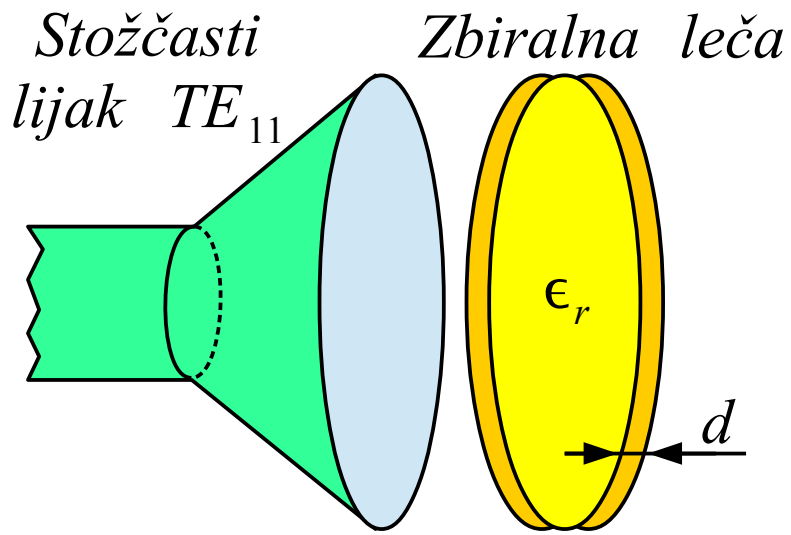
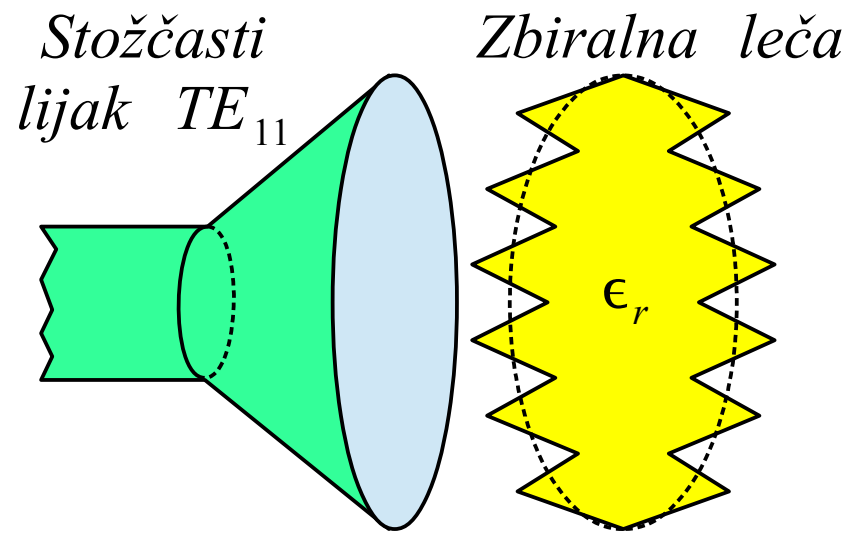


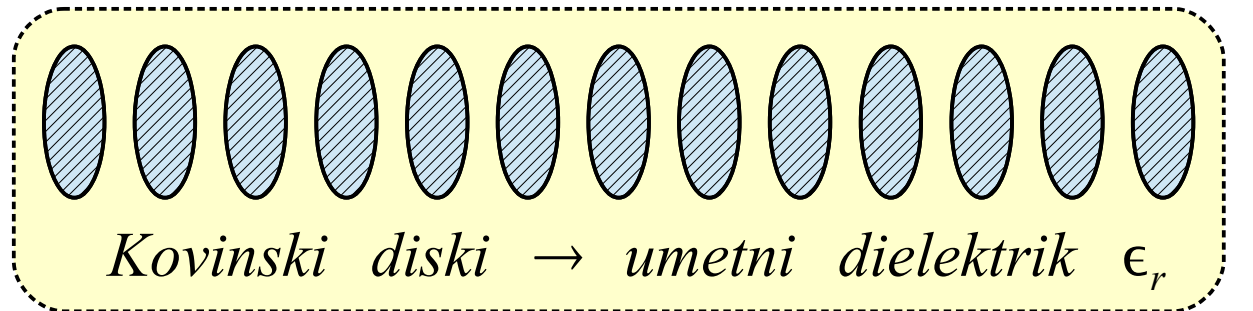
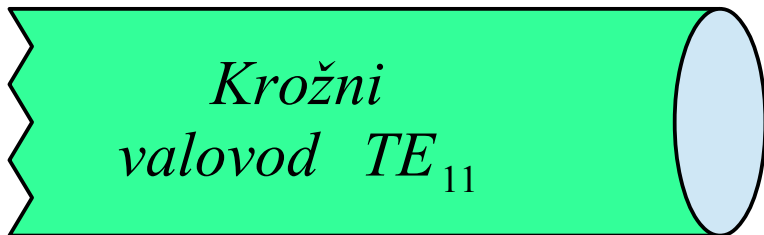
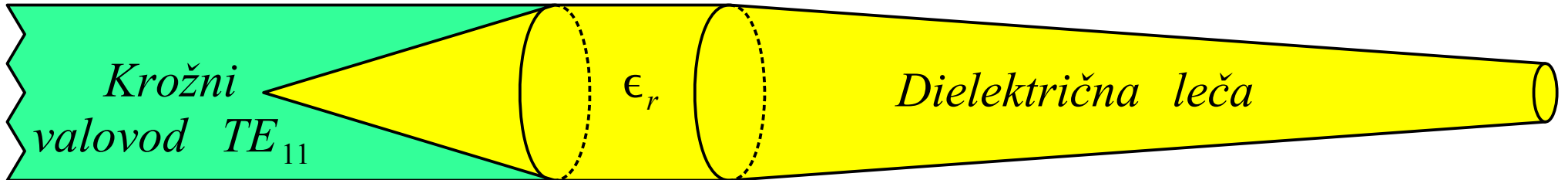
Leča



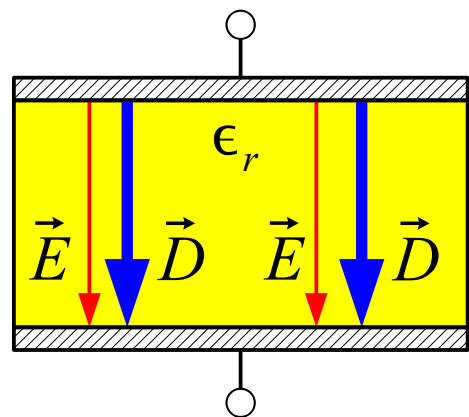
Antirefleksni sloj  
 $\epsilon_r' = \sqrt{\epsilon_r}$   $d = \lambda'/4$



Oblikovana površina  
dielektrika  $\epsilon_r$

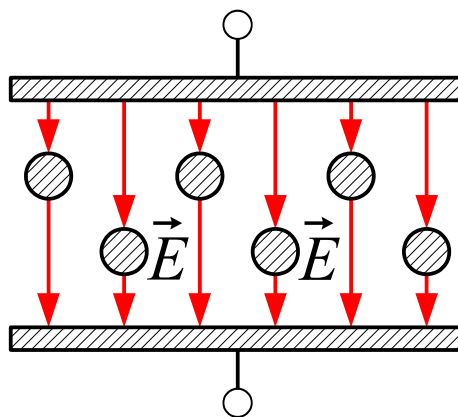


Dielektrične leče



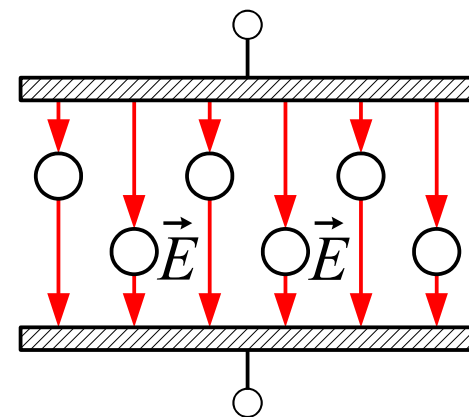
Kondenzator z dielektrikom  $\epsilon_r$

*Kovina* →



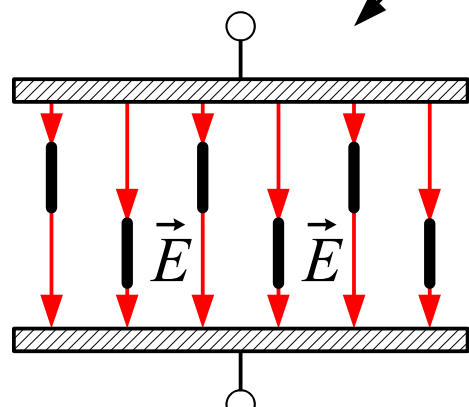
Kovinske kroglice

→ *Votlo*



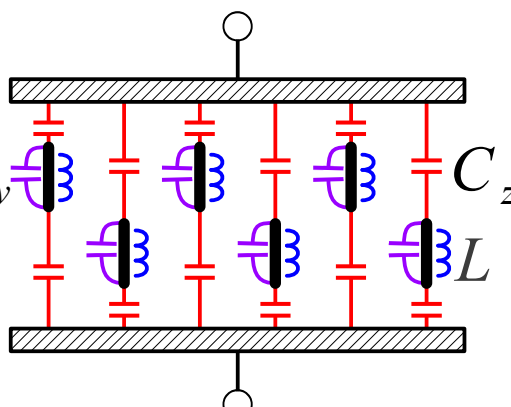
Kovinski balončki

Izbrana smer  $\vec{E}$

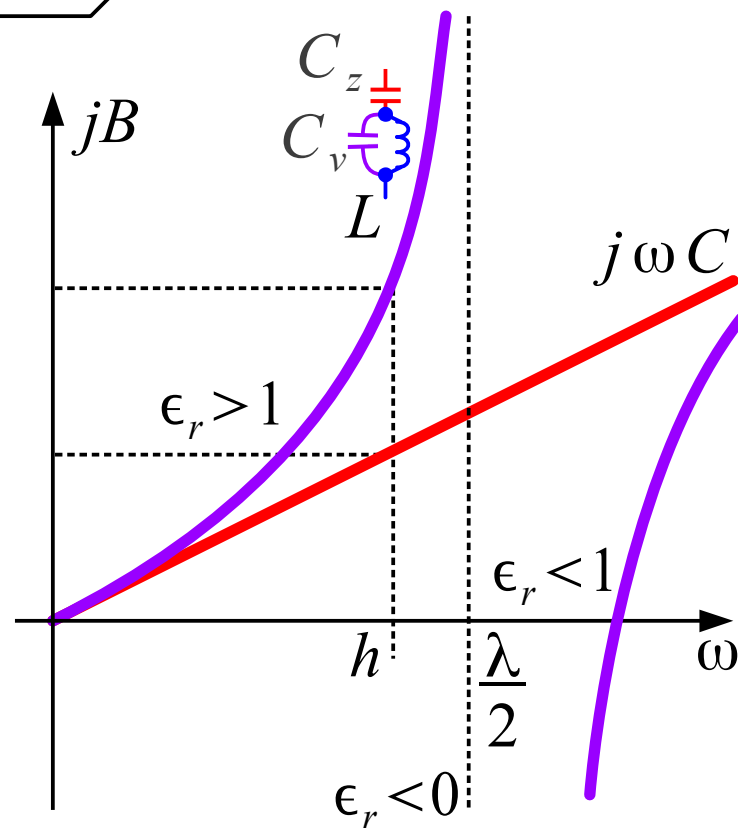


Kovinske palčke  $h \ll \lambda/2$

→ *Rezonanca*

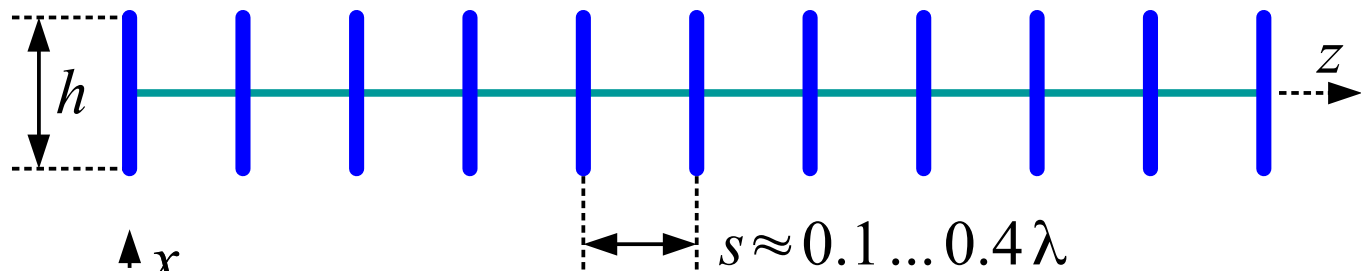


Rezonančne palčke  $h \approx \lambda/2$

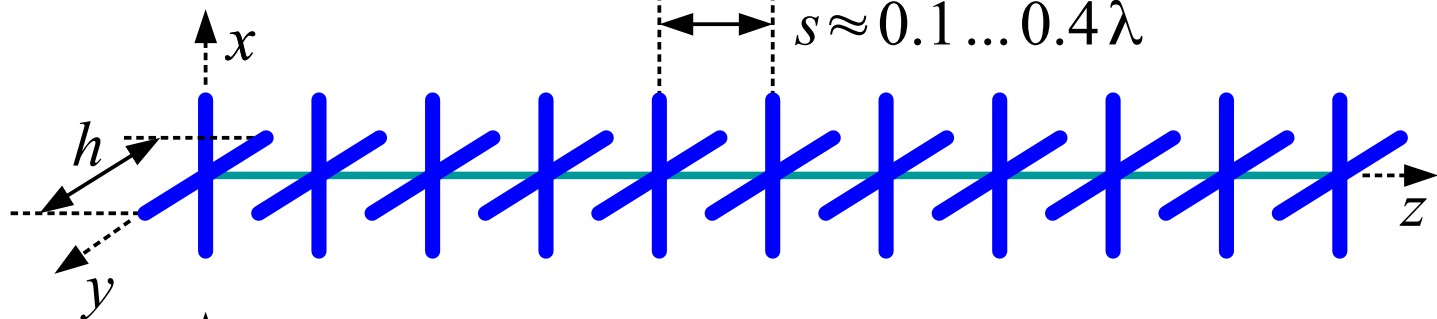


Umetni dielektriki

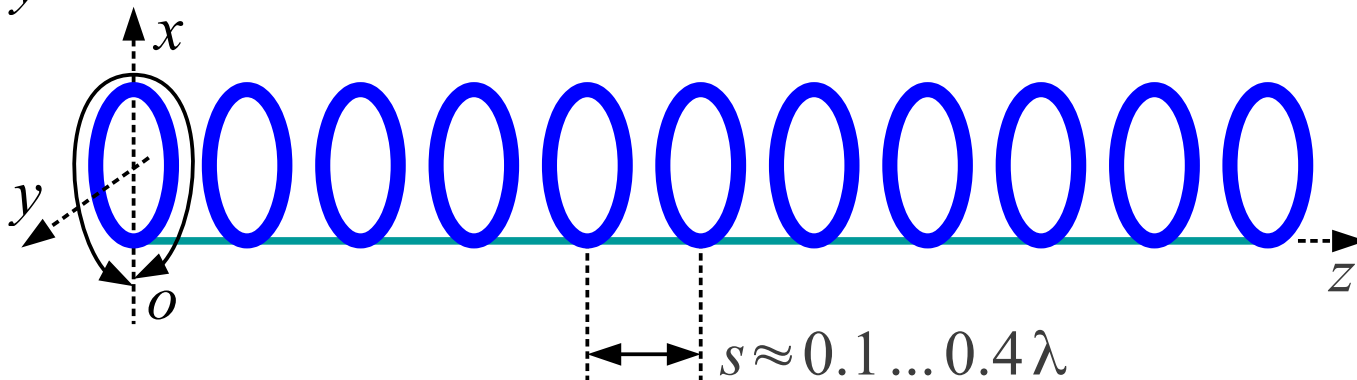
*Palčke*  $h \approx 0.4 \dots 0.45 \lambda$   
(*Shintaro Uda* 1926)



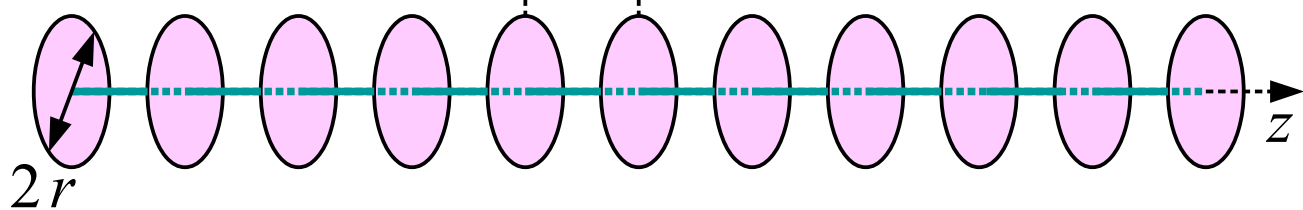
*Križne palčke*  
(*obe polarizaciji*)



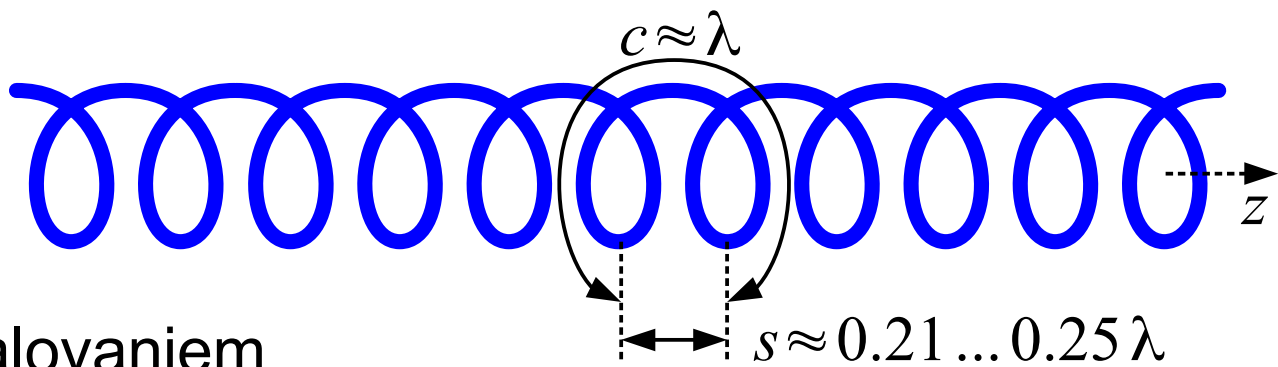
*Žične zanke*  $o \approx 0.9 \lambda$   
(*krožne, kvadratne*)



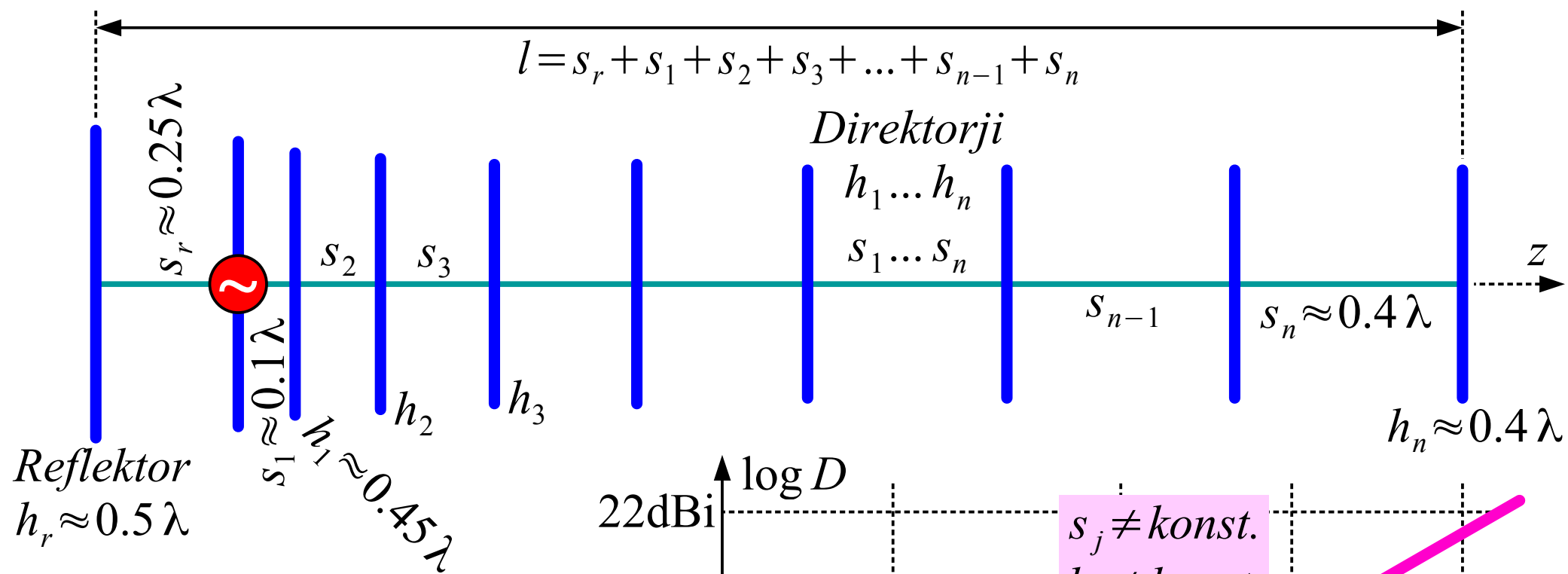
*Kovinski diski*  $2r \approx 0.3 \lambda$   
*cigara* (*obe polarizaciji*)  
(*J.C.Simon & G.Weill* 1953)



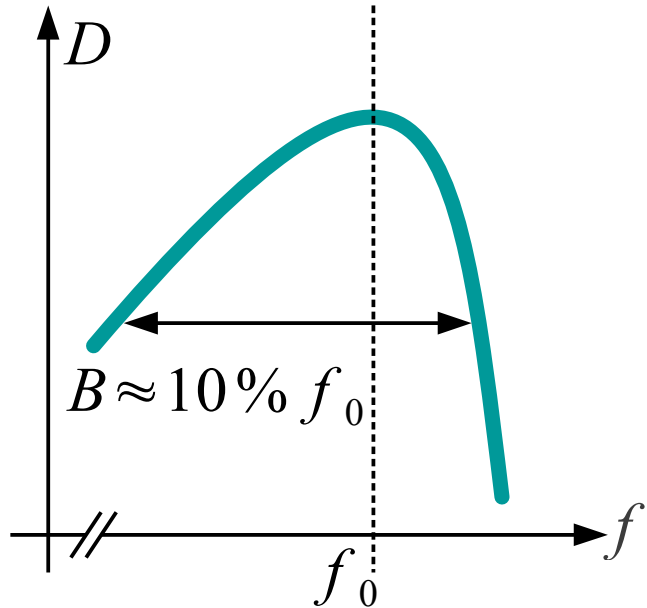
*Vijačnica*  $0.75 \lambda < c < 1.33 \lambda$   
(*krožna polarizacija*)  
(*John Kraus* 1946)



Strukture z upočasnjenim valovanjem



Smernost



Antena Yagi-Uda

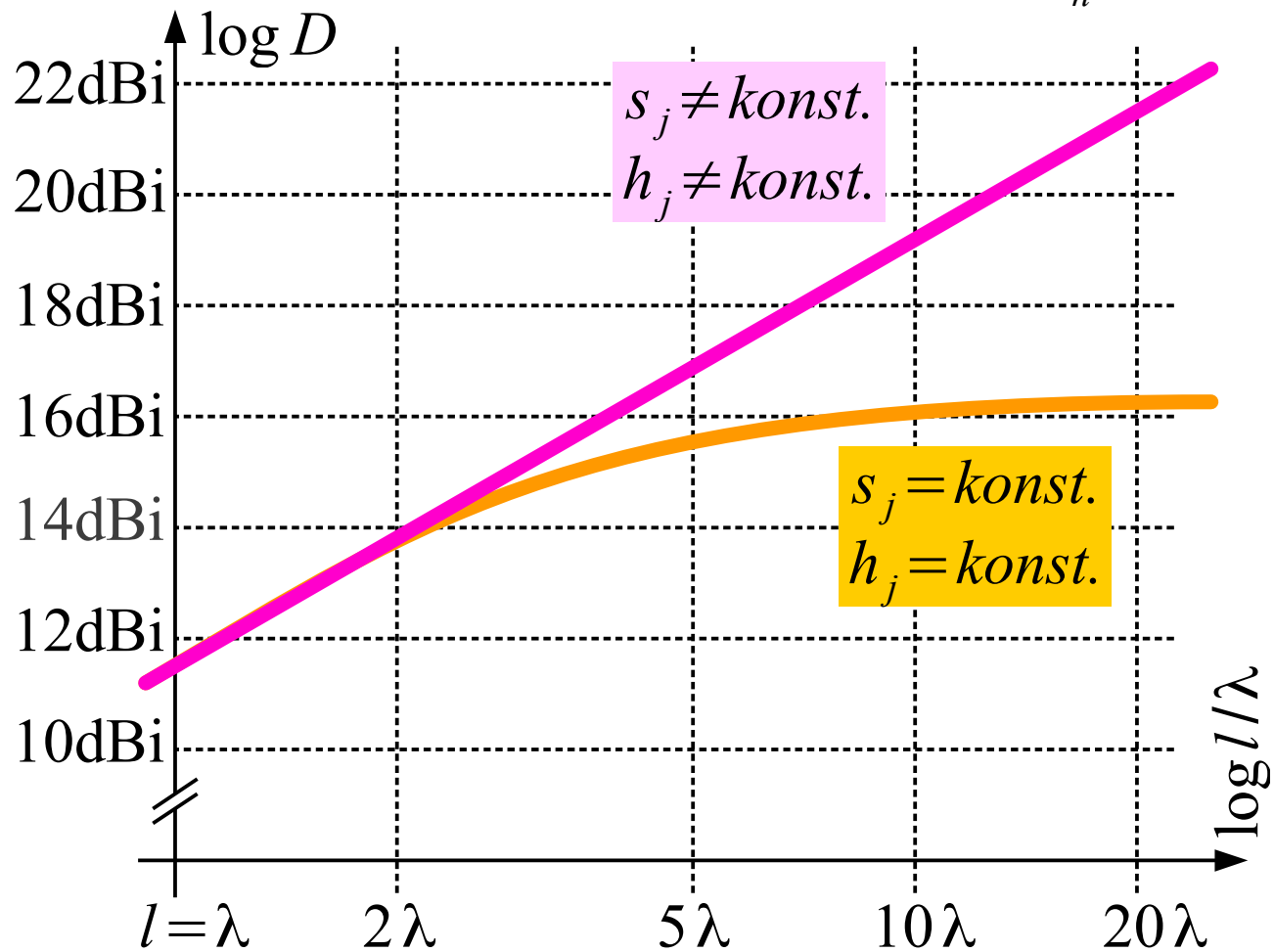


TABLE 1. OPTIMIZED LENGTHS OF PARASITIC ELEMENTS  
FOR YAGI ANTENNAS OF SIX DIFFERENT LENGTHS

LENGTH OF REFLECTOR, $\lambda$	LENGTH OF YAGI IN WAVELENGTHS					
	0.4	0.8	1.20	2.2	3.2	4.2
1st	0.424	0.428	0.428	0.432	0.428	0.424
2nd		0.424	0.420	0.415	0.420	0.424
3rd		0.428	0.420	0.407	0.407	0.420
4th			0.428	0.398	0.398	0.407
5th				0.390	0.394	0.403
6th				0.390	0.390	0.398
7th				0.390	0.386	0.394
8th				0.390	0.386	0.390
9th				0.398	0.386	0.390
10th				0.407	0.386	0.390
11th					0.386	0.390
12th					0.386	0.390
13th					0.386	0.390
14th					0.386	
15th					0.386	
SPACING BETWEEN DIRECTORS, IN $\lambda$	0.20	0.20	0.25	0.20	0.20	0.308
GAIN RELATIVE TO HALF-WAVE DIPOLE IN DB	7.1	9.2	10.2	12.25	13.4	14.2
DESIGN CURVE (SEE FIG. 9)	(A)	(B)	(B)	(C)	(B)	(D)

ELEMENT DIAMETER = 0.0085

$f = 400$  MHZ

REFLECTOR SPACED 0.2 $\lambda$  BEHIND DRIVEN ELEMENT

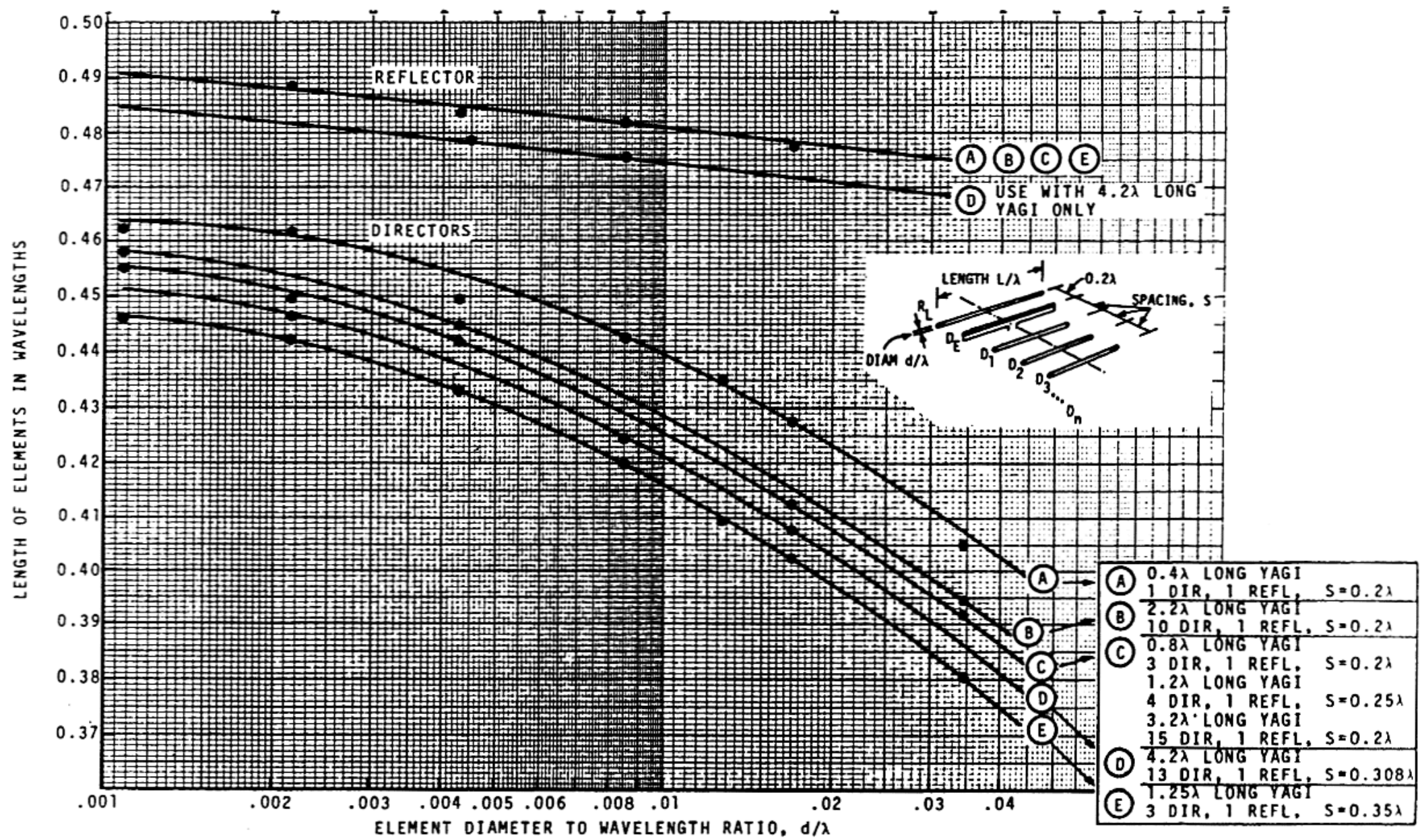
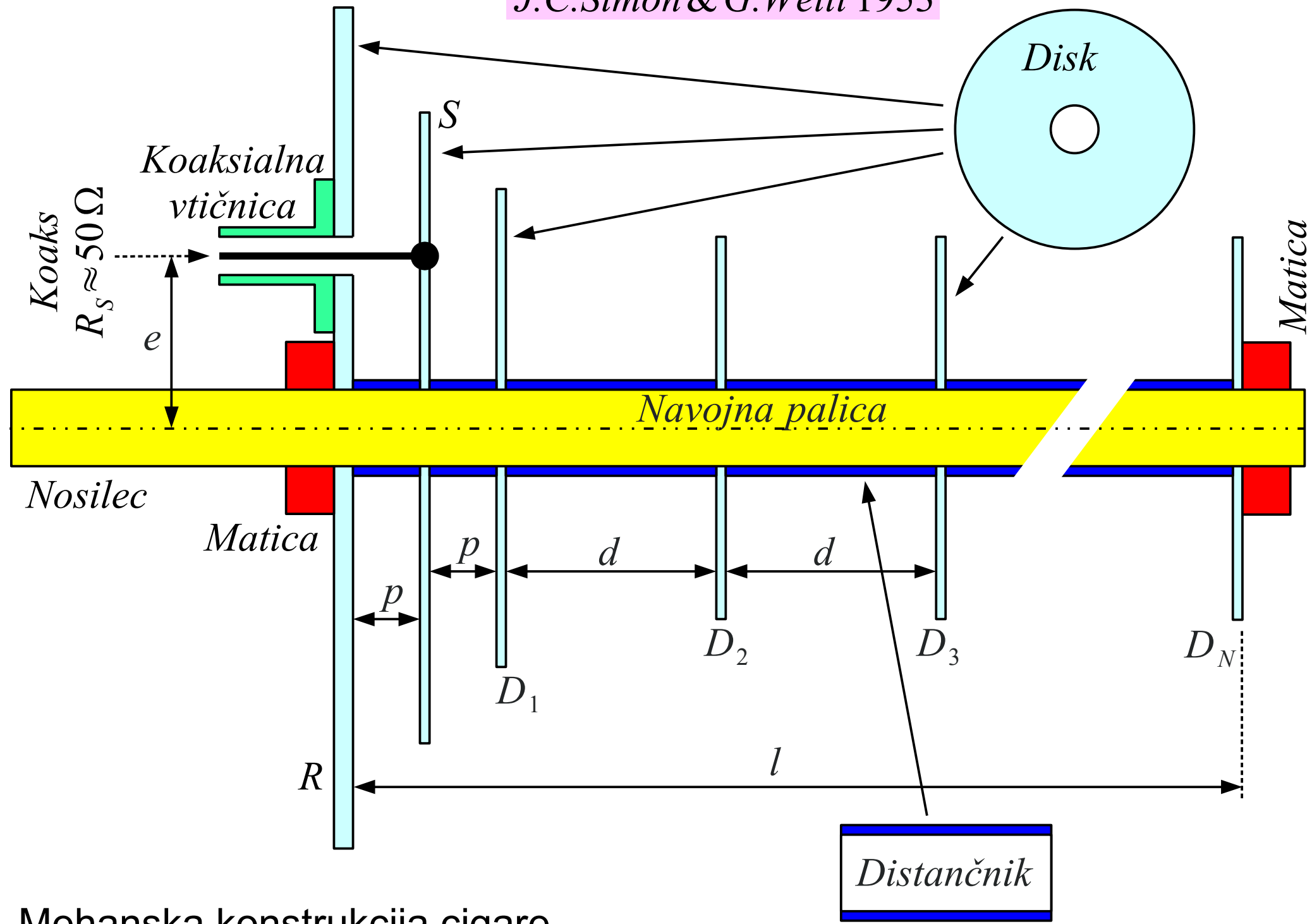


FIG. 9 YAGI ANTENNA DESIGN DATA SHOWING THE RELATIONSHIP BETWEEN ELEMENT DIAMETER TO WAVELENGTH RATIO AND ELEMENT LENGTH FOR DIFFERENT ANTENNAS

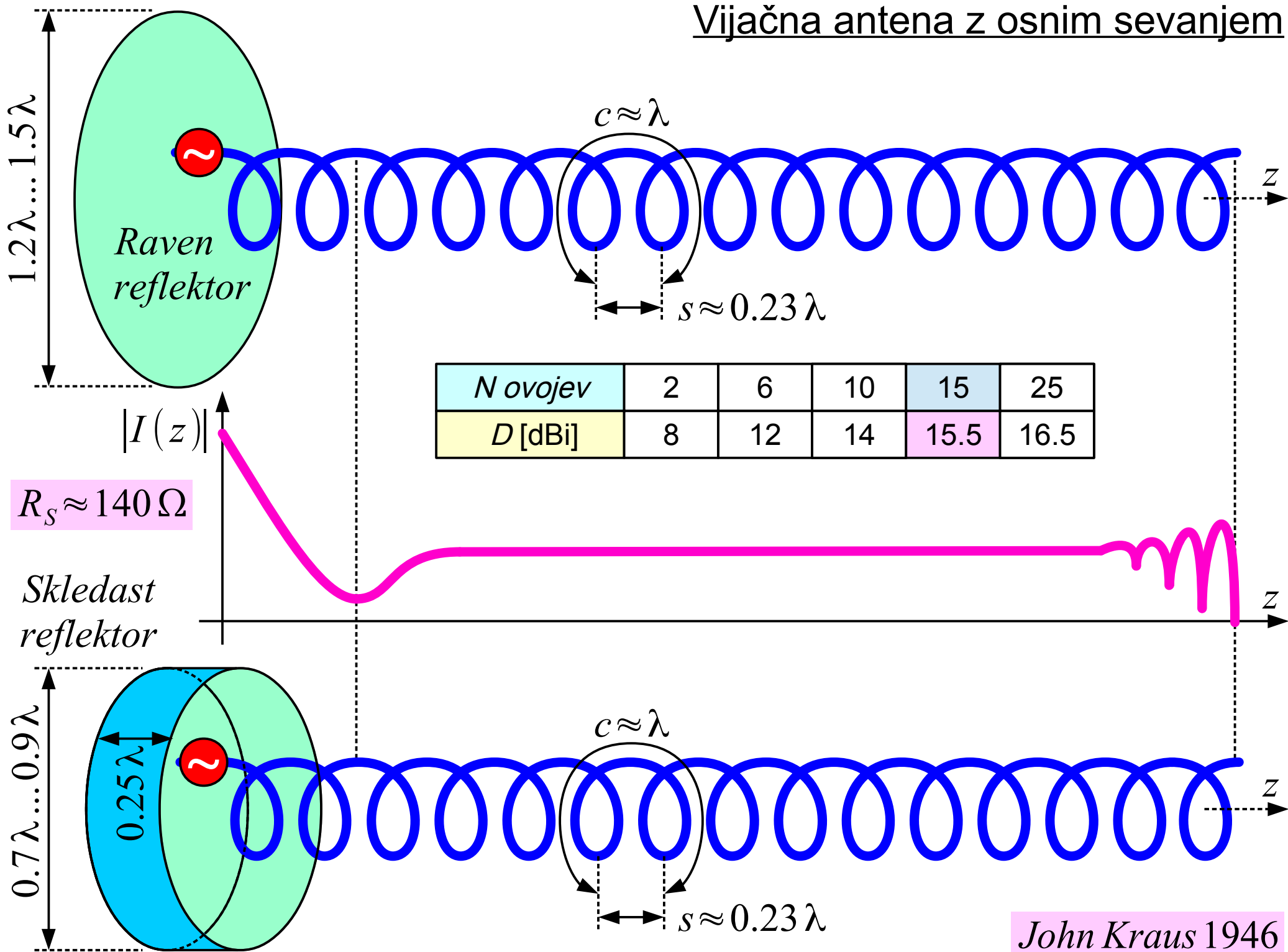
*J.C.Simon & G.Weill 1953*



Mehanska konstrukcija cigare



# Vijačna antena z osnim sevanjem



# Vzbujanje umetnih dielektrikov

*Palčke Yagi – Uda*

*Zaviti dipol*

$$R_S \approx 200 \Omega$$

*Vijačna antena*

*Raven reflektor*

*C*

*Koaks*  
 $R_S \approx 50 \Omega$

*Zanke Yagi – Uda*

$$R_S \approx 50 \Omega$$

*Raven reflektor*

$\lambda/4$

*Vijačna antena*

*Koaks*  
 $R_S \approx 50 \Omega$

$$Z_K \approx 84 \Omega$$

$\gamma$   
*priklop*  
 $R_S \approx 50 \Omega$

*Palčke Yagi – Uda*

$e$

*C*

