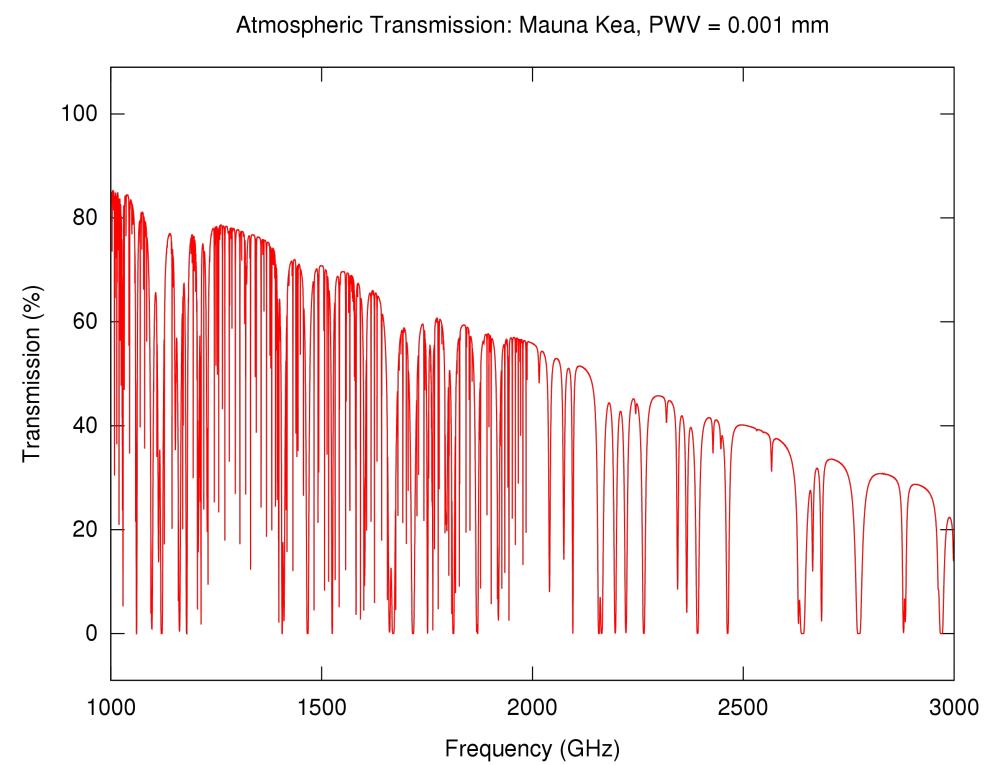
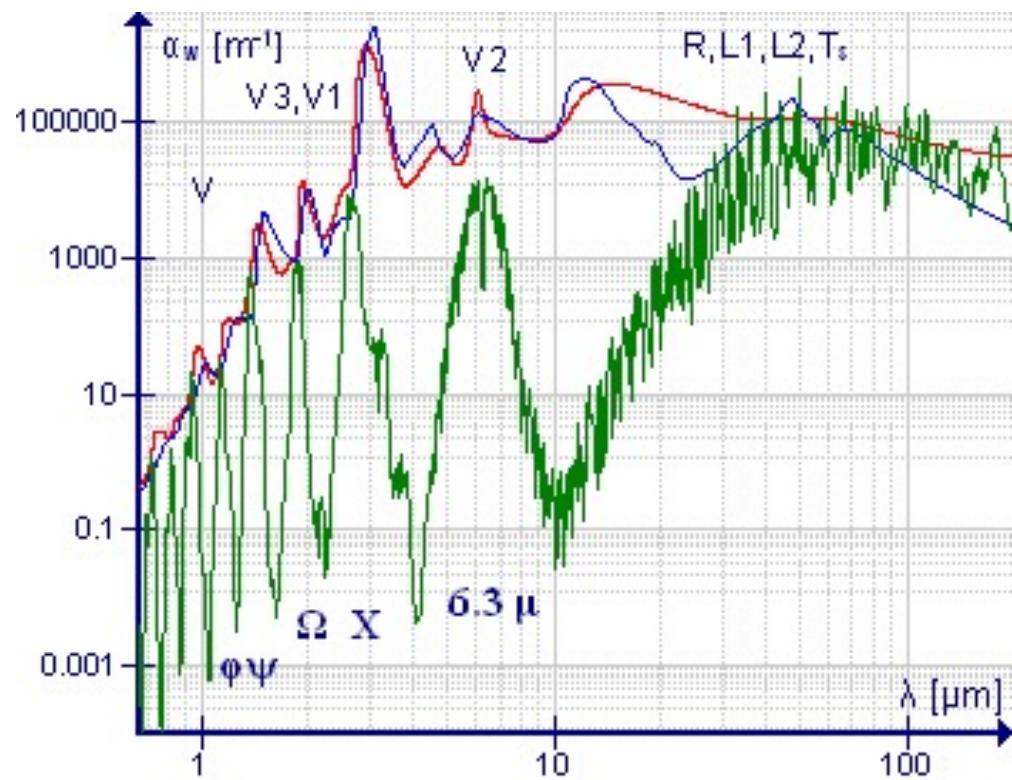
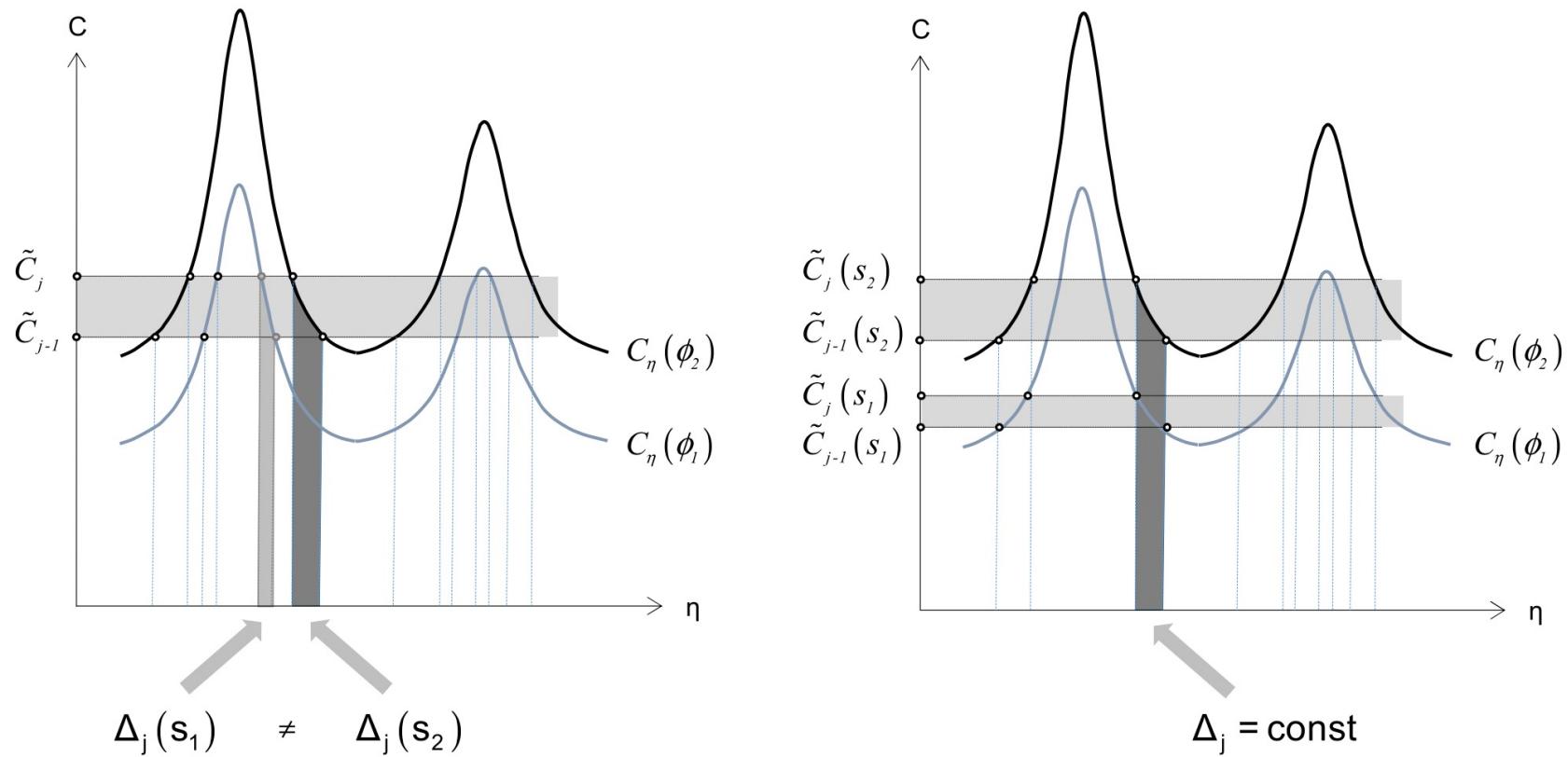


# Water absorption spectrum

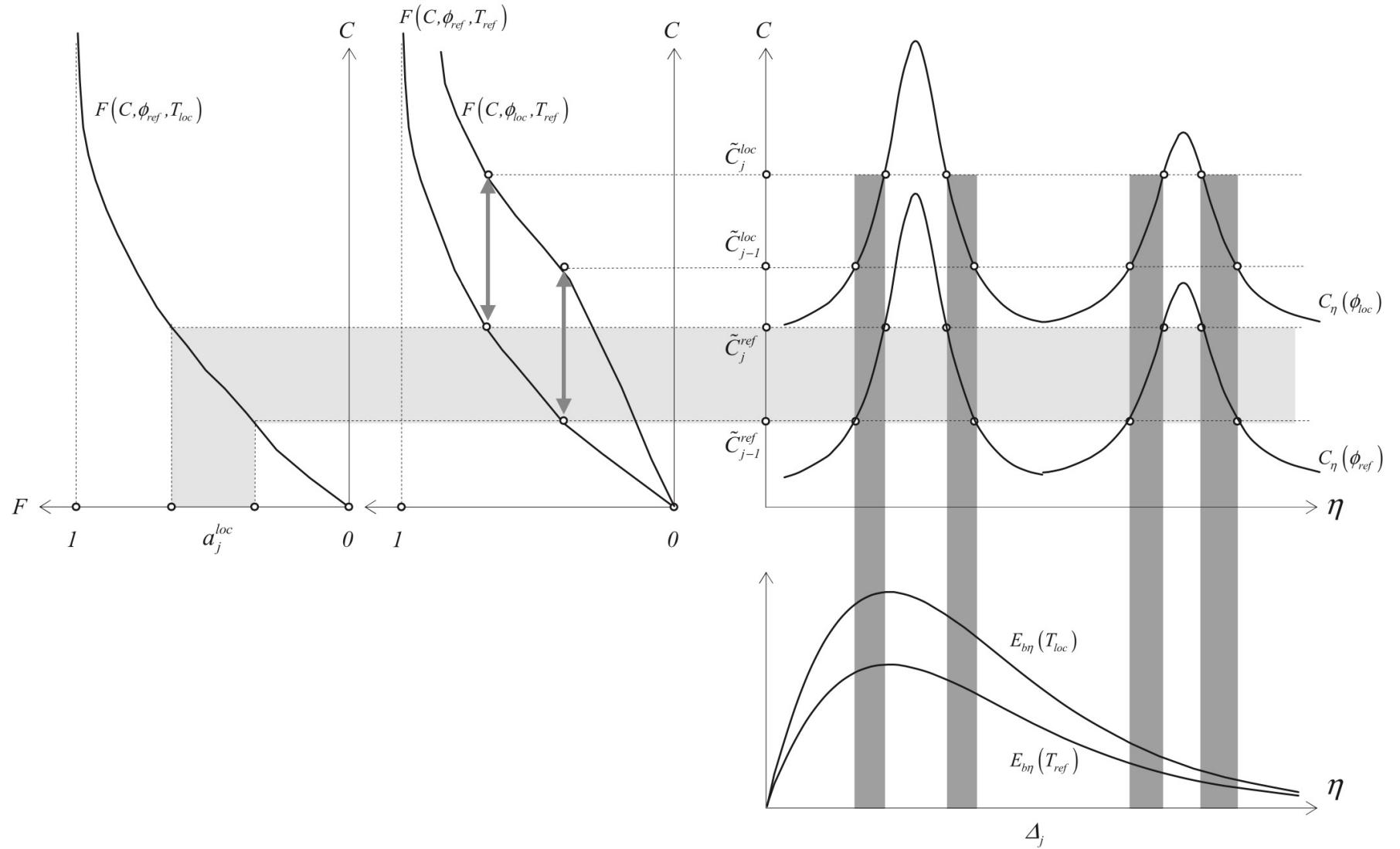


# SLW model, spatial dependence



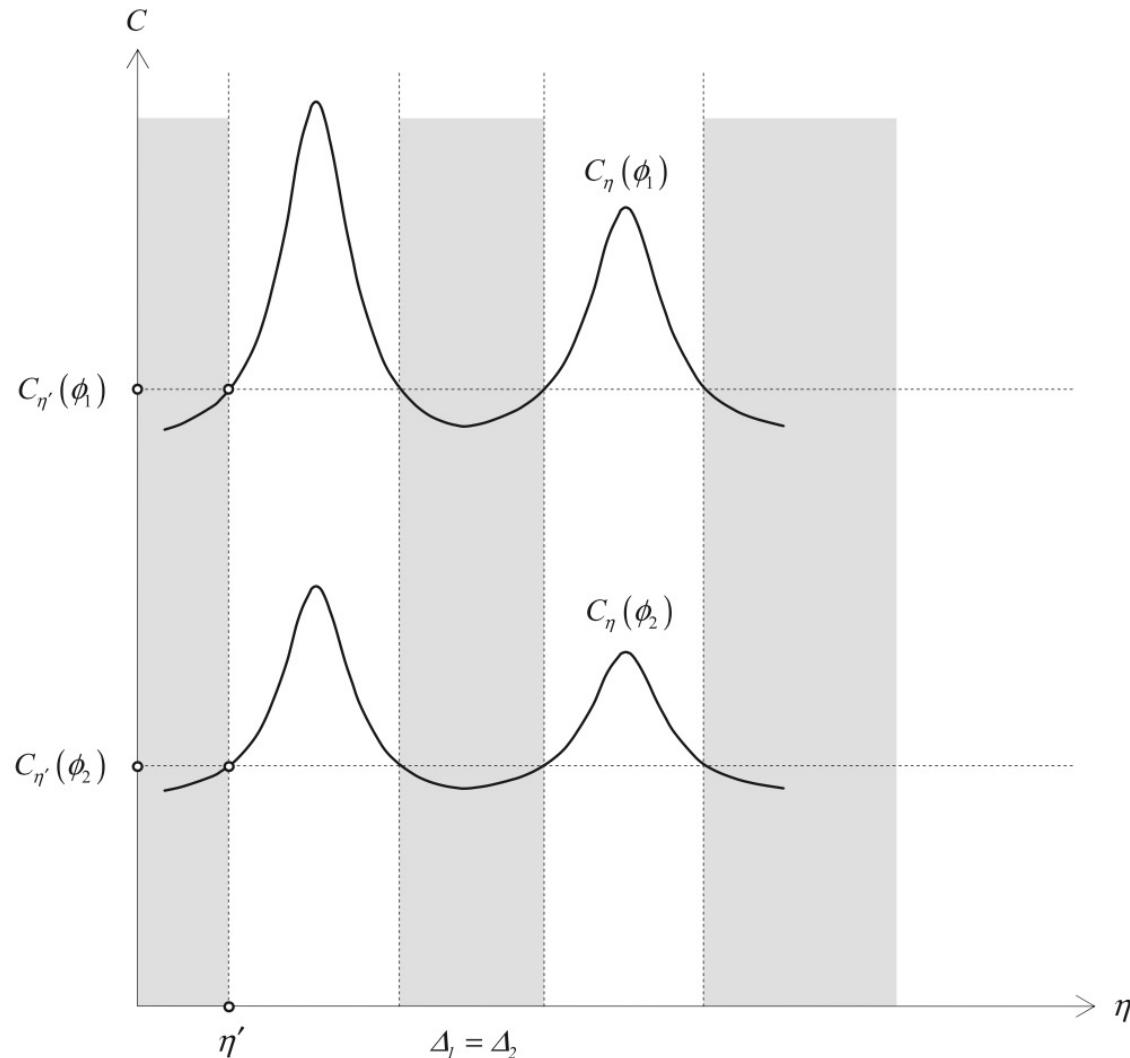
**Fig. 2.** Gray gas wavenumber intervals  $\Delta_j(s)$  in non-uniform media: a) fixed supplemental cross-sections  $\tilde{C}_j = \text{const}$  - variable intervals  $\Delta_j(s)$ , and b) variable supplemental cross-sections  $\tilde{C}_j(s)$  - fixed intervals  $\Delta_j = \text{constant}$ .

# SLW model, reference approach



**Fig. 3.** Geometrical interpretation of the SLW reference approach.

# Rank Correlation



**Fig. 4.** Rank correlated gas absorption cross-section  $C_\eta(\phi)$  at two different thermodynamic states  $\phi_1$  and  $\phi_2$ .

# Discrete Ordinates

TABLE 17.1

Discrete ordinates for the  $S_N$ -approximation ( $N = 2, 4, 6, 8$ ), from [19].

Order of Approximation	Ordinates			Weights $w$
	$\xi$	$\eta$	$\mu$	
$S_2$ (symmetric)	0.5773503	0.5773503	0.5773503	1.5707963
$S_2$ (nonsymmetric)	0.5000000	0.7071068	0.5000000	1.5707963
$S_4$	0.2958759	0.2958759	0.9082483	0.5235987
	0.2958759	0.9082483	0.2958759	0.5235987
	0.9082483	0.2958759	0.2958759	0.5235987
$S_6$	0.1838670	0.1838670	0.9656013	0.1609517
	0.1838670	0.6950514	0.6950514	0.3626469
	0.1838670	0.9656013	0.1838670	0.1609517
	0.6950514	0.1838670	0.6950514	0.3626469
	0.6950514	0.6950514	0.1838670	0.3626469
	0.9656013	0.1838670	0.1838670	0.1609517
$S_8$	0.1422555	0.1422555	0.9795543	0.1712359
	0.1422555	0.5773503	0.8040087	0.0992284
	0.1422555	0.8040087	0.5773503	0.0992284
	0.1422555	0.9795543	0.1422555	0.1712359
	0.5773503	0.1422555	0.8040087	0.0992284
	0.5773503	0.5773503	0.5773503	0.4617179
	0.5773503	0.8040087	0.1422555	0.0992284
	0.8040087	0.1422555	0.5773503	0.0992284
	0.8040087	0.5773503	0.1422555	0.0992284
	0.9795543	0.1422555	0.1422555	0.1712359