Table 3

	t					
No.	1	5	10	15	18	21
110	29.9	15.3	2.3	20.0	30.5	41.0
818	44.2	39.2	32.7	25.9	21.8	17.5
288	27.0	28.7	30.7	32.5	33.5	34.4
509	15.6	14.9	13.8	12.6	11.8	11.0
553	13.3	11.0	8.5	6.2	4.9	3.7
452	13.2	10.2	6.5	2.9	0.9	1.1
848	8.1	4.0	1.2	6.7	10.1	13.5
469	6.1	3.5	0.4	2.7	5.1	6.2
510	5.1	4.9	4.4	3.7	3.3	2.7
149	5.1	6.7	8.5	10.0	10.8	11.5
222	1.3	1.5	2.1	2.9	3.5	4.2
892	71.5	75.0	79.2	83.1	85.4	87.6

9. Stability of the Method

1. Our calculations showed that the decreasing of the confidence probability ε (beginning with $\varepsilon = 0.2$) does not shift the time interval of probable dating. We also obtained that this interval does not depend on the assumption of normality of the distribution of random variables ξ_i (a kind of robustness).

2. Let us show how the final results depend on the content of the group of named stars (information kernel). Namely, let us consider a subset of this group. Of course, the dating time interval will be changed (more exactly, it will increase). For example, if we remove Arcturus (the fastest star in the group), then the left boundary of the dating time interval shifts to approximately 350 A.D. but it still does not touch the traditional period of Ptolemy. Some useful information about the dependence on the content of the group of named stars is contained in Fig. 121. There, for some fixed t, the empirical distribution functions

$$F^{(t)}(x) = \#\{i\colon\ |\Delta(i,t,\gamma,\varphi)| < x\}/12$$

are shown.

We see that the "best" distribution function corresponds to $t = 10$ (i.e., $\approx$ 1000 A.D.) and $\gamma = 21'$. This confirms the assertion above.

3. Let us change the accuracy level Δ. Recall that we started with $\Delta = 10'$. Then the "epoch of Ptolemy" will be included only when $\Delta = 25'$.

4. Now consider not only the "rigid rotation" of the celestial sphere (as group errors), but also an arbitrary diffeomorphism of the coordinates (which is, however,