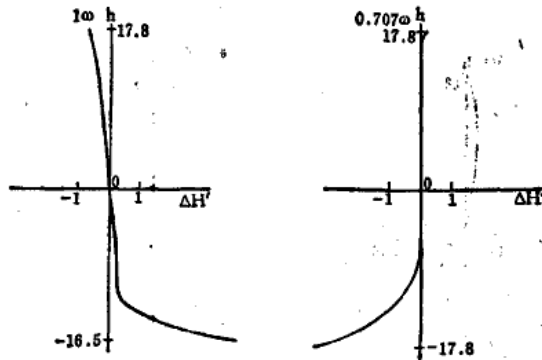
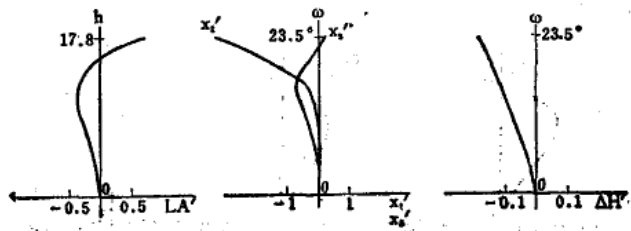
F. A. = 47°

$Lp'_1 = 10^\circ$



序号	r	d	$n_d$	v	序号	r	d	$n_d$	v
1	42.81	7.476	1.65844	50.84	4	41.27	11.265		
2	-7013.04	10.241			5	167.23	6.799	1.6910	54.80
3	-60.91	2.969	1.67270	32.23	6	-47.56			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.1	0.068	0.028	-0.2	-0.07	46.4	-0.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{f1}$	$K'_{T0.7}$
100	0.69	-0.18	-3.3	0.002	-3.3	6.04	-0.11
70	-0.38	-0.125	-0.3	-0.87	0.57	-1.9	-0.28



● 此系参考数据。

编号: 01-00-115

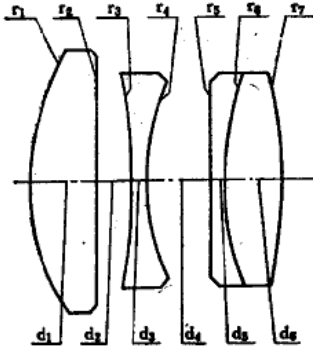
# 摄影物镜

E. F. L = 100

B. F. L =

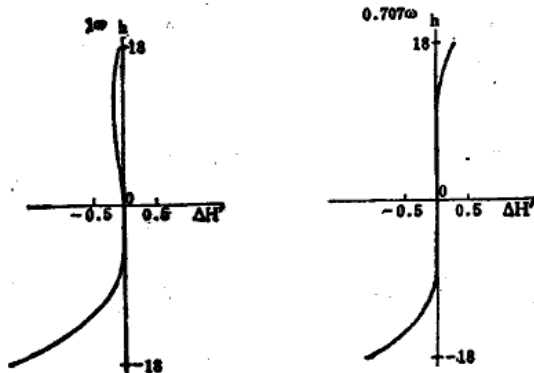
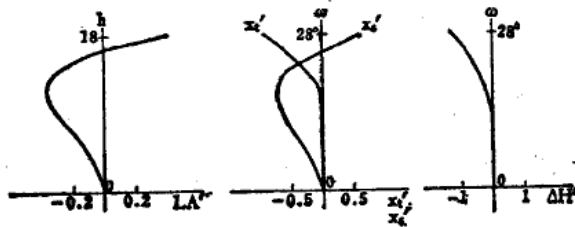
FNo. = 2.8

F. A. = 56°



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	39.266	10.62	1.7130	53.89	5	263.753	2.39	1.6261	39.10
2	283.685	5.69			6	50.234	9.49	1.7550	53.28
3	-99.940	2.53	1.6236	36.75	7	-69.533			
4	35.715	9.63							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.09	0.0079	0.04	-0.22	-0.2	53	2.7%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.42	-1.4	-0.89	0.6	-1.5	-1.6	-0.4
70	-0.36	-0.34	-0.15	-0.75	0.59	-0.4	-0.07



编号: 01-00-116

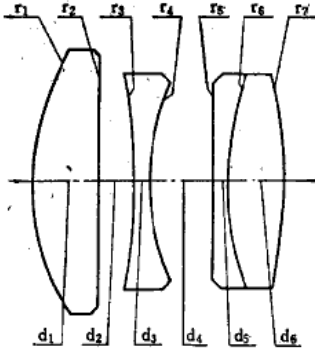
# 摄影物镜

E. F. L = 100

B. F. L =

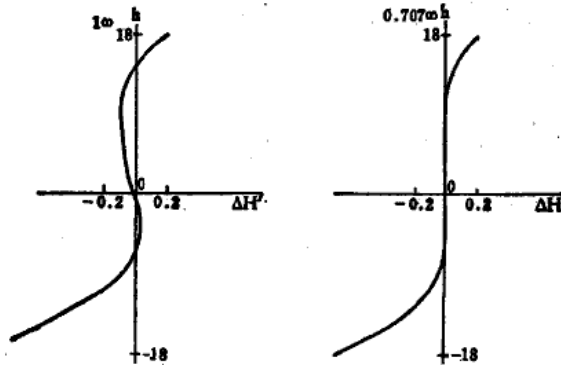
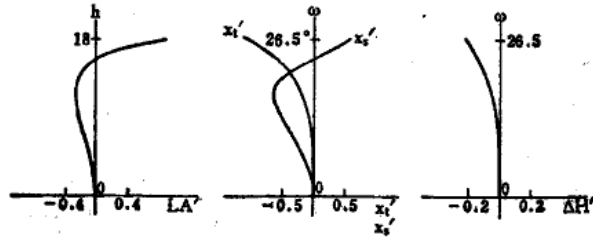
FNo. = 2.8

F. A. = 53°



序号	r	d	$n_d$	v	序号	r	d	$n_d$	v
1	42.348	8.48	1.7335	51.04	5	$\infty$	2.55	1.6204	37.97
2	859.654	7.25			6	53.647	7.61	1.7440	44.90
3	-72.448	1.97	1.6547	32.87	7	-52.794			
4	39.706	8.95							

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.10	0.02	0.03	-0.19	-0.03	50	-0.45%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K_{T1}$	$K_{T0.7}$
100	0.86	-0.2	-1.1	0.57	-1.6	-0.9	-0.24
70	-0.36	-0.06	-0.19	-0.68	0.489	-0.4	-0.07



编号: 01-00-117

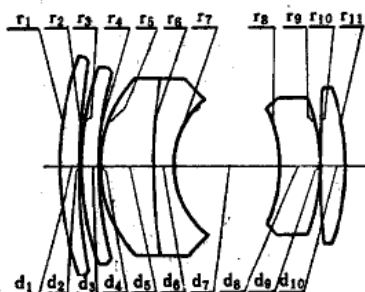
### 六片式改型高斯摄影物镜

E. F. L = 1.0

B. F. L = 0.5845

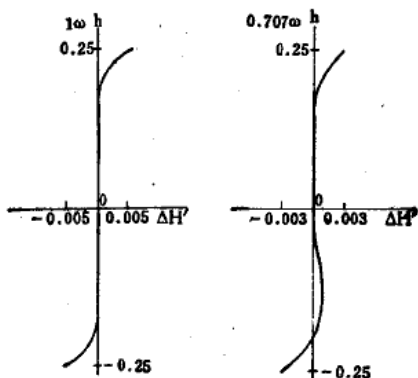
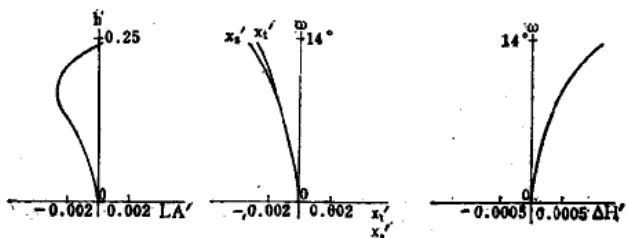
FNo. = 2

F. A. = ± 14°



序号	r	d	n <sub>d</sub>	v <sub>d</sub>	序号	r	d	n <sub>d</sub>	v <sub>d</sub>
1	0.55202	0.05208	1.69100	54.80	7	0.21352	0.23553		
2	0.95375	0.00056			8	-0.30375	0.08936	1.72825	28.34
3	0.57639	0.04616	1.69100	54.80	9	-0.47801	0.00059		
4	0.80828	0.00059			10	10.70056	0.06155	1.69100	54.80
5	0.34086	0.10770	1.69100	54.80	11	-0.52482			
6	1.90298	0.03847	1.66680	33.09					

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.0012	-0.00014	-0.000016	-0.00053	0.00072	0.25	0.46%
h 或 ω%	LA'	ΔH'	x <sub>t</sub>	x <sub>s</sub>	x <sub>t</sub> ' - x <sub>s</sub> '	K <sub>T1</sub>	K <sub>T0.7</sub>
100	0.0000055	0.0011	-0.0025	-0.0028	0.00027	0.00068	0.00012
70	-0.0027	0.00046	-0.0018	-0.0018	-0.000002	-0.0000019	-0.00008



编号: 01-00-118

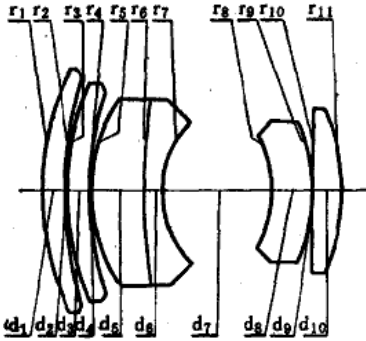
### 六片式改型高斯摄影物镜

E. F. L = 1.0

B. F. L = 0.4934

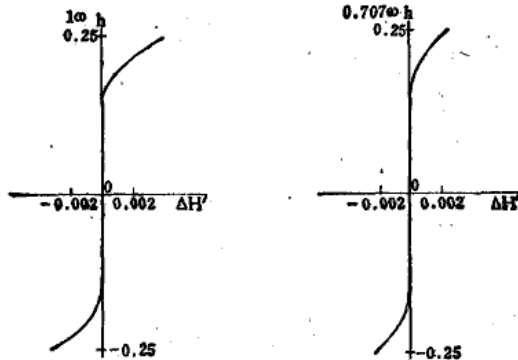
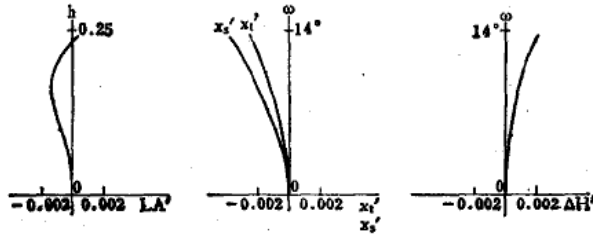
FNo. = 2

F. A. = ±14°



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	0.74046	0.05378	1.62041	60.29	7	0.21479	0.25122		
2	1.70593	0.00119			8	-0.31907	0.10120	1.78472	25.51
3	0.68906	0.04167	1.62041	60.29	9	-0.45729	0.00060		
4	1.03103	0.00119			10	3.18788	0.05715	1.62041	60.29
5	0.33074	0.11906	1.69100	54.80	11	-0.60101			
6	1.27493	0.05001	1.66096	32.83					

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.00070	-0.00013	0.000047	0.00070	0.0011	0.24	0.84%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x''_i$	$x'_i - x''_i$	$K_{T1}$	$K_{T0.7}$
100	0.00025	0.002	-0.0025	-0.0036	0.0011	0.00088	0.00007
70	-0.0015	0.00079	-0.0018	-0.0022	0.00045	0.0001	-0.00007



编号: 01-00-119

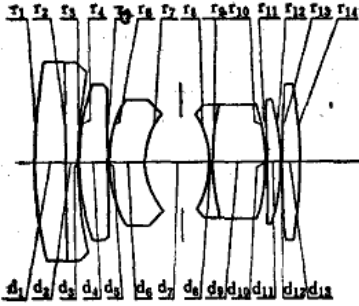
# 摄影物镜

E. F. L = 1.0

B. F. L = 0.6789

FNo. = 1.4

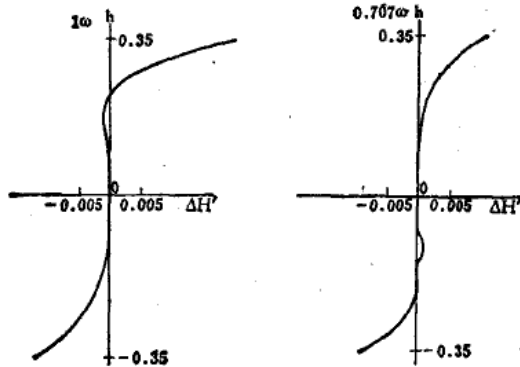
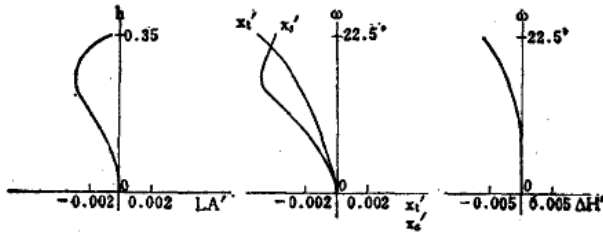
F. A. = ±22.5°



序号	r	d	$n_d$	v	序号	r	d	$n_d$	v
1	1.97579	0.11518	1.78443	43.77	8	-0.39700	0.05339	1.80518	25.46
2	-7.17419	0.08009	1.72151	29.28	9	1.03012	0.19990	1.78443	43.77
3	2.03690	0.01226			10	-0.69229	0.00095		
4	0.86394	0.13780	1.78443	43.77	11	-17.76637	0.06865	1.78443	43.77
5	2.73433	0.00341			12	-0.92290	0.00095		
6	0.49091	0.14512	1.80518	25.46	13	3.31300	0.05721	1.78443	43.77
7	0.33916	0.26299*			14	-2.16591			

$0.26299^* = 0.13000 + 0.13299$

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0023	0.00064	0.00095	-0.0045	-0.0046	0.41	-1.5%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0004	-0.0052	-0.0052	-0.0042	-0.0008	0.0018	-0.0005
70	-0.0028	-0.0025	-0.0025	-0.0050	-0.0028	0.0008	0.0002



编号: 01-00-120

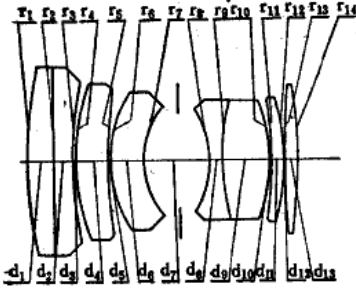
# 摄影物镜

E. F. L = 1.0

B. F. L = 0.6753

FNo. = 1.4

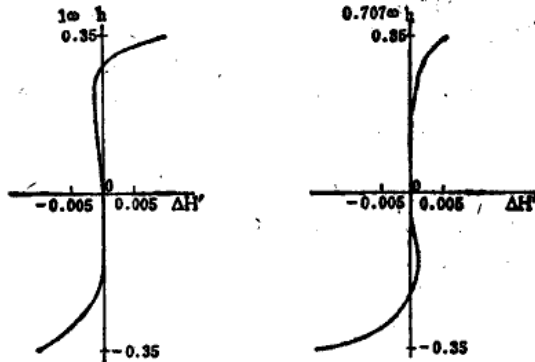
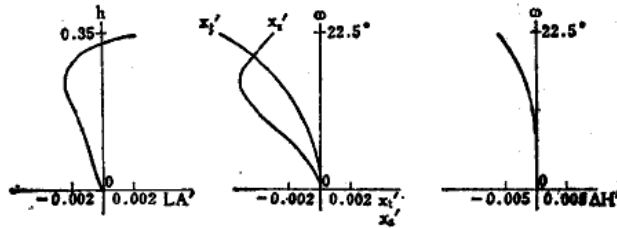
F. A. = ±22.5°



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	2.11494	0.12622	1.78443	43.77	8	-0.38985	0.02867	1.80518	25.46
2	-6.13521	0.05737	1.72151	29.28	9	1.20662	0.21037	1.78443	43.77
3	1.80543	0.00191			10	-0.67370	0.00191		
4	0.93127	0.12239	1.78443	43.77	11	-8.18072	0.06885	1.78443	43.77
5	3.81568	0.00191			12	-0.87919	0.00096		
6	0.46674	0.15299	1.80518	25.46	13	3.03081	0.06699	1.78443	43.77
7	0.33282	0.28304*			14	-2.20805			

0.28304\* = 0.18000 + 0.10304

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.0024	0.00093	0.00073	-0.0043	-0.0046	0.41	-1.4%
h 或 ω %	LA'	ΔH'	x' <sub>i</sub>	x' <sub>s</sub>	x' <sub>i</sub> -x' <sub>s</sub>	K <sub>T1</sub>	K <sub>T0.7</sub>
100	0.0021	-0.006	-0.0062	-0.0032	-0.0029	-0.006	-0.0014
70	-0.0023	-0.0025	-0.0026	-0.0048	0.0021	-0.0054	-0.00047



编号: 01-00-121

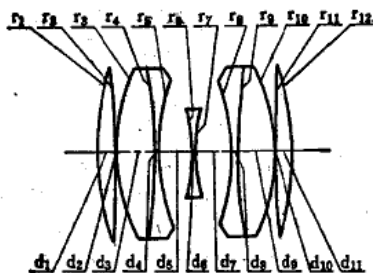
# 物 镜

E.F.L=1.0

B.F.L=

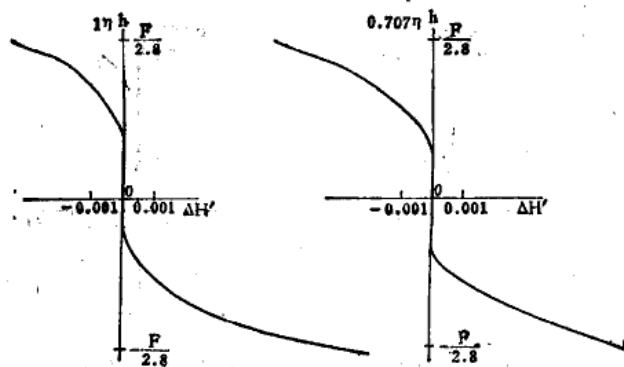
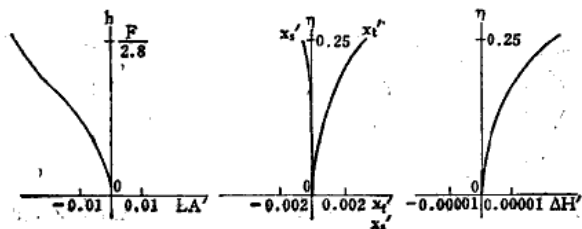
FNo. =2.8

F.A. =



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	0.85427	0.05864	1.720	50.3	7	0.63219	0.10456		
2	-3.1321	0			8	-0.72631	0.10743	1.613	36.9
3	0.59031	0.12025	1.613	59.3	9	1.7723	0.12025	1.613	59.3
4	-1.7723	0.01743	1.613	36.9	10	-0.59031	0		
5	0.72631	0.10456			11	3.1321	0.05864	1.720	50.3
6	-0.63219	0.01742	1.613	36.9	12	-0.85427			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0029	0.00037	0.00012	-0.00014	0.0000097	0.126	-0.019%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.033	0.000024	0.0034	-0.00026	0.0037	0.0018	0.0013
70	-0.02	0.000009	0.0017	-0.00016	0.0018	0.0012	0.0009





编号: 01-00-122

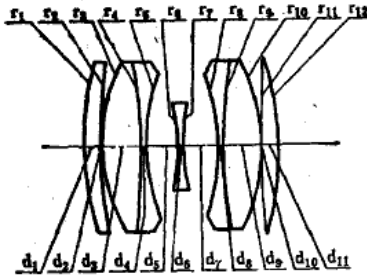
物 镜

E.F.L.=1.0

B.F.L.=

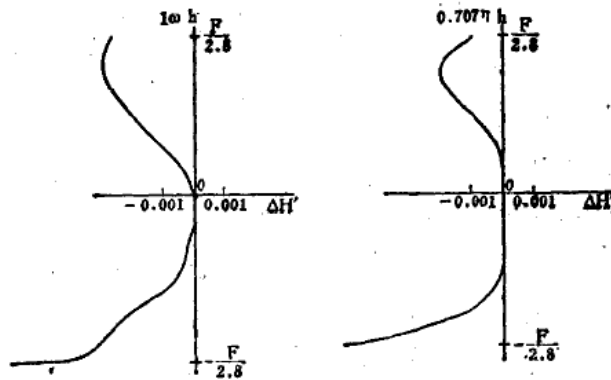
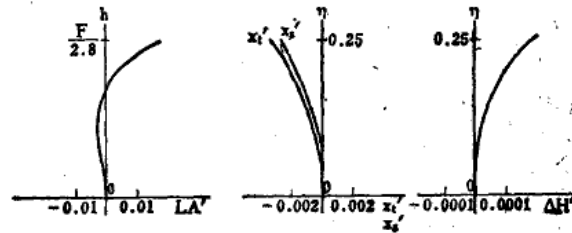
FNo. =2.8

F.A. =



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	0.63532	0.03898	1.720	50.3	7	0.45604	0.02776		
2	20.0321	0			8	-0.72446	0.01743	1.613	36.9
3	0.63321	0.14622	1.613	59.3	9	-0.64629	0.17042	1.613	59.3
4	$\infty$	0.01743	1.613	36.9	10	-0.58913	0.00908		
5	0.70192	0.06061			11	1.33561	0.23218	1.720	50.3
6	-1.04929	0.02184	1.613	36.9	12	-1.31201			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00051	-0.00037	-0.0000079	-0.00012	0.000053	0.15	-0.12%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_c$	$x_s$	$x'_c - x_s$	$K_{T1}$	$K_{T0.7}$
100	0.017	0.00018	-0.0033	-0.00293	-0.0004	-0.004	-0.002
70	0.00012	0.00006	-0.00169	-0.0015	-0.00019	-0.003	-0.0014



编号: 01-00-123

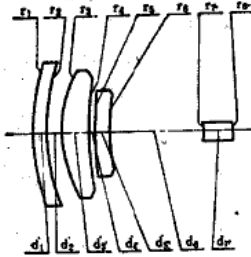
# 红 外 远 摄 物 镜

E. F. L = 100

B. F. L = 1.48

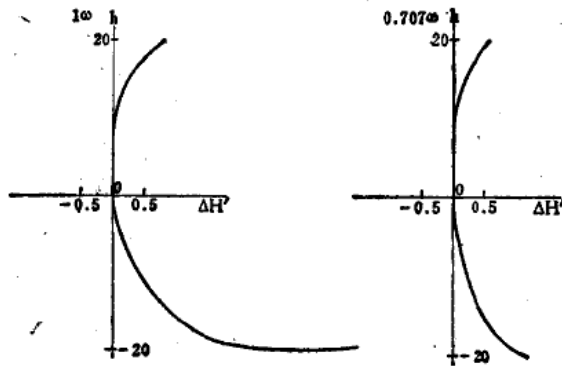
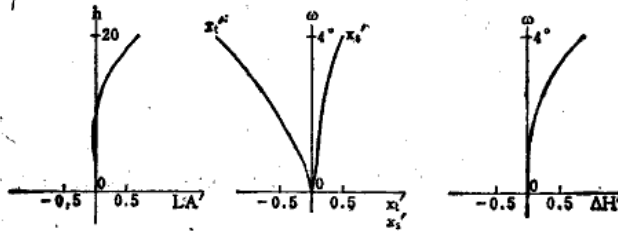
FNo. = 2.5

F. A. =  $\pm 4^\circ$



序号	r	d	n	v	序号	r	d	n	v
1	66.04	4.6	3.42		5	193.7	4.9	4.02	
2	61.72	5.0			6	72.0	30.0		
3	41.60	8.6	3.42		7	-7.92	9.3	4.02	
4	118.6	2.05			8	-26.66			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.0047	0.082	-0.080	0.12	0.25	7.4	11%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.89	0.83	-1.55	0.49	-2.05	2.5	0.5
70	0.14	0.26	-0.79	0.28	-1.07	0.8	0.28



编号: 01-00-124

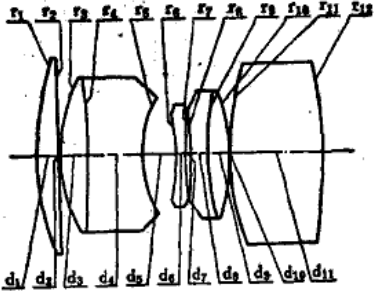
# 透 镜 系 统

E. F. L. = 1.0

B. F. L. =

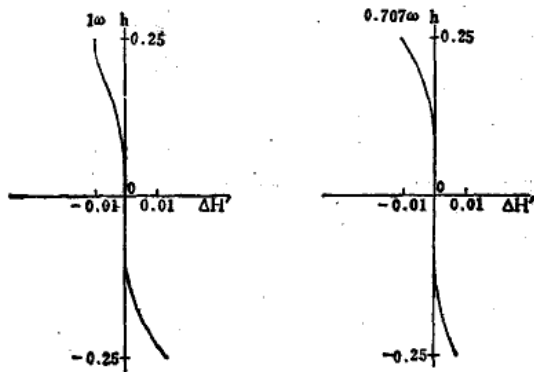
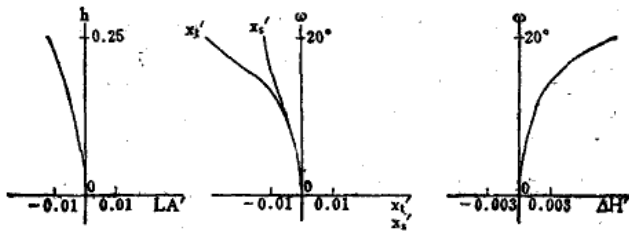
FNo. = 2

F. A. = ±20°



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	0.9144	0.0700	1.6910	54.8	7	1.3921	0.0165		
2	-20.559	0			8	-1.5615	0.0618	1.7484	27.8
3	0.5288	0.0886	1.6258	35.7	9	1.2955	0.0676	1.6910	54.8
4	-2.3553	0.1794	1.6484	27.8	10	-0.5666	0		
5	0.3930	0.1097			11	0.9260	0.3016	1.6910	54.8
6	-0.5513	0.0300	1.5097	64.4	12	-1.5488			

	ΣS <sub>1</sub>	ΣS <sub>2</sub>	ΣS <sub>3</sub>	ΣS <sub>4</sub>	ΣS <sub>5</sub>	HI	QP(1ω)
	-0.0019	-0.00033	-0.000044	-0.0034	0.0029	0.32	2.8%
h 或 ω %	LA'	ΔH'	x <sub>i</sub> '	x <sub>s</sub> '	x <sub>i</sub> '-x <sub>s</sub> '	K <sub>T1</sub>	K <sub>T2.7</sub>
100	-0.01	0.009	-0.03	-0.013	-0.018	-0.00091	-0.00028
70	-0.0057	0.0028	-0.013	-0.0098	-0.0032	-0.002	-0.00685



编号, 01-00-125

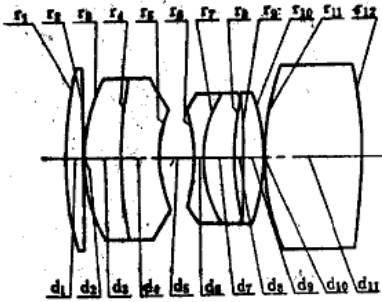
# 透 镜 系 统

E. F. L = 1.0

B. F. L =

FNo. = 2

F. A. = ±20°



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	1.0765	0.0566	1.6910	54.8	7	0.4298	0.0989	1.6910	54.8
2	305.8	0			8	0.9583	0.0253		
3	0.5425	0.1157	1.6910	54.8	9	-2.1388	0.0611	1.6910	54.8
4	1.2711	0.1275	1.6479	33.8	10	-0.6014	0		
5	0.3980	0.1096			11	0.8313	0.3101	1.6910	54.8
6	-0.6065	0.0300	1.6258	35.7	12	-1.5805			

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI'	QP(1 $\omega$ )
	-0.00049	0.00018	0.00082	-0.00266	0.00027	0.36	-0.12%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_s$	$x'_i - x'_s$	$K'_{r1}$	$K'_{r0.7}$
100	-0.00013	-0.00045	-0.00005	-0.0028	0.0027	-0.0012	-0.00005
70	-0.00112	0.0001	0.0004	-0.005	0.0055	-0.00076	0.000097

