

### 17. Effects of Timing Errors

The problem of errors in the sampling times  $t_m$ , whether regularly spaced or not, is not a part of the conventional textbook discussion, because measurements are typically obtained from instruments for which clock errors are normally quite small. But for instruments whose clocks drift, but especially when analyzing data from ice or deep ocean cores, the inability to accurately date the samples is a major problem. A general treatment of clock error or “timing jitter” may be found in Moore and Thomson (1991) and Thomson and Robinson (1996), with a simplified version applied to ice core records in Wunsch (2000).