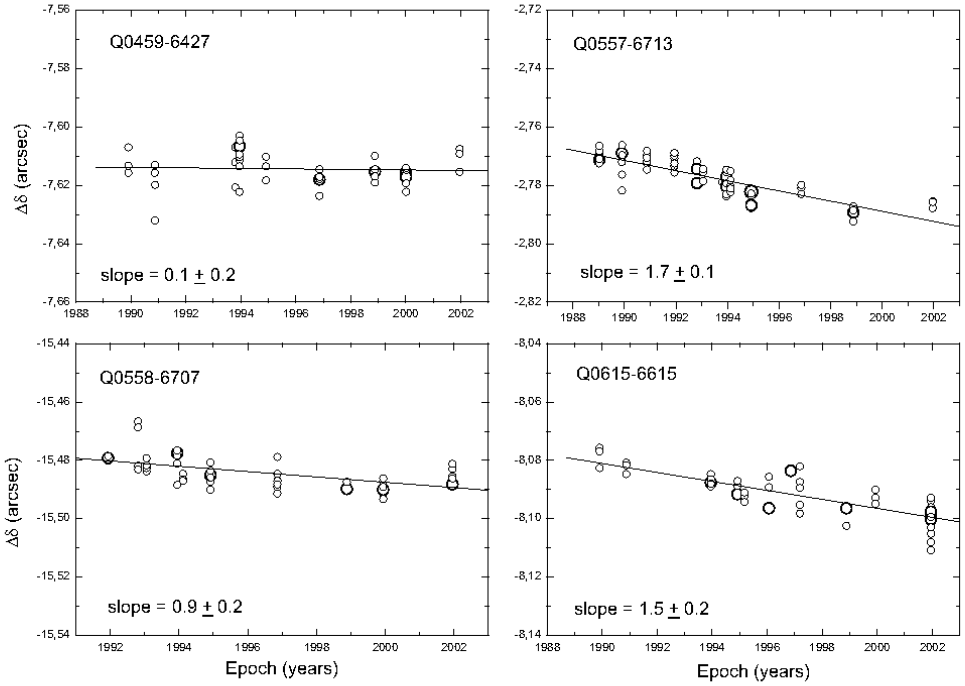


Fig. 3. Same as Figure 2 but for DEC ($\Delta\delta$).

TABLE 4

PROPER MOTION OF THE LMC (AS MEASURED)

| Field ID | $\mu_\alpha \cos(\delta)$ mas yr$^{-1}$ | $\mu_\delta$ mas yr$^{-1}$ | Frames | Epochs | Epoch Range |
|---|---|---|---|---|---|
| Q0459-6427 | 1.4 ± 0.2 | 0.1 ± 0.2 | 45 | 9 | 1989.91−2001.96 |
| Q0557-6713 | 1.2 ± 0.2 | 1.7 ± 0.1 | 70 | 13 | 1989.02−2001.96 |
| Q0558-6707 | 1.3 ± 0.2 | 0.9 ± 0.2 | 48 | 9 | 1992.81−2001.96 |
| Q0615-6615 | 2.1 ± 0.2 | 1.5 ± 0.2 | 53 | 11 | 1989.90−2001.96 |

respectively, and, finally, Columns 4, 5, and 6 show the number of frames, the number of epochs, and the observation period, respectively. It should be noted that the rather small quoted errors for the PM come out directly from what the least-square fit yields as the uncertainty in the determination of the slope of the best fit line. The fact that the DEC component of the PM for Q0459-6427 in this table differs by more than $2\sigma$ from the rest, may be because this field is in a different location within the LMC relative to the rest of the fields, namely, to the NW of the LMC bar, whereas the other three fields are far to the NE of the LMC bar which means that it might be affected by local internal motions in the cloud of the type suggested by Piatek, Pryor, & Olszewski (2008). This topic probably deserves further studies on the dynamics of this LMC area (and others of similar type in it).

## 4. COMPARISON WITH PREVIOUS MEASUREMENTS

Table 5 lists the results of all the PM measurements that are known for the LMC with respect to either the center of the LMC or the corresponding field (indicated as "field"), with uncertainties of less than 1 mas yr$^{-1}$ in both PM ($\mu$) components, and the system of reference used in each case. The values for the LMC center are obtained by correcting the field PM for rotation of the LMC plane, and for perspective effects, as explained in