

## 目 录

符号说明	1
四组变焦距物镜	2
变焦距物镜	5
变焦距摄影物镜	8
变焦距摄影物镜	12
具有可动正组的变焦距物镜	15
八片式变焦距物镜	18
变焦距镜头	21
八片式变焦距物镜	23
变焦距物镜	26
变焦距物镜	29
用于近距离摄影的变焦距镜头	32
变焦距镜头	35
变焦距物镜	38
变焦距镜头	41
变焦距镜头	43
大孔径变焦距物镜	45
两个可动负组在两个固定正组间的变焦距镜头	48
大孔径变焦距物镜	51
大孔径变焦距物镜	54
变焦距摄影物镜	57
变焦距镜头	60
变焦距镜头	63
变焦距镜头	66
变焦距镜头	69
变焦距摄影物镜	72
可动透镜作线性差动式移动的变焦距镜头	75
大孔径变焦距物镜	77
变焦距物镜	80
广角变焦距物镜	82
光学补偿式变焦距物镜	85
可动透镜作线性差动式移动的变焦距镜头	88

大倍率变焦距镜头.....	90
小型的大倍率变焦距镜头.....	91
变焦距镜头.....	92
变焦距电影摄影镜头.....	93
变焦距镜头.....	94
大倍率大孔径变焦距物镜.....	95
大倍率变焦距镜头.....	96
用于中心快门照相机的变焦距镜头.....	97
小型的变焦距镜头.....	98
具有两个光栏的变焦距镜头.....	99
超远摄型变焦距镜头.....	100
大孔径广角变焦距镜头.....	101
大孔径变焦距物镜.....	102
大倍率变焦距镜头.....	103
五组变焦距镜头.....	104

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！

## 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。

凡数据后有符号“\*\*”，表示原资料中未给出F.A.值，此系我们在计算时主观给定的值。

2. 在主要参数表中，当d值是可变的，则用符号“\*\*\*”表示。

3. 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。

4. 常用符号：

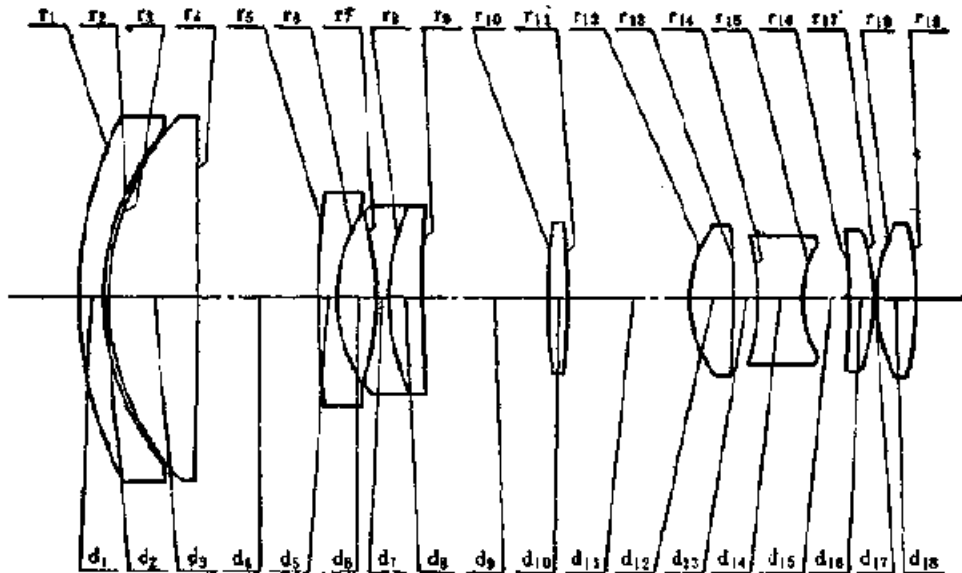
$\Sigma S_1$	球差系数和；
$\Sigma S_2$	慧差系数和；
$\Sigma S_3$	象散系数和；
$\Sigma S_4$	场曲系数和；
$\Sigma S_5$	畸变系数和；
$LA'$	球差；
$\Delta H'$	绝对畸变；
$x'_t$	细光束子午场曲；
$x'_s$	细光束弧矢场曲；
$x'_t - x'_s$	象散；
$K'_{T_1}$	全口径的子午慧差；
$K'_{T_{0.7}}$	0.707口径的子午慧差；
QP	相对畸变；
HI	理想象高；
E. F. L	焦距；
B. F. L	后截距；
FNo.	相对孔径倒数；
F. A.	视场角；
$\eta$	物高；
$\omega$	镜头视场。

编号: 04-03-001

## 四 组 变 焦 距 物 镜

E.F.L=0.641~1.560 B.F.L=0.520 FNo.=9 F.A.= $\pm 26.9^{\circ}$ ~ $\pm 10.9^{\circ}$

超星阅读器提醒：  
使用本复制品  
请尊重相关知识产权！



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	1.6604	0.100	1.78470	26.08	11	-2.9979	0.505*		
2	1.0347	0.009			12	0.5052	0.177	1.71300	53.83
3	1.0682	0.364	1.71300	53.83	13	-5.8668	0.102		
4	-55.1950	***1			14	-0.9660	0.186	1.78470	26.08
5	12.9360	0.070	1.58144	40.86	15	0.4479	0.193		
6	0.6295	0.155			16	-2.7248	0.102	1.71300	53.83
7	-1.1272	0.081	1.51821	65.05	17	-0.7910	0.066		
8	0.8742	0.130	1.78470	26.08	18	0.6437	0.162	1.71300	53.83
9	6.0136	***2			19	-13.8970			
10	2.9979	0.081	1.62014	63.52					

0.505\* = 0.300 + 0.205

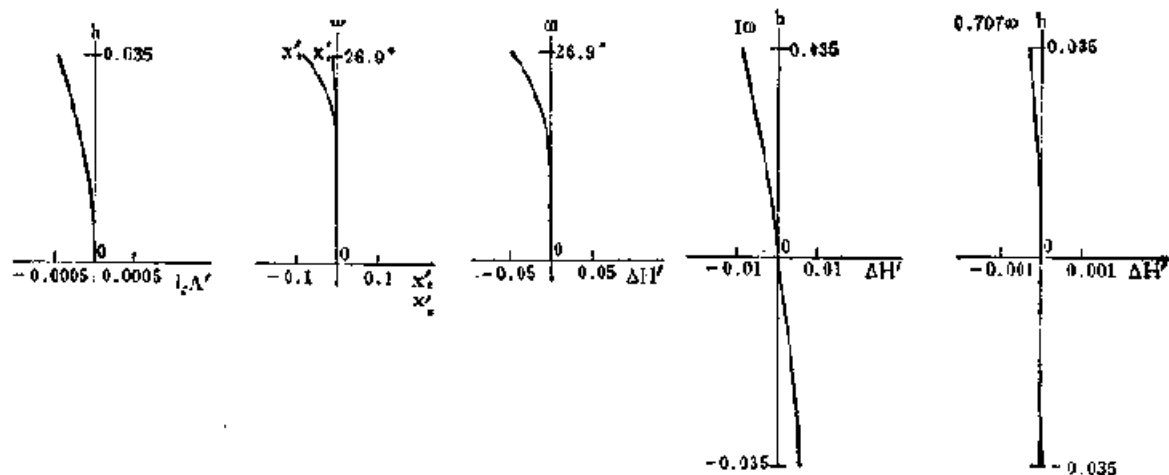
04-03-001-1

超星浏览器提醒您：  
使用本复制品  
请尊重知识产权！

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0000028	-0.0000106	0.0000228	-0.0000455	-0.0019261	0.325	-13%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_e$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.00046	-0.0442	-0.0770	-0.0050	-0.0720	-0.002060	-0.000990
70	-0.00024	-0.0088	-0.0020	0.0003	-0.0023	-0.000091	-0.000046

E.F.L = 0.641 ( $\approx 26.9^\circ$ )

\*\*\*1=0.035, \*\*\*2=0.816

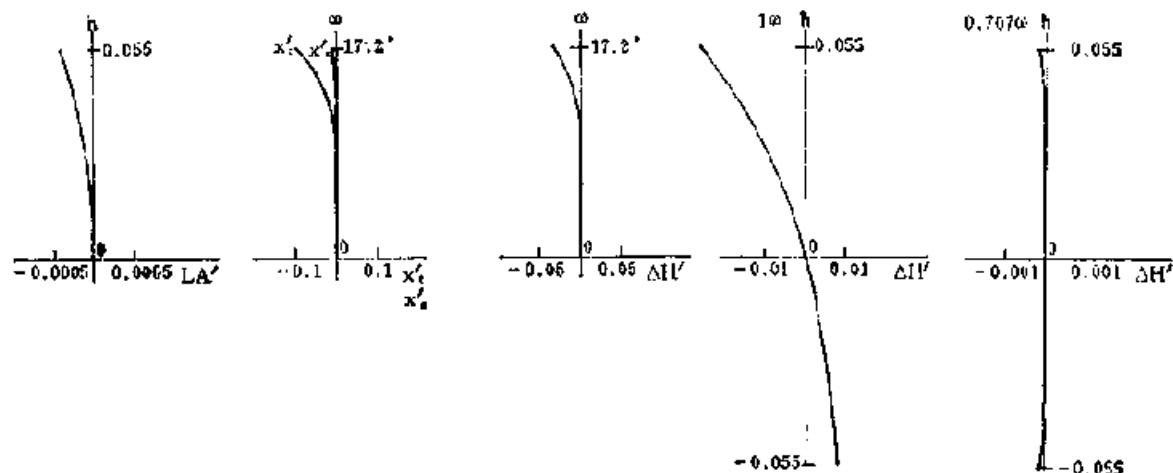


04-03-001-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0000026	-0.0000022	0.0000383	-0.0000479	0.0003027	0.309	-9%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_e$	$x'_s$	$x'_i - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.00012	-0.0280	-0.0951	-0.00430	-0.0908	-0.009090	-0.004130
70	-0.00023	0.0001	0.0004	0.00005	-0.0001	-0.000134	-0.000067

E.F.L = 1.000 ( $\approx 17.2^\circ$ )

\*\*\*1=0.501, \*\*\*2=0.516



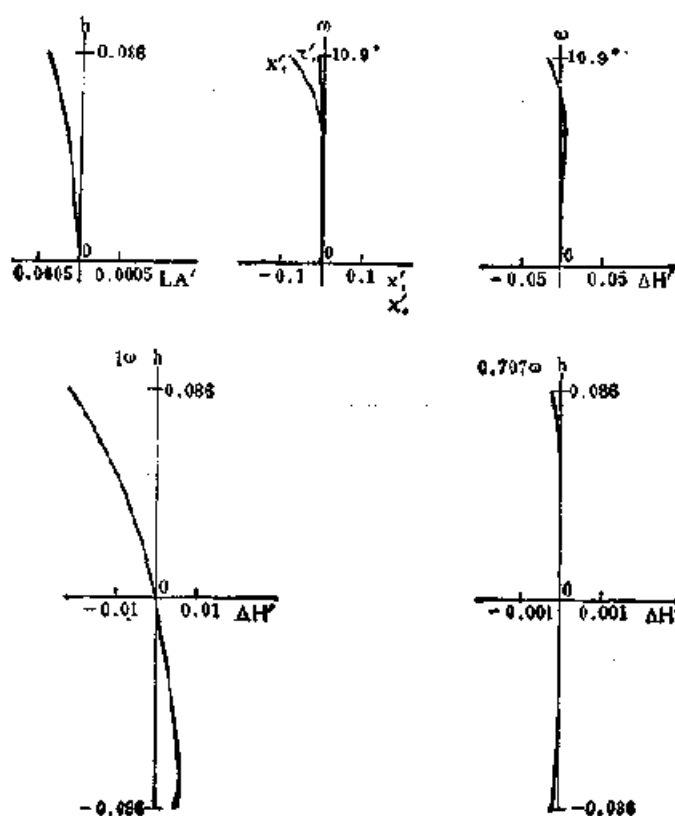
超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！

04-03-001-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1%)
	- 0.0000027	0.0000056	- 0.0000142	- 0.0000478	0.0014143	0.800	- 6 %
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_i$	$x'_e$	$x'_i - x'_e$	$K'_{T1}$	$K'_{T0.7}$
100	- 0.00043	- 0.0184	- 0.0854	- 0.0026	- 0.6828	- 0.008300	- 0.004020
70	- 0.00022	0.0031	- 0.0010	- 0.0009	- 0.0001	- 0.000163	- 0.000078

E. F. L = 1.560 ( $\pm 10.9^\circ$ )

\*\*\*1=0.800, \*\*\*2=0.019

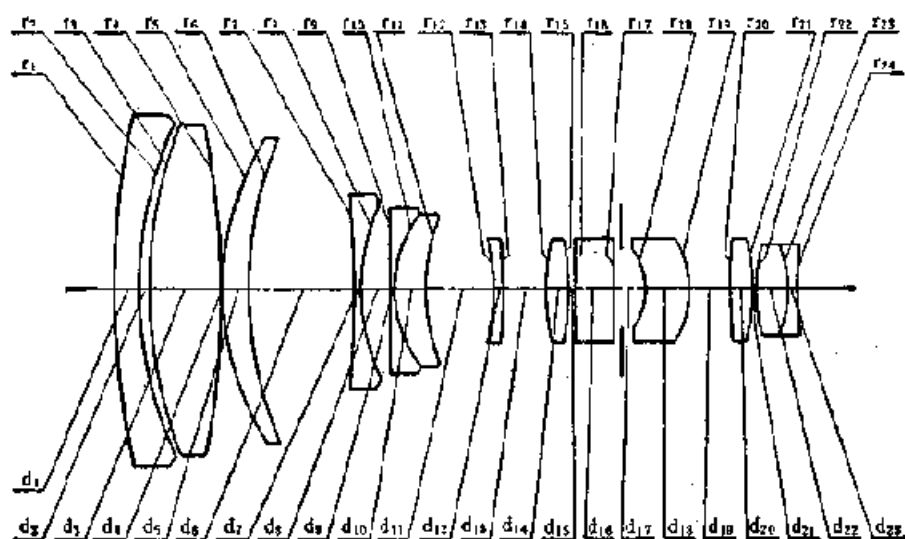


编号: 04-03-002

# 变 焦 距 物 镜

E.F.L=9.3~35.4 B.F.L=15.25 FNo.=1.9 F.A.  $\pm 21.6^\circ \sim \pm 5.6^\circ$

超星网提醒您：  
使用本复制品  
请尊重相关知识产权！



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	112.2000	3.00	1.79180	25.90	13	- 51.5820	*** 3		
2	46.9960	1.20			14	28.7990	2.50	1.69400	54.60
3	50.1190	8.70	1.62287	60.06	15	- 35.9950	0.70		
4	-110.6000	0.05			16	$\infty$	5.00	1.57832	41.04
5	33.9820	3.50	1.62287	60.06	17	$\infty$	4.00*		
6	47.6570	*** 1			18	- 8.2937	5.30	1.71618	27.97
7	-139.2400	1.00	1.69400	54.60	19	- 11.9710	5.10		
8	24.5820	3.50			20	87.8520	2.80	1.69400	54.60
9	930.5700	0.80	1.52010	35.01	21	- 24.0570	0.05		
10	14.8550	3.50	1.79180	25.90	22	20.9830	4.00	1.69850	53.18
11	24.4080	*** 2			23	- 14.1250	1.00	1.81252	25.28
12	- 22.8760	1.30	1.66151	50.60	24	45.9730			

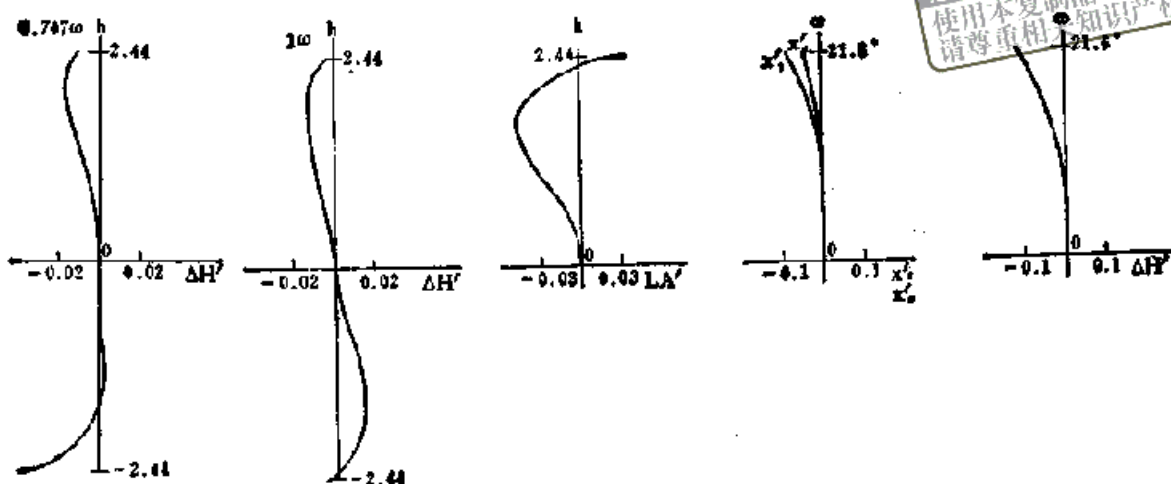
4.00\* = 1.50 + 2.50

04-03-002-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02495	-0.00163	0.00217	-0.00578	-0.00571	3.7	-3.1%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.0357	-0.1147	-0.0864	-0.0406	-0.0458	-0.00453	-0.00007
70	-0.0476	-0.0452	-0.0214	-0.0186	-0.0028	-0.02476	-0.00814

E. F. L = 9.3 ( $\pm 21.6^\circ$ )

\*\*\*1=2.500; \*\*\*2=30.971; \*\*\*3=1.724

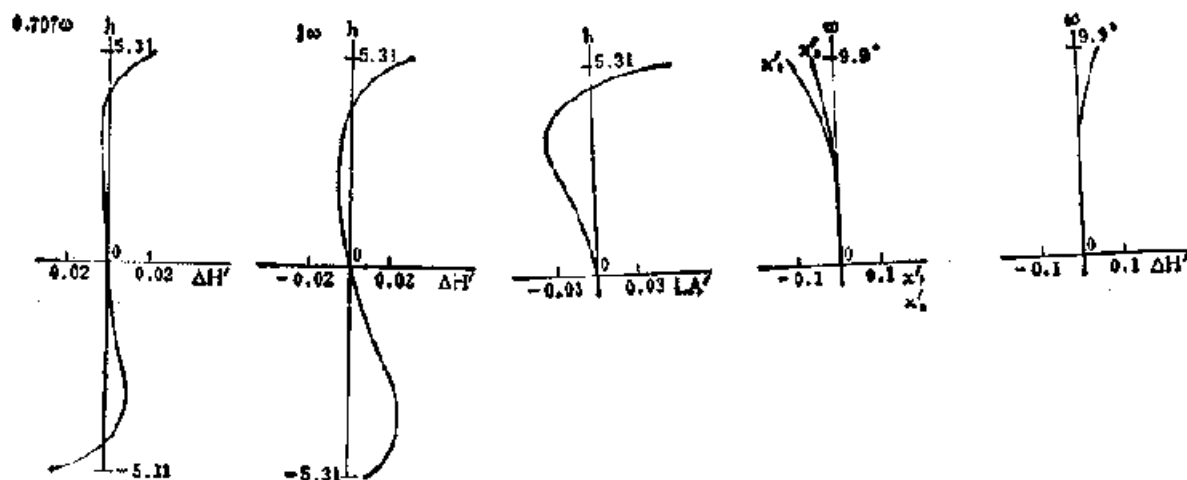


04-03-002-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02145	0.00742	-0.00224	-0.00602	0.01174	3.5	1.6%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.0633	0.0572	-0.1135	-0.0471	-0.0664	0.01790	0.01118
70	-0.0335	0.0120	-0.0321	-0.0219	-0.0102	-0.00240	0.00314

E. F. L = 20.2 ( $\pm 1.9^\circ$ )

\*\*\*1=21.650; \*\*\*2=8.223; \*\*\*3=5.322





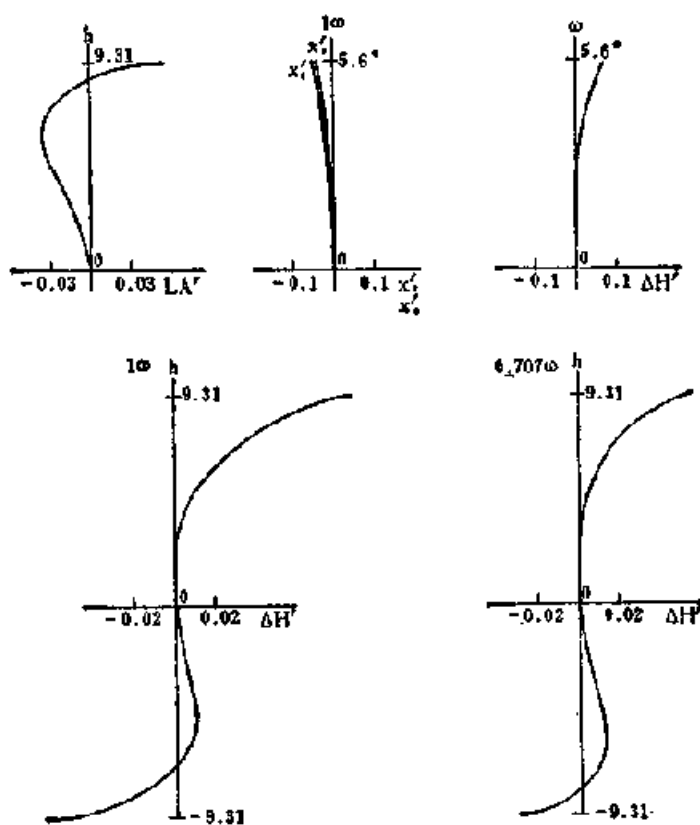
04-03-002-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02189	0.02183	-0.00273	-0.00608	0.02969	3.5	1.9%
b 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.0531	0.0694	-0.0491	-0.0410	-0.0081	0.010800	0.014060
70	-0.0357	0.0217	-0.0277	-0.0228	-0.0049	0.012270	0.012808

E. F. L = 35.4 ( $\pm 5.6^\circ$ )

\*\*\*1=31.540, \*\*\*2=1.910, \*\*\*3=1.785

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！

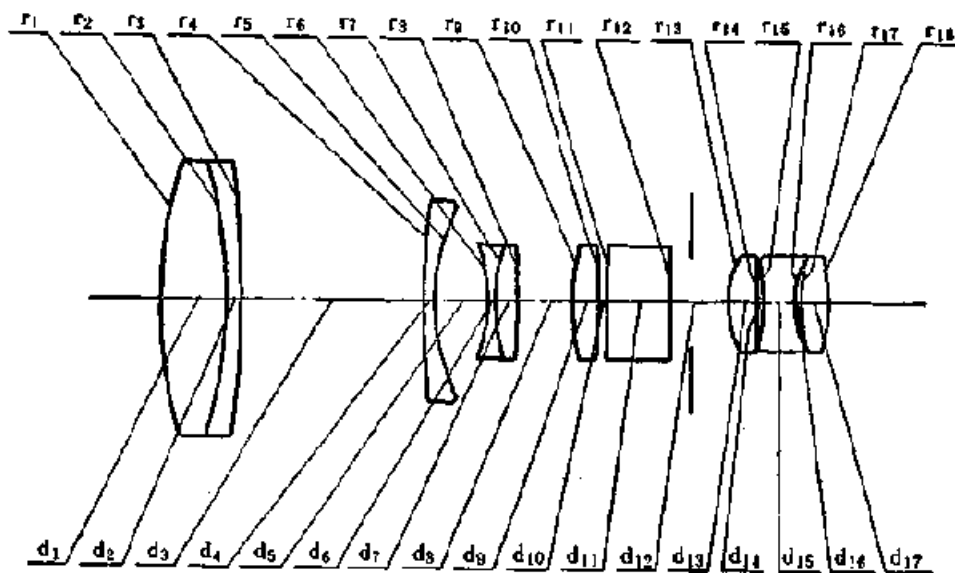


编号: 04-03-003

# 变 焦 距 摄 影 物 镜

E.F.L = 12.84 ~ 20.08 B.F.L = 9.58 FNo. = 1.9 F.A. =  $\pm 16' \sim \pm 6.9'$

星图提醒您:  
使用本复制品  
请尊重相关知识产权!



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	48.3490	6.0	1.62289	58.06	10	- 64.9580	0.7		
2	- 41.8680	1.2	1.78470	28.08	11	$\infty$	6.0	1.51680	64.17
3	- 149.6300	* * * 1			12	$\infty$	5.2*		
4	127.7210	1.0	1.62041	60.33	13	8.9123	2.7	1.71300	53.83
5	13.1710	* * * 2			14	- 95.0200	0.4		
6	- 14.8530	0.8	1.51742	52.20	15	- 20.2410	3.2	1.78470	26.08
7	18.1710	2.0	1.71738	29.51	16	8.5340	0.6		
8	- 292.2700	* * * 3			17	18.1710	2.4	1.74400	44.77
9	20.9820	2.3	1.62041	60.33	18	- 18.1710			

5.2\* = 2.0 + 3.2

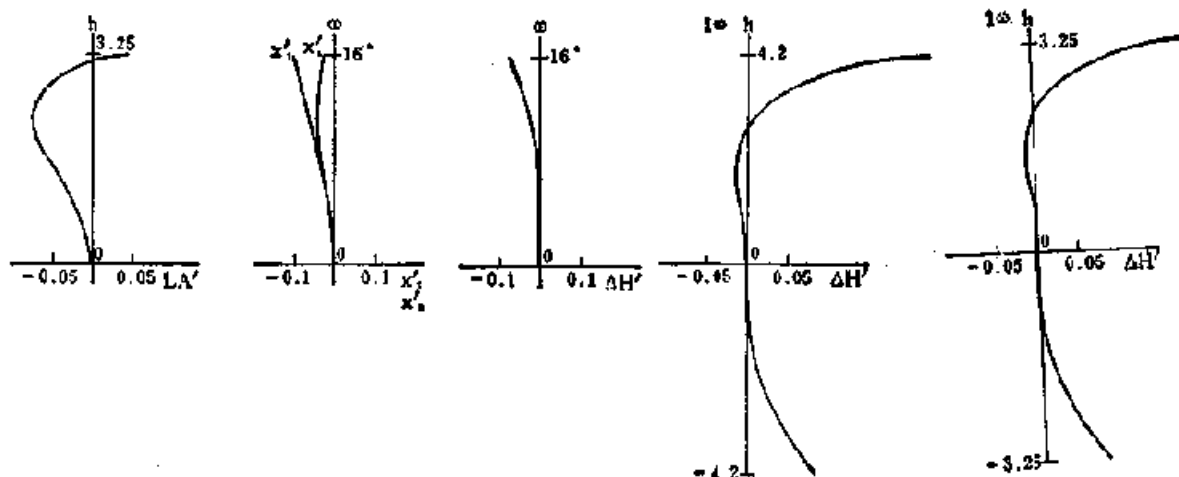
04-03-003-1

超星阅读器提醒您：  
禁止非法复制、传播、修改、  
盗用、重相、删减、篡改、

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1\omega)
	-0.03939	-0.00435	0.00122	-0.01877	-0.03310	3.5	-1.9%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.0456	-0.0701	-0.0235	-0.1022	0.0787	0.13753	0.01633
70	-0.0757	-0.0240	-0.0386	-0.0591	0.0205	0.07779	0.00839

E. F. L = 12.34 ( $\pm 16^\circ$ )

\*\*\*1 = 1.70; \*\*\*2 = 18.14; \*\*\*3 = 8.36

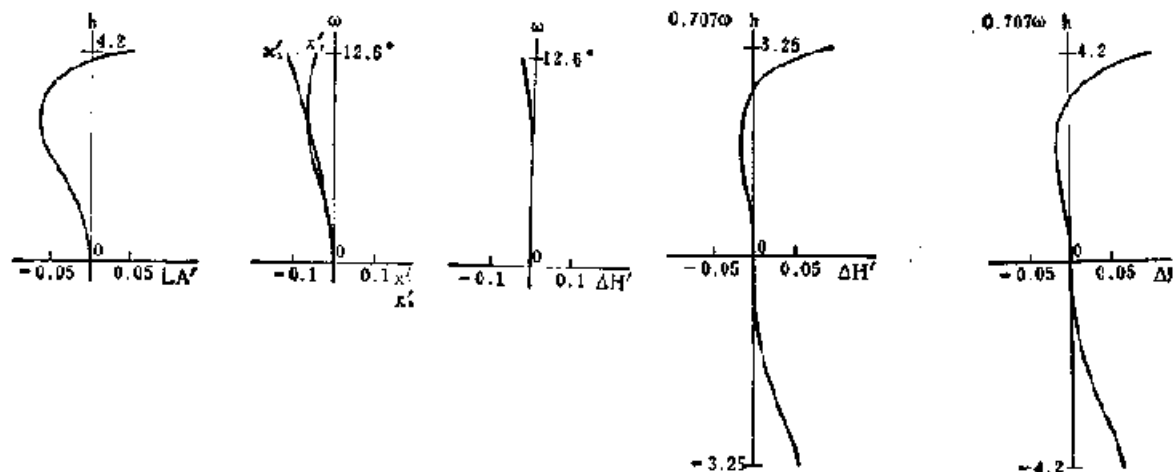


04-03-003-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1\omega)
	-0.03831	-0.00249	-0.00197	-0.01955	-0.01093	3.6	-0.8%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.0542	-0.0309	-0.0441	-0.1210	0.0769	0.15447	0.01834
70	-0.0879	-0.0094	-0.0048	-0.0715	0.0667	0.08555	0.01068

E. F. L = 16.03 ( $\pm 12.6^\circ$ )

\*\*\*1 = 9.75; \*\*\*2 = 10.86; \*\*\*3 = 7.59



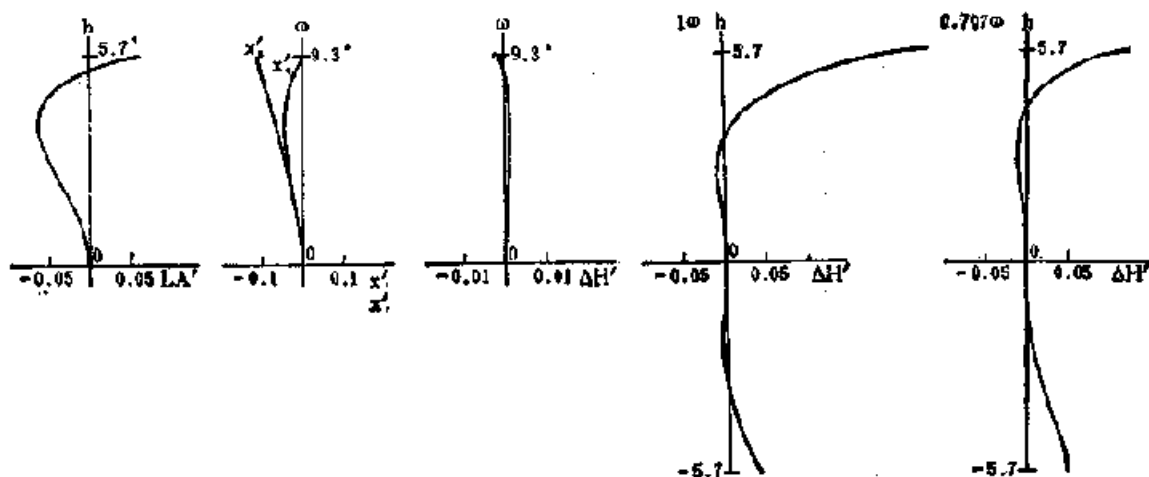
04-03-003-3

超星浏览器提醒您：  
使用本浏览器时，请遵守相关法律法规。

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.03636	-0.00225	-0.00152	-0.01966	0.00411	3.5	-0.04%
b 或 $\omega$ %	LA'	$\Delta H'$	$x'_e$	$x'_i$	$x'_i - x'_e$	$K'_{T1}$	$K'_{T0.7}$
100	0.0664	-0.0014	0.0121	-0.1079	0.1200	0.14640	0.01037
70	-0.0646	0.0011	-0.0474	-0.0664	0.0190	0.08663	0.00973

E. F. L = 21.55 ( $\pm 9.3^\circ$ )

\*\*\*1 = 17.80, \*\*\*2 = 5.10, \*\*\*3 = 5.30

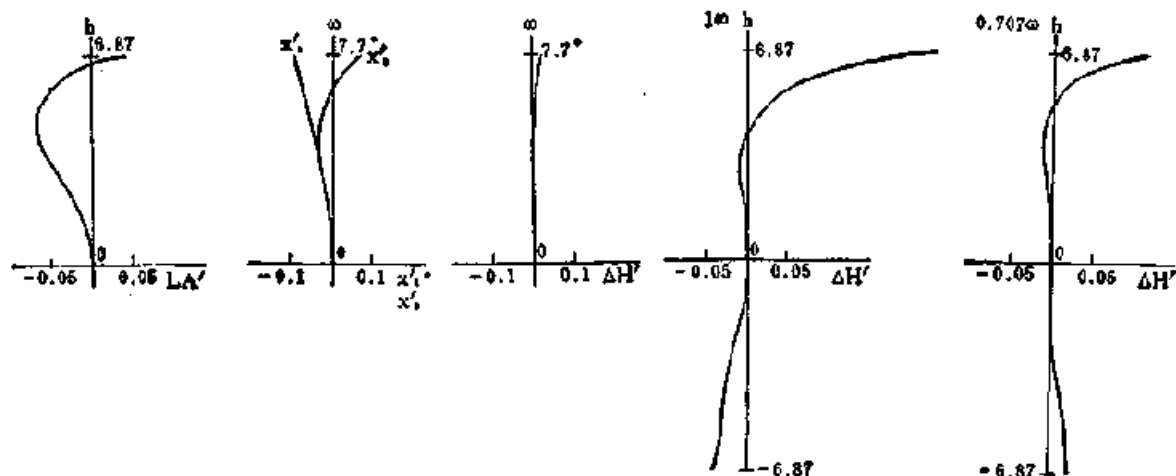


04-03-003-4

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.036170	-0.003650	0.000002	-0.019600	0.014525	3.5	0.57%
b 或 $\omega$ %	LA'	$\Delta H'$	$x'_e$	$x'_i$	$x'_i - x'_e$	$K'_{T1}$	$K'_{T0.7}$
100	0.0465	0.0204	0.0687	-0.0955	0.1642	0.09755	-0.00697
70	-0.0693	0.0086	-0.0287	-0.0610	0.0343	0.06740	0.00266

E. F. L = 26.14 ( $\pm 7.7^\circ$ )

\*\*\*1 = 22.40, \*\*\*2 = 3.03, \*\*\*3 = 2.77



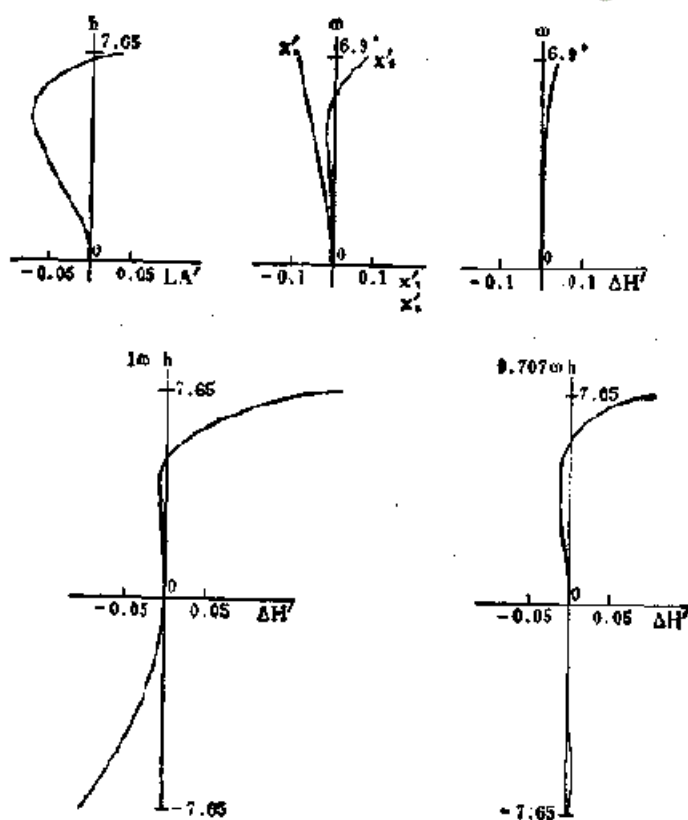
04-03-003-5

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	- 0.03737	- 0.00538	0.00041	- 0.01951	0.02101	3.5	0.98%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x_2 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.0335	0.0345	0.0819	- 0.0929	0.1748	0.05797	- 0.02156
70	- 0.0747	0.0132	- 0.0218	- 0.0596	0.0377	0.05006	- 0.00385

E. F. L = 29.08 ( $\pm 6.9$ )

\*\*\*1=24.70; \*\*\*2=2.50; \*\*\*3=1.00

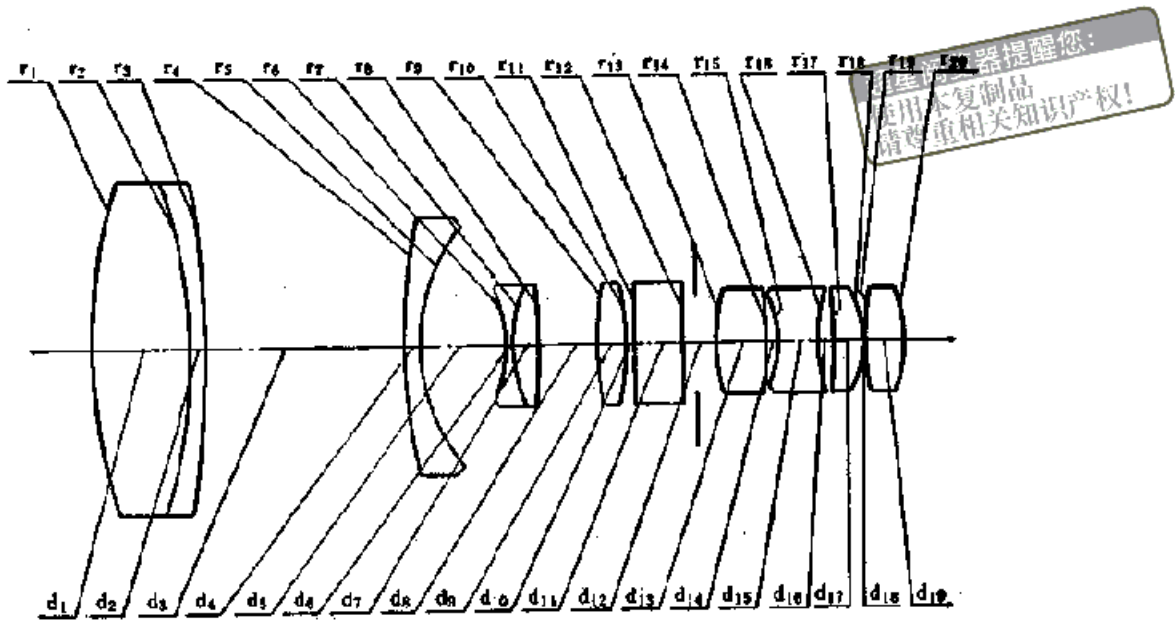
超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



编号: 04-03-004

## 变 焦 距 摄 影 物 镜

E.F.L=10.25~34.30 B.F.L=13.28 FNo.=1.6 F.A.= $\pm 19.5^{\circ} \sim \pm 5.7^{\circ}$



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	54.640	10.0	1.62280	56.90	11	$\infty$	5.0	1.51680	64.17
2	-47.655	1.6	1.78470	26.08	12	$\infty$	3.3*		
3	-170.342	*** 1			13	18.564	5.0	1.62041	60.33
4	76.626	1.2	1.71300	53.83	14	-62.194	1.5		
5	19.112	*** 2			15	-10.517	4.0	1.80518	25.43
6	-15.849	1.0	1.71300	53.83	16	-16.659	1.5		
7	14.642	2.5	1.78470	26.08	17	-365.150	3.0	1.62041	60.33
8	-71.274	*** 3			18	-12.959	0.1		
9	33.254	3.0	1.62041	60.33	19	24.758	4.0	1.62041	60.33
10	-26.606	0.8			20	-15.178			

3.3\* = 1.3 + 2.0

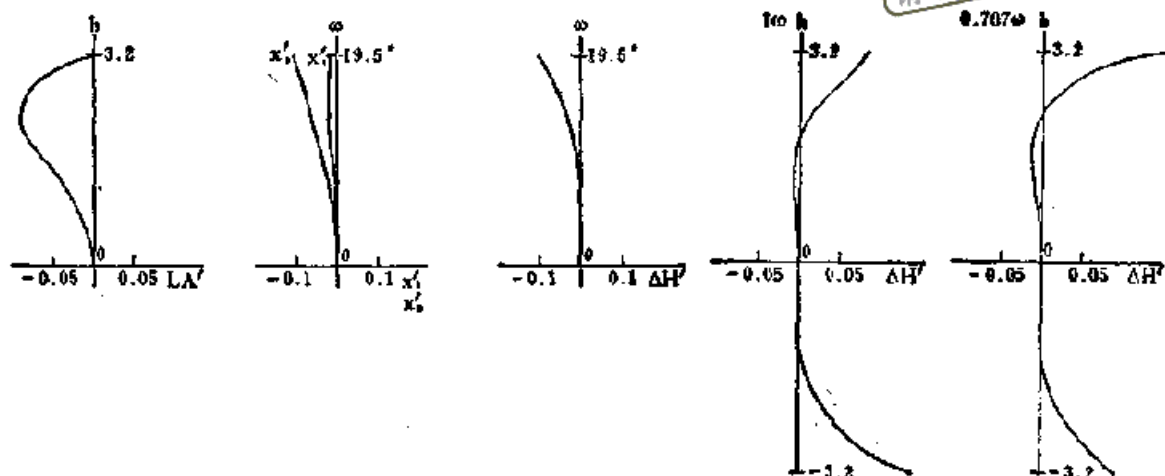
04-03-004-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.06064	-0.00577	0.01256	-0.02895	-0.05659	3.6	-2.7%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x_s$	$x'_t - x'_s$	$K'_{T1}$	$K_{T0.7}$
100	0.0142	-0.0995	-0.0116	-0.1079	0.0963	0.11140	0.02165
70	-0.0916	-0.0340	-0.0191	-0.0586	0.0395	0.12688	0.00952

E. F. L = 10.25 ( $\pm 19.5^\circ$ )

\*\*\*1 = 0.800, \*\*\*2 = 29.900, \*\*\*3 = 6.524

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！

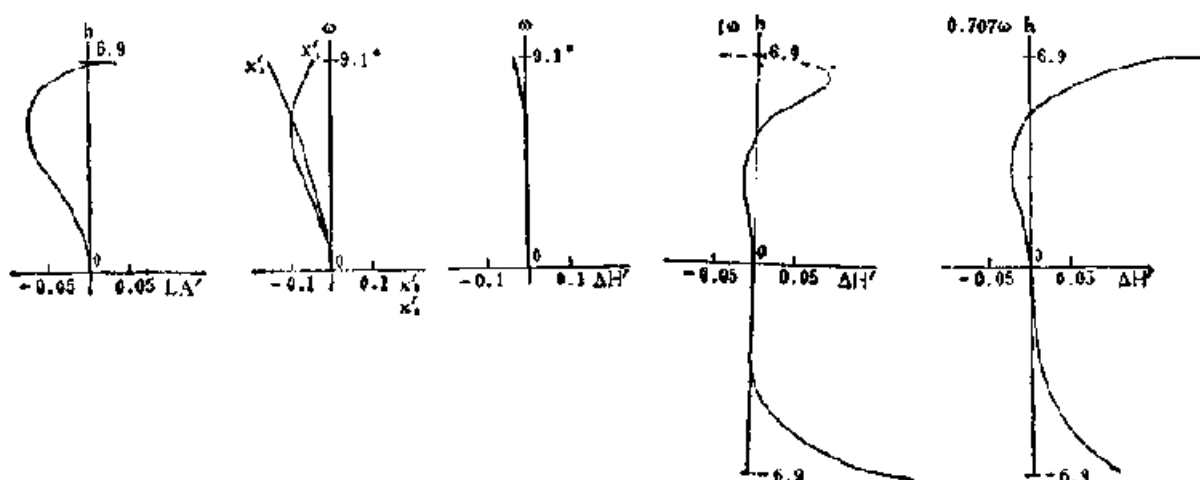


04-03-004-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.05362	-0.00975	-0.00728	-0.03138	0.00639	3.5	-0.79%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x_s$	$x'_t - x'_s$	$K'_{T1}$	$K_{T0.7}$
100	0.0408	-0.0281	-0.0402	-0.1556	0.1153	-0.42407	0.02703
70	-0.0751	-0.0029	-0.0981	-0.0931	-0.0050	0.17327	0.01658

E. F. L = 22.07 ( $\pm 9.1^\circ$ )

\*\*\*1 = 24.411, \*\*\*2 = 8.679, \*\*\*3 = 6.140



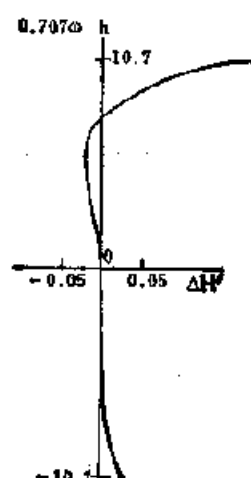
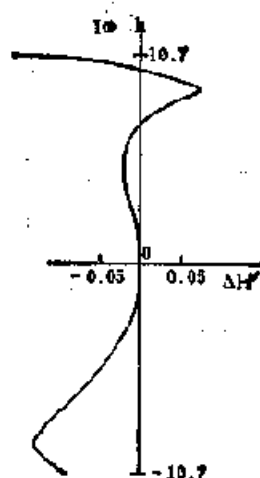
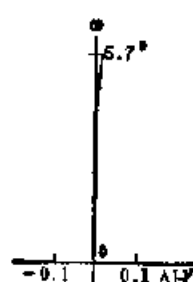
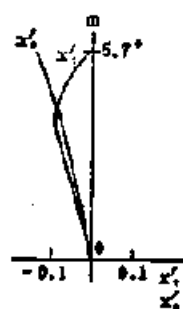
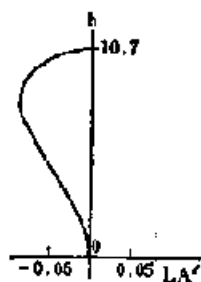
04-03-004-3

超星浏览器提醒您:

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HD	QP(1 $\omega$ )
	-0.05572	-0.01061	-0.00223	-0.03001	0.02187	3.4	0.34%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x_o$	$x'_t - x_o$	$K_{T1}$	$K_{T0.7}$
100	-0.0073	0.0117	-0.0122	-0.1482	0.1360	-0.12645	-0.04408
70	-0.0883	0.0085	-0.0386	-0.0892	0.0006	0.11522	-0.00254

E. F. L = 34.30 ( $\pm 5.7^\circ$ )

\*\*\*1=34.531, \*\*\*2=3.500, \*\*\*3=1.200



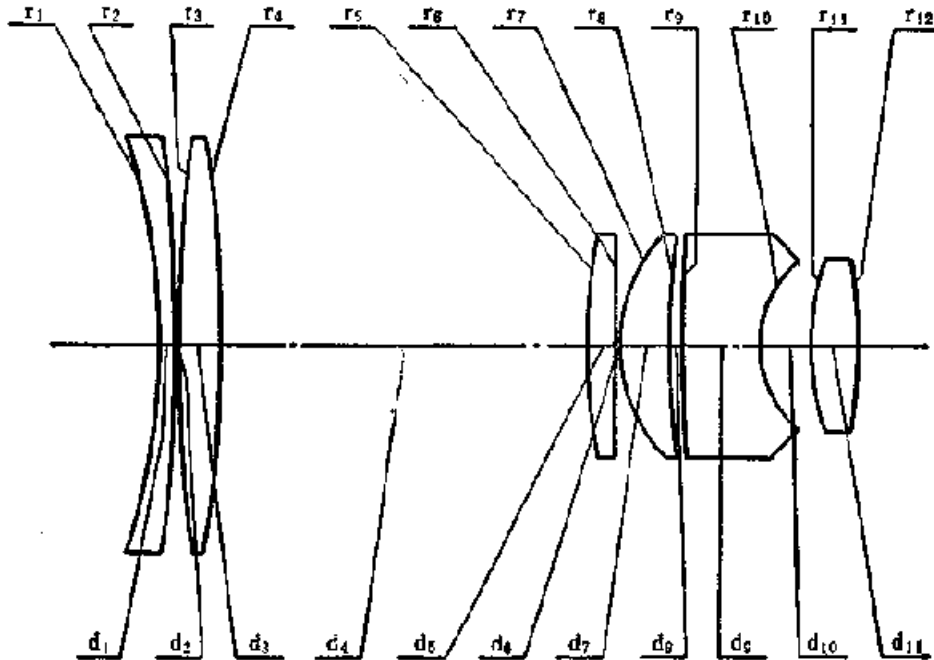


编号: 04-03-005

# 具有可动正组的变焦距物镜

E.F.L=15.65~24.70 B.F.L=7.74 FNo.=1.4 F.A.= $\pm 11^{\circ} \sim \pm 6.9^{\circ}$

定阅器提醒您:  
使用本复制品  
请尊重知识产权!



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	-39.6000	0.80	1.5111	63.4	7	9.8186	3.30	1.62041	60.3
2	-111.7000	***1			8	52.0000	0.80		
3	84.0000	2.70	1.62041	60.3	9	400.0000	4.80	1.7818	27.0
4	-84.0000	***2			10	6.8778	3.16*		
5	35.0000	1.80	1.62041	60.3	11	14.9628	2.70	1.6910	54.8
6	$\infty$	0.15			12	-32.9126			

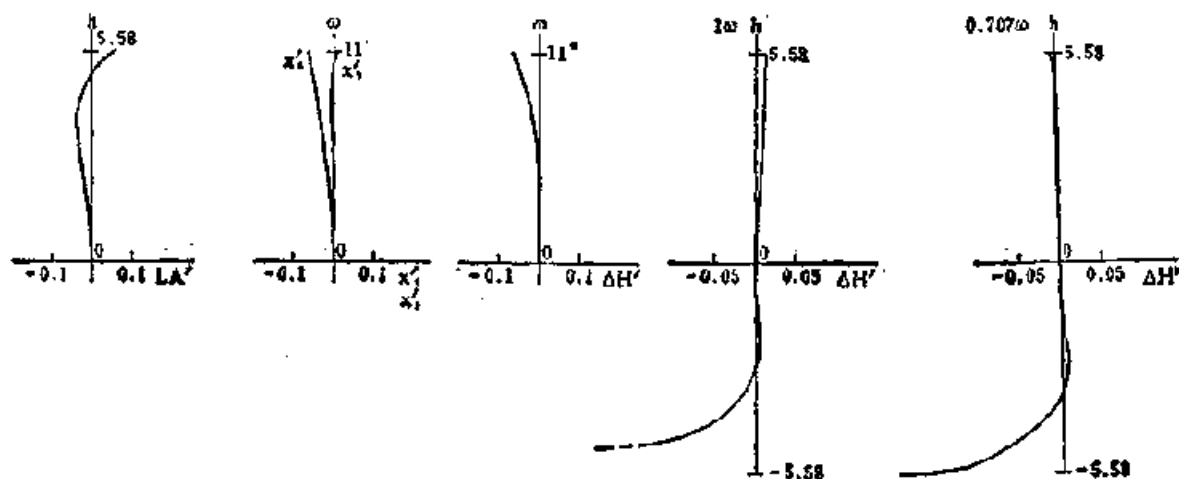
3.16\* = 2.16 + 1.00

04-03-005-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0335	0.0072	0.0087	-0.0275	-0.0362	3.04	-1.95%
h或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K'_{T0.7}$
100	0.0568	-0.0594	0.0099	-0.0628	0.0727	-0.2301	-0.0114
70	-0.0299	-0.0196	-0.0009	-0.0353	0.0344	-0.0897	-0.0042

E. F. L = 15.66 ( $\pm 11^\circ$ )

\*\*\*1 = 31.70; \*\*\*2 = 0.30

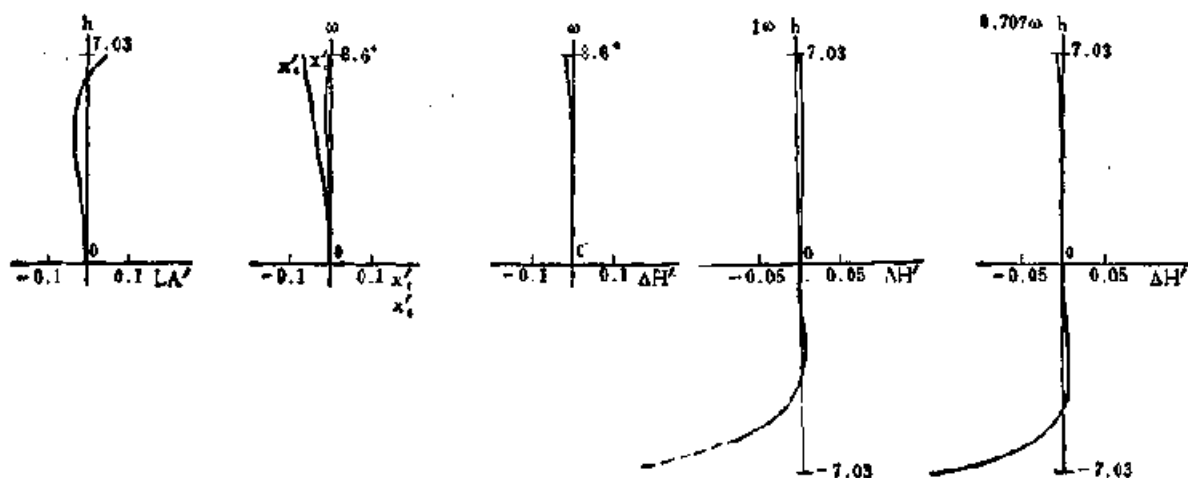


04-03-005-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0353	0.0087	0.0070	-0.0268	-0.0048	2.97	-0.44%
h或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K'_{T0.7}$
100	0.0448	-0.0130	-0.0003	-0.0868	0.0865	-0.1727	-0.0056
70	-0.0339	-0.0035	-0.0064	-0.0366	0.0302	-0.0427	-0.0018

E. F. L = 19.68 ( $\pm 8.6^\circ$ )

\*\*\*1 = 16.00; \*\*\*2 = 16.00

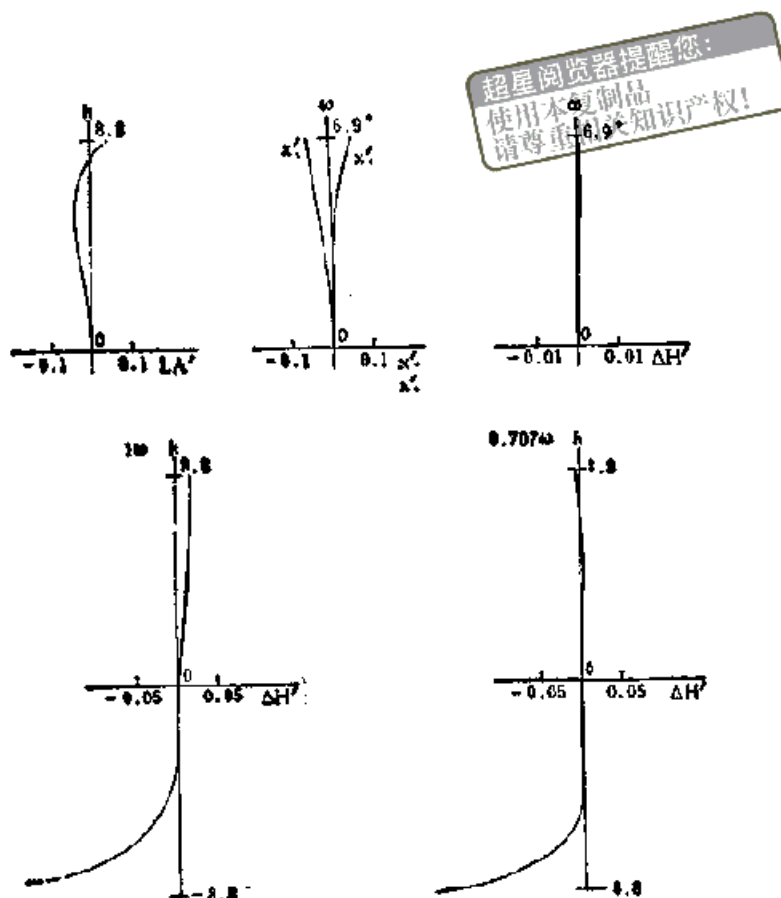


04-03-005-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(10)
	-0.0358	0.0076	0.0107	-0.0270	0.0032	2.98	-0.001%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K\tau_1$	$K\tau_{0.7}$
100	0.0483	-0.00004	0.0535	-0.0515	0.1050	-0.1889	-0.0097
70	-0.0356	0.00130	0.0185	-0.0292	0.0477	-0.0898	-0.0042

E. F. L = 24.7 ( $\pm 6.9$ )

\*\*\*1=0.3, \*\*\*2=31.7

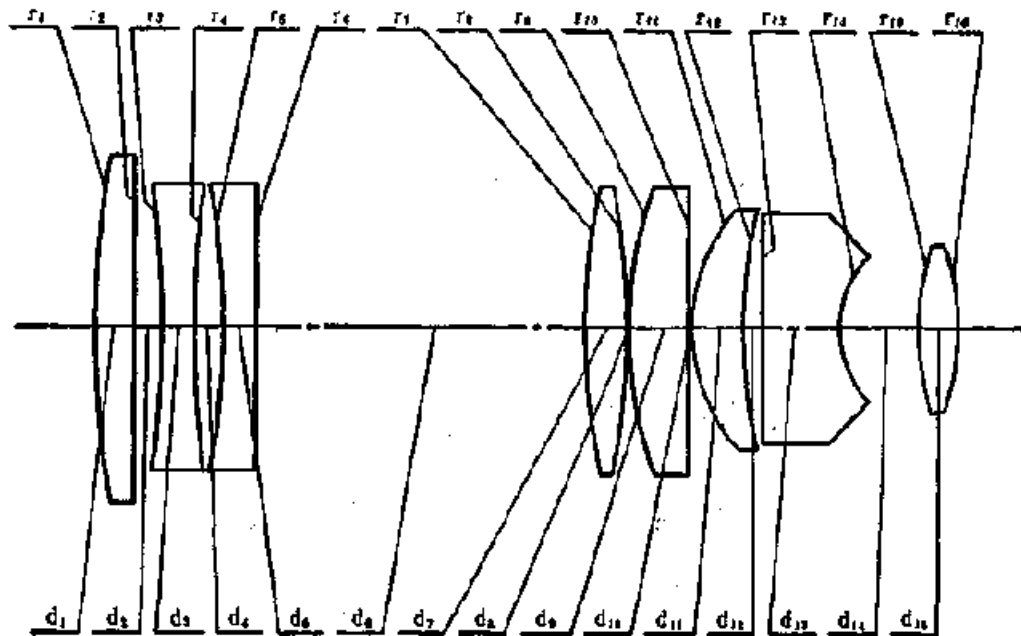


编号: 04-03-006

# 八片式变焦距物镜

E.F.L=0.751~1.253 B.F.L= FNo. =1.1 F.A.  $- \pm 11.5^{\circ} \sim \pm 6.8^{\circ}$

超浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!



序号	r	d	nd	vd	序号	r	d	nd	vd
1	3.10878	0.12500	1.56873	63.12	9	1.41669	0.19000	1.62041	60.29
2	$\infty$	*** 1			10	$\infty$	0.00500		
3	- 3.54321	0.10947	1.51680	64.20	11	0.56300	0.16880	1.62041	60.29
4	3.54321	0.07900			12	2.02380	0.04621		
5	- 2.37372	0.10947	1.51680	64.20	13	$\infty$	0.25475	1.78470	26.10
6	$\infty$	*** 2			14	0.33093	0.25194*		
7	2.25261	0.13673	1.56873	63.12	15	0.82575	0.13000	1.75496	53.23
8	- 2.25261	0.00800			16	- 0.82575			

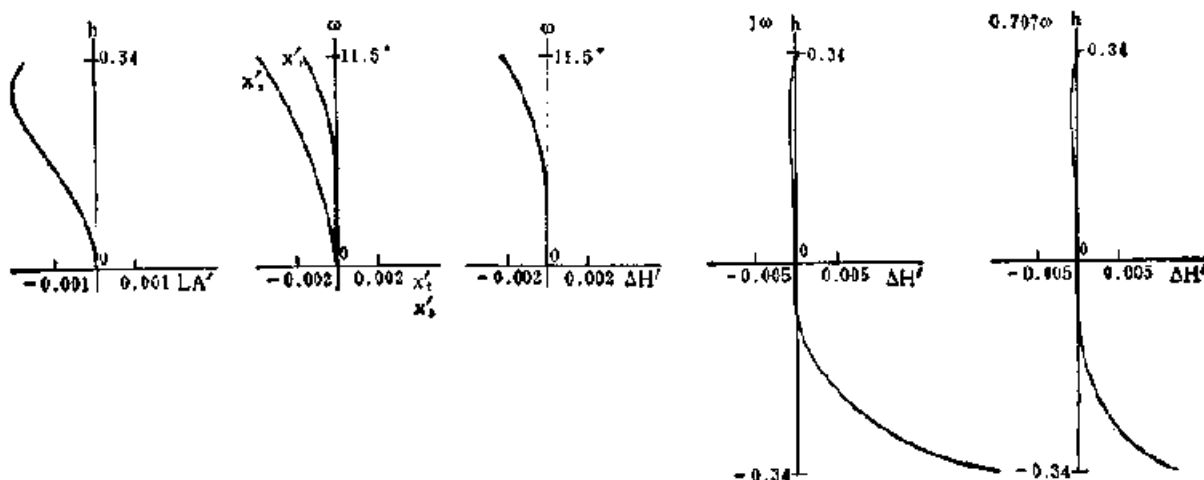
0.25194\* = 0.10000 + 0.15194

04-03-006-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	- 0.00214	- 0.00024	0.00088	- 0.00263	0.00177	0.15	- 1.419%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	- 0.00169	- 0.00214	- 0.00153	- 0.00379	0.00226	0.01277	0.00327
70	- 0.00177	- 0.00073	- 0.00023	- 0.00201	0.00178	0.00609	0.00107

E. F. L = 0.751 ( $\pm 11.5^\circ$ )    B. F. L = 0.292

\*\*\*1 = 0.08749; \*\*\*2 = 1.08023

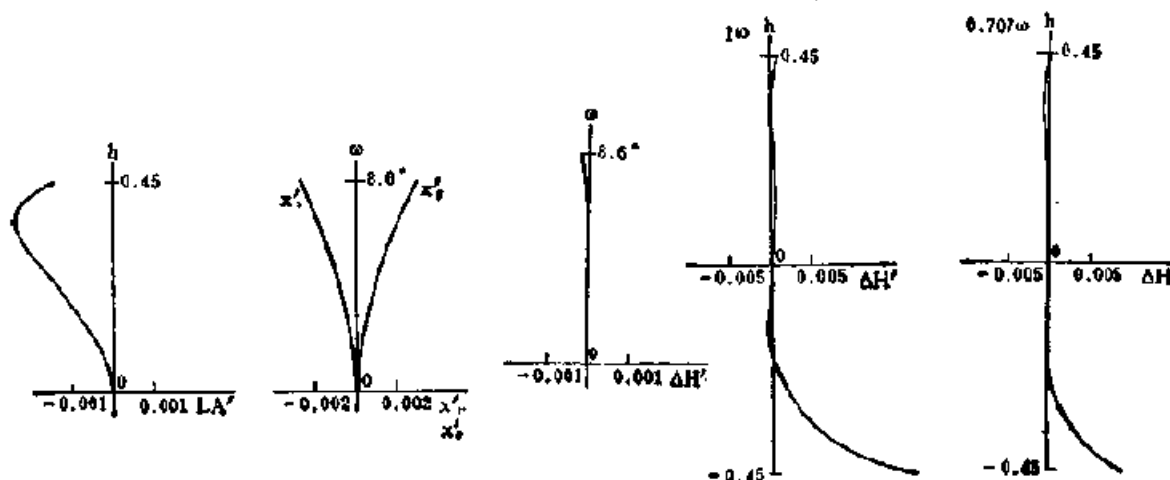


04-03-006-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	- 0.00259	- 0.00044	0.00138	- 0.00261	0.00001	0.15	- 0.09%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	- 0.00151	- 0.00014	0.00291	- 0.00256	0.00547	0.00943	0.00181
70	- 0.00210	- 0.00002	0.00175	- 0.00141	0.00316	0.00467	0.00050

E. F. L = 1.000 ( $\pm 8.6^\circ$ )    B. F. L = 0.313

\*\*\*1 = 0.03768; \*\*\*2 = 0.48004

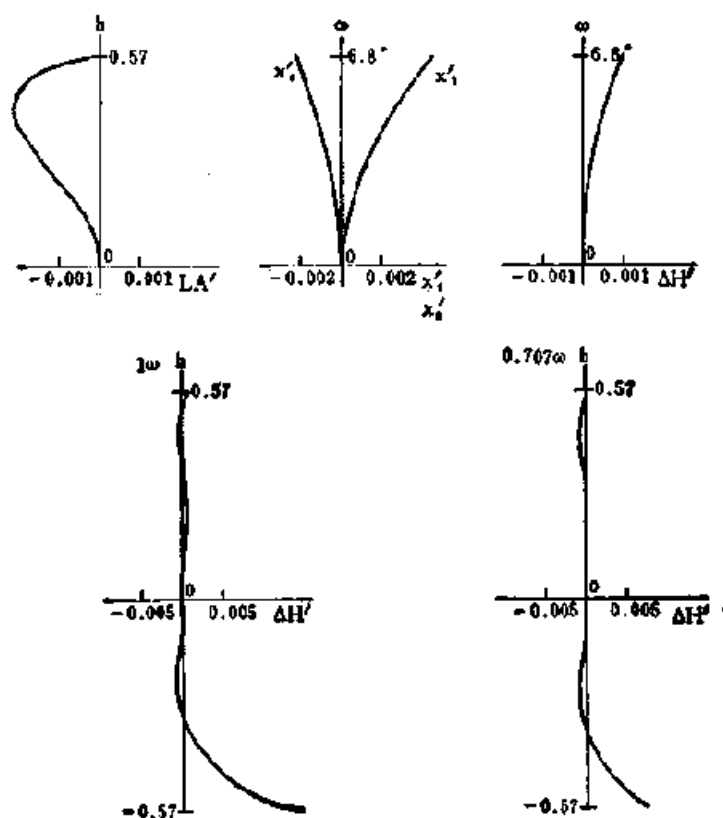


04-03-006-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HT	QP(100)
	- 0.00275	- 0.00069	0.00161	- 0.00268	0.00103	0.15	0.68%
h 或 $\omega$ %	LA'	AH'	$x'_1$	$x'_2$	$x'_1 - x'_2$	K <sub>T1</sub>	K <sub>T2</sub>
100	- 0.00017	0.00102	0.00454	- 0.00215	0.00670	0.00787	0.00096
70	- 0.00211	0.00039	0.00244	- 0.00122	0.00366	0.00391	0.00009

E. F. L. = 1.253 ( $\pm 6.8^\circ$ )    B. F. L. = 0.324

\*\*\*1=1.12772, \*\*\*2=0.04000

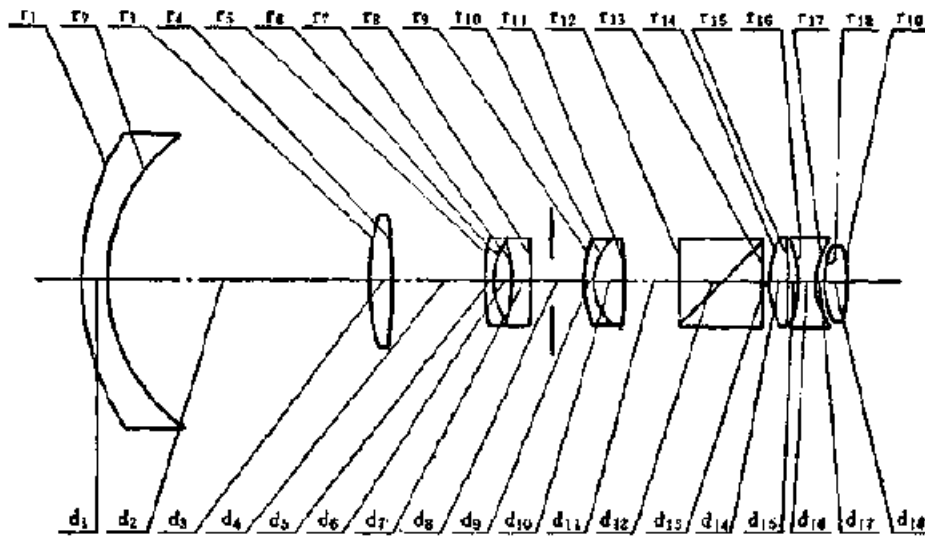


编号: 04-03-007

# 变 焦 距 镜 头

E.F.L=8.95~22.42 B.F.L=7.1 FNo.=2.7 F.A.= $\pm 20^{\circ} \sim \pm 8.9^{\circ}$

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



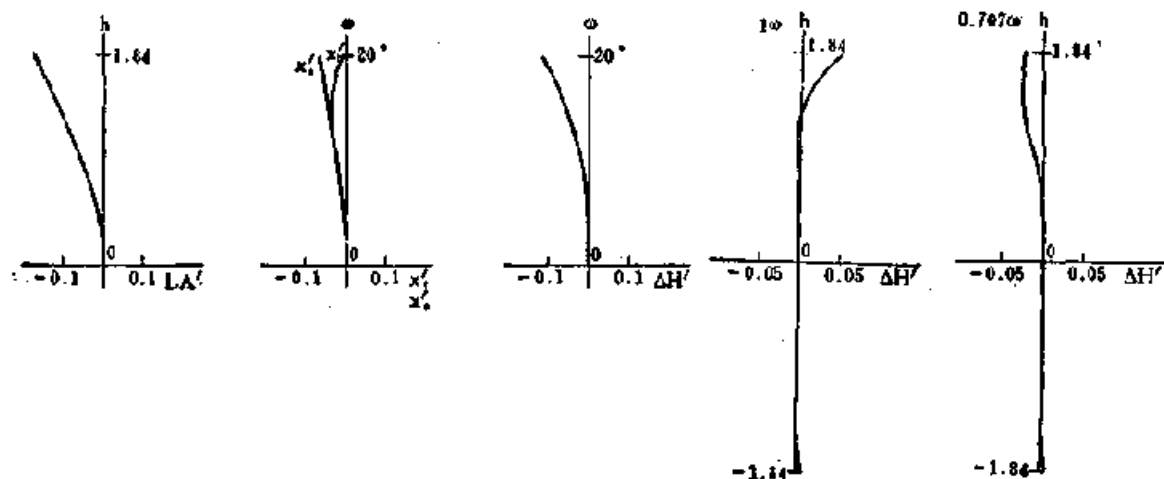
序号	r	d	n	v	序号	r	d	n	v
1	35.60	3.48	1.50	67.0	11	-62.90	***3		
2	24.10	26.02			12	$\infty$	11.23	1.49	57.4
3	32.60	2.73	1.64	60.1	13	$\infty$	0.85		
4	-103.60	***1			14	13.20	2.58	1.69	56.2
5	51.80	0.90	1.50	67.0	15	-267.60	0.93		
6	9.27	2.17			16	-19.30	2.73	1.62	36.6
7	-19.40	2.92	1.50	67.0	17	9.56	0.63		
8	-54.80	***2*			18	12.90	2.96	1.61	58.8
9	16.40	0.97	1.72	29.3	19	-33.40			
10	7.92	4.37	1.66	50.8					

04-03-007-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.0135	-0.0063	0.0008	-0.0052	-0.0419	3.65	3.1%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.170	-0.111	-0.006	-0.068	0.062	0.0250	0.0002
70	-0.094	-0.042	-0.038	-0.042	0.004	-0.0079	-0.0106

E. F. L = 10.00 ( $\pm 20^\circ$ )

\*\*\*1=3.06; \*\*\*2=24.94; \*\*\*3=2.02; \*\*\*2\*=24.94=17.74+7.20

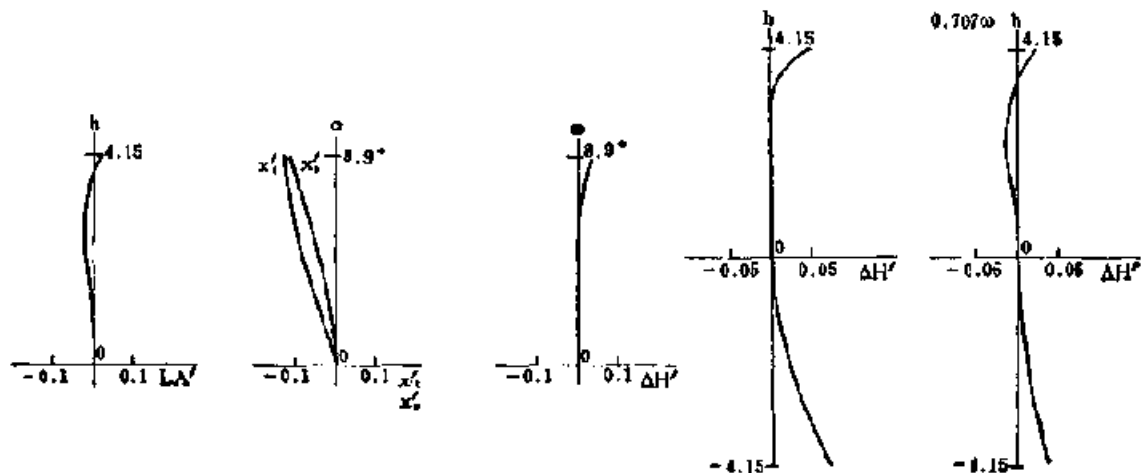


04-03-007-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.0053	0.0001	-0.0036	-0.0054	0.0091	3.55	1.06%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.0228	0.0377	-0.124	-0.108	-0.016	0.0651	0.0213
70	-0.0217	0.0106	-0.096	-0.062	-0.034	0.0303	0.0082

E. F. L = 22.60 ( $\pm 8.9^\circ$ )

\*\*\*1=13.28; \*\*\*2=9.05; \*\*\*3=7.67; \*\*\*2\*=9.05=7.52+1.53

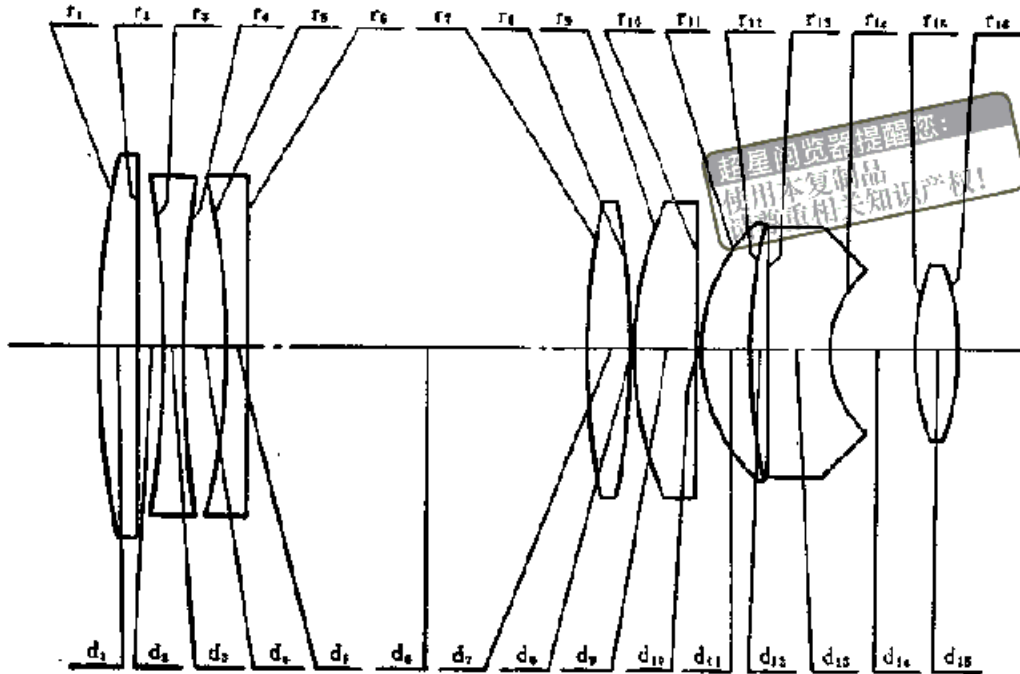




编号: 04-03-008

# 八片式变焦距物镜

E.F.L=0.747~1.248 B.F.L= FNo. =1.1 F.A. =  $\pm 11.5^{\circ} \sim \pm 6.8^{\circ}$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	3.17793	0.12500	1.56873	63.12	9	1.16025	0.21060	1.62041	60.20
2	$\infty$	*** 1			10	$\infty$	0.00560		
3	- 3.84882	0.07250	1.51680	64.20	11	0.56300	0.16480	1.62041	60.20
4	3.84882	0.12791			12	2.14680	0.04621		
5	- 2.31809	0.07250	1.51680	64.20	13	$\infty$	0.19700	1.78470	28.10
6	$\infty$	*** 2			14	0.34965	0.28051*		
7	2.51876	0.13673	1.56873	63.12	15	0.86810	0.13000	1.75496	53.28
8	- 2.51876	0.00800			16	- 0.86810			

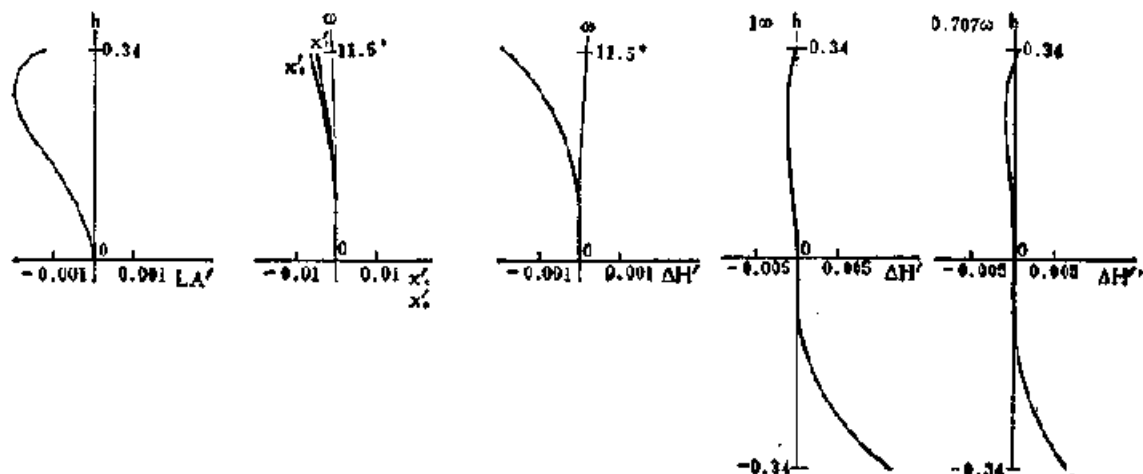
$0.28051^* = 0.10000 + 0.18051$

04-03-003-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\infty$ )
	-0.00248	0.00005	0.00052	-0.00273	-0.00178	0.151	-1.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0012	-0.0021	-0.0036	-0.0049	0.0013	0.00578	0.00175
70	-0.0019	-0.0007	-0.0016	-0.0026	0.0010	0.00336	0.00073

E. F. L = 0.747( $\pm 11.5^\circ$ ) B. F. L = 0.296

\*\*\*1 = 0.07800; \*\*\*2 = 1.11451

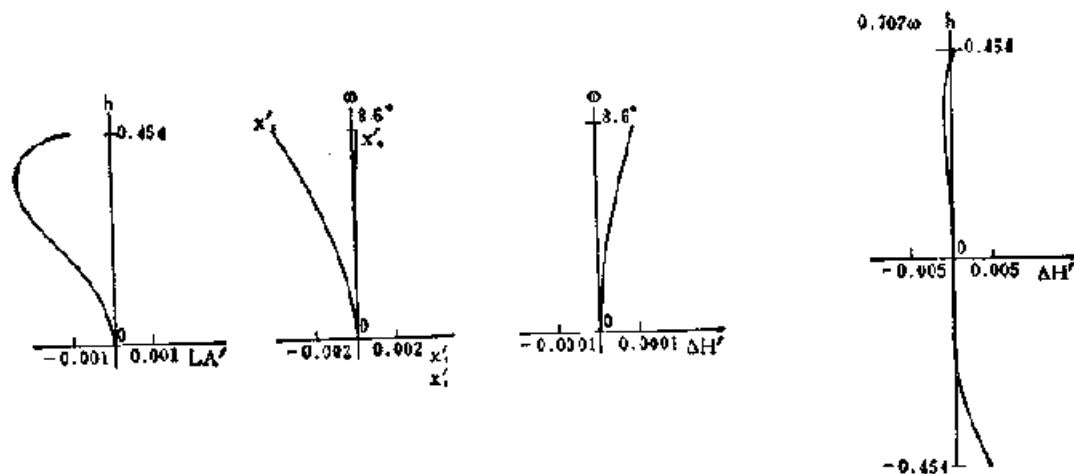


04-03-003-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\infty$ )
	-0.00295	-0.00021	0.00097	-0.00280	0.00021	0.15	0.06%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0009	0.000095	0.00020	-0.00390	0.00410	0.00350	0.00060
70	-0.0023	0.000059	0.00016	-0.00210	0.00226	0.00232	0.00018

E. F. L = 0.998( $\pm 8.6^\circ$ ) B. F. L = 0.316

\*\*\*1 = 0.69769; \*\*\*2 = 0.49481



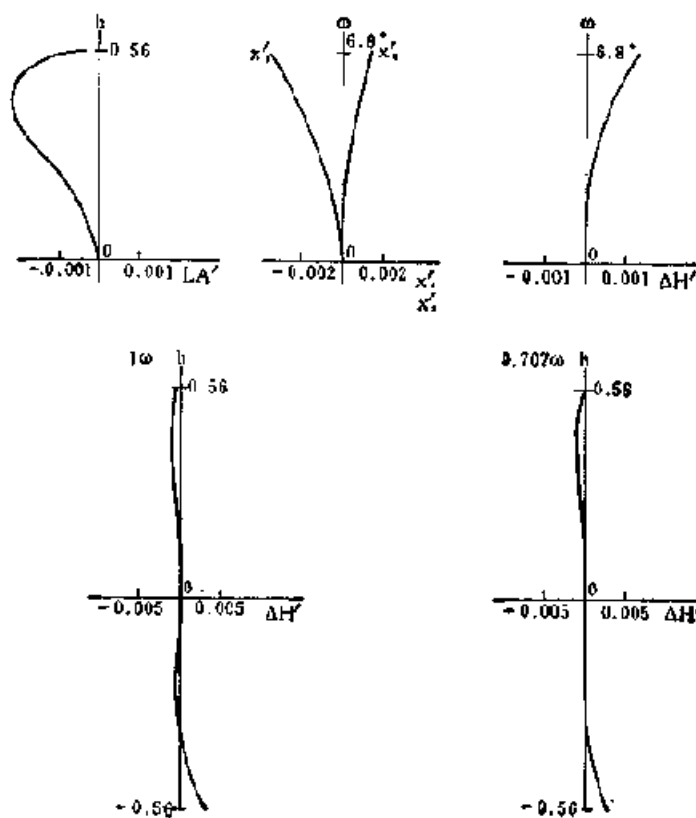
04-03-003-3

浏览器提醒您:

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1%)
	-0.00278	-0.00046	0.00108	-0.00274	0.00132	0.15	0.92%
h 或 $\omega\%$	$LA'$	$\Delta H'$	$x'_t$	$x'_s$	$x'_1, x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0003	0.0013	0.00130	-0.00370	0.00500	0.00167	-0.00023
70	-0.0021	0.0005	0.00065	-0.00197	0.00262	0.00120	-0.00026

E. F. L = 1.268 ( $\pm 6.8^\circ$ )    B. F. L = 0.326

\*\*\*1 = 1.15251, \*\*\*2 = 0.04000

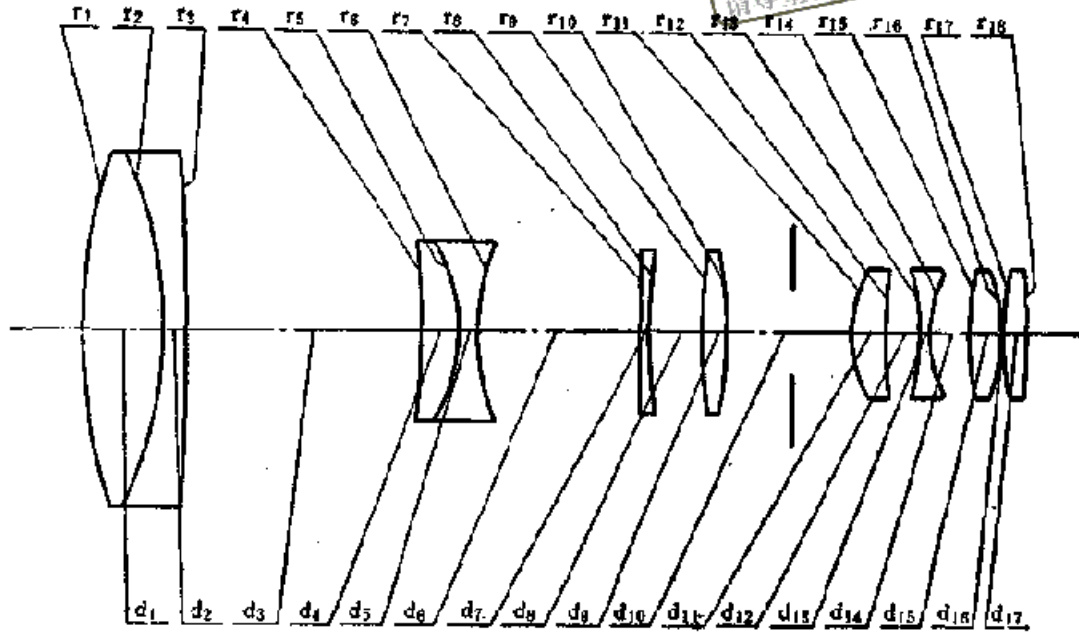


编号: 04-03-009

## 变 焦 距 物 镜

E.F.L=12.10~36.27 B.F.L=15.273 FNo.=1.9 F.A.= $\pm 14.2^{\circ} \sim \pm 4.7^{\circ}$

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



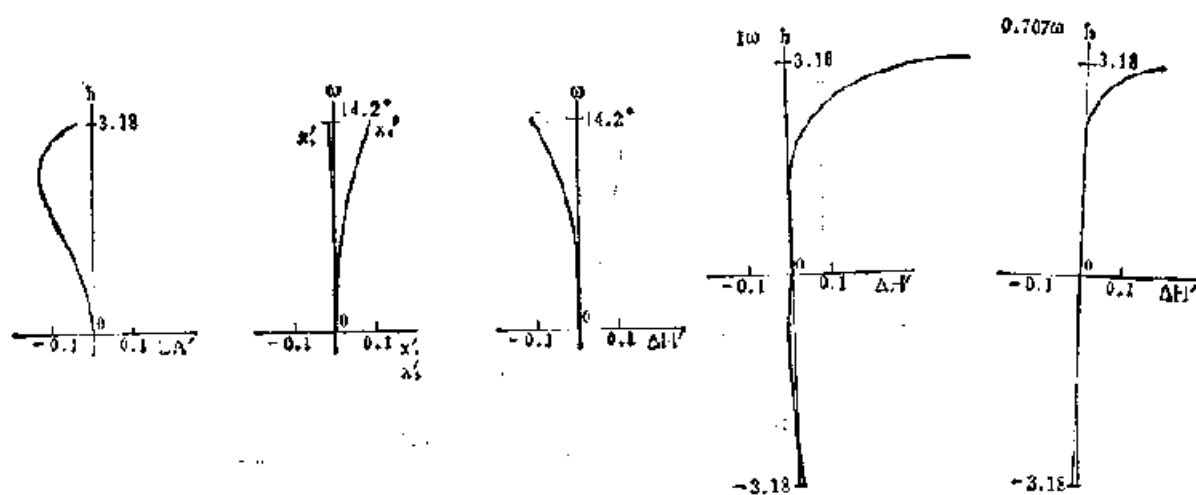
序号	r	d	$n_D$	$\nu_D$	序号	r	d	$n_D$	$\nu_D$
1	50.89	7.40	1.611	58.8	10	-32.93	***4*		
2	-37.04	2.02	1.649	33.8	11	11.83	3.20	1.697	56.2
3	-390.30	***1			12	203.03	2.94		
4	-80.55	3.57	1.720	29.3	13	-22.61	1.06	1.720	29.3
5	-15.98	1.80	1.697	56.2	14	11.40	4.09		
6	21.70	***2			15	43.01	2.80	1.611	58.8
7	$\infty$	1.07	1.649	33.8	16	-16.52	0.12		
8	61.33	***3			17	29.16	2.00	1.611	58.8
9	158.70	2.16	1.611	58.8	18	-137.90			

04-03-009-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1%)
	-0.0524	-0.0169	0.0056	-0.0103	-0.0526	3.06	-3.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.026	-0.104	0.0909	-0.0127	0.1036	0.2313	0.0119
70	-0.128	-0.037	0.0483	-0.0077	0.0560	0.1015	-0.0022

E. F. L = 32.10 ( $\pm 14.2^\circ$ )

\*\*\*1=2.50, \*\*\*2=34.56, \*\*\*3=2.12, \*\*\*4=14.58; \*\*\*4' = 14.58 = 8.87 + 5.71

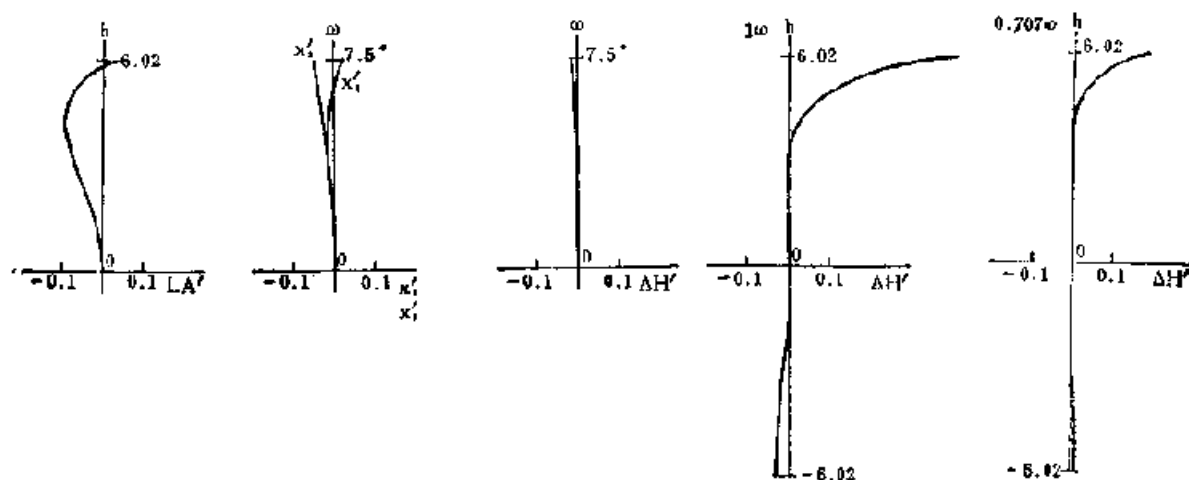


04-03-009-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1%)
	-0.0449	-0.0110	0.0014	-0.0104	-0.0031	3.01	-0.41%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.041	-0.0123	0.0287	-0.0493	0.0780	0.1876	0.0009
70	-0.096	-0.0031	-0.0102	-0.0361	0.0199	0.0952	-0.0032

E. F. L = 22.86 ( $\pm 7.5^\circ$ )

\*\*\*1=22.12, \*\*\*2=14.94, \*\*\*3=4.99, \*\*\*4=11.71; \*\*\*4' = 11.71 = 6.00 + 5.71

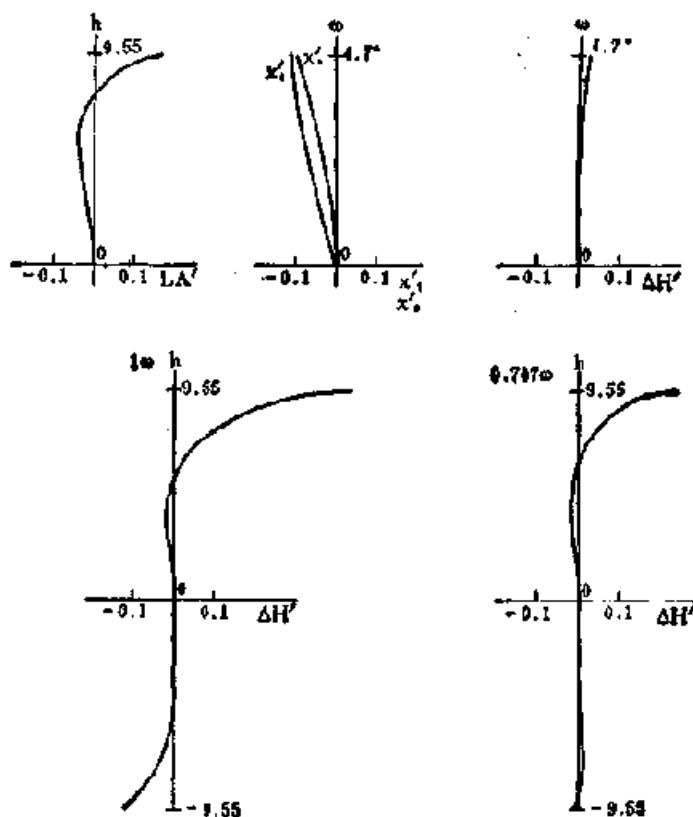


04-03-009-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0275	-0.0003	-0.0071	-0.0106	0.0162	3.01	0.84%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_2$	$x'_3$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.173	0.0254	-0.1149	-0.1044	-0.0105	0.1625	0.0064
70	-0.031	0.0099	-0.0925	-0.0590	-0.0335	0.1196	0.0120

E. F. L = 36.27 ( $\pm 4.7^\circ$ )

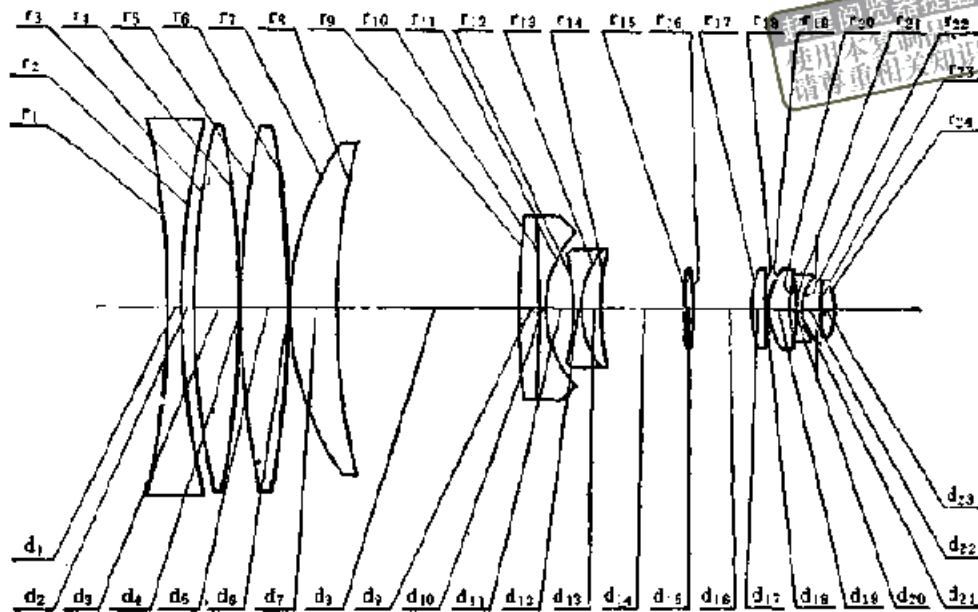
\*\*\*1=31.86, \*\*\*2=5.20, \*\*\*3=2.67, \*\*\*4=13.83, \*\*\*4'=13.83-8.12=5.71

超星网  
使用本复制品  
请尊重知识产权!

编号: 04-03-010

## 变 焦 距 物 镜

E.F.L=35.50~202.60 B.F.L=45.4 FNo.=1.8 F.A.= $\pm 13.2^{\circ} \sim \pm 2.3^{\circ}$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	-552.80	8.50	1.74080	28.05	13	57.00	12.50	1.80518	25.46
2	468.80	8.50			14	166.05	***3		
3	627.10	27.50	1.62041	60.29	15	349.40	5.00	1.65830	57.29
4	627.10	0.50			16	-173.40	35.00		
5	627.10	27.50	1.62041	60.29	17	59.95	9.00	1.59181	58.25
6	-627.10	0.50			18	901.75	0.50		
7	171.56	30.00	1.62041	60.29	19	57.25	13.00	1.71300	53.89
8	415.40	***1			20	86.90	2.00		
9	944.50	12.50	1.80518	25.46	21	-475.00	5.00	1.80518	25.46
10	-1832.50	5.00	1.51821	65.18	22	28.70	11.55*		
11	67.15	***2			23	121.00	8.35	1.62280	56.88
12	-137.95	5.00	1.71300	53.89	24	-48.05			

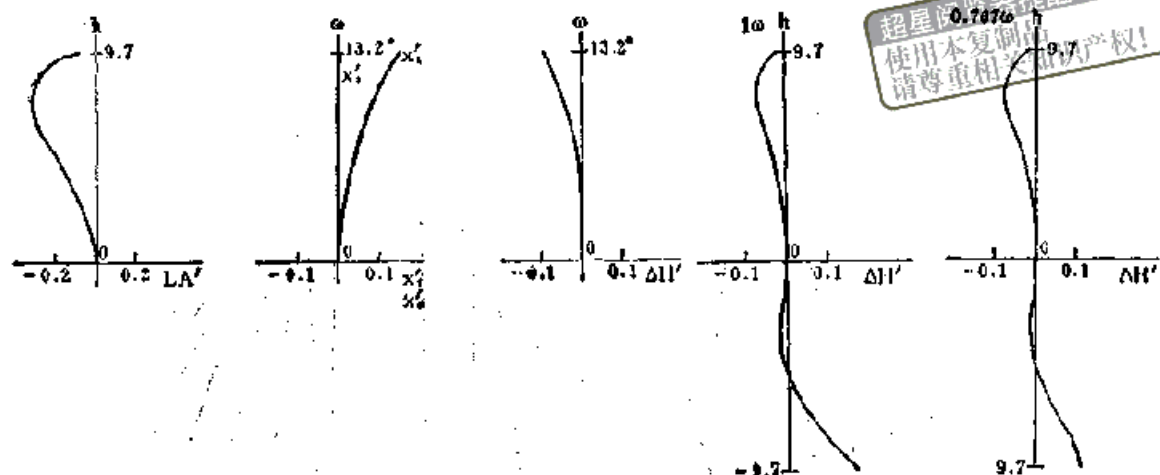
11.55\* = 6.00 + 5.55

04-03-010-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.1357	-0.0131	0.0134	-0.0119	-0.0521	3.31	-1.08%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.073	-0.0905	0.1532	0.0077	0.1455	0.0811	-0.0088
70	-0.312	-0.0329	0.0787	0.0017	0.0770	0.0539	-0.0074

E. F. L = 35.50 ( $\pm 13.2^\circ$ )

\*\*\*1=5.10; \*\*\*2=95.30; \*\*\*3=77.10

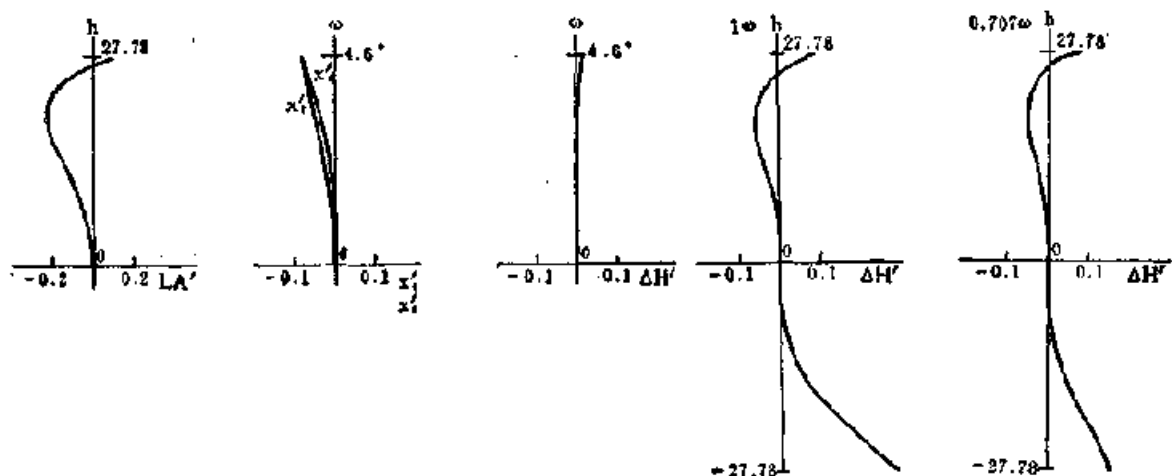


04-03-010-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.1111	-0.0058	-0.0023	-0.0120	0.0117	8.12	0.21%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.100	0.0173	-0.0793	-0.0812	0.0019	0.1810	0.0292
70	-0.226	0.0068	-0.0521	-0.0444	-0.0077	0.1185	0.0189

E. F. L = 101.00 ( $\pm 4.6^\circ$ )

\*\*\*1=111.40; \*\*\*2=15.30; \*\*\*3=50.30





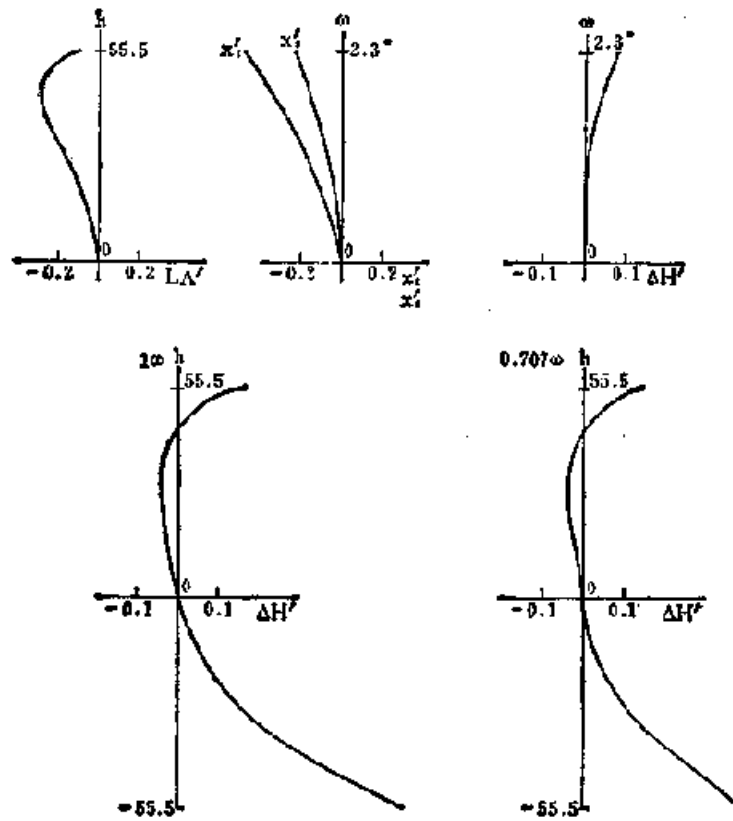
04-03-010-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.1222	0.0399	-0.0275	-0.0120	0.0487	8.1	1.02%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K'_{T0.1}$
100	-0.070	0.0823	-0.484	-0.231	-0.253	0.3620	0.1186
70	-0.277	0.0301	-0.278	-0.123	-0.155	0.2805	0.0963

E. F. L = 202.64 ( $\pm 2.3^\circ$ )

\*\*\*1 = 145.60; \*\*\*2 = 28.50; \*\*\*3 = 3.40

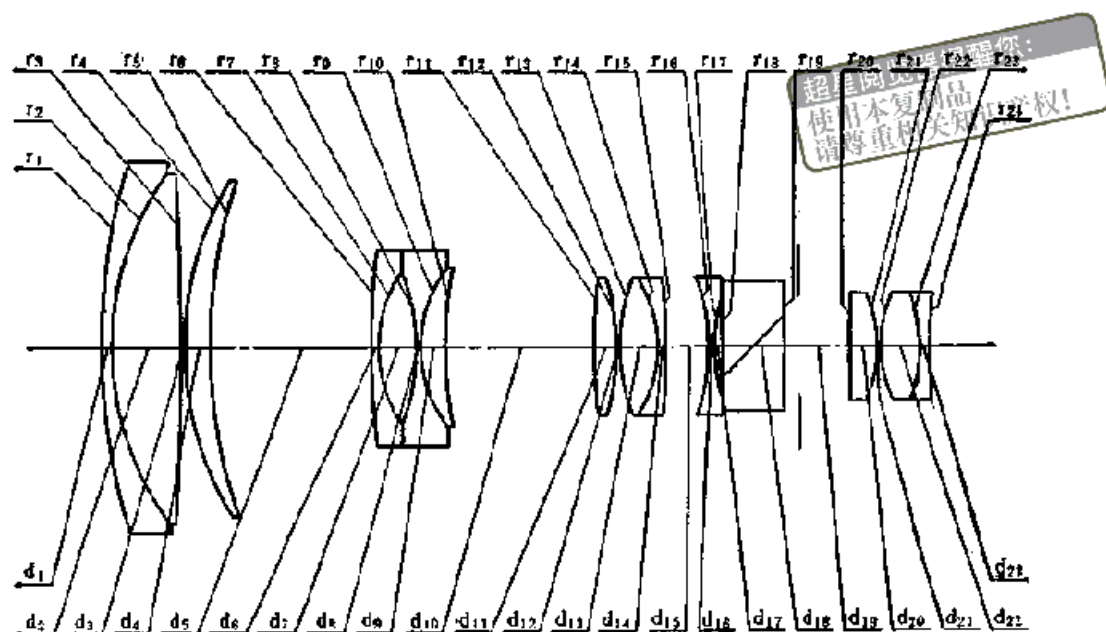
超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



编号: 04-03-011

## 用于近距离摄影的变焦距镜头

E.F.L=7.50~56.30 B.F.L=14.22 FNo.=1.8 F.A.= $\pm 26.70' \sim \pm 3.55'$



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	85.943	1.40	1.74077	27.7	13	25.000	5.50	1.65830	57.3
2	40.600	9.50	1.65160	56.5	14	-17.200	0.90	1.72342	38.0
3	-292.560	0.10			15	-254.650	*** 3		
4	42.962	3.40	1.5168	64.2	16	-24.050	0.80	1.65830	57.3
5	69.600	*** 1			17	24.050	0.85		
6	205.150	0.90	1.717	47.9	18	$\infty$	8.30	1.57501	41.3
7	17.200	5.00			19	$\infty$	8.90*		
8	-28.400	0.80	1.51835	60.3	20	1100.000	3.90	1.62374	47.0
9	17.558	3.30	1.72825	28.3	21	-17.335	0.20		
10	52.125	*** 2			22	17.960	5.30	1.62041	60.3
11	86.894	2.90	1.6516	58.2	23	-14.530	1.20	1.80518	25.6
12	-33.490	0.10			24	174.600			

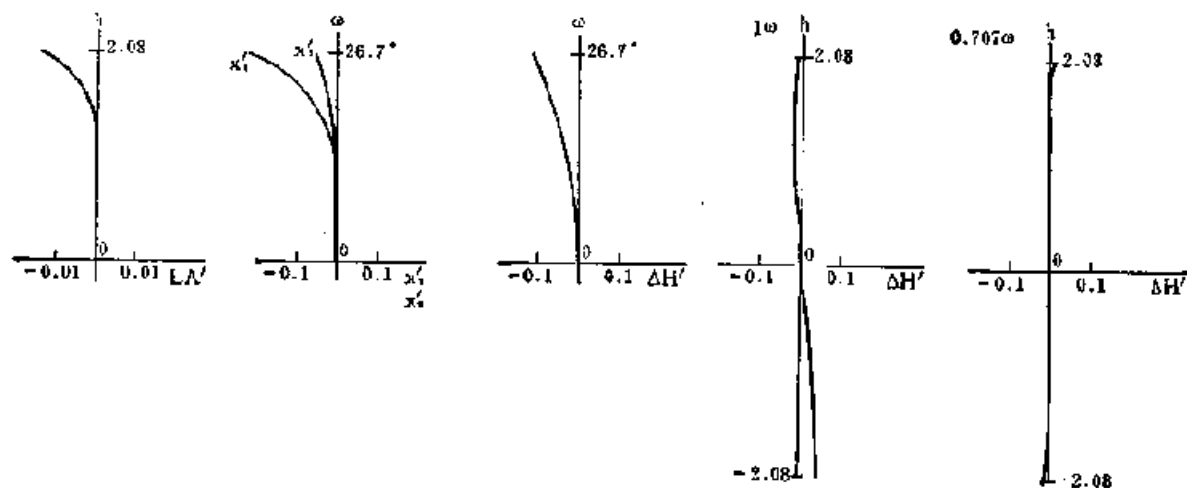
8.90\* = 2.90 + 6.00

04-03-011-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00095	-0.00450	0.00707	-0.00636	-0.03159	3.77	-2.99%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.1}$
100	-0.0141	-0.1127	-0.2263	-0.0538	-0.1725	0.00862	0.00206
70	-0.0008	-0.0497	-0.0306	-0.0159	-0.0147	-0.00112	-0.00378

E. F. L = 7.50 ( $\pm 26.7^\circ$ )

\*\*\*1 = 1.73, \*\*\*2 = 45.72, \*\*\*3 = 1.47

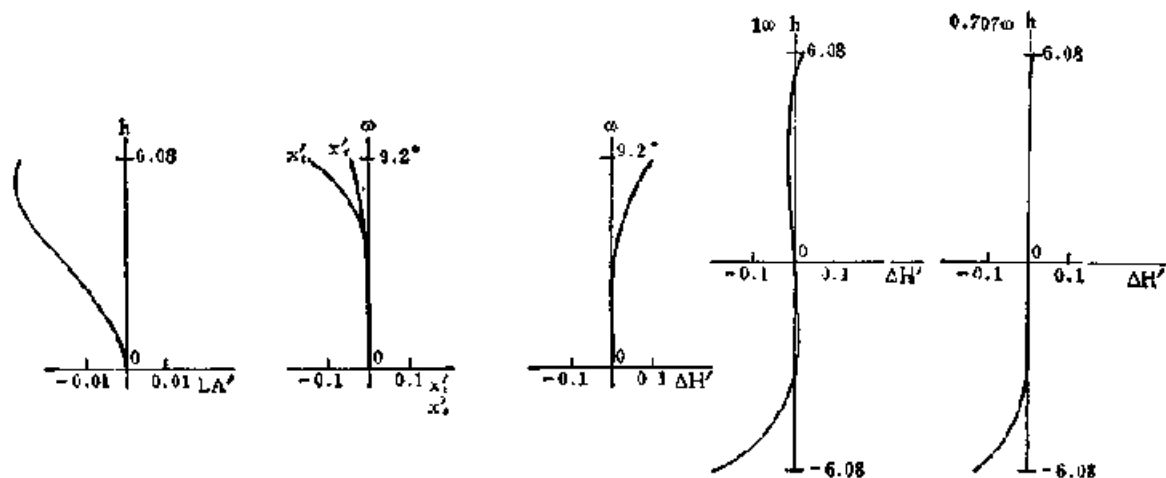


04-03-011-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.01142	0.00983	0.00401	-0.00683	0.43673	3.53	3.04%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.1}$
100	-0.0259	0.1072	-0.1437	-0.0372	-0.1065	-0.0978	-0.0231
70	-0.0243	0.0301	-0.0195	-0.0136	-0.0059	-0.0538	-0.0137

E. F. L = 21.90 ( $\pm 9.2^\circ$ )

\*\*\*1 = 22.43, \*\*\*2 = 20.37, \*\*\*3 = 6.12

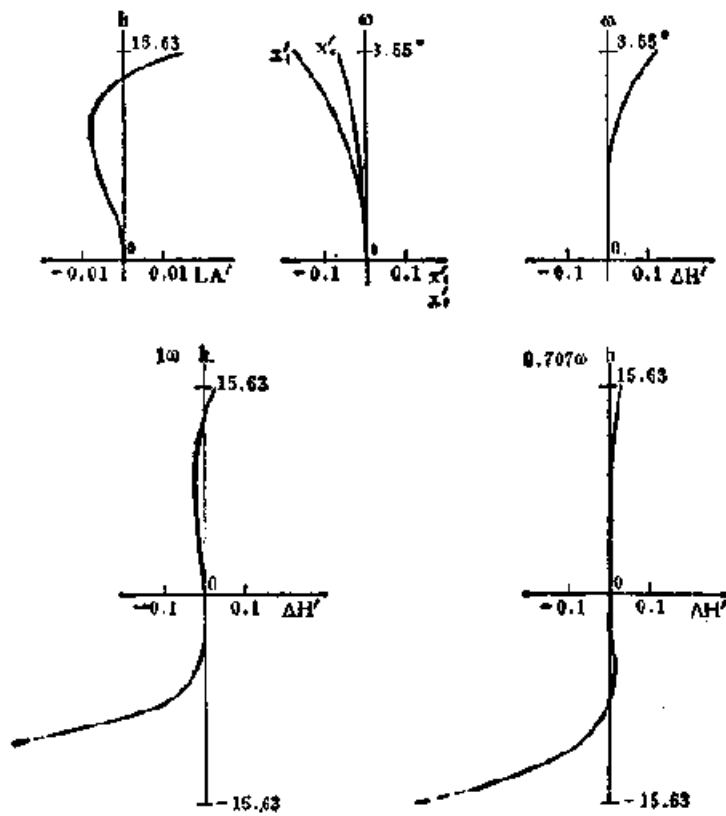


04-03-011-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(10)
	-0.00558	0.00607	-0.00374	-0.00883	0.05126	3.5	3.25%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.0169	0.1138	-0.1632	-0.0867	-0.1026	-8.1295	-0.3093
70	-0.0077	0.0357	-0.0750	-0.0335	-0.0415	-0.4015	-0.0333

E. F. L = 50.30 ( $\pm 3.55^\circ$ )

\*\*\*1=23.23, \*\*\*2=2.96, \*\*\*3=12.73

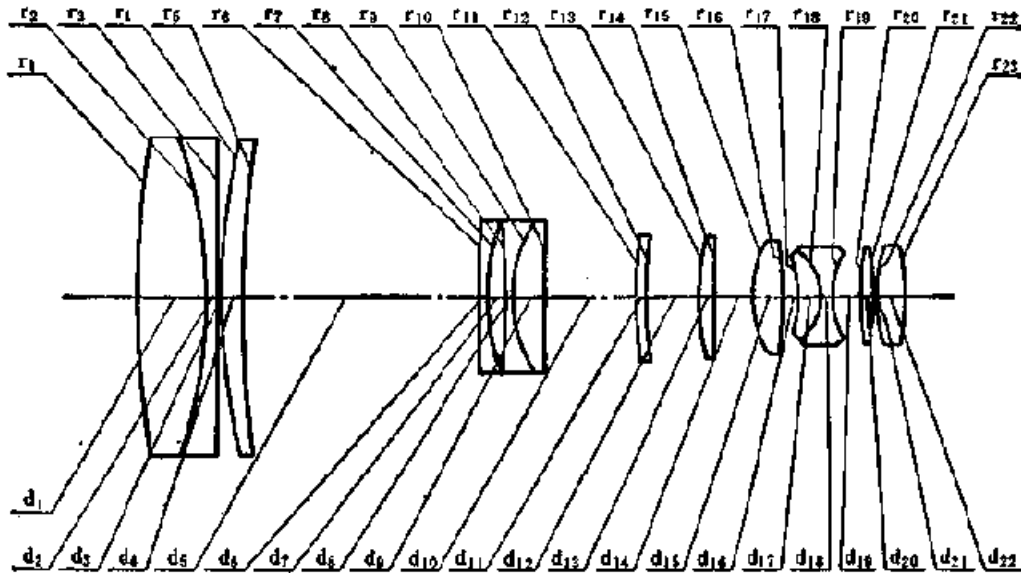


编号: 04-03-012

# 变 焦 距 镜 头

超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

E.F.L=10.0~40.0 B.F.L=13.46 FNo.=1.4 F.A.= $\pm 17.5^{\circ} \sim \pm 4.3^{\circ}$



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	187.000	9.0000	1.6779	55.5	13	35.130	2.0000	1.6385	55.5
2	-64.000	1.5000	1.6889	31.1	14	$\infty$	5.0000		
3	$\infty$	0.5000			15	13.800	4.2700	1.6073	56.7
4	81.270	3.0000	1.6237	47.0	16	-60.000	2.1300		
5	321.440	*** 1			17	-16.750	3.0000	1.7200	50.3
6	1016.400	1.0000	1.6910	54.8	18	-7.940	1.5800	1.6483	33.8
7	30.330	2.2863			19	11.229	3.7300*		
8	-167.400	1.0000	1.6910	54.8	20	33.400	2.0000	1.6264	60.3
9	18.500	4.5000	1.6727	32.2	21	-33.400	0.1600		
10	$\infty$	*** 2			22	21.000	4.0000	1.6264	60.3
11	180.900	1.0000	1.6385	55.5	23	-30.720			
12	50.000	*** 3							

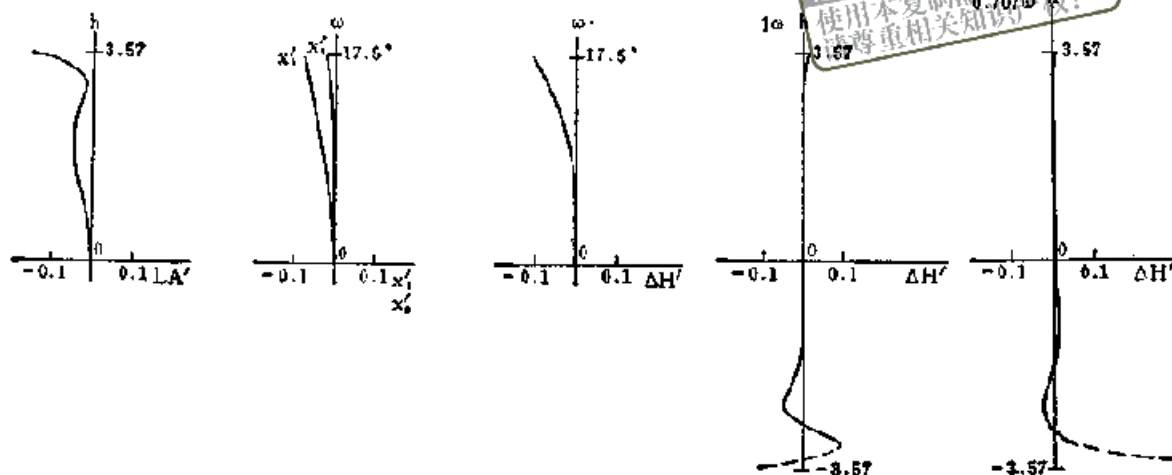
3.7300\* = 2.0000 + 1.7300

04-03-012-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.06519	0.00972	0.00775	-0.02808	-0.06737	3.17	-3.32%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.151	-0.105	-0.0150	-0.0750	0.0600	-5.4047	-0.0285
70	-0.038	-0.036	-0.0037	-0.0395	0.0308	1.5200	-0.0152

E. F. L = 10.0 ( $\pm 17.5^\circ$ )

\*\*\*1=3.7757; \*\*\*2=52.2675; \*\*\*3=1.0000

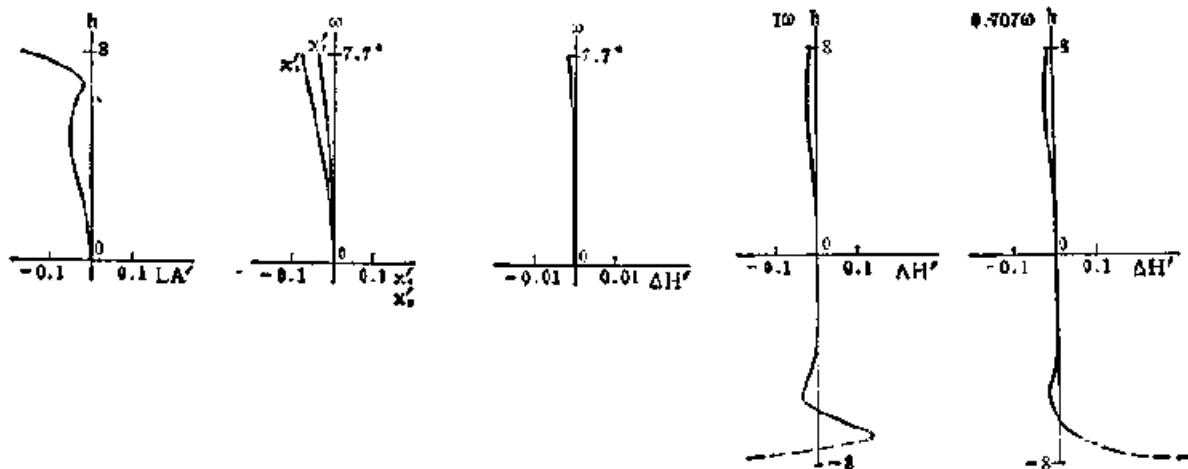


04-03-012-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.06911	0.01279	0.00421	-0.02778	0.00038	3.03	-0.07%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.180	-0.0021	-0.0588	-0.0803	0.0420	-5.4703	-0.0297
70	-0.045	-0.0004	-0.0204	-0.0422	0.0218	2.3589	-0.0178

E. F. L = 22.4 ( $\pm 7.7^\circ$ )

\*\*\*1=37.1090; \*\*\*2=12.4510; \*\*\*3=7.4932



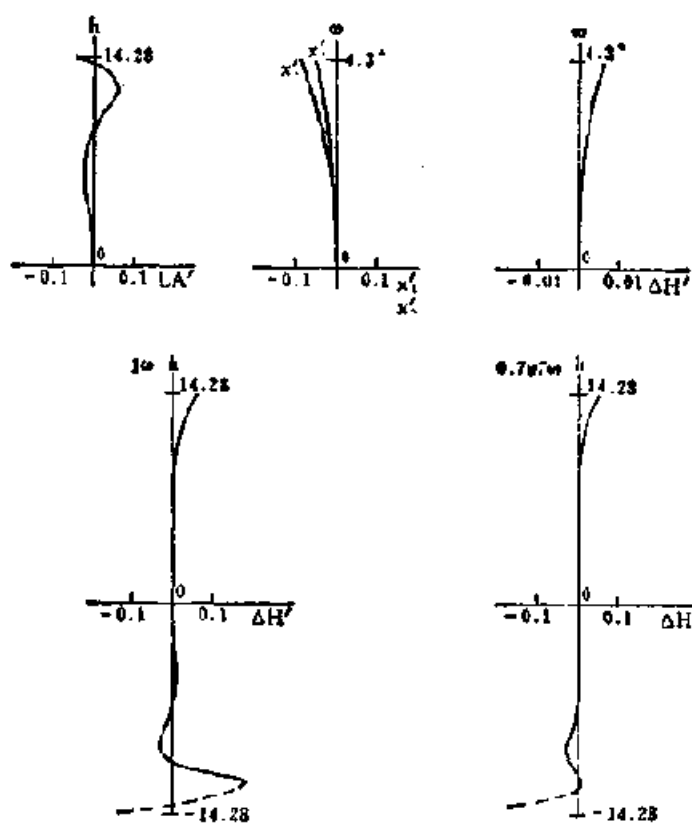
04-03-012-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.04018	0.01623	0.00335	-0.02844	0.00618	3.04	0.21%
$h$ 或 $\omega\%$	$LA'$	$\Delta H'$	$x'_1$	$x'_4$	$x'_1 - x'_4$	$K'_{T1}$	$K'_{T0.7}$
100	-0.040	0.0063	-0.0515	-0.0870	0.0355	-5.5309	-0.0198
70	0.013	0.0625	-0.0284	-0.0456	0.0172	-4.7343	-0.0089

E. F. L = 40.0 ( $\pm 4.3^\circ$ )

\*\*\*1=53.7757, \*\*\*2=2.2675, \*\*\*3=1.0000

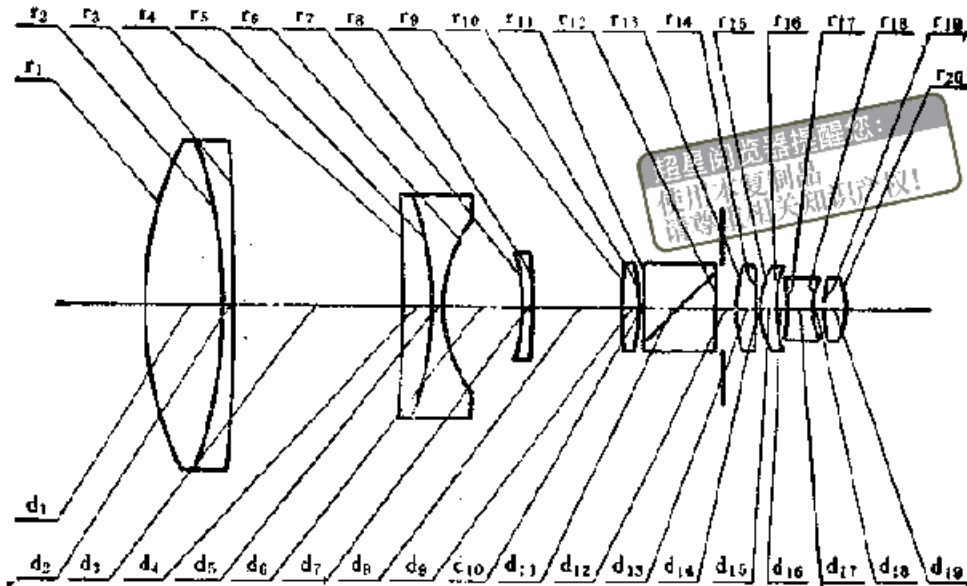
超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



编号: 04-03-013

## 变 焦 距 物 镜

E.F.L=50~200 B.F.L=58.1 FNo.=1.8 F.A.= $\pm 9.1^{\circ} \sim \pm 2.8^{\circ}$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	275.13	58.75	1.61772	49.78	11	$\infty$	55.00	1.52015	63.59
2	-355.69	8.75	1.78130	26.98	12	$\infty$	15.63*		
3	-3212.50	*** 1			13	124.00	13.75	1.67790	55.52
4	-1821.25	22.50	1.80518	25.46	14	-473.63	0.25		
5	-217.00	7.50	1.62041	60.98	15	56.31	14.88	1.60680	55.61
6	102.06	*** 2			16	85.50	7.50		
7	-142.56	6.25	1.62004	36.34	17	177.50	15.69	1.78470	26.10
8	-3618.75	*** 3			18	46.84	8.13		
9	275.63	12.50	1.52015	63.59	19	93.00	14.38	1.74400	44.90
10	-220.31	3.13			20	-71.94			

15.63\* = 5.63 + 10.00

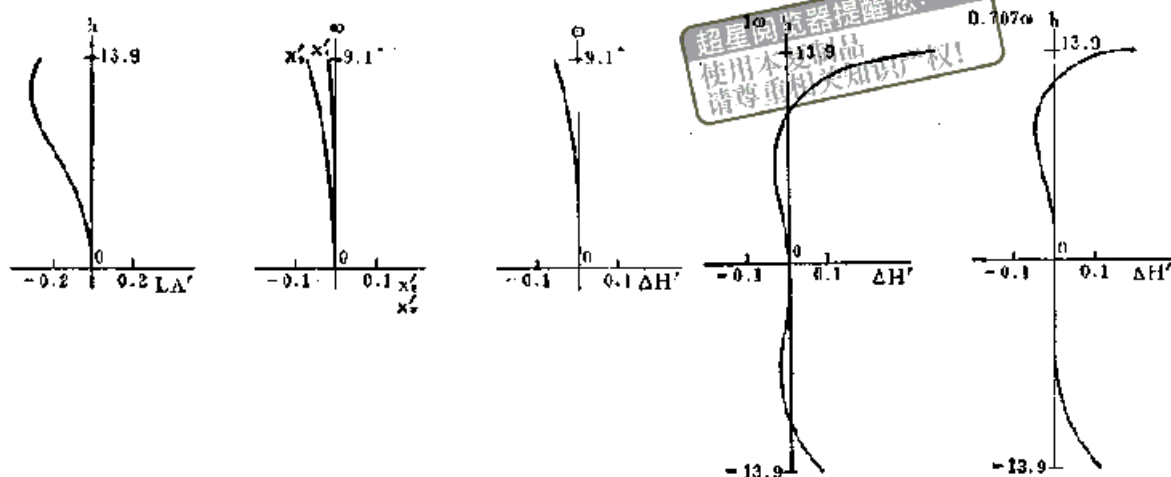


04-03-013-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.1058	-0.0337	0.0050	-0.0154	-0.0347	8.08	-0.75%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.264	-0.061	-0.0110	-0.0670	0.0560	0.2356	-0.0079
70	-0.270	-0.022	-0.0051	-0.0345	0.0294	0.1447	-0.0123

E. F. L = 50 ( $\pm 9.1^\circ$ )

\*\*\*1=6.15, \*\*\*2=130.15, \*\*\*3=68.14

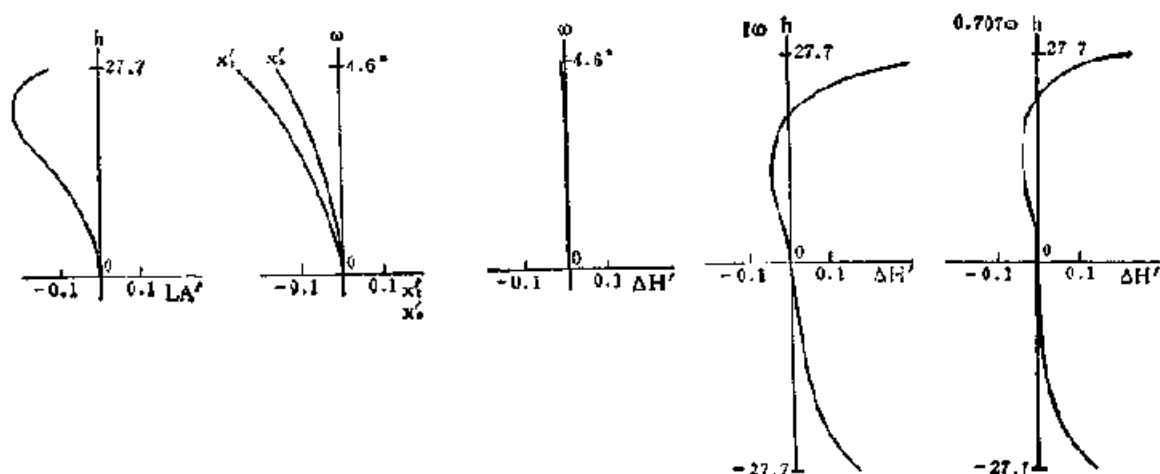


04-03-013-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0820	-0.0229	-0.0091	-0.0154	-0.0014	8.02	-0.06%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.119	-0.0047	-0.254	-0.153	-0.101	0.3099	0.0213
70	-0.107	-0.0013	-0.135	-0.079	-0.056	0.1900	0.0076

E. F. L = 100 ( $\pm 4.6^\circ$ )

\*\*\*1=127.19, \*\*\*2=61.00, \*\*\*3=66.25

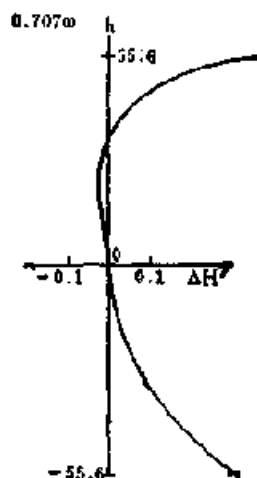
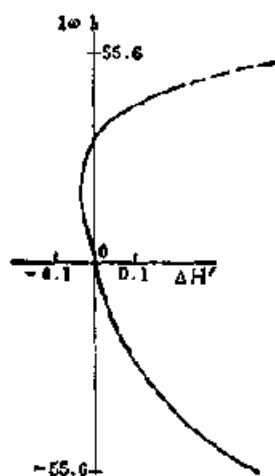
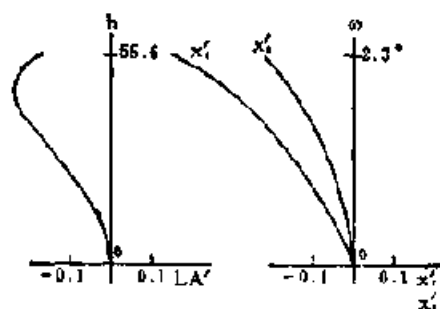


04-03-013-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\infty$ )
	-0.0913	0.0218	-0.0203	-0.0155	0.0158	2	0.33%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.371	0.0258	-0.245	-0.220	-0.225	0.5254	0.1303
70	-0.220	0.0097	-0.235	-0.113	-0.122	0.3531	0.0895

E. F. L = 200 ( $\pm 2.3^\circ$ )

\*\*\*1 = 214.52; \*\*\*2 = 12.90; \*\*\*3 = 27.02

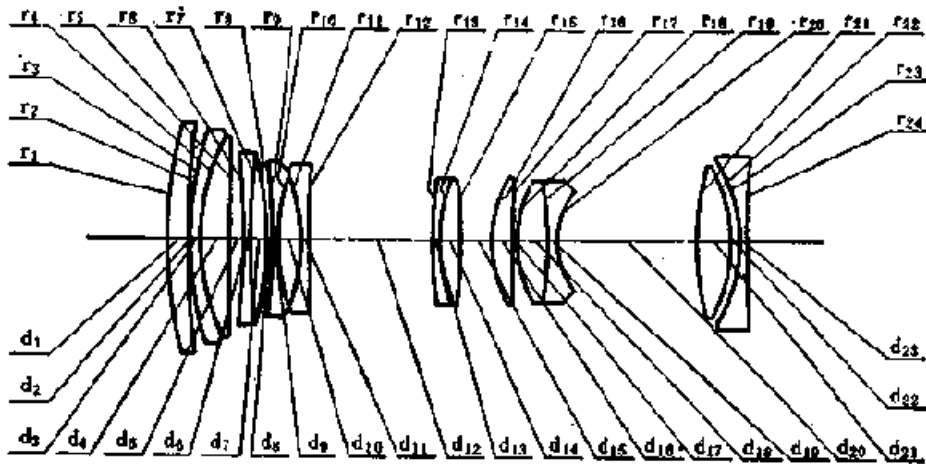


编号: 04-03-014

# 变 焦 距 镜 头

E.F.L.=76.79~153.60 B.F.L.=43.18 FNo.=4 F.A.= $\pm 17.9^{\circ} \sim \pm 9.0^{\circ}$

超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	78.829	4.09	1.51633	64.15	13	84.070	1.13	1.74077	27.79
2	441.679	0.19			14	36.191	3.95	1.6223	53.2
3	74.639	1.90	1.74077	27.79	15	-105.440	6.707*		
4	44.110	5.80	1.51821	65.04	16	24.560	4.78	1.51633	64.15
5	1742.450	***1			17	$\infty$	0.38		
6	-175.362	1.70	1.618	63.38	18	24.442	6.12	1.51009	63.63
7	133.175	2.96	1.7846	26.22	19	-61.605	2.00	1.711	41.78
8	-80.740	0.38			20	17.088	28.87		
9	-214.635	1.43	1.5725	57.65	21	57.836	7.00	1.50342	33.91
10	39.980	5.26			22	-31.791	1.43		
11	-35.068	1.43	1.618	63.38	23	-30.887	1.43	1.66998	39.32
12	626.880	***2			24	455.310			

6.707\* = 3.000 + 3.707

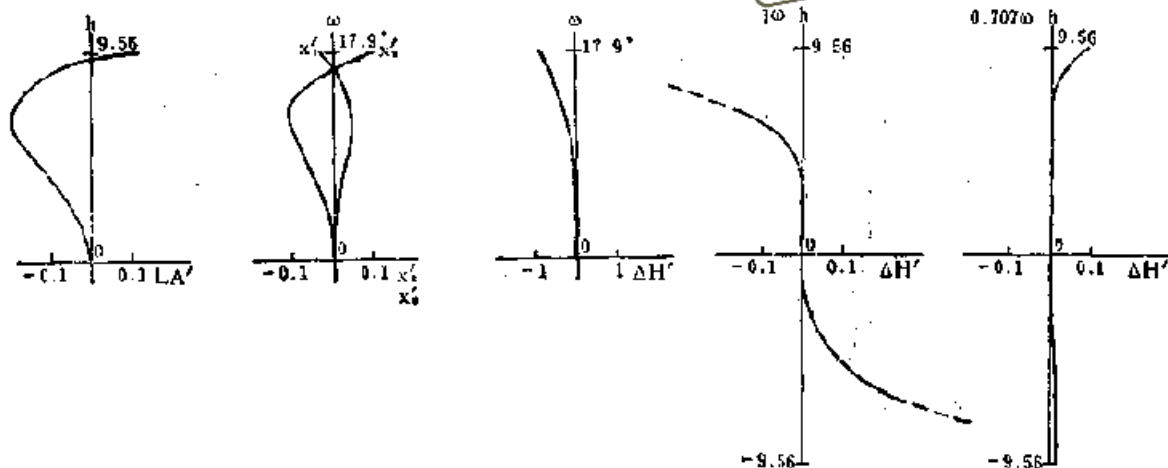
04-03-014-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0229	-0.0103	-0.0029	-0.0159	-0.3741	21.85	-3.3%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.125	-0.820	-0.0373	0.1100	-0.1478	-1.9345	0.0481
70	-0.201	-0.278	0.0447	-0.1087	0.1534	0.0423	0.0043

E. F. L = 78.79 ( $\pm 17.9^\circ$ )

\*\*\*1 = 2.086; \*\*\*2 = 25.371

超星网  
使用本复制品  
请尊重相关知识产权!

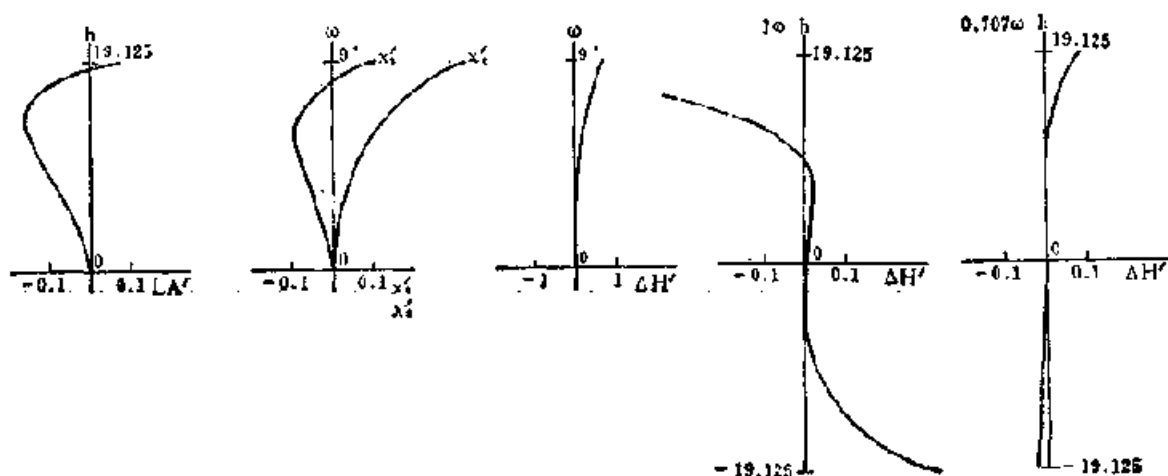


04-03-014-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0169	-0.0154	0.0039	-0.0163	0.1829	24.28	3.02%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.085	0.734	0.343	0.104	0.239	-2.2351	-0.0426
70	-0.164	0.285	0.125	-0.083	0.213	0.0298	0.0036

E. F. L = 153.60 ( $\pm 9.0^\circ$ )

\*\*\*1 = 26.433; \*\*\*2 = 1.024

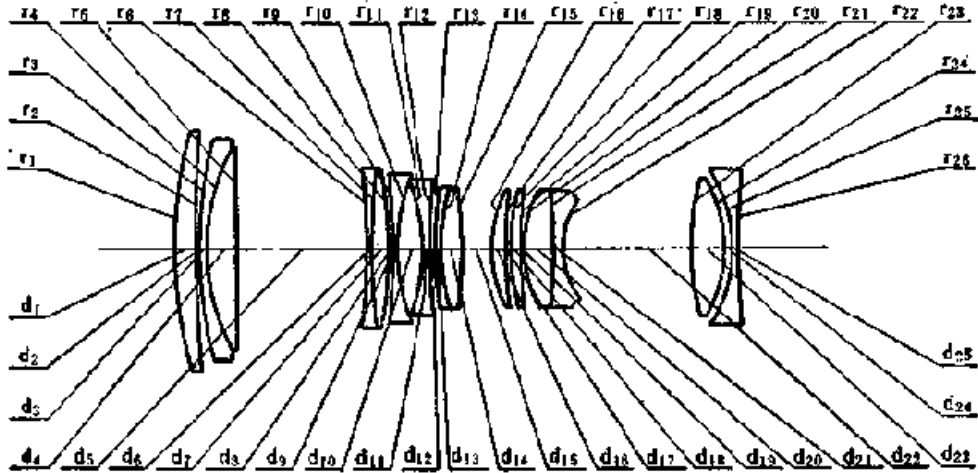


编号: 04-03-015

# 变 焦 距 镜 头

超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

E.F.L=76.5~153.0 B.F.L=44.39 FNo.=4 F.A.= $\pm 17.9^{\circ} \sim \pm 9.0^{\circ}$



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	78.828	4.09	1.51633	64.15	14	36.191	3.95	1.6223	53.2
2	441.679	0.19			15	-105.440	6.707*		
3	74.639	1.90	1.74077	27.79	16	25.913	3.30	1.50378	66.81
4	44.110	5.80	1.51821	65.04	17	108.255	0.15		
5	1742.450	*** 1			18	46.923	2.50	1.50048	65.99
6	-175.362	1.70	1.618	63.38	19	98.549	0.20		
7	133.175	2.96	1.7847	26.22	20	24.880	5.74	1.50378	66.81
8	-80.740	0.38			21	-115.109	2.00	1.744	44.78
9	-214.635	1.43	1.5725	67.65	22	16.850	26.00		
10	39.980	5.26			23	51.876	7.00	1.60717	40.34
11	-35.968	1.43	1.618	63.38	24	-28.103	1.44		
12	626.880	*** 2			25	-26.962	1.43	1.66755	41.93
13	84.070	1.18	1.74077	27.79	26	248.554			

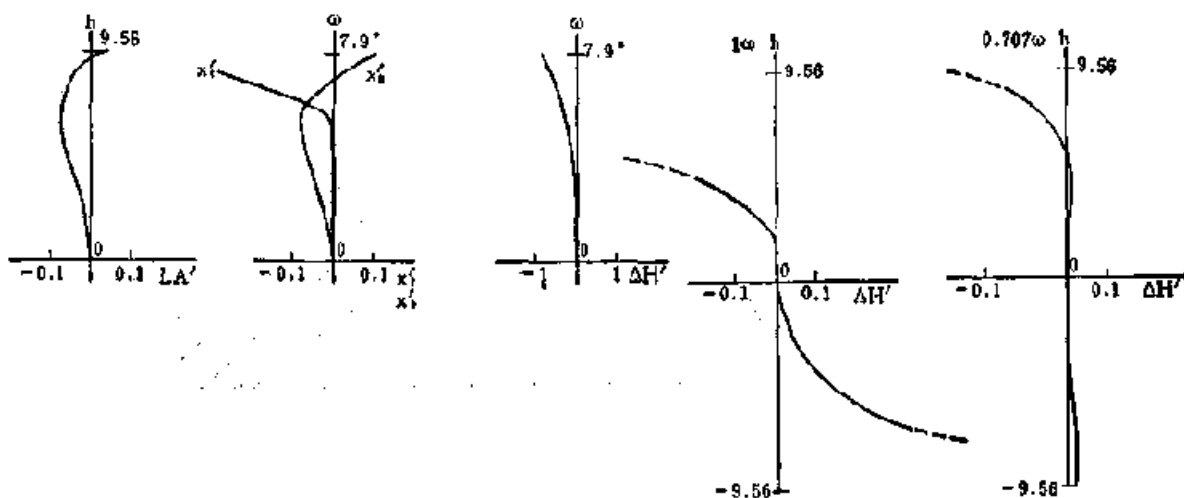
6.707\* = 4.707 + 2.000

04-03-015-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0093	-0.0044	-0.0039	-0.0124	-0.1659	24.76	-3.3%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.044	-0.808	-0.5780	0.1050	-0.6830	-1.6051	-0.5481
70	-0.076	-0.269	-0.0078	-0.0794	0.0716	-0.2382	-0.0036

E. F. L = 76.5 ( $\pm 17.9^\circ$ )

\*\*\*1 = 2.986, \*\*\*2 = 25.271

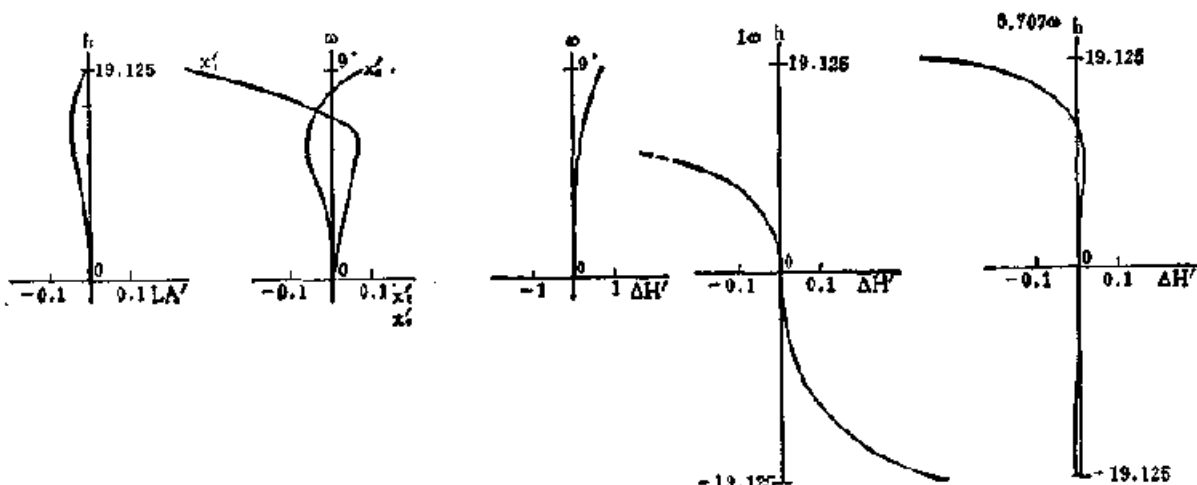


04-03-015-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0034	-0.0101	0.0030	-0.0128	0.1897	24.19	3.04%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0007	0.736	-0.3590	0.0330	-0.4420	-2.4037	-0.7668
70	-0.0394	0.271	0.0635	-0.0564	0.1199	-0.1967	-0.0044

E. F. L = 153.0 ( $\pm 9.0^\circ$ )

\*\*\*1 = 26.433, \*\*\*2 = 1.024



编号: 04-03-016

# 大孔径变焦距物镜

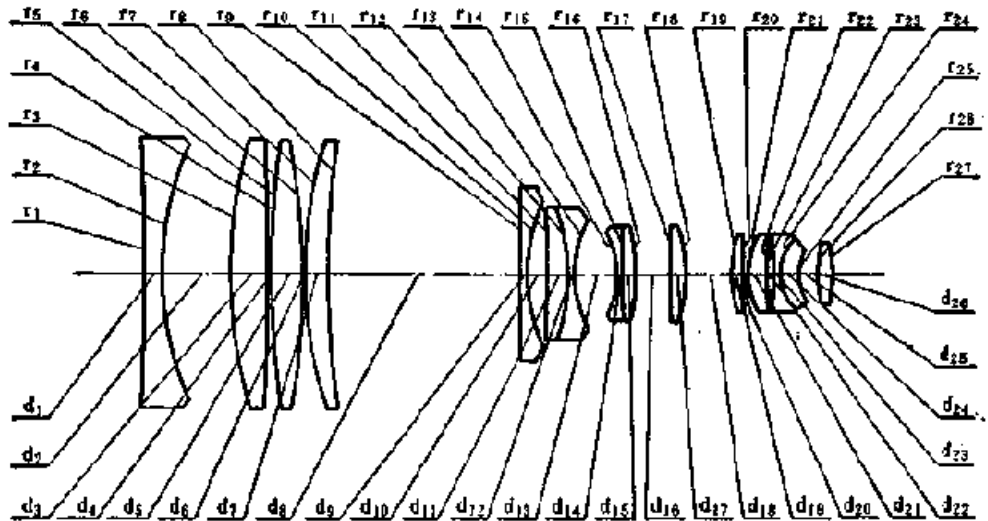
E.F.L=30~180

B.F.L=46.9

FNo.=1.4

F.A.= $\pm 15.3^{\circ} \sim \pm 2.5^{\circ}$

超星浏览器提醒您:  
本复制品  
请尊重知识产权!



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	-1339.00	15.00	1.78470	26.10	15	872.75	10.50	1.64831	33.77
2	249.80	56.50			16	-168.25	*** 3		
3	385.40	30.00	1.69938	49.57	17	1002.00	11.00	1.65844	50.9
4	-1434.00	0.90			18	-126.25	38.00		
5	1025.00	25.75	1.67790	55.52	19	102.80	10.75	1.71300	53.89
6	-537.20	1.35			20	1087.00	0.50		
7	308.80	22.50	1.67790	55.52	21	62.95	17.00	1.71300	53.89
8	980.75	*** 1			22	1169.50	1.50		
9	10000.00	7.50	1.62041	60.29	23	-475.00	7.75	1.80518	25.46
10	139.75	15.50			24	38.93	15.00	1.71300	53.89
11	-1502.00	17.00	1.80518	25.46	25	40.83	16.25*		
12	-160.70	5.00	1.52542	64.55	26	100.50	10.75	1.71300	53.89
13	92.75	*** 2			27	-124.65			
14	-66.00	4.00	1.62041	60.29					

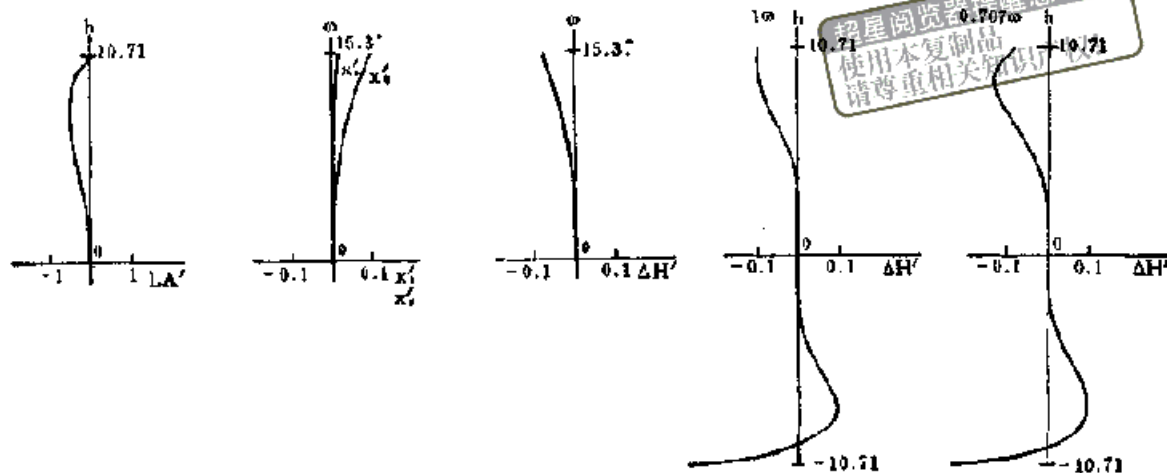
16.25\* = 8.25 + 8.00

04-03-016-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.3805	0.0133	0.0101	-0.0065	-0.0626	8.22	-1.02%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.1515	-0.0041	0.0953	0.0189	0.0759	-0.1839	0.00776
70	-0.4597	-0.0311	0.0475	0.0082	0.0393	-0.1557	0.00688

E. F. L = 30 ( $\pm 15.3^\circ$ )

\*\*\*1=9.25; \*\*\*2=187.40; \*\*\*3=23.85

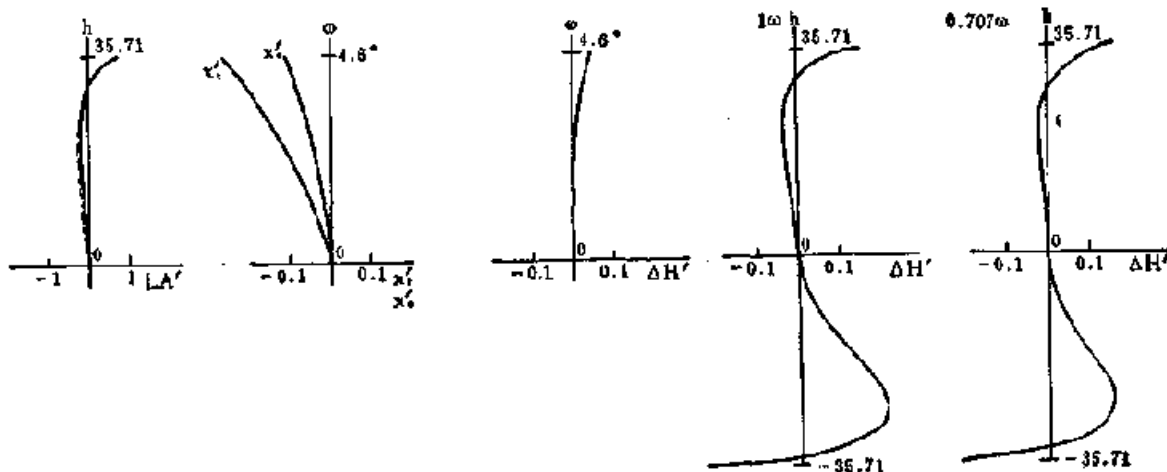


04-03-018-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.2443	0.0615	-0.0236	-0.0067	0.0353	8.02	0.52%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.073	0.0416	-0.272	-0.115	-0.157	-0.0332	0.0965
70	-0.185	0.0158	-0.154	-0.062	-0.092	-0.0122	0.0083

E. F. L = 100 ( $\pm 4.6^\circ$ )

\*\*\*1=155.70; \*\*\*2=34.80; \*\*\*3=30.00



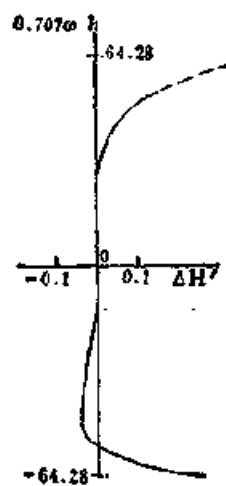
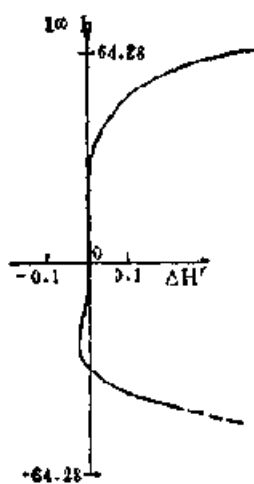
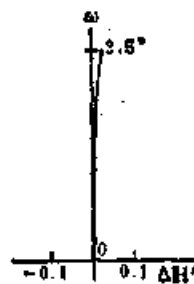
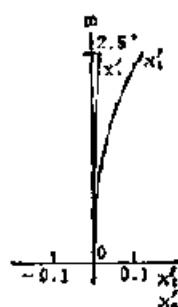


04-03-016-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	0.08271	-0.03146	0.00848	-0.00657	0.02158	7.9	0.32%
b 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_3$	$K_{T1}$	$K'_{T0.7}$
100	1.713	0.0256	0.1268	0.0211	0.1057	1.8261	0.1459
70	0.397	0.0098	0.0528	0.0073	0.0455	0.3758	0.0102

E. F. L = 180 ( $\pm 2.5^\circ$ )

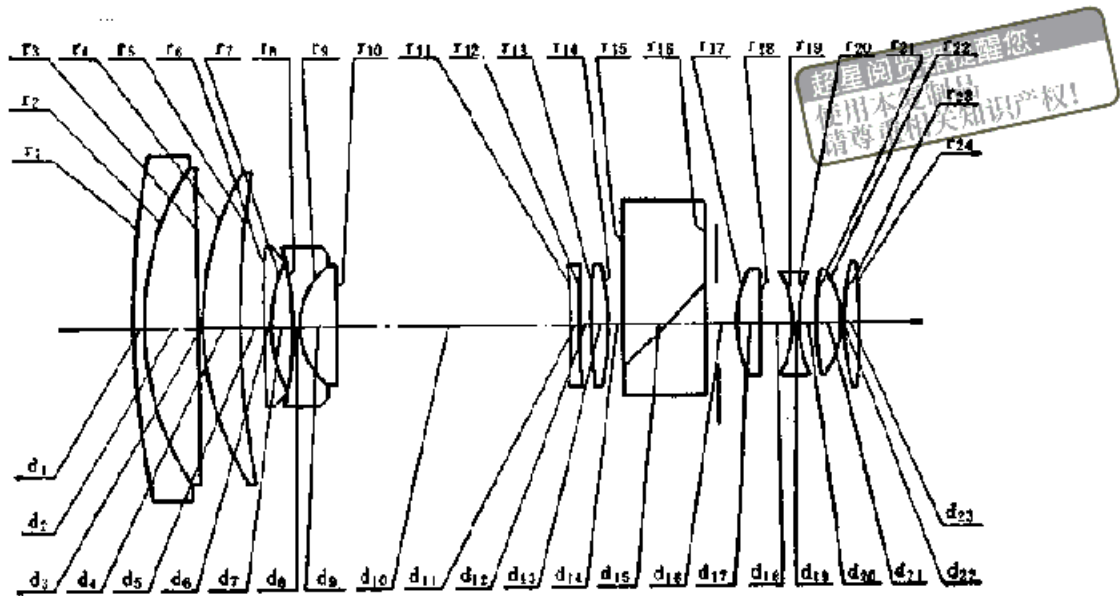
\*\*\*1 = 200.60, \*\*\*2 = 14.70, \*\*\*3 = 5.20



编号: 04-03-017

## 两个可动负组在两个固定正组间的变焦距镜头

E.F.L=7.50~30.00 B.F.L=11.653 FNo.=1.7 F.A.= $\pm 11.3^{\circ} \sim \pm 2.8^{\circ}$



序号	r	d	n	$v_D$	序号	r	d	n	$v_D$
1	90.30	1.00	1.6990	30.1	13	66.83	1.70	1.6936	53.4
2	28.76	5.90	1.6073	59.5	14	-28.87	1.50		
3	-762.36	0.10			15	$\infty$	8.50	1.6200	36.3
4	30.68	4.10	1.6204	60.3	16	$\infty$	3.00*		
5	112.58	*** 1			17	11.92	2.40	1.7440	44.9
6	326.18	0.57	1.6385	55.5	18	$\infty$	3.40		
7	14.12	2.30			19	-10.10	0.80	1.7847	25.7
8	-93.26	0.57	1.6936	53.4	20	13.93	1.80		
9	7.80	3.80	1.6727	32.2	21	60.56	2.40	1.7200	50.3
10	543.87	*** 2			22	-9.43	0.12		
11	-95.02	1.00	1.7847	25.7	23	24.42	1.50	1.6935	53.4
12	95.02	*** 3			24	-197.77			

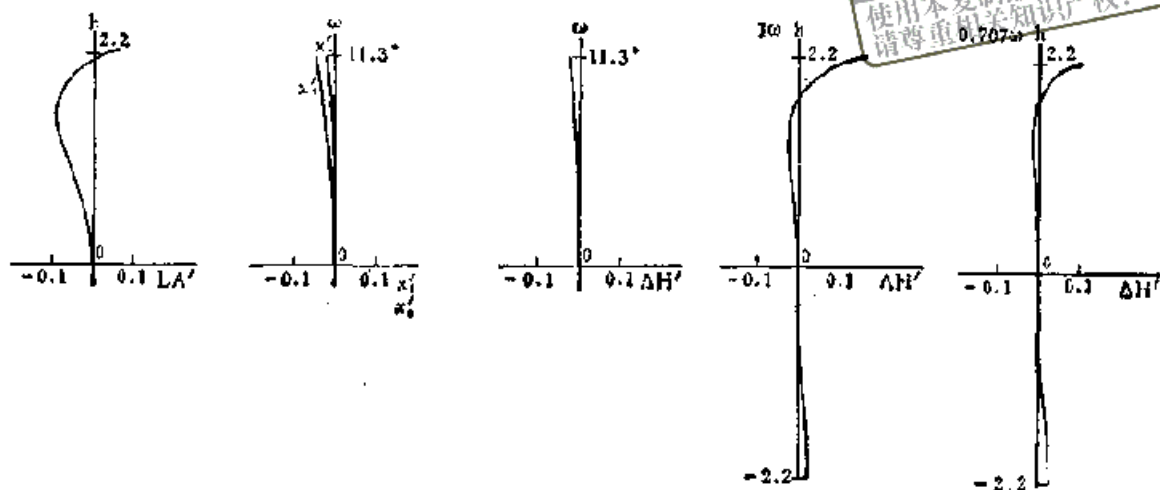
3.00\* = 1.00 + 2.00

04-03-017-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.04892	-0.00792	-0.00204	-0.00206	-0.01175	1.5	-1.4%
$h$ 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.0458	-0.0210	-0.0464	-0.0230	-0.0204	0.09596	-0.00064
70	-0.0896	-0.0073	-0.0245	-0.0134	-0.0111	0.06222	-0.00187

E. F. L = 7.50 ( $\pm 11.3^\circ$ )

\*\*\*1 = 2.30; \*\*\*2 = 23.94; \*\*\*3 = 1.20

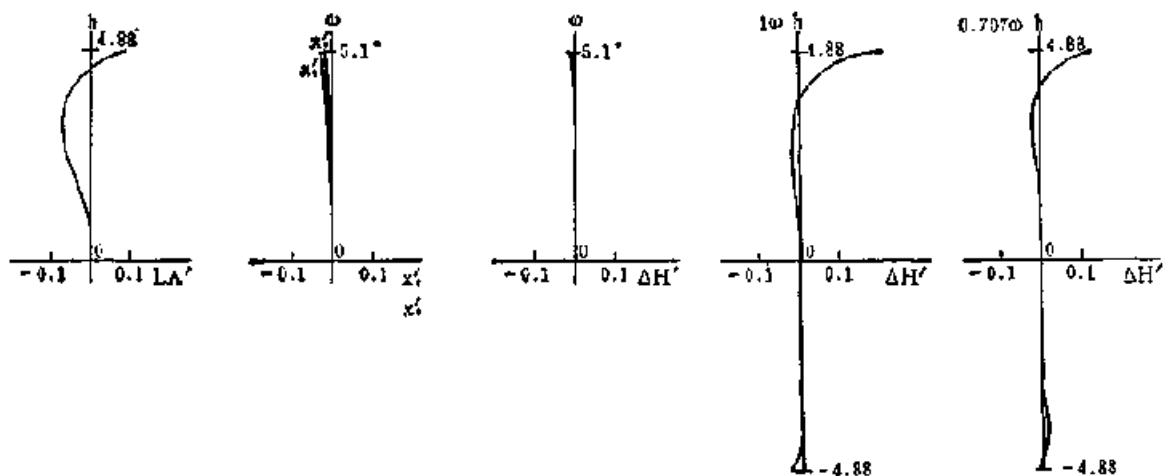


04-03-017-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.04402	-0.00965	-0.00052	-0.00273	-0.00242	1.5	-0.39%
$h$ 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.0939	-0.0043	-0.0237	-0.0185	-0.0052	0.09670	-0.00579
70	-0.0713	-0.0015	-0.0130	-0.0095	-0.0034	0.05748	-0.00585

E. F. L = 16.60 ( $\pm 5.1^\circ$ )

\*\*\*1 = 16.30; \*\*\*2 = 6.39; \*\*\*3 = 4.75



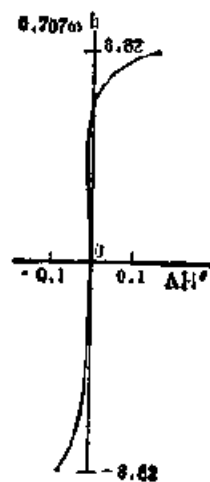
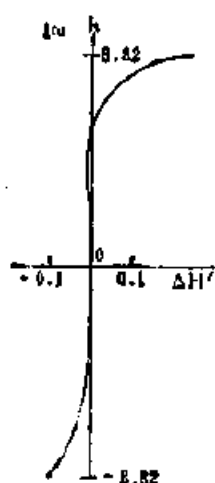
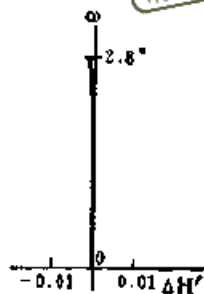
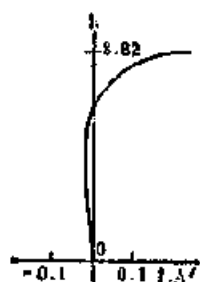
04-03-017-5

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02414	-0.00985	0.00129	-0.00276	-0.00045	1.5	-0.06%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x_2$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K'_{T0.7}$
100	0.2389	-0.0009	0.0141	-0.0066	0.0207	0.08145	-0.00907
70	-0.0099	-0.0003	0.0049	-0.0038	0.0087	0.01891	-0.00740

E. F. L = 30.00 ( $\pm 2.8^\circ$ )

\*\*\*1 = 23.30, \*\*\*2 = 2.94, \*\*\*3 = 1.20

超星浏览器提醒  
使用本复制品  
请尊重相关知识产权!

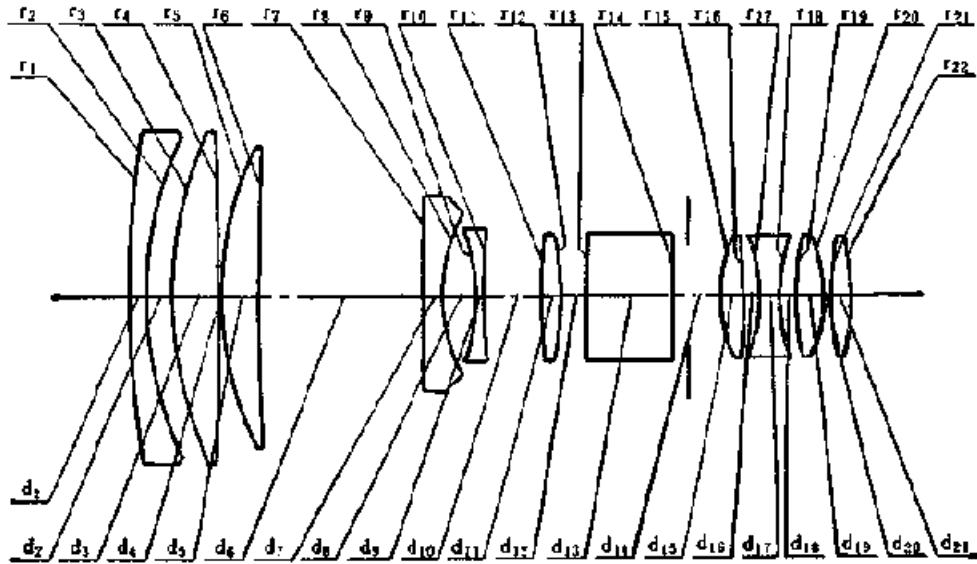


编号: 04-03-018

# 大孔径变焦距物镜

浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

E.F.L=10.40~30.00 B.F.L=15.22 FNo.=2 F.A.= $\pm 19.3^{\circ} \sim \pm 6.9^{\circ}$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	161.80	1.80	1.76107	27.4	12	-32.02	2.50		
2	38.01	2.50			13	$\infty$	9.00	1.51872	64.0
3	41.27	4.70	1.60994	56.4	14	$\infty$	4.80*		
4	-550.50	9.10			15	14.01	2.30	1.62509	52.9
5	33.99	3.80	1.62509	52.9	16	-190.50	1.80		
6	308.20	*** 1			17	-16.81	2.10	1.79180	25.9
7	700.00	2.00	1.60548	60.4	18	17.94	1.65		
8	17.11	*** 2			19	45.04	2.60	1.62286	60.1
9	-19.53	1.00	1.48914	70.2	20	-15.87	0.80		
10	120.02	*** 3			21	27.81	2.00	1.62286	60.1
11	224.40	1.80	1.79180	25.9	22	-31.06			

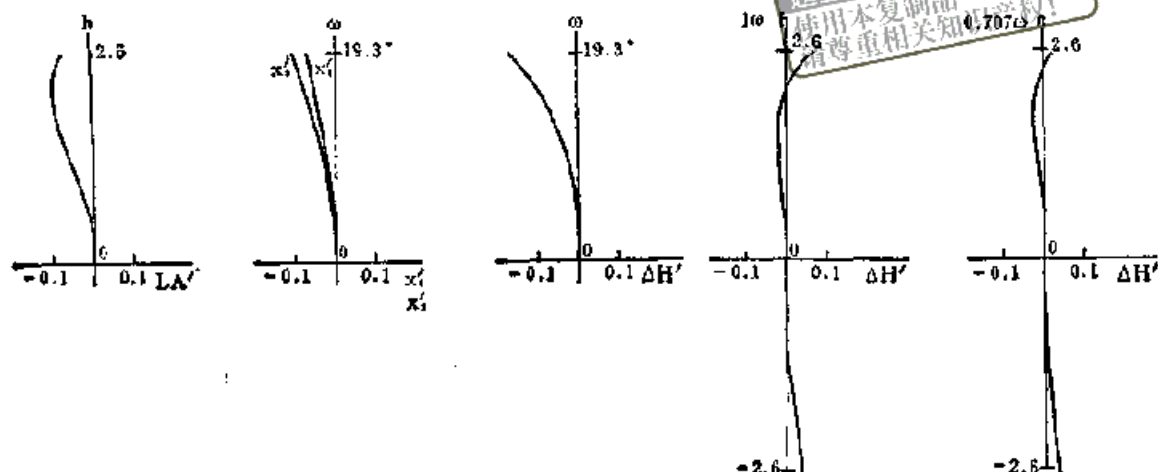
4.80\* = 1.80 + 3.00

04-03-018-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.0284	-0.0051	0.0023	-0.0171	-0.0788	3.6	-4.3%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.067	-0.176	-0.0715	-0.1102	0.0387	0.05387	0.00189
70	-0.081	-0.061	-0.0393	-0.0584	0.0191	0.03093	-0.00116

E. F. L = 10.40 ( $\pm 19.3^\circ$ )

\*\*\*1=1.11; \*\*\*2=15.24; \*\*\*3=9.85

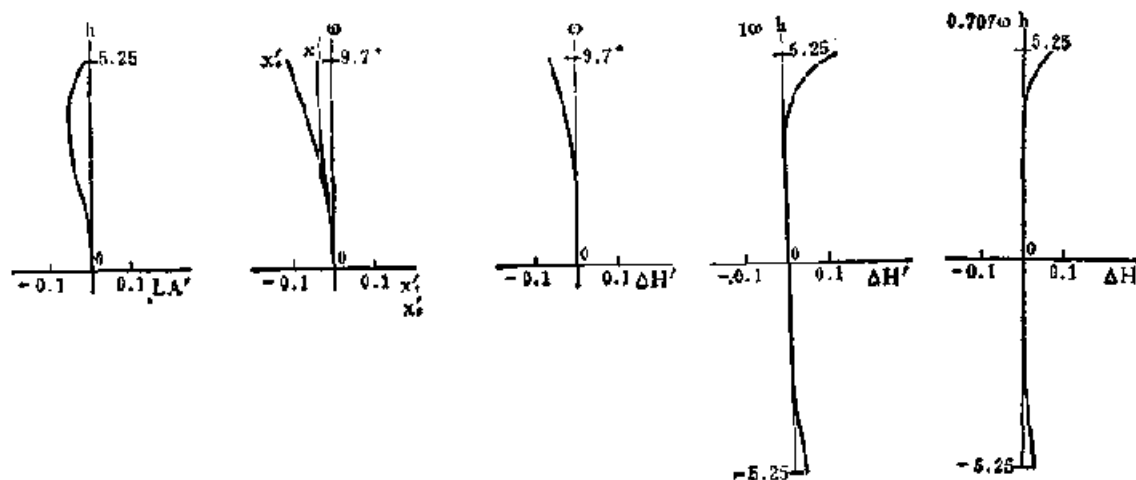


04-03-018-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02155	-0.00188	0.00280	-0.01843	-0.02586	3.6	-1.6%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.012	-0.0580	-0.0336	-0.1089	0.0753	0.07964	0.00397
70	-0.054	-0.0196	-0.0304	-0.0594	0.0290	0.04766	0.00516

E. F. L = 21.00 ( $\pm 9.7^\circ$ )

\*\*\*1=16.97; \*\*\*2=3.28; \*\*\*3=6.04



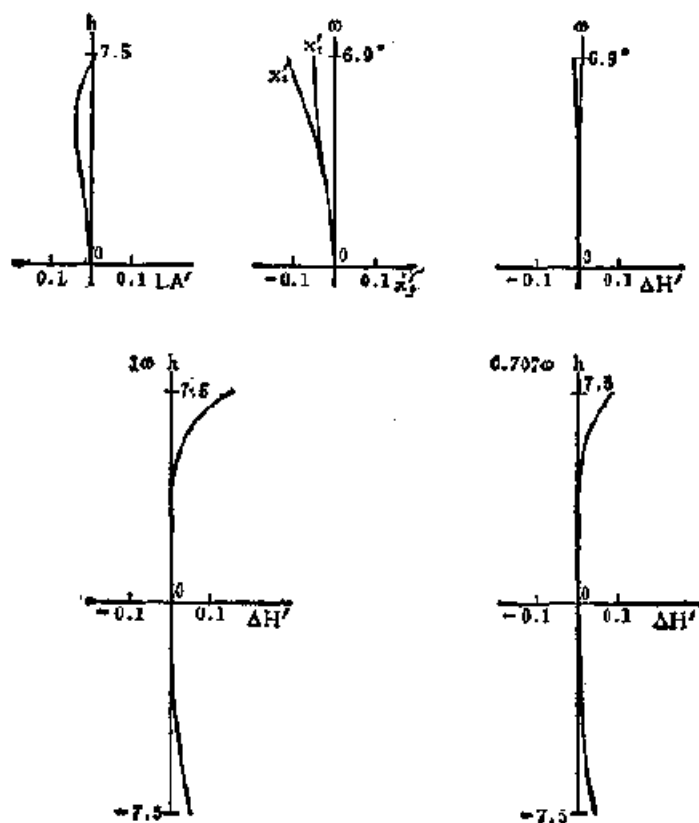
04-03-018-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1\omega)
	-0.01876	0.00137	0.00203	-0.01883	-0.00523	3.6	-0.39%
h 或 $\omega$ %	$\Delta A'$	$\Delta H'$	$x'_2$	$x'_4$	$x'_2 - x'_4$	$K'_{T1}$	$K'_{T0.7}$
100	0.0100	-0.0141	-0.0545	-0.1212	0.0667	0.1000	0.0187
70	-0.0411	-0.0045	-0.0392	-0.0640	0.0248	0.0638	0.0128

E. F. L = 30.00 ( $\pm 6.9^\circ$ )

\*\*\*1=22.84, \*\*\*2=2.27, \*\*\*3=1.19

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！

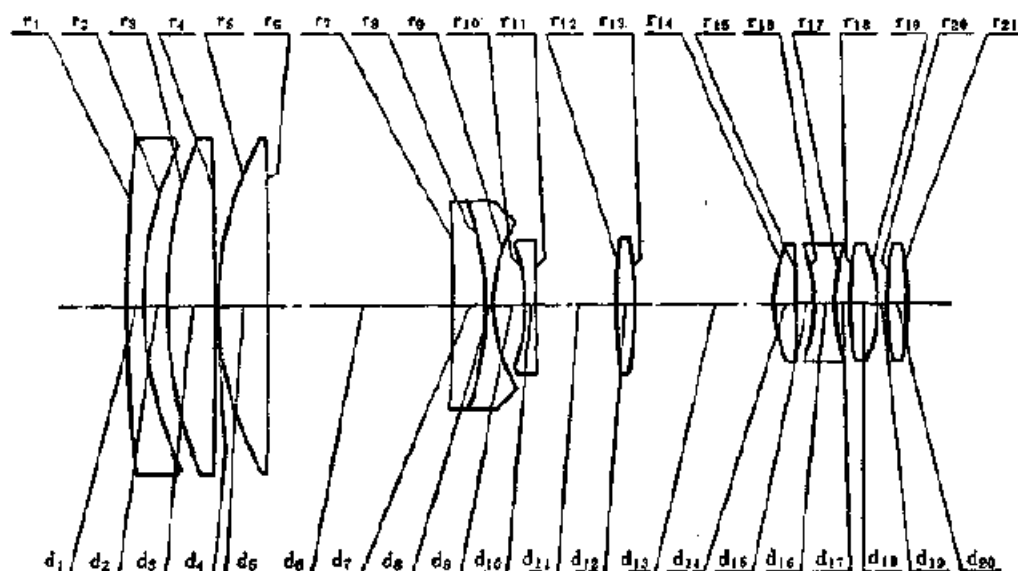


编号: 04-03-019

# 大孔径变焦距物镜

E.F.L=9.35~35.00 B.F.L=15.187 FNo.=2 F.A.= $\pm 21.4^{\circ}$ ~ $\pm 6.7^{\circ}$

超星阅读器  
使用本复制品  
请尊重相关知识产权!



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	224.80	1.80	1.76167	27.4	12	60.13	1.80	1.69416	31.0
2	37.67	2.50			13	-43.75	14.30*		
3	45.13	4.90	1.62543	58.8	14	14.01	2.30	1.62509	52.9
4	-477.50	0.10			15	-190.50	1.80		
5	35.32	5.20	1.62509	52.9	16	-16.81	2.10	1.79180	25.9
6	-1875.00	*** 1			17	17.94	1.54		
7	-286.80	3.10	1.76167	27.4	18	45.04	2.60	1.62286	60.1
8	-31.95	1.00	1.62286	60.1	19	-15.87	0.80		
9	16.33	*** 2			20	25.50	2.00	1.62286	60.1
10	-18.55	1.00	1.52583	51.2	21	-34.72			
11	428.00	*** 3							

14.30\* = 11.30 + 3.00

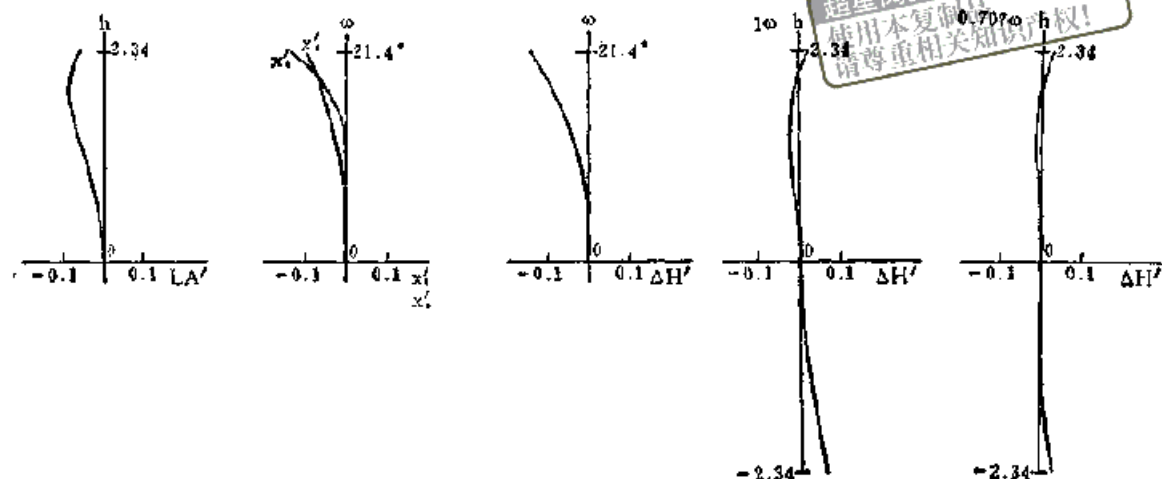


04-03-019-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02864	-0.06097	0.00744	-0.01574	-0.08294	3.67	-3.9%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{11}$	$K'_{10.7}$
100	-0.0569	-0.1456	-0.1388	-0.0948	-0.0440	0.04493	0.00717
70	-0.0792	-0.0587	-0.0139	-0.0419	0.0280	0.02956	0.00037

E. F. L = 9.35 ( $\pm 21.4^\circ$ )

\*\*\* 1 = 1.15; \*\*\* 2 = 17.02; \*\*\* 3 = 12.23

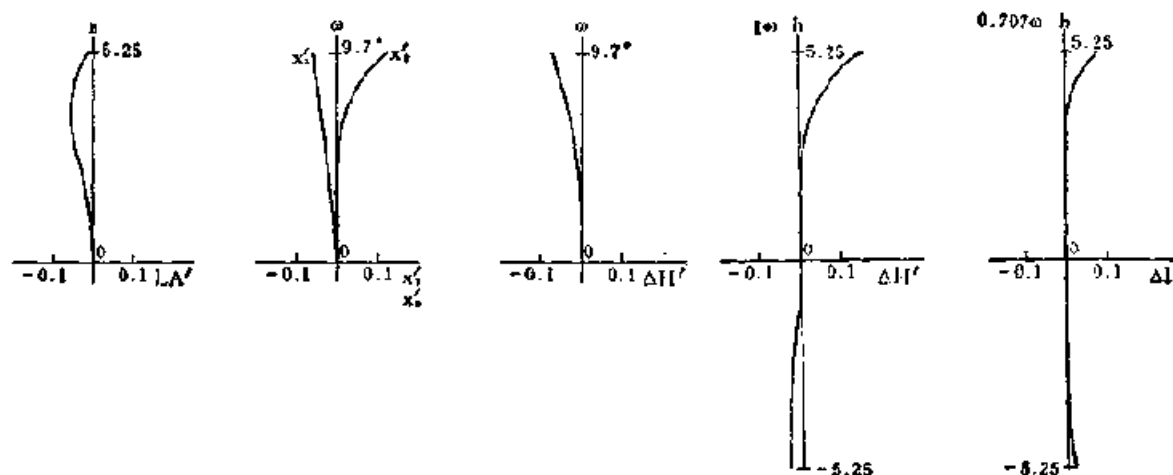


04-03-019-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02291	-0.06077	0.00500	-0.01699	-0.02887	3.0	-2.05%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{11}$	$K'_{10.7}$
100	-0.0126	-0.0739	0.1183	-0.0610	0.1793	0.0713	0.0045
70	-0.0586	-0.0230	0.0195	-0.0409	0.0604	0.0474	0.0051

E. F. L = 21.90 ( $\pm 9.7^\circ$ )

\*\*\* 1 = 18.93; \*\*\* 2 = 3.12; \*\*\* 3 = 8.35



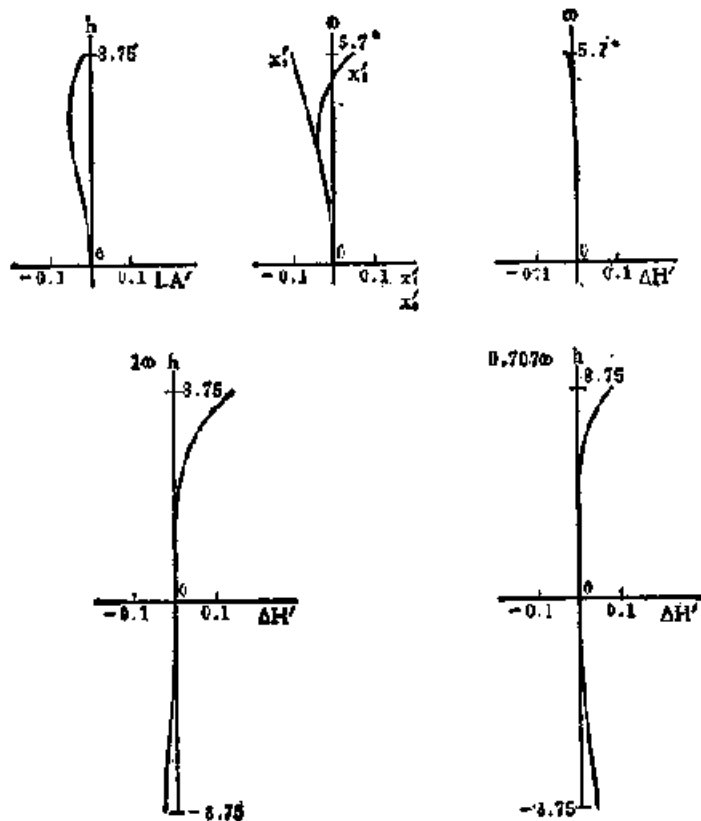
04-03-019-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02157	0.00520	-0.00132	-0.01644	0.00516	3.5	-0.14%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0122	-0.0051	0.0433	-0.0994	0.1432	0.05953	0.00029
70	-0.0533	0.0010	-0.0359	-0.0612	0.0253	0.06269	0.01323

E. F. L = 35.00 ( $\pm 5.7^\circ$ )

\*\*\* 1 = 26.36; \*\*\* 2 = 3.10; \*\*\* 3 = 0.95

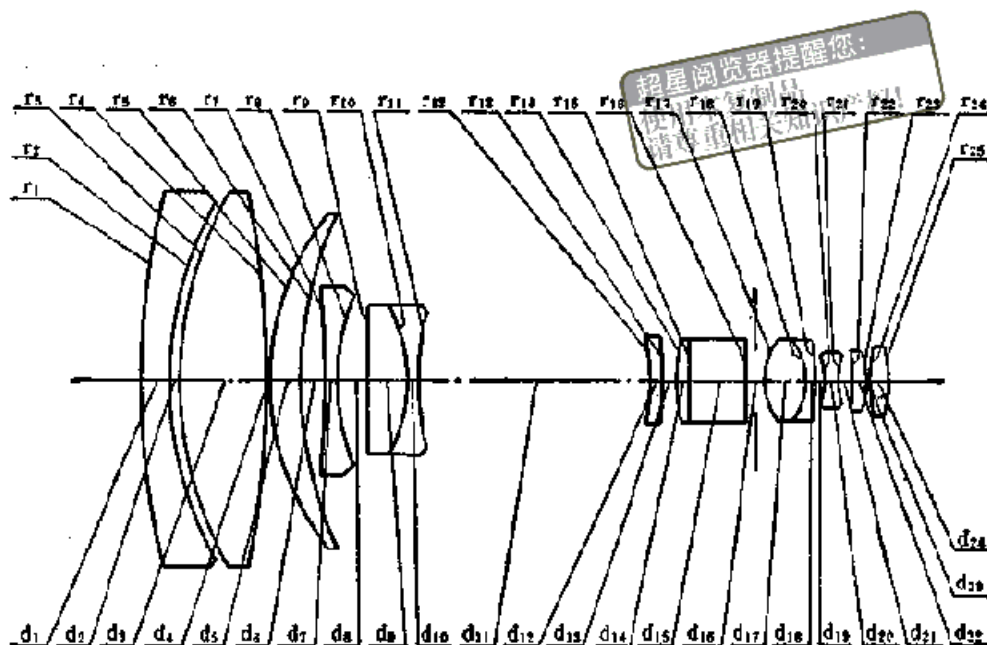
超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



编号: 04-03-020

## 变 焦 距 摄 影 物 镜

E.F.L=7.600~29.900 B.F.L=7.20 FNo.=1.8 F.A.= $\pm 22.3^{\circ} \sim \pm 5.7^{\circ}$



序号	r	d	$n_d$	$v$	序号	r	d	$n_d$	$v$
1	80.5840	3.000	1.80518	25.46	14	20.6830	1.300	1.71300	53.89
2	40.6790	1.000			15	$\infty$	6.400	1.60733	58.66
3	42.7300	10.000	1.56873	53.12	16	$\infty$	2.000*		
4	-97.8630	0.100			17	7.6076	4.600	1.71300	53.89
5	29.0050	3.500	1.61765	55.10	18	-7.6076	0.700	1.62374	47.04
6	42.4730	*** 1			19	-32.3150	1.100		
7	-118.8400	1.510	1.69100	54.80	20	-6.9730	1.600	1.80518	25.46
8	23.5440	3.200			21	9.3061	1.500		
9	805.8400	4.500	1.74077	27.70	22	-38.4050	1.700	1.78797	47.44
10	-17.4030	1.200	1.71300	53.89	23	-12.0570	0.050		
11	20.6400	*** 2			24	20.2410	2.000	1.78797	47.44
12	-24.4050	1.400	1.78443	43.77	25	-20.8330			
13	-63.0790	*** 3							

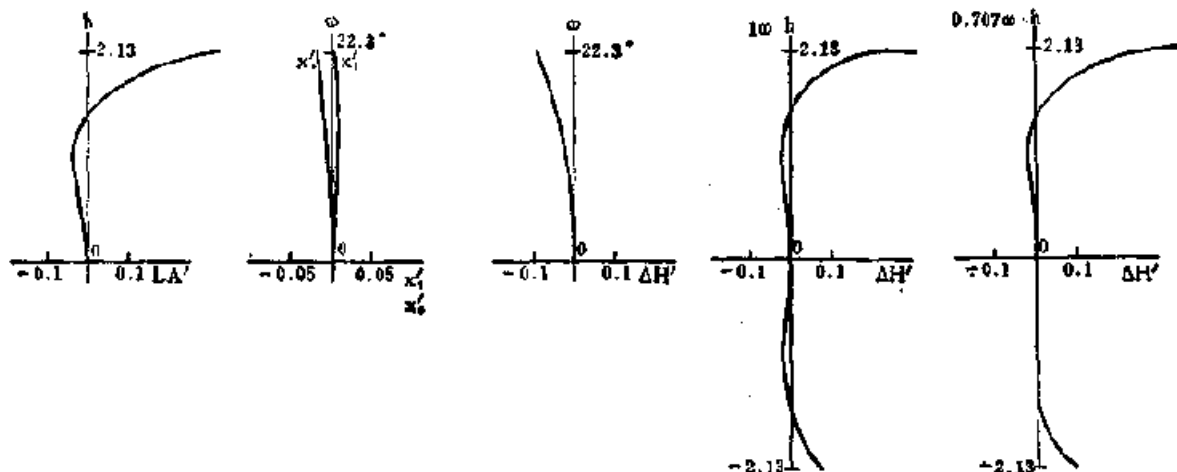
2.000\* = 1.000 + 1.000

04-03-020-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.03873	-0.00681	0.00887	-0.00665	-0.00420	3.1	-2.8%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.3342	-0.0682	0.0055	-0.0131	0.0186	0.2023	0.0010
70	-0.0021	-0.0385	0.0103	-0.0117	0.0220	0.2355	0.0087

E. F. L = 7.600 ( $\pm 22.3^\circ$ )

\*\*\* 1 = 2.510, \*\*\* 2 = 25.812, \*\*\* 3 = 1.500

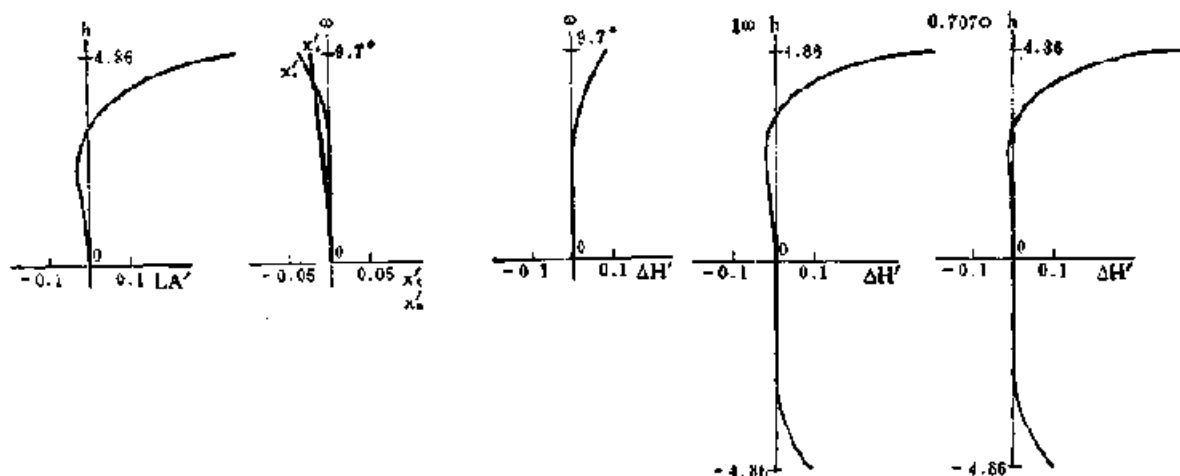


04-03-020-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.03327	-0.00224	0.00776	-0.00692	0.02084	3	3.1%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.3689	0.0932	-0.0358	-0.0216	-0.0142	0.2542	0.0078
70	0.0145	0.0221	-0.0020	-0.0151	0.0131	0.2638	0.0148

E. F. L = 17.500 ( $\pm 9.7^\circ$ )

\*\*\* 1 = 19.322, \*\*\* 2 = 8.995, \*\*\* 3 = 3.500

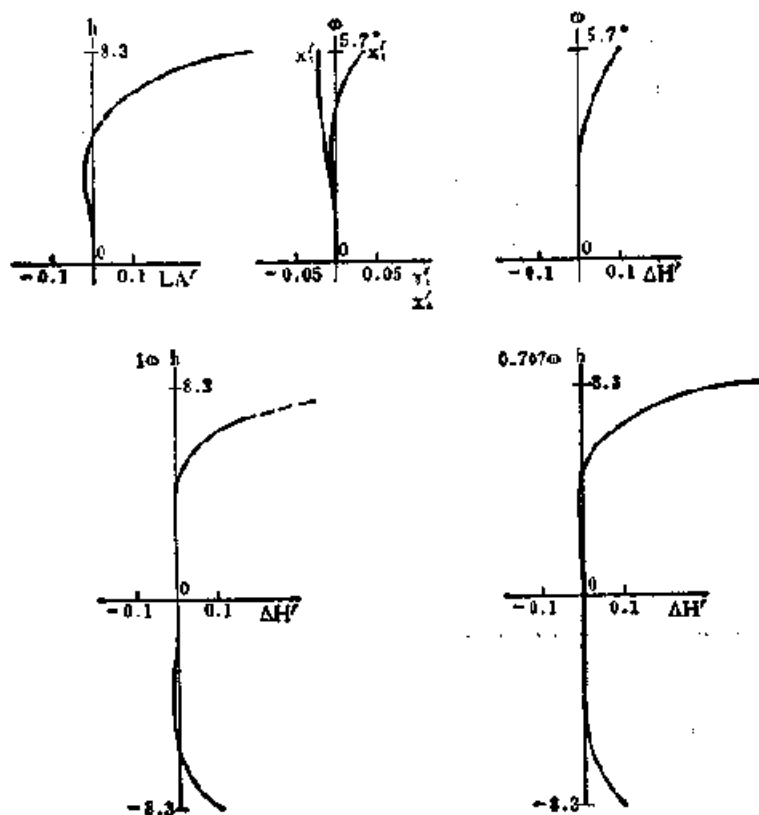


04-03-020-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.02390	-0.00318	0.00228	-0.00996	0.04645	0	3.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_3$	$K_{I1}$	$K_{I0.7}$
100	0.3985	0.1021	0.0391	-0.0187	0.0828	0.3753	0.0166
70	0.0291	0.0324	-0.0013	-0.0182	0.0769	0.2876	0.0229

E. F. L = 29.900 ( $\pm 5.7^\circ$ )

\*\*\* 1 = 26.219; \*\*\* 2 = 2.105; \*\*\* 3 = 1.500

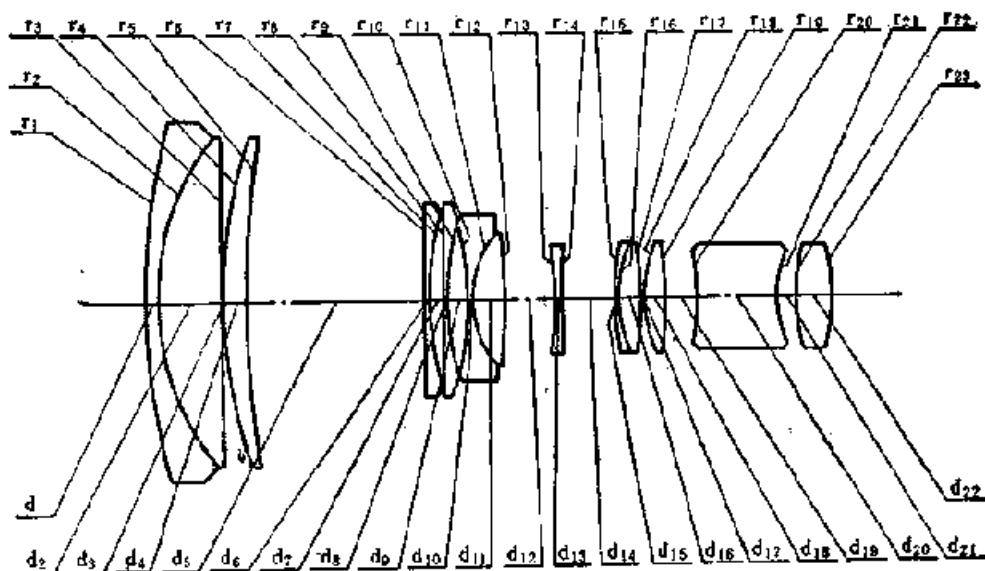


编号: 04-03-021

# 变 焦 距 镜 头

超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

E.F.L=1.0000~4.4444 B.F.L=1.4642 FNo.=2.5 F.A.= $\pm 27.5^{\circ} \sim \pm 6.2^{\circ}$



序号	r	d	$n_d$	v	序号	r	d	$n_d$	v
1	4.6924	0.0667	1.5889	31.1	13	-3.0732	0.0444	1.5688	56.0
2	1.7478	0.4444	1.6935	53.4	14	9.6259	*** 3		
3	$\infty$	0.0022			15	2.4029	0.0222	1.7283	28.3
4	3.3395	0.1556	1.6201	80.5	16	0.9098	0.1378	1.6433	47.8
5	9.0175	*** 1			17	-2.4029	0.0111		
6	$\infty$	0.0400	1.6385	55.5	18	0.9524	0.1442	1.6073	59.5
7	2.0666	0.0751			19	-13.4843	0.2307*		
8	$\infty$	0.0400	1.6385	55.5	20	-1.6858	0.5509	1.6477	33.9
9	2.0666	0.1316			21	0.7678	0.1164		
10	-2.0666	0.0267	1.6583	57.3	22	1.3423	0.2444	1.6237	47.0
11	0.6651	0.2289	1.6477	33.9	23	-1.3423			
12	-10.1419	*** 2							

\* 0.2307° = 0.1000 + 0.1307

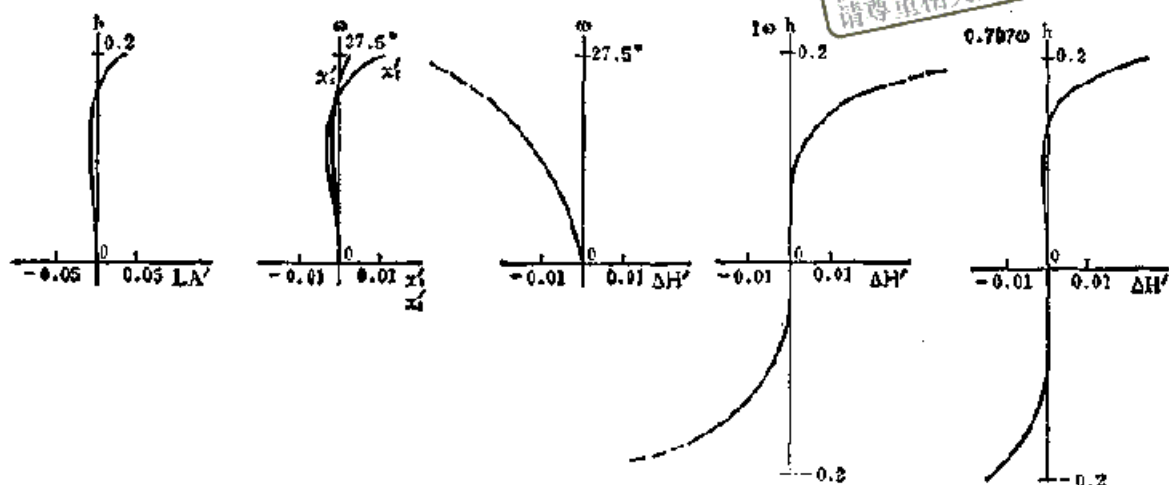
04-03-021-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00328	-0.00247	-0.00174	-0.00022	-0.01774	0.52	-10.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.03217	-0.05414	0.01183	0.00238	0.00945	-0.03289	-0.00108
70	-0.00691	-0.01774	-0.00258	-0.00163	-0.00095	0.00482	-0.00135

E. F. L = 1.0000 ( $\pm 27.5^\circ$ )

\*\*\* 1 = 0.0097; \*\*\* 2 = 1.8414; \*\*\* 3 = 0.0889

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！

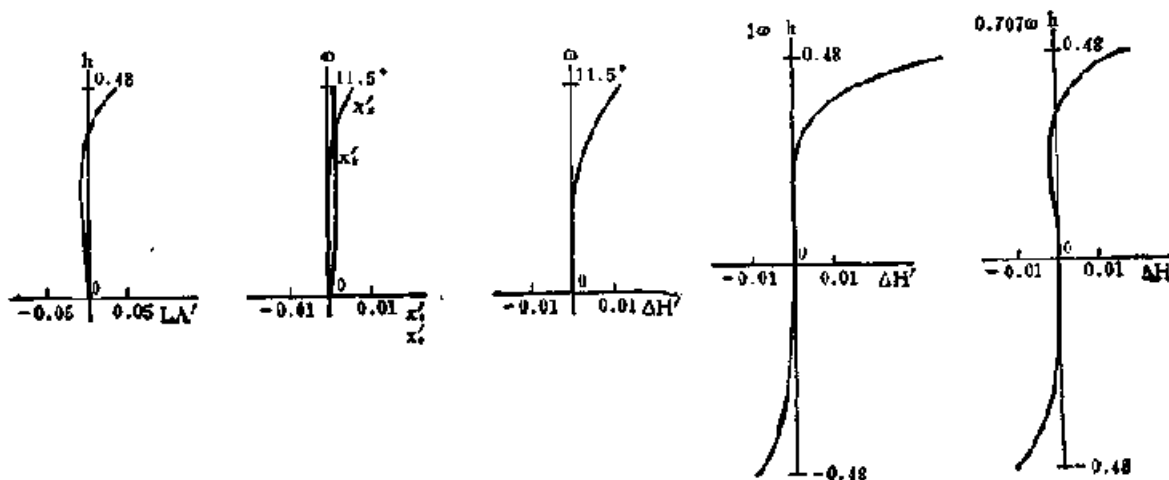


04-03-021-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.003257	-0.000873	0.000619	-0.000235	0.003226	0.48	2.6%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.03630	0.01279	0.001145	0.005808	-0.004663	0.01488	0.00195
70	-0.00602	0.00366	0.002030	0.001019	0.001020	0.00366	-0.00124

E. F. L = 2.3876 ( $\pm 11.5^\circ$ )

\*\*\* 1 = 1.2155; \*\*\* 2 = 0.8521; \*\*\* 3 = 0.3724

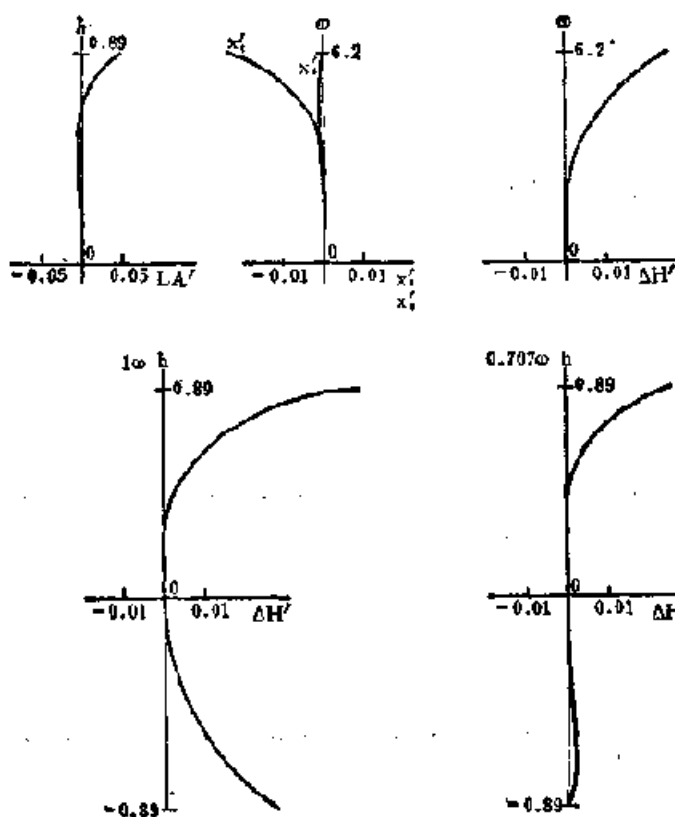


04-03-021-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	超星提醒您: 使用本复制品时, 请向本馆大图书馆	QP(1.0)
	-0.002405	-0.000233	0.000189	-0.000235	0.000252	0.48	5.2%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.04979	0.0254	-0.02395	0.00039	-0.02434	0.03727	0.01105
70	-0.00014	0.0089	-0.00310	-0.00023	-0.00287	0.01318	0.00304

E. F. L = 4.4444 ( $\pm 6.2^\circ$ )

\*\*\* 1 = 1.7875, \*\*\* 2 = 0.0637, \*\*\* 3 = 0.0889



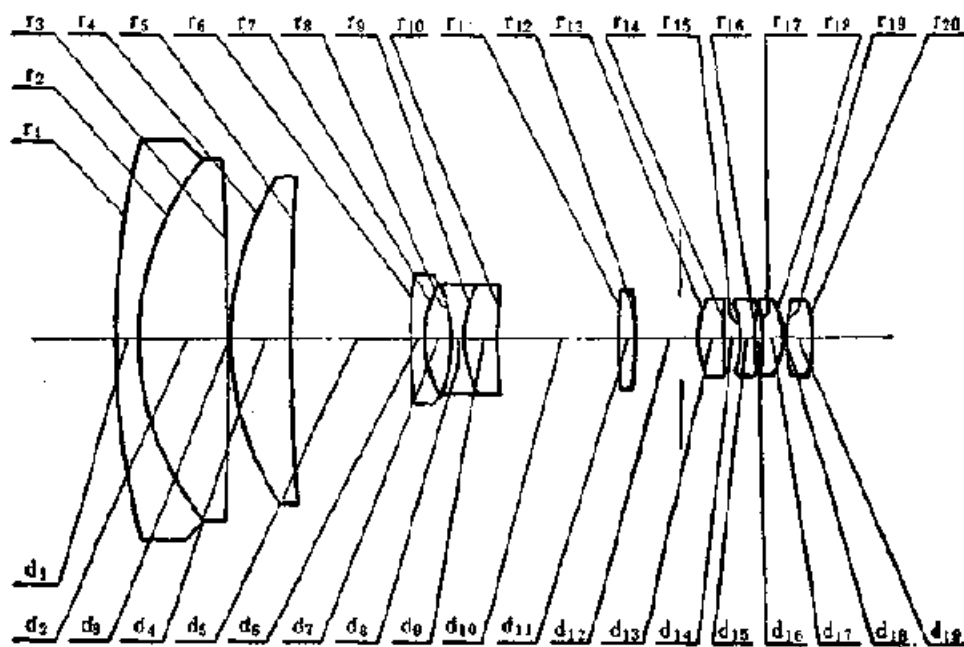


编号: 04-03-022

# 变 焦 距 镜 头

超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

E.F.L=0.3250~1.2770 B.F.L=0.4298 FNo.=1.8 F.A.= $\pm 17.6^{\circ} \sim \pm 4.5^{\circ}$



序号	r	d	nD	v	序号	r	d	nD	v
1	3.6500	0.100	1.751	27.7	11	1.9000	0.085	1.620	60.3
2	1.3100	0.425	1.620	60.3	12	-2.8250	0.280*		
3	-15.4000	0.005			13	0.3900	0.126	1.697	56.2
4	1.4650	0.270	1.620	60.3	14	$\infty$	0.080		
5	16.7000	*** 1			15	-0.4600	0.050	1.751	27.7
6	5.0484	0.060	1.617	55.0	16	0.4600	0.042		
7	0.5060	0.120			17	-0.9190	0.105	1.651	55.5
8	-0.6740	0.055	1.620	60.3	18	-0.3720	0.007		
9	0.5680	0.150	1.751	27.7	19	0.7019	0.120	1.620	60.3
10	10.7610	*** 2			20	-0.7019			

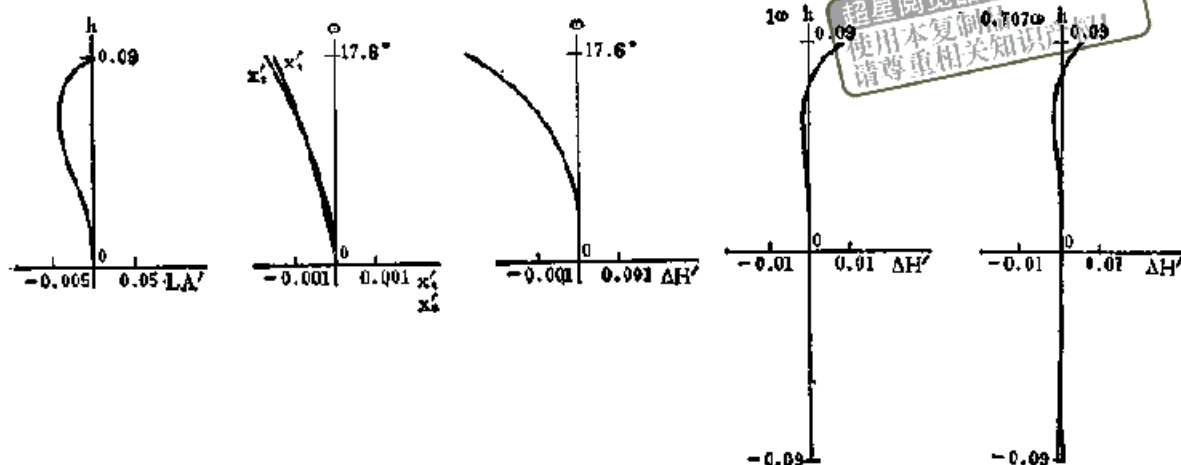
$$0.280^* = 0.200 + 0.080$$

04-03-022-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.002052	-0.000685	0.000941	-0.000298	-0.001243	0.10	-2.67%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.00037	-0.00275	-0.00150	-0.00166	0.00016	0.00414	-0.00035
70	-0.00417	-0.00089	-0.00097	-0.00094	-0.00003	0.00239	-0.00045

E. F. L = 0.3250 ( $\pm 17.6^\circ$ )

\*\*\* 1 = 0.0509; \*\*\* 2 = 0.8089

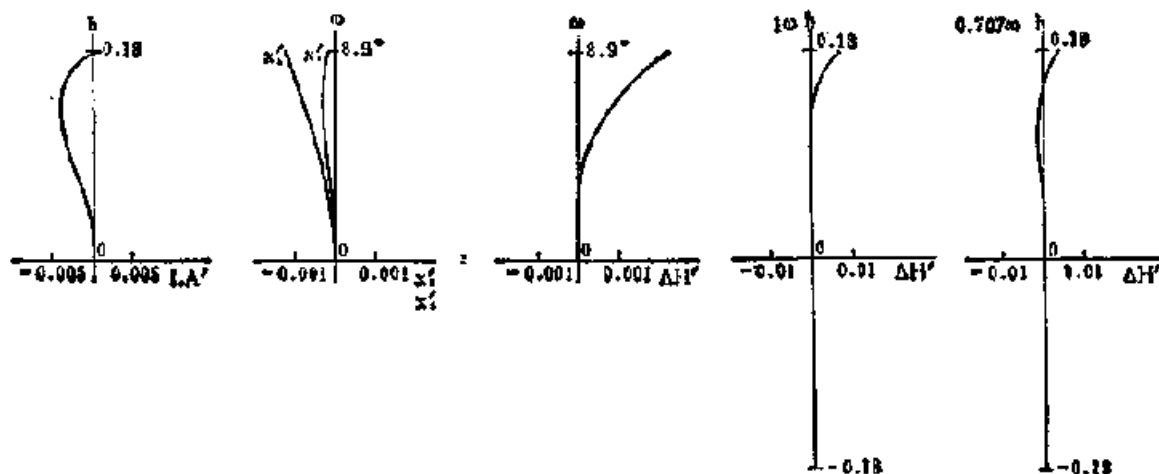


04-03-022-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.002100	-0.000303	0.000287	-0.000310	0.001004	0.1	2.24%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K_{T1}$	$K_{T0.7}$
100	0.00095	0.00225	-0.00017	-0.00124	0.00107	0.00288	-0.00049
70	-0.00411	0.00073	-0.00034	-0.00074	0.00040	0.00224	-0.00046

E. F. L = 0.6440 ( $\pm 8.9^\circ$ )

\*\*\* 1 = 0.5550; \*\*\* 2 = 0.5547



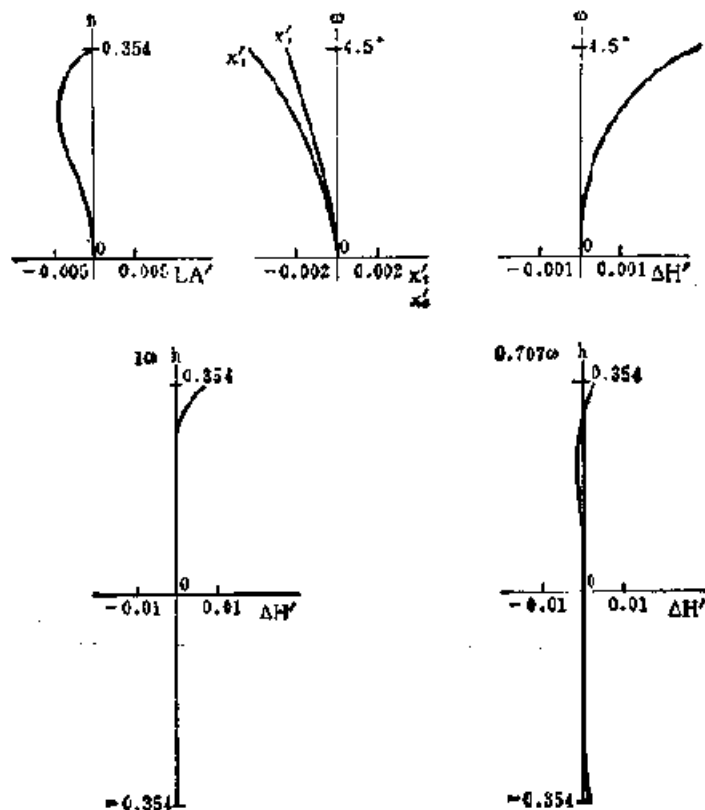
04-03-022-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.002045	-0.000477	-0.000045	-0.000306	0.001528	0.1	3.01%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x_t$	$x_d$	$x_t - x_d$	$K_{T1}$	$K_{T0.7}$
100	-0.00069	0.00300	-0.00450	-0.00253	-0.00197	0.00347	-0.00027
70	-0.00423	0.00100	-0.00213	-0.00131	-0.00082	0.00265	-0.00024

E.F.L = 1.2770 ( $\pm 4.5^\circ$ )

\*\*\* 1 = 0.8100, \*\*\* 2 = 0.0503

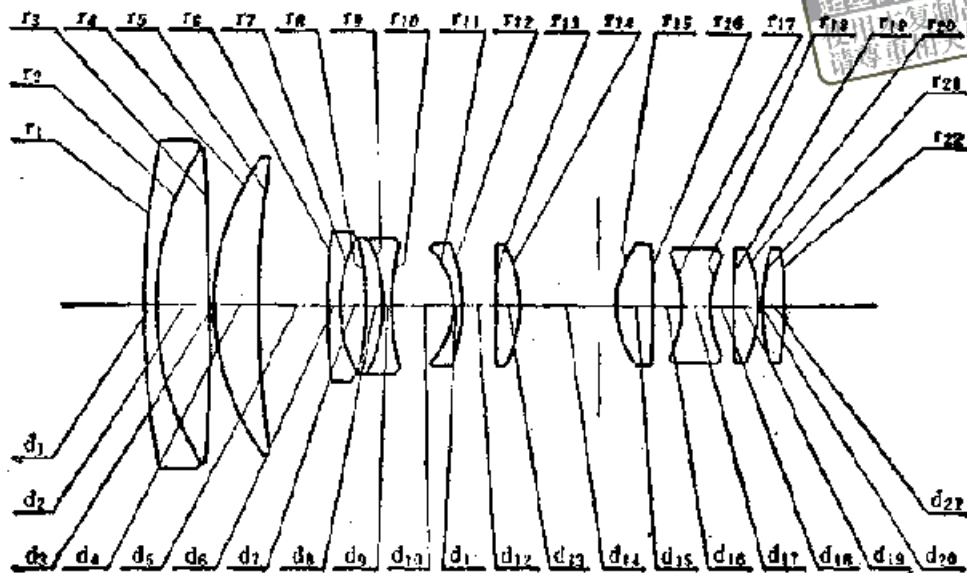
超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



编号: 04-03-023

# 变 焦 距 镜 头

E.F.L=9.0~30.0 B.F.L=7.909 FNo.=2.8 F.A.= $\pm 22.3^{\circ} \sim \pm 6.7^{\circ}$



序号	r	d	n	v	序号	r	d	n	v
1	76.025	1.14	1.78472	25.7	12	-16.451	*** 3		
2	27.438	5.02	1.71300	53.9	13	$\infty$	2.10	1.71300	53.9
3	-379.080	0.10			14	-11.905	0.00*		
4	22.850	4.25	1.64000	60.2	15	9.269	3.43	1.74330	49.2
5	115.012	*** 3			16	-276.780	2.52		
6	115.000	0.86	1.62041	60.3	17	-11.104	2.87	1.78472	25.7
7	12.941	2.32			18	11.104	2.04		
8	-29.426	1.81	1.78472	25.7	19	255.200	2.23	1.62041	60.3
9	-13.148	0.34	1.64000	60.2	20	-12.686	0.10		
10	22.105	*** 2			21	19.386	2.00	1.62041	60.3
11	-7.446	0.83	1.67270	32.2	22	-32.200			

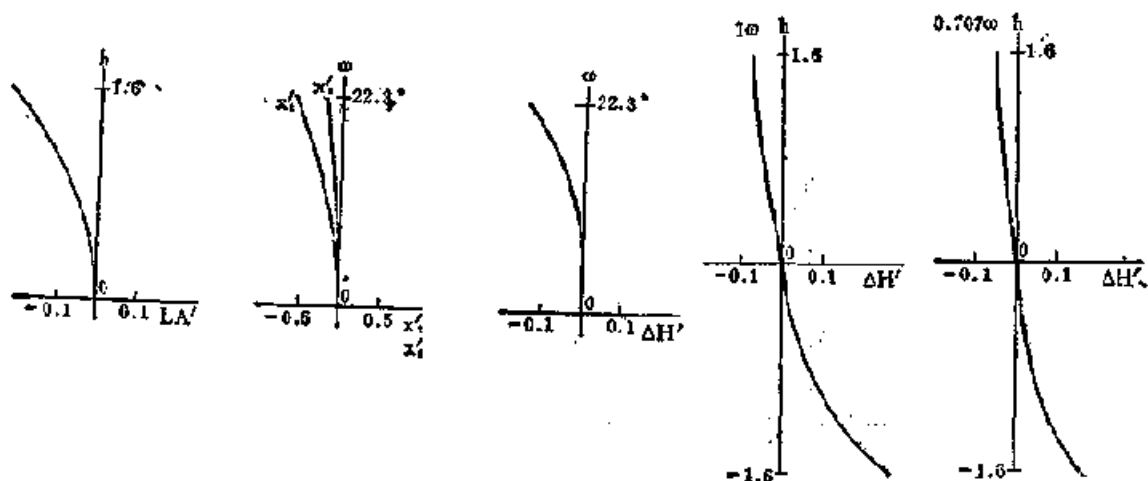
0.00\* = 0.00 + 3.00

04-03-023-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1\omega)
	-0.01582	0.00272	-0.01221	-0.00062	-0.04259	3.7	-3.8%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K\tau_1$	$K\tau_{0.7}$
100	-0.219	-0.143	-0.594	-0.165	-0.429	0.0900	0.0288
70	-0.117	-0.040	-0.300	-0.095	-0.205	0.0569	0.0168

E. F. L = 9.0 ( $\pm 22.3^\circ$ )

\*\*\* 1 = 0.038; \*\*\* 2 = 12.061; \*\*\* 3 = 3.210

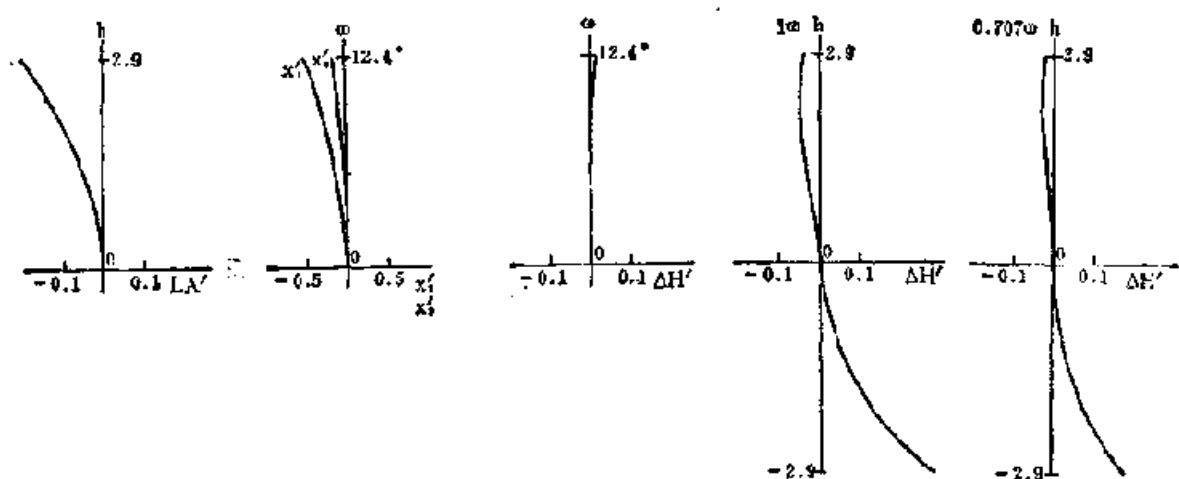


04-03-023-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1\omega)
	-0.01513	0.00820	-0.01417	-0.00035	0.01041	3.6	0.55%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K\tau_1$	$K\tau_{0.7}$
100	-0.263	0.0200	-0.514	-0.137	-0.377	0.1206	0.0384
70	-0.170	0.0037	-0.253	-0.082	-0.161	0.0774	0.0253

E. F. L = 16.2 ( $\pm 12.4^\circ$ )

\*\*\* 1 = 6.541; \*\*\* 2 = 5.556; \*\*\* 3 = 3.262

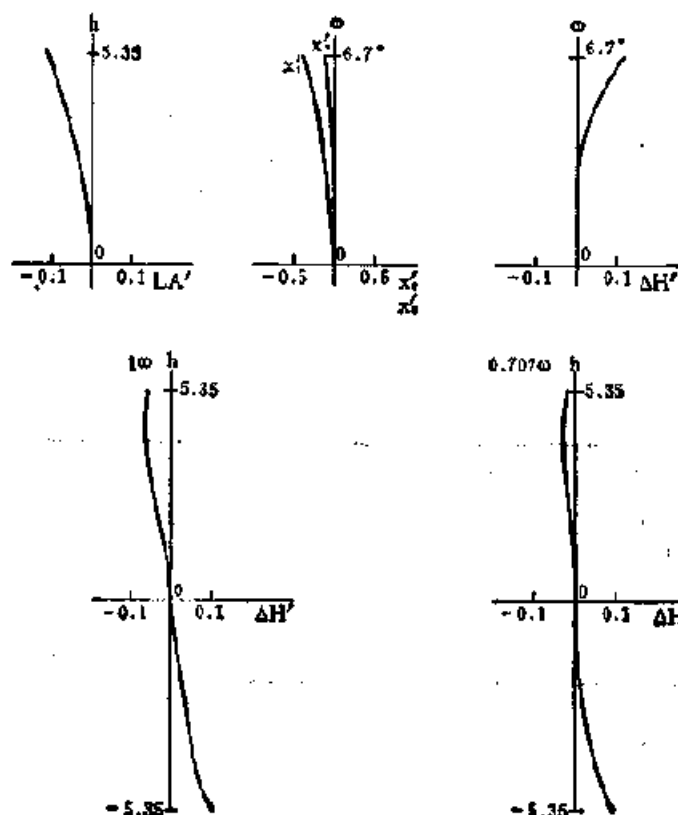


04-03-025-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00932	0.00105	-0.00851	-0.00065	0.03292	3.5	3.06%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	K $\tau_1$	K $\tau_2$
100	-0.111	0.108	-0.412	-0.107	-0.305	0.02778	-0.00036
70	-0.065	0.033	-0.201	-0.063	-0.138	0.02716	0.00367

E. F. L = 30.0 ( $\pm 6.7^\circ$ )

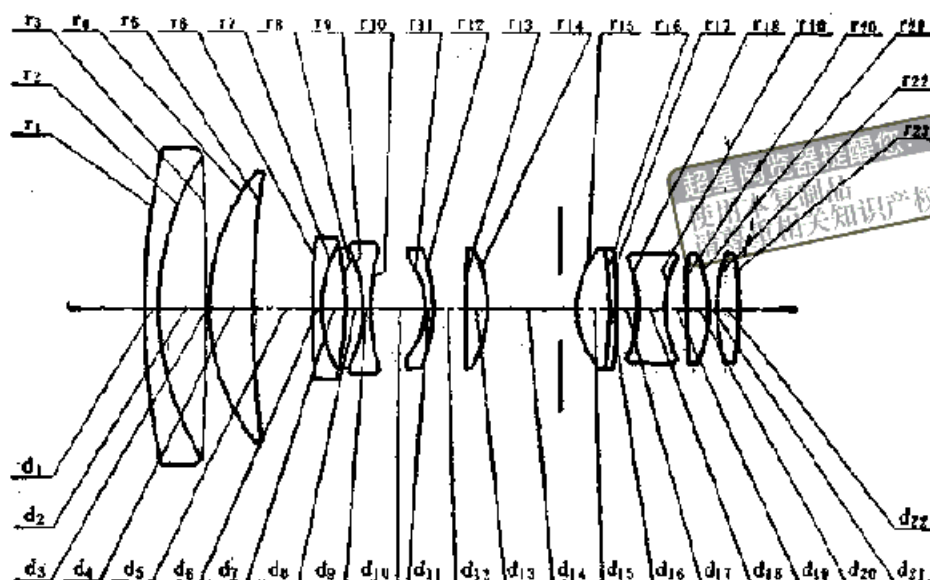
\*\*\* 1 = 11.421, \*\*\* 2 = 2.782, \*\*\* 3 = 1.156



编号: 04-03-024

# 变 焦 距 镜 头

E.F.L=9.0~80.4 B.F.L=9.071 FNo.=3.6 F.A.= $\pm 22.8^{\circ} \sim \pm 6.7^{\circ}$



序号	r	d	n	v	序号	r	d	n	v
1	76.025	1.14	1.78472	25.7	13	$\infty$	2.10	1.71300	52.0
2	27.438	5.02	1.71300	53.7	14	-12.905	9.00*		
3	-379.060	0.10			15	9.269	3.43	1.74330	49.2
4	22.850	4.25	1.64000	60.2	16	-40.000	0.80	1.74400	44.9
5	115.012	*** 1			17	-276.780	2.14		
6	115.000	0.86	1.62041	60.3	18	-11.104	2.87	1.78172	25.7
7	12.941	2.32			19	11.104	2.04		
8	-29.426	1.81	1.78472	25.7	20	255.200	2.23	1.62041	60.3
9	-13.128	0.84	1.64000	60.2	21	-12.686	0.60		
10	22.105	*** 2			22	19.386	2.20	1.62041	60.3
11	-7.446	0.83	1.67270	32.2	23	-31.724			
12	-16.451	*** 3							

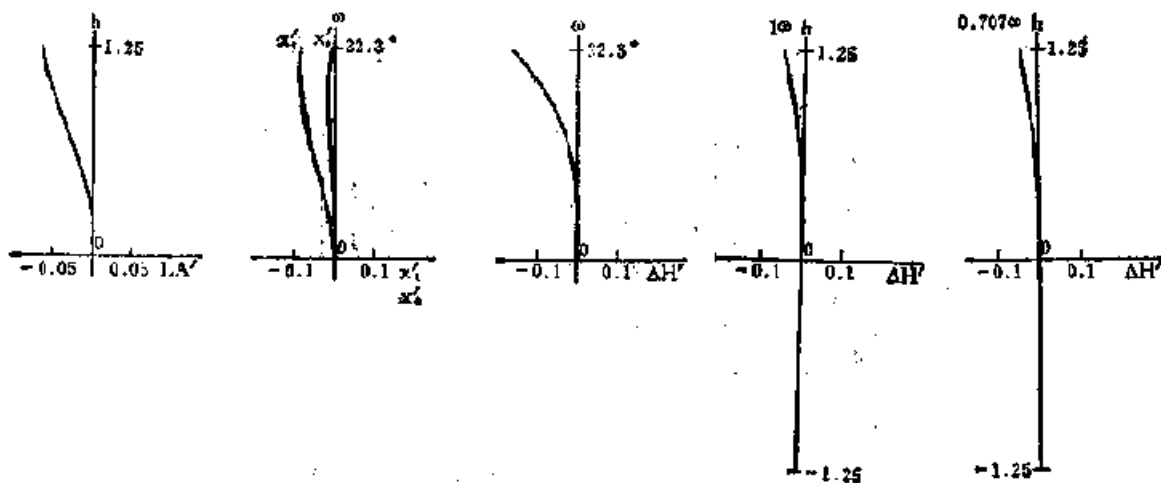
9.00\* = 6.00 + 3.00

04-03-024-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00360	-0.00344	-0.00209	0.00019	-0.03845	3.7	-4.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.067	-0.164	-0.0856	-0.0042	-0.0814	-0.0266	-0.0176
50	-0.041	-0.056	-0.0725	-0.0179	-0.0546	-0.0165	-0.0122

E. F. L = 9.1 ( $\pm 22.3^\circ$ )

\*\*\* 1 = 0.933; \*\*\* 2 = 12.061; \*\*\* 3 = 3.210

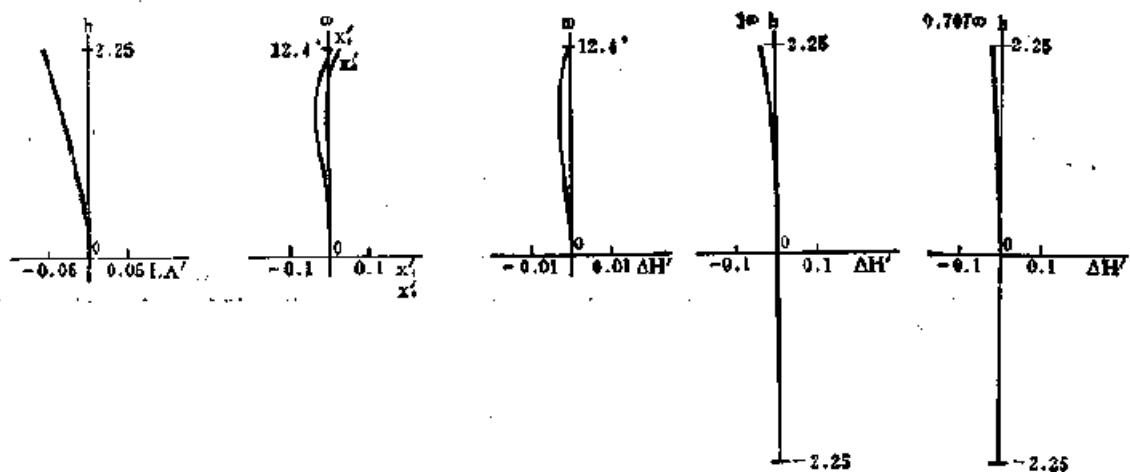


04-03-024-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00319	-0.00152	-0.00052	0.00019	-0.00232	3.6	0.02%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.056	0.0006	0.0040	0.0271	-0.0231	-0.01671	-0.01322
50	-0.035	-0.0025	-0.0338	-0.0046	-0.0292	-0.00983	-0.00815

E. F. L = 16.4 ( $\pm 12.4^\circ$ )

\*\*\* 1 = 6.641; \*\*\* 2 = 5.556; \*\*\* 3 = 3.262



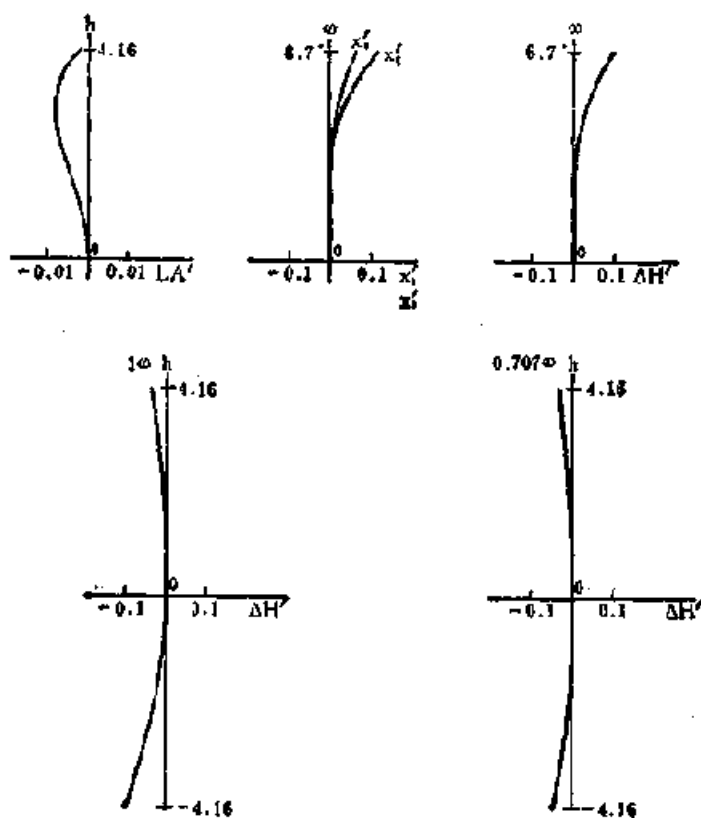


04-03-024-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00112	-0.00448	0.00125	0.00019	0.01837	3.6	2.5%
h 或 $\omega$ %	LA'	$\Delta H'$	$x_1'$	$x_2'$	$x_3' + x_4'$	$K_{T1}$	$K_{Te.7}$
100	-0.0017	0.0838	0.1121	0.0593	0.0528	-0.05978	-0.03382
70	-0.0084	0.0275	0.0285	0.0147	0.0138	-0.03500	-0.01975

E. F. L = 30.4 ( $\pm 6.7$ )

\*\*\* 1 = 11.421, \*\*\* 2 = 2.782, \*\*\* 3 = 1.156

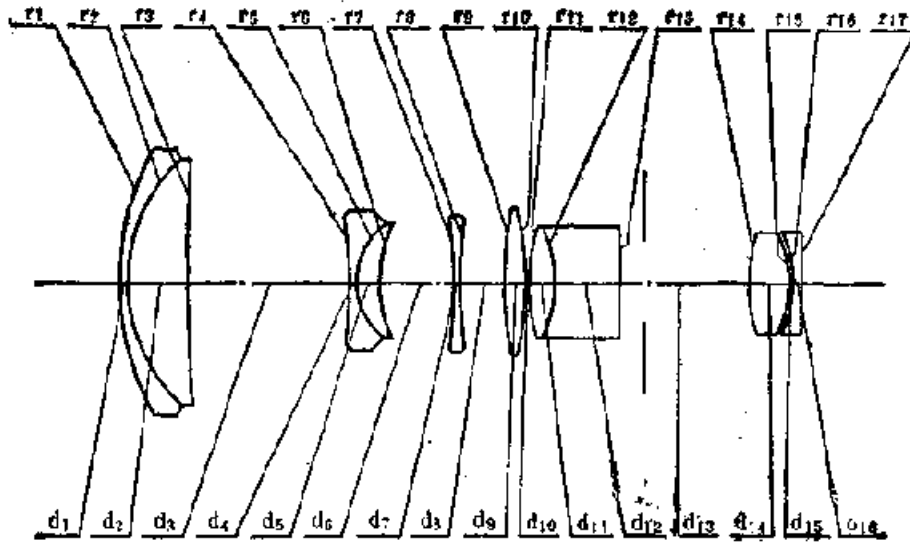


编号: 04-03-025

# 变焦距摄影物镜

E.F.L=1.000~4.060 B.F.L=0.830 FNo.=1.8 F.A.= $\pm 17.2^{\circ} \sim \pm 4.3^{\circ}$

浏览器提醒您：  
使用本复制品  
请尊重相关知识版权！



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	2.4770	0.080	1.7618	28.5	10	-2.8300	0.010		
2	1.5150	0.545	1.6237	47.0	11	1.7250	0.250	1.5725	57.5
3	26.3760	*** 1			12	-1.1404	0.600	1.7174	29.5
4	-4.0140	0.050	1.6988	55.6	13	$\infty$	1.200*		
5	0.5440	0.218	1.8061	40.7	14	1.3680	0.370	1.6074	56.7
6	1.2215	*** 2			15	-1.0500	0.010		
7	-6.4220	0.080	1.6385	55.5	16	-0.9880	0.090	1.5927	35.4
8	6.4220	*** 3			17	-50.8400			
9	3.2970	0.200	1.6433	47.8					

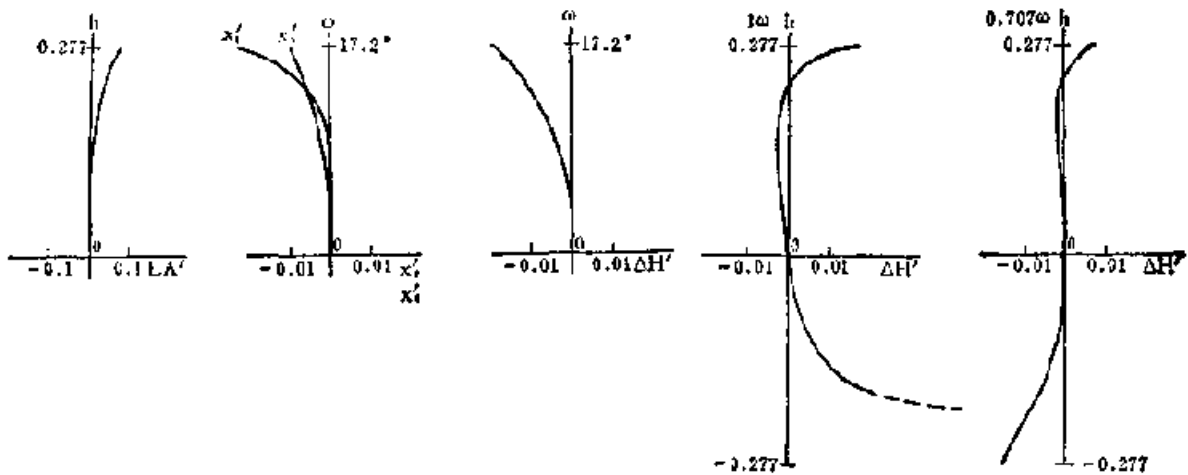
1.200\* = 0.100 + 1.100

04-03-025-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\infty$ )
	0.00355	-0.00273	0.00021	-0.00187	-0.01076	0.31	-0.1%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x_2$	$x'_1 - x_2$	$K_{T1}$	$K_{T0.7}$
100	0.0669	-0.0192	-0.0231	-0.0099	-0.0132	-0.5443	0.0136
70	0.0201	-0.0071	-0.0017	-0.0037	0.0020	-0.0640	-0.0045

E. F. L = 1.015 ( $\pm 17.2^\circ$ )

\*\*\* 1 = 0.01561; \*\*\* 2 = 2.49315; \*\*\* 3 = 0.08000

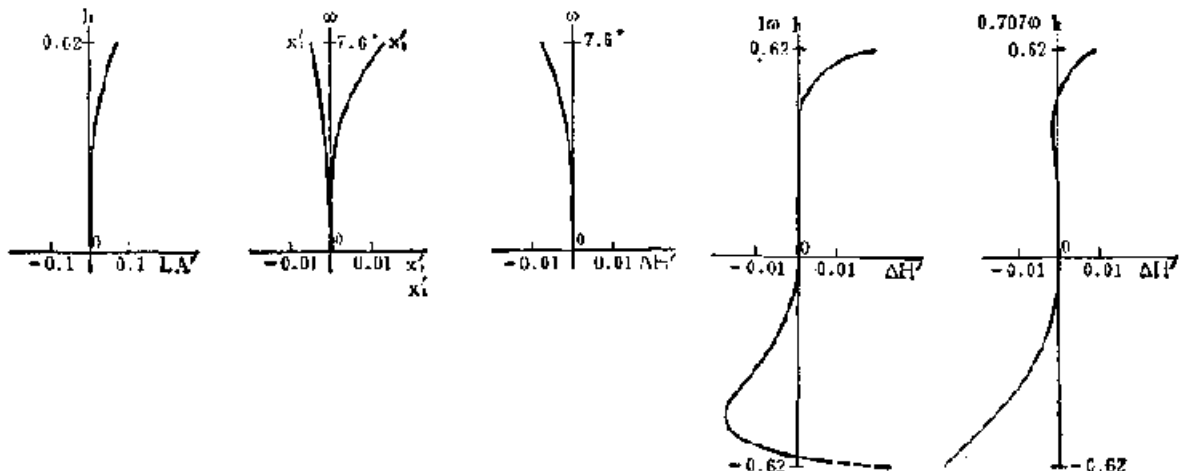


04-03-025-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\infty$ )
	0.00545	-0.00324	0.00080	-0.00191	-0.00375	0.31	-2.4%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x_2$	$x'_1 - x_2$	$K_{T1}$	$K_{T0.7}$
100	0.0701	-0.0075	0.0129	-0.0048	0.0177	0.0417	-0.0084
70	0.0248	-0.0025	0.0042	-0.0030	0.0072	-0.0095	-0.0071

E. F. L = 2.278 ( $\pm 7.6^\circ$ )

\*\*\* 1 = 1.515610; \*\*\* 2 = 0.680722; \*\*\* 3 = 0.392930

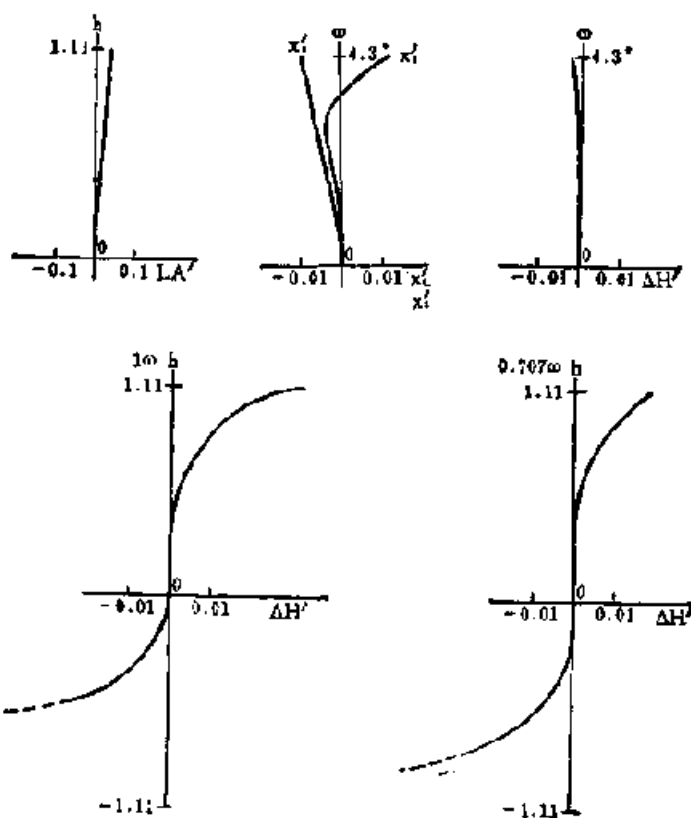


04-03-025-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	Hf	QP(1 $\omega$ )
	0.00684	0.00033	-0.00047	-0.00193	-0.00062	0.31	-0.78%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{1f}$	$K_{Tf}$
100	0.0368	-0.0024	0.0122	-0.0094	0.0216	-0.6281	-0.0328
70	0.0247	-0.0006	-0.0036	-0.0066	0.0030	-0.4958	-0.0101

E. P. L = 4.060 ( $\pm 4.3^\circ$ )

\*\*\* 1 = 2.26561, \*\*\* 2 = 0.24315, \*\*\* 3 = 0.08000

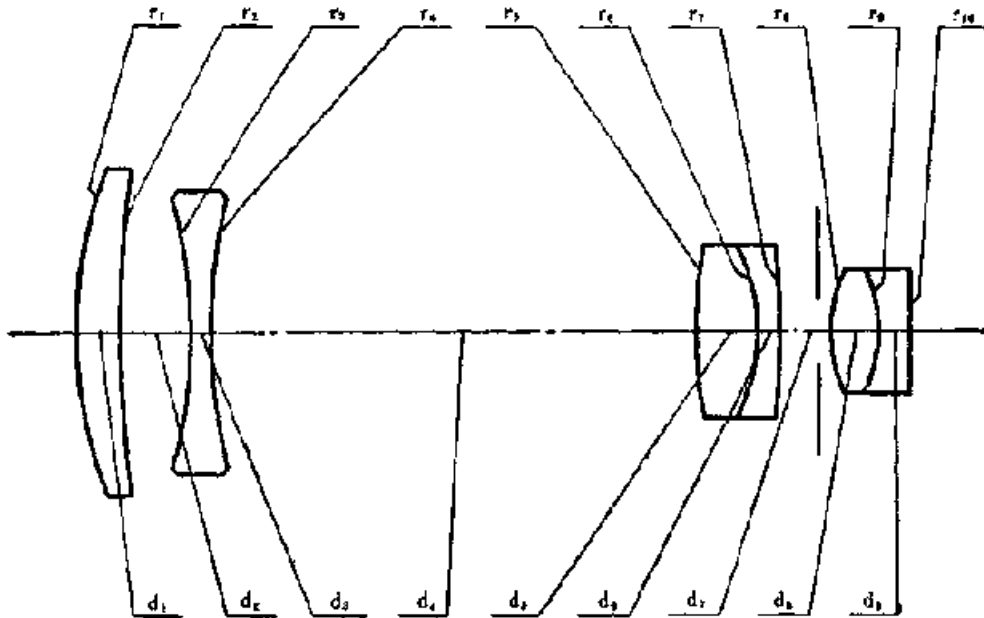


编号: 04-03-026

超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

## 可动透镜作线性差动式移动的变焦距镜头

E.F.L=12.00~32.30 B.F.L=12.0 FNo. = 2 F.A. =  $\pm 14.8^\circ \sim \pm 5.4^\circ$



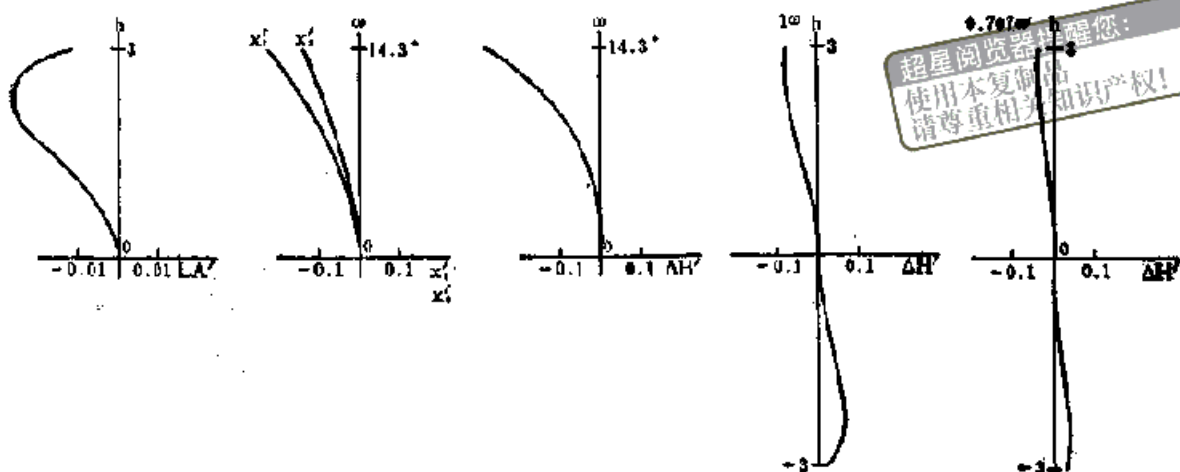
序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	35.650	3.840	1.620	60.3	6	-14.489	1.840	1.617	35.6
2	92.945	*** 1			7	-82.667	*** 3*		
3	-39.960	1.840	1.620	60.3	8	11.420	3.840	1.617	54.9
4	45.794	*** 2			9	-11.420	2.780	1.720	29.3
6	38.768	5.970	1.617	54.9	10	$\infty$			

04-03-026-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	III	QP(1 $\omega$ )
	-0.01021	-0.00311	-0.00492	-0.01840	-0.16168	3.1	-9.4%
b 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x_1 - x_2$	$K_{T1}$	$K_{T0.1}$
100	-0.0106	-0.2897	-0.2295	-0.1415	-0.0880	-0.0255	-0.0023
70	-0.0257	-0.1060	-0.1195	-0.0802	-0.0391	-0.0071	-0.0003

E. F. L = 12.00 ( $\pm 14.3^\circ$ )

\*\*\* 1 = 5.620; \*\*\* 2 = 40.530; \*\*\* 3 = 5.730; \*\*\* 3\* = 5.730 = 4.270 + 1.460

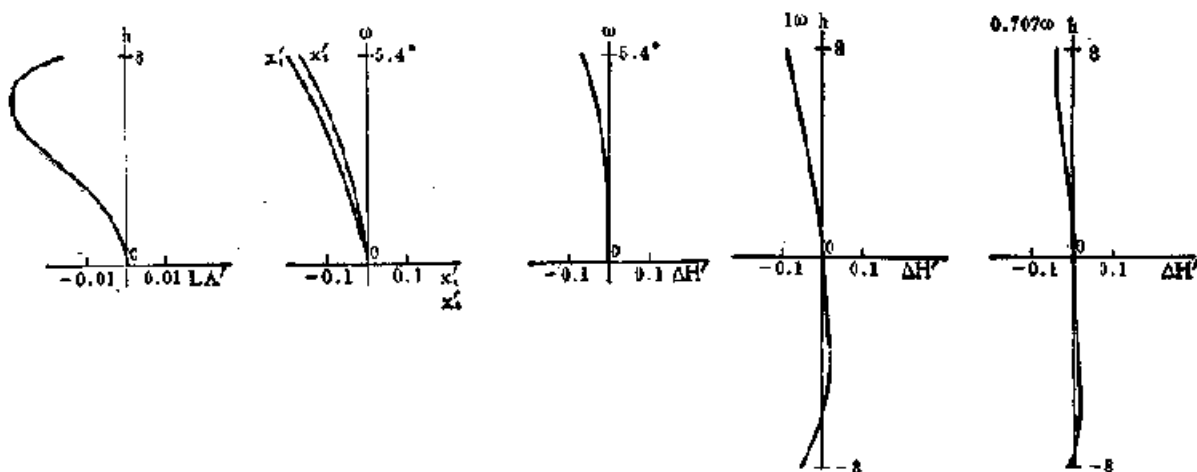


04-03-026-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.01019	0.00048	-0.00506	-0.01883	-0.03405	3.04	-2.3%
b 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x_1 - x_2$	$K_{T1}$	$K_{T0.1}$
100	-0.0155	-0.0708	-0.1977	-0.1665	-0.0312	-0.0868	-0.0226
70	-0.0278	-0.0243	-0.1180	-0.0903	-0.0277	-0.0237	-0.0072

E. F. L = 32.30 ( $\pm 6.4^\circ$ )

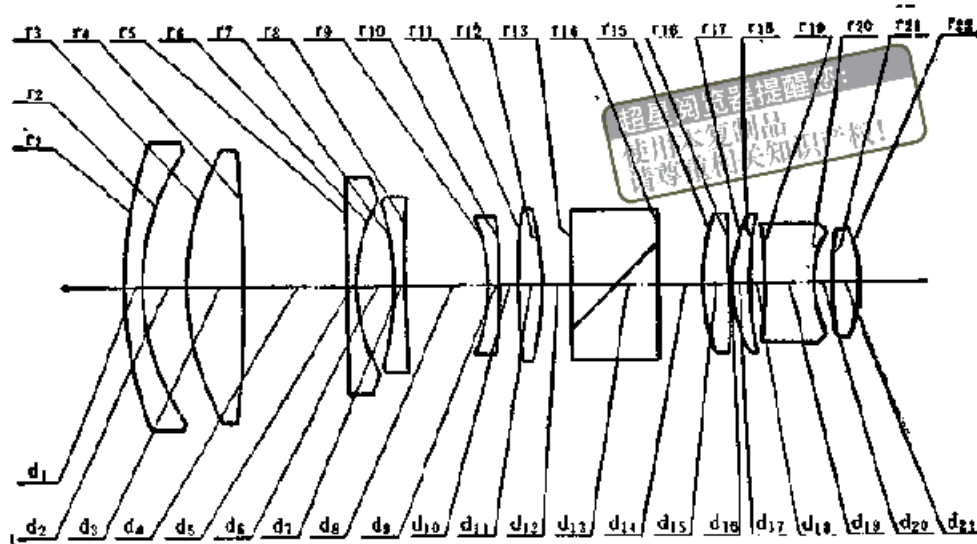
\*\*\* 1 = 24.890; \*\*\* 2 = 1.990; \*\*\* 3 = 25.000; \*\*\* 3\* = 25.000 = 23.540 + 1.460



编号: 04-03-027

# 大孔径变焦距物镜

E.F.L=10.30~30.00 B.F.L=13.050 FNo.=1.8 F.A.= $\pm 19.5^{\circ} \sim \pm 6.7^{\circ}$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	41.42	1.80	1.7917	25.8	12	-32.91	3.10		
2	24.03	4.50			13	$\infty$	9.00	1.5187	63.9
3	27.05	6.00	1.6808	54.0	14	$\infty$	4.50*		
4	-183.60	*** 1			15	22.56	2.55	1.6940	54.4
5	2727.00	1.00	1.4891	70.2	16	-106.20	0.05		
6	16.99	3.70			17	13.29	1.80	1.6940	54.4
7	-29.74	1.00	1.4891	70.2	18	30.04	1.40		
8	279.40	*** 2			19	-36.19	4.90	1.8126	25.2
9	-18.46	1.00	1.4891	70.2	20	10.99	2.25		
10	-70.15	*** 3			21	32.69	2.45	1.7161	53.6
11	60.03	2.40	1.6713	41.6	22	-14.61			

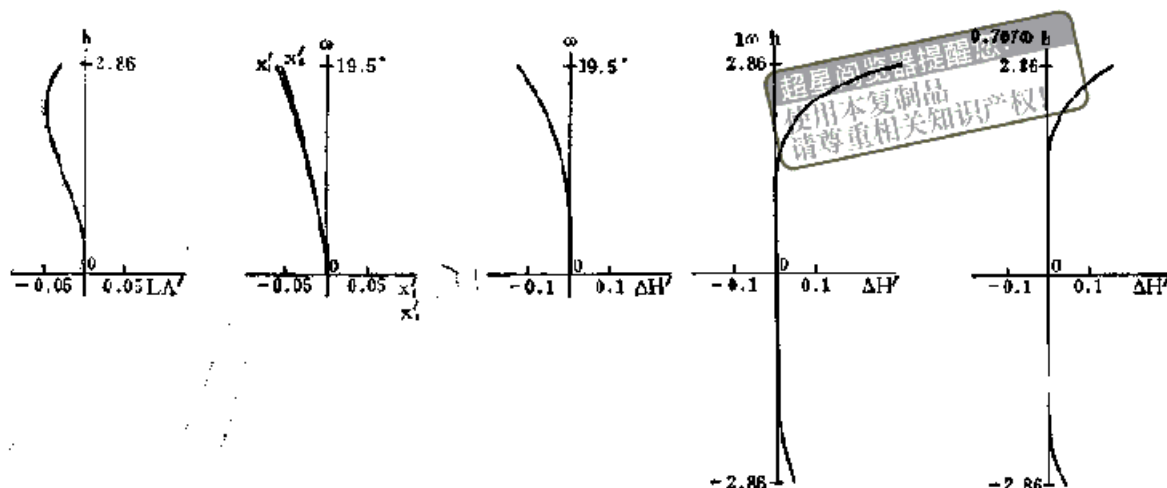
4.50\* = 3.00 + 1.50

04-03-027-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.01942	-0.01218	-0.00128	-0.01015	-0.06611	3.6	-3.6%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_o$	$x'_i - x'_o$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0271	-0.1321	-0.0615	-0.0616	-0.0029	0.1818	0.0282
70	-0.0453	-0.0453	-0.0333	-0.0334	-0.0029	0.0985	0.0093

E. F. L = 10.30 ( $\pm 19.5^\circ$ )

\*\*\* 1 = 0.15; \*\*\* 2 = 27.05; \*\*\* 3 = 2.10

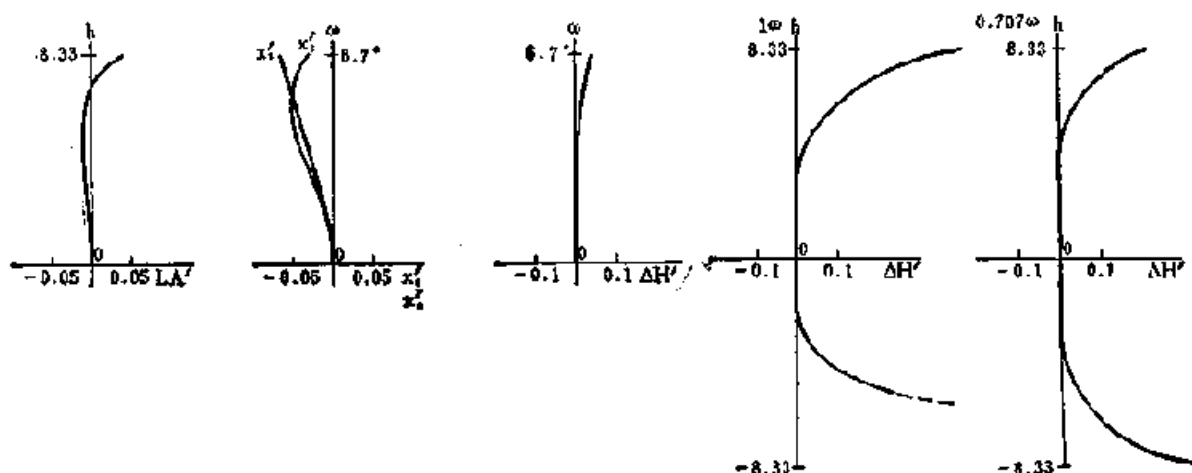


04-03-027-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.01168	-0.00577	-0.00144	-0.01046	0.00948	3.5	0.27%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x'_o$	$x'_i - x'_o$	$K'_{T1}$	$K'_{T0.7}$
100	0.0256	0.0098	0.0257	-0.0490	0.0747	0.2203	0.0336
70	-0.0203	0.0047	-0.0288	-0.0343	0.0055	0.1184	0.0159

E. F. L = 20.00 ( $\pm 10^\circ$ )

\*\*\* 1 = 16.31; \*\*\* 2 = 8.75; \*\*\* 3 = 4.24



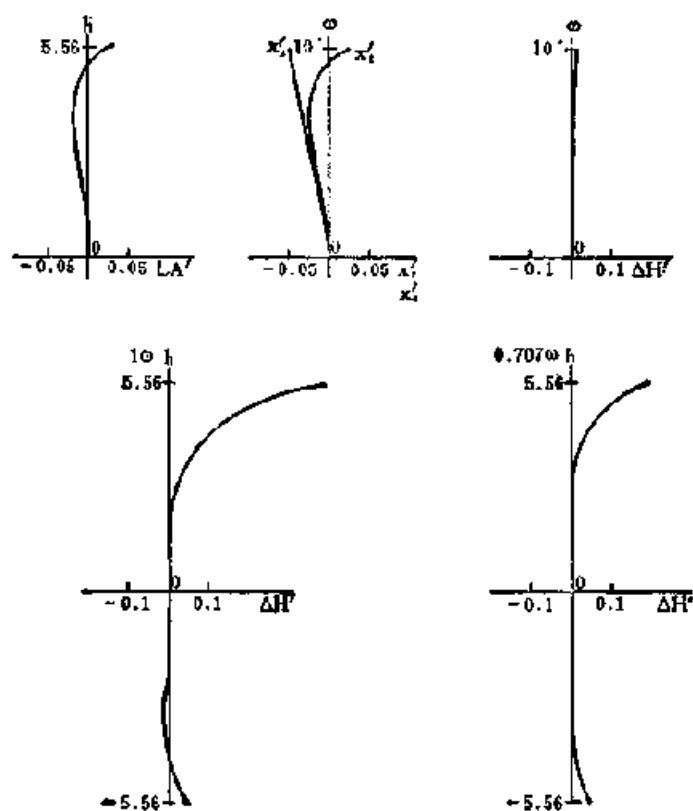


04-03-027-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(1 $\omega$ )
	-0.00649	-0.00134	-0.00553	-0.01048	0.02824	3.5	1.2%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_i$	$x_e$	$x'_i - x'_e$	$K_{T1}$	$K_{T0.7}$
100	0.0402	0.0420	-0.0239	-0.0665	0.0376	10.9150	0.2425
70	-0.0070	0.0163	-0.0503	-0.0431	0.0072	0.2785	0.0411

E.F.L = 30.00 ( $\pm 5.7^\circ$ )

\*\*\* 1 = 23.91; \*\*\* 2 = 2.41; \*\*\* 3 = 2.98

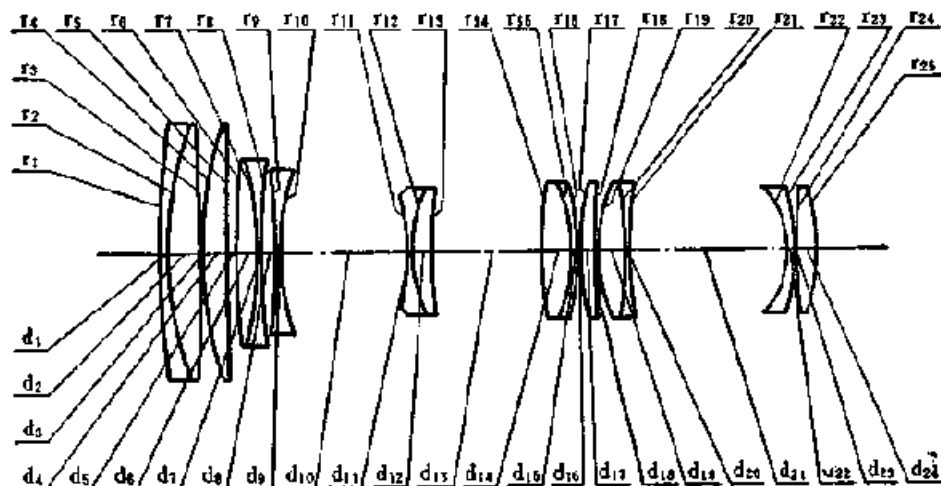


编号: 04-03-028

超星阅读器提醒您:  
使用本复制品  
请尊重相关知识产权!

## 变 焦 距 物 镜

E.F.L.=72~203 B.F.L.=40.00 FNo.=4 F.A.= $\pm 19.1^{\circ} \sim \pm 6.8^{\circ}$



序号	r	d	nd	v	序号	r	d	nd	v
1	268.54	1.900	1.71736	29.5	14	88.43	6.500	1.48749	70.0
2	80.13	6.900	1.58913	61.2	15	-36.55	1.460	1.80518	25.5
3	-410.77	0.300			16	-56.17	0.300		
4	90.60	5.300	1.51009	63.4	17	61.15	3.870	1.48749	70.0
5	3376.49	*** 1			18	234.27	0.300		
6	222.96	4.700	1.78472	25.7	19	38.35	6.000	1.48749	70.0
7	-81.30	1.300	1.66672	48.4	20	-104.13	1.023	1.64328	47.8
8	154.03	2.700			21	94.78	49.846 <sup>*</sup>		
9	-184.02	1.000	1.66672	48.4	22	-20.19	1.480	1.69700	48.5
10	51.53	*** 2			23	-53.33	0.267		
11	-47.69	1.000	1.52249	59.6	24	135.84	4.000	1.58921	41.0
12	33.79	4.800	1.02588	35.6	25	-53.64			
13	153.92	*** 3							

49.846<sup>\*</sup> = 1.000 + 48.846

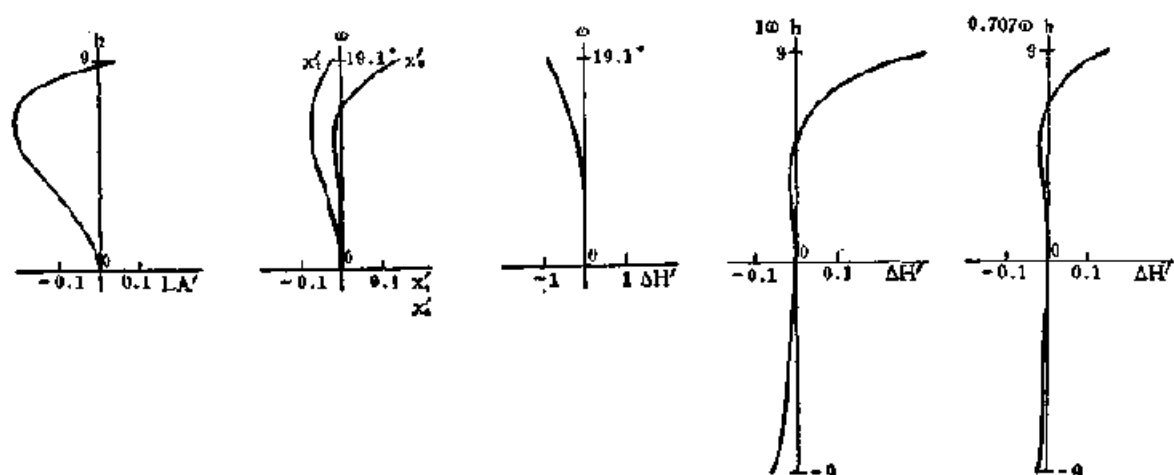
04-03-028-1

\*2 星浏览器提醒您:

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	-0.0236	-0.0037	-0.0016	-0.0033	-0.1813	24.9	-3.6%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.0235	-0.903	-0.0148	0.1421	-0.1569	0.1329	0.0045
70	-0.2090	-0.295	-0.0730	-0.0159	-0.0571	0.6663	-0.0063

E. F. L = 72 ( $\pm 19.1^\circ$ )

\*\*\* 1 = 2.041, \*\*\* 2 = 28.624, \*\*\* 3 = 24.389

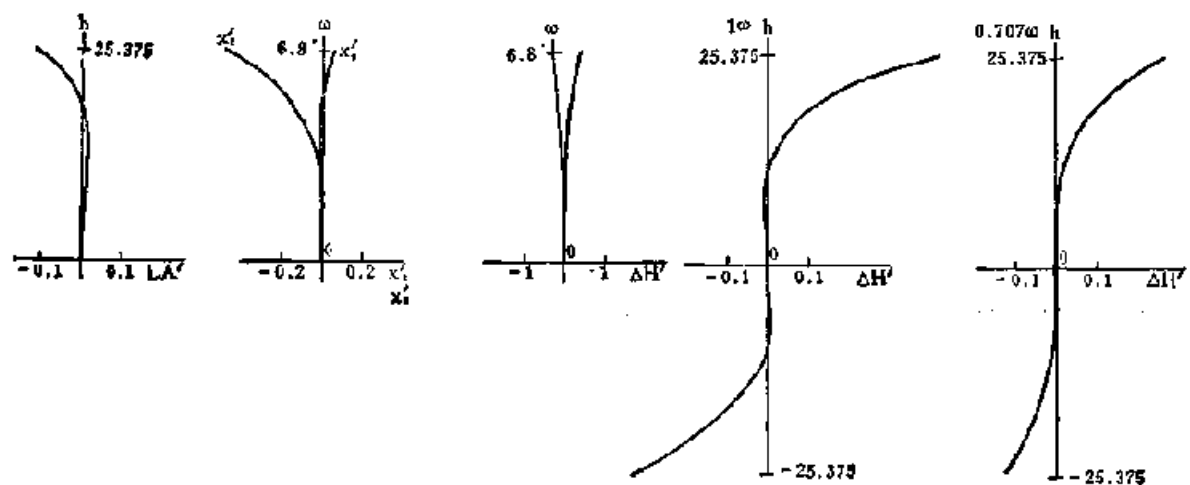


04-03-028-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP(100)
	0.00318	-0.00248	0.00067	-0.00343	0.16596	24.06	2.98%
h 或 $\omega$ %	$LA'$	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.1237	0.718	-0.524	0.065	-0.589	0.0403	-0.0109
70	0.0056	0.261	-0.113	-0.009	-0.104	0.0615	0.0040

E. F. L = 203 ( $\pm 6.8^\circ$ )

\*\*\* 1 = 47.565, \*\*\* 2 = 6.000, \*\*\* 3 = 1.500

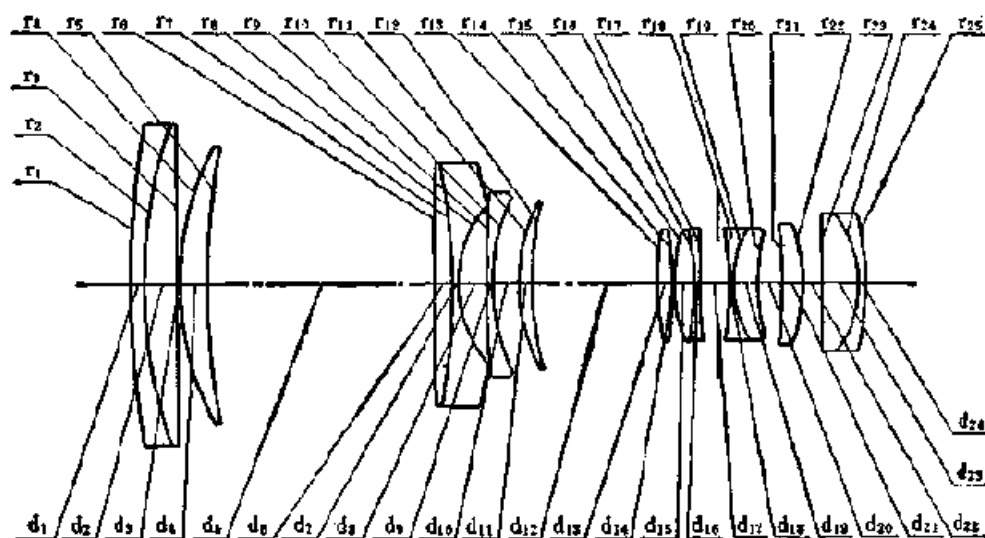


编号: 04-03-029

# 广角变焦距物镜

E. F. L = 35.99 ~ 100.00 B. F. L = 46.482 FNo. = 2.8 F. A. =  $\pm 15.9^{\circ}$  \*\* ~  $\pm 0.3^{\circ}$  \*\*

超星浏览器提醒  
使用本复制品  
请尊重相关知识产权!



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	266.000	2.6	1.80518	25.5	14	-86.500	0.1		
2	104.500	7.4	1.64000	60.2	15	41.610	5.0	1.64000	60.2
3	$\infty$	0.1			16	-54.000	0.9	1.80518	25.5
4	64.250	6.6	1.62041	60.3	17	876.482	* * * 3 *		
5	191.282	* * * 1			18	-64.080	1.0	1.69680	55.6
6	501.010	3.7	1.80518	25.5	19	24.080	5.8	1.71736	28.5
7	-144.785	1.5	1.67003	47.2	20	38.585	5.0		
8	26.326	6.8			21	-122.500	5.0	1.80610	41.0
9	470.070	1.5	1.62041	60.3	22	-38.250	4.2		
10	46.610	5.5			23	$\infty$	8.0	1.75500	52.4
11	39.703	3.0	1.80518	25.5	24	-23.770	1.5	1.75520	27.5
12	60.777	* * * 2			25	-83.107			
13	70.000	3.0	1.62041	60.3					

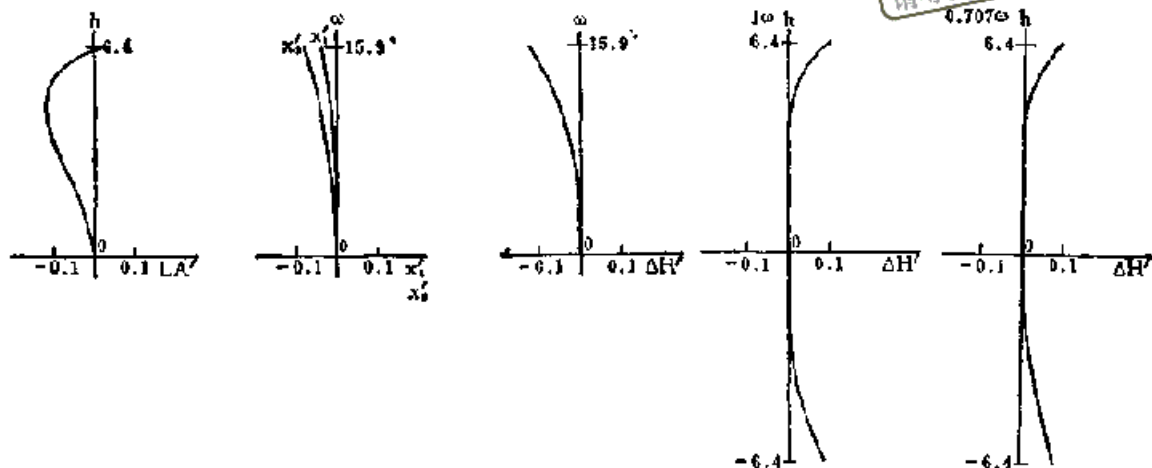
04 03 029-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.02851	0.00290	0.00188	-0.00763	-0.04227	10.2	-1.2%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	0.0216	-0.1225	-0.0353	-0.0303	0.0450	0.0977	0.0221
70	-0.1259	-0.0435	-0.0153	-0.0431	0.0278	0.0836	0.0207

E. F. L = 35.99 ( $\pm 15.9^\circ$ )

\*\*\* 1 = 2.246; \*\*\* 2 = 45.122; \*\*\* 3 = 4.194; \*\*\* 3' = 4.194 = 3.134 + 1.060

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！

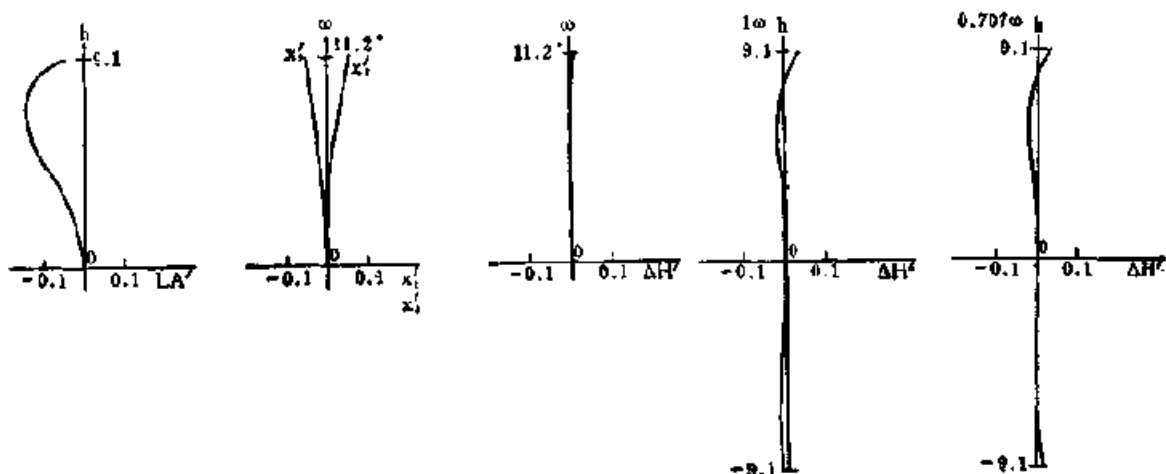


04-03-029-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.02870	-0.00627	0.00408	-0.00774	0.00148	10.1	0.03%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_1$	$x'_2$	$x'_1 - x'_2$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0494	0.0084	0.0600	-0.0483	0.1088	0.01513	-0.01748
70	-0.1422	0.0022	0.0295	-0.0231	0.0526	0.02013	-0.00900

E. F. L = 50.99 ( $\pm 11.2^\circ$ )

\*\*\* 1 = 16.245; \*\*\* 2 = 28.854; \*\*\* 3 = 6.462; \*\*\* 3' = 6.462 = 5.462 + 1.000

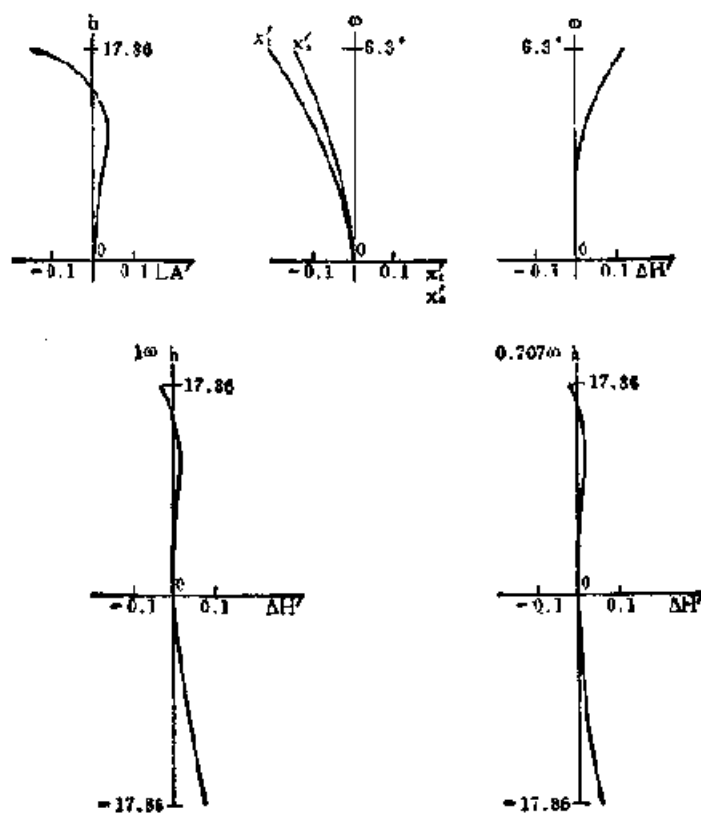


04-03-029-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HH	QP (1%)
	0.00971	0.01032	-0.00182	-0.00957	0.04095	11.0	1.1%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K_{T1}$	$K_{T0.7}$
100	-0.1480	0.1208	-0.2120	-0.1524	-0.0596	0.02656	0.03276
70	0.0301	0.0416	-0.1091	-0.0822	-0.0269	0.02174	0.02455

E. F. L = 100.00 ( $\pm 6.3^\circ$ )

\*\*\* 1 = 42.246; \*\*\* 2 = 0.903; \*\*\* 3 = 8.413; \*\*\* 3" = 8.413 = 7.413 + 1.00\*

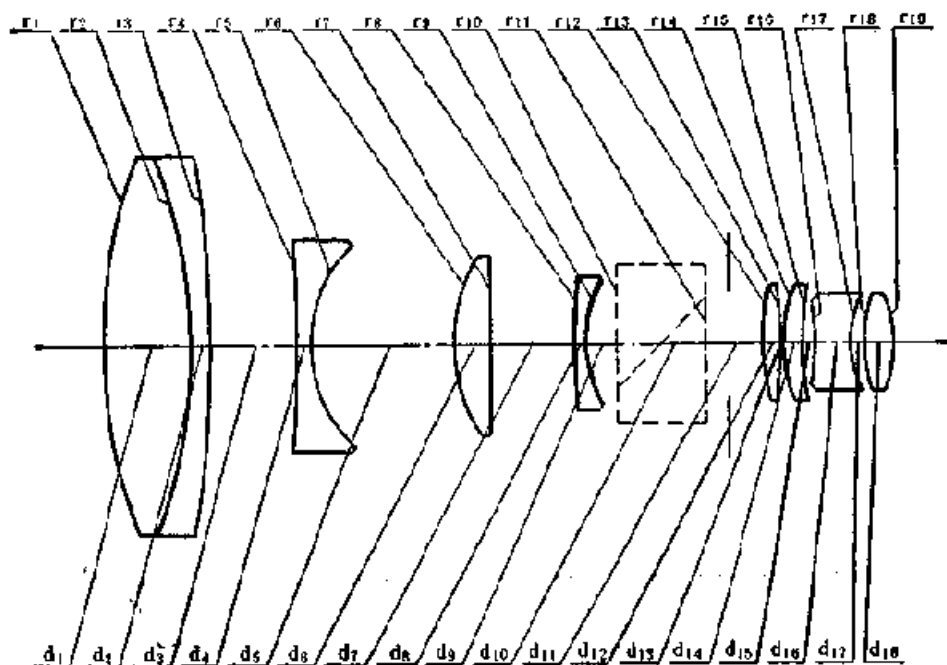


编号: 04-03-030

# 光学补偿式变焦距物镜

E.F.L=9.60~23.00 B.F.L=13.76 FNo.=1.8 F.A.  $\pm 21.1^{\circ} \sim \pm 8.7^{\circ}$

超星浏览器提醒您：  
使用本资源时，  
请尊重相关知识版权！



序号	r	d	n	v	序号	r	d	n	v
1	50.91	8.85	1.6204	60.3	11	$\infty$	5.80*		
2	-55.61	1.90	1.8052	25.5	12	22.02	1.92	1.7844	43.8
3	-125.86	***1			13	-57.37	0.04		
4	-327.66	1.50	1.6204	60.3	14	14.49	2.15	1.7440	44.9
5	13.82	***2			15	37.67	1.00		
6	17.38	3.60	1.5785	41.7	16	-27.65	3.90	1.8052	25.5
7	$\infty$	***3			17	9.89	1.30		
8	72.09	1.00	1.6204	60.3	18	15.87	2.85	1.7130	53.9
9	12.44	3.06			19	-13.58			
10	$\infty$	9.00	1.5168	64.2					

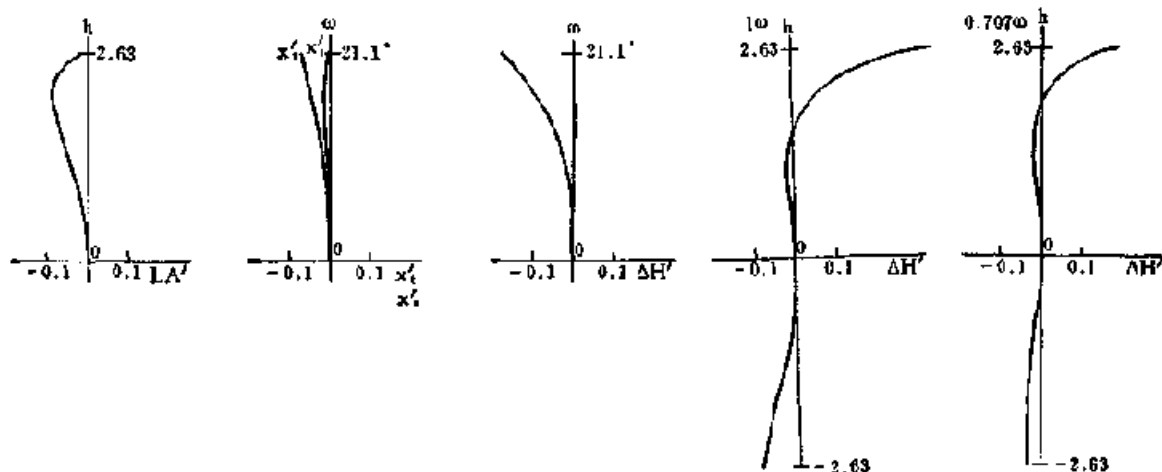
5.80\* = 5.00 + 0.80

04-03-030-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.02944	-0.02356	0.00419	-0.01617	-0.02638	3.7	-4.7%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0189	-0.175	-0.0029	-0.0700	0.0671	0.1273	-0.0174
70	-0.0760	-0.061	-0.0108	-0.0395	0.0287	0.0787	-0.0176

E. F. L = 9.52 ( $\pm 21.1^\circ$ )

\*\*\* 1 = 0.41; \*\*\* 2 = 23.10; \*\*\* 3 = 0.40

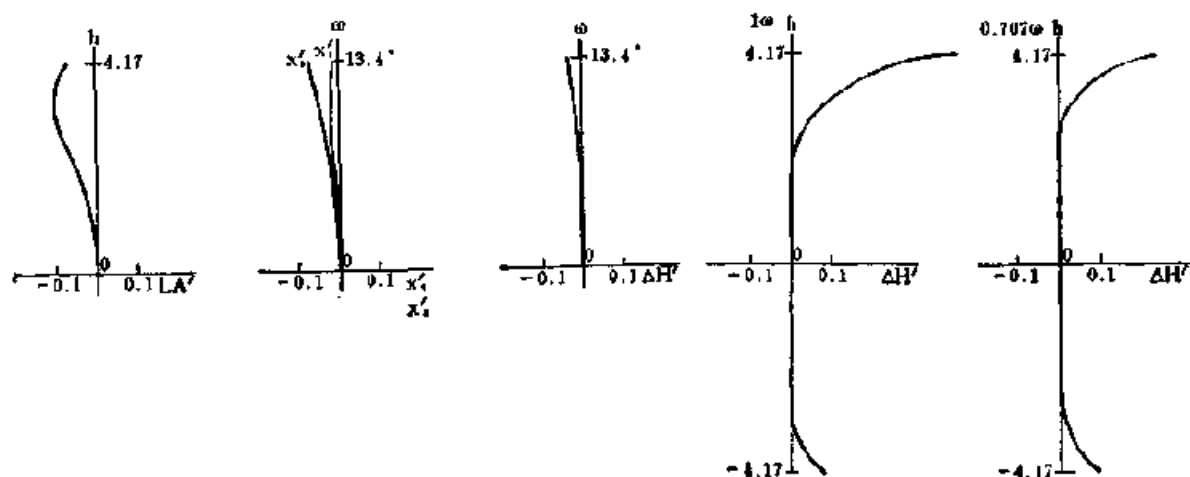


04-03-030-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.03369	-0.00604	0.00320	-0.01678	-0.02263	3.6	-0.9%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	-0.0555	-0.0321	-0.0148	-0.0713	0.0565	0.2314	0.0253
70	-0.0921	-0.0137	-0.0172	-0.0413	0.0241	0.1822	0.0126

E. F. L = 15.00 ( $\pm 13.4^\circ$ )

\*\*\* 1 = 8.70; \*\*\* 2 = 14.81; \*\*\* 3 = 8.69



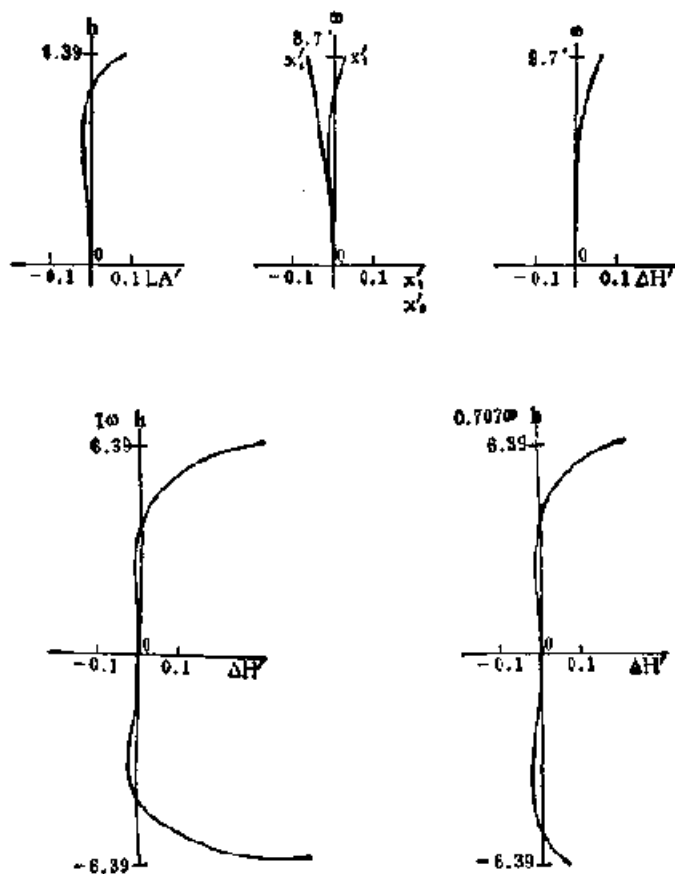


04-03-030-3

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HL	QP (1%)
	-0.01177	-0.03897	0.01275	-0.01891	0.01899	3.5	1.7%
$h$ 或 $\omega\%$	$LA'$	$\Delta H'$	$x_1$	$x_2$	$x_3 = x_4$	$K'_{T1}$	$K'_{T2.7}$
100	0.0840	0.0603	0.0300	-0.0587	0.0937	0.3765	0.0137
70	-0.0217	0.0162	-0.0100	-0.0395	0.0295	0.1455	-0.0050

E. F. L = 23.00 ( $\pm 8.7^\circ$ )

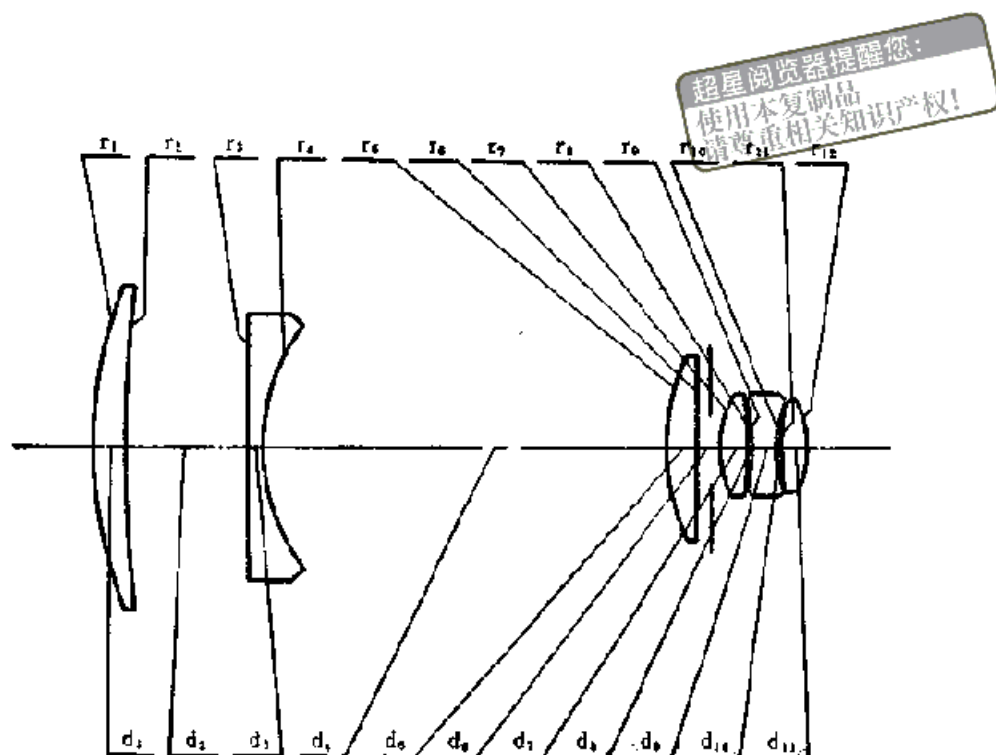
\*\*\* 1 = 16.00, \*\*\* 2 = 7.51, \*\*\* 3 = 15.99



编号: 04-03-031

## 可动透镜作线性差动式移动的变焦距镜头

E.F.L.=9.48~25.36 B.F.L=10.157 FNo.=2.2 F.A.= $\pm 18.22^{\circ} \sim \pm 6.7^{\circ}$



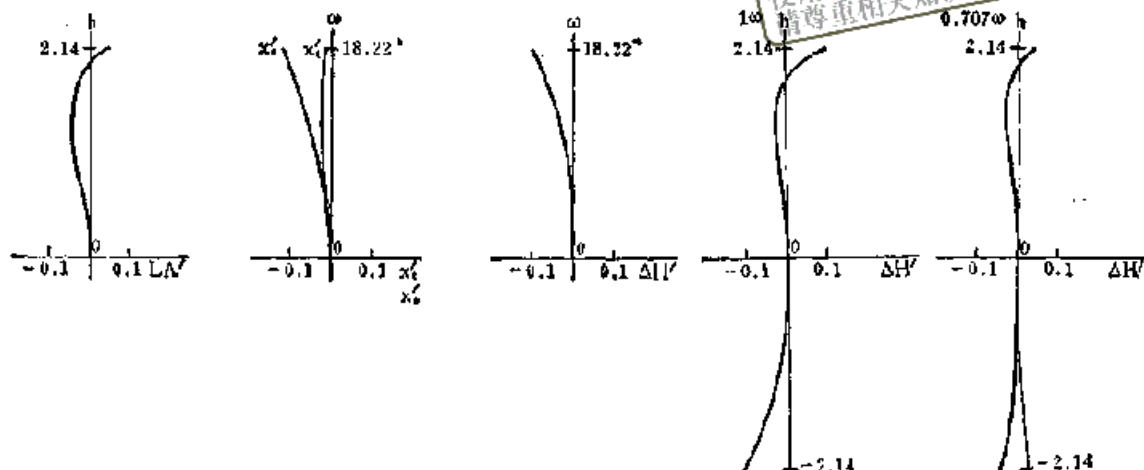
序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	31.900	2.500	1.613	58.8	7	7.913	2.000	1.611	58.8
2	140.318	*** 1			8	-31.592	0.220		
3	$\infty$	1.000	1.605	43.6	9	-11.219	2.000	1.649	33.8
4	15.212	*** 2			10	7.985	0.381		
5	19.559	2.000	1.611	58.8	11	31.592	2.000	1.611	58.8
6	$\infty$	*** 3			12	-7.913			

04-03-031-1

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.01731	-0.01522	0.00298	-0.01760	-0.04016	3.1	-3.2%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.0500	-0.0885	-0.0154	-0.1219	0.1065	-0.0980	-0.0322
70	-0.0448	-0.0837	-0.0203	-0.0653	0.0450	-0.0156	-0.0253

E. F. L = 9.43 ( $\pm 18.22^\circ$ )

\*\*\* 1 = 4.677; \*\*\* 2 = 31.334; \*\*\* 3 = 2.660; \*\*\* 3\* = 2.660 = 1.841 + 1.016

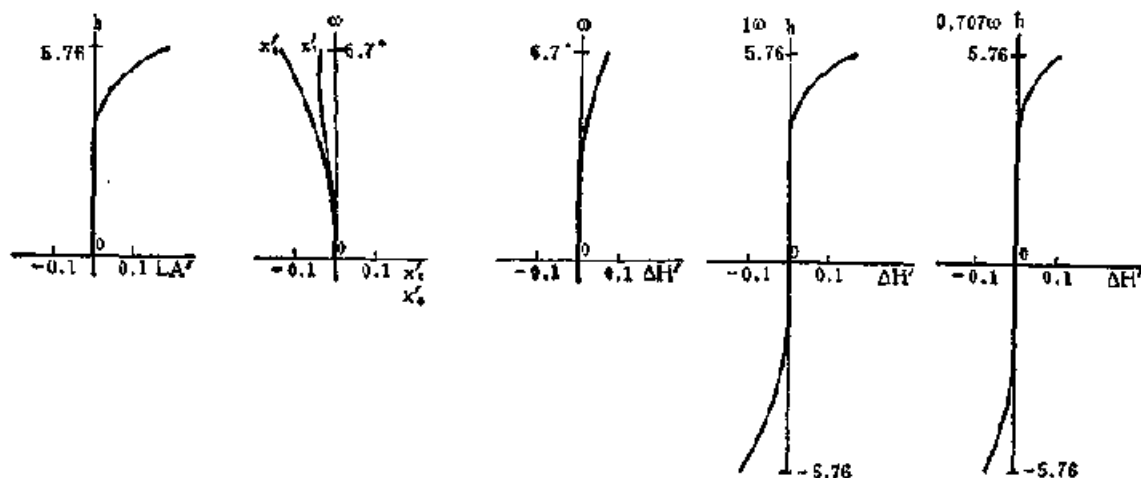


04-03-031-2

	$\Sigma S_1$	$\Sigma S_2$	$\Sigma S_3$	$\Sigma S_4$	$\Sigma S_5$	HI	QP (1 $\omega$ )
	-0.00422	-0.00832	0.00344	-0.01867	0.02364	3	1.87%
h 或 $\omega$ %	LA'	$\Delta H'$	$x'_t$	$x'_s$	$x'_t - x'_s$	$K'_{T1}$	$K'_{T0.7}$
100	0.1798	0.0562	-0.0370	-0.1358	0.0988	0.02757	-0.0116
70	0.0193	0.0101	-0.0317	-0.0706	0.0388	0.00980	-0.0109

E. F. L = 25.36 ( $\pm 6.7^\circ$ )

\*\*\* 1 = 18.868; \*\*\* 2 = 2.952; \*\*\* 3 = 16.851; \*\*\* 3\* = 16.851 = 15.835 + 1.016

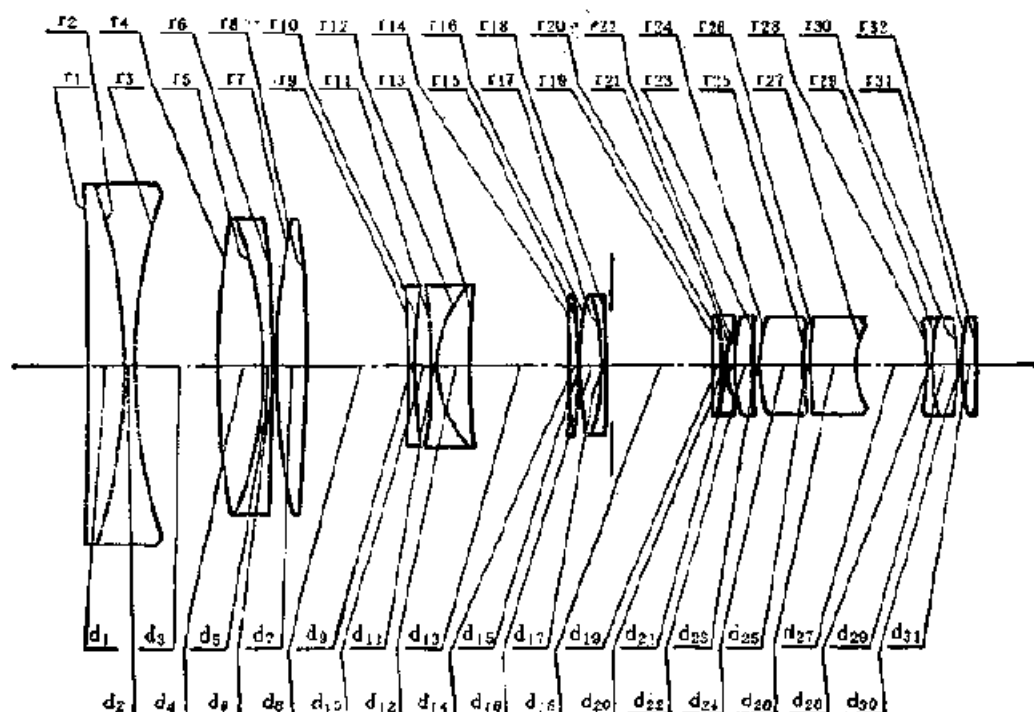


编号: 04-03-032

超星阅读器提醒您:  
使用本复制品  
尊重相关知识产权!

# 大倍率变焦距镜头

E. F. L = 60.0 ~ 400.0 B. F. L = FNo. = 14 F. A. =  $\pm 20' \sim \pm 3.5'$



序号	r	d	n	v	序号	r	d	n	v
1	-1000.000	14.00	1.6645	35.9	17	-92.227	2.40	1.6398	34.6
2	-181.600	4.00	1.6228	58.9	18	$\infty$	*** 4		
3	205.700	*** 1			19	-778.900	3.20	1.6398	34.6
4	405.000	16.00	1.6204	60.3	20	-105.900	1.60	1.6385	55.5
5	148.240	3.00	1.6880	31.1	21	23.945	2.60		
6	-1000.000	0.10			22	86.700	8.40	1.62084	60.3
7	207.300	12.00	1.6204	60.4	23	135.900	0.20		
8	-683.600	*** 2			24	55.236	17.25	1.56377	60.9
9	-1000.600	2.50	1.6172	54.0	25	111.975	2.40		
10	191.500	5.00			26	214.500	17.65	1.67266	32.0
11	-250.000	2.50	1.6127	58.6	27	34.540	26.25		
12	44.800	12.50	1.6128	37.0	28	-47.300	0.90	1.57808	41.6
13	331.400	*** 3			29	55.500	11.55	1.63867	55.3
14	$\infty$	3.50	1.6204	60.3	30	-55.500	0.30		
15	-229.400	0.10			31	109.500	4.50	1.61193	37.1
16	203.000	7.50	1.6204	60.3	32	-493.500			

(1) E. F. L = 60.0

\*\*\* 1 = 104.12; \*\*\* 2 = 5.96; \*\*\* 3 = 207.06; \*\*\* 4 = 20.98

(2) E. F. L = 150.0

\*\*\* 1 = 60.85; \*\*\* 2 = 104.55; \*\*\* 3 = 108.47; \*\*\* 4 = 64.25

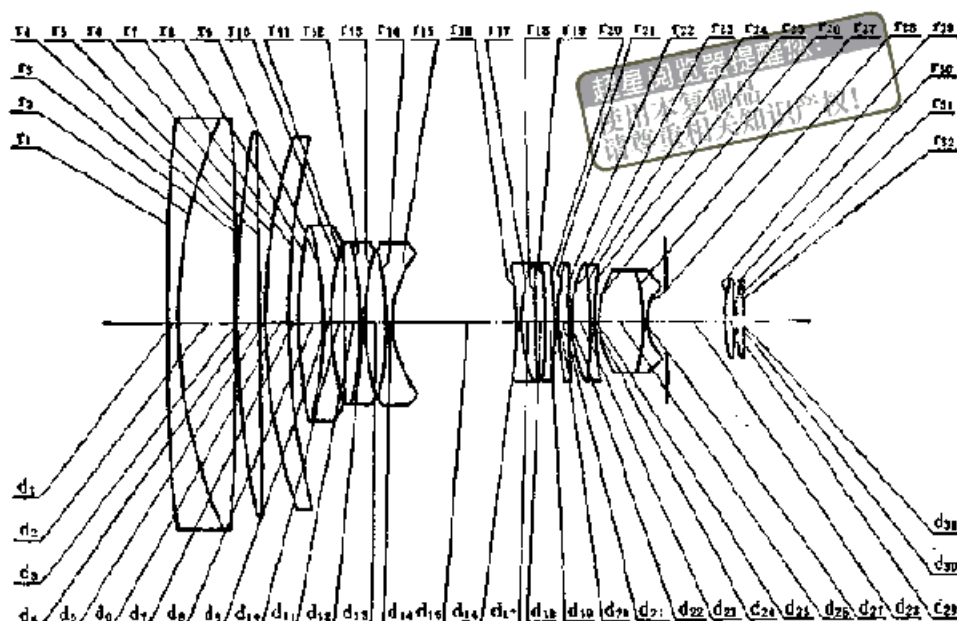
(3) E. F. L = 400.0

\*\*\* 1 = 14.66; \*\*\* 2 = 210.62; \*\*\* 3 = 2.40; \*\*\* 4 = 110.44

编号: 04-03-033

# 小型的大倍率变焦距镜头

E.F.L=6.5~75.0 B.F.L=9.2330 FN<sub>0</sub>=1.8 F.A.=±24'~±2.4'



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	356.9900	1.20	1.7552	27.5	17	18.8900	1.80	1.53258	43.0
2	61.6600	6.70	1.713	53.9	18	-2436.8800	*** 3		
3	-602.2800	0.10			19	-411.2400	1.30	1.83451	42.9
4	152.4500	3.00	1.62041	60.3	20	-38.3300	0.10		
5	∞	0.10			21	38.3300	1.40	1.883	41.0
6	66.5400	3.40	1.62041	60.3	22	450.3700	0.10		
7	178.9310	*** 1			23	17.2100	2.50	1.58313	59.3
8	92.9800	2.90	1.86518	25.5	24	-54.5700	0.60	1.78472	25.7
9	-46.0700	0.60	1.78595	50.6	25	41.0900	0.10		
10	30.0600	1.70			26	10.4000	5.65	1.6393	45.0
11	∞	2.00	1.86518	25.5	27	-25.0500	0.50	1.69695	30.0
12	-43.8000	0.60	1.78595	50.6	28	6.9100	9.60		
13	36.7300	2.50			29	20.8900	1.00	1.62041	60.3
14	-36.7300	0.60	1.62041	60.3	30	-99.0200	0.10		
15	14.2633	*** 2			31	23.9400	1.00	1.62041	60.3
16	-24.4800	0.60	1.51633	64.1	32	∞			

(1) E.F.L=6.5

\*\*\* 1 = 1.152; \*\*\* 2 = 51.697; \*\*\* 3 = 1.000

(2) E.F.L=30.0

\*\*\* 1 = 38.364; \*\*\* 2 = 7.091; \*\*\* 3 = -8.294

(3) E.F.L=75.0

\*\*\* 1 = 49.533; \*\*\* 2 = 3.196; \*\*\* 3 = 1.000

编号: 04-03-034

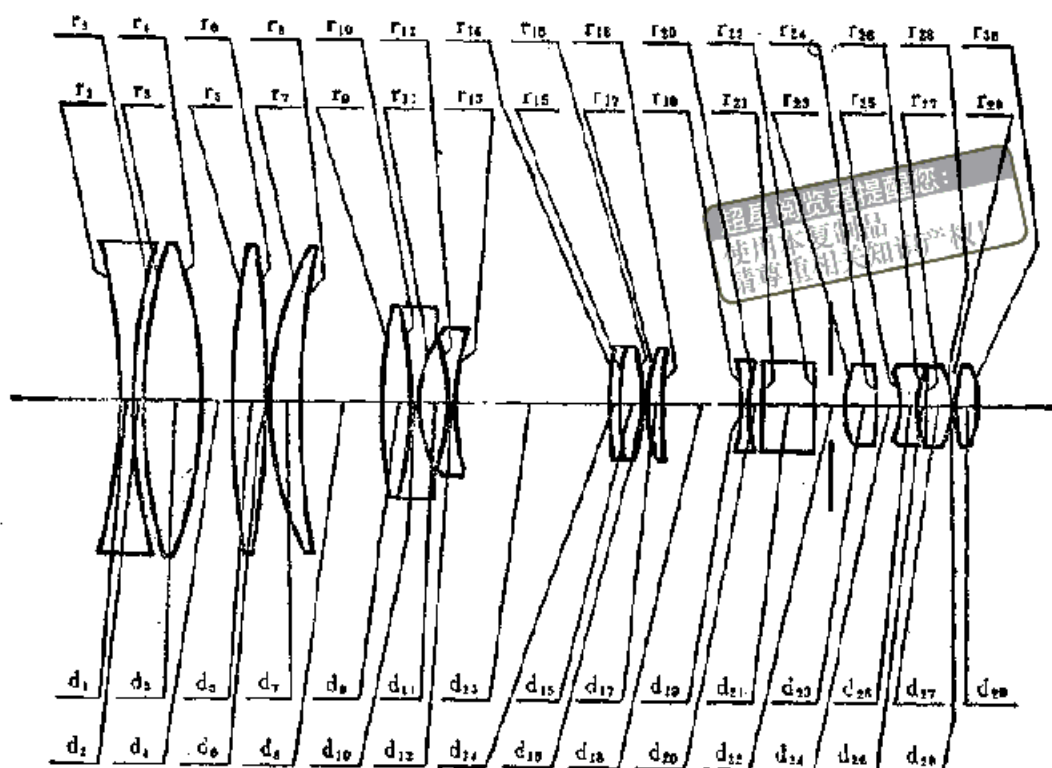
# 变 焦 距 镜 头

E.F.L=7.0~56.0

B.F.L=

FN<sub>0</sub> = 1.8

F.A. =



序号	r	d	n	v	序号	r	d	n	v
1	-67.2	1.90	1.805	25.4	16	-30.0	0.10		
2	105.0	1.90			17	19.9	2.70	1.720	50.4
3	116.0	8.30	1.574	56.4	18	78.2	*** 3		
4	-60.8	4.90			19	-41.1	0.90	1.620	60.3
5	187.0	4.40	1.643	48.0	20	17.4	1.90		
6	-187.0	0.10			21	∞	8.20	1.569	56.1
7	45.4	5.70	1.658	50.9	22	∞	5.05		
8	166.0	*** 1			23	17.8	4.20	1.570	49.5
9	93.2	3.80	1.805	25.4	24	-49.7	3.50		
10	-52.2	1.00	1.620	60.3	25	-16.5	2.40	1.847	23.8
11	16.8	4.90			26	16.5	1.35		
12	-37.9	1.00	1.744	44.8	27	-585.0	3.80	1.569	63.1
13	41.2	*** 2			28	-12.4	0.20		
14	77.7	0.80	1.741	27.6	29	18.9	3.10	1.620	60.3
15	30.0	3.80	1.652	44.9	30	-12.3			

(1) E.F.L=7.0

\*\*\* 1 = 0.80; \*\*\* 2 = 41.80; \*\*\* 3 = 2.80

(2) E.F.L=56.0

\*\*\* 1 = 29.30; \*\*\* 2 = 2.00; \*\*\* 3 = 14.10

编号: 04-03-035

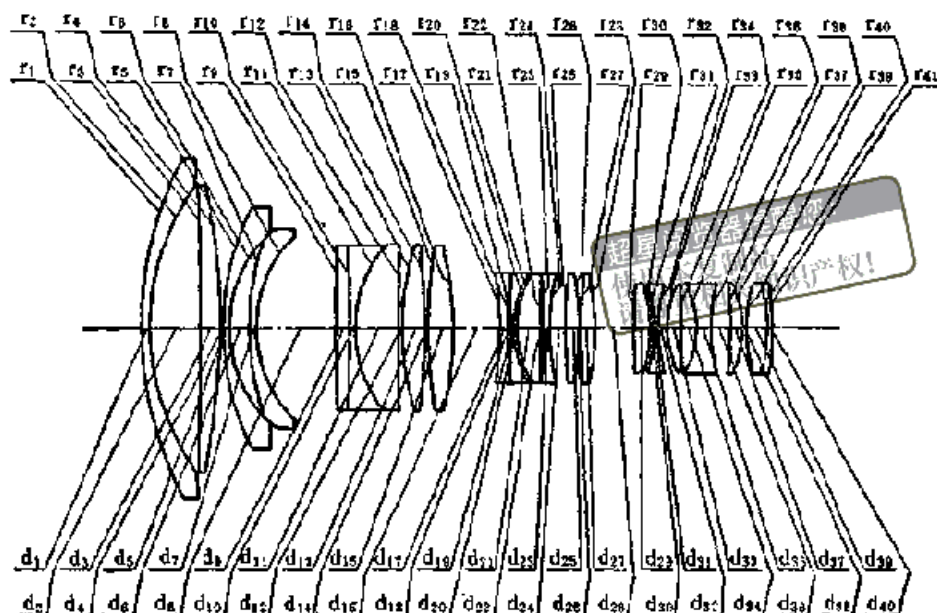
# 变焦距电影摄影镜头

E. F. L = 8~24

B. F. L =

FNo. = 1.6

F. A. =  $\pm 37.5^\circ$



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	78.20	2.20	1.697	56	22	$\infty$	0.40		
2	55.20	11.10			23	-170.60	1.40	1.697	56
3	-740.80	4.40	1.697	36	24	50.00	*** 3		
4	-145.50	0.20			25	159.40	2.60	1.696	31
5	62.40	1.40	1.697	56	26	-71.30	0.02		
6	28.20	4.60			27	159.40	2.60	1.696	31
7	55.70	1.40	1.697	56	28	-71.30	*** 4		
8	26.80	*** 1			29	221.30	3.40	1.788	47
9	435.60	3.00	1.788	47	30	-30.00	0.40		
10	-463.40	1.40	1.788	25	31	-30.00	1.30	1.788	25
11	26.60	9.40	1.764	45	32	37.54	1.40		
12	$\infty$	0.03			33	18.60	3.40	1.720	50
13	65.00	5.10	1.697	56	34	-528.50	3.10		
14	-191.20	1.20			35	-19.45	3.40	1.788	25
15	191.20	5.10	1.697	56	36	33.70	3.80		
16	-65.00	*** 2			37	-136.40	3.10	1.720	50
17	-50.00	1.40	1.697	56	38	-18.80	0.13		
18	170.60	0.50			39	27.50	4.40	1.697	56
19	$\infty$	0.80	1.788	47	40	-33.20	1.00	1.696	31
20	20.10	0.07			41	-123.60			
21	20.10	5.40	1.788	25					

(1) E. F. L = 8

\*\*\* 1 = 18.20; \*\*\* 2 = 25.50; \*\*\* 3 = 1.70; \*\*\* 4 = 15.70

(2) E. F. L = 24

\*\*\* 1 = 29.20; \*\*\* 2 = 1.54; \*\*\* 3 = 25.70; \*\*\* 4 = 4.70

编号: 04-03-036

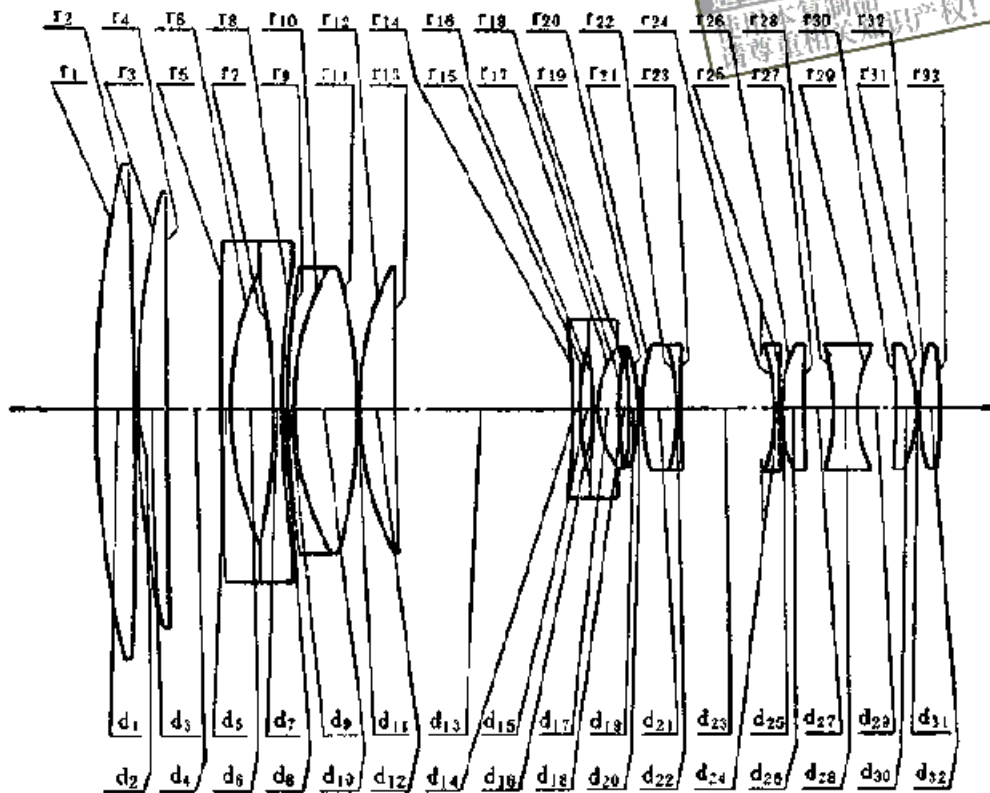
# 变 焦 距 镜 头

E. F. L = 12 ~ 120

B. F. L = 27.34

FNo. = 2

F. A. =



序号	r	d	$n_d$	$v_d$	序号	r	d	$n_d$	$v_d$
1	246.920	7.00	1.69738	56	18	65.150	*** 3		
2	-450.780	0.01			19	-67.150	2.00	1.51610	64.2
3	170.630	5.50	1.69930	30.1	20	-37.950	0.01		
4	4511.000	10.20			21	44.500	6.50	1.62008	60.2
5	856.170	1.50	1.69738	56	22	-45.493	0.80	1.69866	30.1
6	61.110	8.45			23	754.200	*** 4		
7	-117.200	1.50	1.69738	56	24	-38.550	1.00	1.54125	47.6
8	173.000	*** 1			25	692.200	0.10		
9	184.650	1.00	1.78723	24.4	26	27.514	4.23	1.744	45
10	55.040	12.00	1.62085	60	27	983.600	5.36		
11	-97.750	0.01			28	-47.400	4.94	1.73150	28
12	57.526	0.50	1.69738	56	29	25.611	6.61		
13	2954.000	*** 2			30	-182.770	4.34	1.69675	56
14	-150.700	0.80	1.62030	60.2	31	-26.238	0.10		
15	47.314	2.40			32	44.100	3.50	1.69675	56
16	103.060	0.70	1.69774	55.7	33	-143.600			
17	18.544	4.00	1.73118	28.3					

(1) E. F. L = 12

\*\*\* 1 = 0.909, \*\*\* 2 = 63.243, \*\*\* 3 = 1.787, \*\*\* 4 = 32.030

(2) E. F. L = 120

\*\*\* 1 = 29.439, \*\*\* 2 = 1.247, \*\*\* 3 = 63.783, \*\*\* 4 = 3.500



编号: 04-03-037

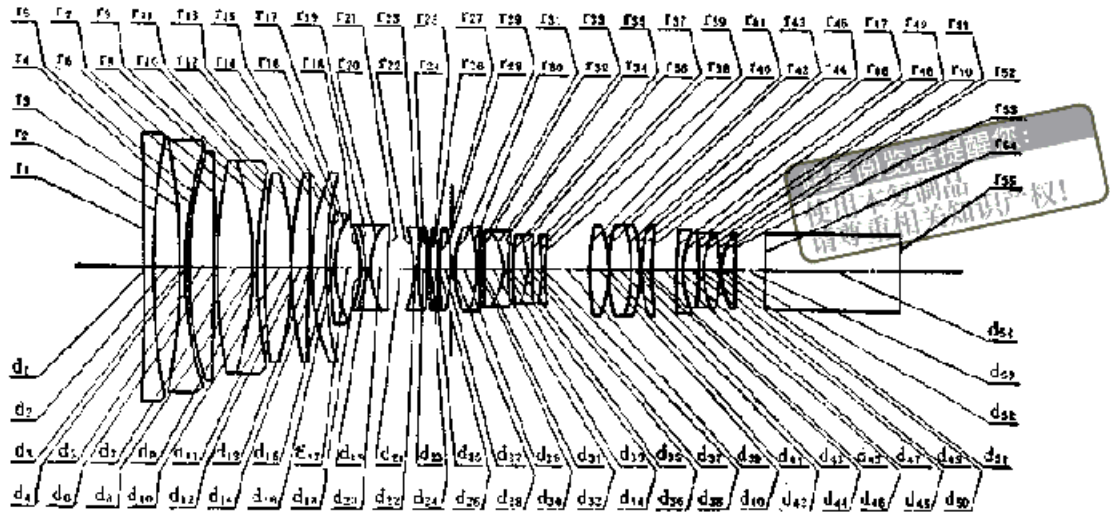
# 大倍率大孔径变焦距物镜

E. F. L = 1.0 ~ 29.6

B. F. L = 0.162

FNo. = 2.1

F. A. =



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	-50.68	0.19	1.643	59.9	29	2.32	0.52	1.499	66.8
2	13.02	0.66			30	-3.34	0.09	1.761	27.1
3	-17.36	0.19	1.643	59.9	31	-55.07	*** 4		
4	9.14	0.02			32	-98.52	0.49	1.761	27.4
5	8.98	0.63	1.694	31.0	33	-1.53	0.07	1.734	28.5
6	-105.81	0.14			34	3.71	*** 5		
7	17.61	0.82	1.660	54.9	35	7.39	0.33	1.761	27.4
8	-7.48	0.18	1.791	25.9	36	-2.06	0.09	1.792	47.2
9	16.44	0.15			37	3.62	0.22		
10	42.11	0.60	1.643	59.9	38	-7.29	0.09	1.792	47.2
11	-8.73	0.00			39	4.67	*** 6		
12	0.87	0.47	1.613	59.9	40	12.23	0.39	1.489	70.2
13	-147.78	0.00			41	-3.86	0.00		
14	5.13	0.44	1.643	59.9	42	4.19	0.59	1.489	70.2
15	9.59	*** 1			43	-3.20	0.14	1.694	31.0
16	6.02	0.12	1.792	47.2	44	-5.34	0.00		
17	2.21	0.58			45	2.21	0.36	1.489	70.2
18	-3.95	0.19	1.761	27.4	46	11.44	0.59		
19	-2.37	0.09	1.716	53.6	47	35.56	0.14	1.792	47.2
20	1.92	0.44	1.723	29.3	48	2.09	0.34		
21	19.16	*** 2			49	-25.81	0.12	1.792	47.2
22	-2.35	0.09	1.716	53.6	50	1.83	0.44	1.489	70.2
23	3.80	0.19	1.727	29.0	51	-3.86	0.00		
24	-27.68	*** 3			52	2.04	0.29	1.489	70.2
25	20.68	0.24	1.503	56.2	53	39.87	0.78		
26	-3.49	0.00			54	∞	3.30	1.518	64.0
27	8.66	0.26	1.503	56.2	55	∞			
28	-5.23	0.12							

(1) E. F. L = 1.0

\*\*\* 1 = 0.013; \*\*\* 2 = 4.456; \*\*\* 3 = 1.418; \*\*\* 4 = 0.068; \*\*\* 5 = 0.123; \*\*\* 6 = 1.439

(2) E. F. L = 14.5

\*\*\* 1 = 5.174; \*\*\* 2 = 0.675; \*\*\* 3 = 0.038; \*\*\* 4 = 0.063; \*\*\* 5 = 0.123; \*\*\* 6 = 1.439

(3) E. F. L = 29.6

\*\*\* 1 = 5.174; \*\*\* 2 = 0.675; \*\*\* 3 = 0.038; \*\*\* 4 = 0.574; \*\*\* 5 = 1.042; \*\*\* 6 = 0.014

编号: 04-03-038

# 大倍率变焦距镜头

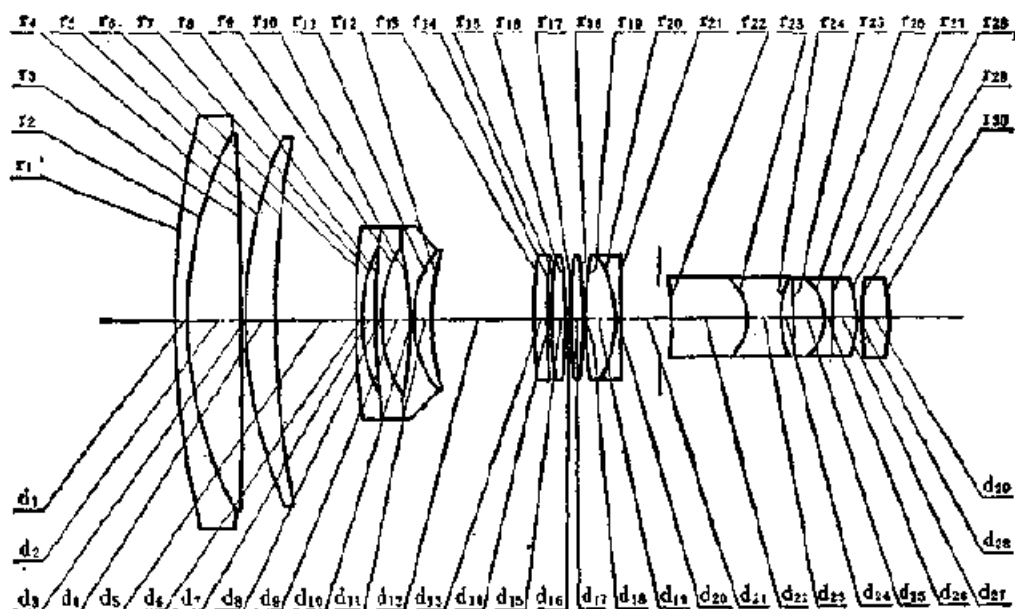
E. F. L = 13~286

B. F. L =

FNo. = 3.5

F. A. =  $\pm 80.0' \sim \pm 1.5'$

超星阅读器提醒  
使用本复制品  
请尊重相关知识产权!



序号	r	d	n	v	序号	r	d	n	v
1	210.4470	2.20	1.78472	25.7	16	-144.0000	0.10		
2	90.0000	12.00	1.61405	55.1	17	86.8940	3.00	1.62606	39.1
3	-937.4600	0.10			18	-144.0000	0.10		
4	96.5820	7.30	1.51835	60.3	19	60.1000	7.50	1.73601	51.0
5	425.3202	*** 1			20	-26.1670	1.01	1.78472	25.7
6	246.0000	0.83	1.64006	60.0	21	1008.7200	*** 3		
7	34.4000	3.40			22	-40.2700	17.00	1.72342	38.0
8	218.2000	0.83	1.64006	60.0	23	-11.8000	7.50	1.62045	35.0
9	28.9270	6.50			24	19.2000	2.40		
10	-82.4800	0.75	1.51728	69.6	25	$\infty$	7.45	1.44528	67.2
11	25.0000	4.35	1.78472	25.7	26	-9.8640	1.45	1.57250	57.5
12	65.1988	*** 2			27	$\infty$	5.80	1.46450	65.8
13	346.6000	3.00	1.61840	44.2	28	-19.7040	0.05		
14	557.6000	0.10			29	59.9000	5.80	1.51118	50.9
15	86.8940	3.00	1.62606	39.1	30	-77.4000			

(1) E. F. L = 13

\*\*\* 1 = 0.4100, \*\*\* 2 = 102.1958, \*\*\* 3 = 3.6837

(2) E. F. L = 286

\*\*\* 1 = 99.3295, \*\*\* 2 = 3.2763, \*\*\* 3 = 26.6837

编号: 04-03-039

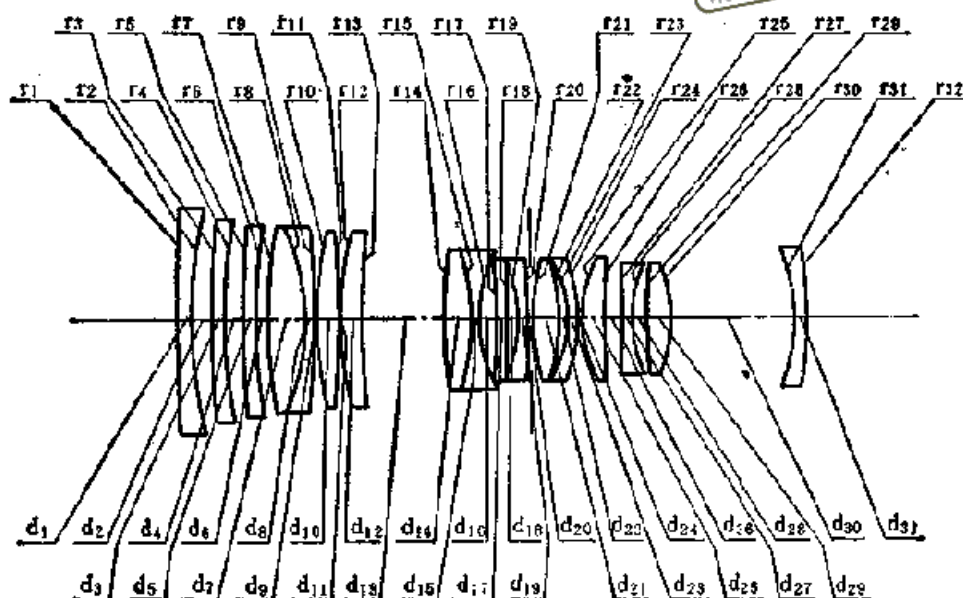
# 用于中心快门照相机的变焦距镜头

E. F. L = 50.00 ~ 121.00

B. F. L = 39.17

FNo. =

超星阅读器提示: 使用本复制品, 请尊重相关知识产权!



序号	r	d	$n_D$	$v_D$	序号	r	d	$n_D$	$v_D$
1	883.57	2.50	1.744	44.90	17	-97.46	1.60	1.8374	43.47
2	79.58	3.50			18	-762.85	1.90		
3	250.10	2.50	1.744	44.90	19	-32.28	1.74	1.8374	43.47
4	80.70	3.50			20	1323.99	*** 3		
5	270.88	2.50	1.744	44.90	21	40.86	5.00	1.5168	64.19
6	96.67	*** 1			22	-35.35	1.40		
7	93.11	7.00	1.720	59.31	23	-26.77	2.00	1.7495	34.99
8	-40.45	1.50	1.7215	29.28	24	-30.16	0.50		
9	-160.61	0.25			25	23.57	4.50	1.6204	60.29
10	63.85	4.00	1.691	54.79	26	182.46	3.00		
11	-240.37	0.25			27	-253.63	2.00	1.720	50.31
12	56.17	4.16	1.691	54.79	28	20.35	3.00		
13	310.44	*** 2			29	108.73	4.50	1.6204	60.29
14	84.77	4.50	1.7215	29.28	30	-25.16	22.30		
15	-43.06	1.50	1.720	59.31	31	-39.23	2.00	1.7215	29.28
16	26.21	2.50			32	-96.08			

(1) E. F. L = 50.00

\*\*\* 1 = 1.93; \*\*\* 2 = 15.15; \*\*\* 3 = 1.00

(2) E. F. L = 121.00

\*\*\* 1 = 16.33; \*\*\* 2 = 0.75; \*\*\* 3 = 15.40

编号: 04-03-040

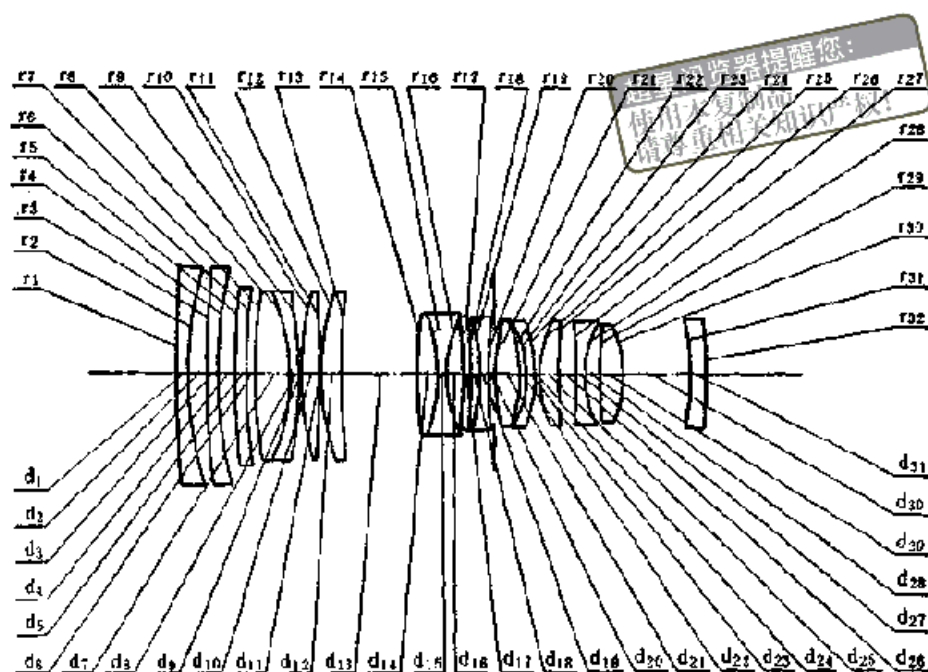
# 小型的变焦距镜头

E.F.L=59.06~121.63

B.F.L=52.0

FNo. =

F.A. =



序号	$r$	$d$	$n_D$	$v_D$	序号	$r$	$d$	$n_D$	$v_D$
1	716.00	2.50	1.744	44.90	17	-96.74	1.60	1.8028	46.75
2	78.13	3.50			18	-1137.40	1.90		
3	379.87	2.50	1.744	44.90	19	-32.22	1.60	1.8028	46.75
4	89.00	3.50			20	552.18	*** 3		
5	464.40	2.50	1.744	44.90	21	40.94	5.00	1.5168	64.19
6	118.02	*** 1			22	-35.64	1.40		
7	103.38	7.00	1.720	50.31	23	-20.63	2.00	1.7215	29.28
8	-41.56	1.50	1.7215	29.28	24	-30.30	0.50		
9	-140.22	0.25			25	24.07	4.50	1.6204	60.29
10	63.58	4.00	1.691	64.79	26	210.40	3.10		
11	-258.75	0.25			27	-171.72	2.00	1.7200	50.31
12	54.03	4.20	1.691	54.79	28	20.98	3.00		
13	270.16	*** 2			29	111.76	4.50	1.6204	60.29
14	86.41	4.50	1.7215	29.28	30	25.00	13.50		
15	-35.64	1.50	1.7200	50.51	31	-64.44	3.60	1.7215	29.28
16	26.30	3.40			32	-210.40			

(1) E.F.L=59.06

\*\*\* 1 = 1.73; \*\*\* 2 = 15.26; \*\*\* 3 = 1.00

(2) E.F.L=121.63

\*\*\* 1 = 16.33; \*\*\* 2 = 0.89; \*\*\* 3 = 15.40

编号: 04-03-041

# 具有两个光栏的变焦距镜头

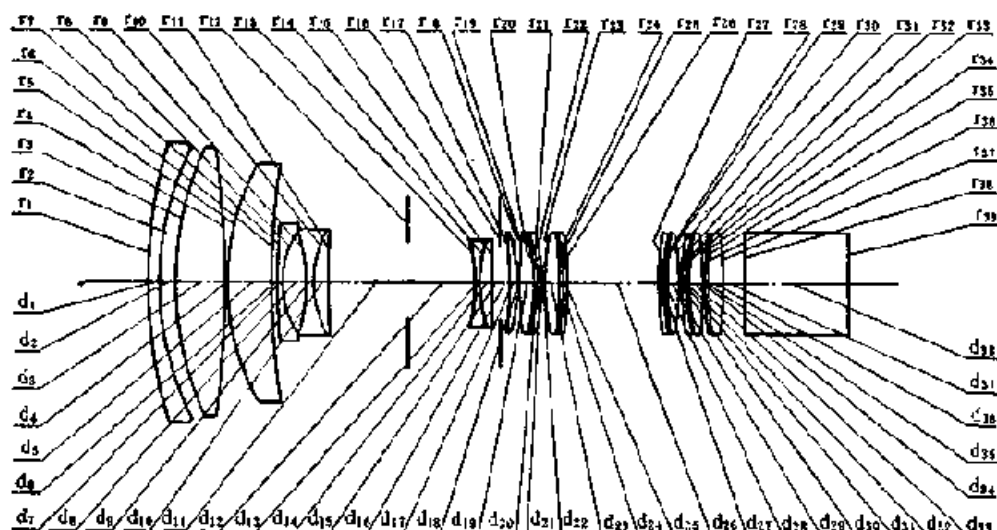
星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

E. F. L = 6.675 ~ 38.477

B. F. L =

FNo. = 1.85

F. A. =



序号	r	d	n	v	序号	r	d	n	v
1	50.75000	1.30000	1.92286	21.3	21	-15.25000	0.50000	1.80518	25.4
2	35.60000	1.95000			22	-19.50000	0.10000		
3	38.17000	8.50000	1.61800	63.4	23	32.06353	1.80000	1.62041	60.3
4	-230.97000	0.13000			24	-87.73000	0.50000		
5	28.73552	5.65000	1.61800	63.4	25	-26.65000	0.50000	1.80518	25.4
6	124.93000	*** 1			26	-42.23000	13.42244		
7	292.74000	0.50000	1.88300	41.0	27	56.36000	0.50000	1.80518	25.4
8	10.73000	2.90000			28	27.56000	0.60000		
9	-19.93751	0.60000	1.78650	50.2	29	174.60000	1.50000	1.71300	54.0
10	11.90000	2.10000	1.92286	21.3	30	-34.81000	0.13000		
11	246.32000	*** 2			31	33.98000	0.50000	1.80518	25.4
12	∞	*** 3			32	21.07000	0.23000		
13	-20.98952	0.50000	1.80610	40.8	33	28.06475	1.70000	1.71300	54.0
14	16.41000	1.60000	1.80518	25.4	34	-86.88000	0.13000		
15	∞	*** 4			35	115.52000	0.50000	1.80518	25.4
16	∞	1.06000			36	38.69000	1.70000	1.71300	54.0
17	-57.13000	1.30000	1.62041	60.3	37	-83.67000	2.60000		
18	-20.12000	0.10000			38	∞	13.00000	1.51333	64.1
19	134.00000	1.70000	1.62041	60.3	39	∞			
20	-25.02000	0.63000							

① 系双光栏, 在计算时分别按平面处理。

(1) E. F. L = 6.675

\*\*\* 1 = 0.838156; \*\*\* 2 = 9.771670; \*\*\* 3 = 12.349600; \*\*\* 4 = 0.759890

(2) E. F. L = 18.126

\*\*\* 1 = 13.916767; \*\*\* 2 = 0.266963; \*\*\* 3 = 6.297661; \*\*\* 4 = 3.287400

(3) E. F. L = 38.477

\*\*\* 1 = 19.934757; \*\*\* 2 = 0.387002; \*\*\* 3 = 0.847105; \*\*\* 4 = 2.588871

编号: 04-03-042

# 超远摄型变焦距镜头

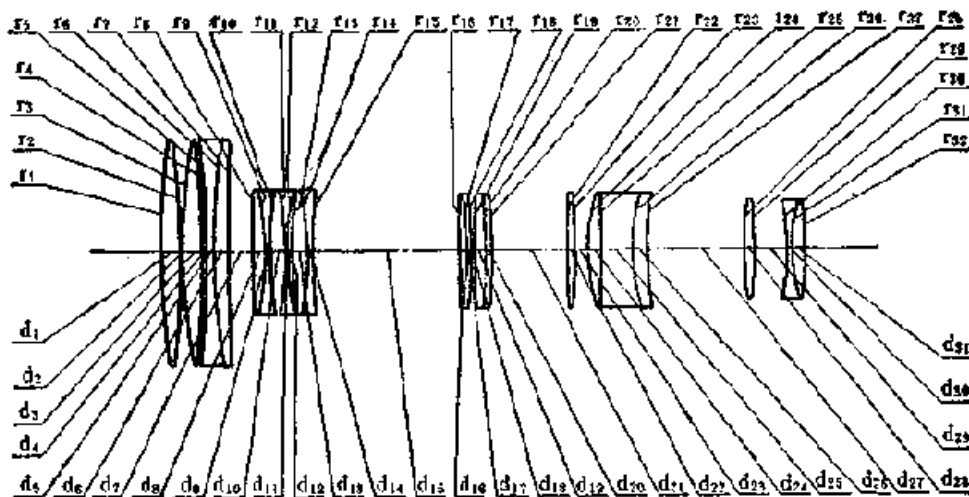
超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

E.F.L=360~1200

B.F.L=

FN<sub>0</sub> = 11

F.A. =



序号	r	d	n	v	序号	r	d	n	v
1	441.500	8.0	1.48606	81.5	17	-134.200	2.6	1.61293	36.9
2	-580.000	0.2			18	-203.700	0.2		
3	274.200	9.5	1.48606	81.5	19	368.100	4.7	1.48606	81.5
4	-638.100	1.0			20	-143.200	2.6	1.75520	27.5
5	-638.100	4.0	1.744	44.9	21	-246.400	*** 3		
6	298.200	6.0	1.53913	61.2	22	344.600	4.0	1.51454	54.6
7	1281.500	*** 1			23	-577.700	8.2		
8	8339.700	4.7	1.75520	27.5	24	25.800	6.0	1.48606	81.5
9	-126.600	2.6	1.58913	61.2	25	-1535.000	13.5	1.744	44.9
10	172.900	6.0			26	30.000	6.3	1.6398	45.0
11	-166.700	1.3	1.48606	81.5	27	136.359	139.4		
12	118.300	3.0	1.58875	51.2	28	385.100	2.7	1.50137	56.6
13	238.700	6.0			29	-385.100	15.2		
14	-149.800	2.6	1.5163	64.2	30	-124.900	2.8	1.74443	49.4
15	444.700	*** 2			31	87.500	4.4	1.60312	38.0
16	-3106.900	3.5	1.62041	60.3	32	-200.400			

(1) E.F.L=360

\*\*\* 1 = 11.258; \*\*\* 2 = 64.853; \*\*\* 3 = 143.138

(2) E.F.L=1200

\*\*\* 1 = 211.258; \*\*\* 2 = 4.248; \*\*\* 3 = 3.744



编号: 04-03-043

# 大孔径广角变焦距镜头

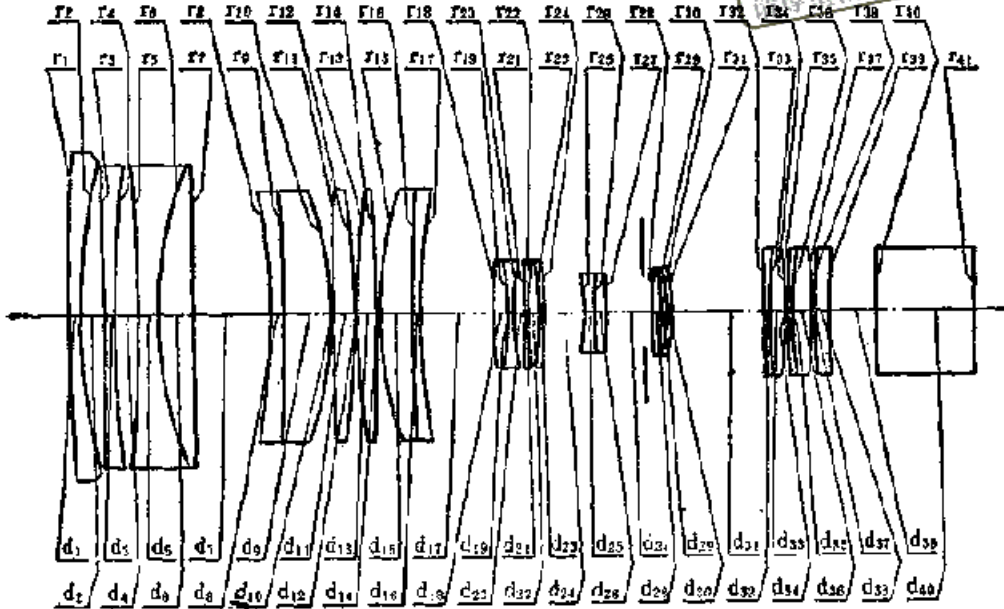
E. F. L = 39.50 ~ 875.96

B. F. L =

FNo. =

F. A. =

超星浏览器提醒您：  
使用本复制品  
请尊重相关知识产权！



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	947.50268	5.000000	1.713	53.0	23	262.80000	4.40500		
2	305.84600	11.264000			23	-134.77000	2.000000	1.883	41.0
3	-1975.00000	5.000000	1.713	53.9	24	-369.15045	* * * 2		
4	610.00000	8.645000			25	-103.94000	5.000000	1.757	47.7
5	-852.48000	10.000000	1.67003	47.2	26	255.71000	5.000000	1.78472	25.7
6	171.74000	16.000000	1.72825	28.3	27	-413.00332	* * * 3		
7	∞	62.772725			28	213.53000	5.500000	1.48749	70.0
8	-306.57000	6.000000	1.7552	27.5	29	-106.76000	2.500000		
9	-1905.80000	21.000000	1.48749	70.0	30	-63.10000	2.000000	1.80518	25.5
10	-162.48000	6.100000			31	-79.19153	176.203160		
11	1229.45000	10.000000	1.48749	70.0	32	∞	2.000000	1.66446	35.9
12	-379.98000	0.100000			33	243.50000	8.500000	1.4645	65.7
13	340.42000	10.100000	1.48749	70.0	34	-194.83000	0.100000		
14	-1975.00000	0.100000			35	495.75000	2.000000	1.66446	35.9
15	169.98000	15.000000	1.48749	70.0	36	163.10000	8.500000	1.4645	65.7
16	2623.32000	4.000000	1.7552	27.5	37	-321.82000	0.100000		
17	405.85090	* * * 1			38	409.09000	5.700000	1.62041	60.3
18	372.49000	7.000000	1.92286	20.9	39	1039.37230	50.000000		
19	-116.53000	2.000000	1.841	43.2	40	∞	82.200000	1.51633	64.1
20	118.53000	4.208000			41	∞			
21	-618.65000	2.000000	1.883	41.0					

(1) E. F. L = 39.50

\* \* \* 1 = 3.7540141; \* \* \* 2 = 217.2927000; \* \* \* 3 = 6.8377210

(2) E. F. L = 164.70

\* \* \* 1 = 164.3095800; \* \* \* 2 = 31.4230730; \* \* \* 3 = 32.1517340

(3) E. F. L = 375.96

\* \* \* 1 = 216.3512000; \* \* \* 2 = 4.6955089; \* \* \* 3 = 6.8377210

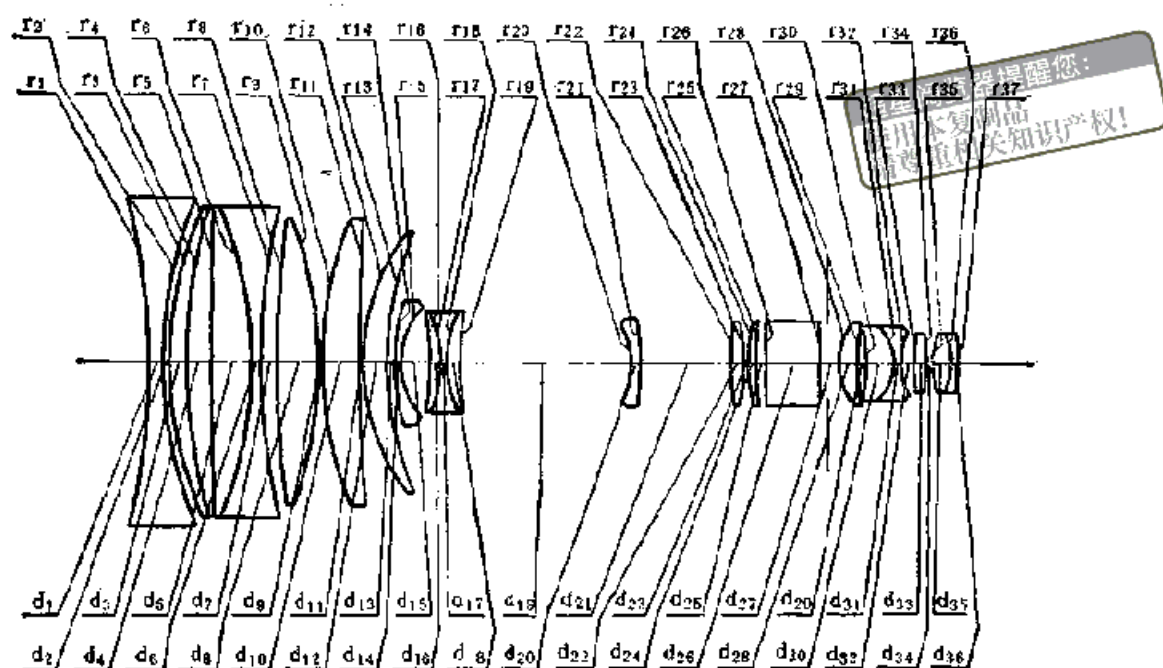
## 大孔径变焦距物镜

E.F.L=1.0~13.3

B.F.L=2.37

FNo.=1.8

F.A.=



序号	r	d	n <sub>d</sub>	v	序号	r	d	n <sub>d</sub>	v
1	-19.190	0.411	1.62041	60.3	20	-3.648	0.274	1.62280	56.9
2	12.253	0.205			21	-12.173	*** 3		
3	11.641	0.616	1.60886	30.1	22	13.014	0.370	1.52542	64.7
4	17.302	0.692			23	-6.085	0.010		
5	94.523	1.206	1.71300	53.8	24	4.803	0.292	1.52542	64.7
6	-12.003	0.300	1.76180	28.9	25	18.820	0.274		
7	20.559	0.479			26	∞	1.644	1.51680	64.2
8	34.478	1.438	1.64050	60.1	27	∞	0.616		
9	-10.863	0.010			28	2.073	0.558	1.48749	70.4
10	11.521	1.096	1.64050	60.1	29	6.856	0.219		
11	94.527	0.010			30	-5.121	0.884	1.76180	27.0
12	6.378	0.810	1.64050	60.1	31	-1.658	0.190	1.67270	32.2
13	10.589	*** 1			32	2.260	0.419		
14	6.474	0.195	1.60100	54.7	33	4.888	0.437	1.48749	70.4
15	2.292	0.918			34	-3.538	0.051		
16	-7.537	0.329	1.80518	25.4	35	2.364	0.575	1.50137	56.4
17	-3.697	0.195	1.71300	53.8	36	-2.170	0.205	1.80518	25.4
18	3.416	0.438	1.80518	25.4	37	-5.525			
19	11.113	*** 2							

- (1) E.F.L=1.0  
\*\*\* 1 = 0.137; \*\*\* 2 = 6.497; \*\*\* 3 = 2.897
- (2) E.F.L=2.1  
\*\*\* 1 = 3.013; \*\*\* 2 = 2.262; \*\*\* 3 = 3.196
- (3) E.F.L=4.3  
\*\*\* 1 = 4.907; \*\*\* 2 = 0.596; \*\*\* 3 = 2.966
- (4) E.F.L=7.6  
\*\*\* 1 = 5.912; \*\*\* 2 = 0.597; \*\*\* 3 = 1.962
- (5) E.F.L=10.3  
\*\*\* 1 = 6.269; \*\*\* 2 = 1.124; \*\*\* 3 = 1.088
- (6) E.F.L=13.3  
\*\*\* 1 = 6.476; \*\*\* 2 = 1.781; \*\*\* 3 = 0.215

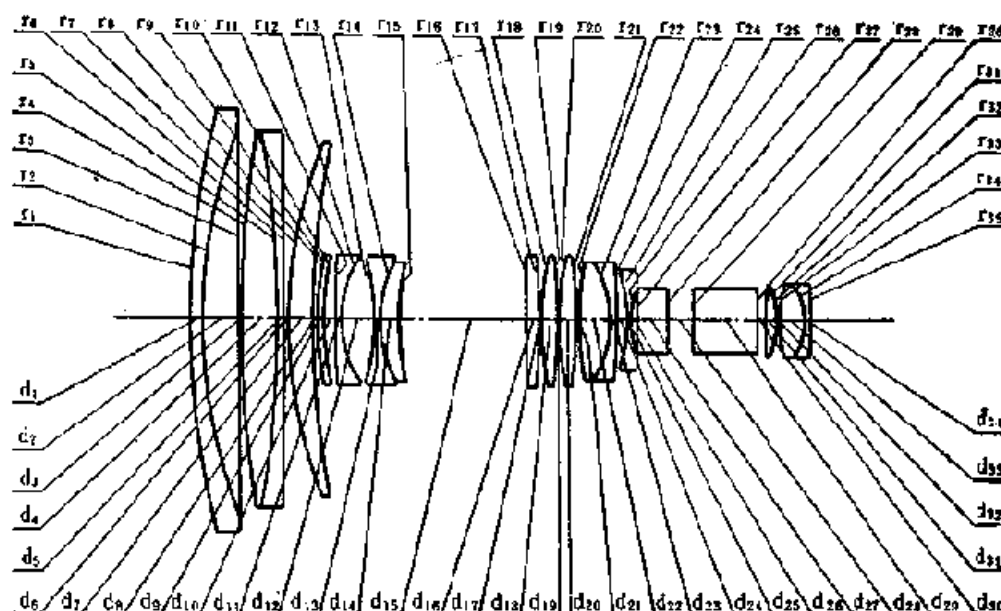


编号: 04-03-045●

超星浏览器提醒您:  
使用本复制品  
请尊重相关知识产权!

# 大倍率变焦距镜头

E.F.L=6.0~123.5 B.F.L= FN<sub>0</sub>=1.8 F.A.=±30.8°~±1.5°



序号	r	d	n	v <sub>d</sub>	序号	r	d	n	v <sub>d</sub>
1	198.000	1.90	1.740	28.2	19	-134.320	0.10		
2	115.617	9.00	1.51728	69.6	20	73.650	3.50	1.62041	60.3
3	2025.800	0.10			21	111.330	0.10		
4	250.898	7.70	1.51728	69.6	22	82.200	7.30	1.67790	55.5
5	-250.898	1.90	1.740	28.2	23	-23.854	1.00	1.740	28.2
6	-582.377	0.10			24	-655.518	*** 3		
7	02.500	6.10	1.5168	64.2	25	-33.834	0.70	1.5168	64.2
8	260.459	*** 1			26	23.900	1.20		
9	85.740	1.10	1.744	44.9	27	∞	7.00	1.57501	41.3
10	45.502	3.10			28	∞	5.80		
11	790.330	1.10	1.6968	55.6	29	∞	13.90	1.57501	41.3
12	21.493	7.70			30	∞	1.30		
13	-53.850	0.85	1.5168	64.2	31	99.500	2.90	1.53172	48.9
14	23.400	5.10	1.80518	25.5	32	-21.358	0.20		
15	71.697	*** 2			33	26.710	3.30	1.60717	40.2
16	-1229.864	3.10	1.62280	56.9	34	-16.559	1.20	1.86074	23.1
17	-167.880	0.10			35	-175.330			
18	70.667	3.50	1.62041	60.3					

(1) E.F.L=6.0

\*\*\* 1 = 0.46°; \*\*\* 2 = 102.888; \*\*\* 3 = 2.148

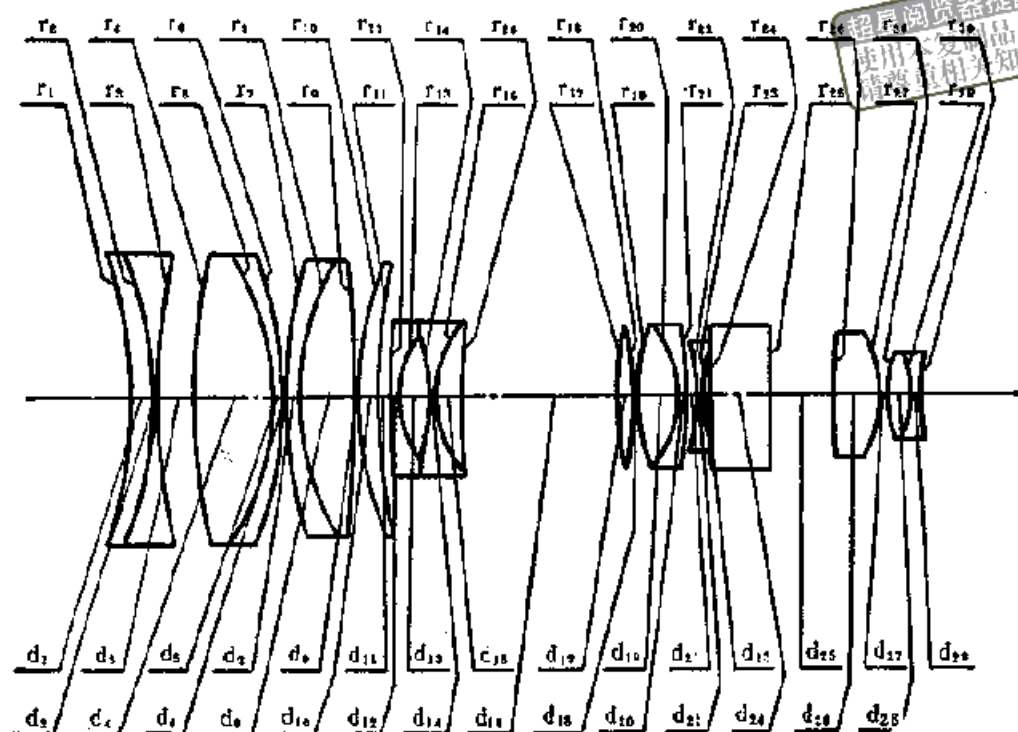
(2) E.F.L=123.5

\*\*\* 1 = 80.633; \*\*\* 2 = 2.731; \*\*\* 3 = 22.135

● 后固定组仅供参考。

## 五组变焦距镜头

E.F.L=9.5~50.0 B.F.L= FNo.=1.8 F.A.=+20.75'~±4.14'



序号	r	d	$n_D$	$v$	序号	r	d	$n_D$	$v$
1	-79.100	3.9	1.74077		16	130.440	*** 2		
2	-56.000	0.8	1.62041		17	80.000	2.7		
3	110.810	6.3			18	-51.315	0.1		
4	131.135	11.2	1.5168		19	33.640	6.3		
5	-40.000	1.6	1.69895		20	-15.780	0.8		
6	-59.050	0.2			21	-95.933	*** 3		
7	85.400	1.4	1.76182		22	-23.600	0.8		
8	39.500	9.1	1.6516		23	21.047	1.2		
9	-260.753	0.1			24	$\infty$	9.0		
10	52.824	3.0	1.6516		25	$\infty$	0.8		
11	90.946	*** 1			26	148.995	6.9		
12	345.300	1.0	1.717		27	-19.704	0.4		
13	16.261	5.4			28	18.900	4.9		
14	-30.253	0.7	1.5168		29	-14.290	1.2		
15	18.200	3.7	1.72825		30	34.322			

(1) E.F.L=9.5

\*\*\* 1 = 1.8144; \*\*\* 2 = 39.4096; \*\*\* 3 = 1.8788

(2) E.F.L=50.0

\*\*\* 1 = 27.8144; \*\*\* 2 = 2.0358; \*\*\* 3 = 13.2526

● 原资料不全, 仅供参考。