

# Tidsplott av luftforurensnings-, meteorologiske og trafikkdata brukt i STANDAM

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Dato

25. mars 2010

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**Tittel** **Tidsplott av luftforurensnings-, meteorologiske og trafikkdata brukt i STANDAM**

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### **Sammendrag**

Denne rapporten presenterer detaljerte figurer av luftkvalitets-, meteorologiske og trafikkdata brukt i prosjektet "Statistisk multivariabel analyse av data fra Ring 2 i Oslo 2001-2009 (STANDAM)", finansiert av Statens Vegvesen.

Emneord

Målgruppe Til den det måtte gjelde

Tilgjengelighet Åpen

Prosjekt STANDAM

Prosjektnummer 220433

Satsningsområde Miljø og marin

Antall sider 541

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# 1 Introduksjon

De neste kapitlene viser detaljerte figurer av luftkvalitets-, meteorologiske- og trafikkdata brukt i prosjektet "Statistisk multivariabel analyse av data fra Ring 2 i Oslo 2001-2009 (STANDAM)", finansiert av Statens Vegvesen. Trafikk- og meteorologiske data vises på original skala, mens luftkvalitetsdataene er plottet på logaritmisk skala for å bedre kunne tydeliggjøre forandringer i luftforurensningskonsentrasjonene over tid.

Hver linje (eller rad) i figurene viser data på timesoppløsning over en periode på to uker, slik at hver side viser en periode på 14 uker. Datakomponentene med tilhørende enhet er listet opp tabell 1.1.

Variable		Enhet
Respons	PM <sub>10</sub> – PM <sub>2,5</sub>	µg/m <sup>3</sup>
	PM <sub>10</sub>	µg/m <sup>3</sup>
	PM <sub>2,5</sub>	µg/m <sup>3</sup>
	NO	µg/m <sup>3</sup>
	NO <sub>2</sub>	µg/m <sup>3</sup>
	NO <sub>x</sub>	µg/m <sup>3</sup>
	CO	mg/m <sup>3</sup>
Meteorologiske data	Vindretning	grader
	Vindstyrke	m/s
	Relativ fuktighet	%
	Temperatur 2m over bakken	°C
	Temperatur 2m-25m over bakken	°C
	Nedbør	mm/time
	Snødybde	m
Trafikkdata	Antall tunge og lette kjøretøy	
	Gjennomsnittshastighet	km/time

Tabell 1.1. Liste over data som er plottet i dette notatet.



## 2 Luftforurensning

Luftkvalitetsdata er fra Kirkeveien i Oslo på timesoppløsning i perioden 2001-2009 og består av svevestøvskomponenter  $PM_{10}$ ,  $PM_{2,5}$  og  $PM_{10} - PM_{2,5}$  og gassene  $NO$ ,  $NO_x$ ,  $NO_2$  og  $CO$ .

Følgende modifikasjoner er gjort med luftforurensningsobservasjonene:

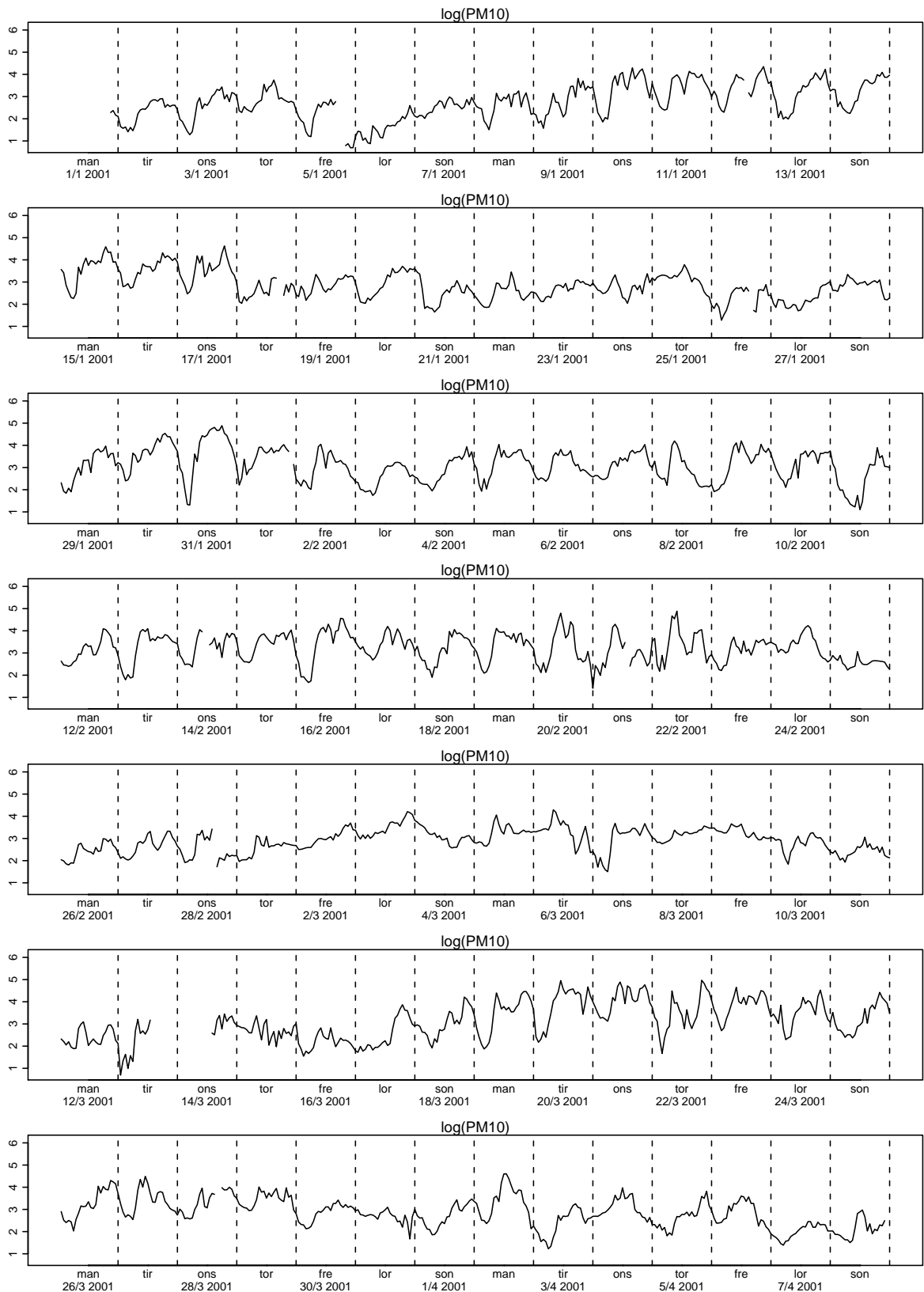
- Luftforurensningsdataene er i vintertid og er derfor justert til klokketid
- Rådataene inneholder verdier for grovfraksjonen  $PM_{10} - PM_{2,5}$  i tillegg til verdier for  $PM_{2,5}$  og  $PM_{10}$ . Men disse oppgitte verdiene for grovfraksjonen er ikke lik differansen mellom  $PM_{2,5}$  og  $PM_{10}$ , og vi har derfor valgt å definere grovfraksjonen som differansen mellom  $PM_{2,5}$  og  $PM_{10}$  og sett bort fra den oppgitte grovfraksjonen  $PM_{10} - PM_{2,5}$  i rådatene. Da  $PM_{10}$  inkluderer  $PM_{2,5}$ , skal konsentrasjonen av den første være større enn den andre. Dette er midlertidig ikke alltid tilfelle i rådatene, som viser at  $PM_{2,5}$  i perioder er betydelig større enn  $PM_{10}$ . Svevestøvkomponentene måles i midlertidig med to forskjellige apparater, og på grunn av målefeil kan målt  $PM_{2,5}$  være større enn  $PM_{10}$ . Vi har derfor godtatt observasjoner der differansen  $PM_{10} - PM_{2,5}$  er større enn  $-5\mu\text{g}/\text{m}^3$  og fjernet observasjoner der  $PM_{10} - PM_{2,5}$  er lavere. Se videre under hvordan vi behandler observasjoner i nærheten av null.
- Rådataene inneholder verdier for  $NO$ ,  $NO_2$  og  $NO_x$ .  $NO_x$  skal per definisjon være minst like stor som summen av  $NO$  og  $NO_2$ . Da dette ikke alltid er tilfelle har vi valgt å beregne  $NO_x$  som  $NO+NO_2$ , istedenfor å bruke de oppgitte målingene av  $NO_x$ .
- Omkring midnatt nyttårsaften er det svært store konsentrasjoner av svevestøv som skyldes oppskytning av raketter. Verdiene for  $PM_{10}$  i første timen på nyåret varierer fra  $200\mu\text{g}/\text{m}^3$  til  $825\mu\text{g}/\text{m}^3$  i perioden 2001 til 2009, som er betydelig høyere enn det vi observerer om natten ellers i året. Til sammenligning er  $460\mu\text{g}/\text{m}^3$  den høyeste (og realistiske) registrerte målingen av  $PM_{10}$  utenom timene rundt nyttårsaften. Nyttårsrakettenes har større effekt på  $PM_{2,5}$ , som har verdier mellom  $150$  og  $650\mu\text{g}/\text{m}^3$  den første timen på nyåret i hele dataperioden. Her er ellers den høyeste (realistiske) målingen på  $220\mu\text{g}/\text{m}^3$ . Siden disse høye konsentrasjonene ikke er relatert til det vi skal modellere her, har vi konsekvent fjernet alle observasjoner av  $PM_{2,5}$ ,  $PM_{10}$  og  $PM_{10} - PM_{2,5}$  fire

timer før og tjue timer etter midnatt nyttårsaftnen.

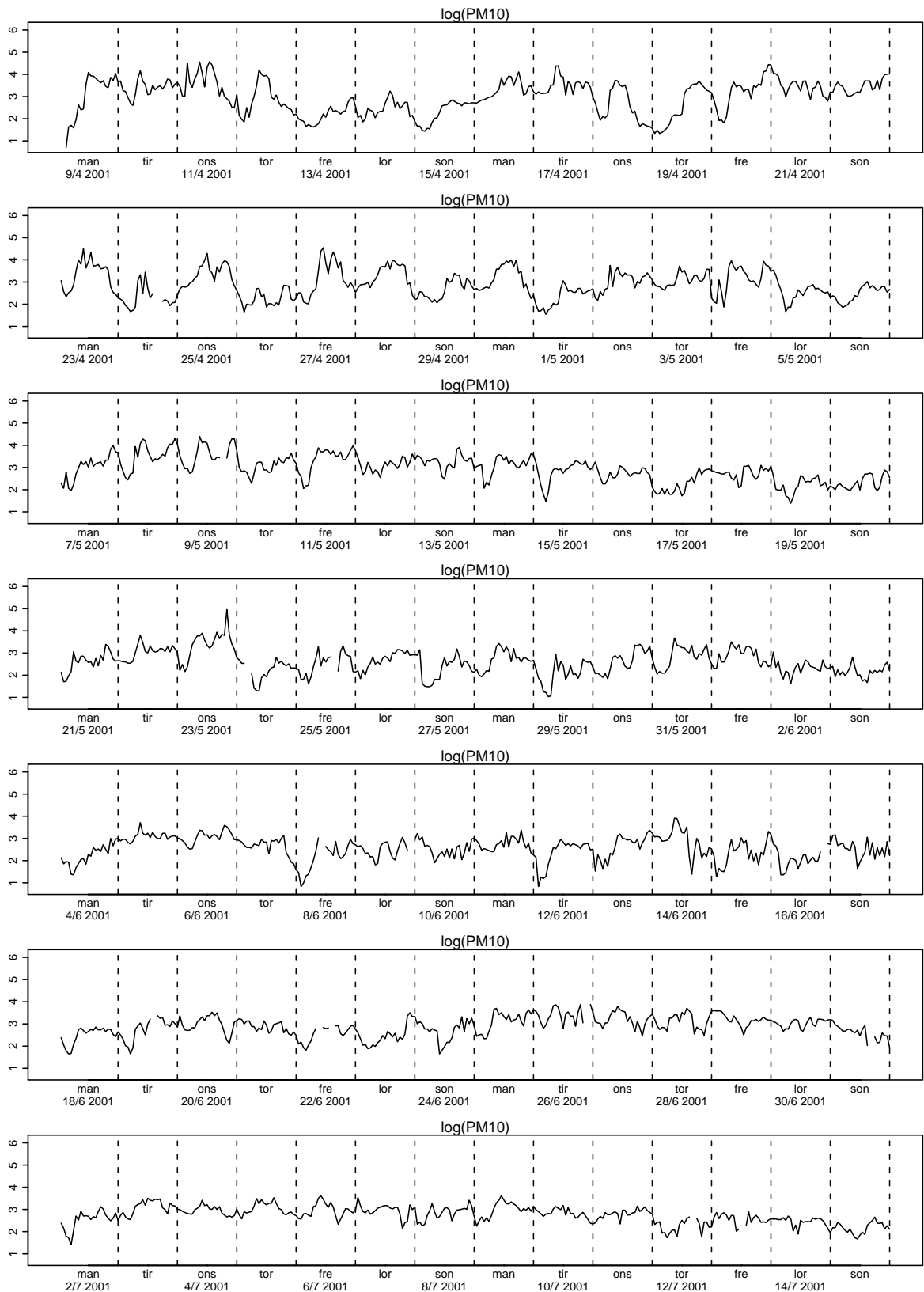
- Mange av luftforurensningskomponentene har observasjoner lik verdien null. På grunn av målefeil kan de registrerte målingene ligge i et lite intervall rundt null, men vi finner det lite troverdig at mange av observasjonene skal ha verdien nøyaktig lik null etter hverandre. Avhengig av størrelsen på de luftforurensningskomponentene har vi fjernet nullene slik:
  - For  $PM_{10}$  er alle null-observasjoner fjernet fordi reelle null-verdier er urimelige.
  - For  $PM_{2,5}$  er alle par av observasjoner som har verdien null rett etter hverandre i tid fjernet.
  - For NO og  $NO_2$  er alle observasjoner som har registrert tre nuller etter hverandre i tid fjernet.
  - For CO er alle observasjoner som har registrert 24 nuller etter hverandre i tid fjernet. Vi tillater her flere nuller etter hverandre enn for de øvrige luftforurensningskomponentene, fordi null er en rimelig verdi, i alle fall om natta.

I tillegg har vi tatt bort observasjoner som er mindre enn henholdsvis  $1\mu\text{g}/\text{m}^3$  og  $2\mu\text{g}/\text{m}^3$  for NO og  $NO_2$  i mer enn 16 timer, fordi lave verdier er mulig i kortere perioder, særlig om natta.

- Tidspunkt med mye lavere verdi enn timen før og etter (drop-verdier) er fjernet for NO og  $NO_2$  (lavere enn  $1\mu\text{g}/\text{m}^3$  for NO og høyere enn  $10\mu\text{g}/\text{m}^3$  i tidspunktene før og etter, men vi har brukt  $2\mu\text{g}/\text{m}^3$  og  $20\mu\text{g}/\text{m}^3$  for  $NO_2$ )
- Grunnet måleapparatets sikkerhetsmargin på  $5\mu\text{g}/\text{m}^3$  kan de registrerte luftforurensningsdataene være negative. For at dette ikke skal skape problemer for analysen senere, er målinger av  $PM_{10}$ ,  $PM_{10} - PM_{2,5}$ ,  $NO_2$  og  $NO_x$  mellom  $-5\mu\text{g}/\text{m}^3$  og  $2\mu\text{g}/\text{m}^3$  satt lik  $2\mu\text{g}/\text{m}^3$ , mens målinger av  $PM_{2,5}$  og NO mellom  $-5\mu\text{g}/\text{m}^3$  og  $1\mu\text{g}/\text{m}^3$  satt lik  $1\mu\text{g}/\text{m}^3$  og målinger av CO mellom  $-0.5$  og  $0.1\text{mg}/\text{m}^3$  satt til  $0.1\text{mg}/\text{m}^3$ . Målinger som er enda lavere er fjernet. Videre er ekstremt høye (det vil si urealistiske målinger) tatt bort.
- Vi har fjernet data hvor målingene har hengt seg opp i en verdi over en lengre periode (mer enn 24 timer).

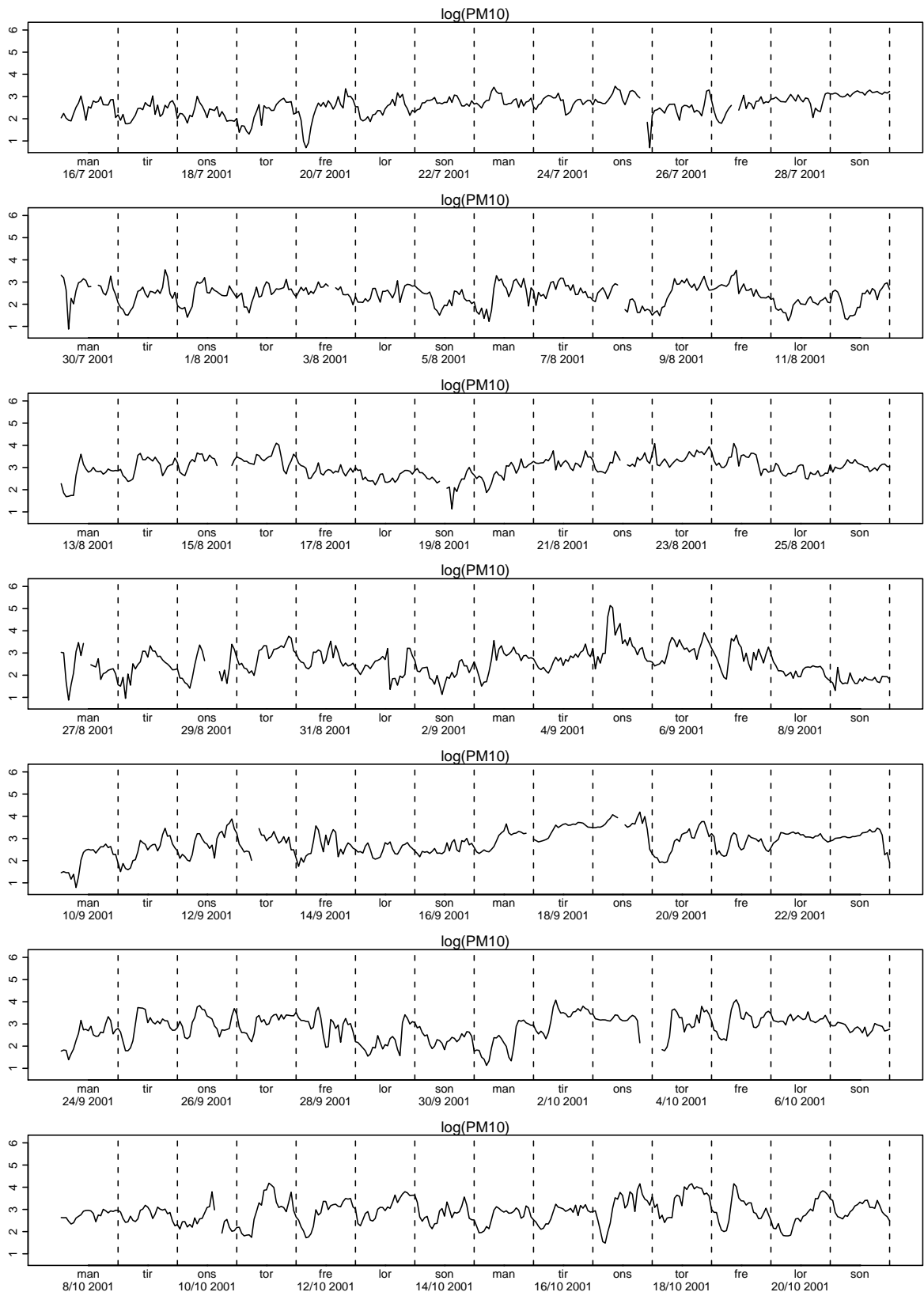


Figur 2.1. Plott av logaritmen til  $PM_{10}$

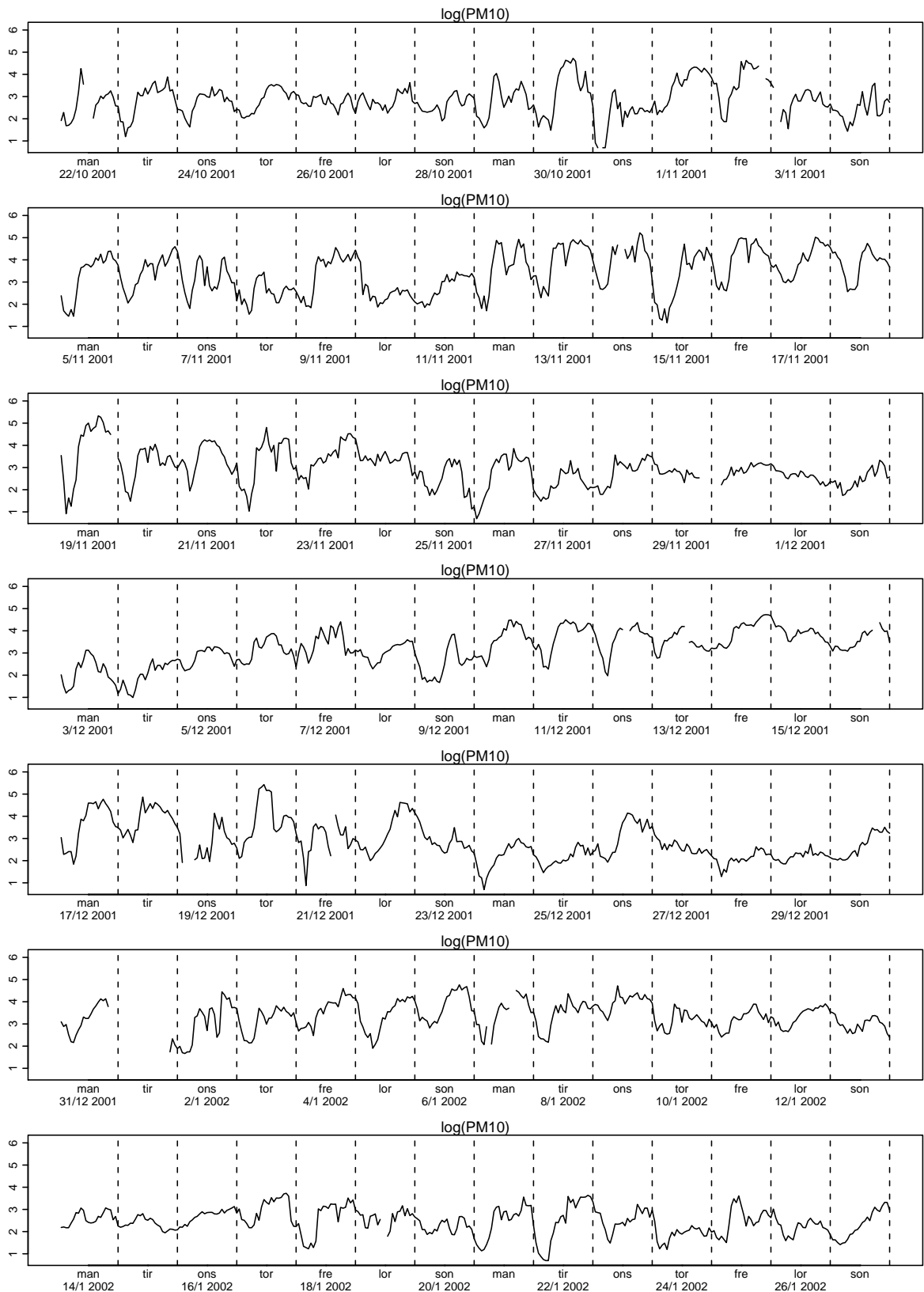


Figur 2.2. Plott av logaritmen til  $PM_{10}$

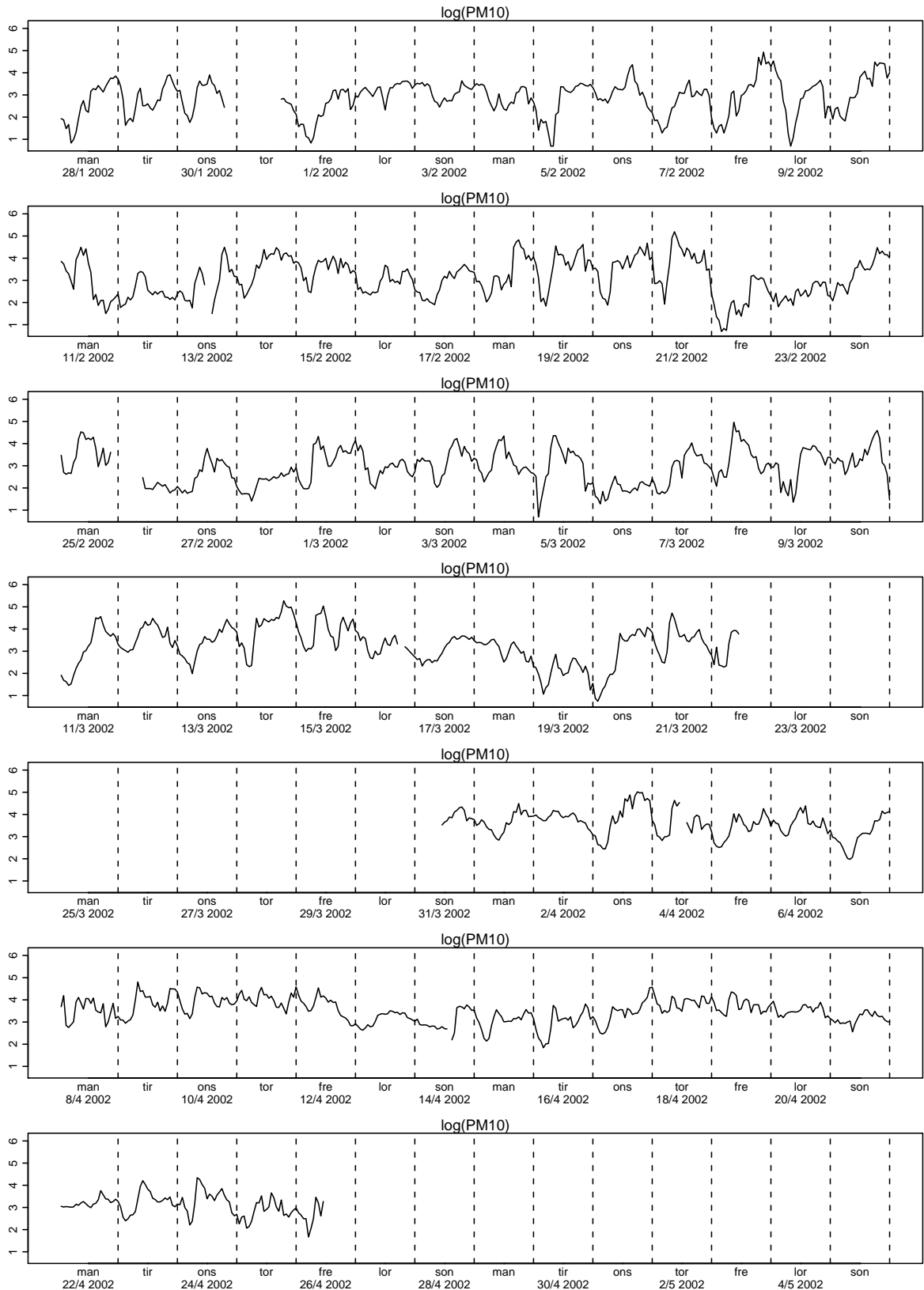




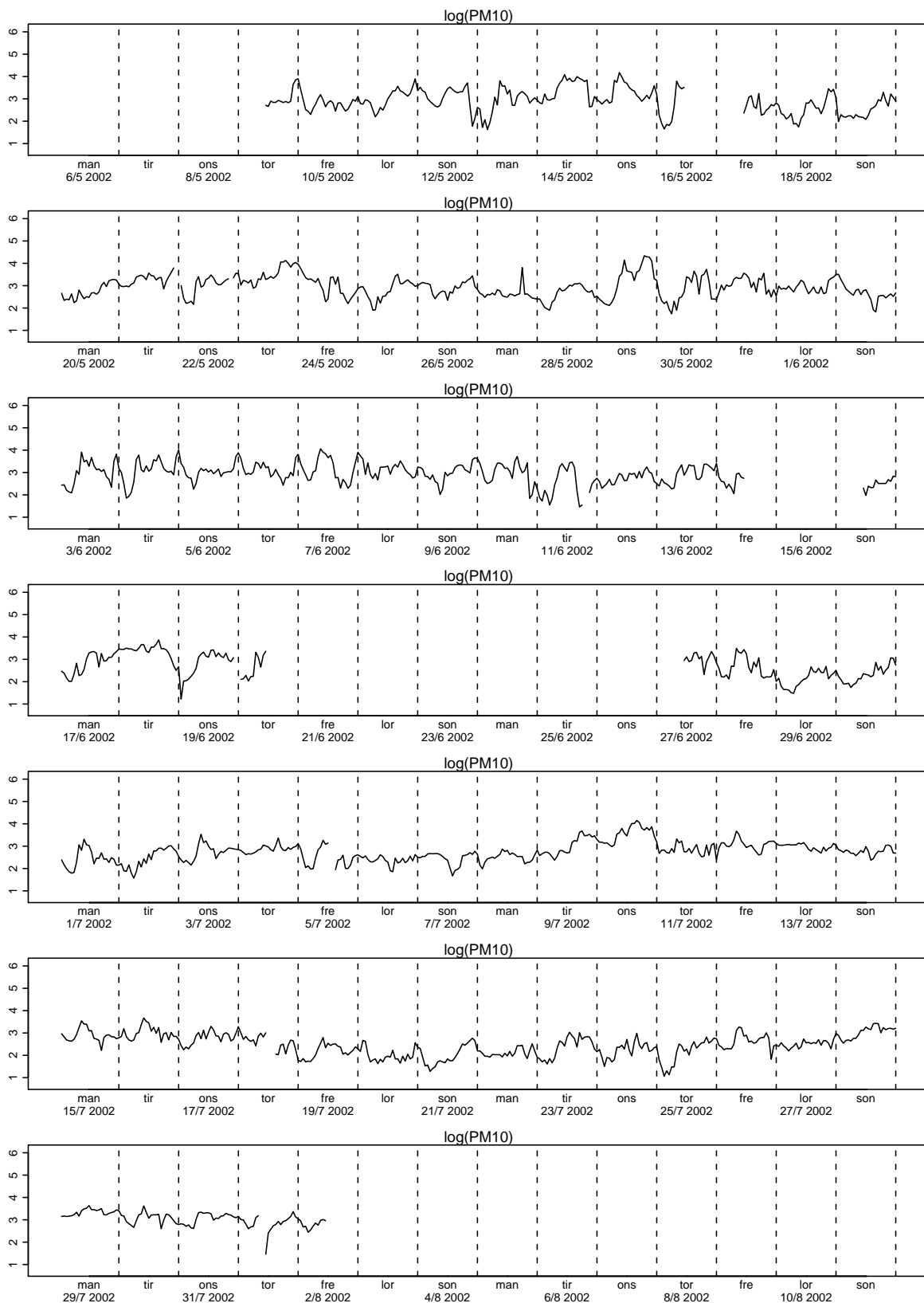
Figur 2.3. Plott av logaritmen til  $PM_{10}$



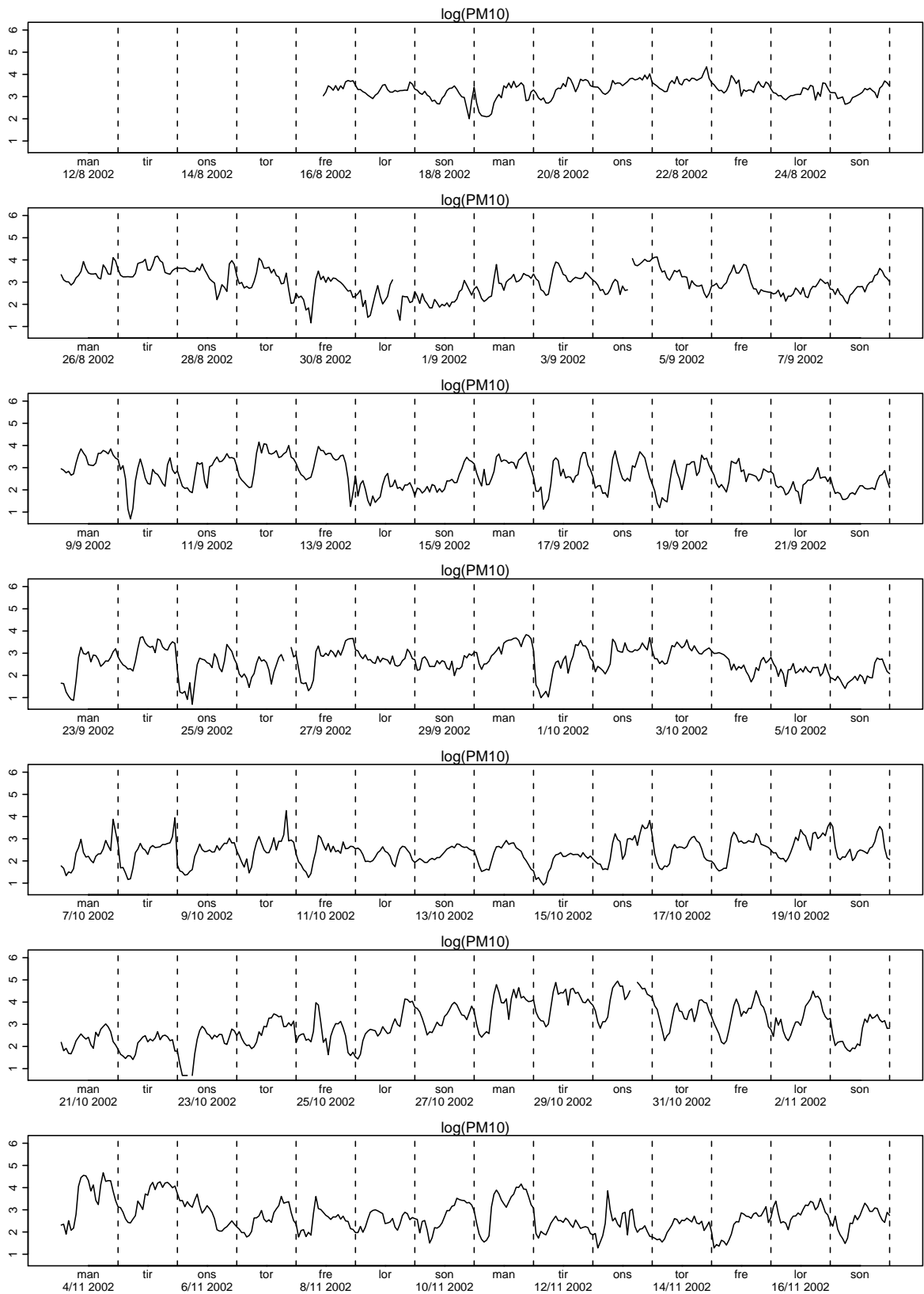
Figur 2.4. Plott av logaritmen til  $PM_{10}$



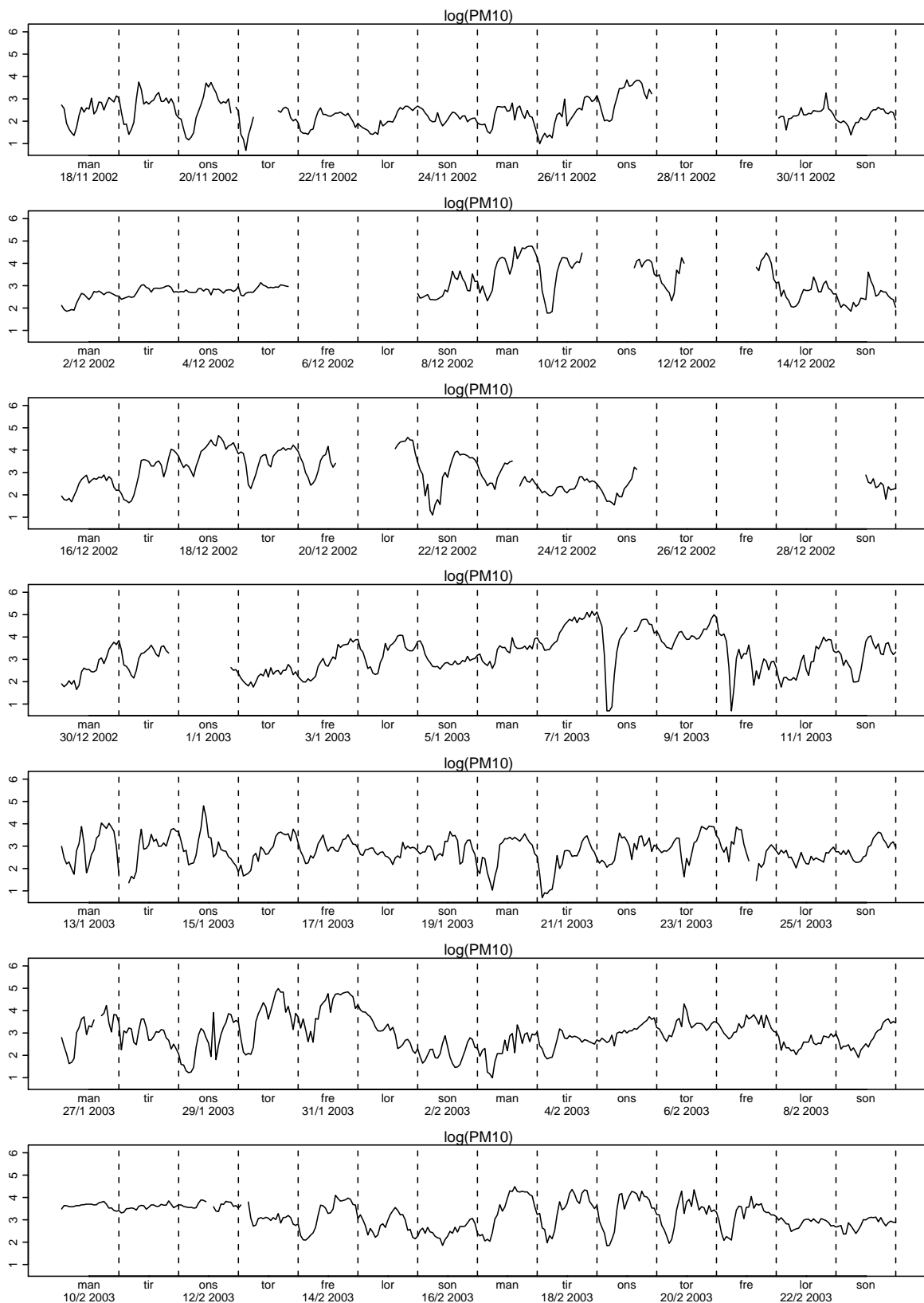
Figur 2.5. Plott av logaritmen til  $PM_{10}$



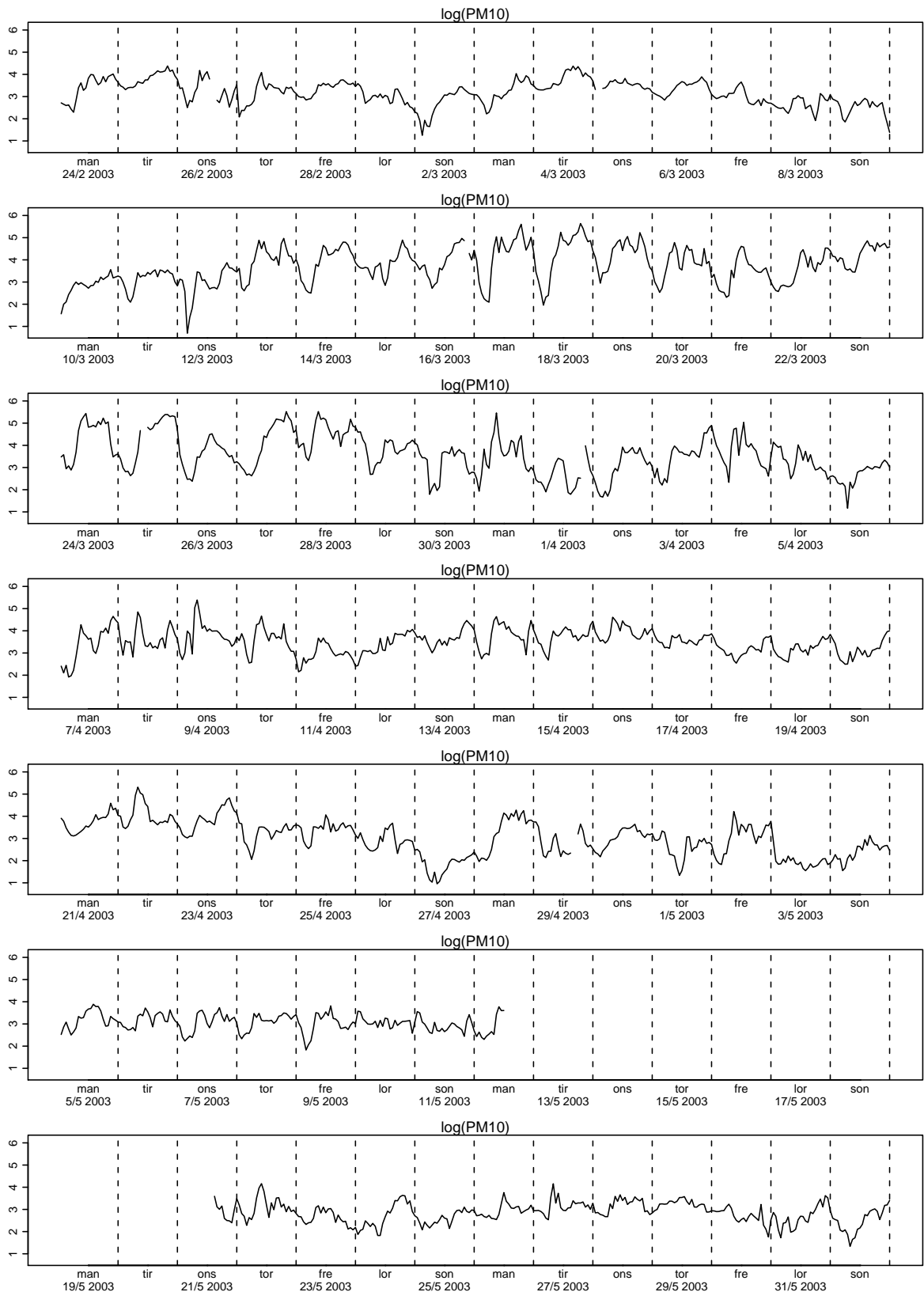
Figur 2.6. Plott av logaritmen til  $PM_{10}$



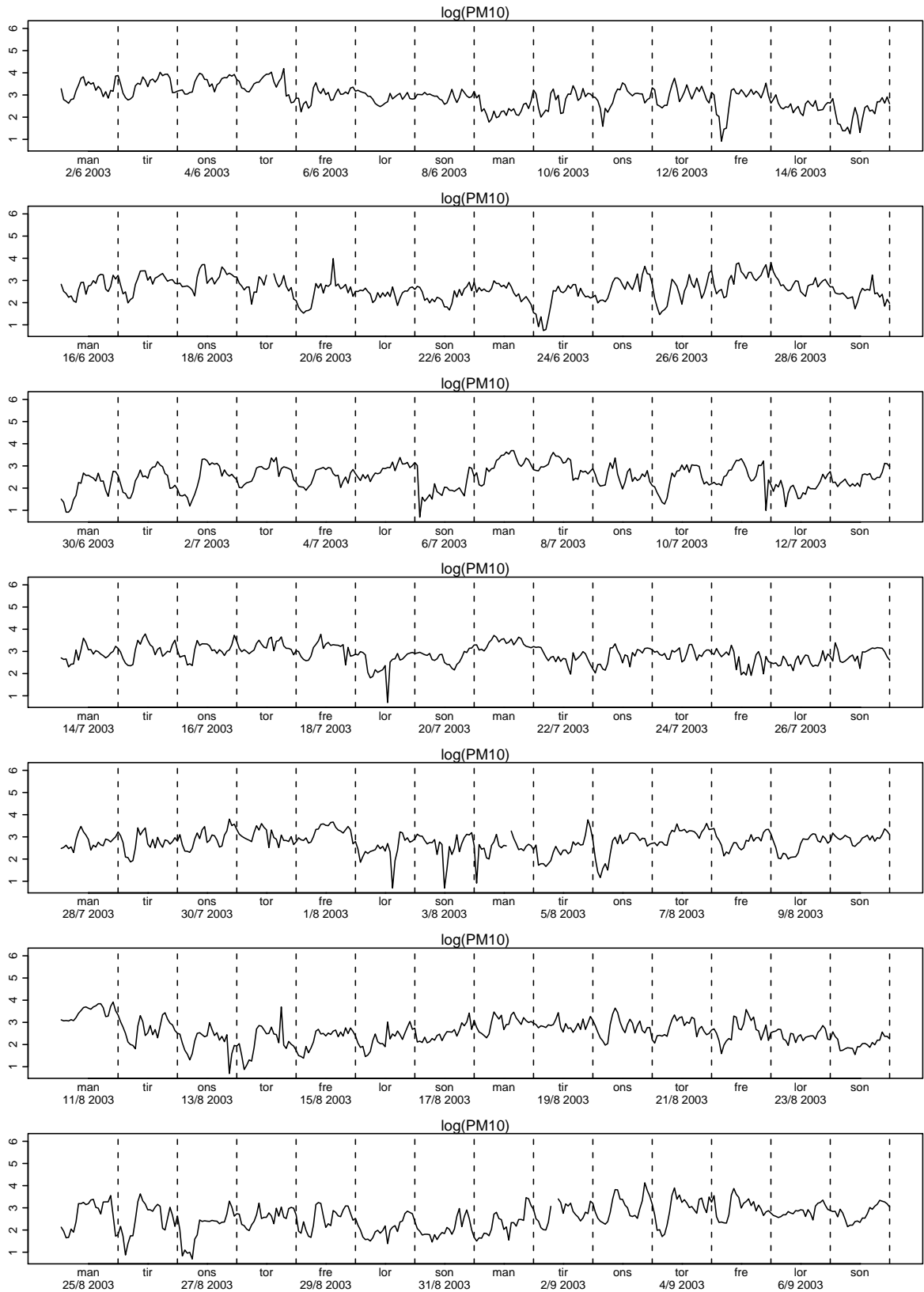
Figur 2.7. Plott av logaritmen til  $PM_{10}$



Figur 2.8. Plott av logaritmen til  $PM_{10}$

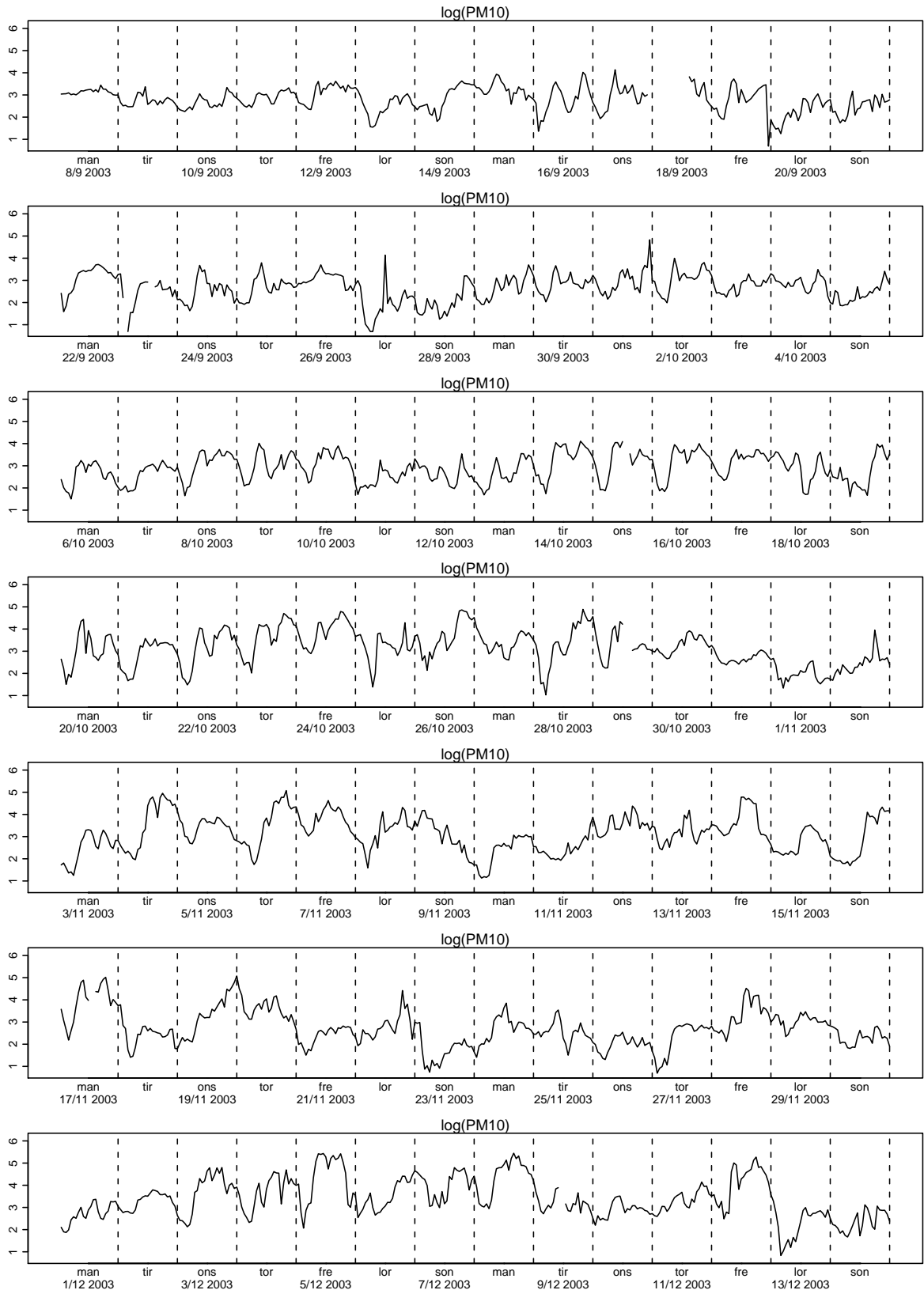


Figur 2.9. Plott av logaritmen til  $PM_{10}$

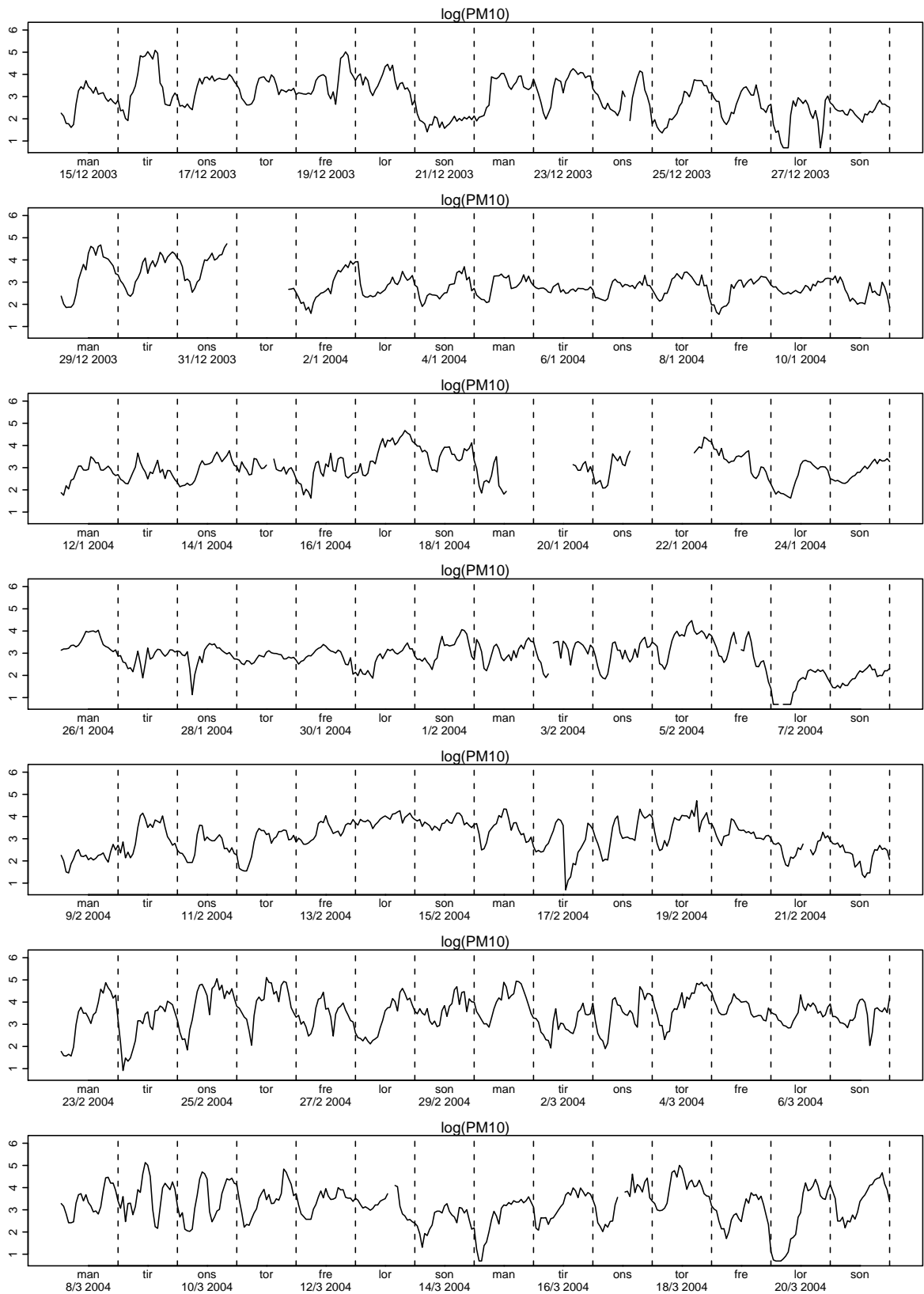


Figur 2.10. Plott av logaritmen til  $PM_{10}$

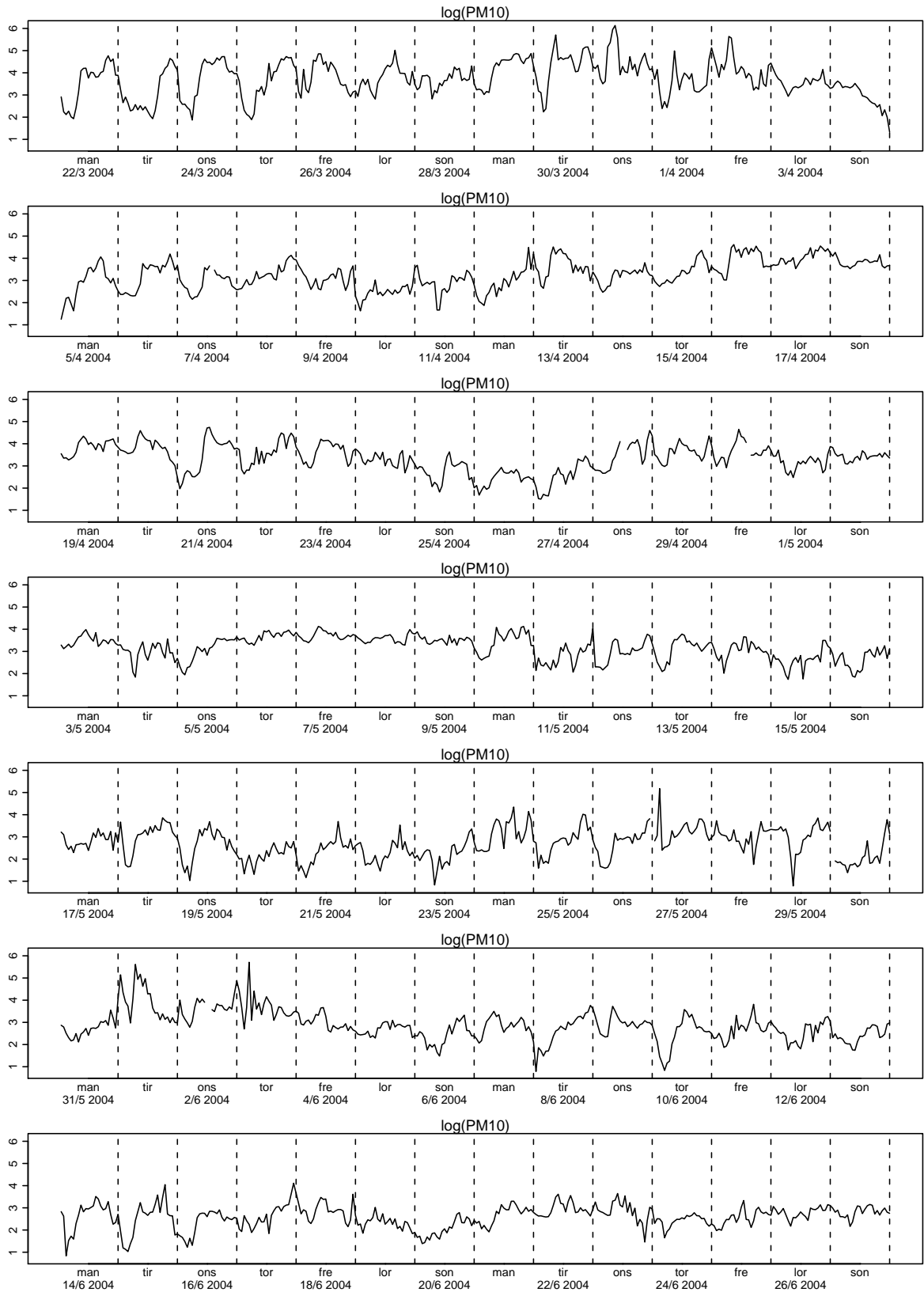




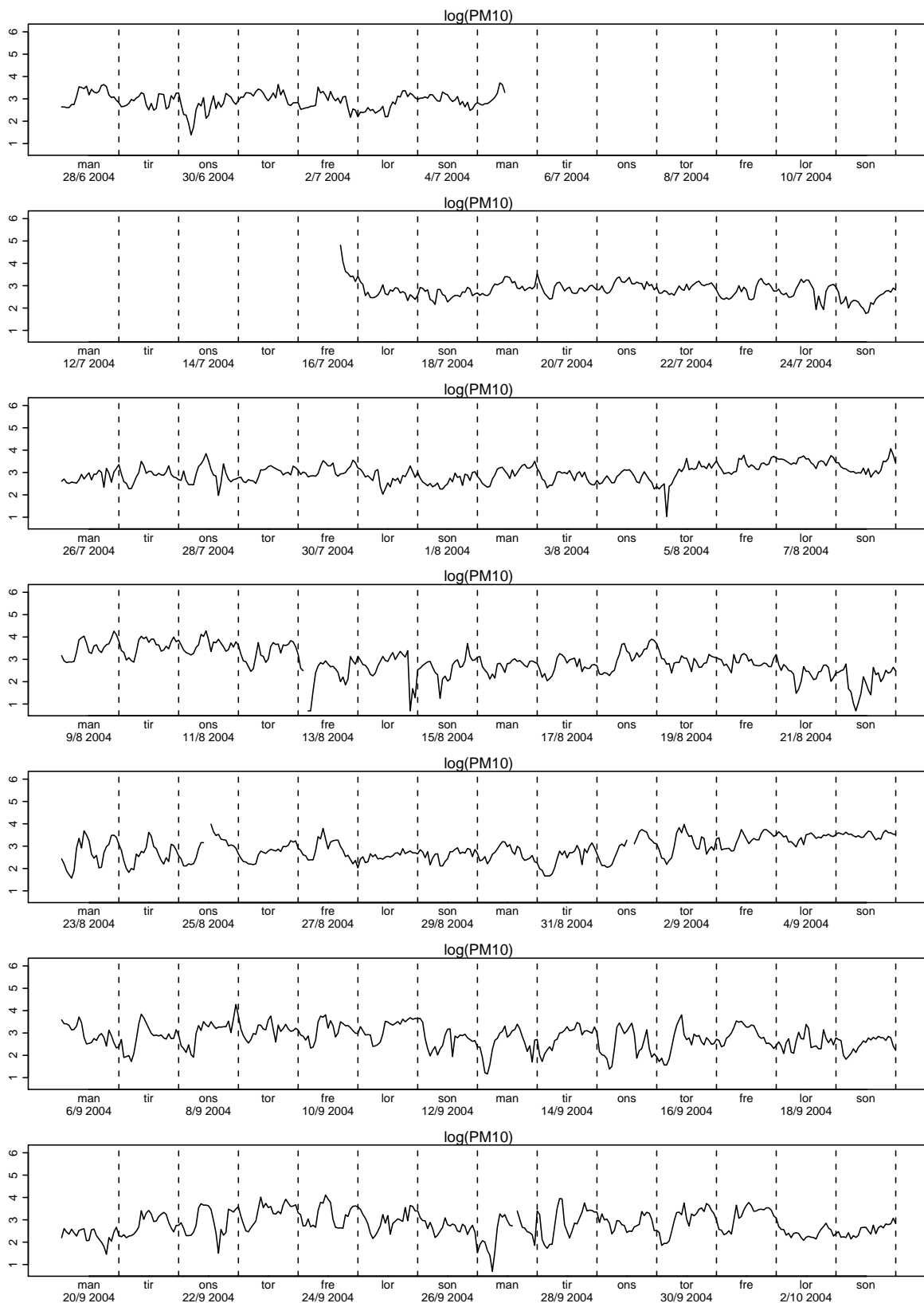
Figur 2.11. Plott av logaritmen til  $PM_{10}$



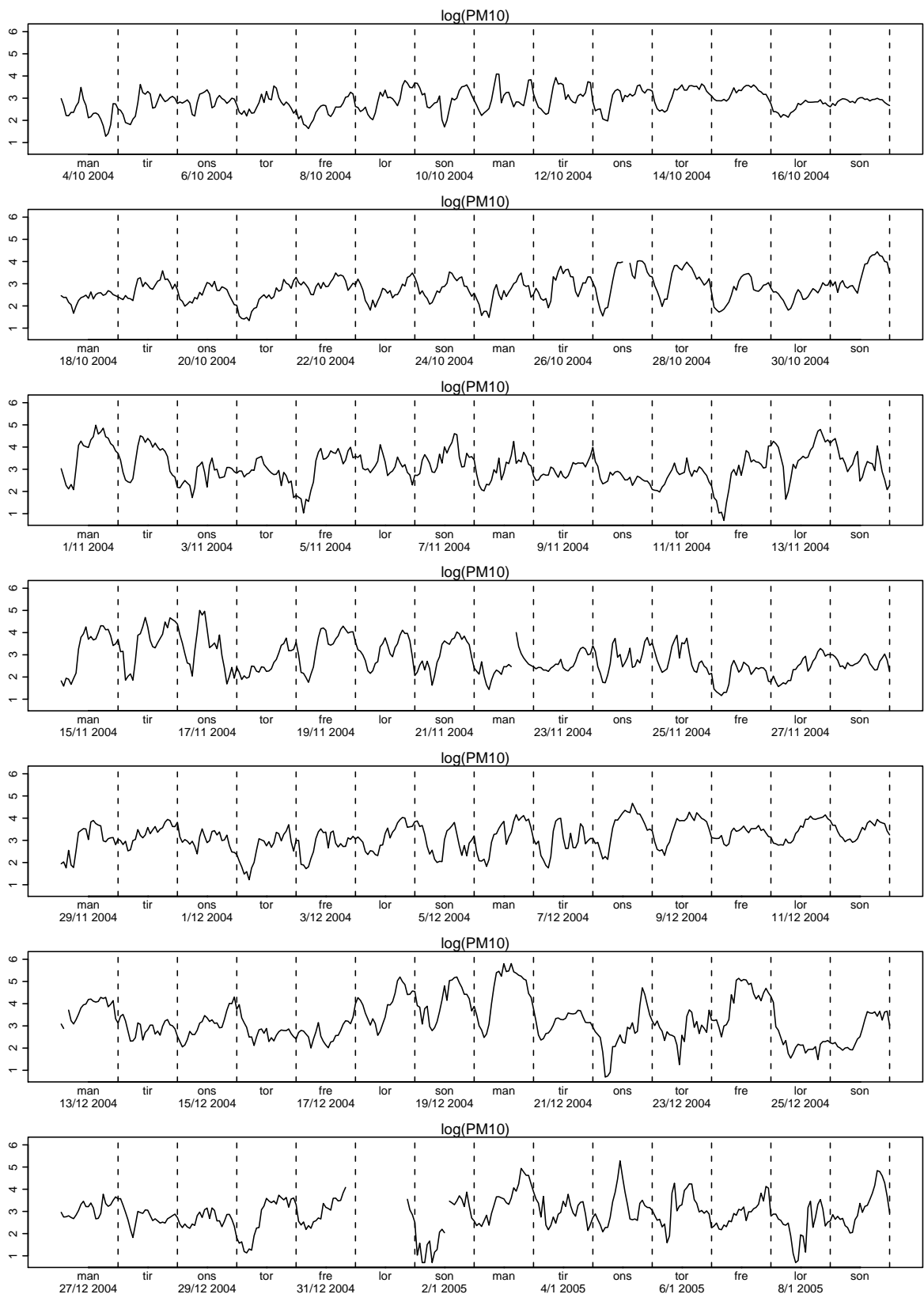
Figur 2.12. Plott av logaritmen til  $PM_{10}$



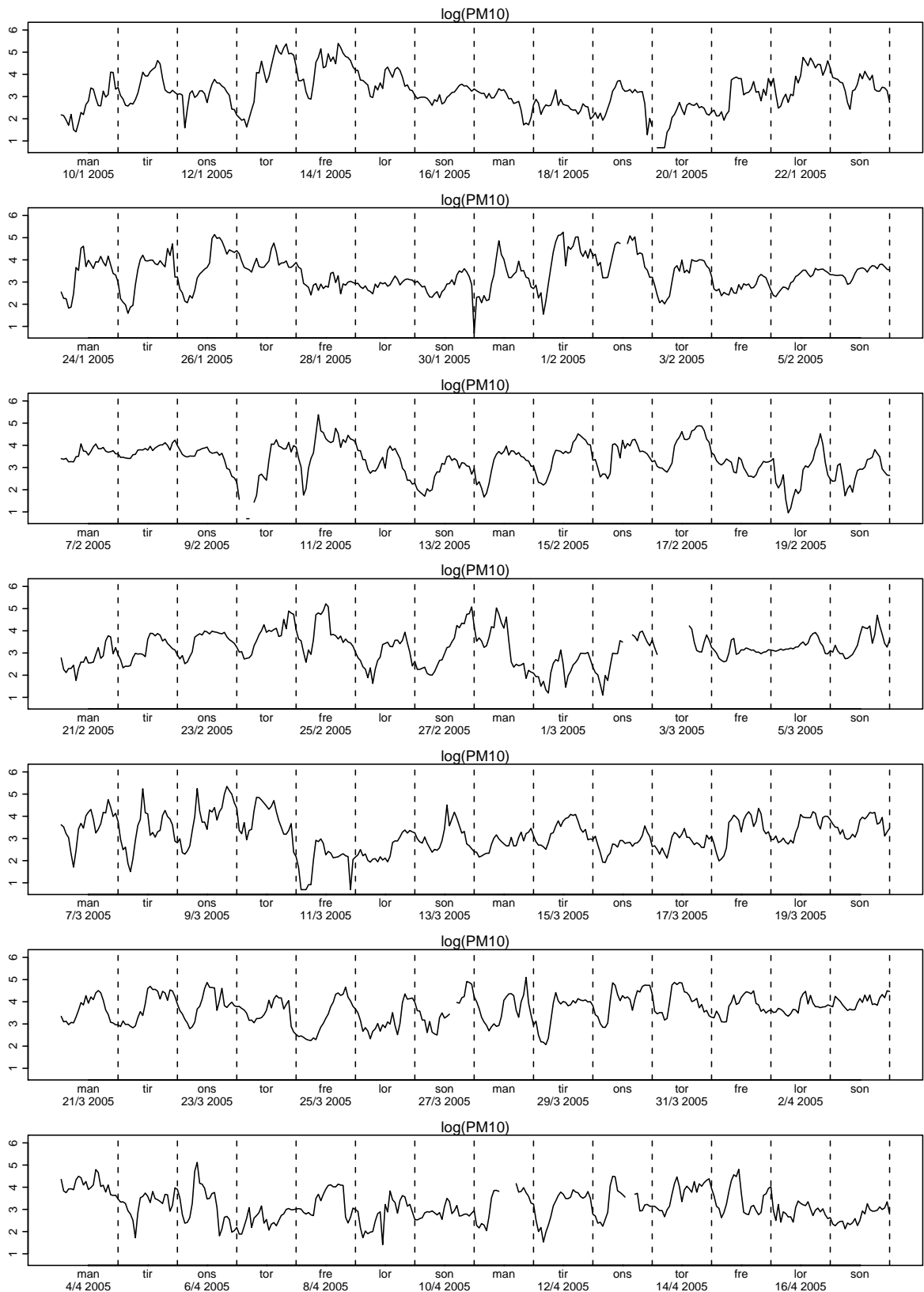
Figur 2.13. Plott av logaritmen til  $PM_{10}$



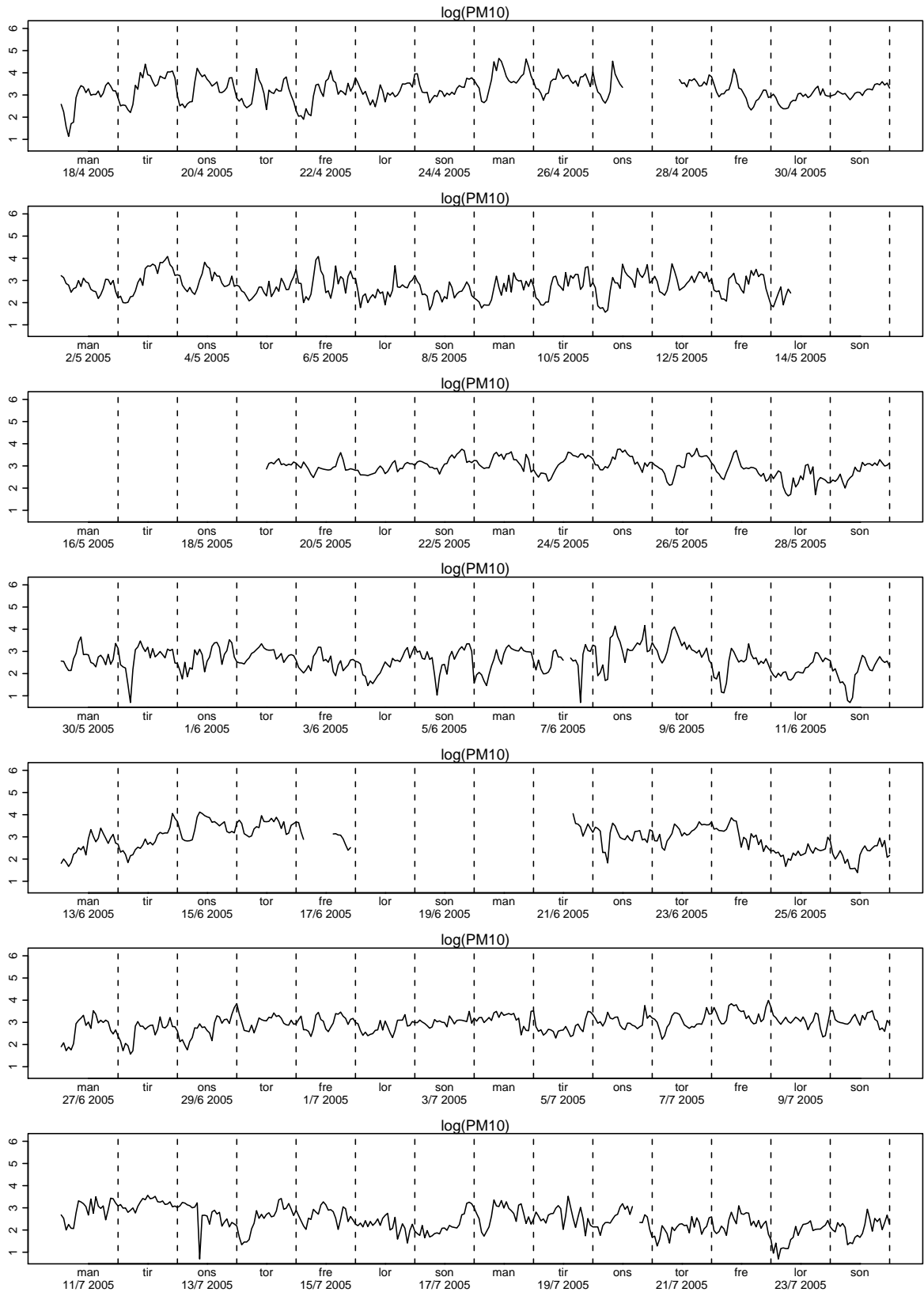
Figur 2.14. Plott av logaritmen til  $PM_{10}$



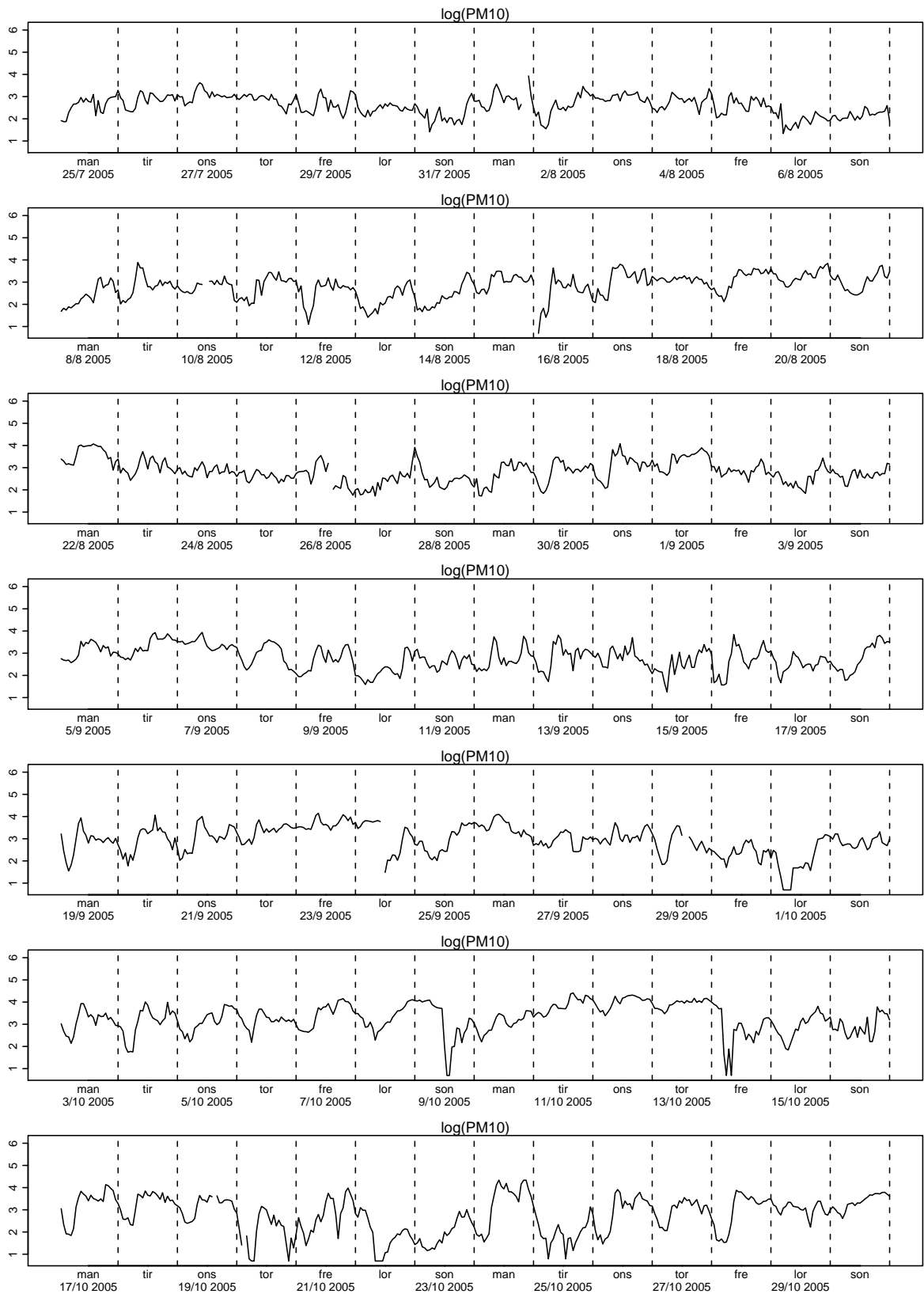
Figur 2.15. Plott av logaritmen til  $PM_{10}$



Figur 2.16. Plott av logaritmen til  $PM_{10}$

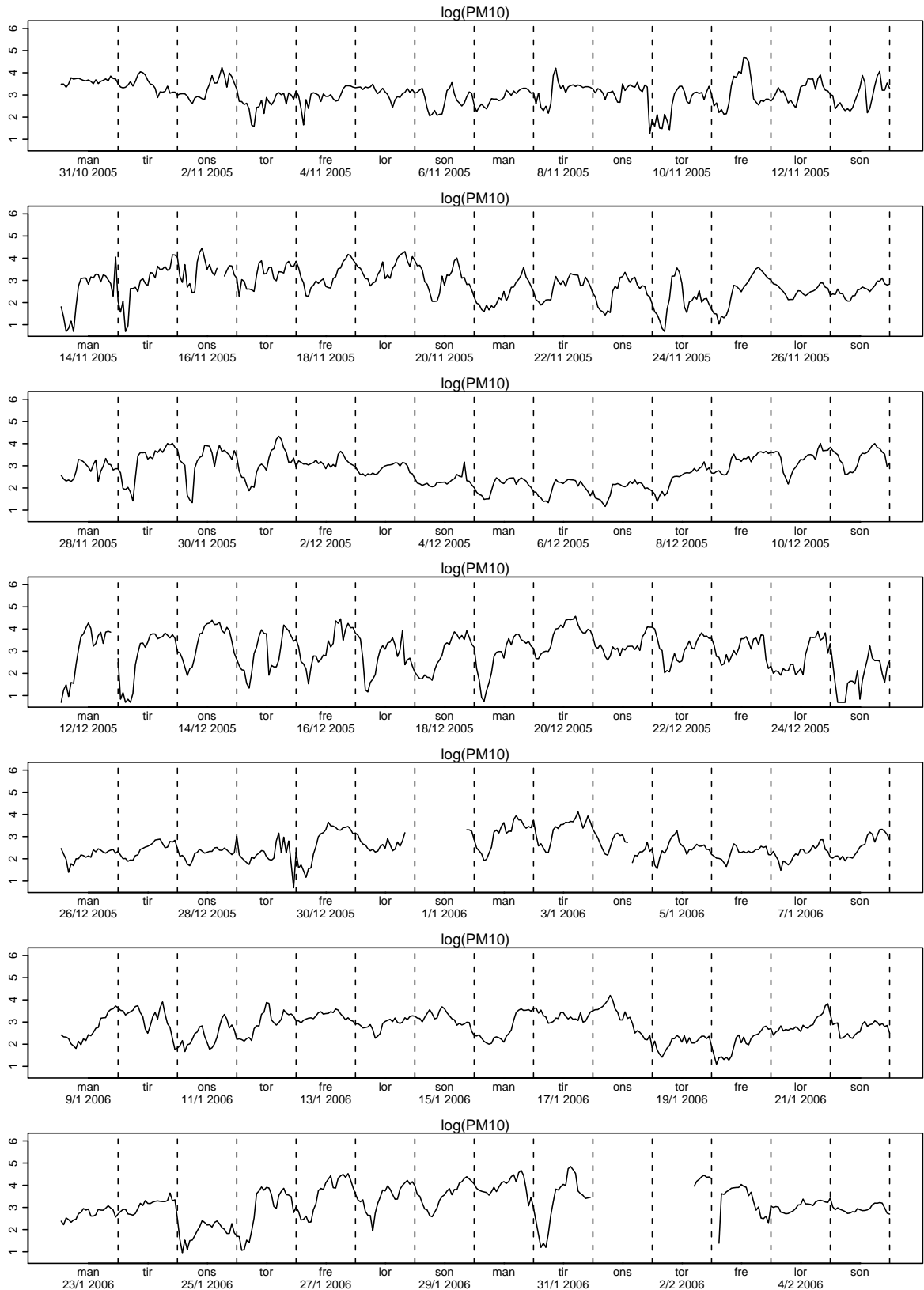


Figur 2.17. Plott av logaritmen til  $PM_{10}$

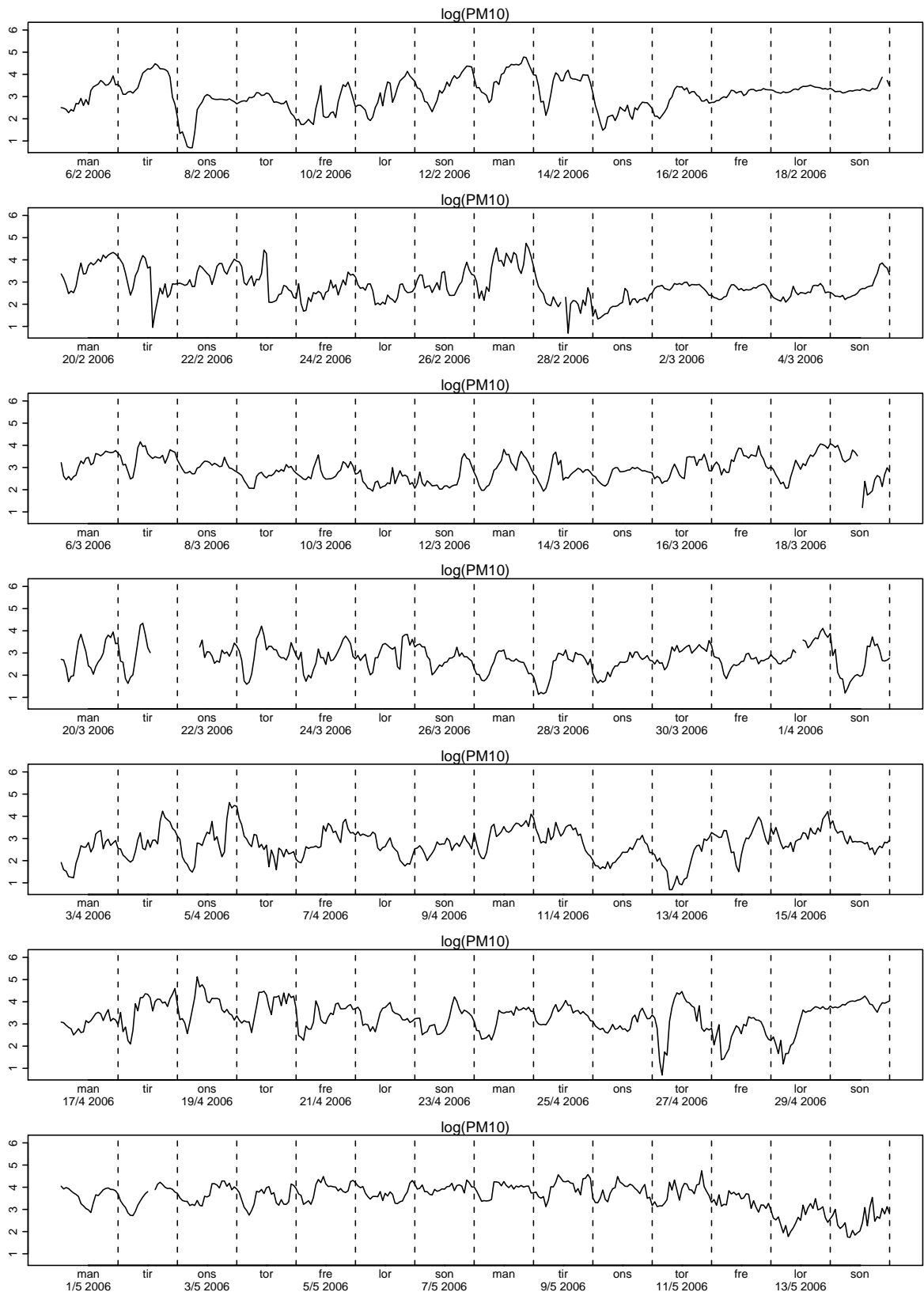


Figur 2.18. Plott av logaritmen til  $PM_{10}$

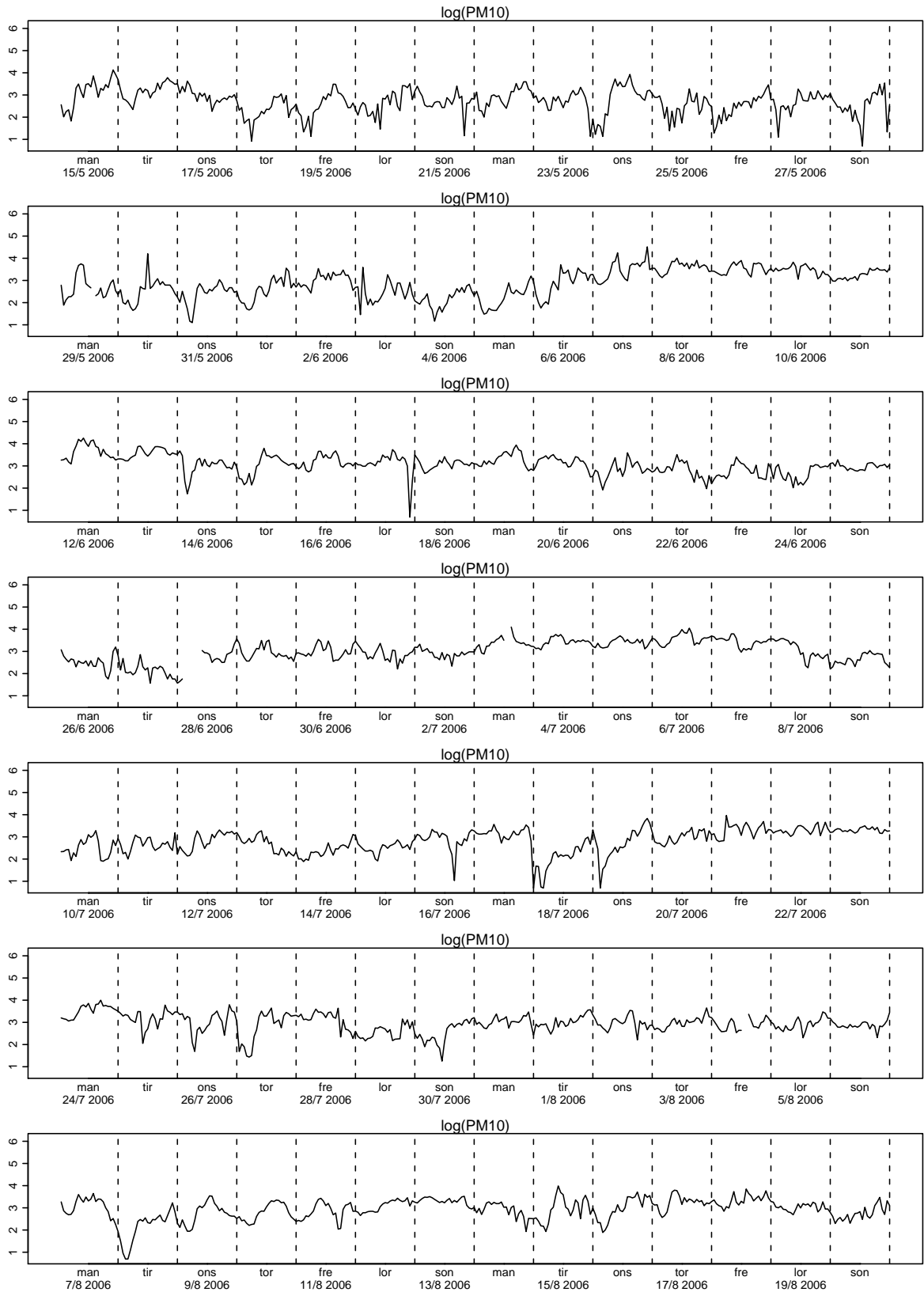




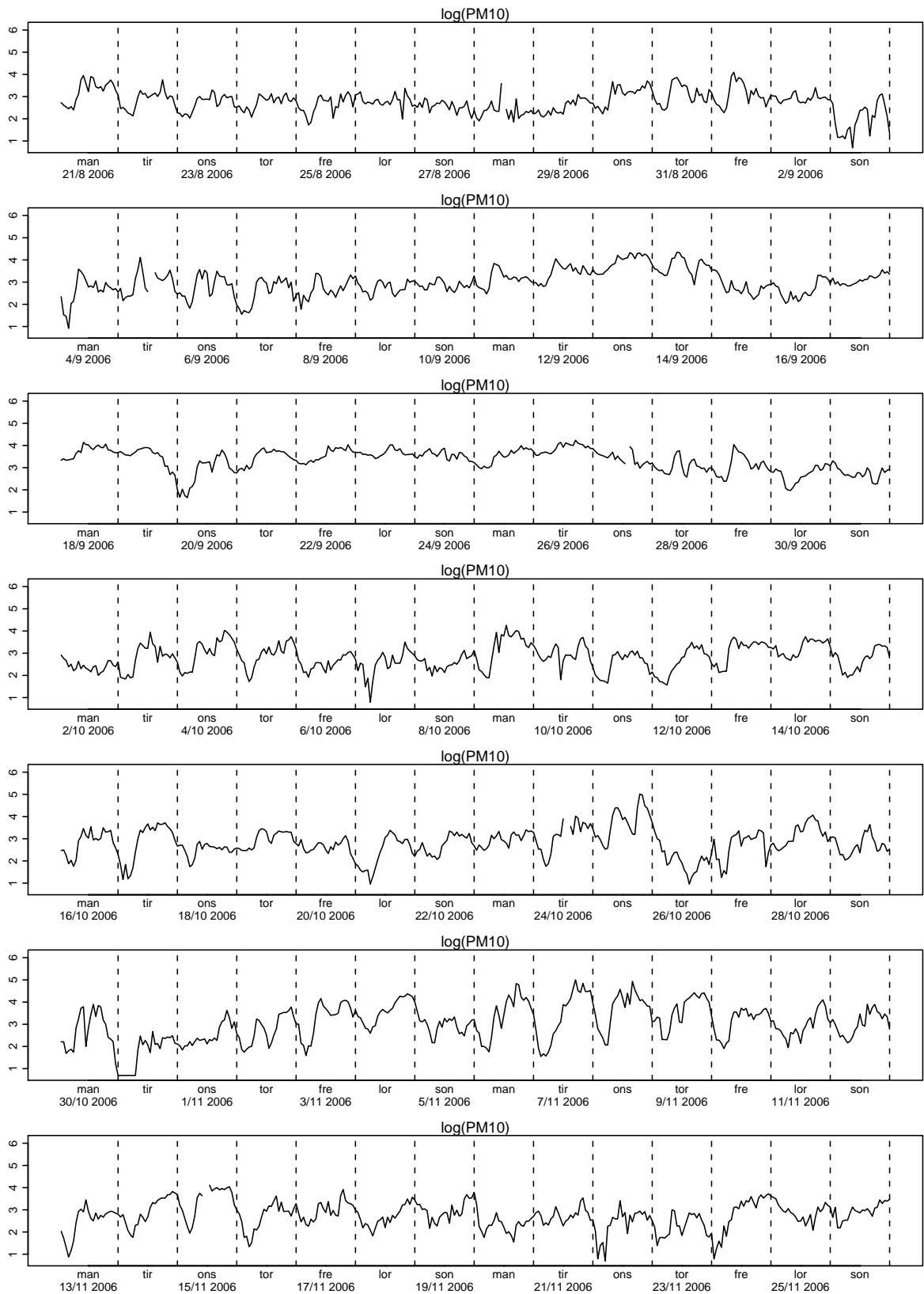
Figur 2.19. Plott av logaritmen til  $PM_{10}$



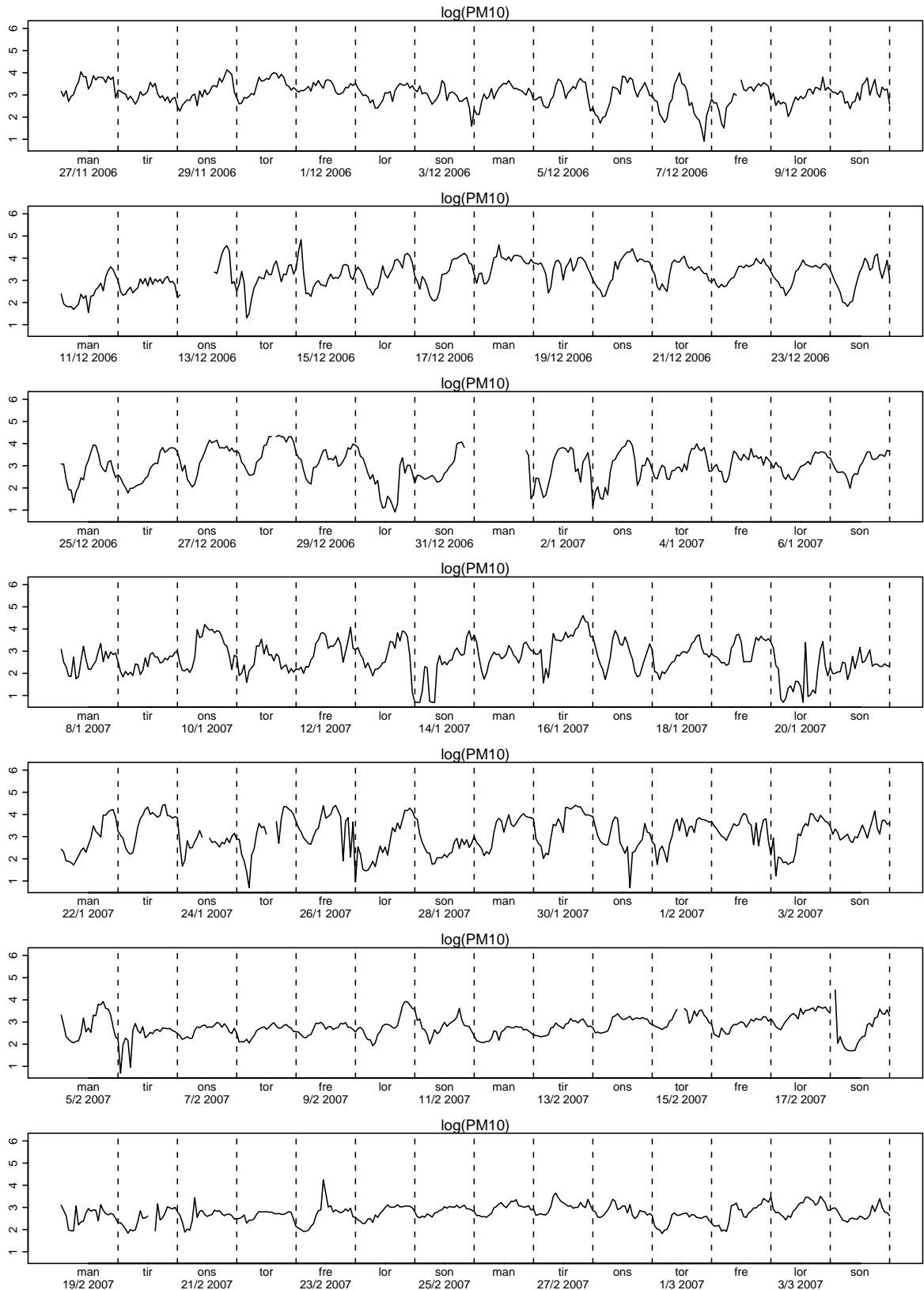
Figur 2.20. Plott av logaritmen til  $\text{PM}_{10}$



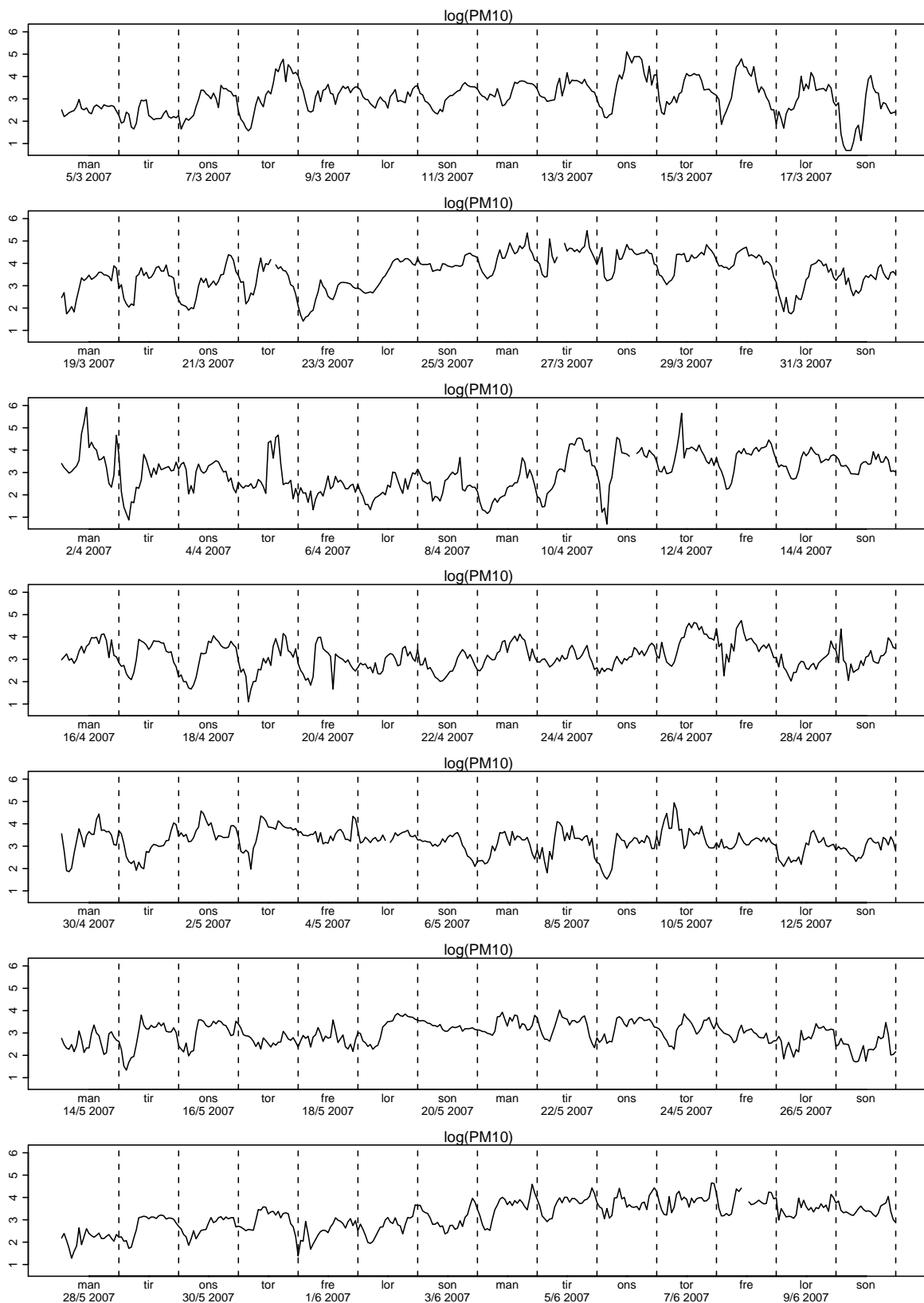
Figur 2.21. Plott av logaritmen til  $PM_{10}$



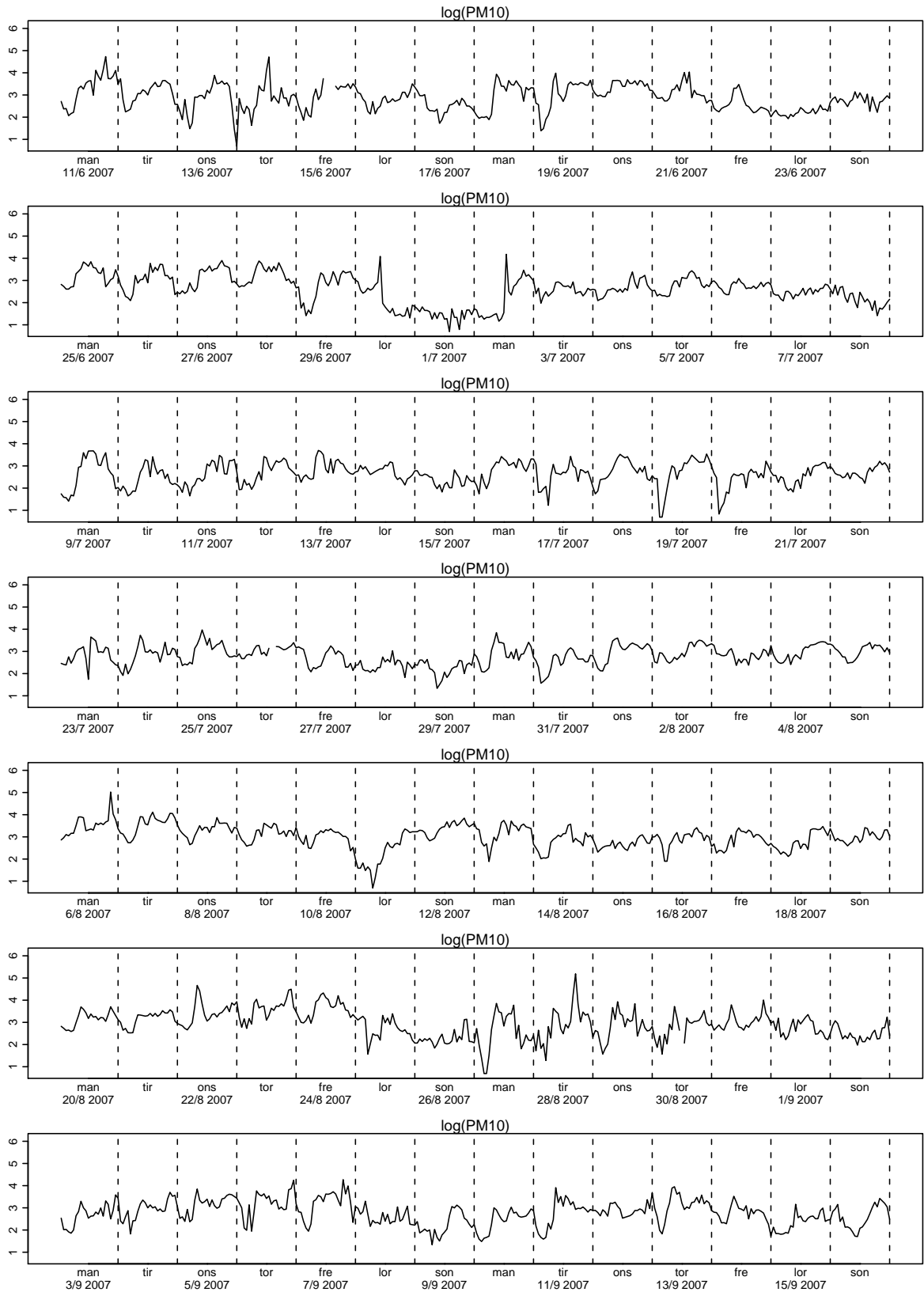
Figur 2.22. Plott av logaritmen til  $PM_{10}$



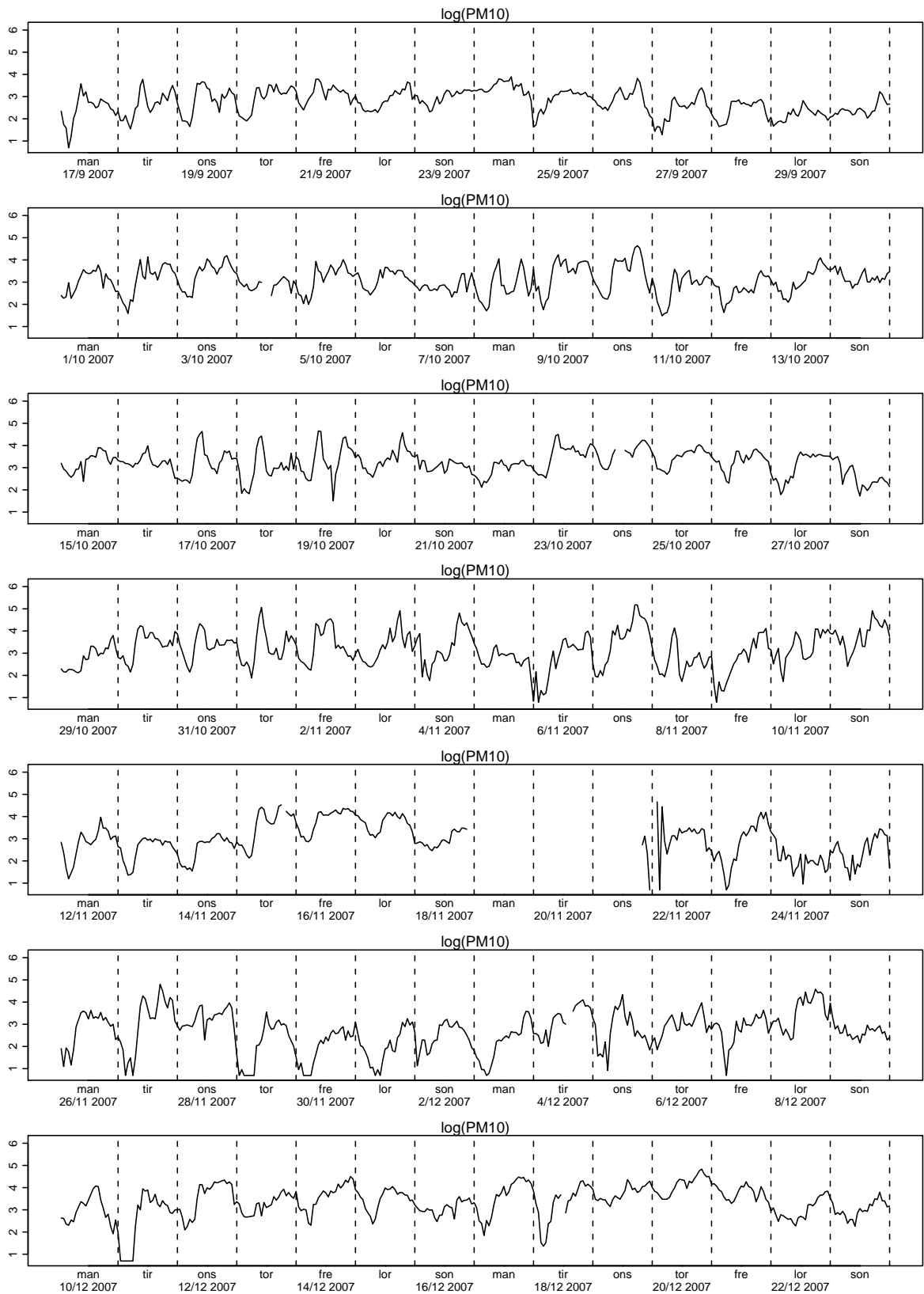
Figur 2.23. Plott av logaritmen til  $PM_{10}$



Figur 2.24. Plott av logaritmen til  $PM_{10}$

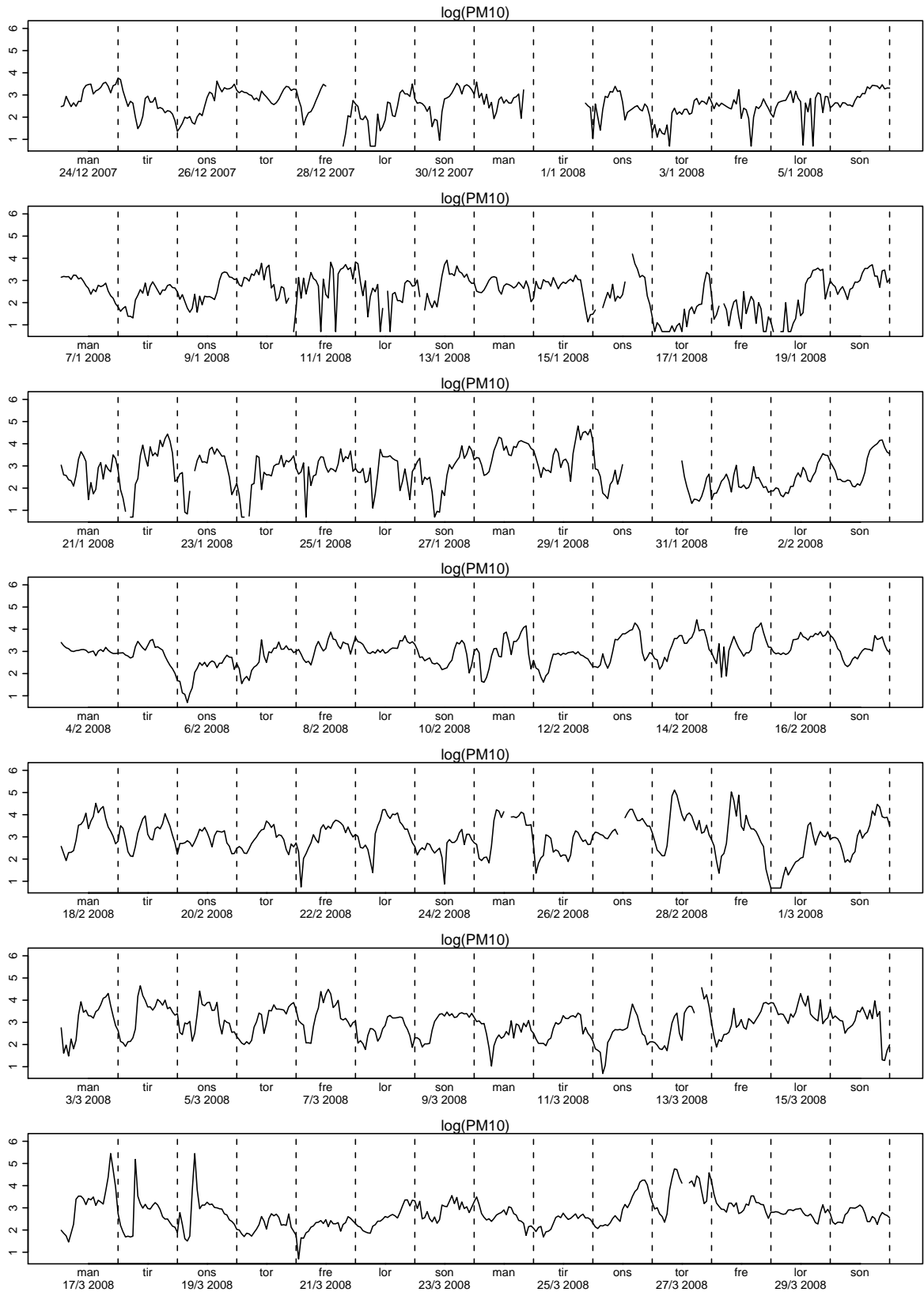


Figur 2.25. Plott av logaritmen til  $PM_{10}$

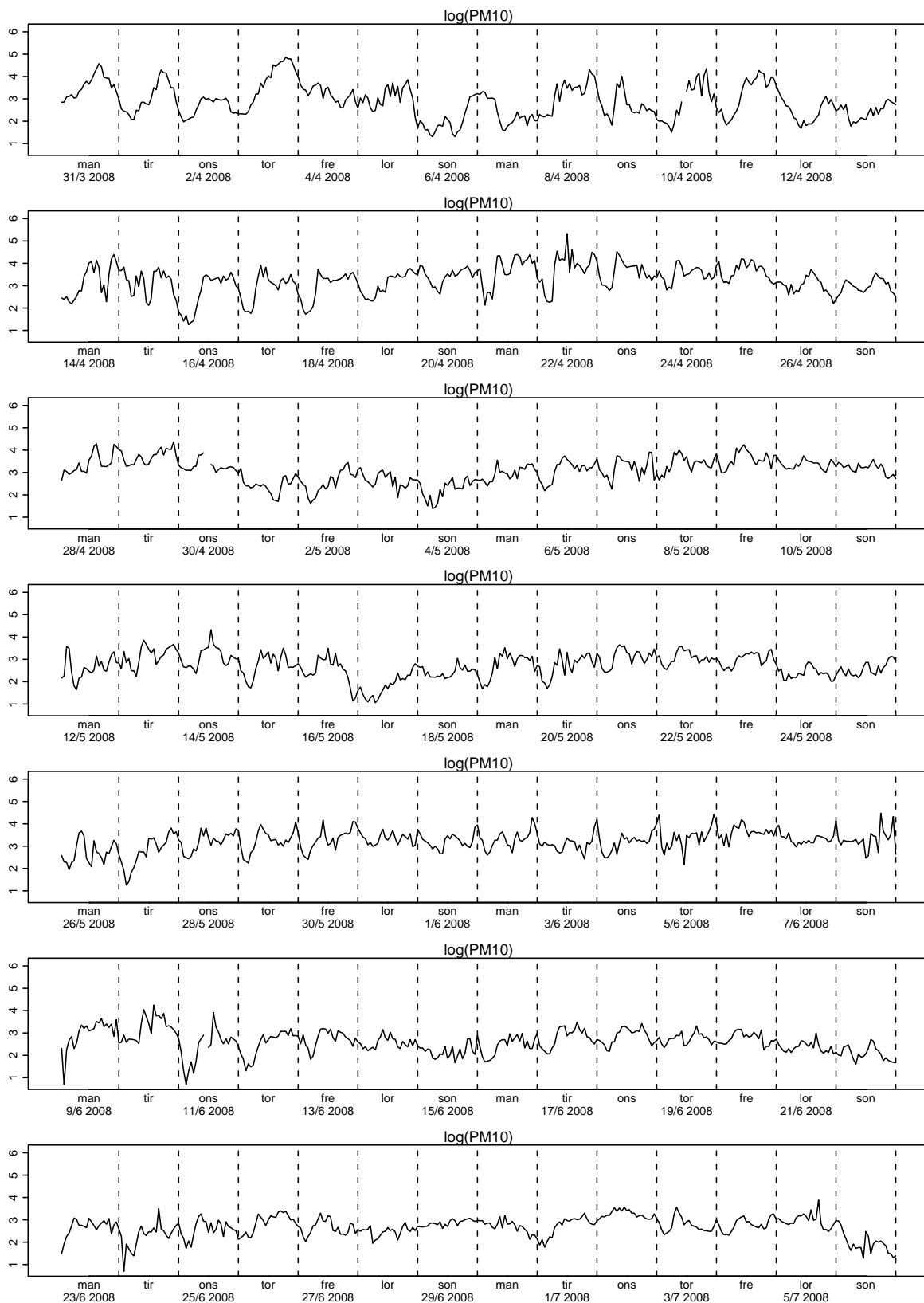


Figur 2.26. Plott av logaritmen til  $PM_{10}$

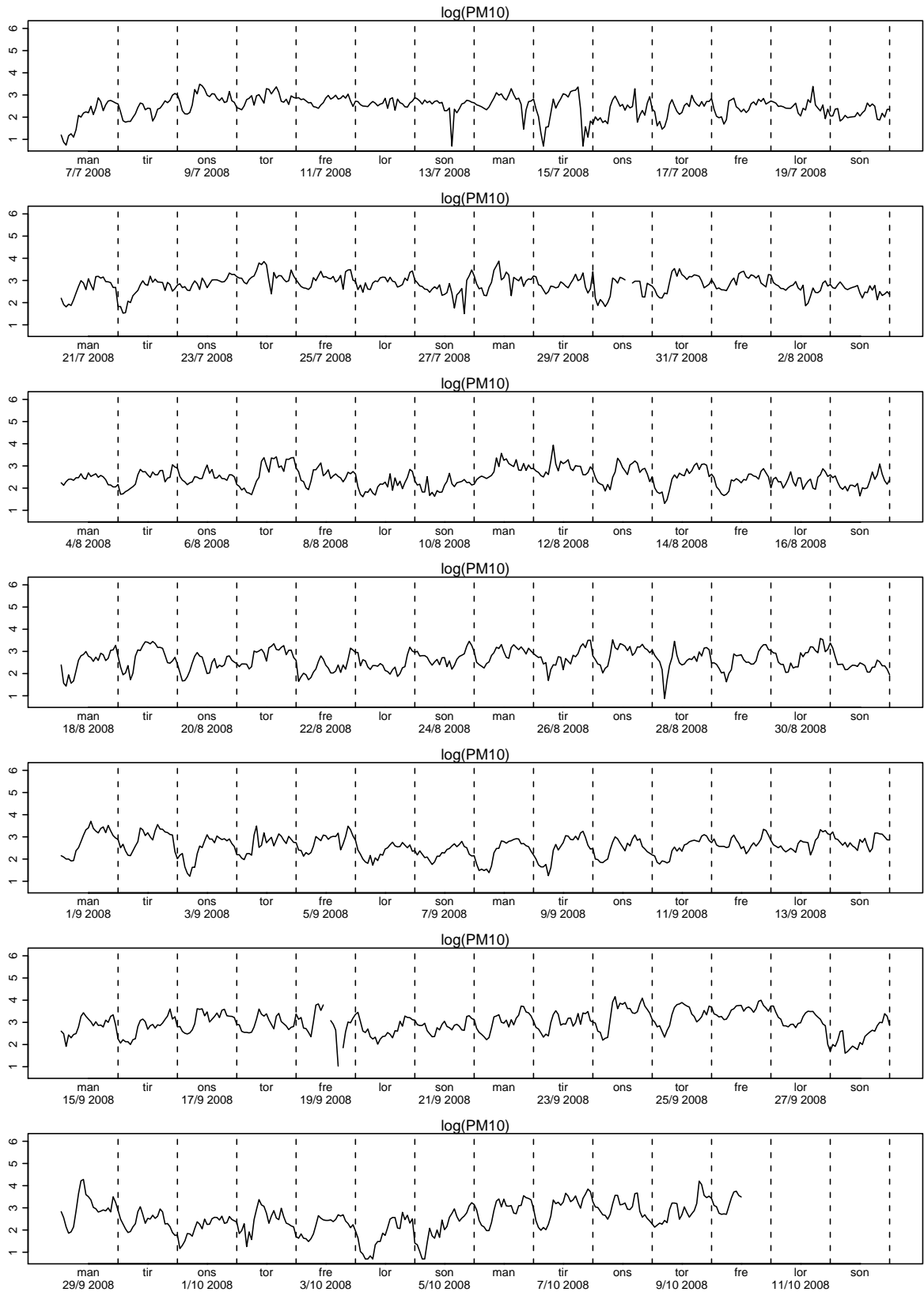




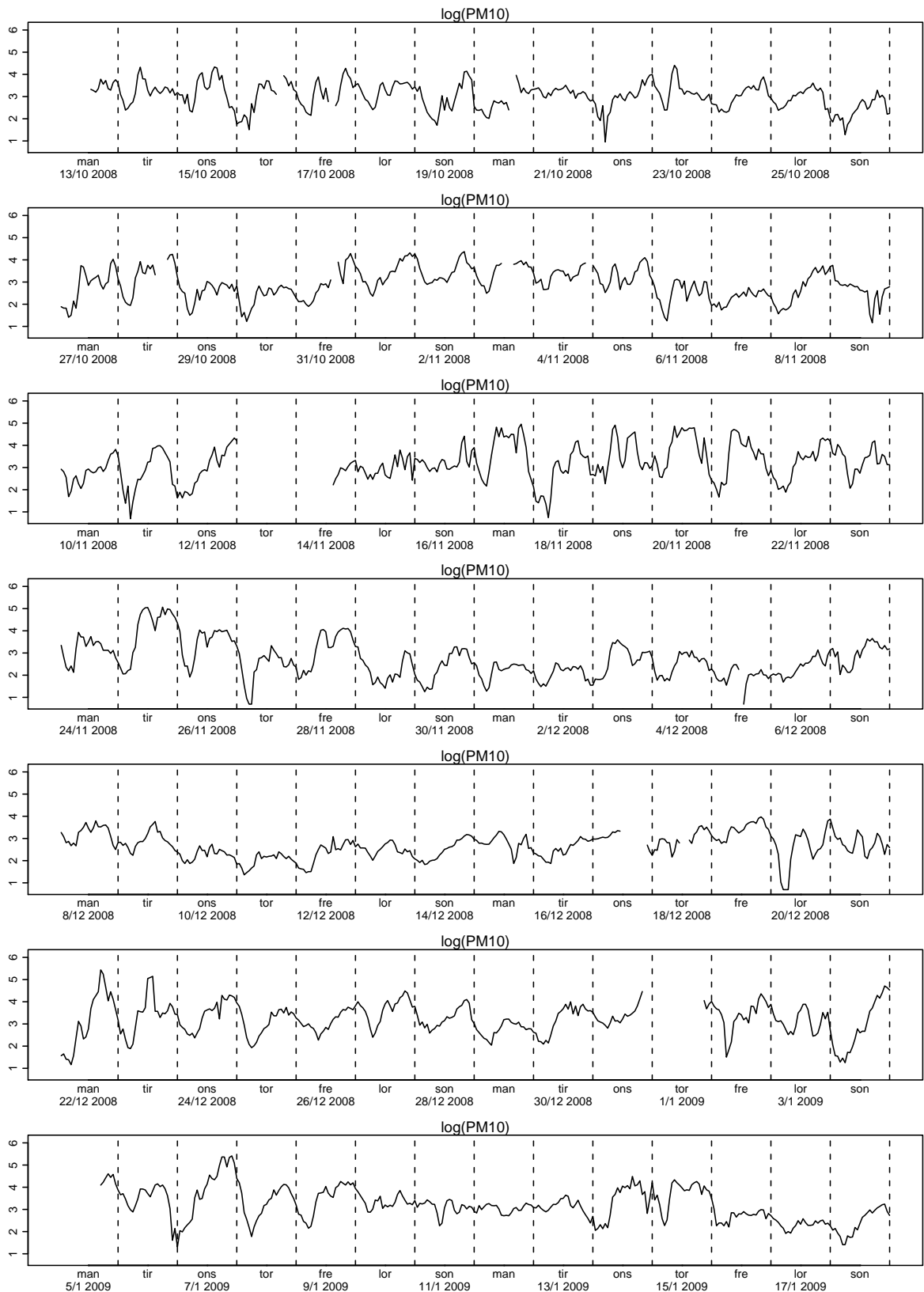
Figur 2.27. Plott av logaritmen til  $PM_{10}$



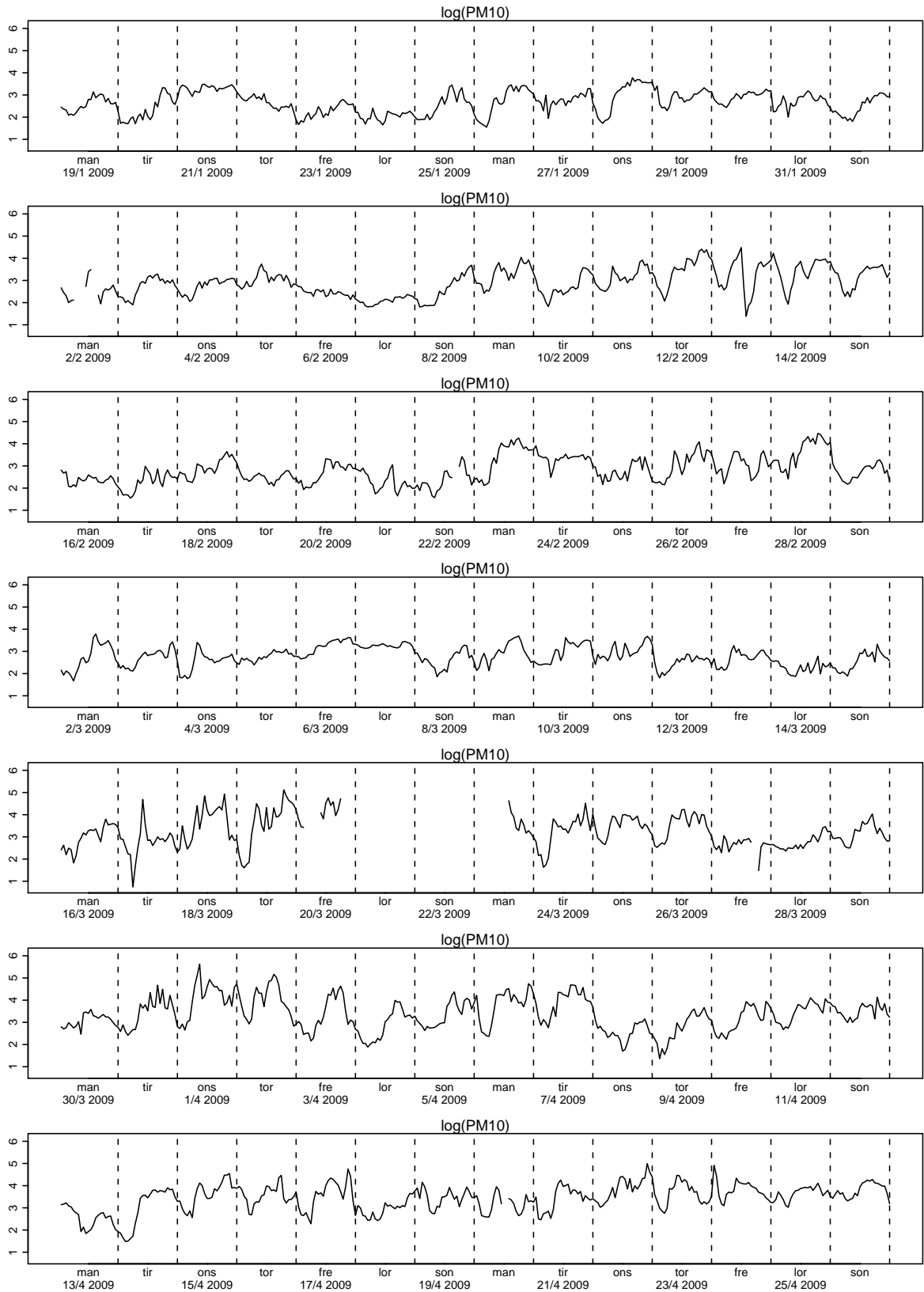
Figur 2.28. Plott av logaritmen til  $PM_{10}$



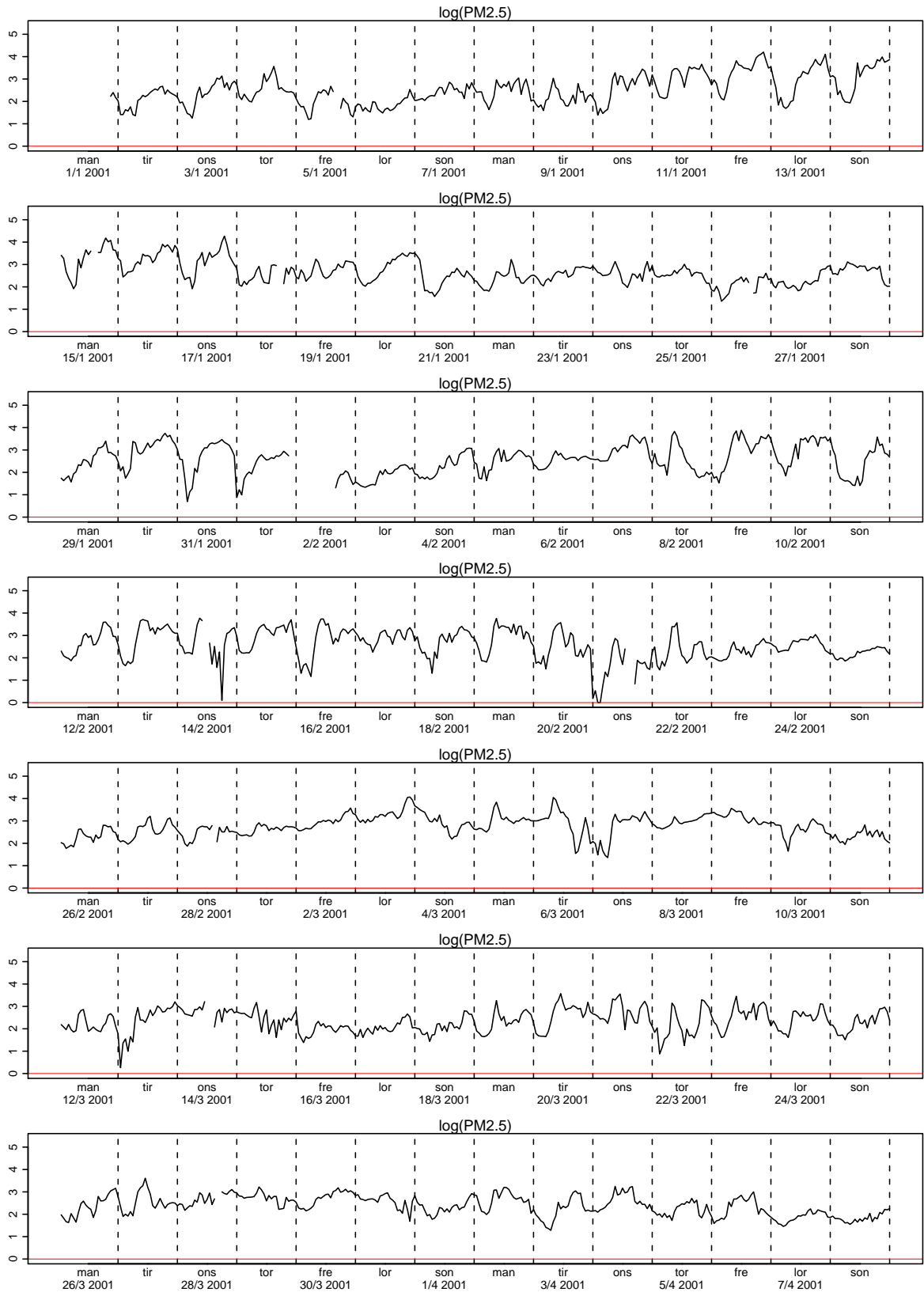
Figur 2.29. Plott av logaritmen til  $PM_{10}$



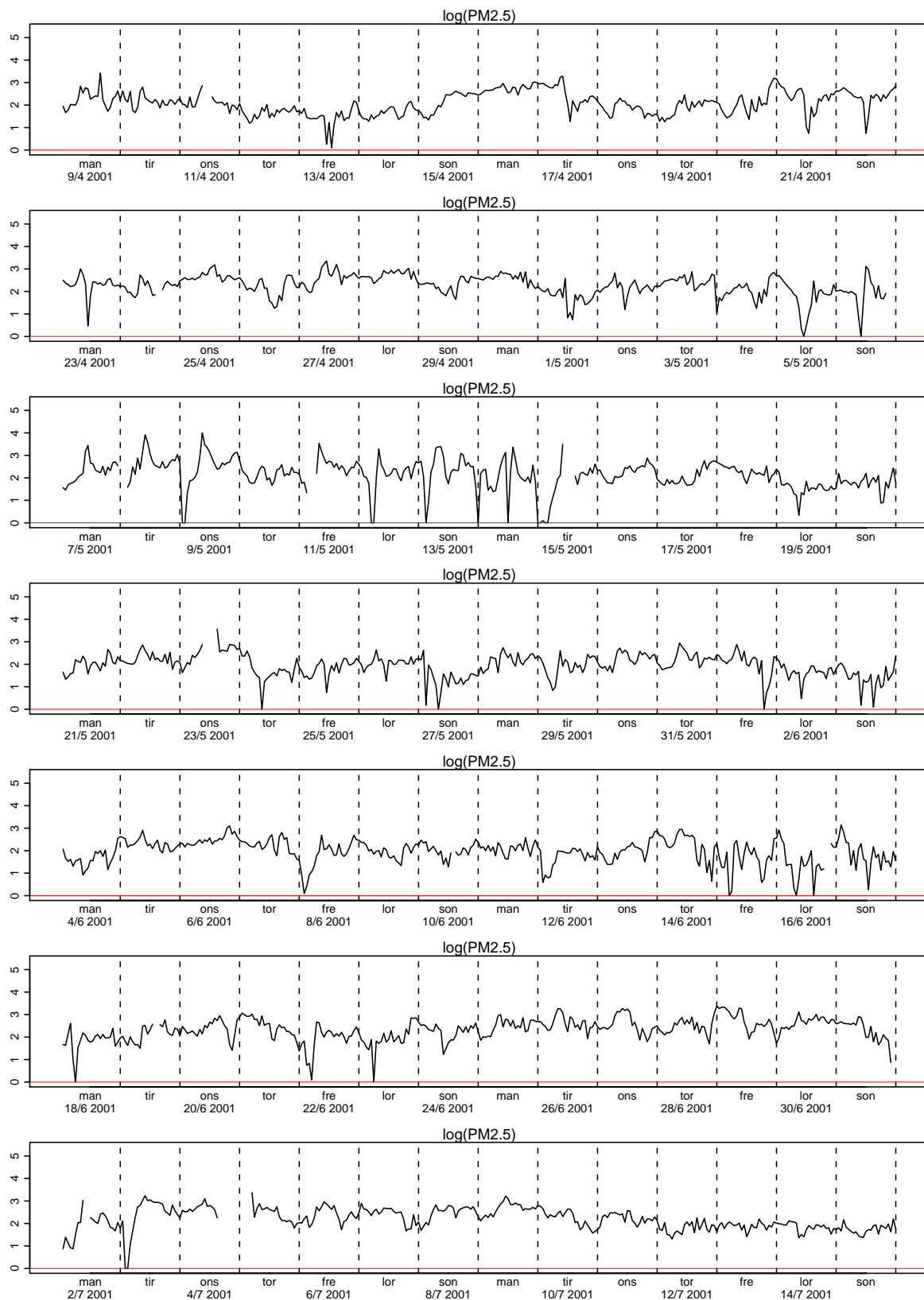
Figur 2.30. Plott av logaritmen til  $PM_{10}$



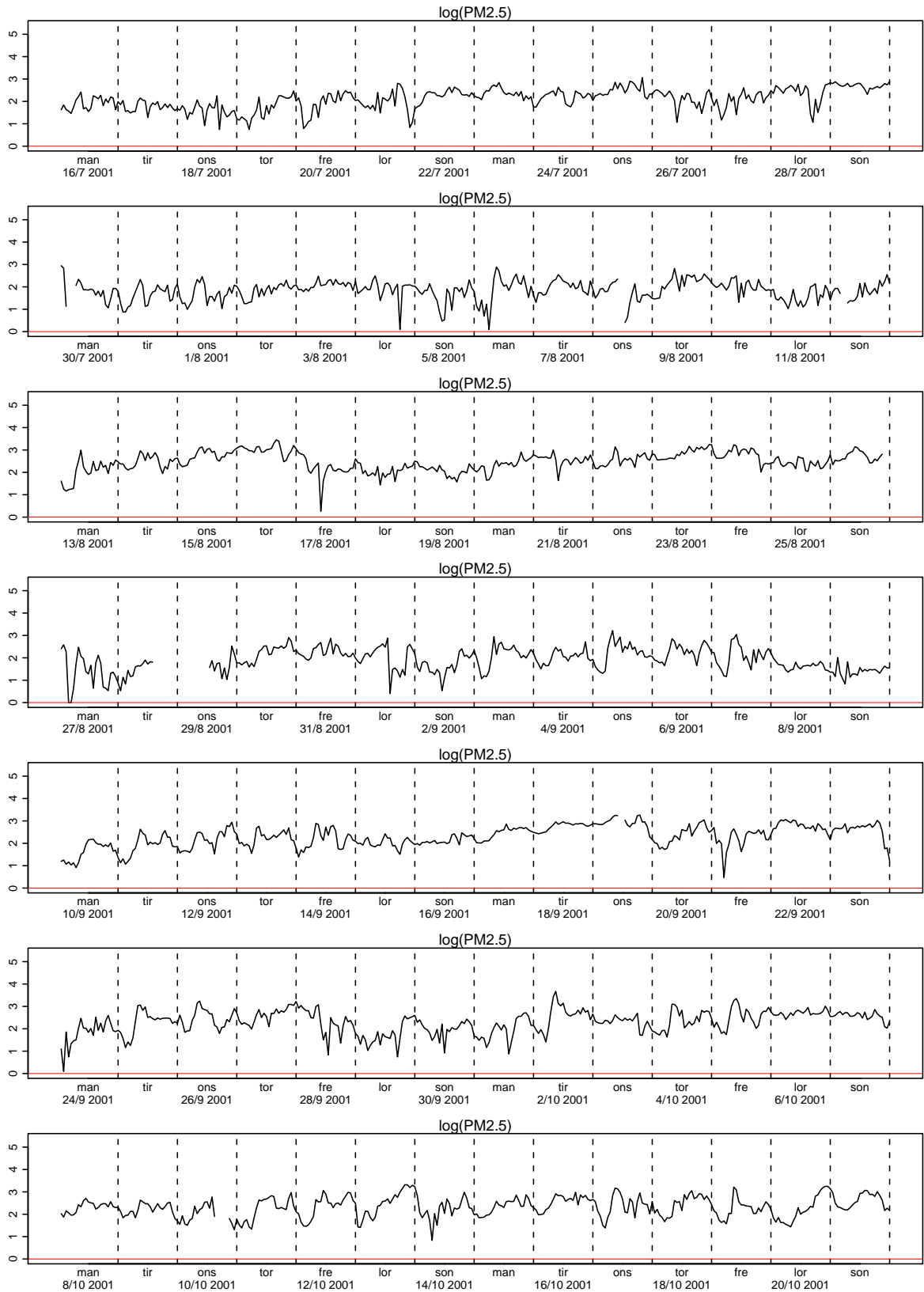
Figur 2.31. Plott av logaritmen til  $PM_{10}$



Figur 2.32. Plott av logaritmen til  $PM_{2,5}$

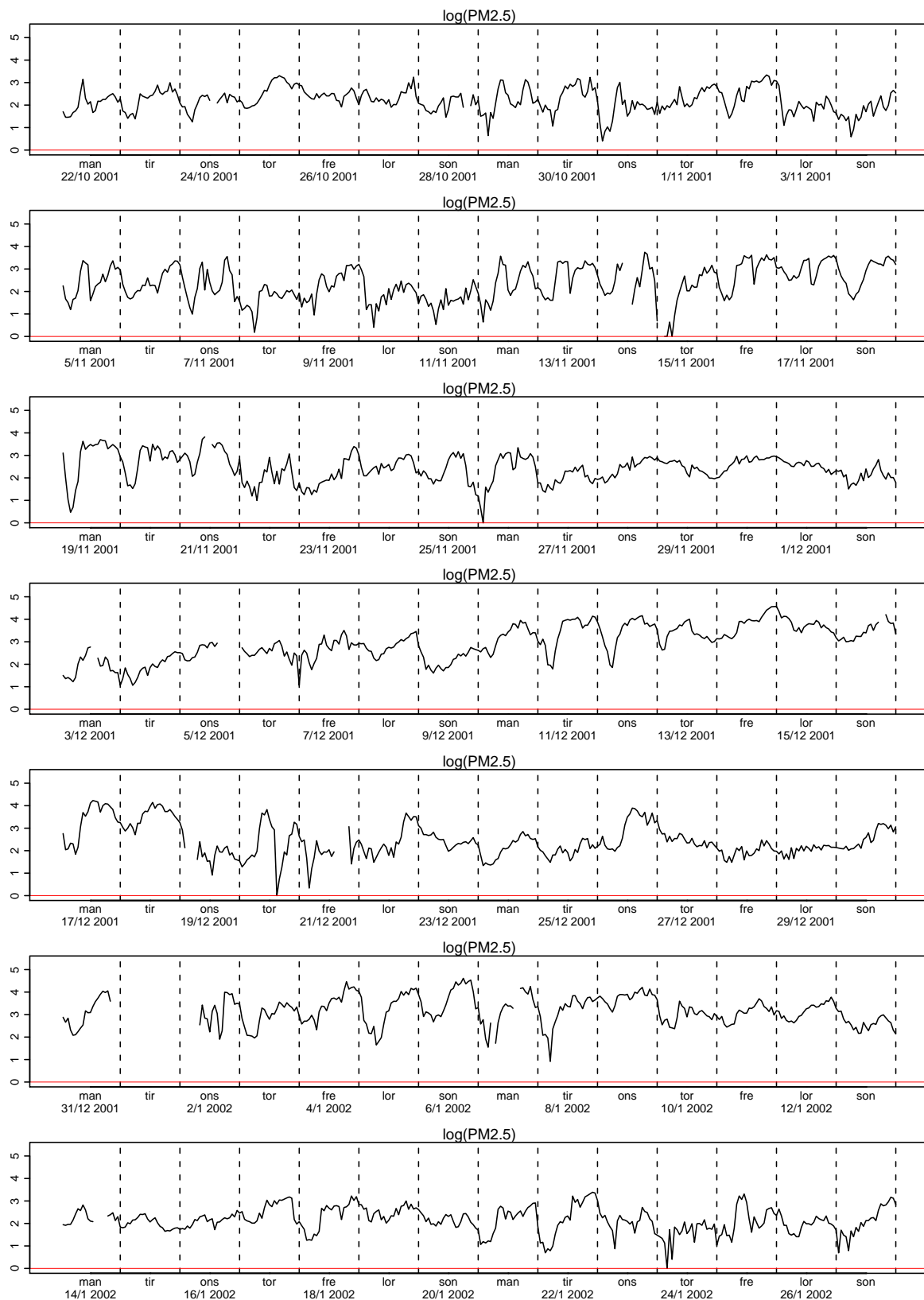


Figur 2.33. Plott av logaritmen til  $PM_{2,5}$

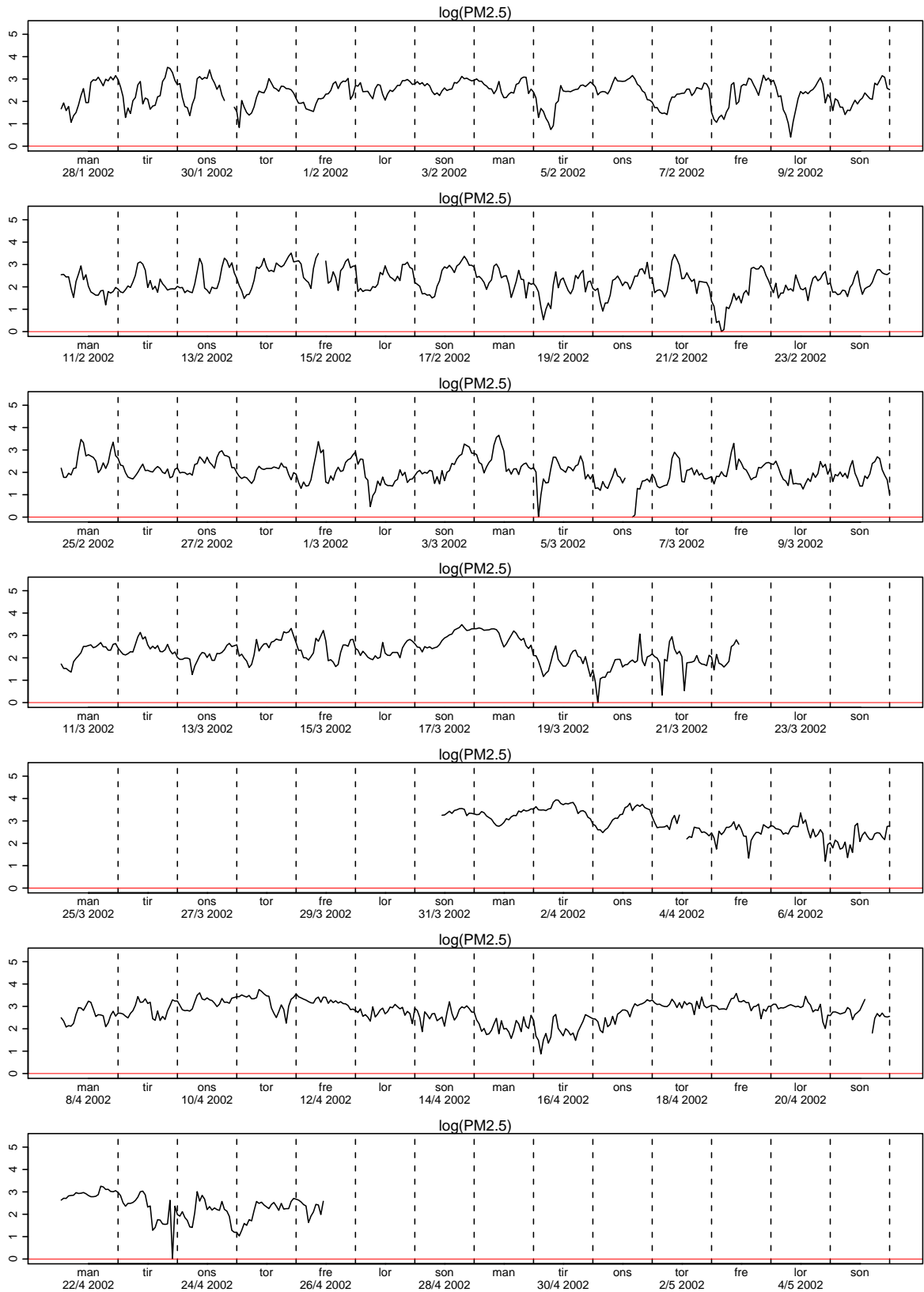


Figur 2.34. Plott av logaritmen til  $PM_{2,5}$

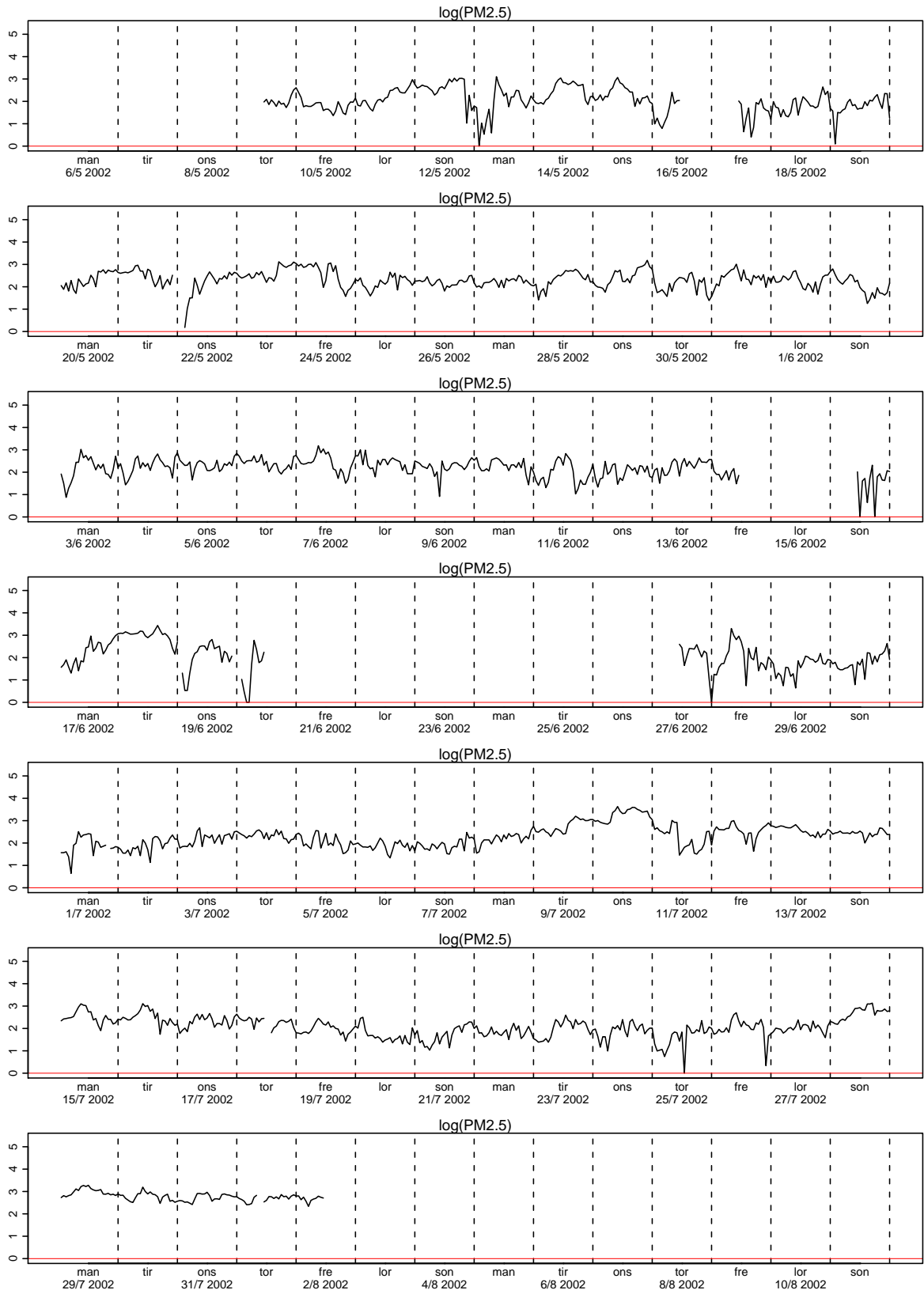




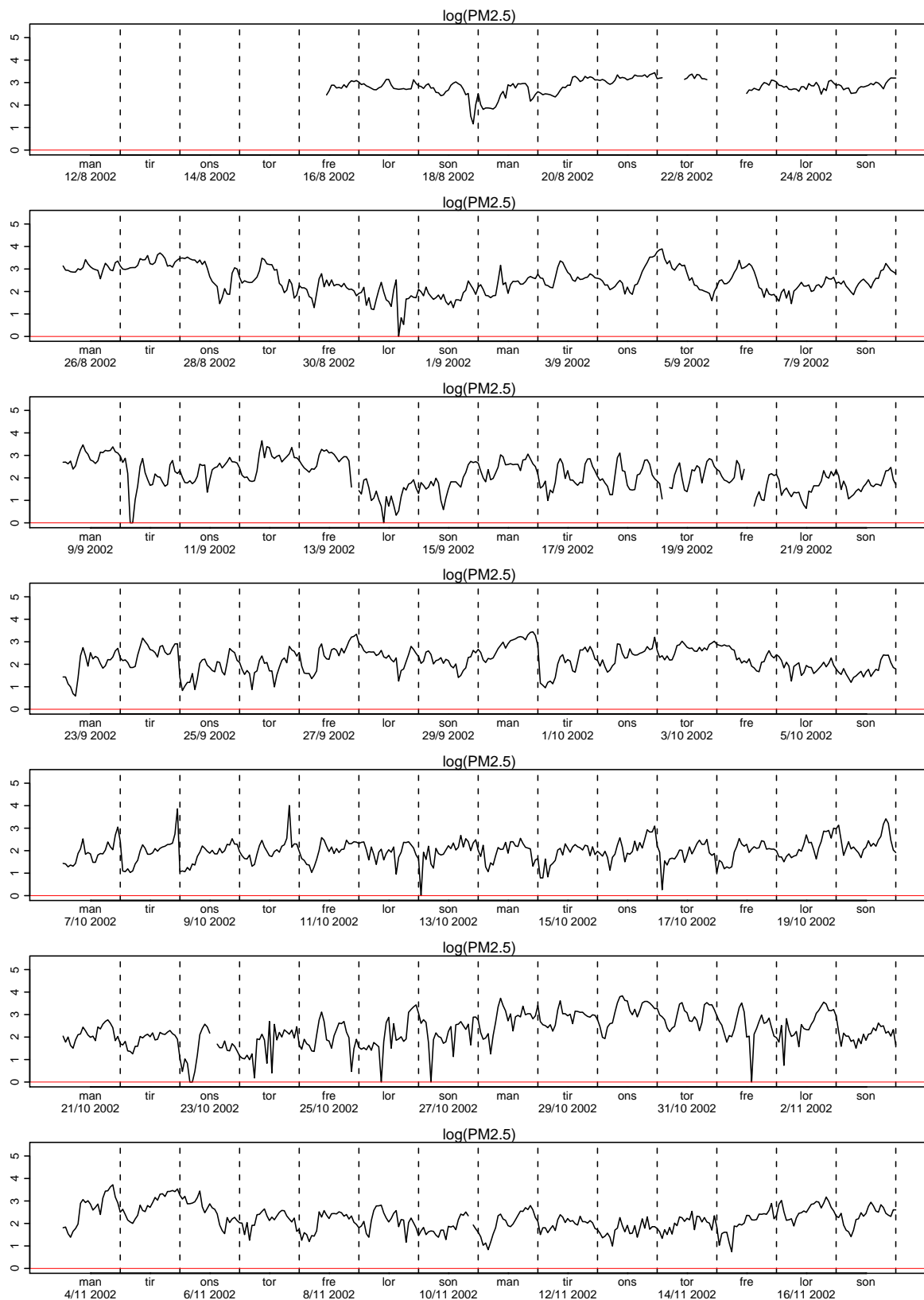
Figur 2.35. Plott av logaritmen til  $PM_{2,5}$



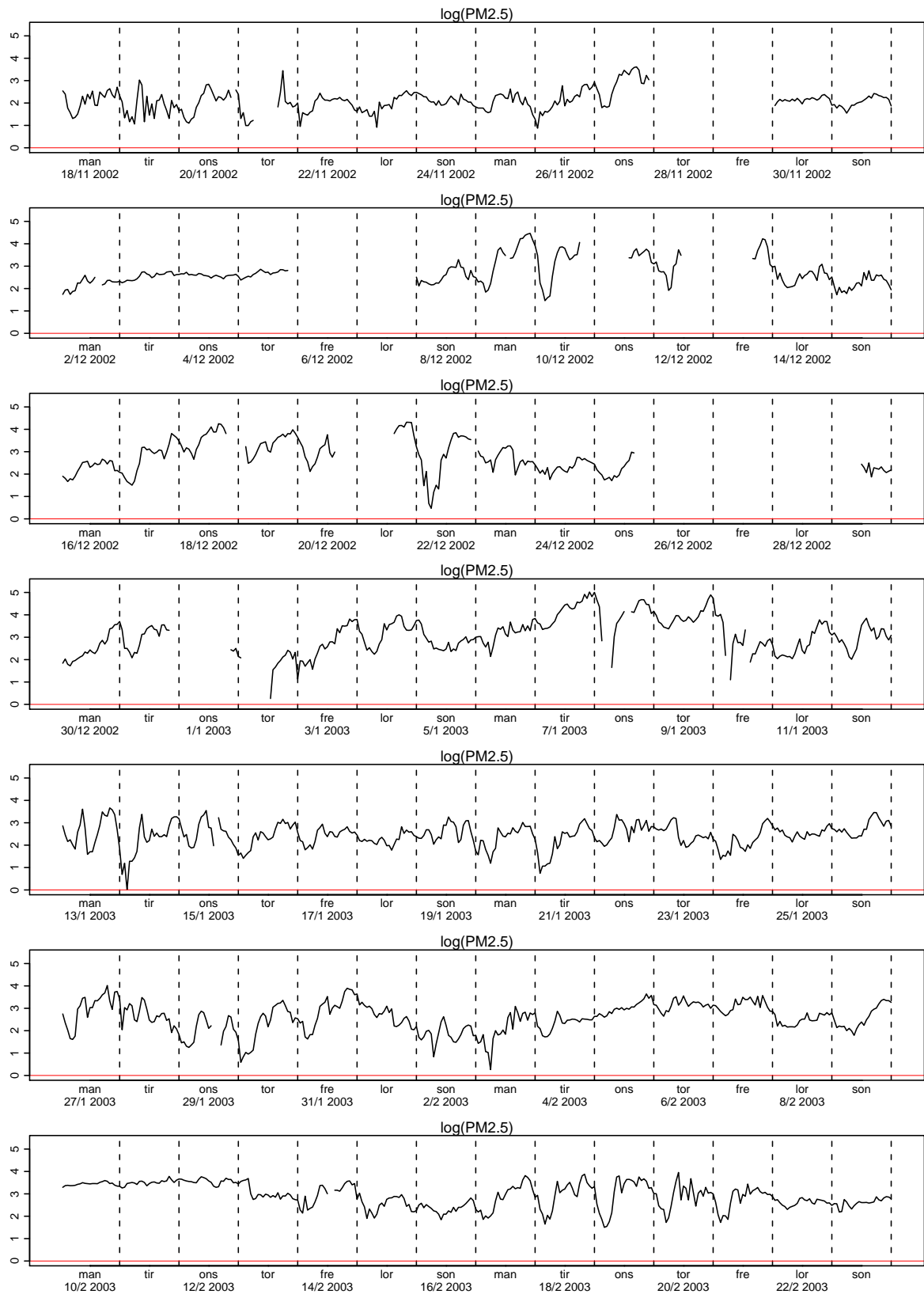
Figur 2.36. Plott av logaritmen til  $PM_{2,5}$



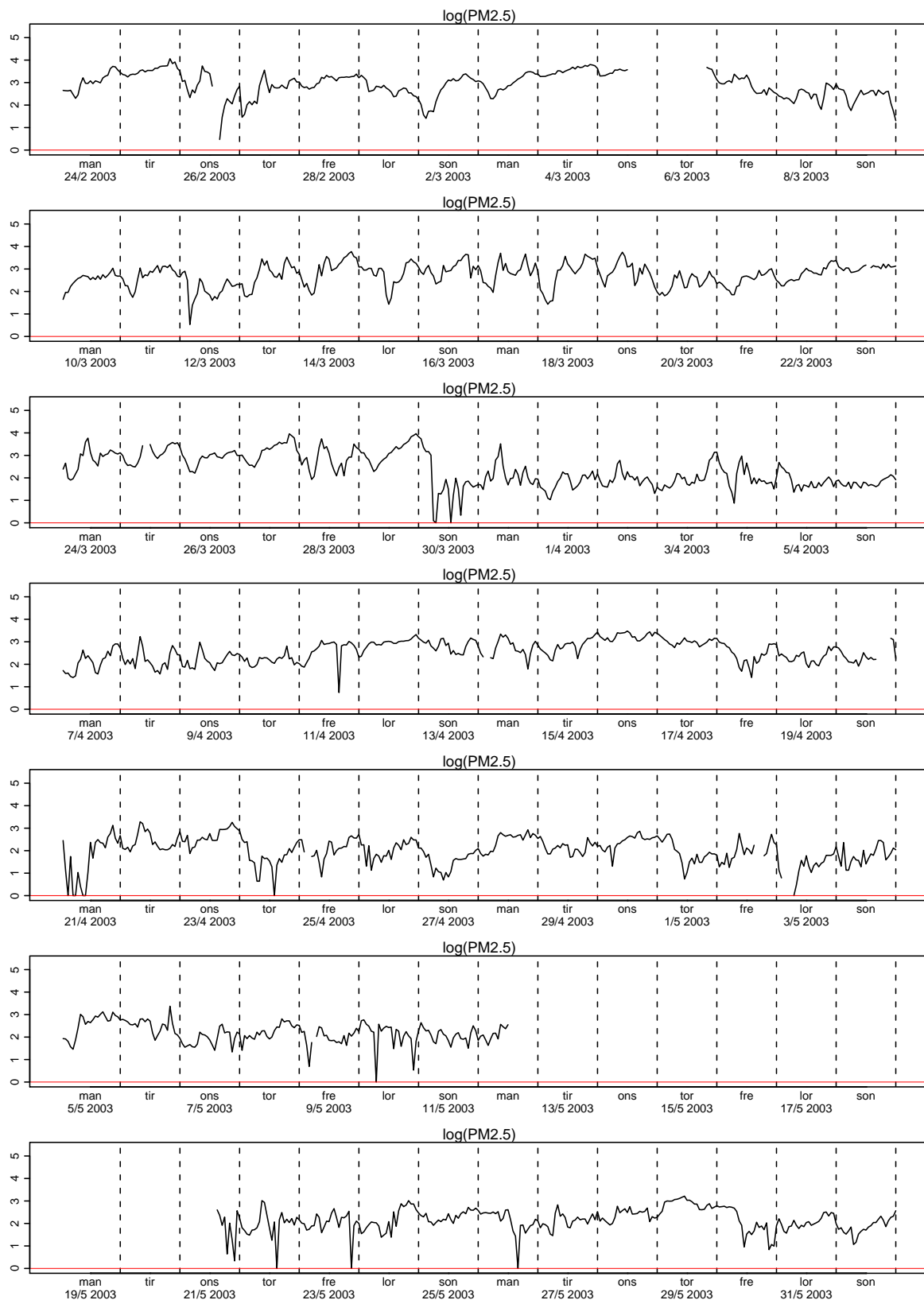
Figur 2.37. Plott av logaritmen til  $PM_{2,5}$



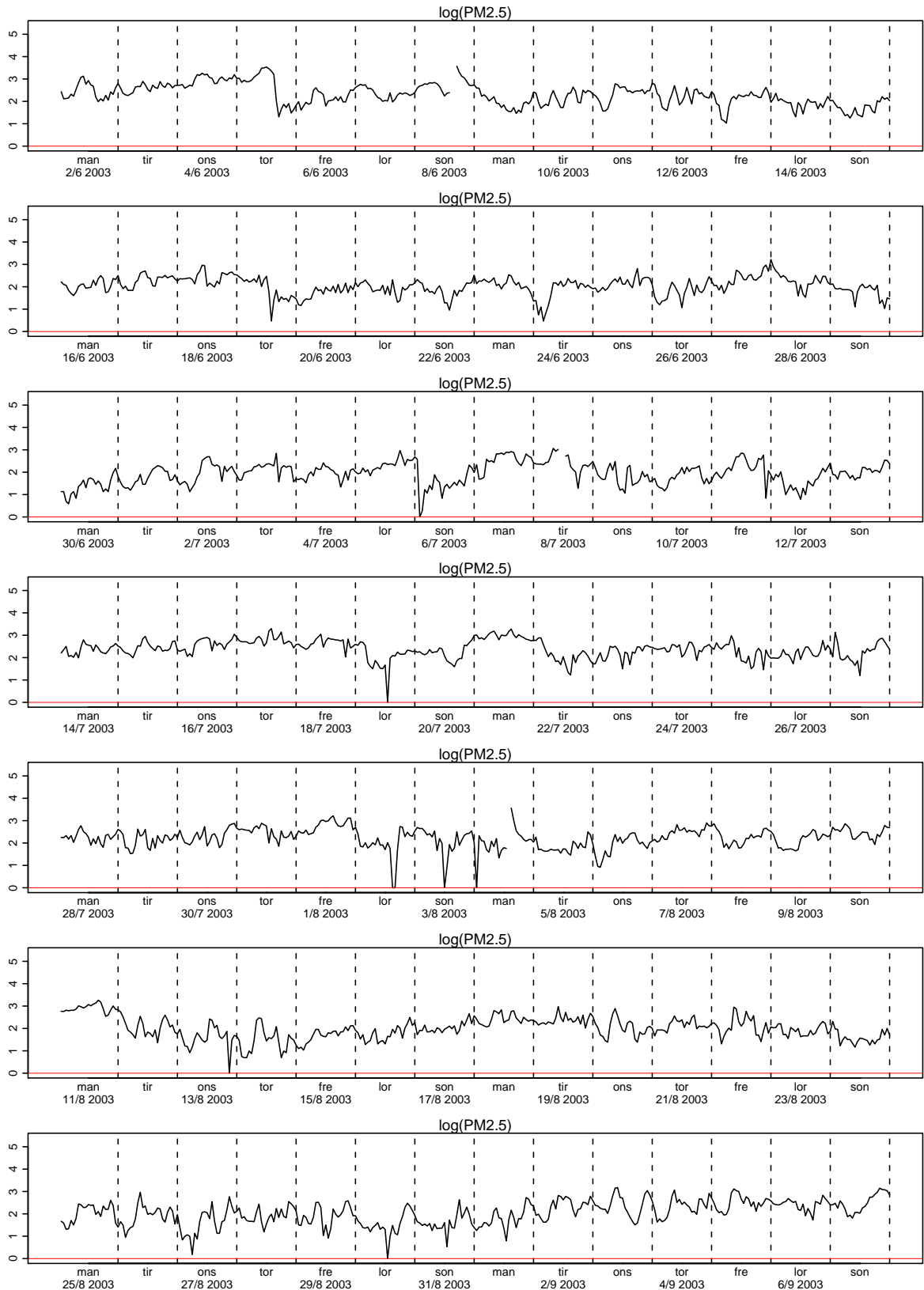
Figur 2.38. Plott av logaritmen til  $PM_{2,5}$



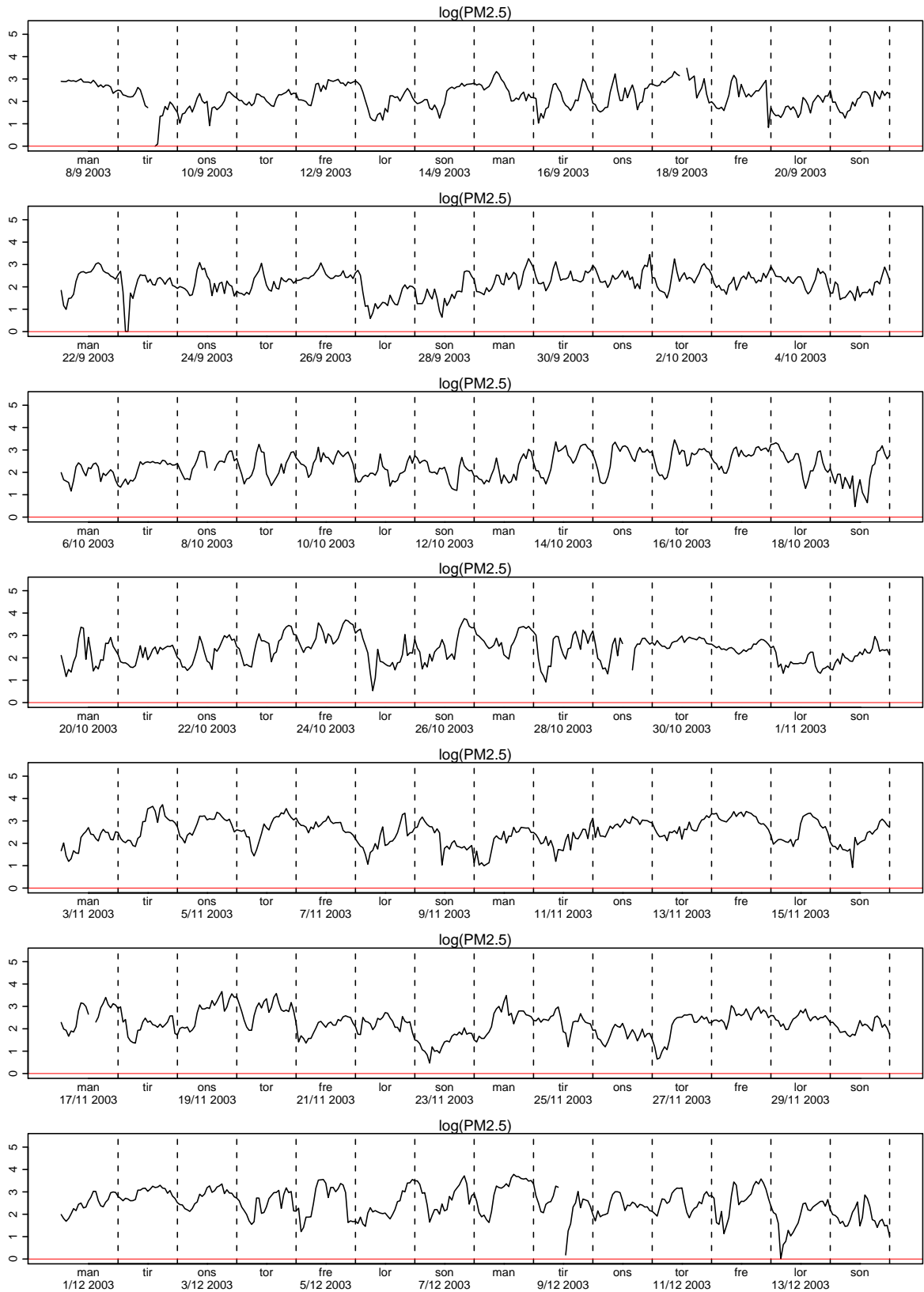
Figur 2.39. Plott av logaritmen til  $\text{PM}_{2,5}$



Figur 2.40. Plott av logaritmen til  $\text{PM}_{2.5}$

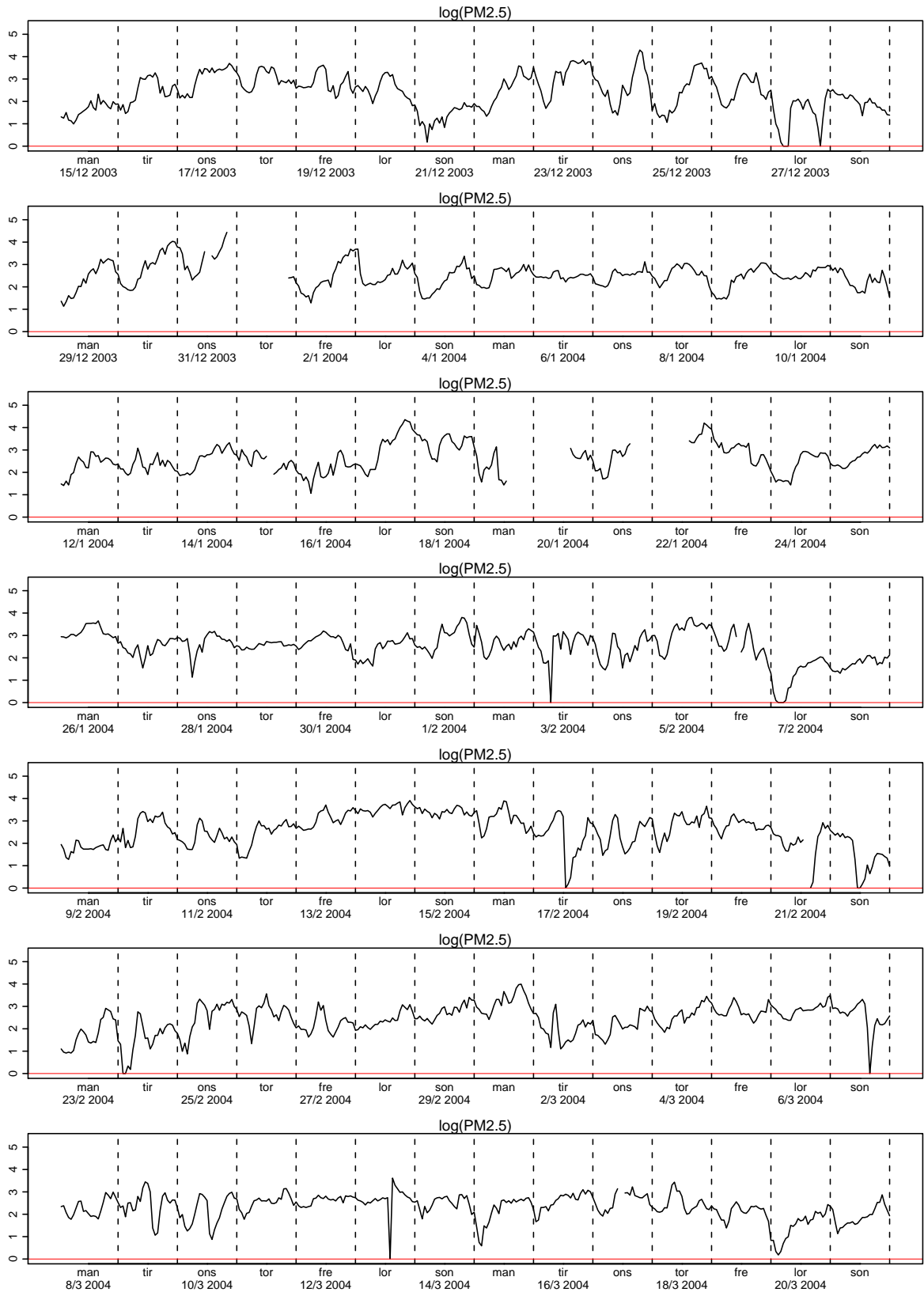


Figur 2.41. Plott av logaritmen til  $PM_{2,5}$

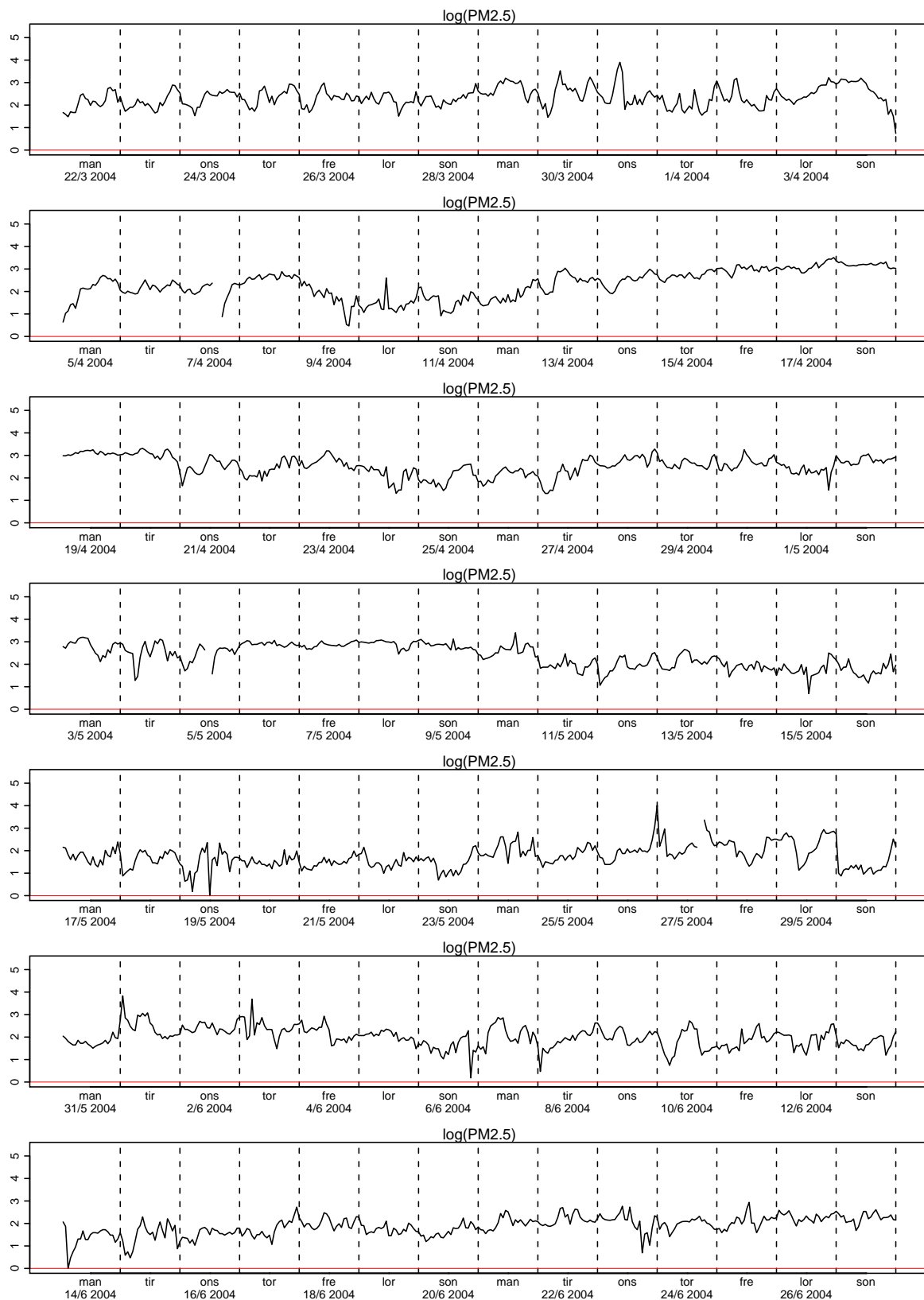


Figur 2.42. Plott av logaritmen til  $PM_{2,5}$

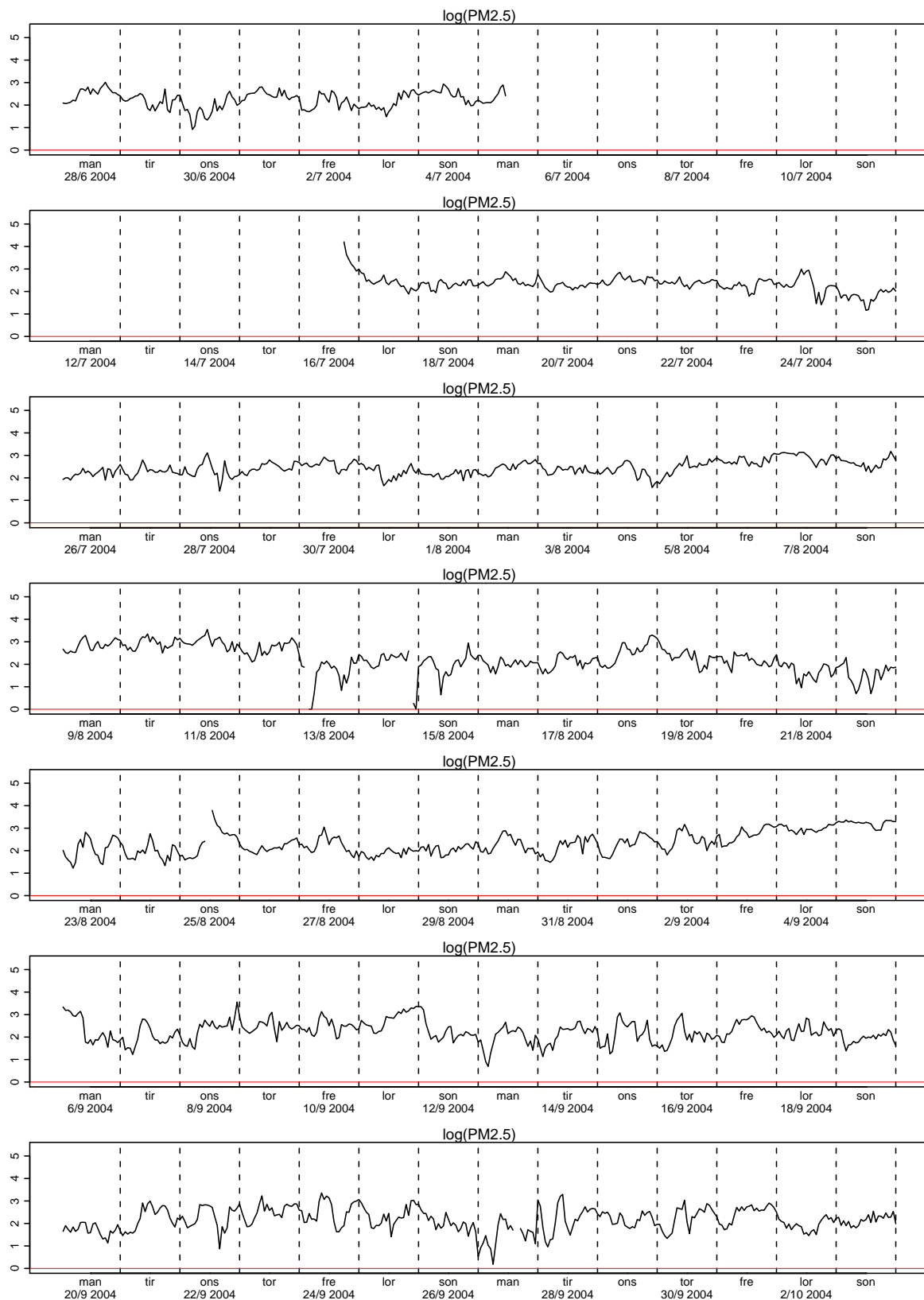




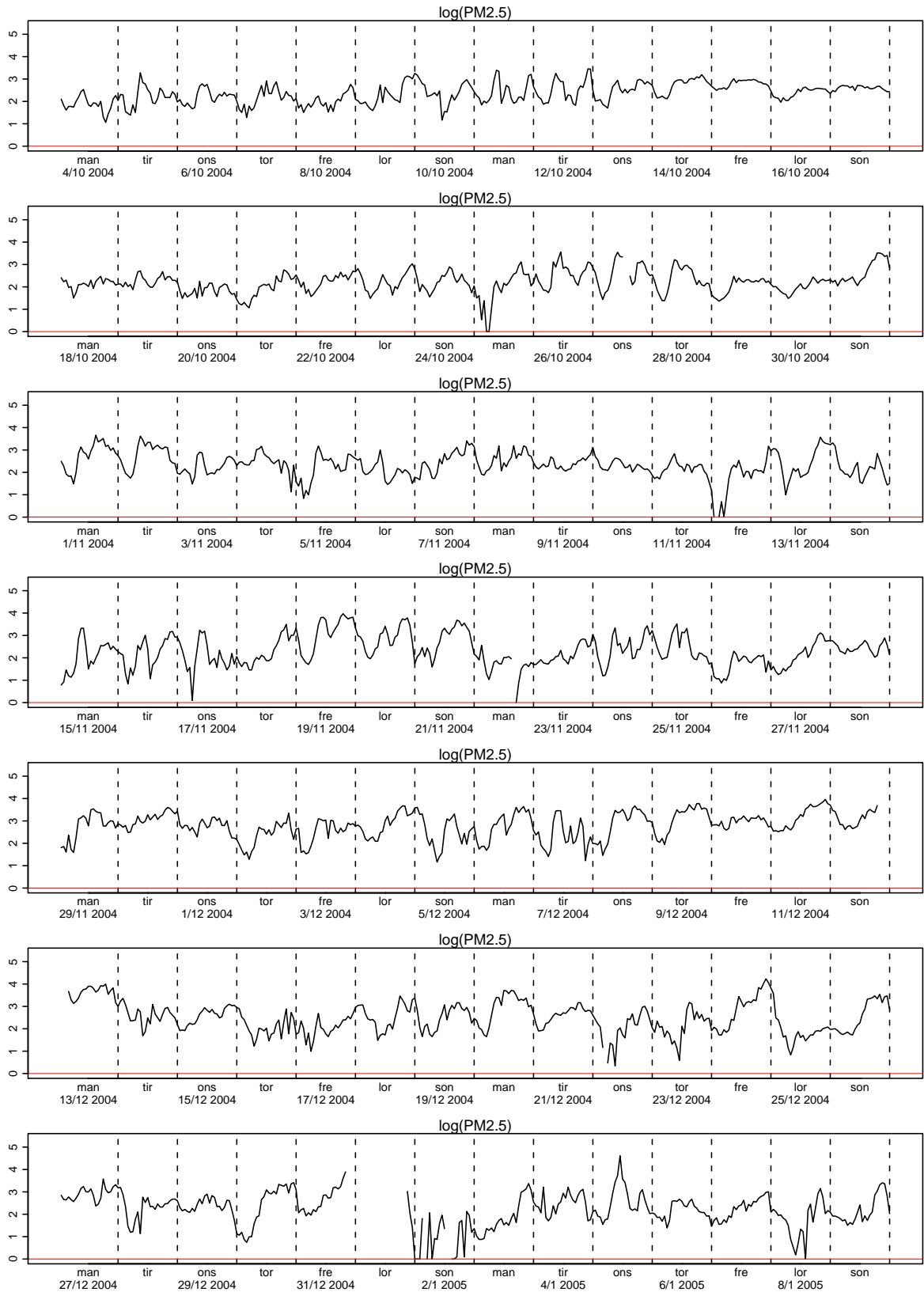
Figur 2.43. Plott av logaritmen til  $PM_{2,5}$



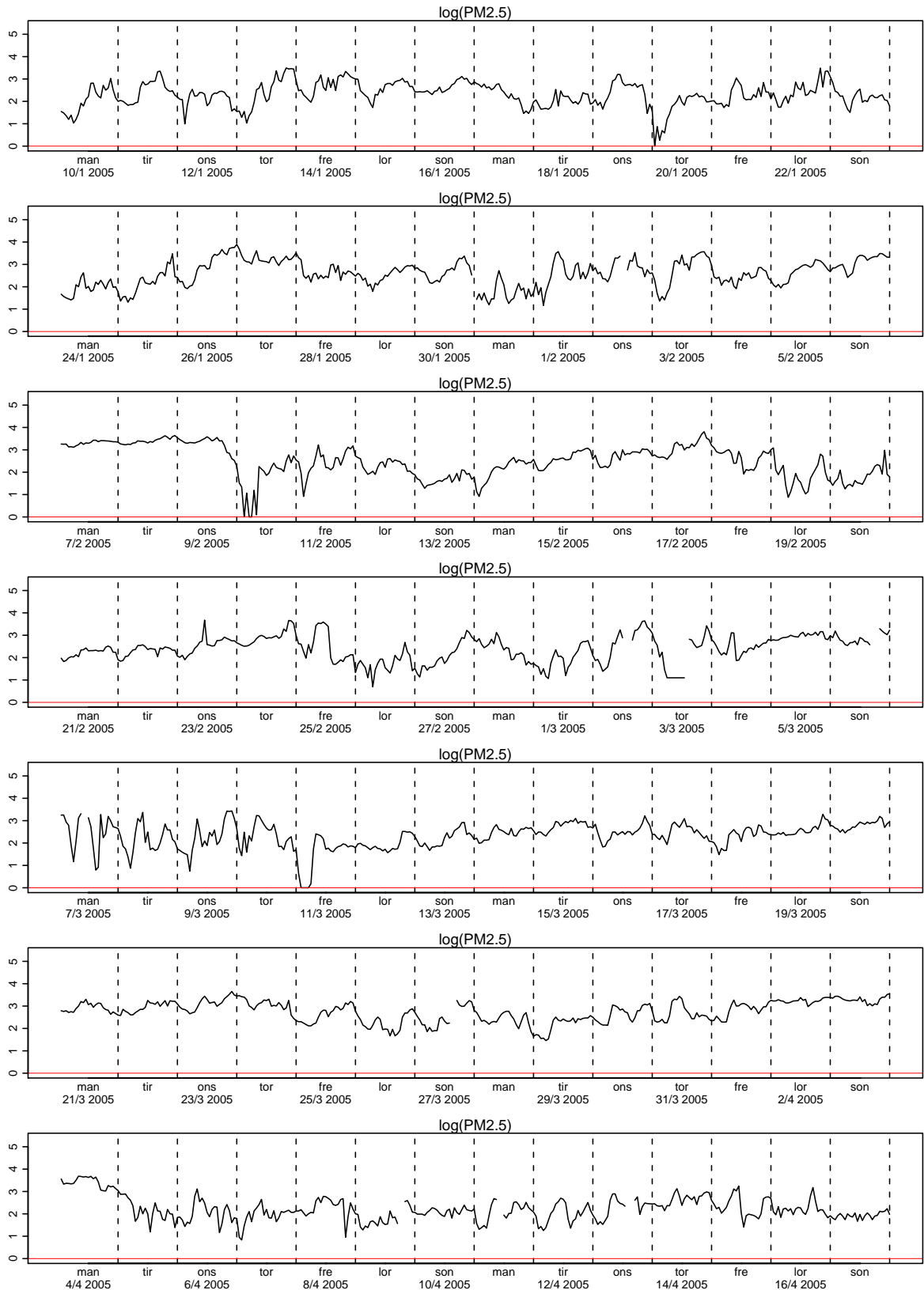
Figur 2.44. Plott av logaritmen til  $PM_{2,5}$



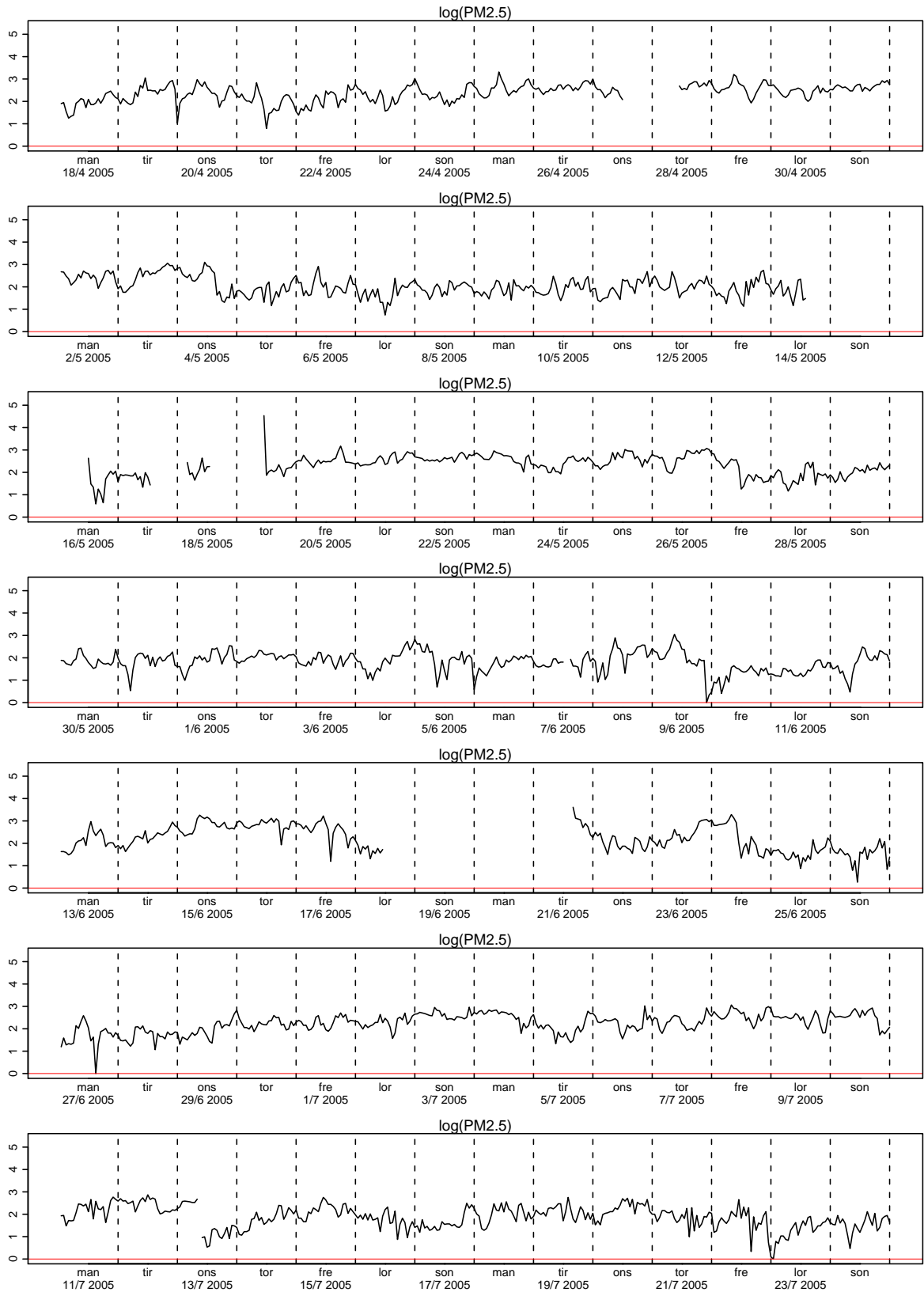
Figur 2.45. Plott av logaritmen til  $PM_{2,5}$



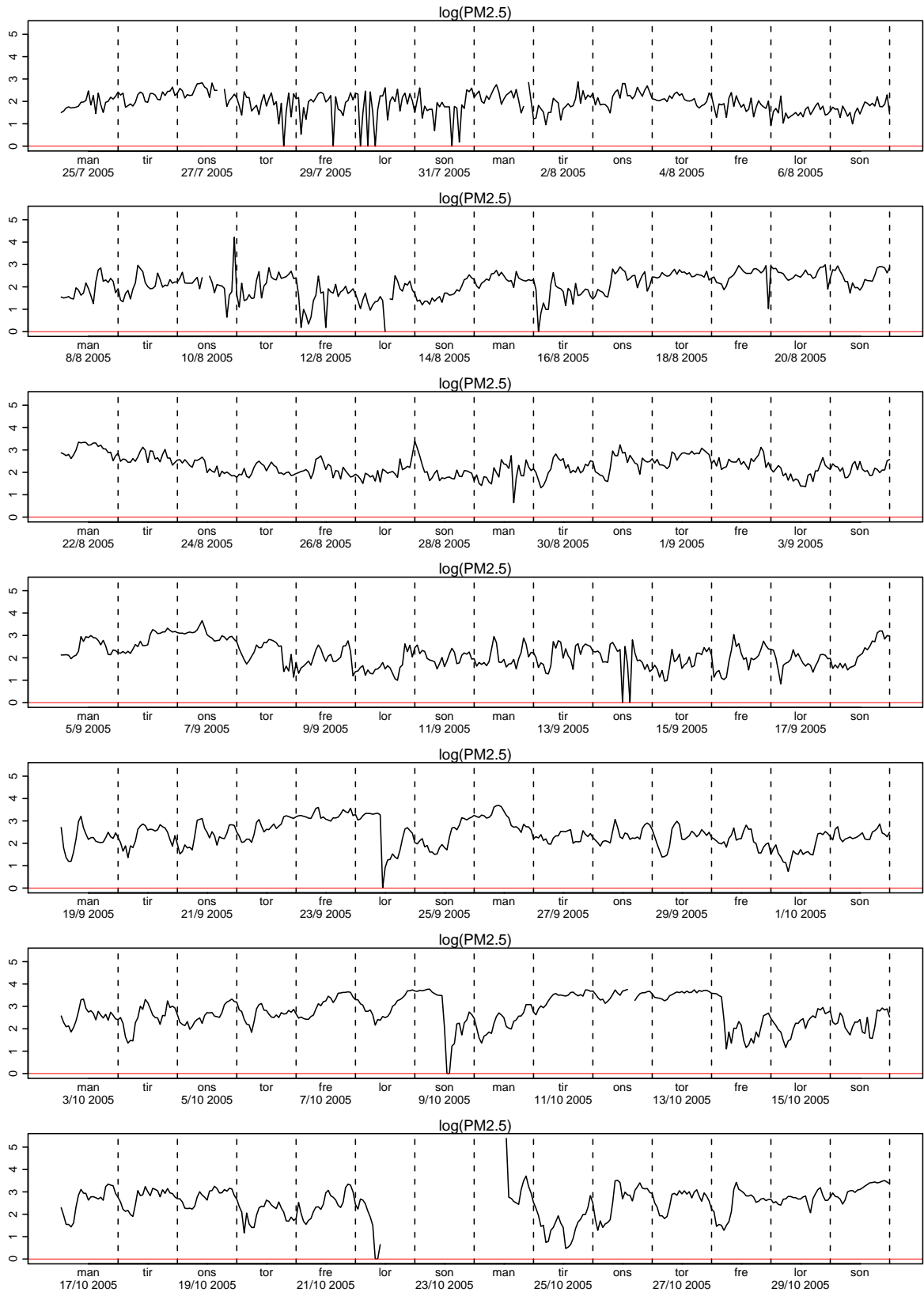
Figur 2.46. Plott av logaritmen til  $PM_{2,5}$



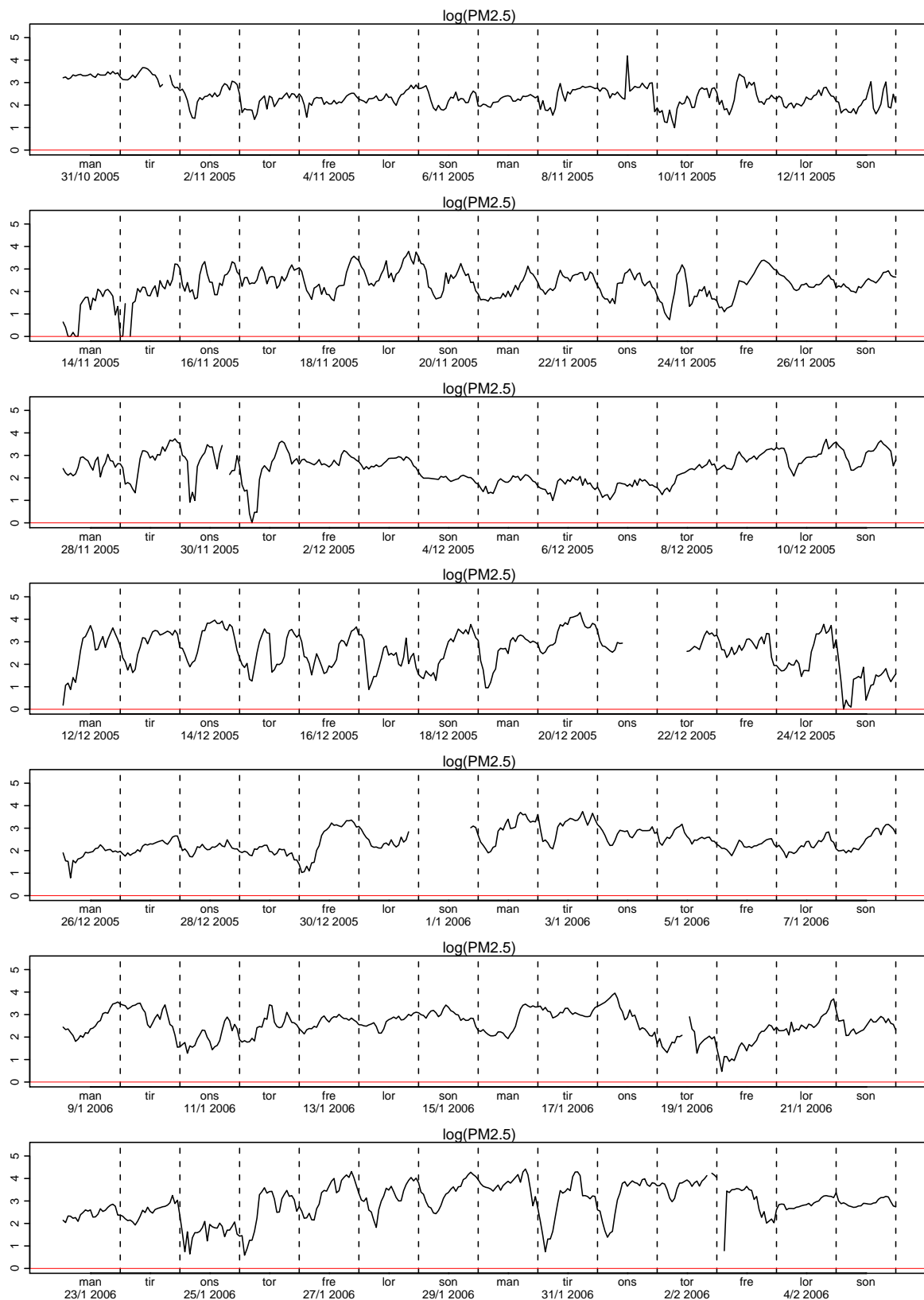
Figur 2.47. Plott av logaritmen til  $\text{PM}_{2,5}$



Figur 2.48. Plott av logaritmen til  $PM_{2,5}$

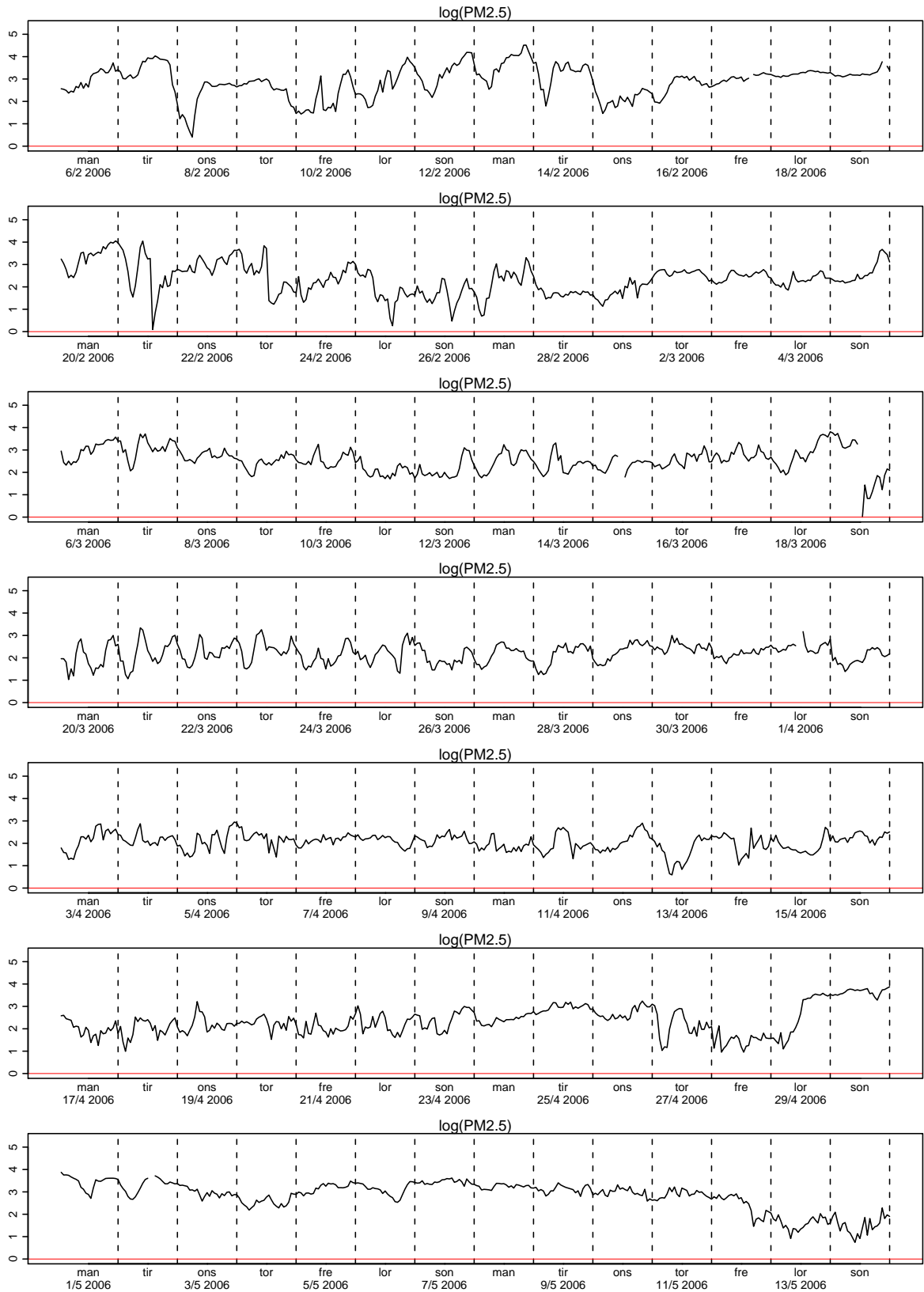


Figur 2.49. Plott av logaritmen til  $\text{PM}_{2,5}$

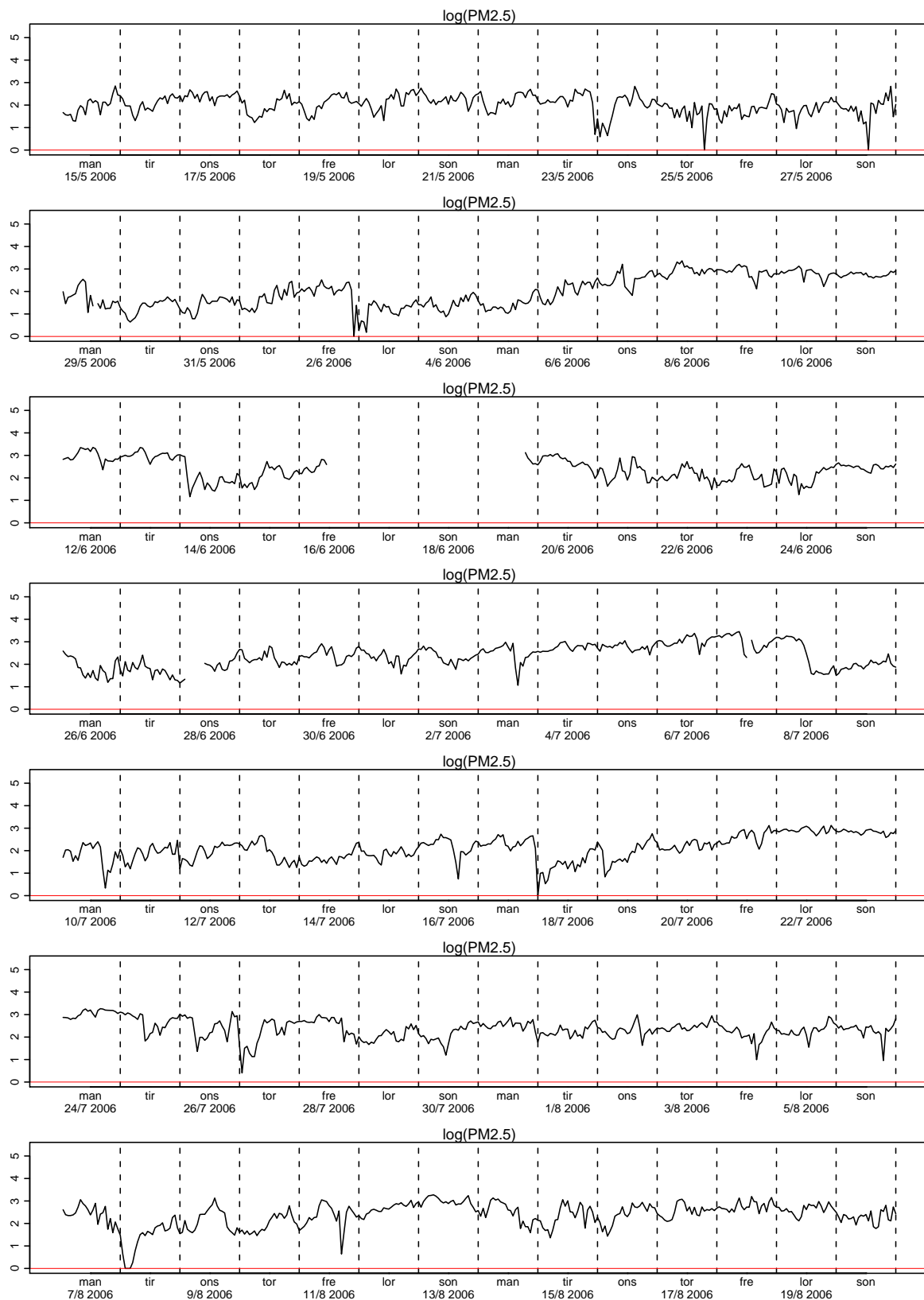


Figur 2.50. Plott av logaritmen til  $PM_{2,5}$

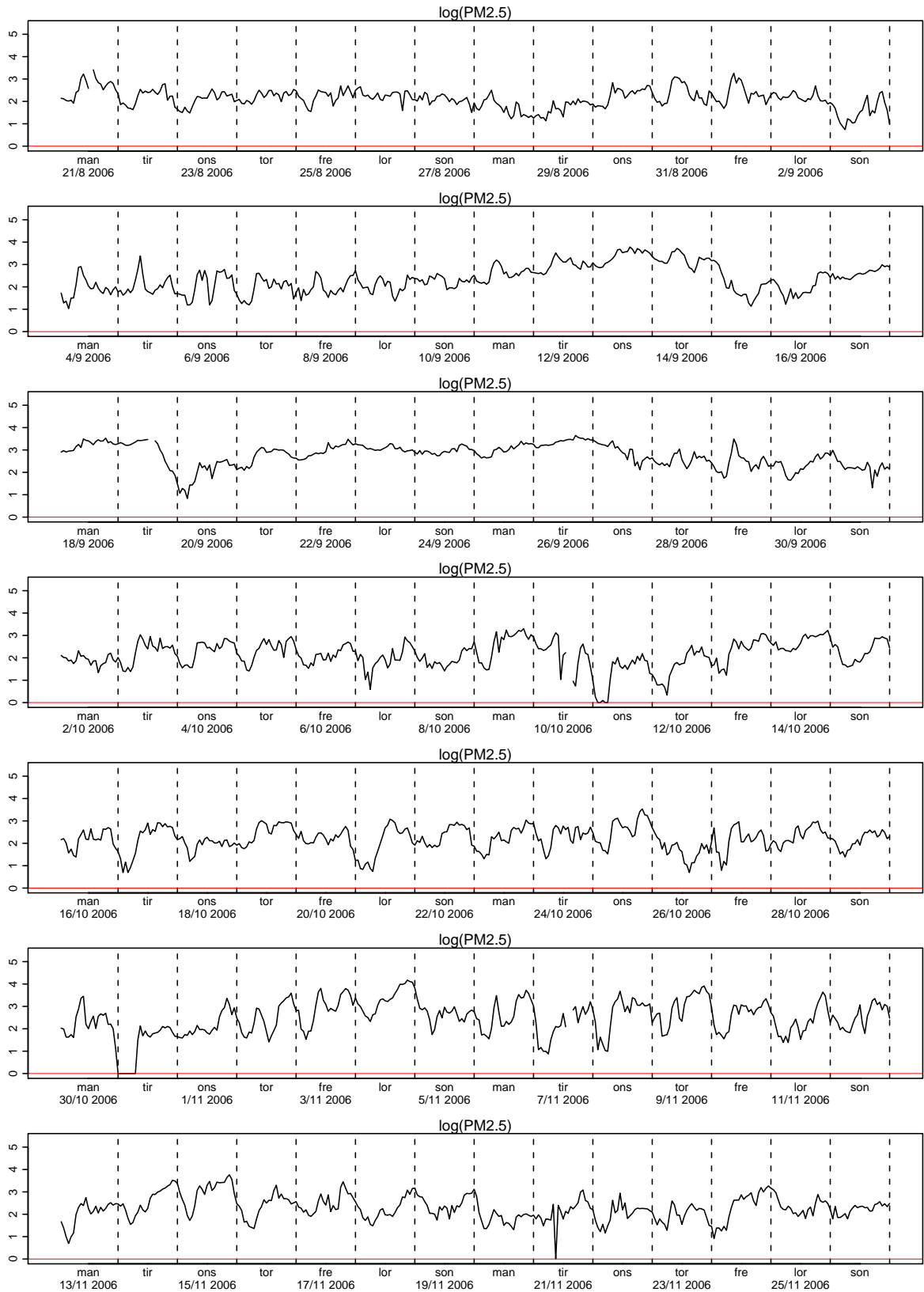




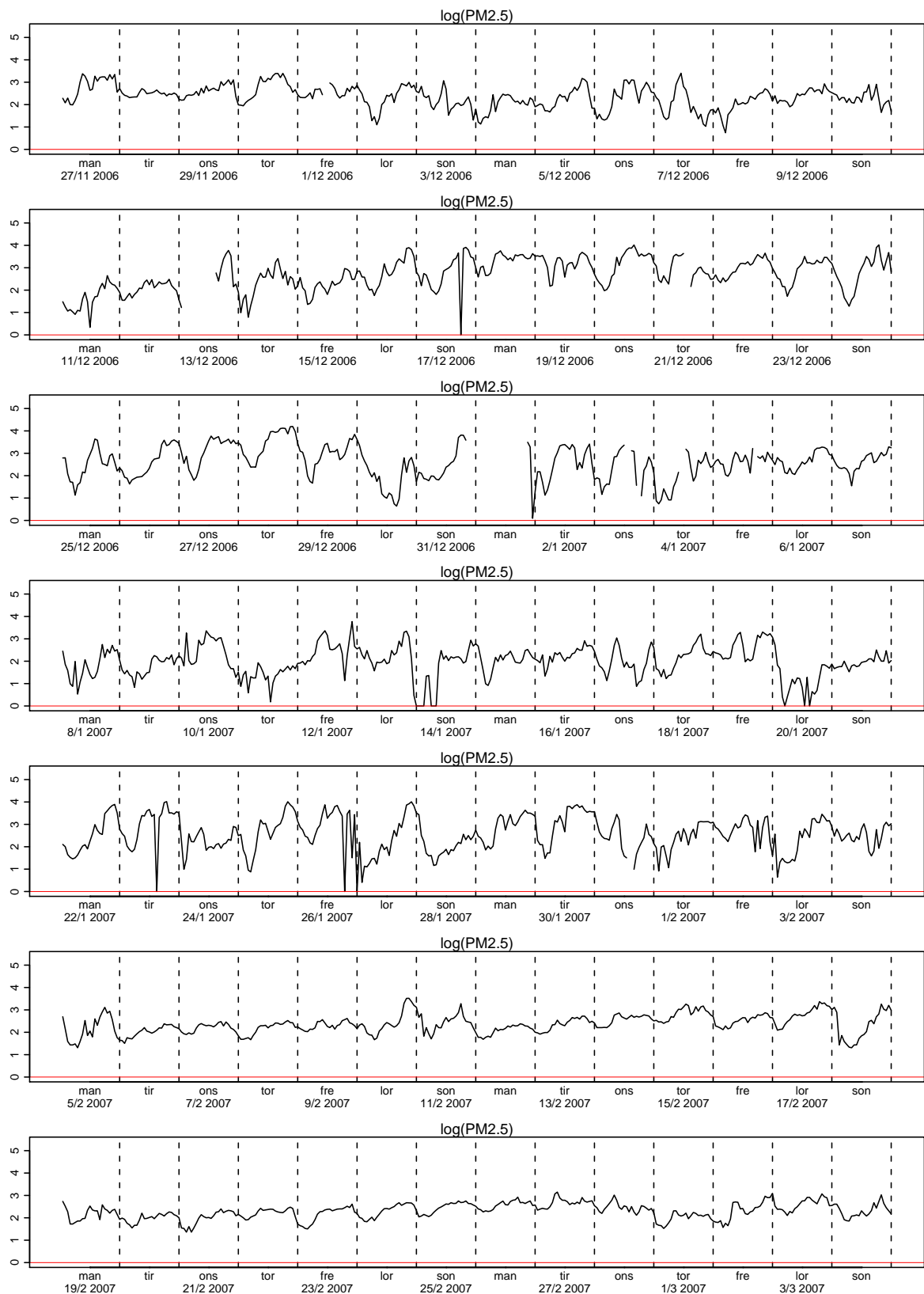
Figur 2.51. Plott av logaritmen til PM<sub>2,5</sub>



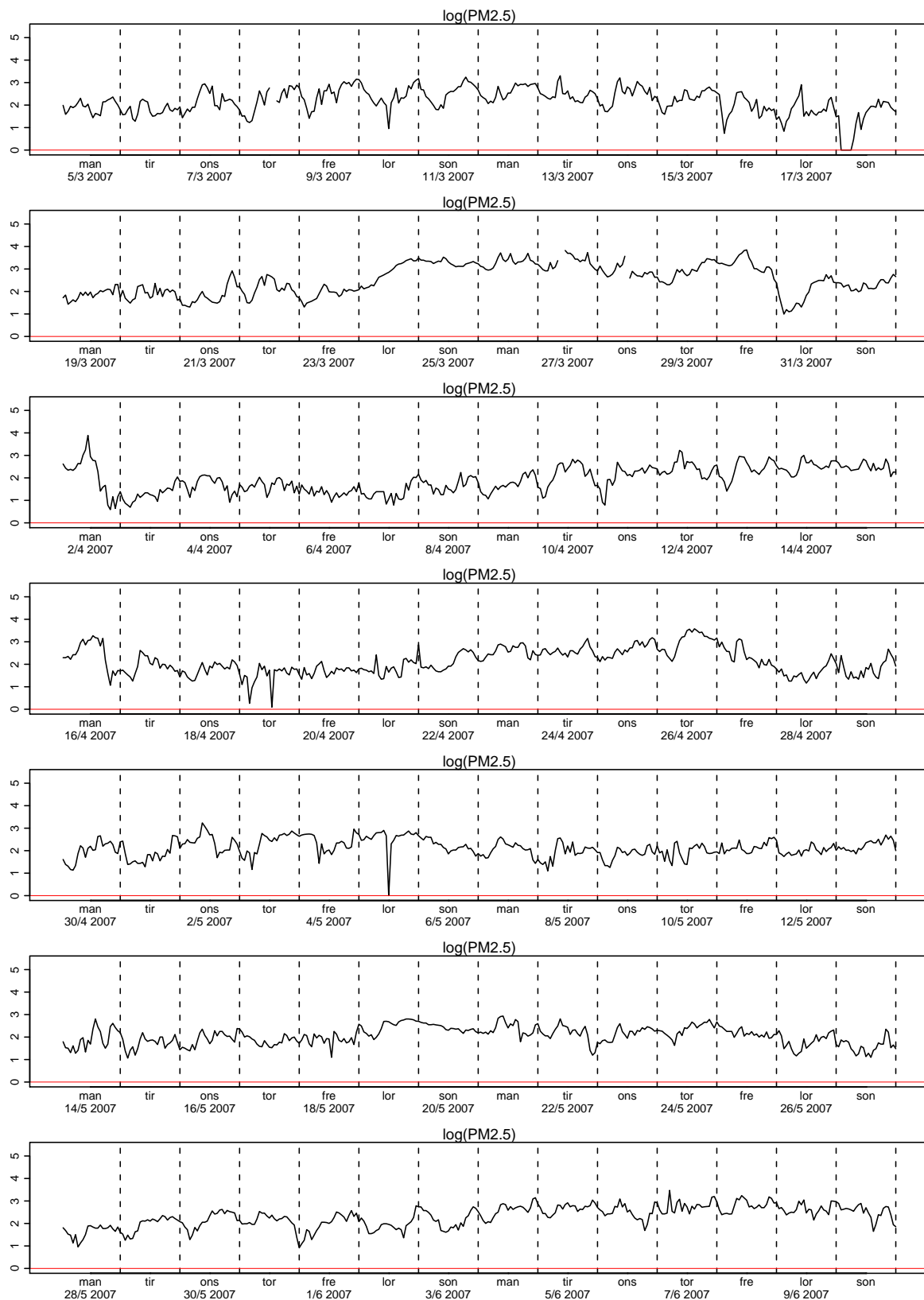
Figur 2.52. Plott av logaritmen til  $\text{PM}_{2.5}$



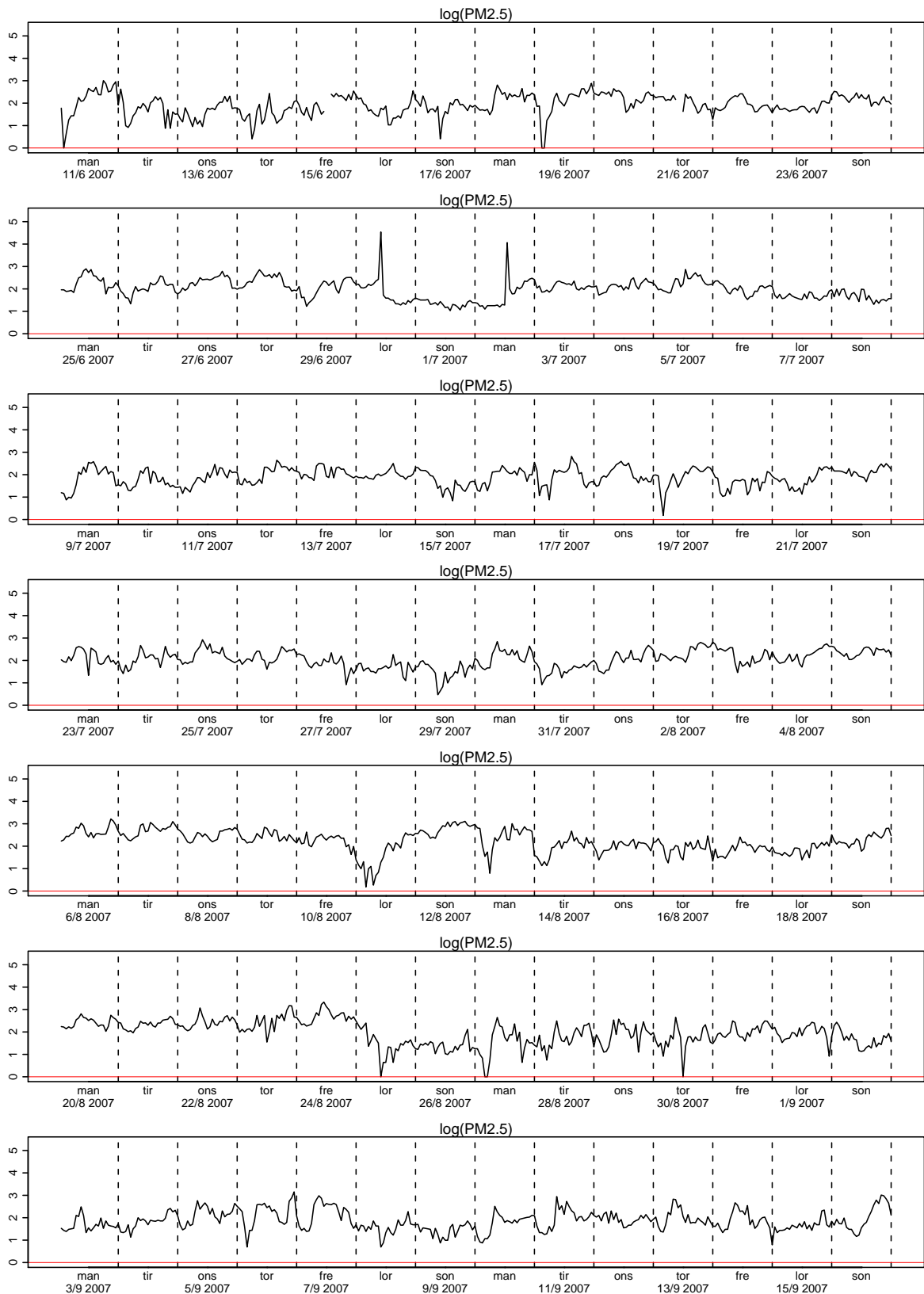
Figur 2.53. Plott av logaritmen til  $\text{PM}_{2,5}$



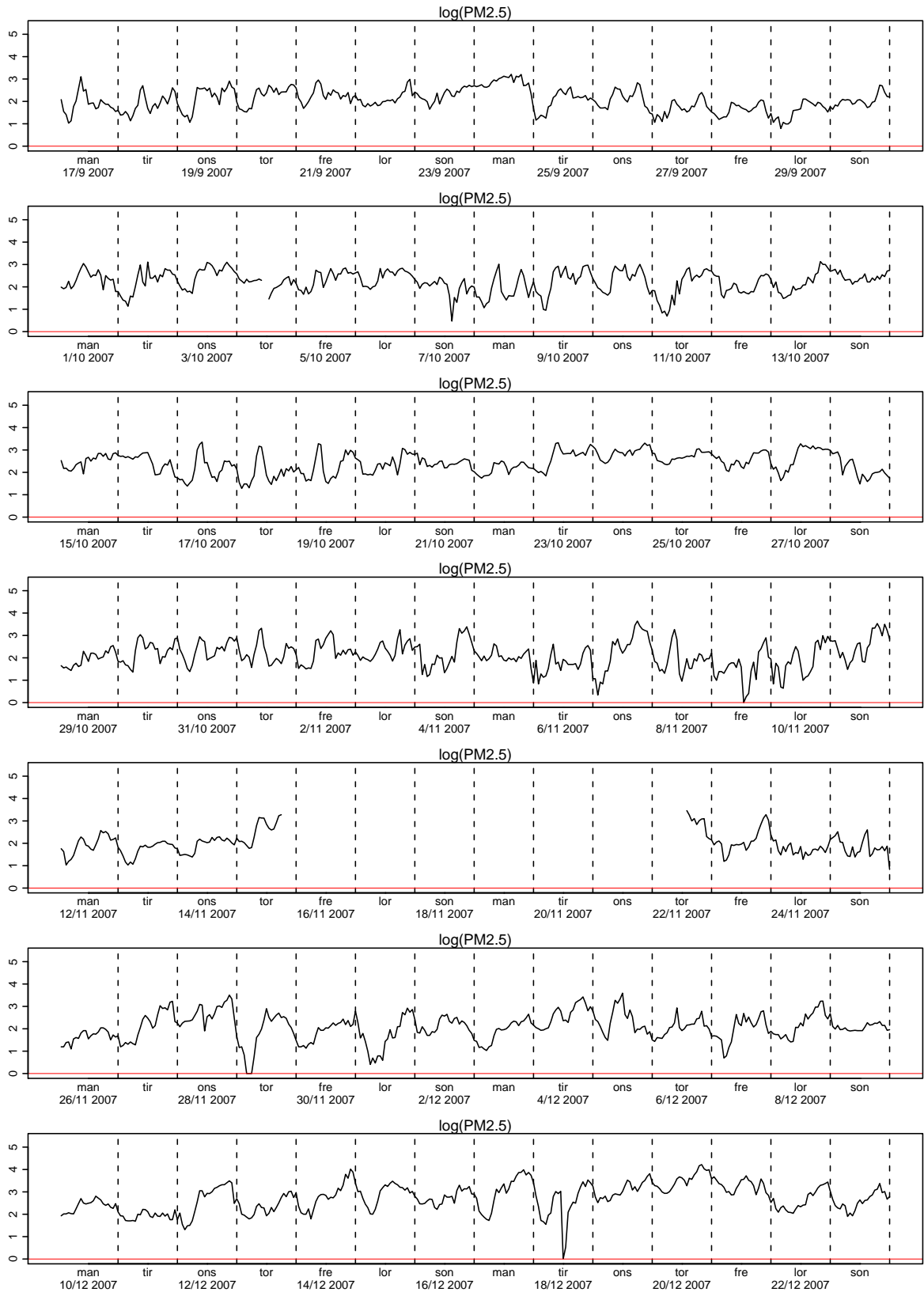
Figur 2.54. Plott av logaritmen til  $PM_{2,5}$



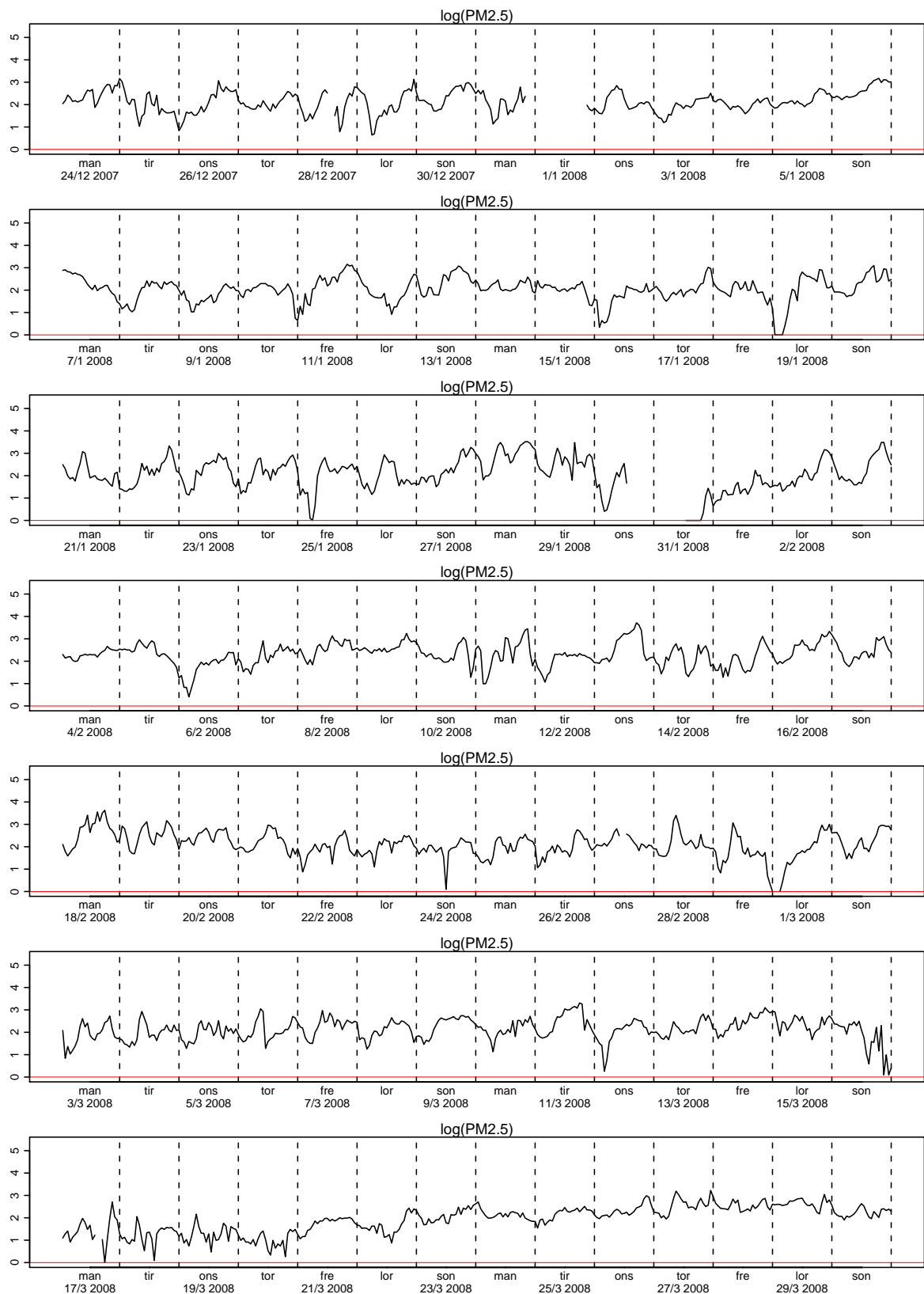
Figur 2.55. Plott av logaritmen til  $PM_{2,5}$



Figur 2.56. Plott av logaritmen til  $PM_{2,5}$

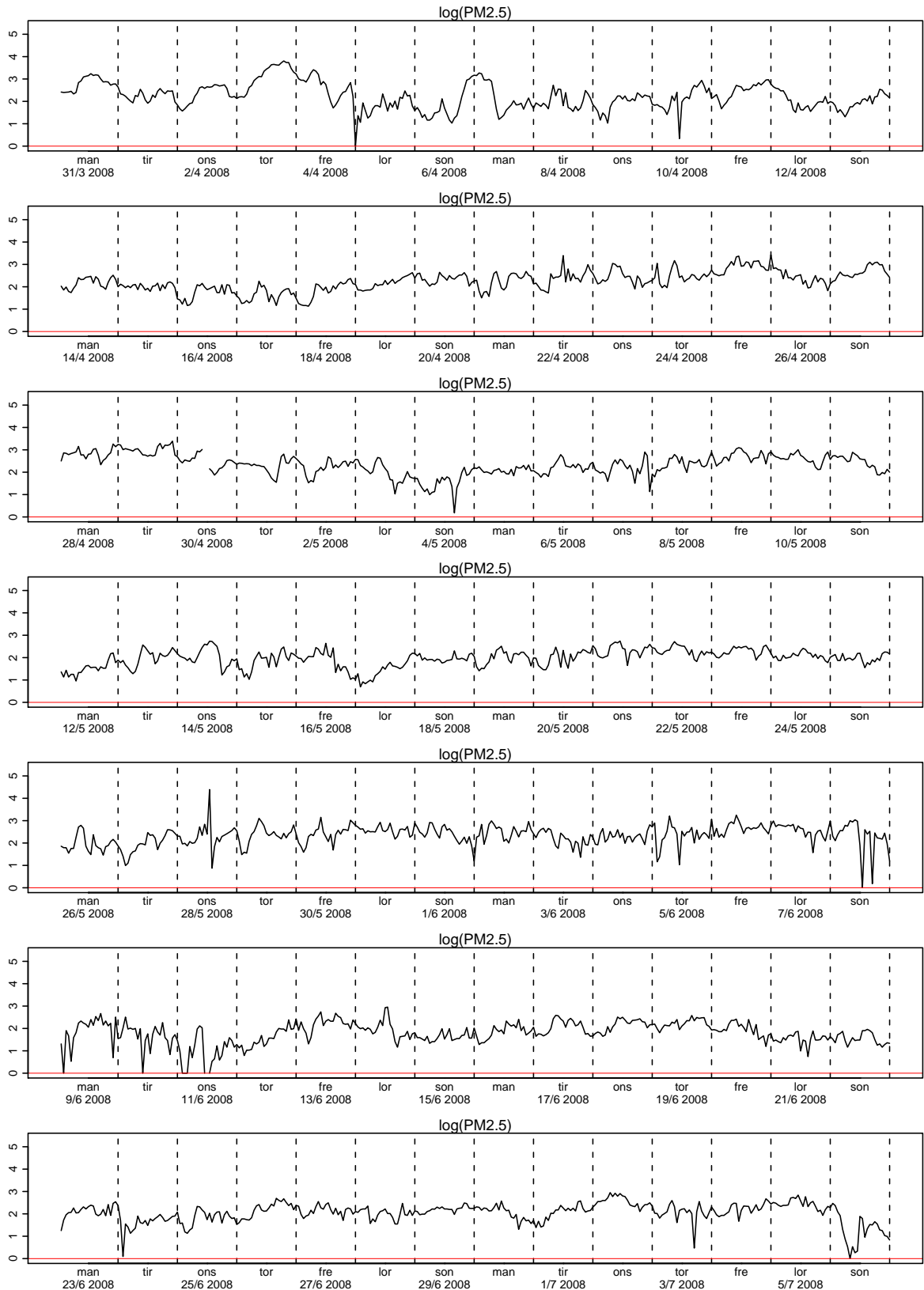


Figur 2.57. Plott av logaritmen til  $PM_{2,5}$

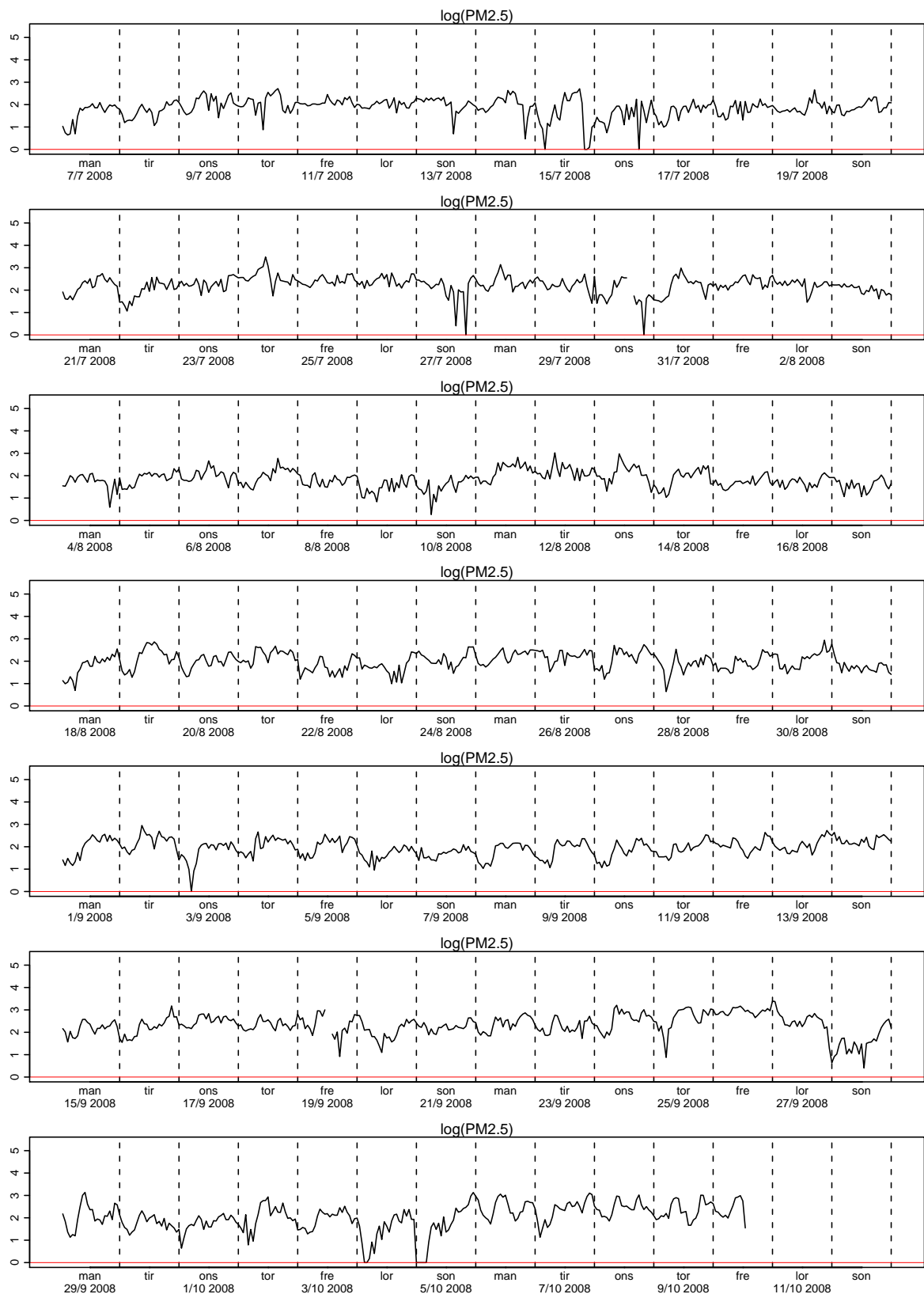


Figur 2.58. Plott av logaritmen til  $PM_{2,5}$

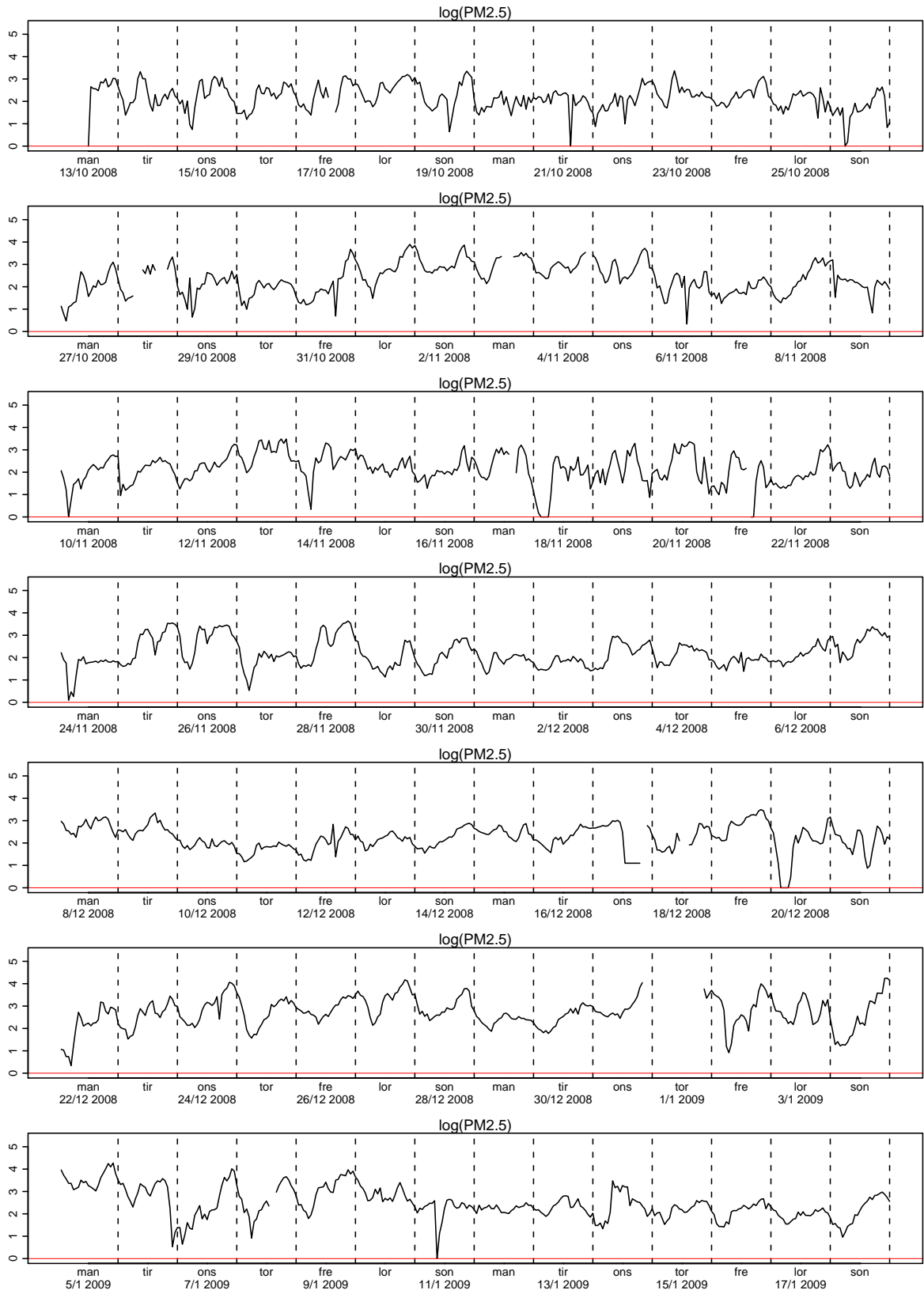




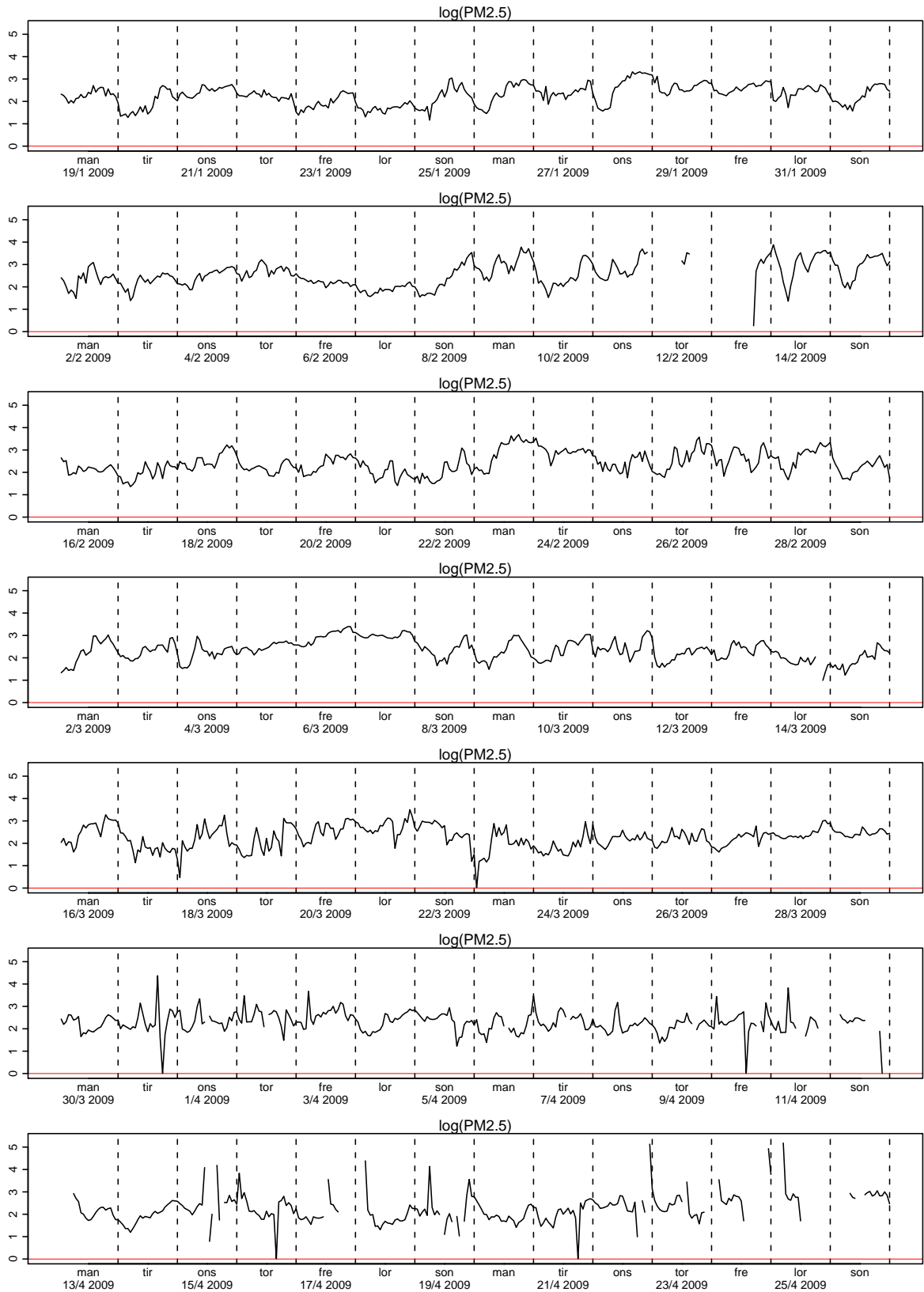
Figur 2.59. Plott av logaritmen til  $PM_{2,5}$



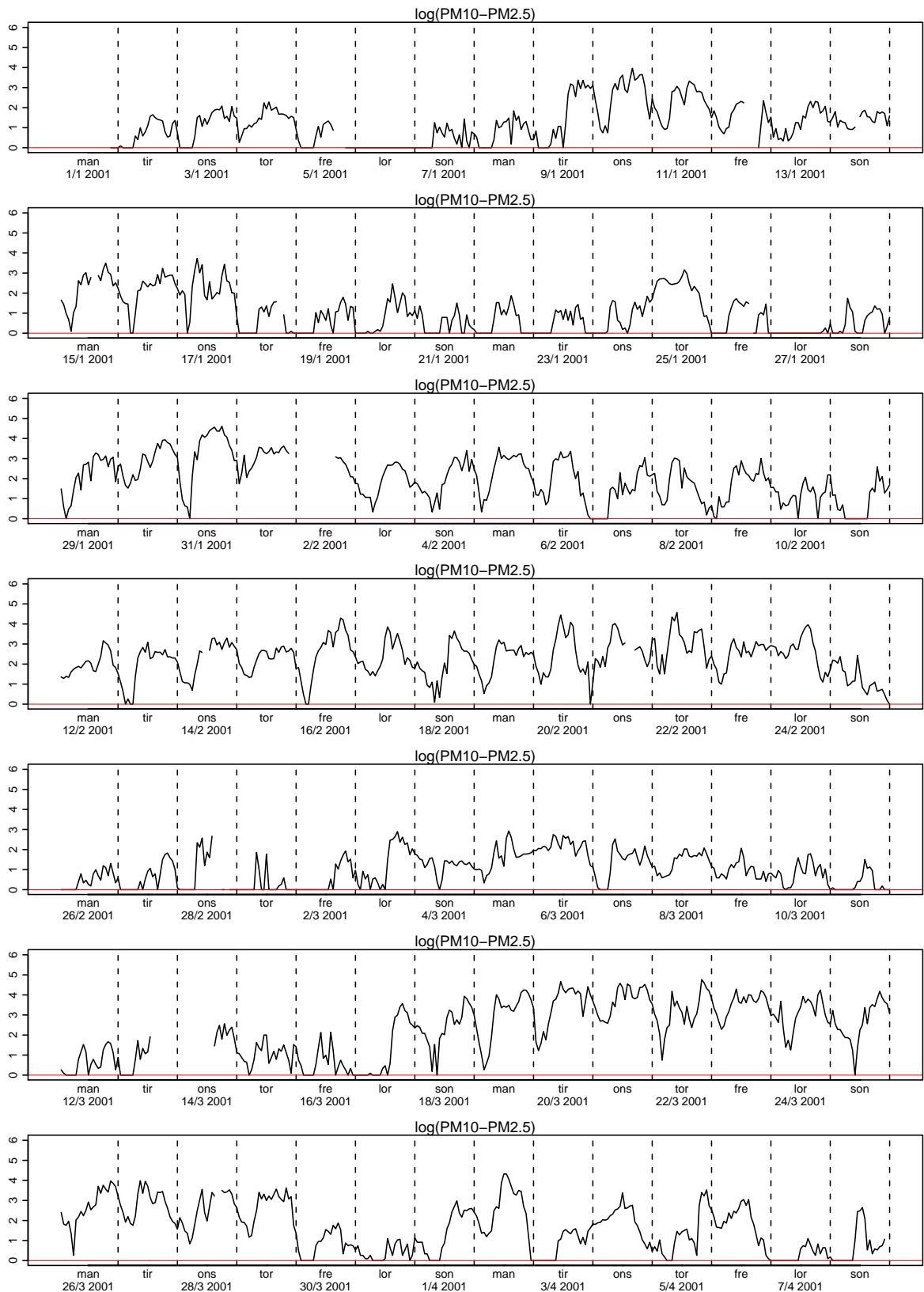
Figur 2.60. Plott av logaritmen til  $PM_{2,5}$



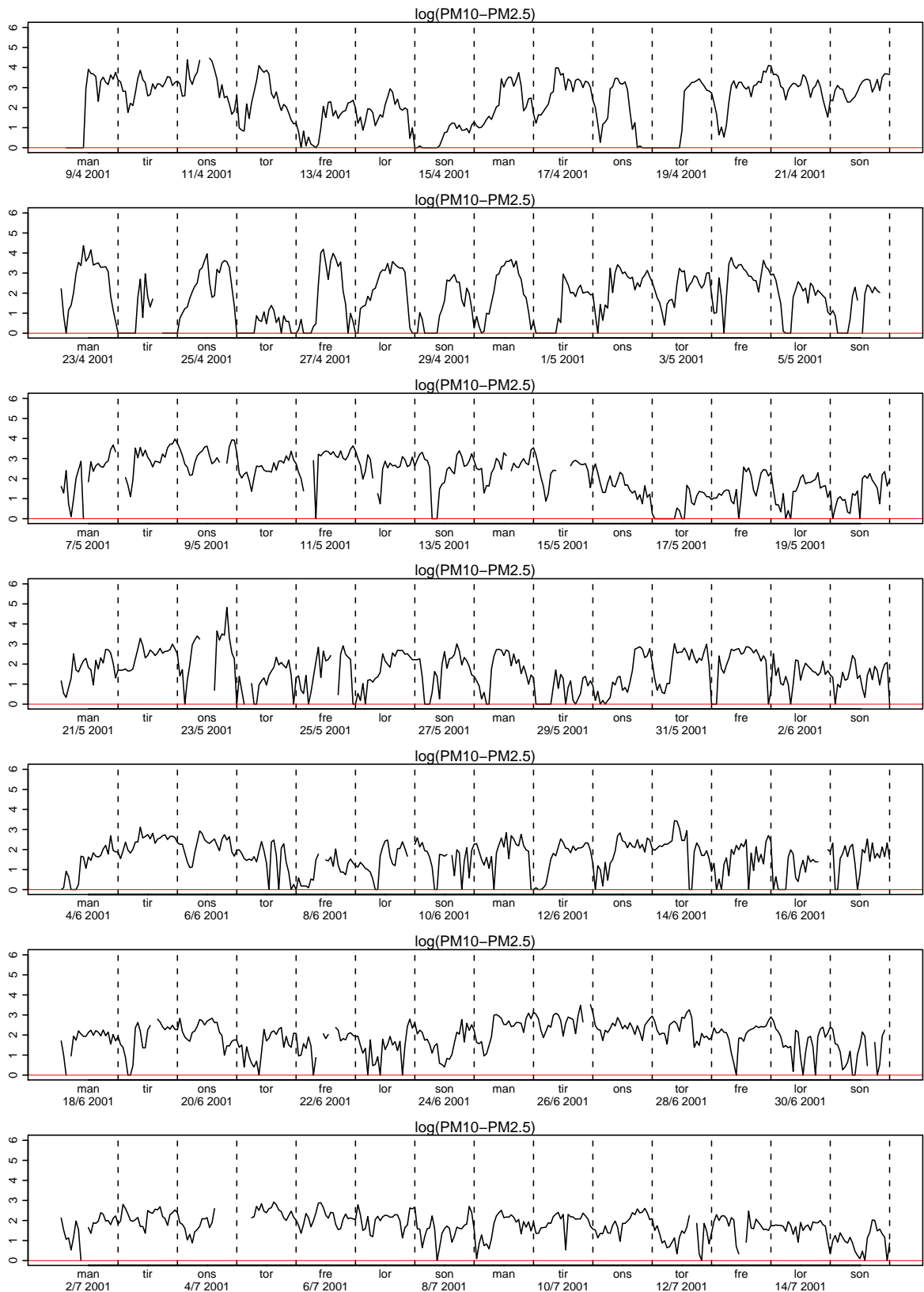
Figur 2.61. Plott av logaritmen til  $PM_{2,5}$



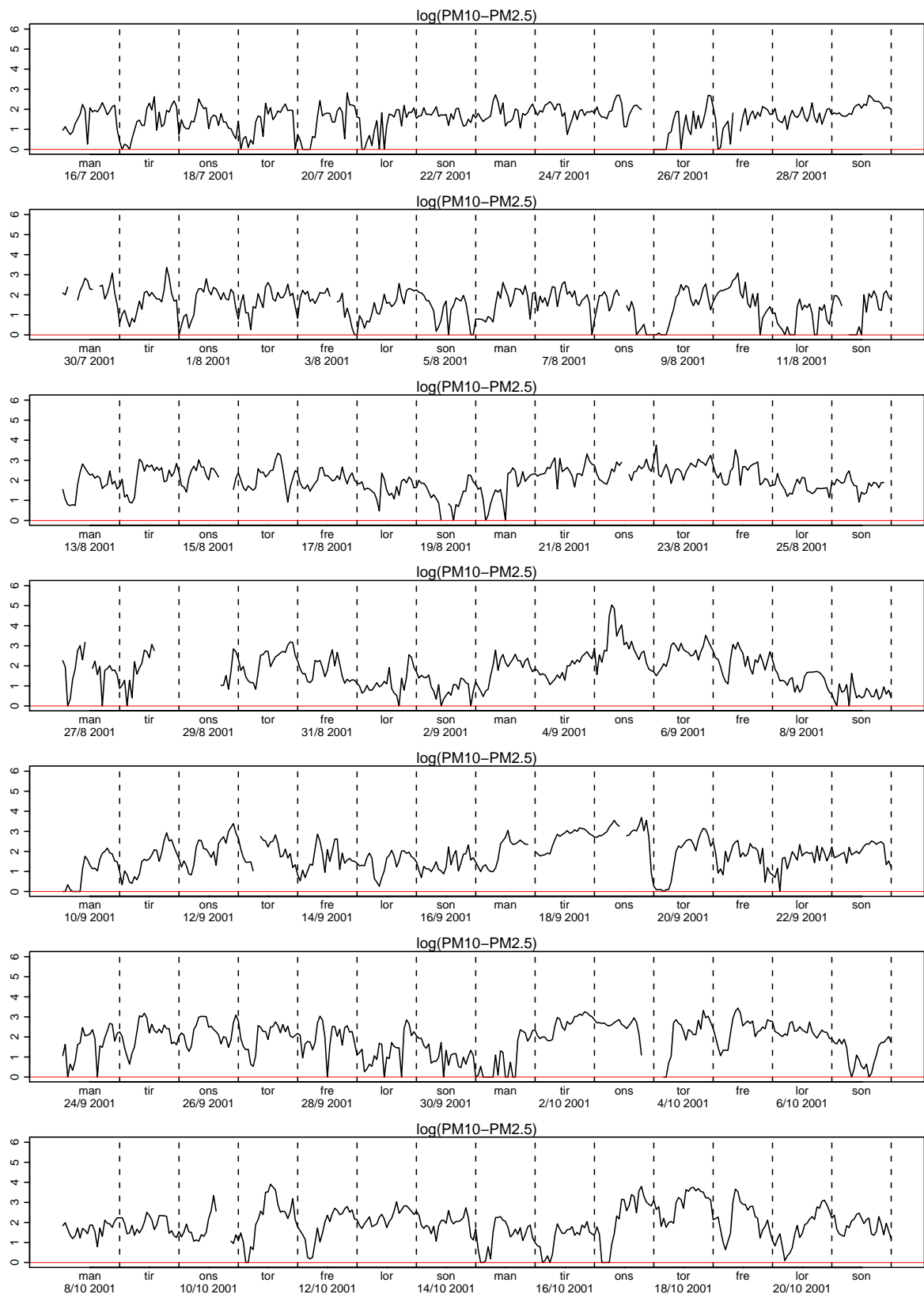
Figur 2.62. Plott av logaritmen til  $PM_{2,5}$



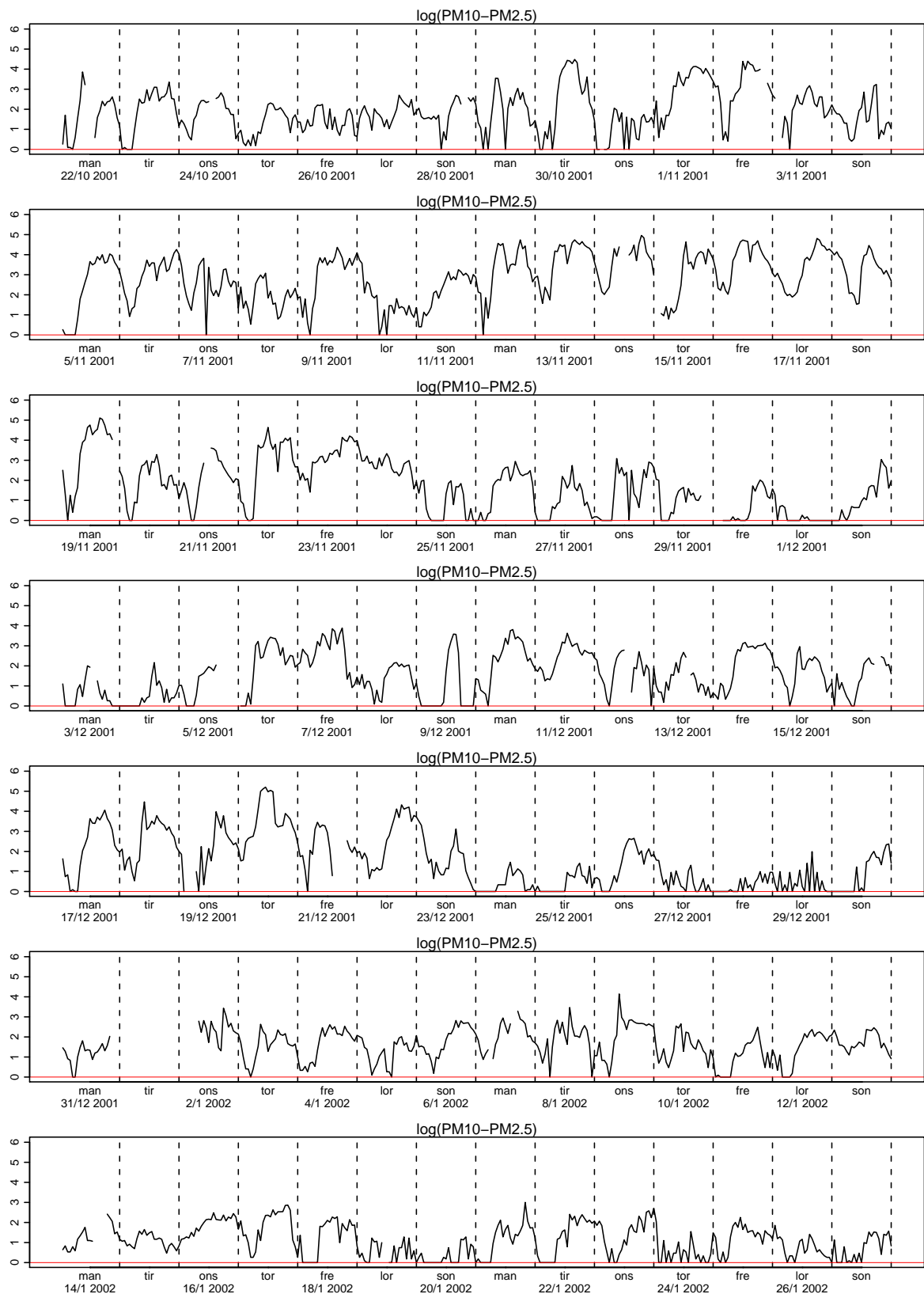
Figur 2.63. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$



Figur 2.64. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$

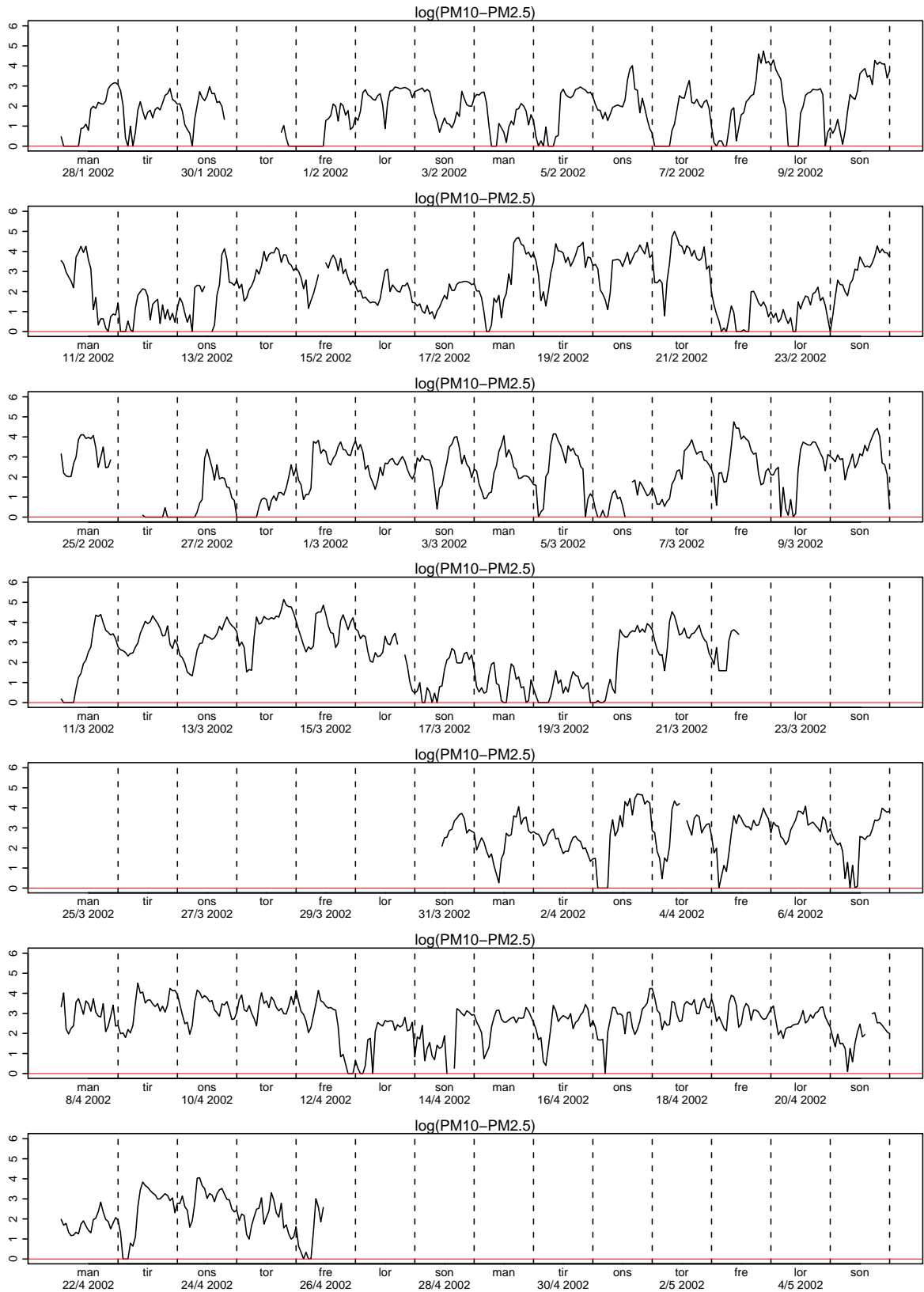


Figur 2.65. Plott av logaritmen til  $PM_{10} - PM_{2,5}$

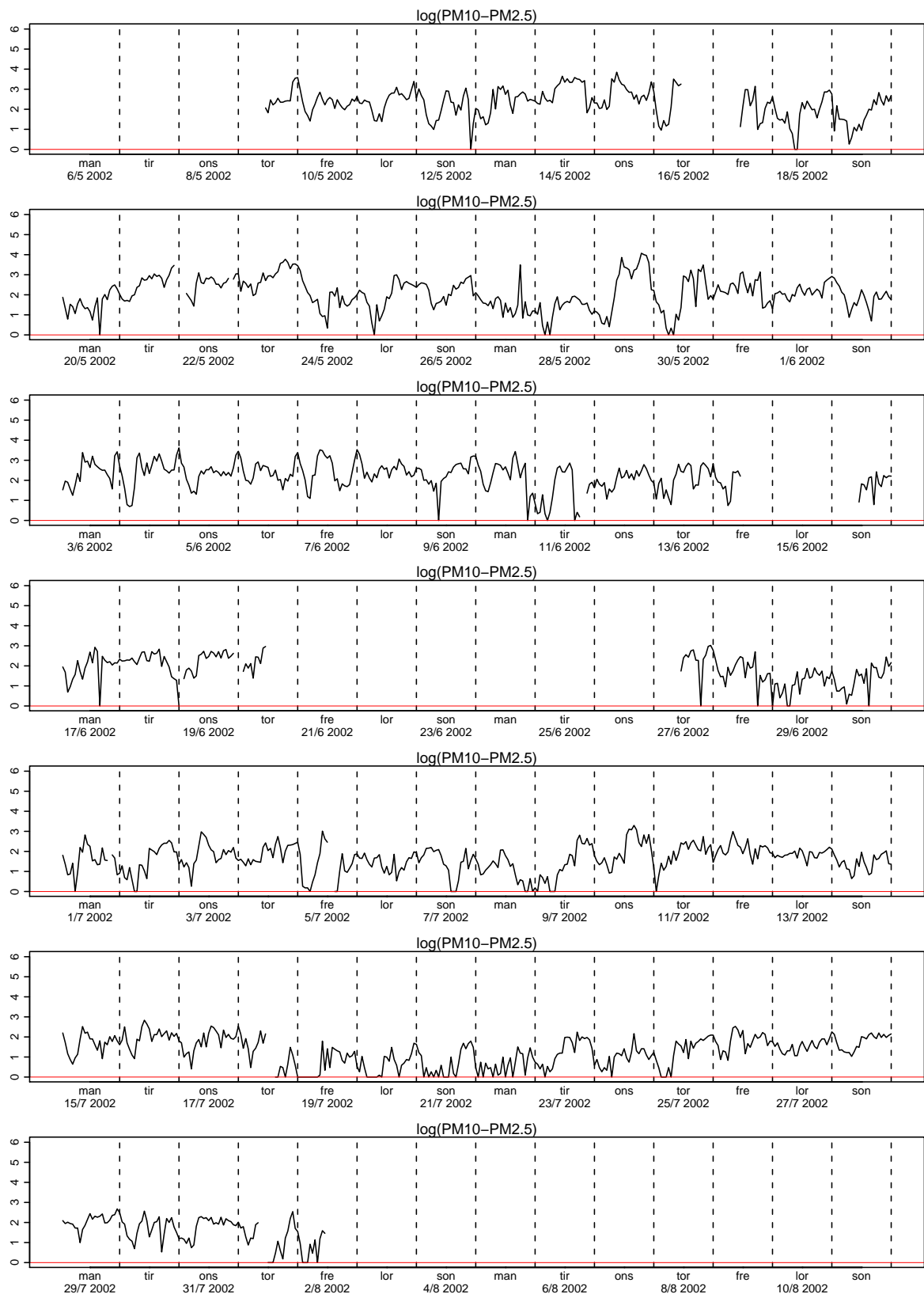


Figur 2.66. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$

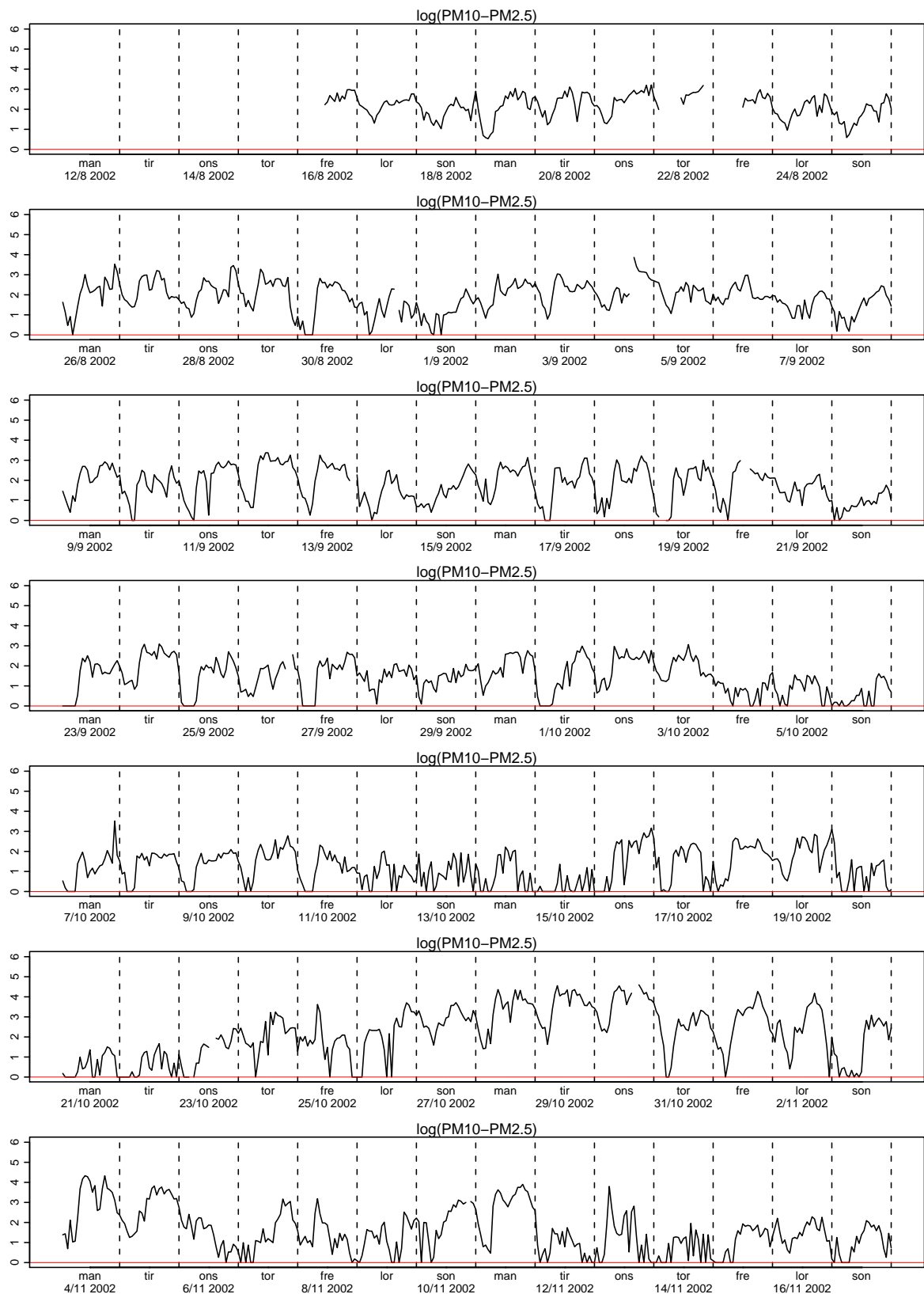




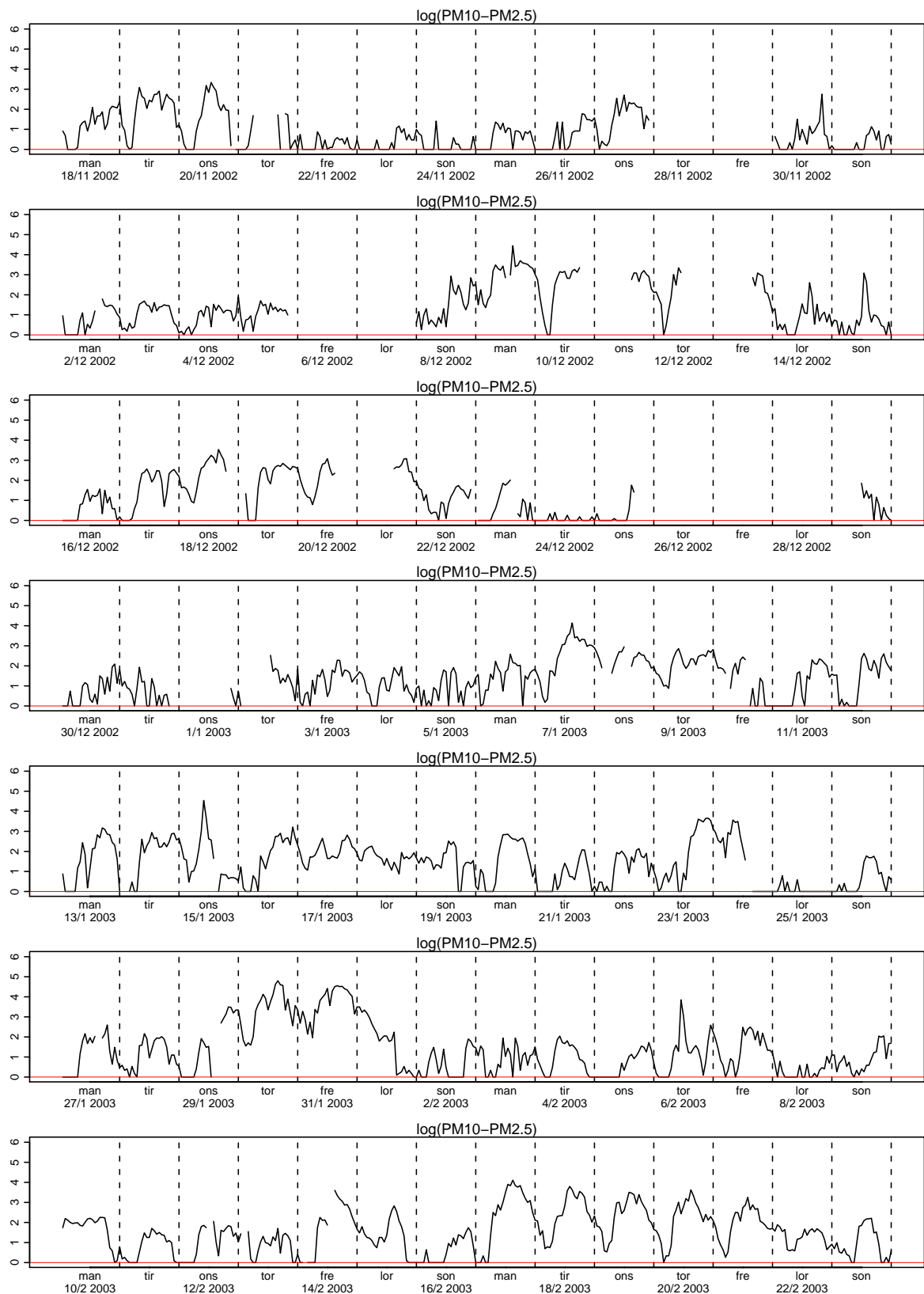
Figur 2.67. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$



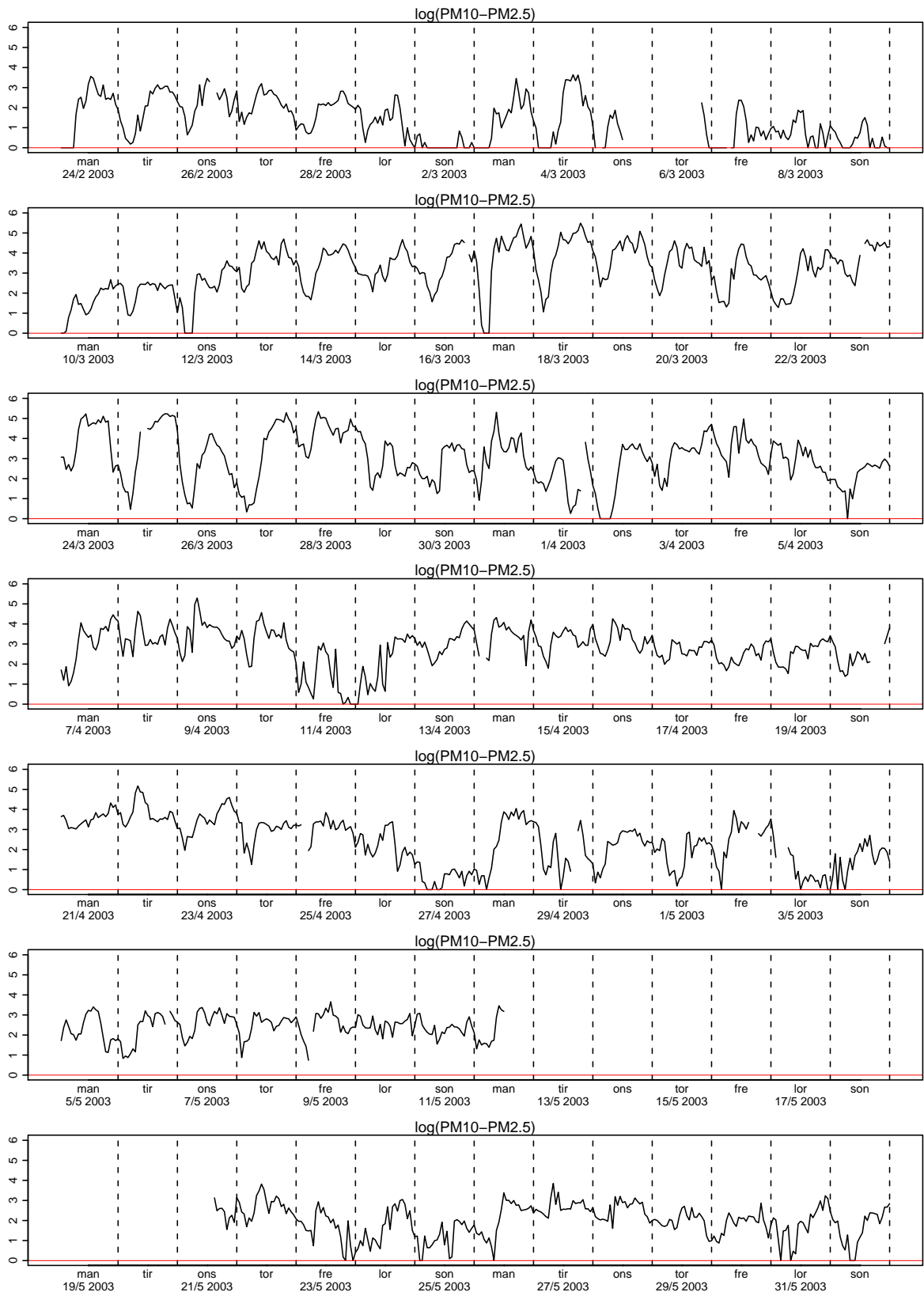
Figur 2.68. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



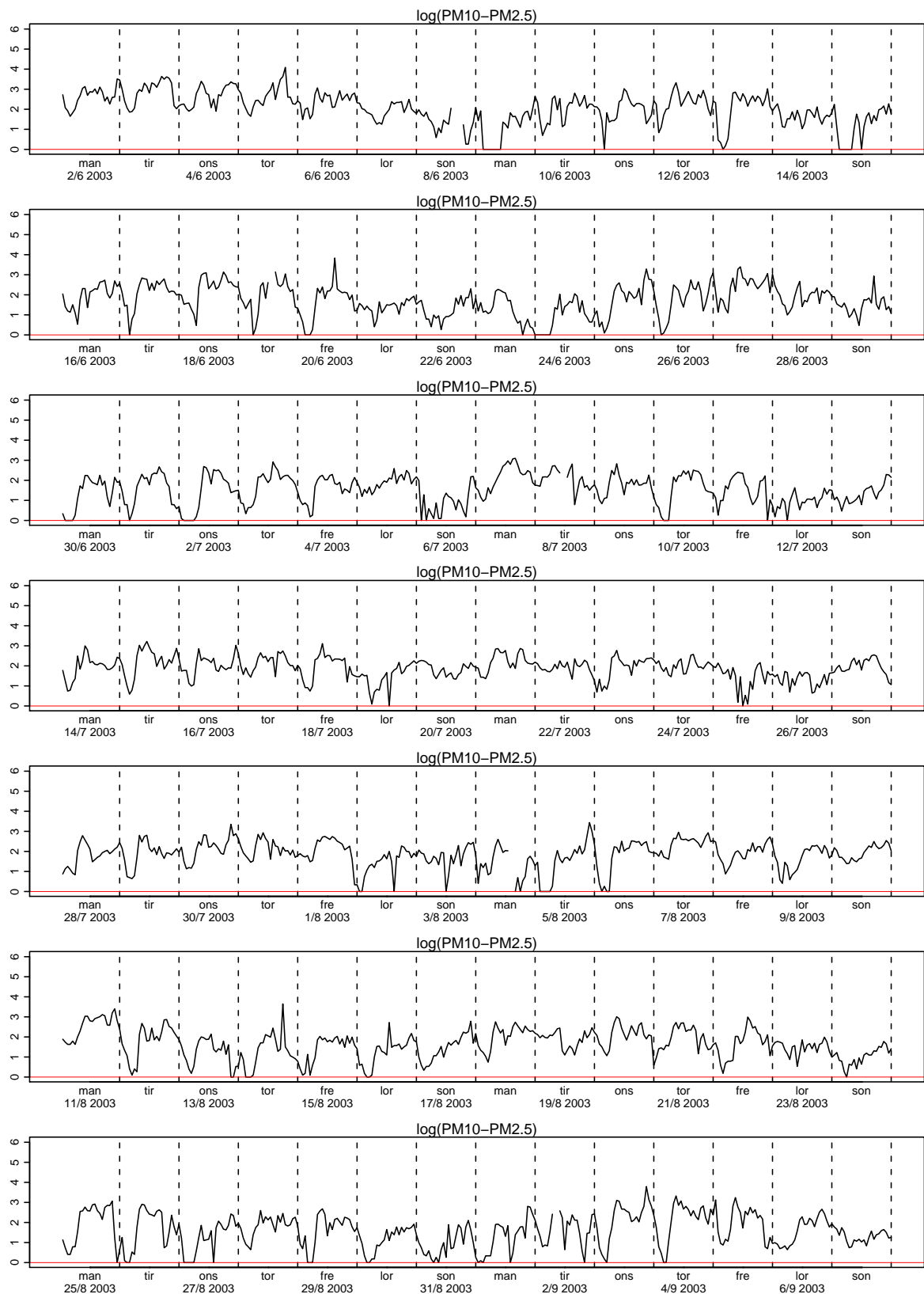
Figur 2.69. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



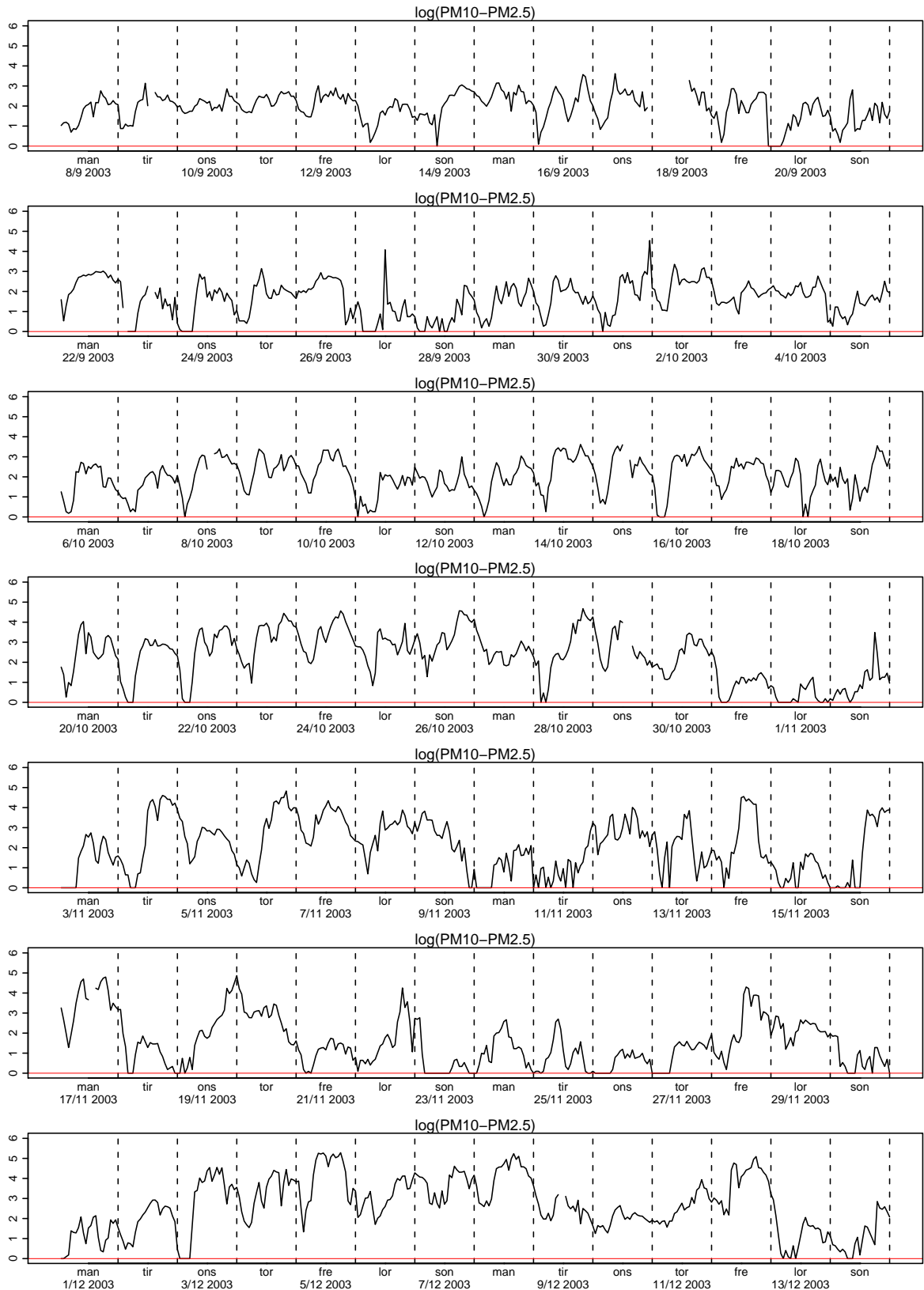
Figur 2.70. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



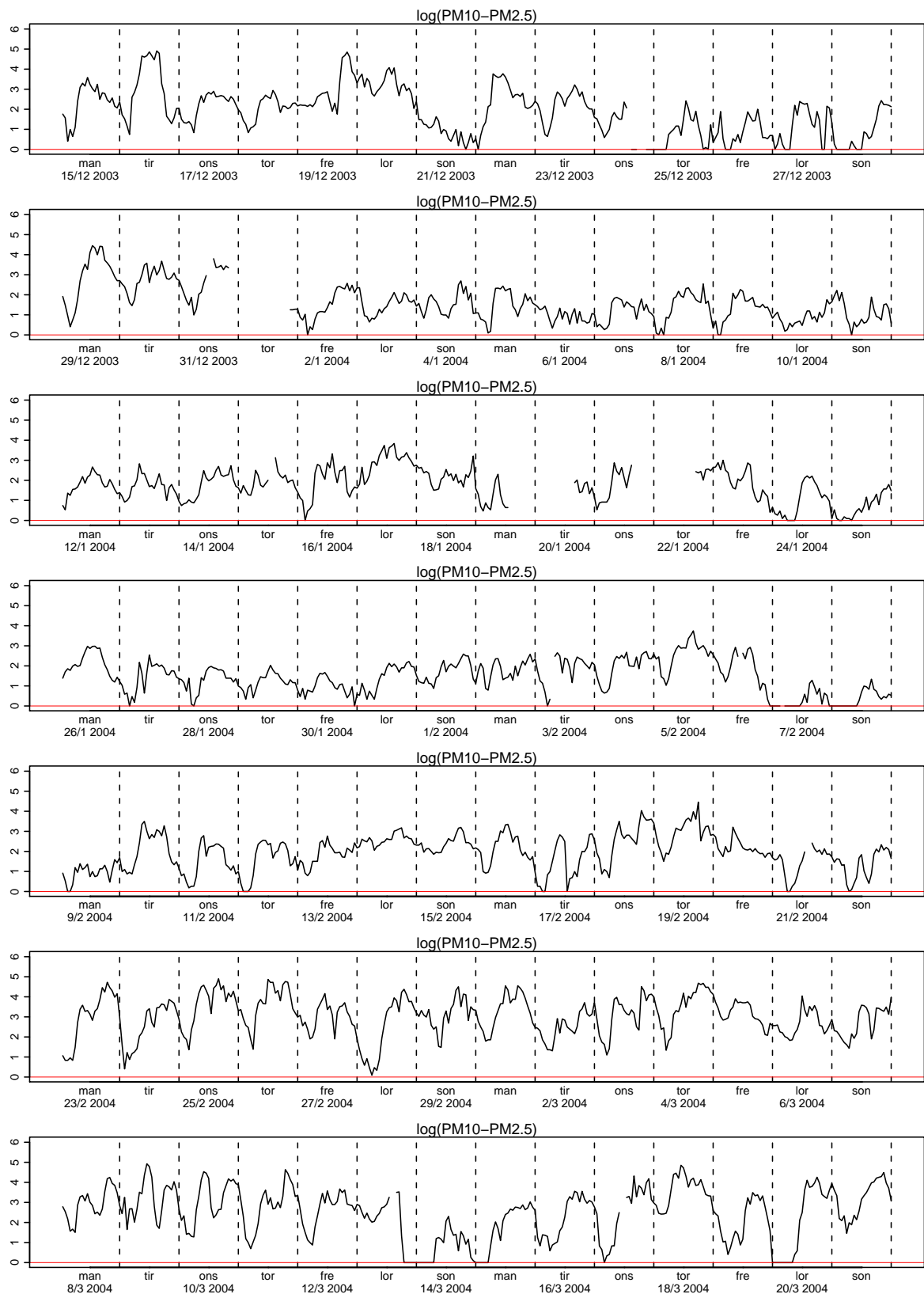
Figur 2.71. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$



Figur 2.72. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$

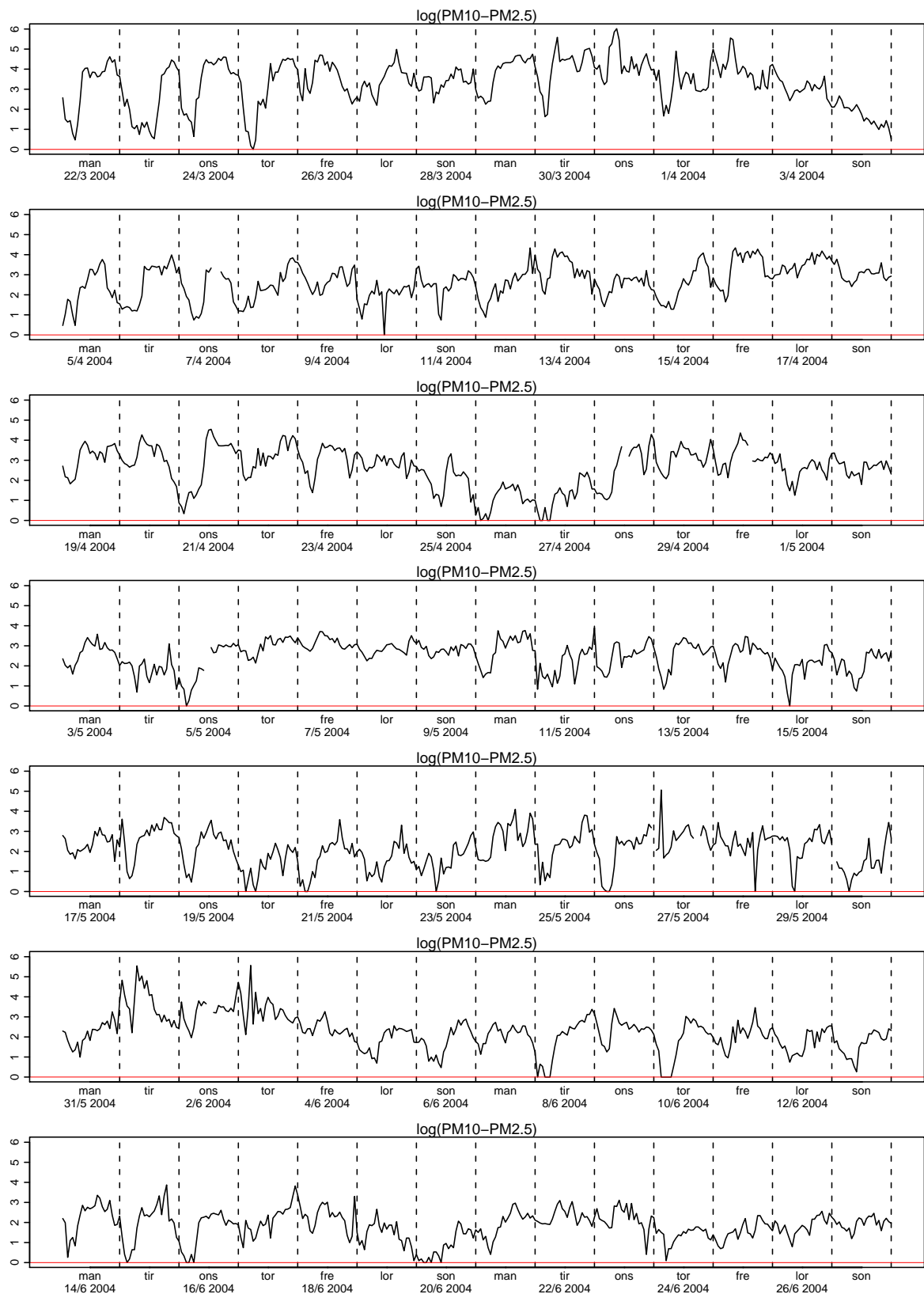


Figur 2.73. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$

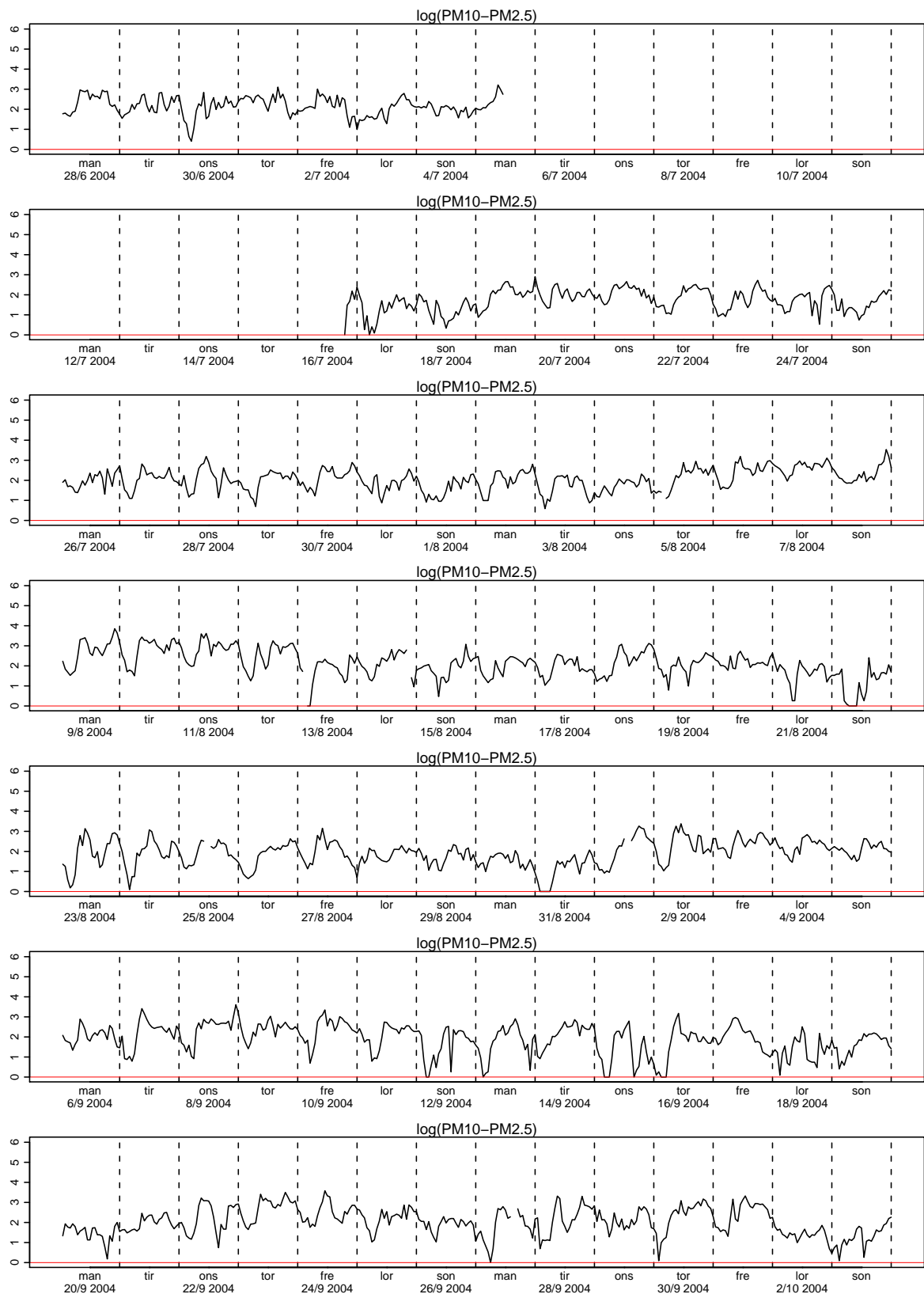


Figur 2.74. Plott av logaritmen til  $PM_{10} - PM_{2,5}$

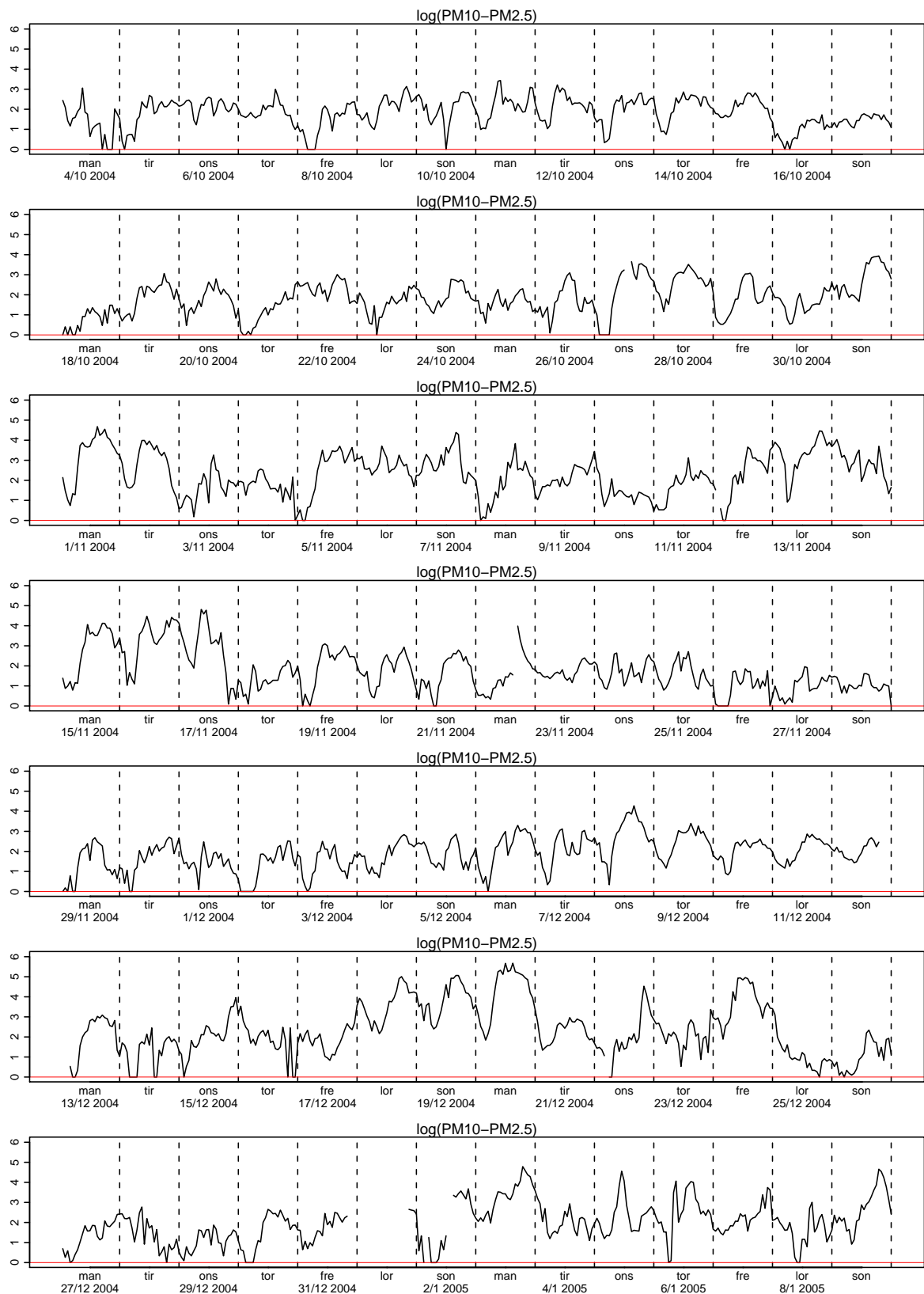




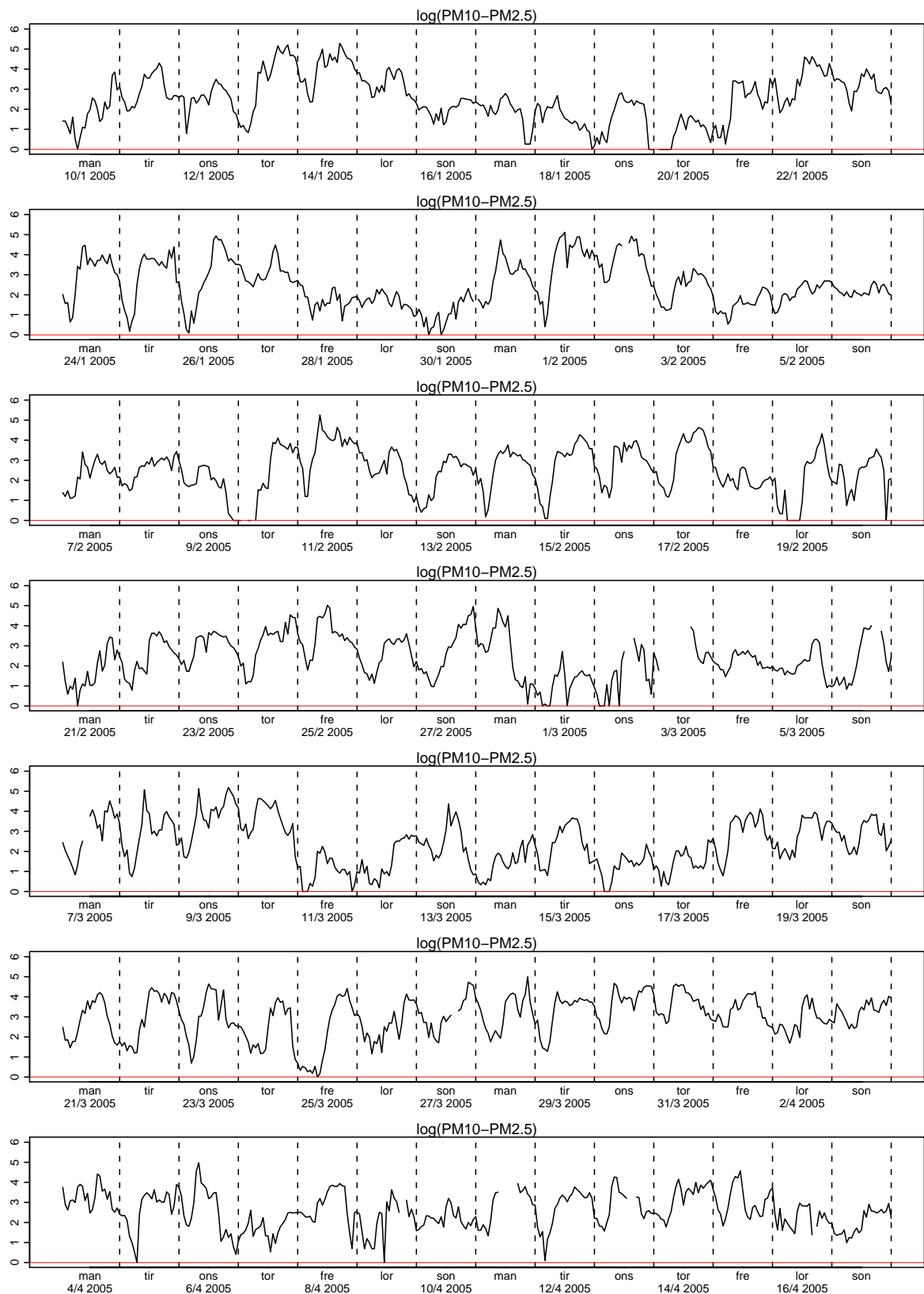
Figur 2.75. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$



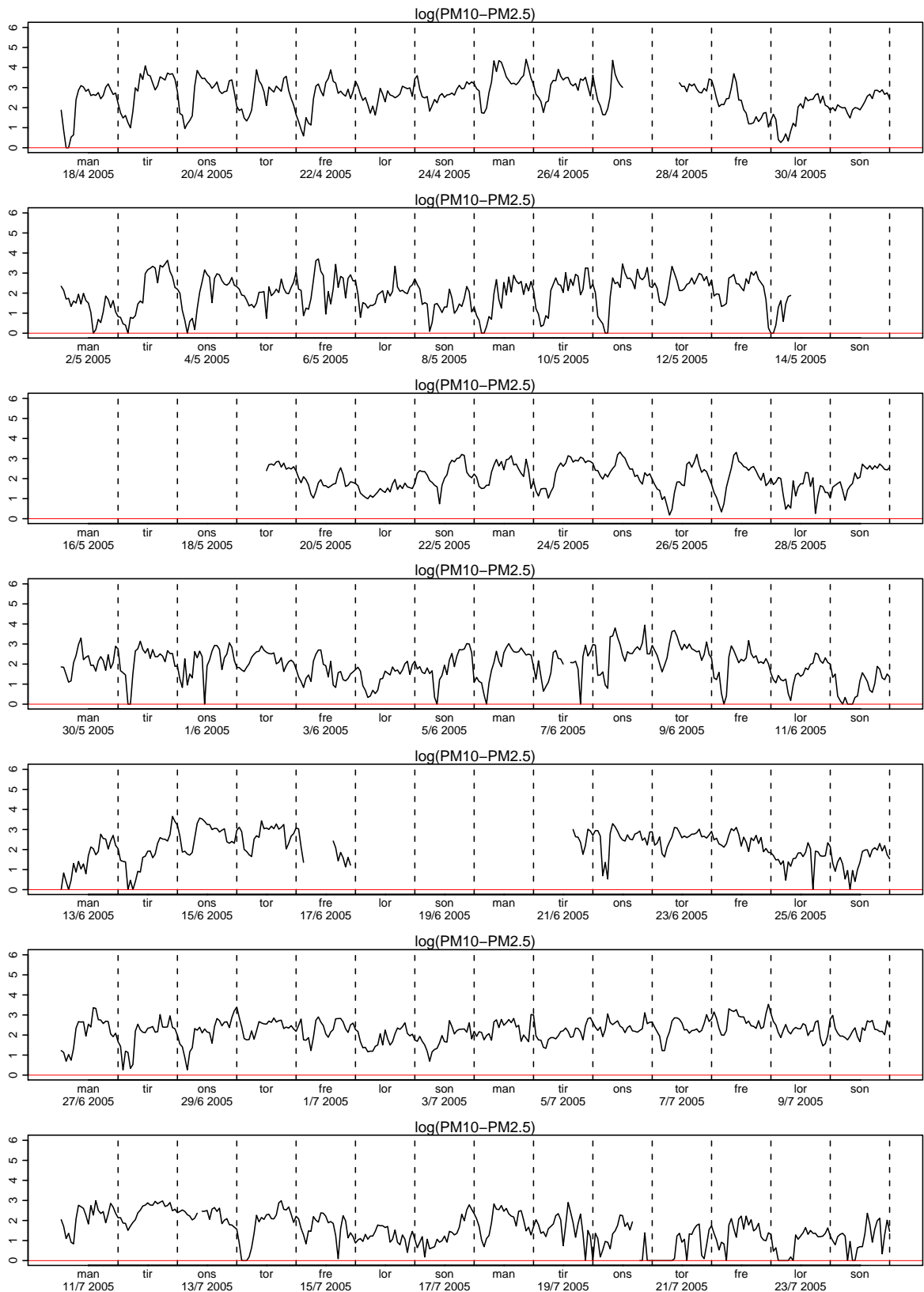
Figur 2.76. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



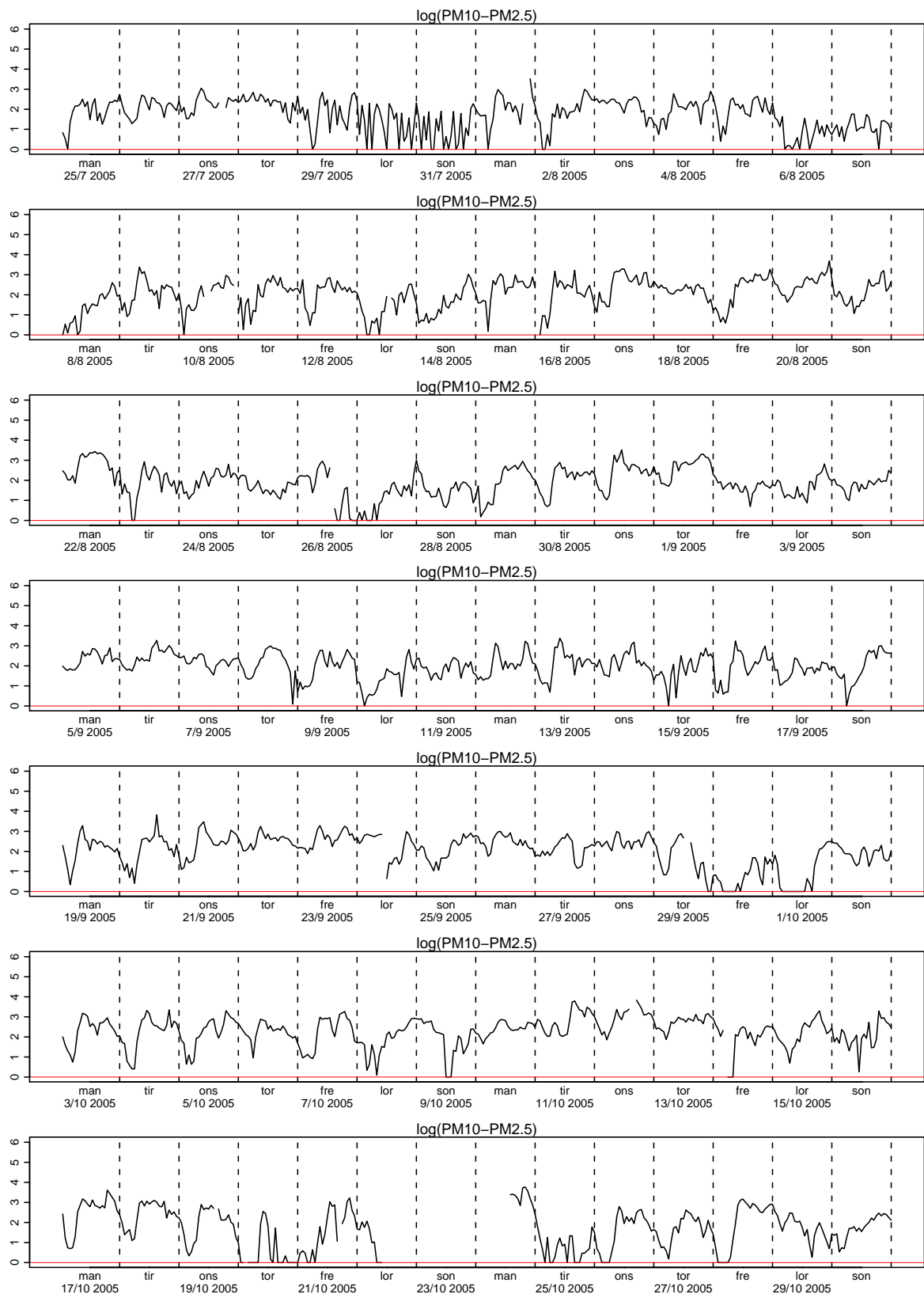
Figur 2.77. Plott av logaritmen til  $PM_{10} - PM_{2,5}$



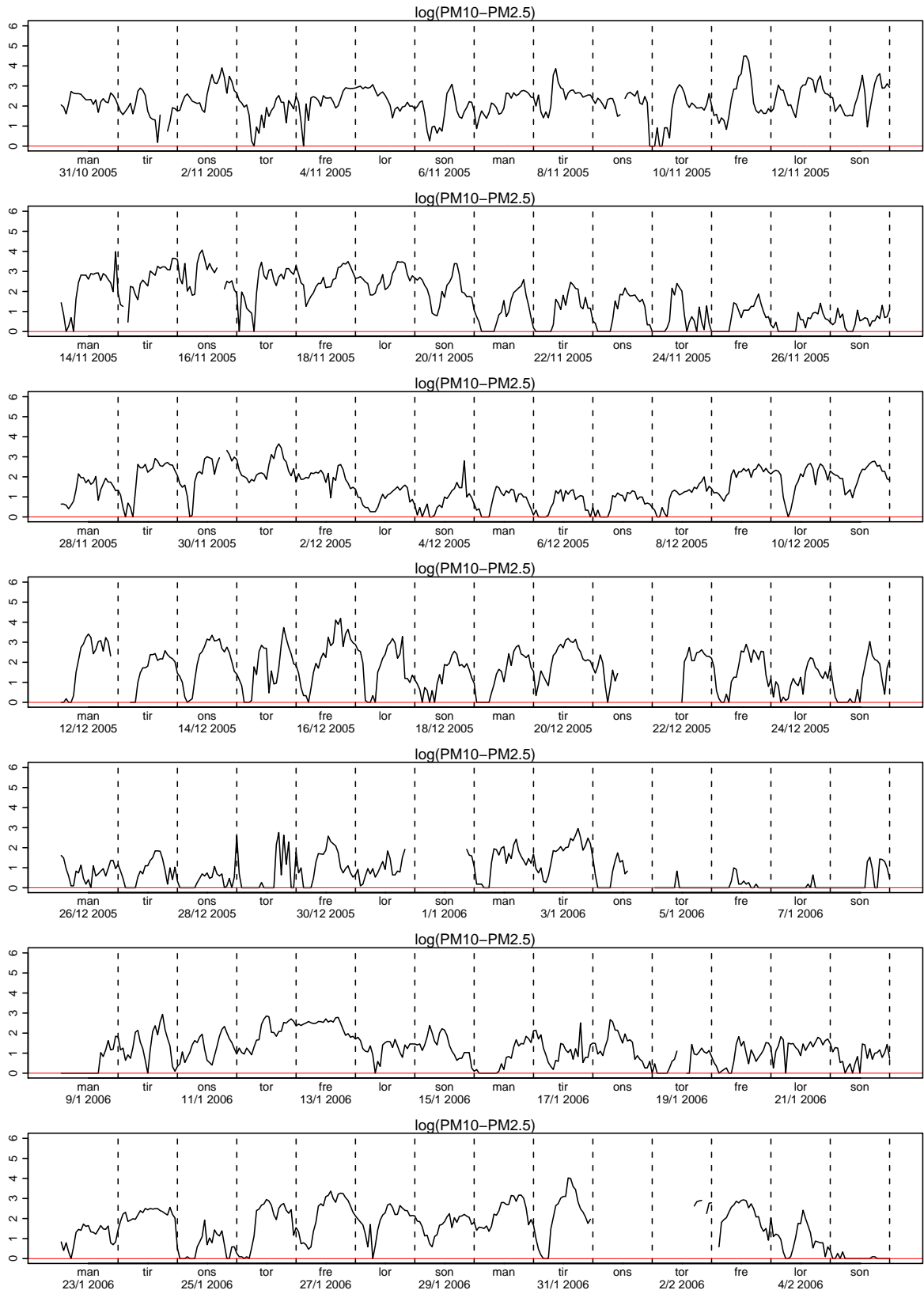
Figur 2.78. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



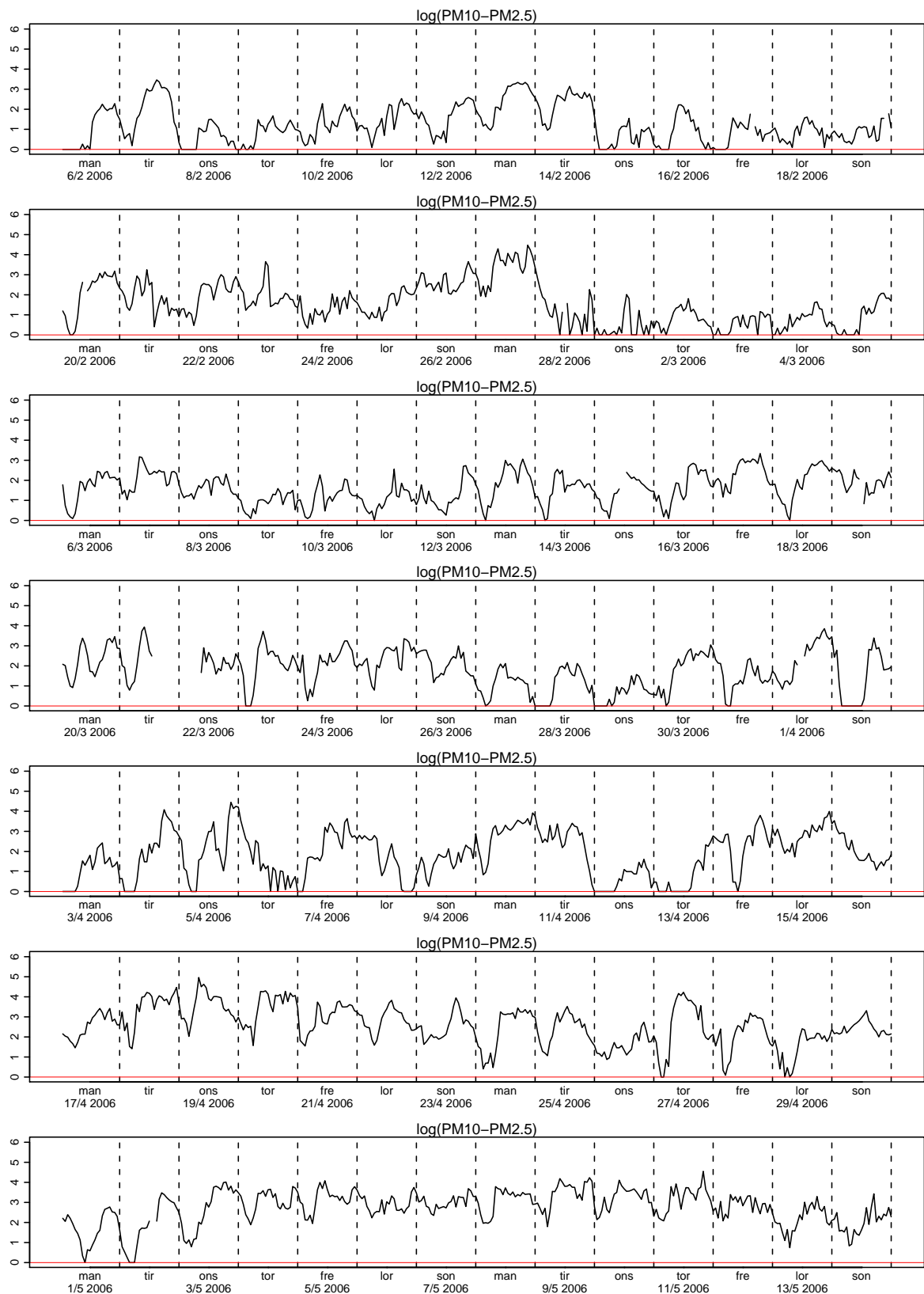
Figur 2.79. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



Figur 2.80. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$

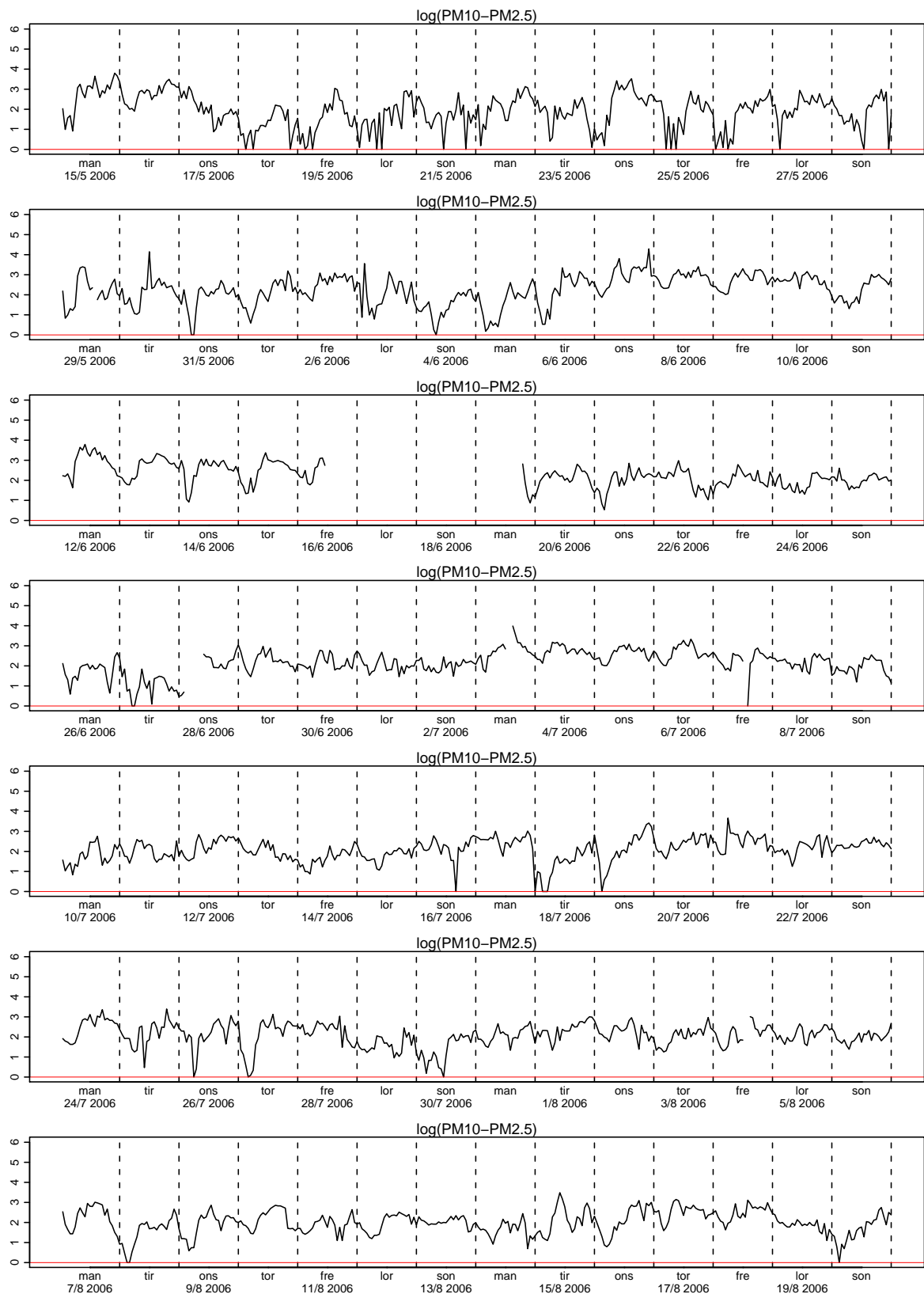


Figur 2.81. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$

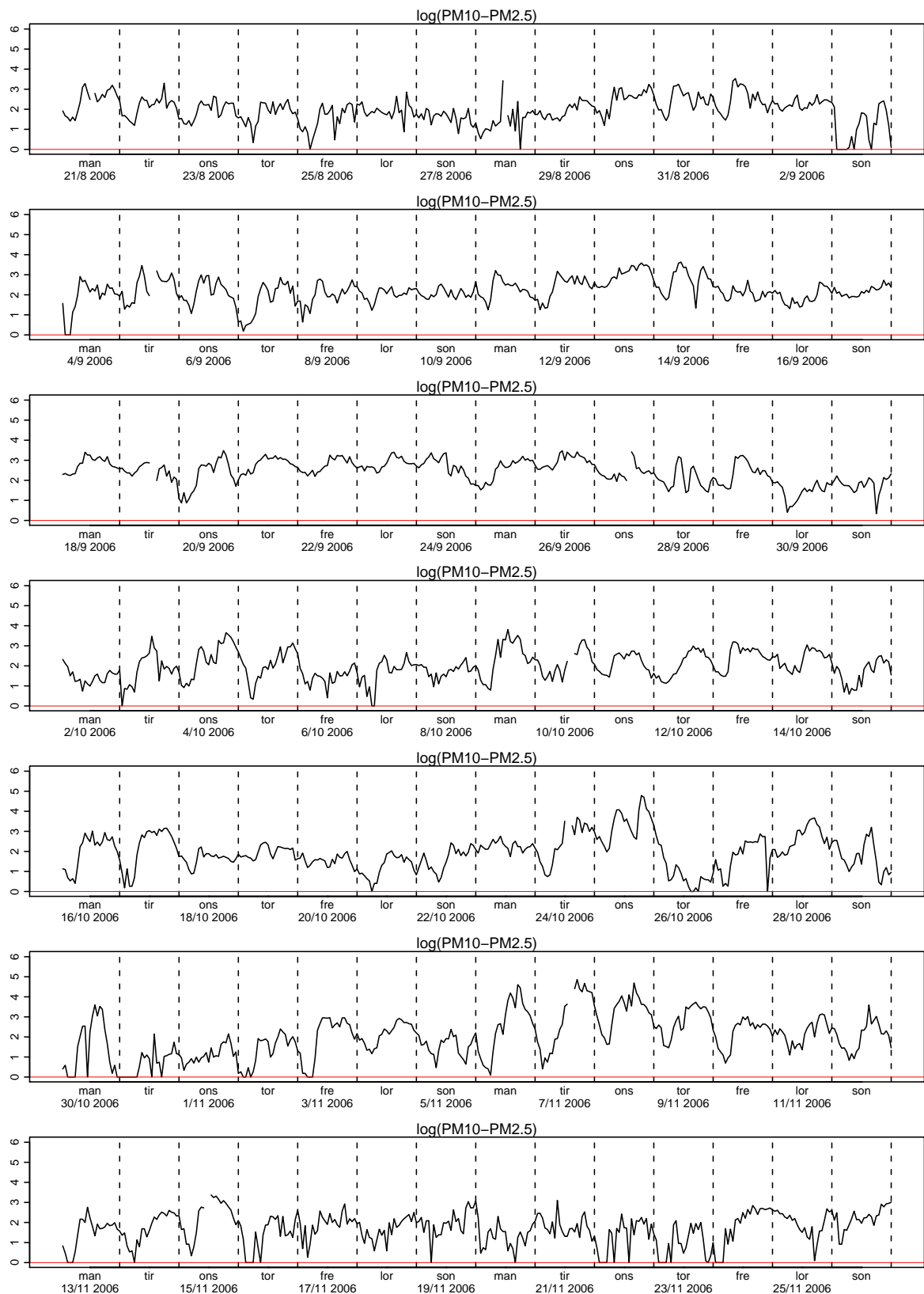


Figur 2.82. Plott av logaritmen til  $PM_{10} - PM_{2,5}$

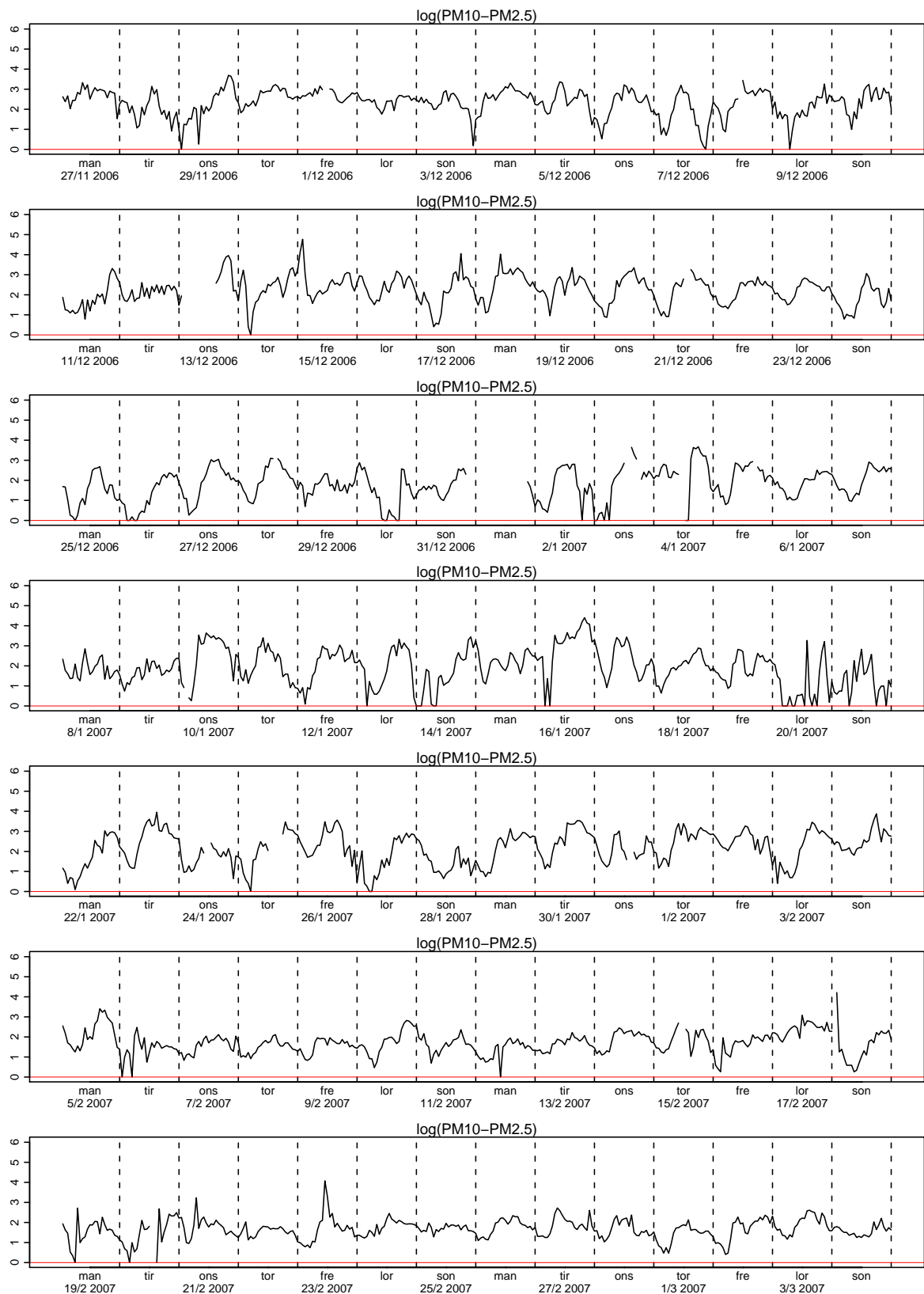




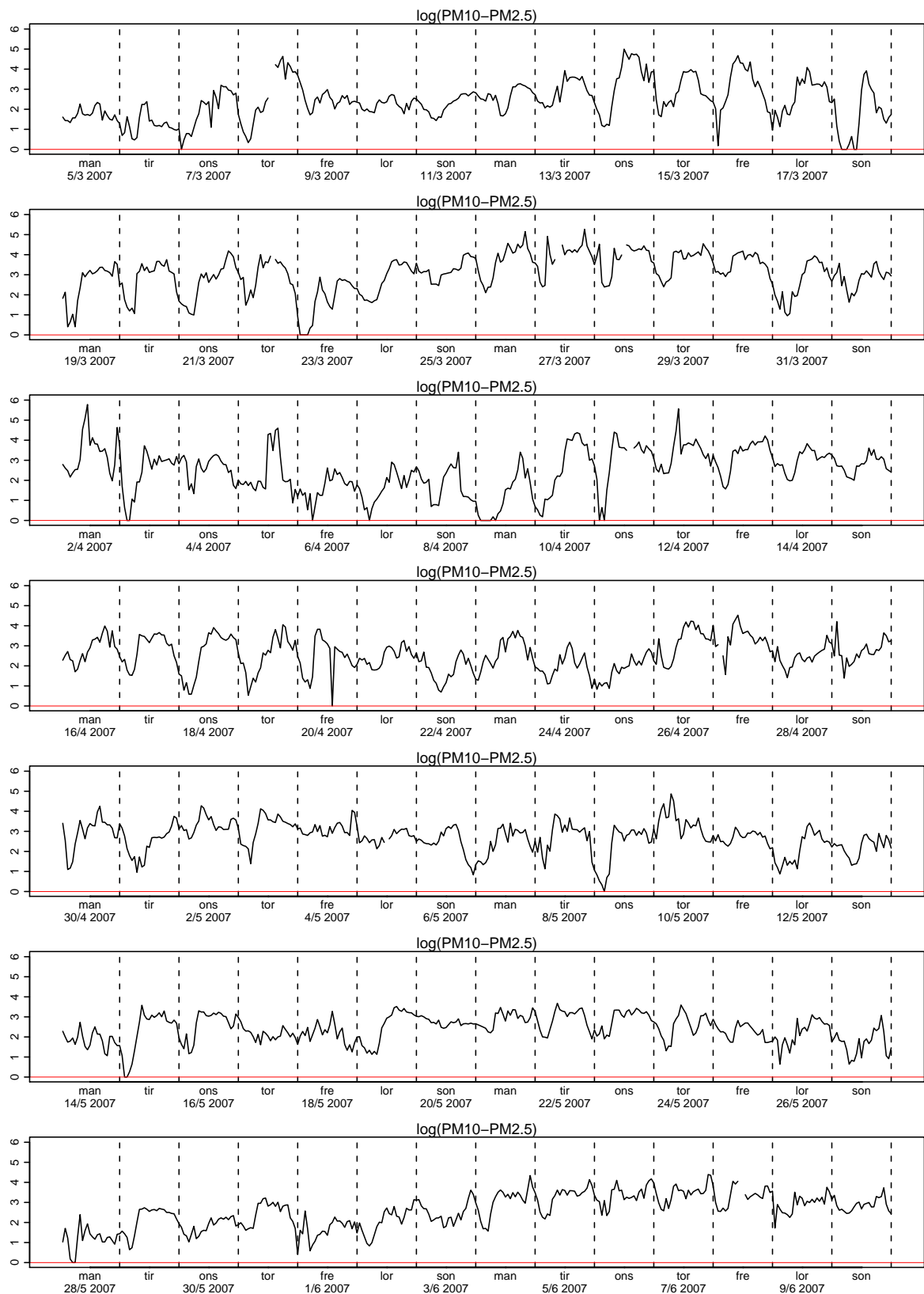
Figur 2.83. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



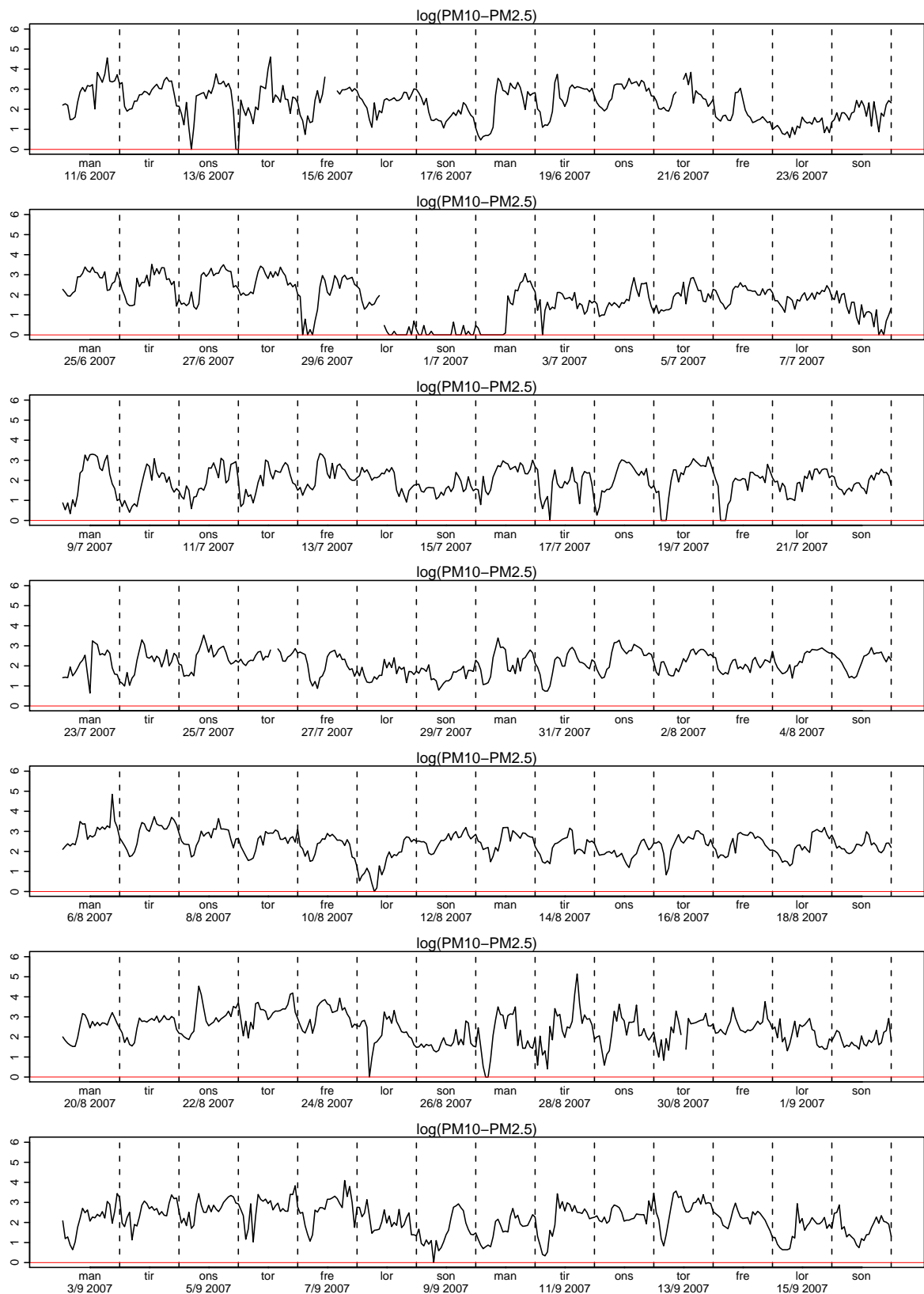
Figur 2.84. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$



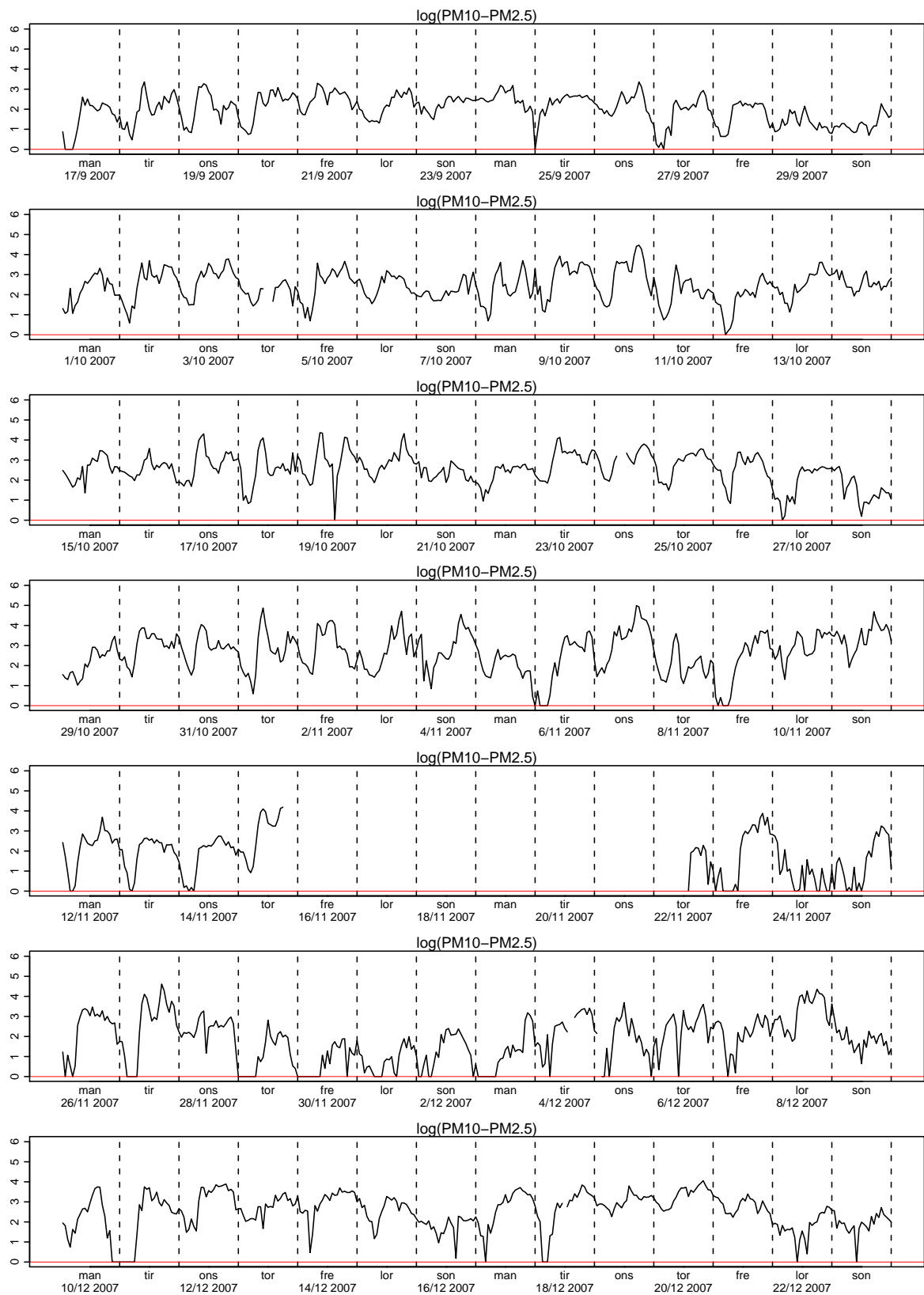
Figur 2.85. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



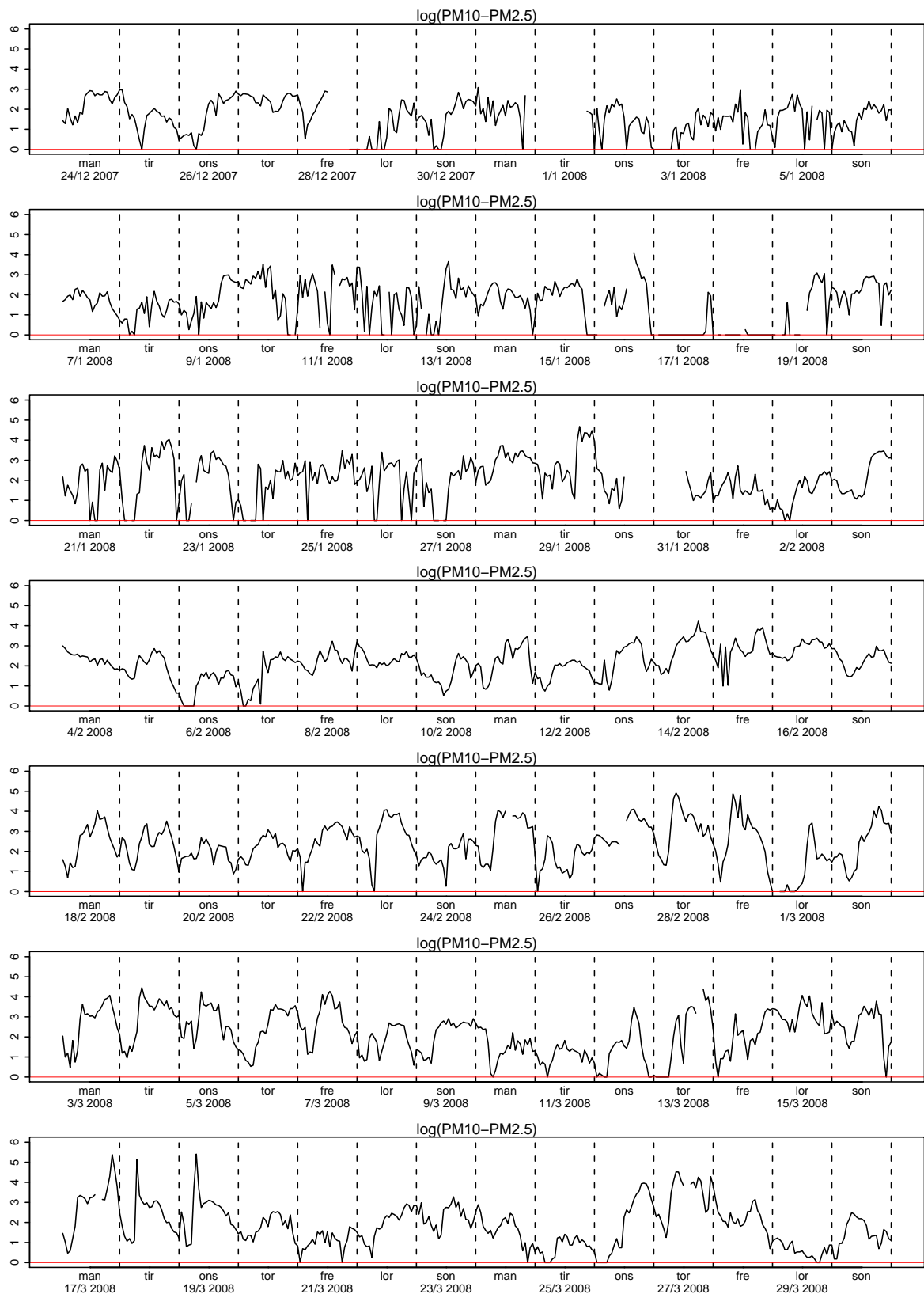
Figur 2.86. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



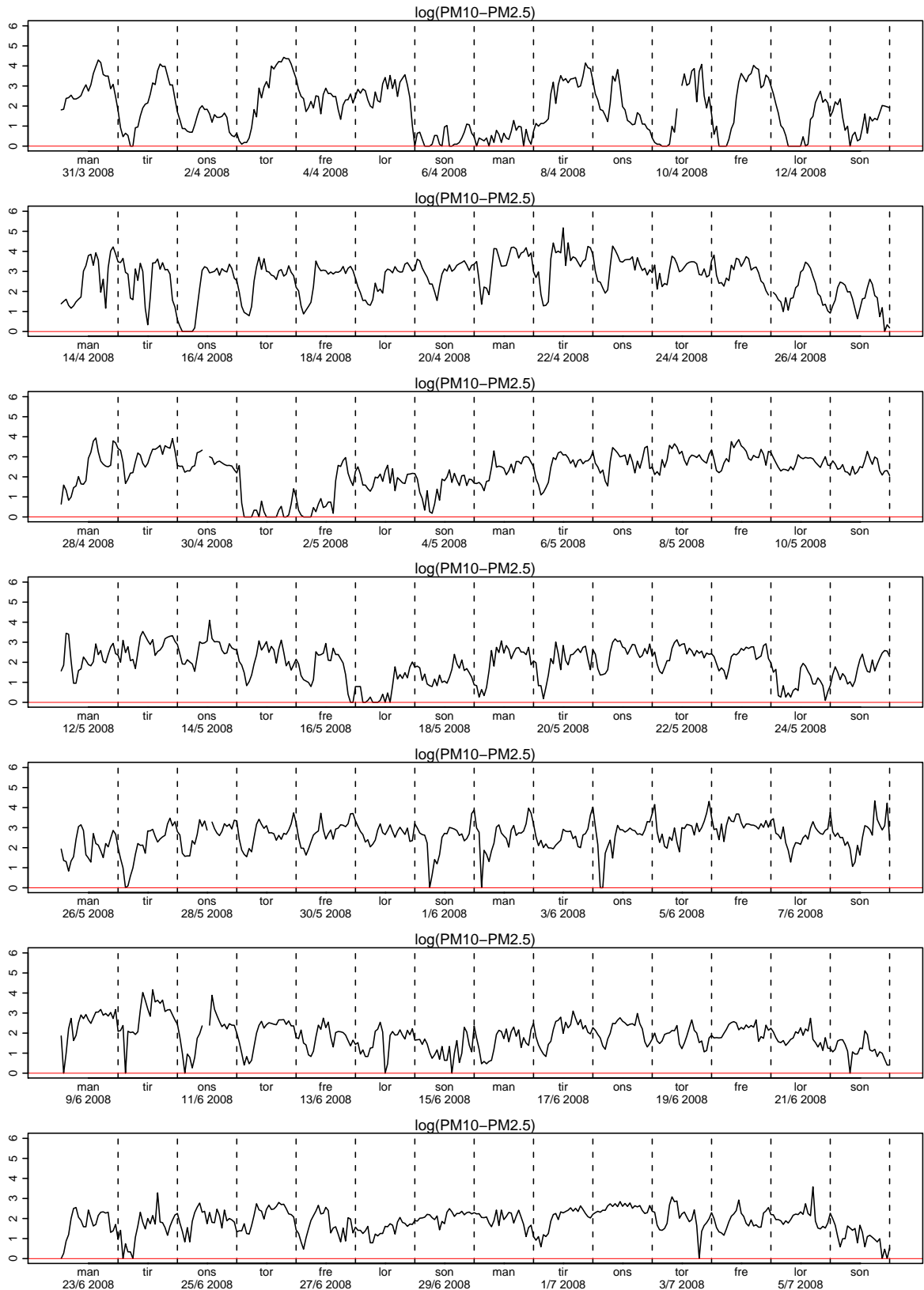
Figur 2.87. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



Figur 2.88. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2.5}$

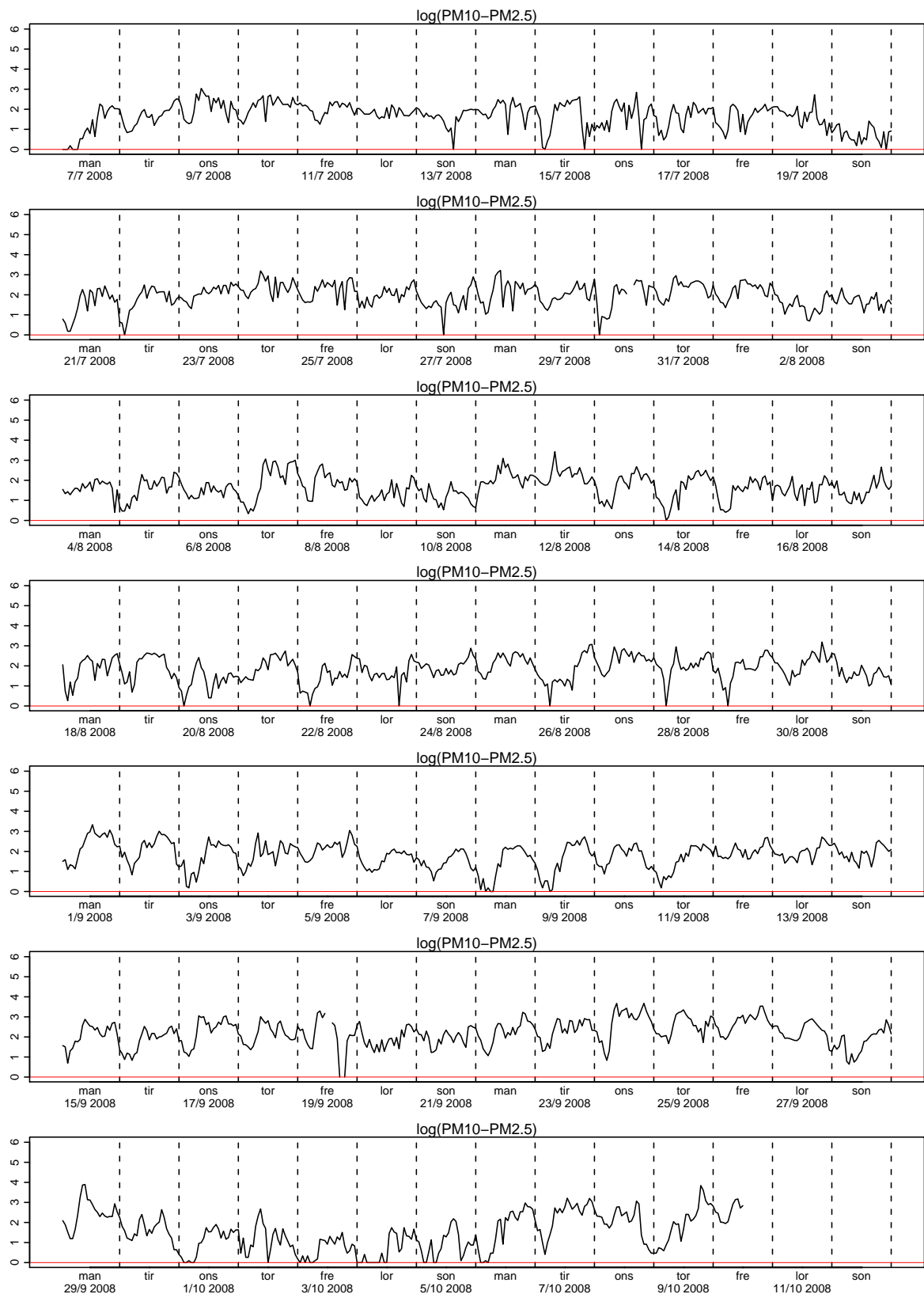


Figur 2.89. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$

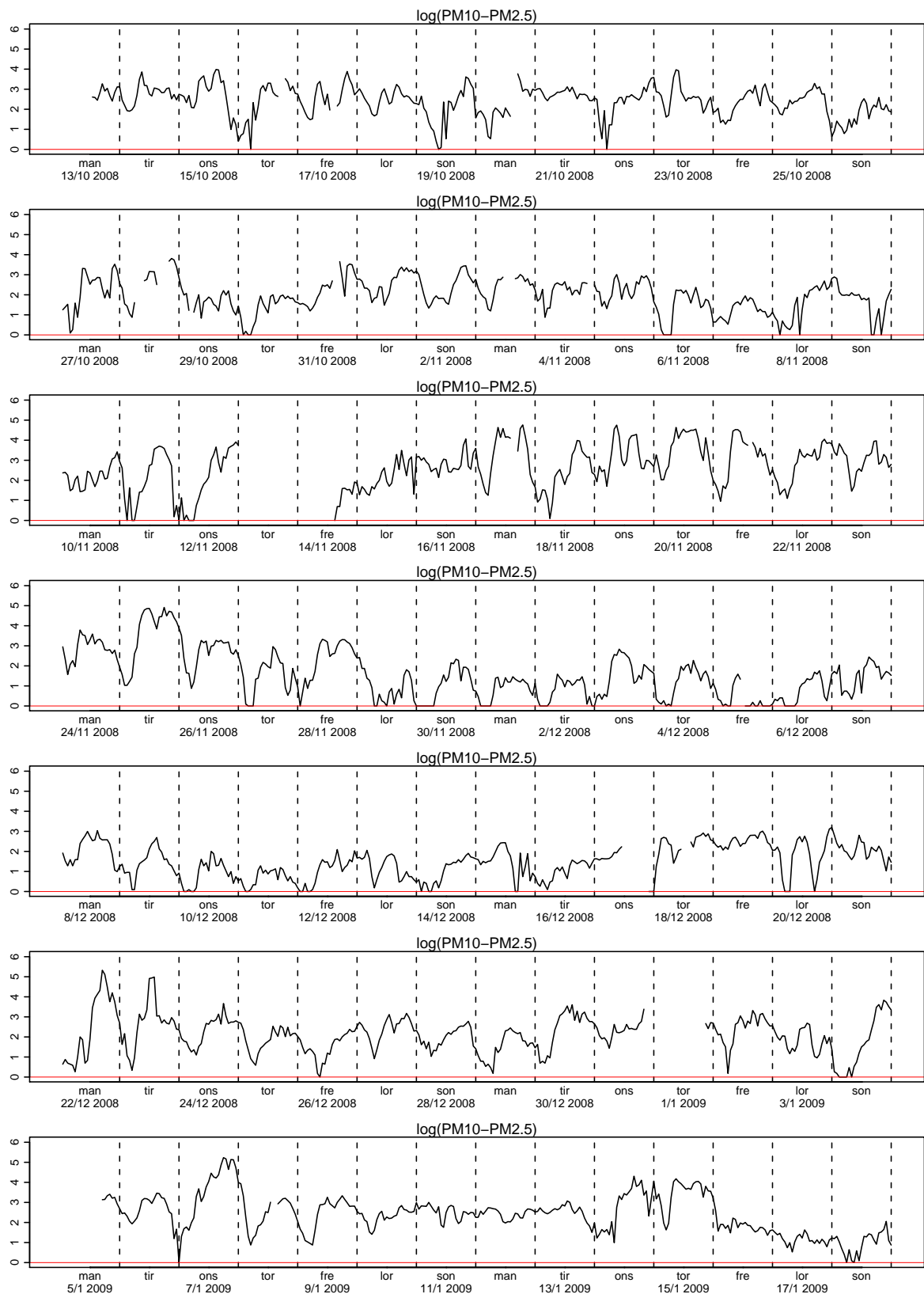


Figur 2.90. Plott av logaritmen til  $PM_{10} - PM_{2,5}$

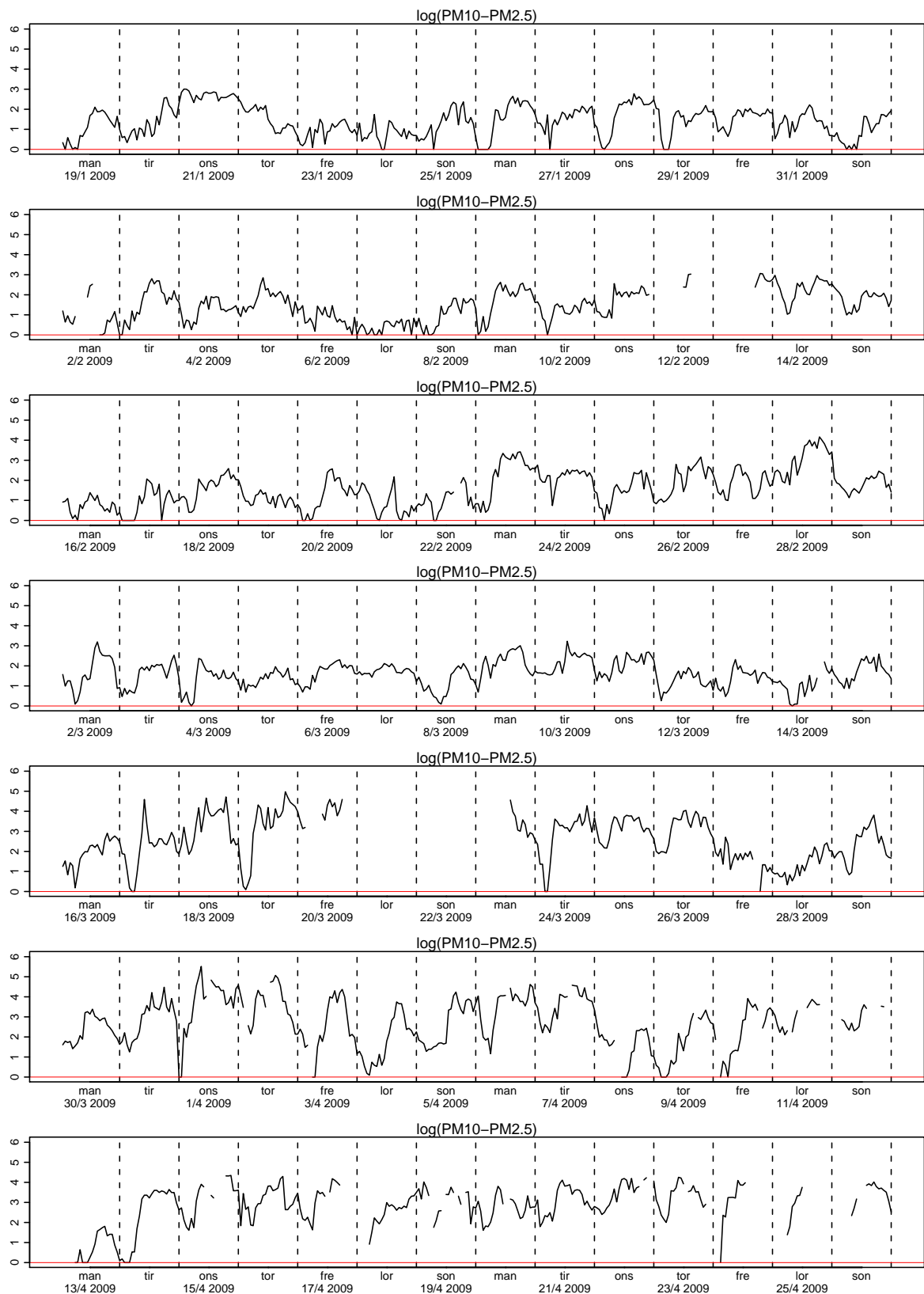




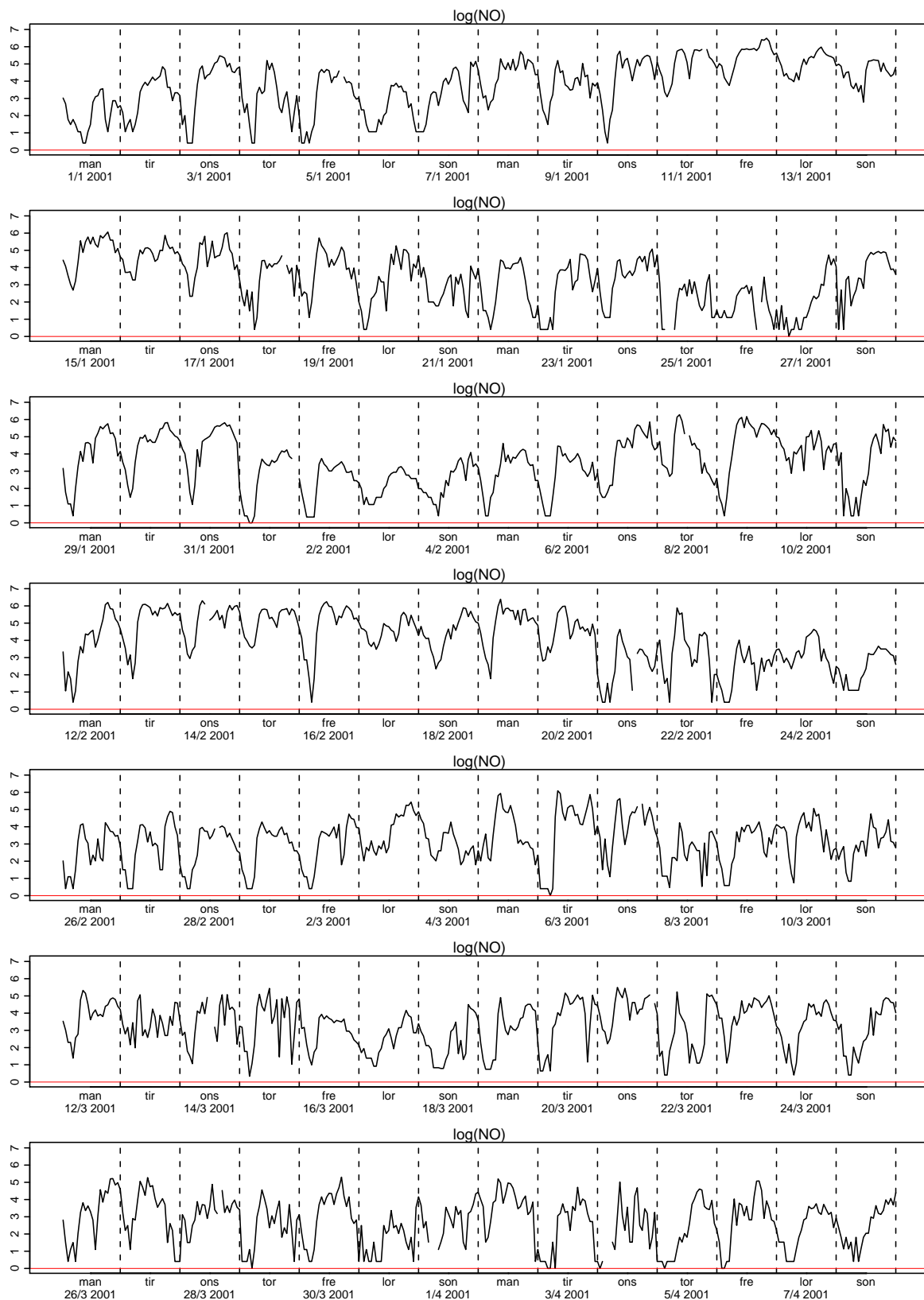
Figur 2.91. Plott av logaritmen til  $\text{PM}_{10} - \text{PM}_{2,5}$



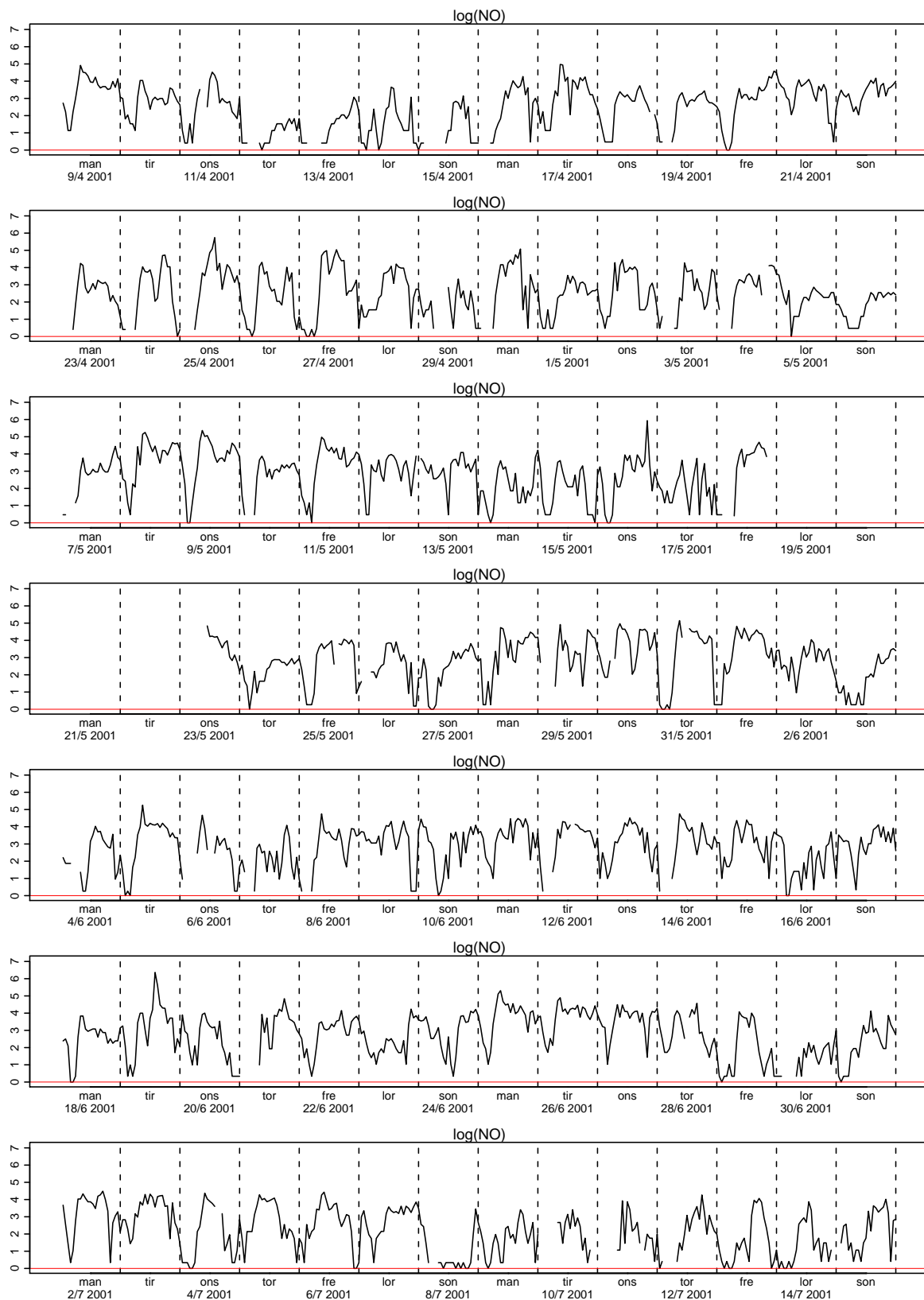
Figur 2.92. Plott av logaritmen til PM<sub>10</sub> – PM<sub>2,5</sub>



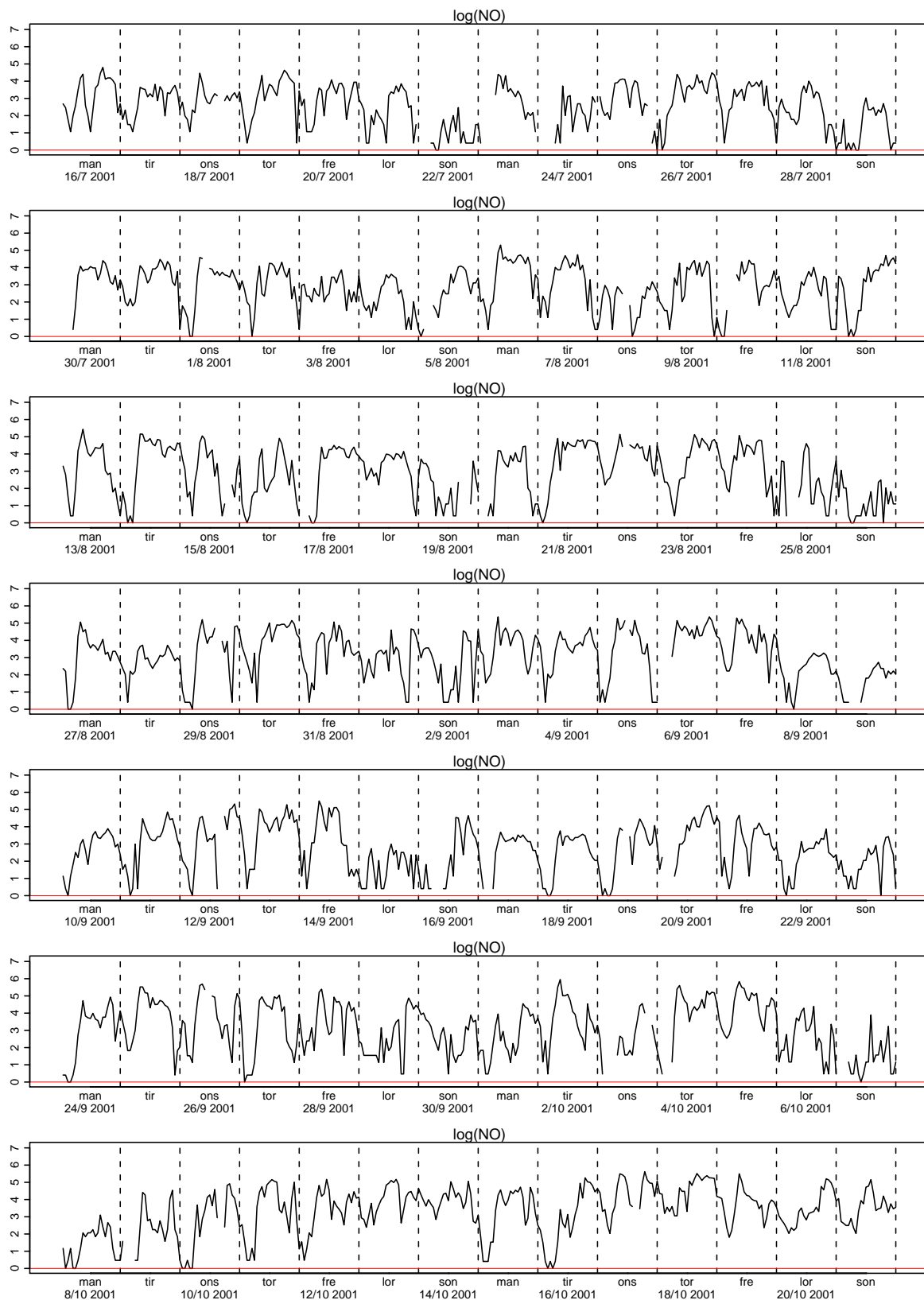
Figur 2.93. Plott av logaritmen til PM<sub>10</sub> – PM<sub>2,5</sub>



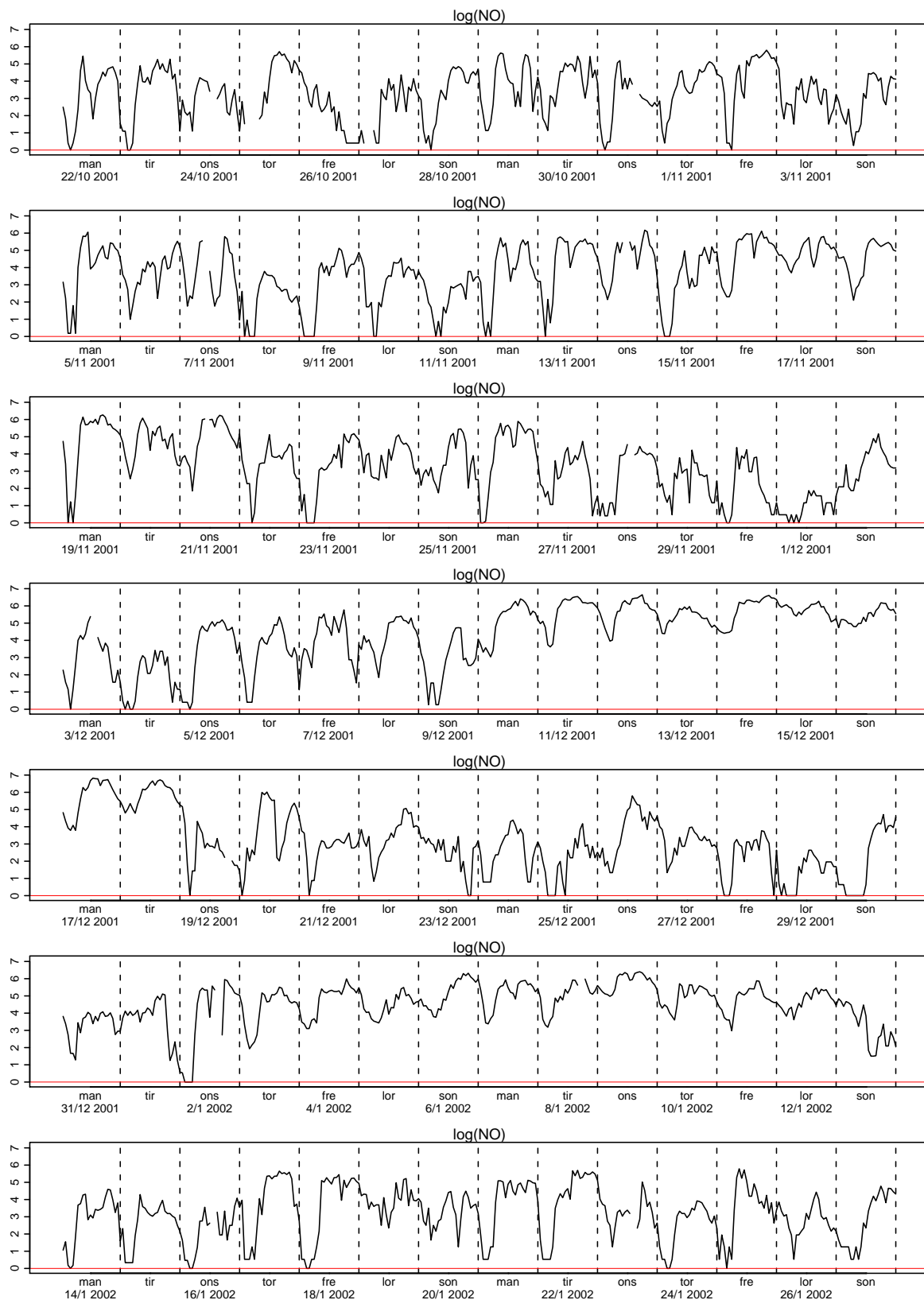
Figur 2.94. Plott av logaritmen til NO



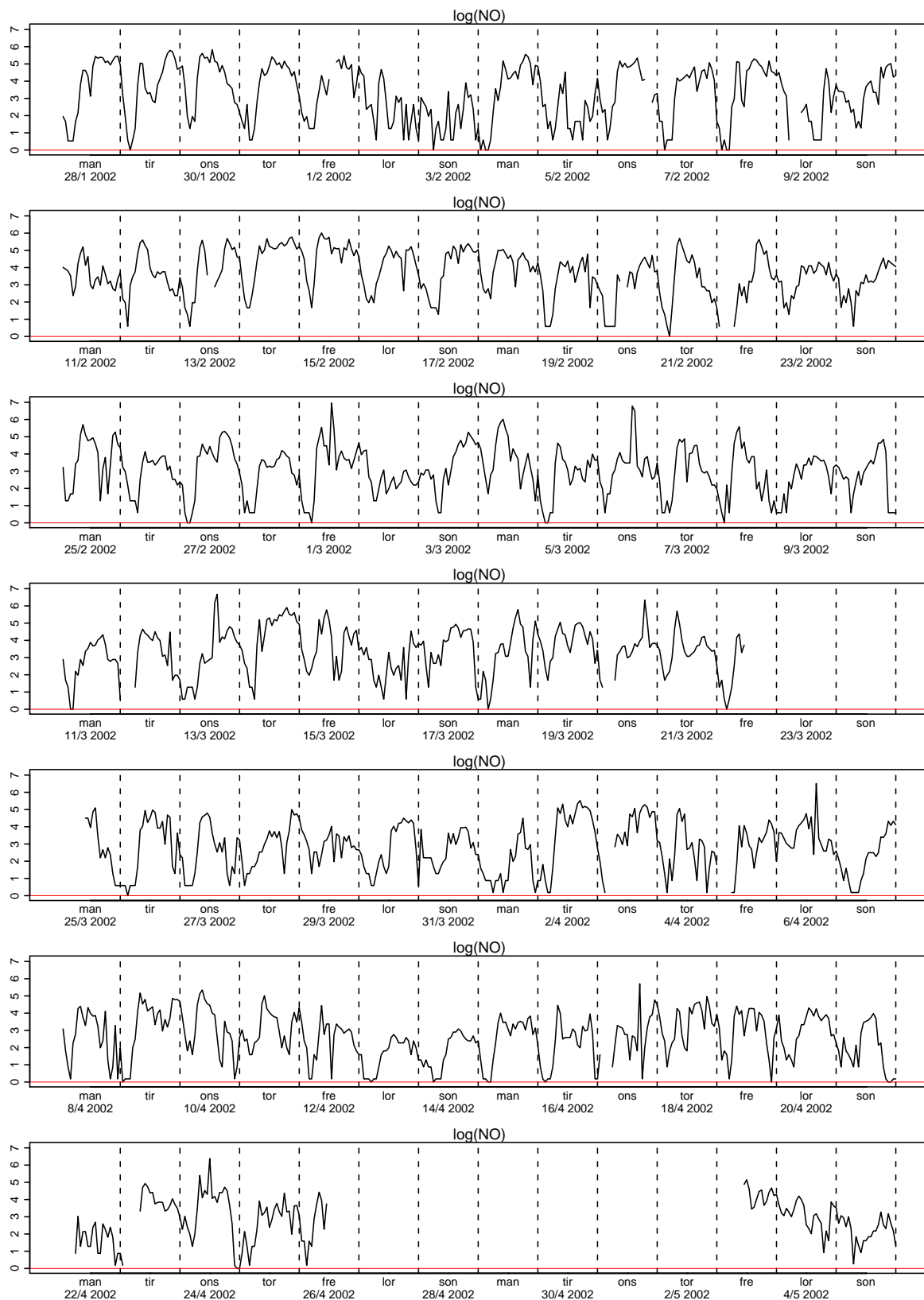
Figur 2.95. Plott av logaritmen til NO



Figur 2.96. Plott av logaritmen til NO

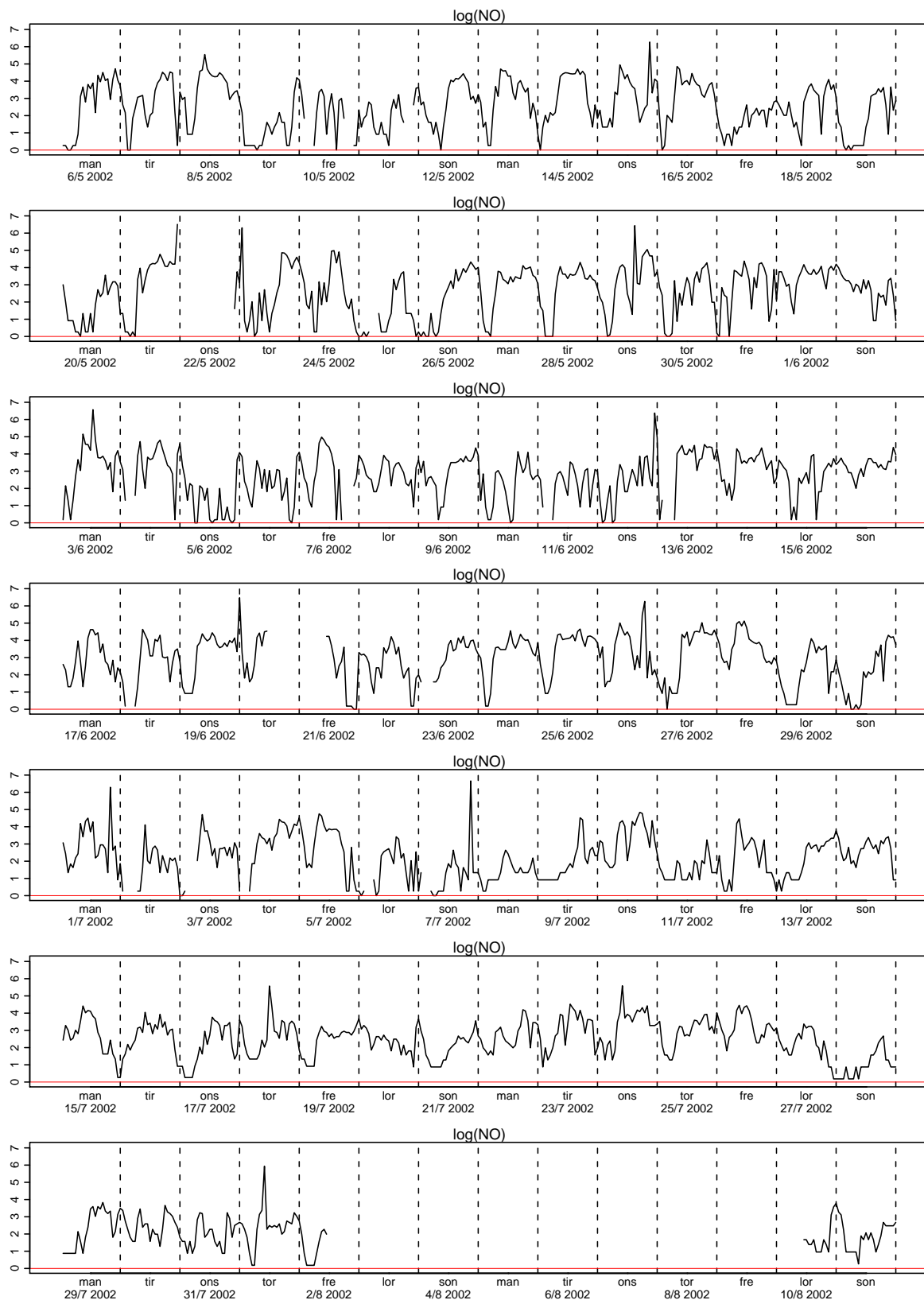


Figur 2.97. Plott av logaritmen til NO

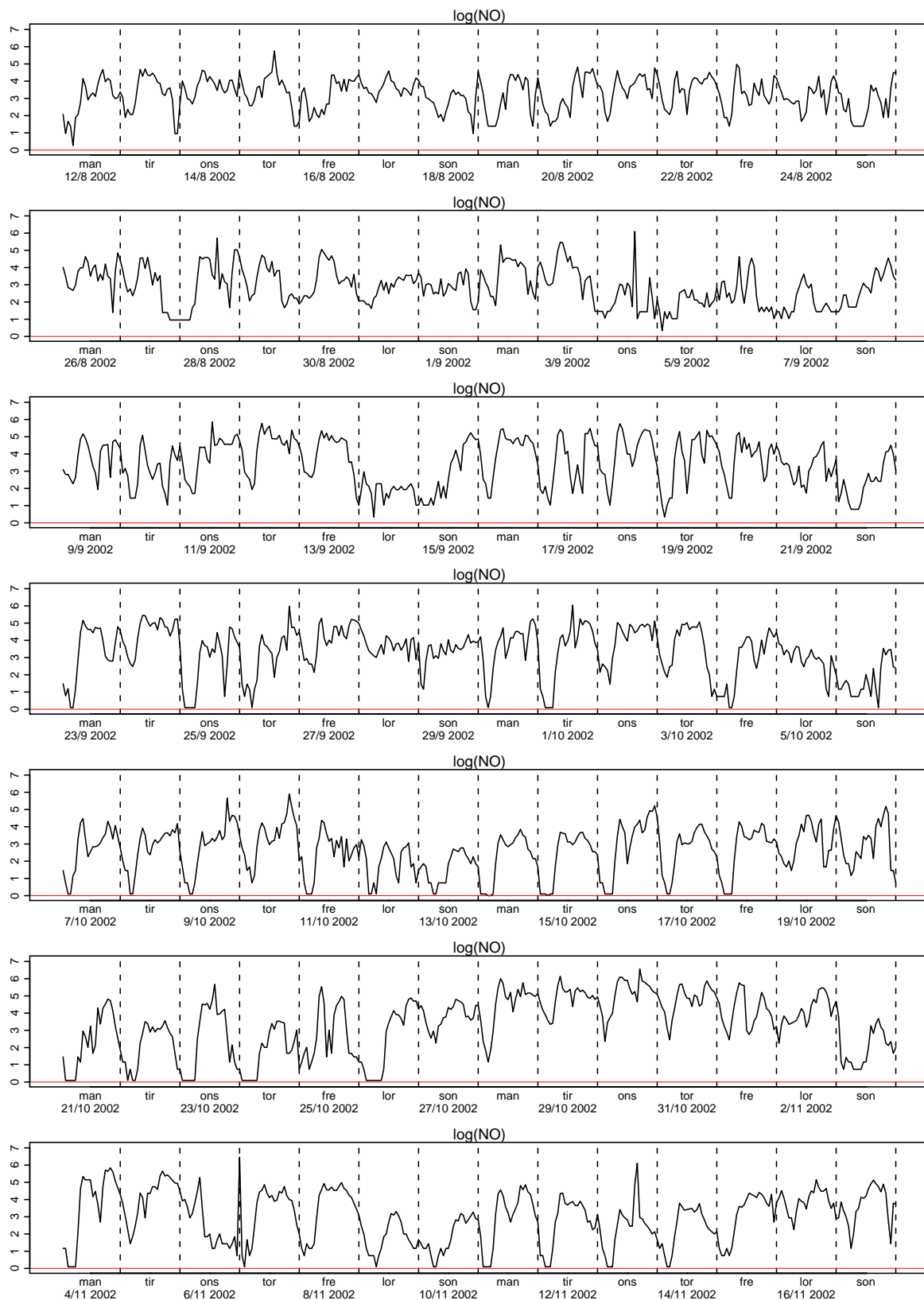


Figur 2.98. Plott av logaritmen til NO

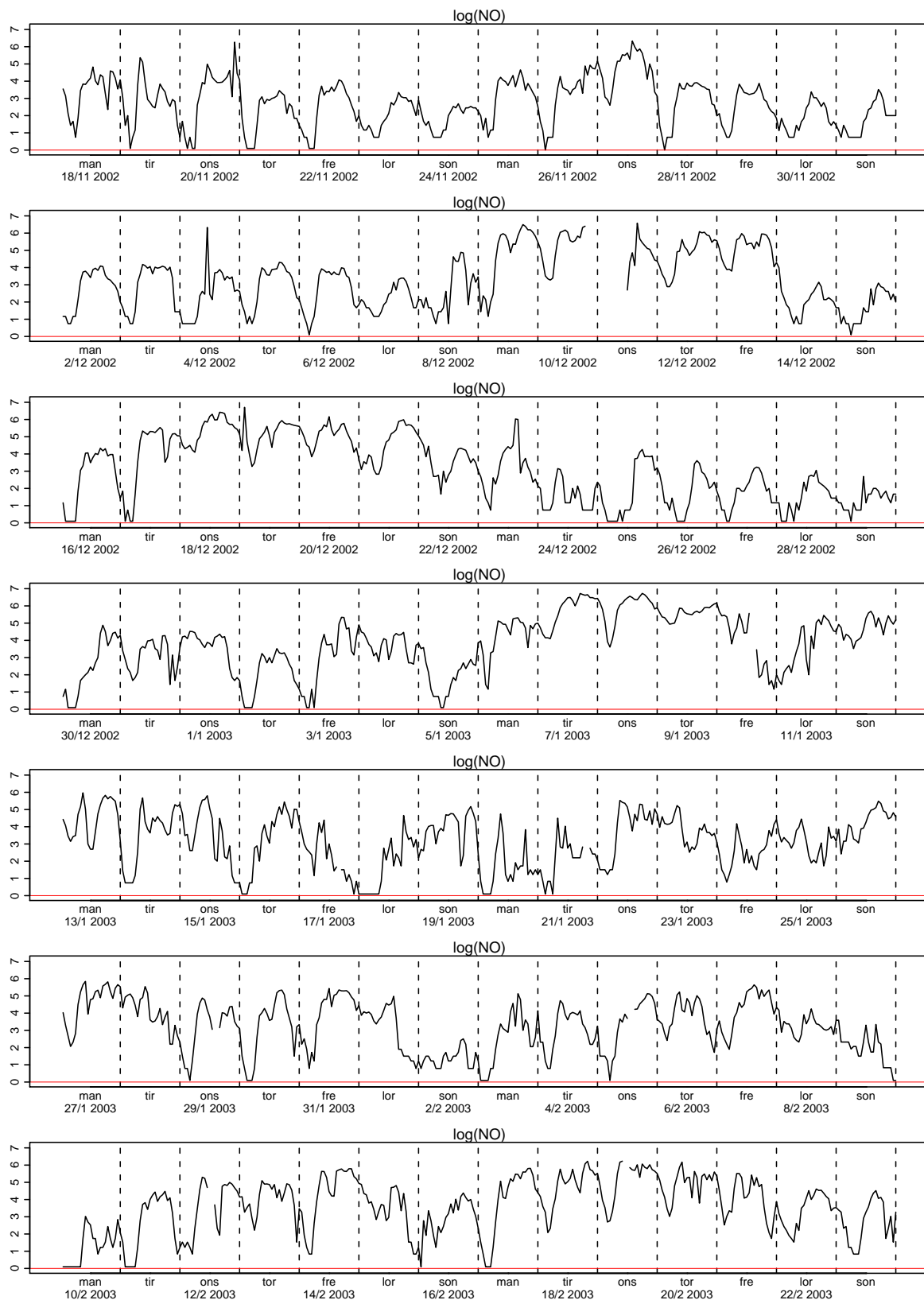




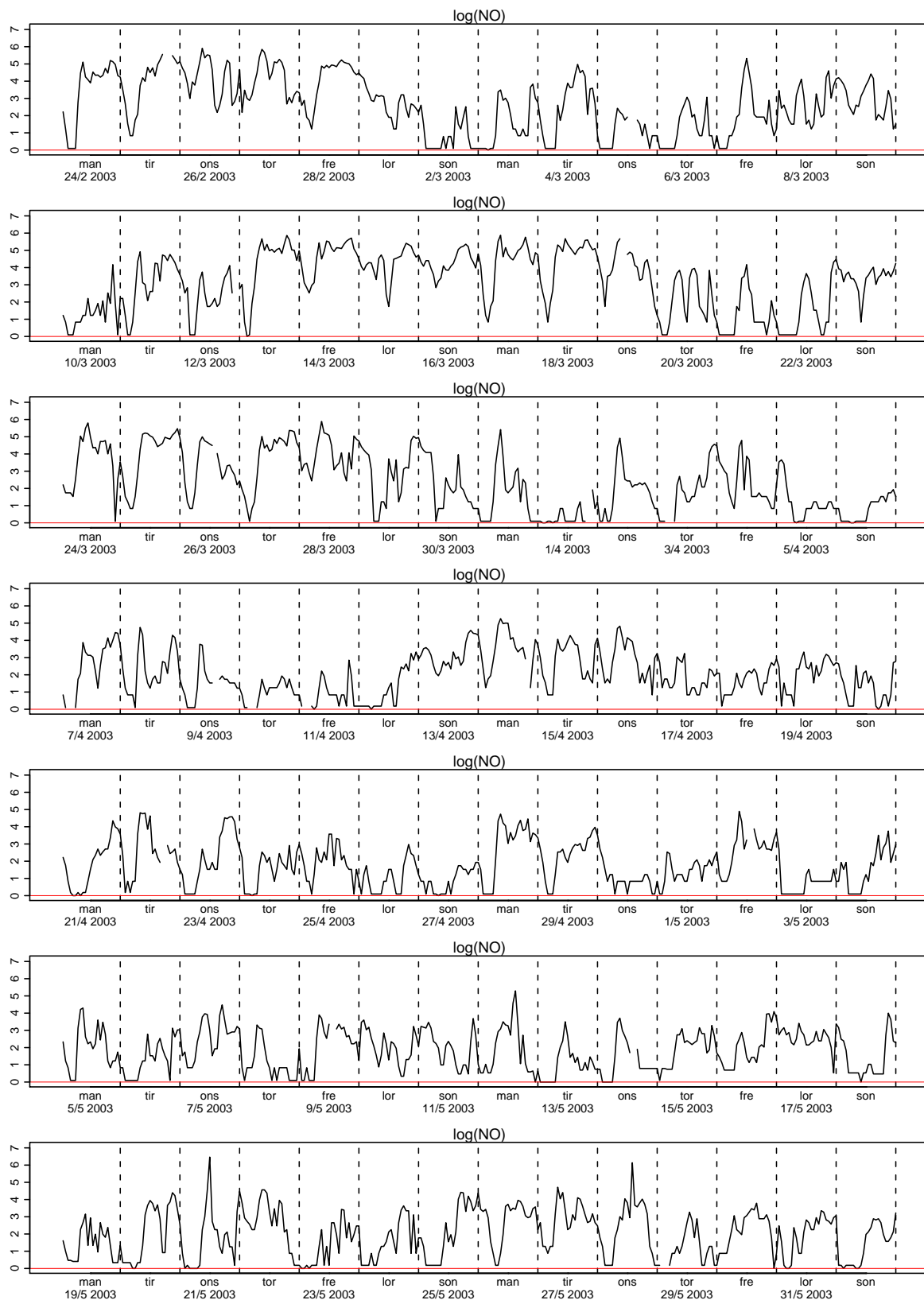
Figur 2.99. Plott av logaritmen til NO



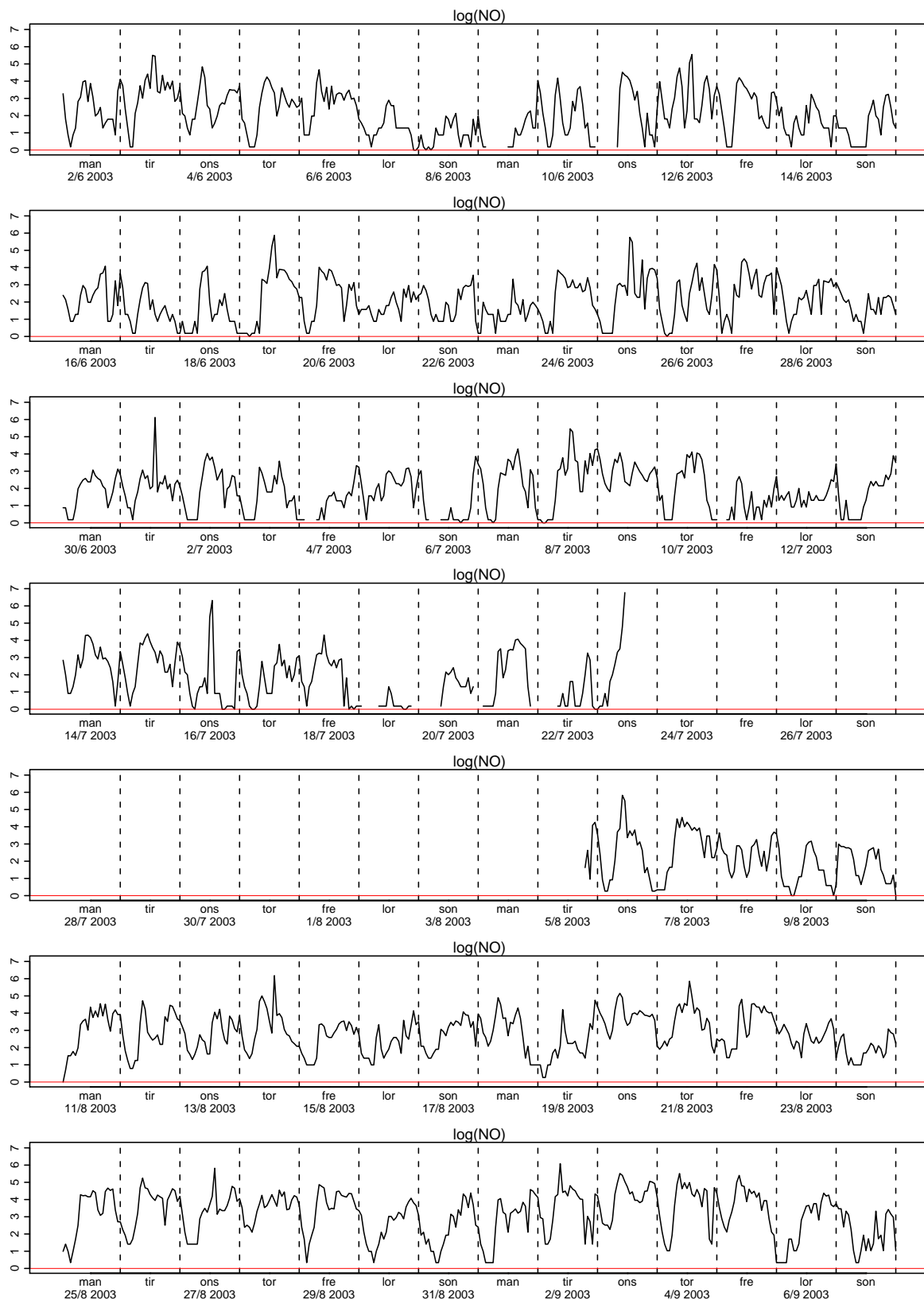
Figur 2.100. Plott av logaritmen til NO



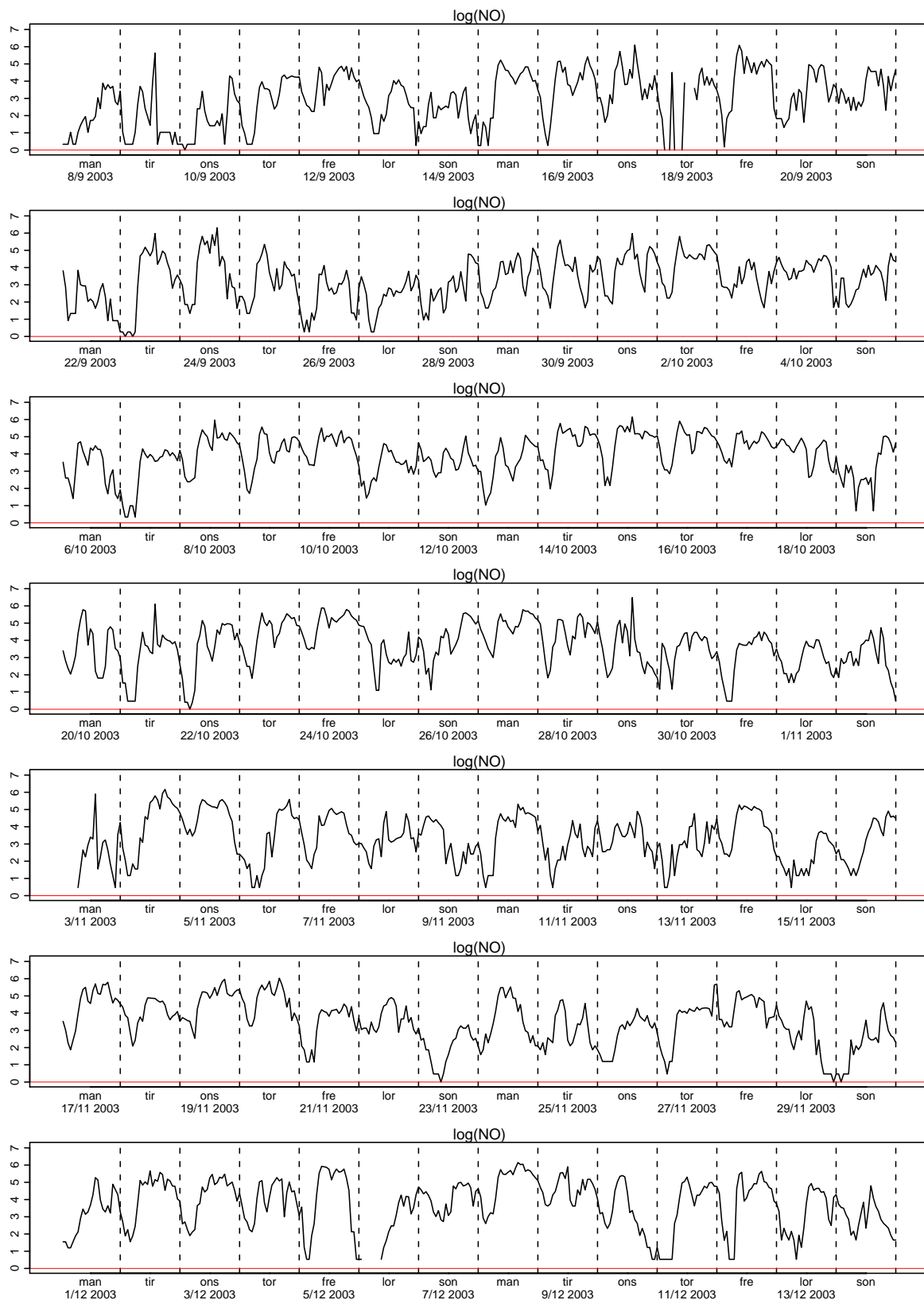
Figur 2.101. Plott av logaritmen til NO



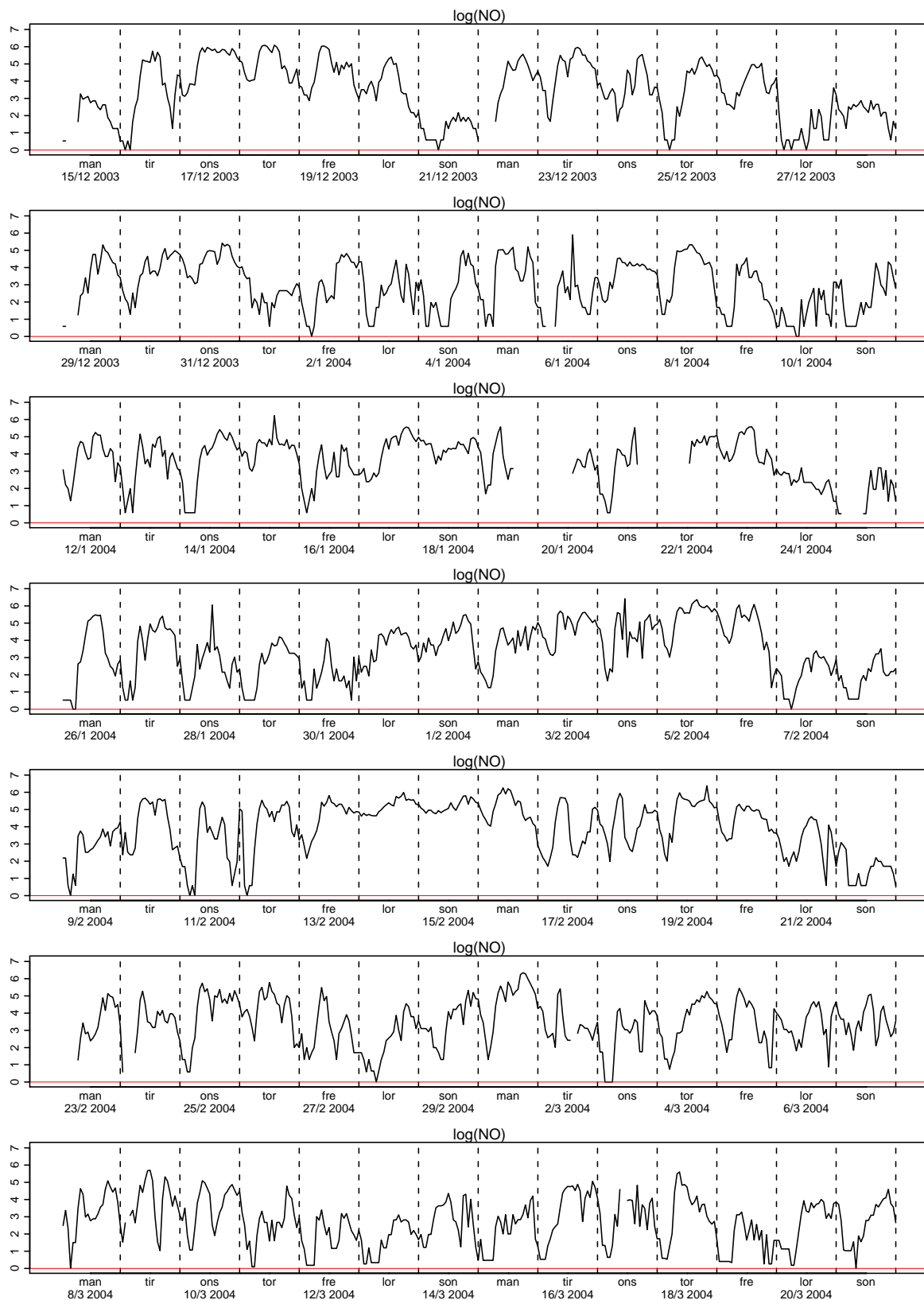
Figur 2.102. Plott av logaritmen til NO



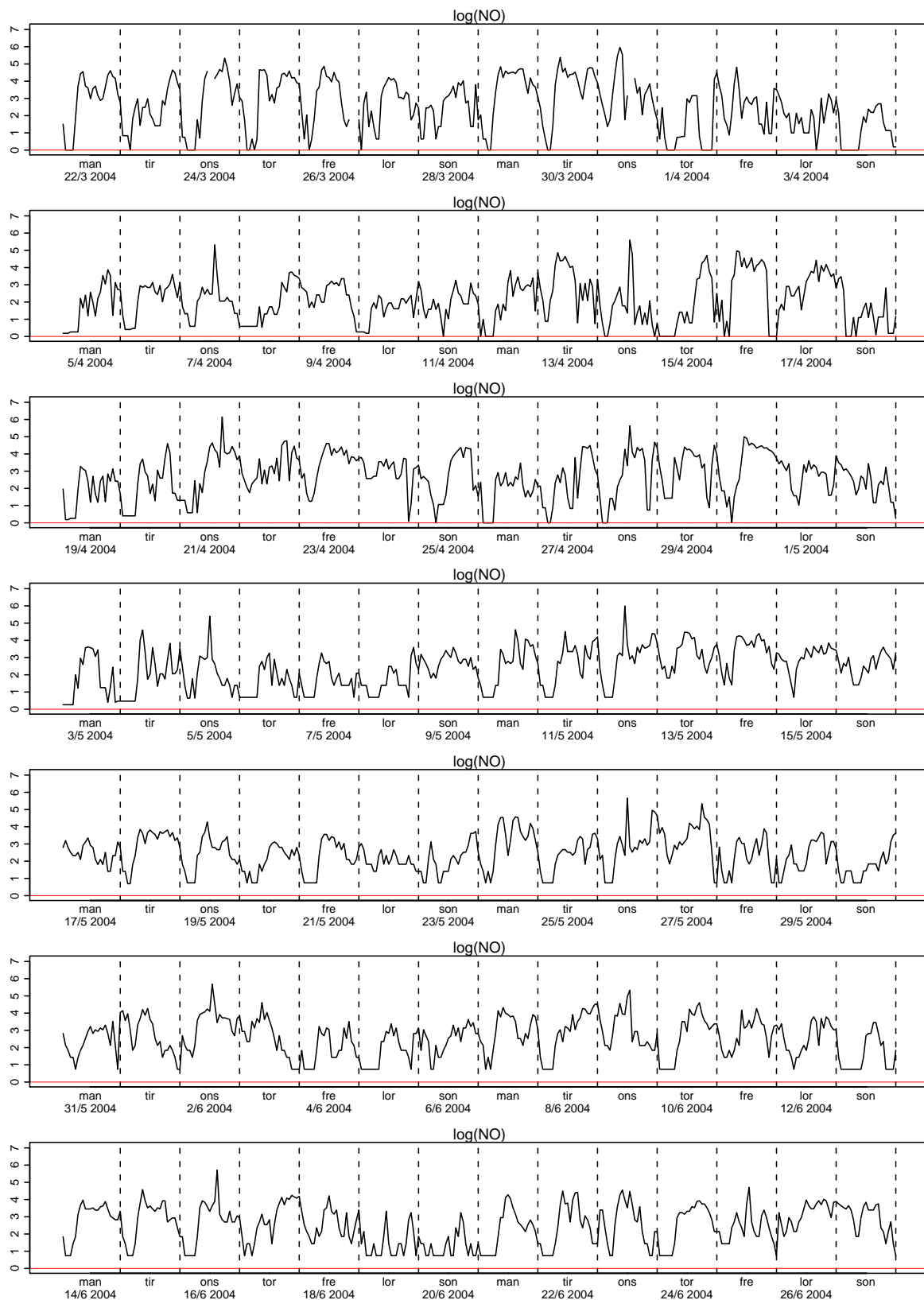
Figur 2.103. Plott av logaritmen til NO



Figur 2.104. Plott av logaritmen til NO

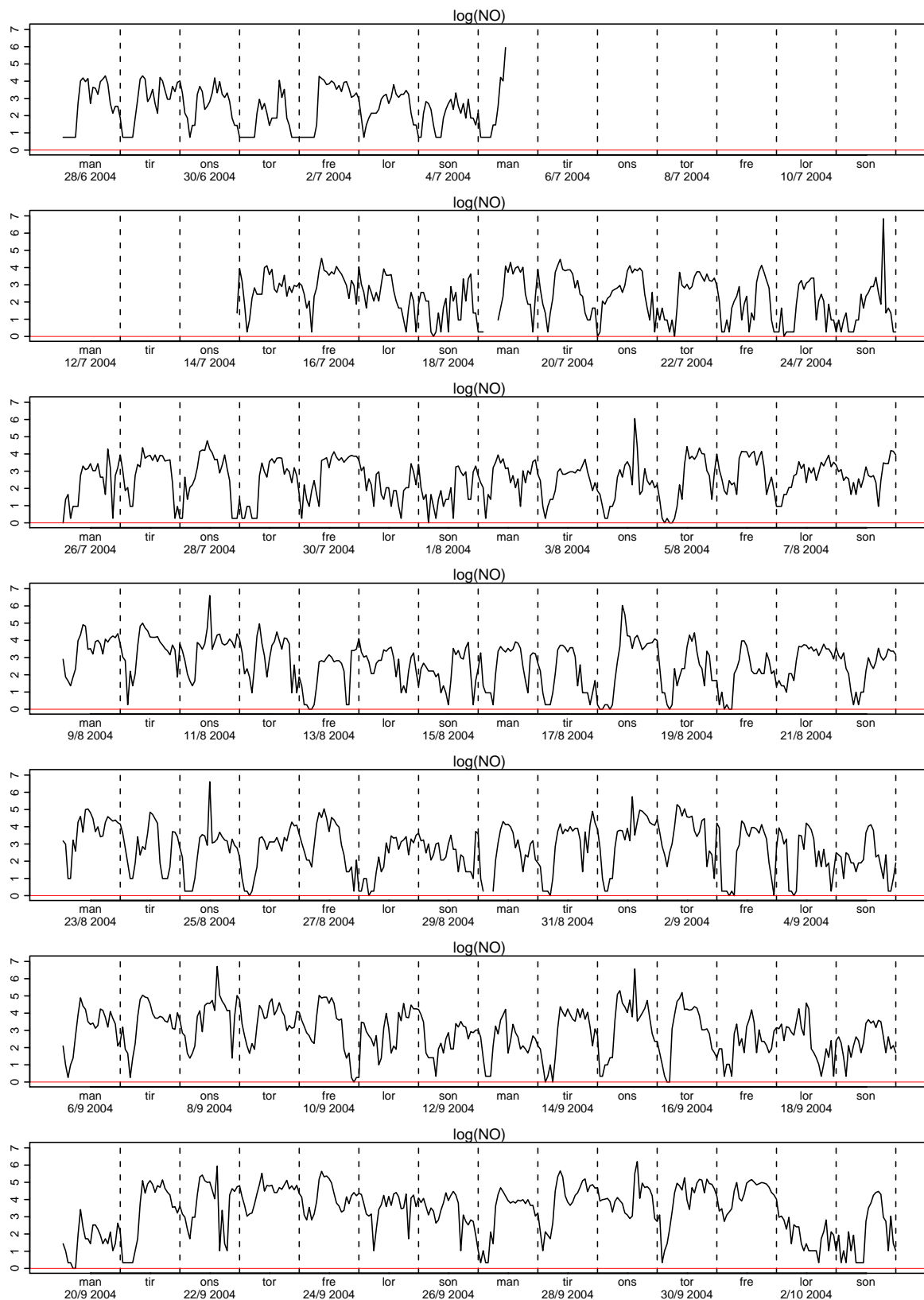


Figur 2.105. Plott av logaritmen til NO

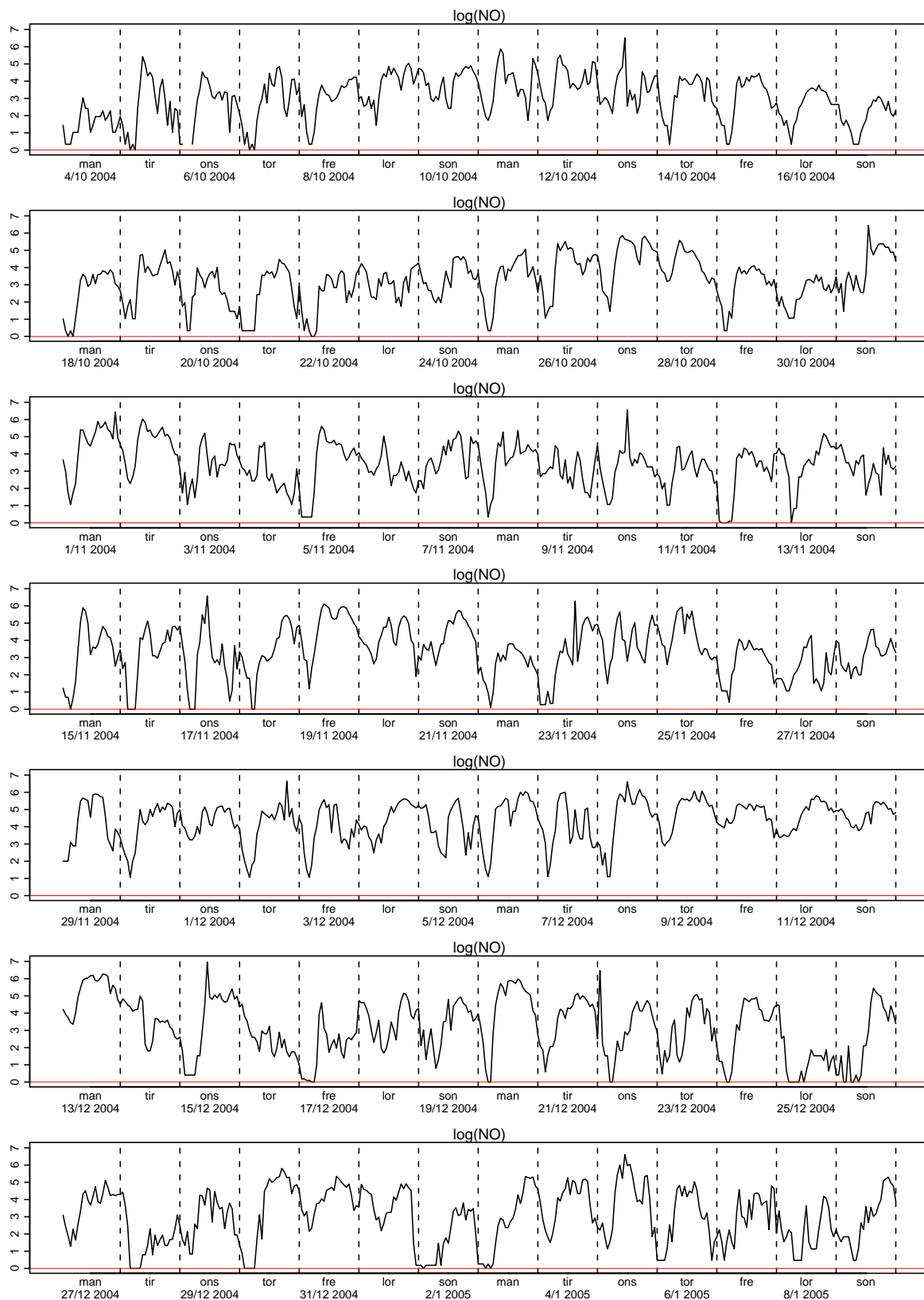


Figur 2.106. Plott av logaritmen til NO

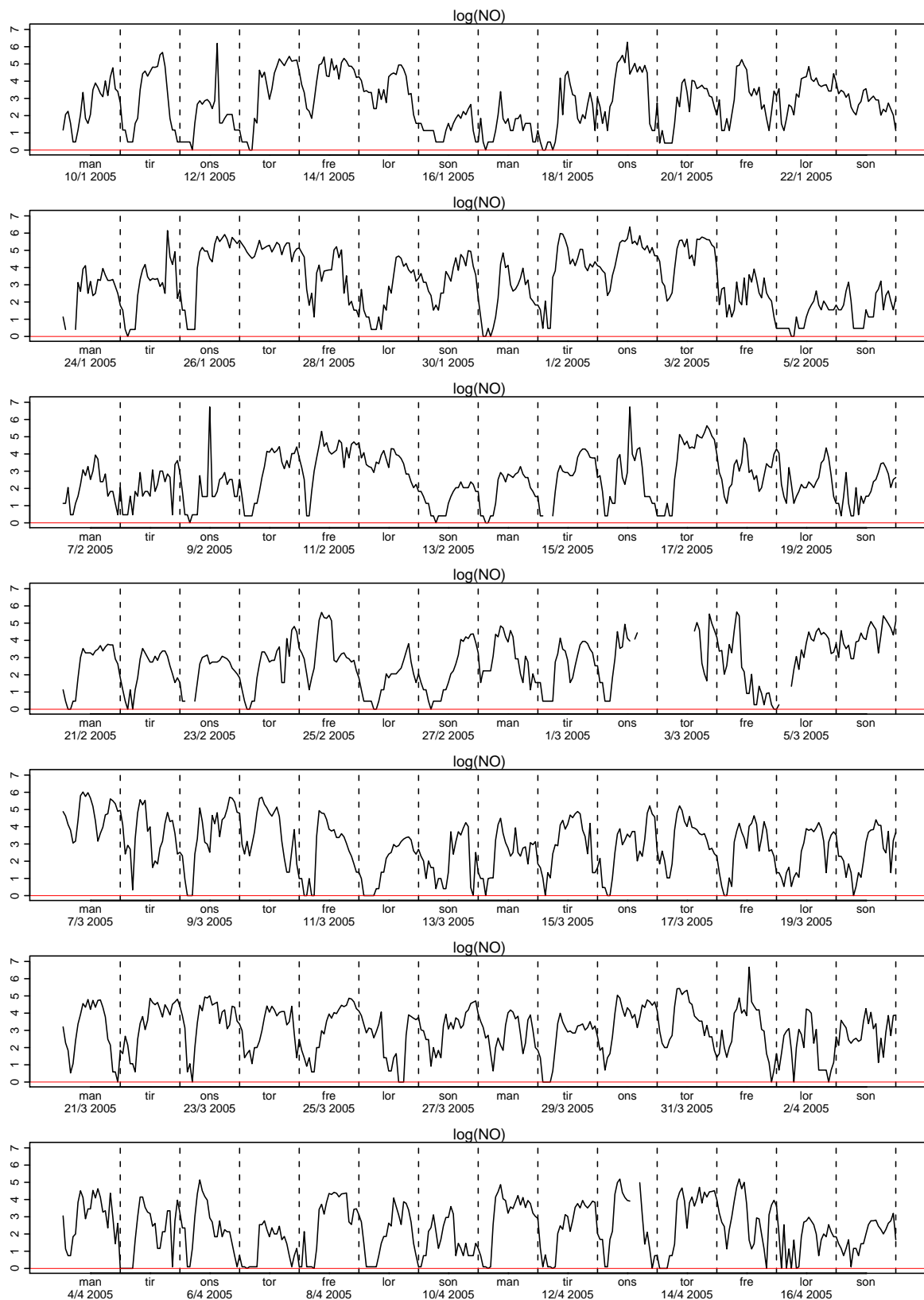




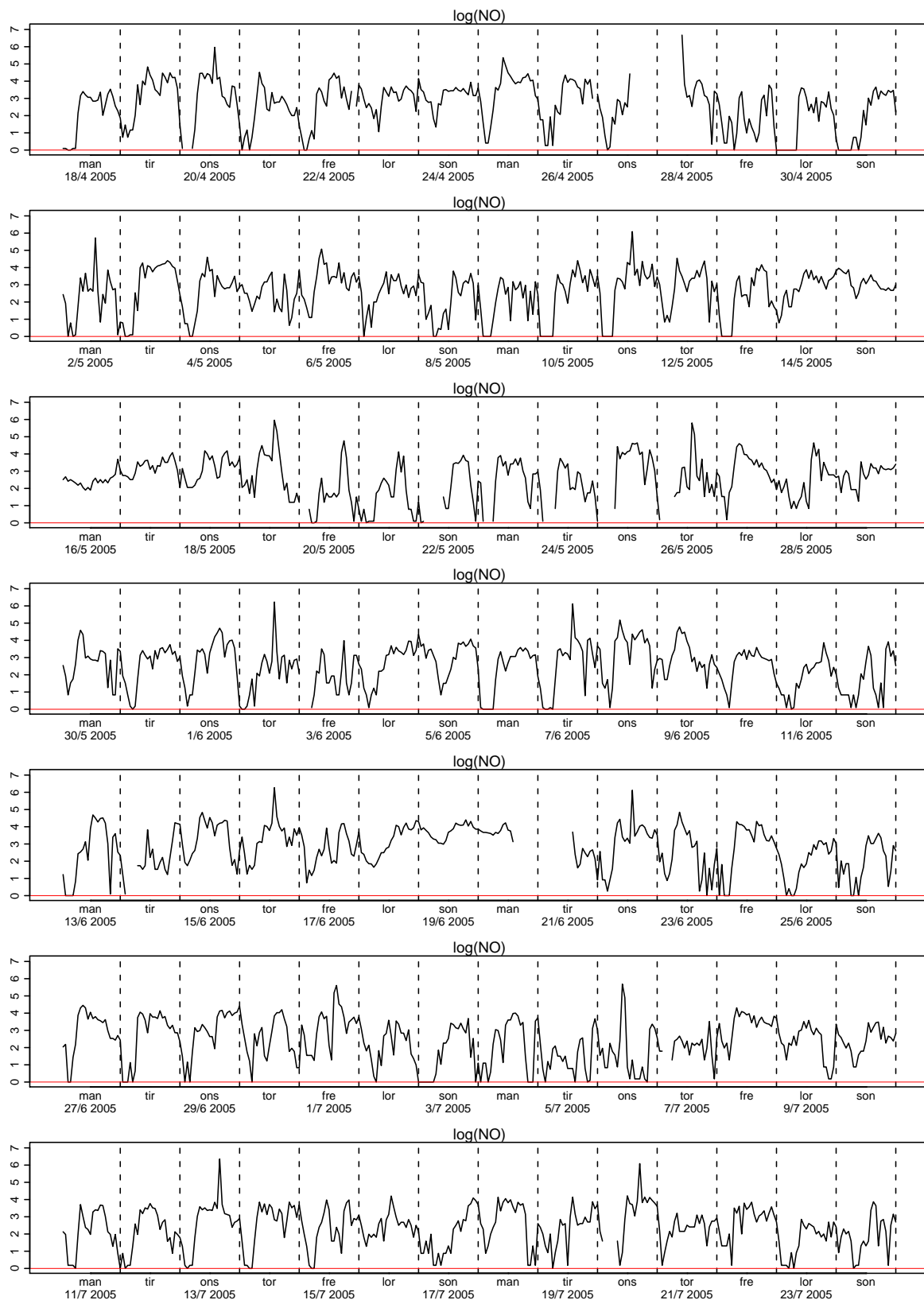
Figur 2.107. Plott av logaritmen til NO



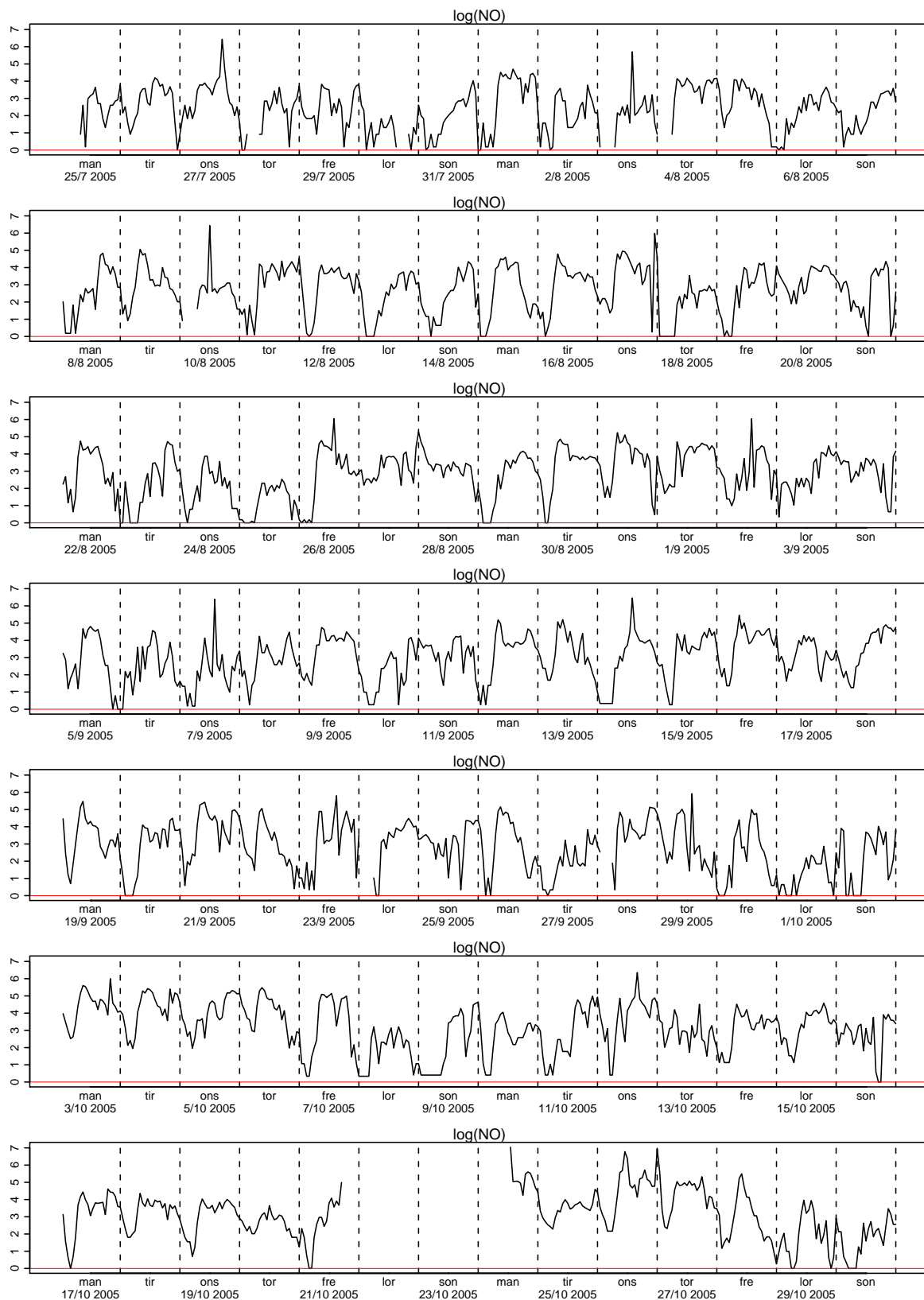
Figur 2.108. Plott av logaritmen til NO



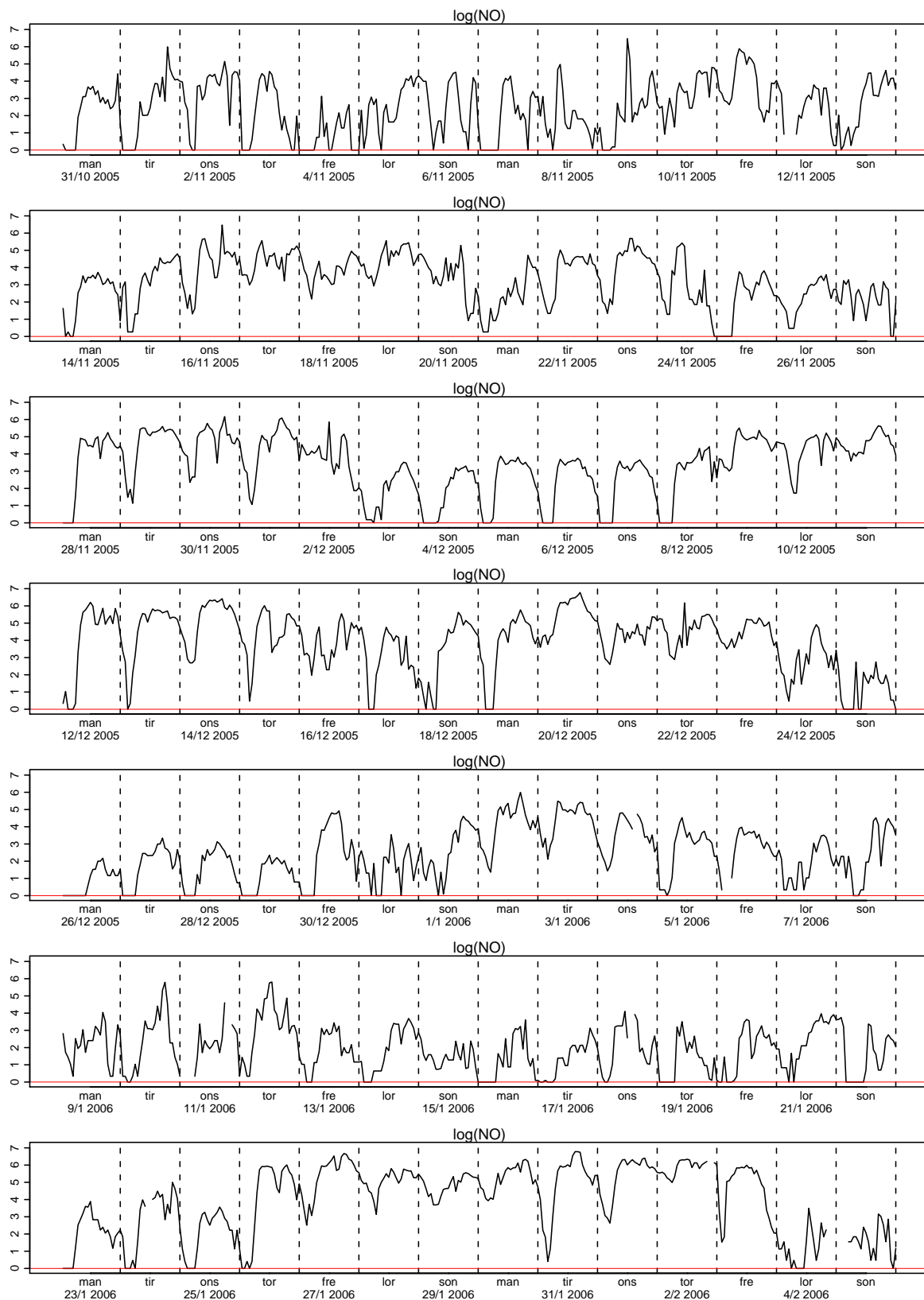
Figur 2.109. Plott av logaritmen til NO



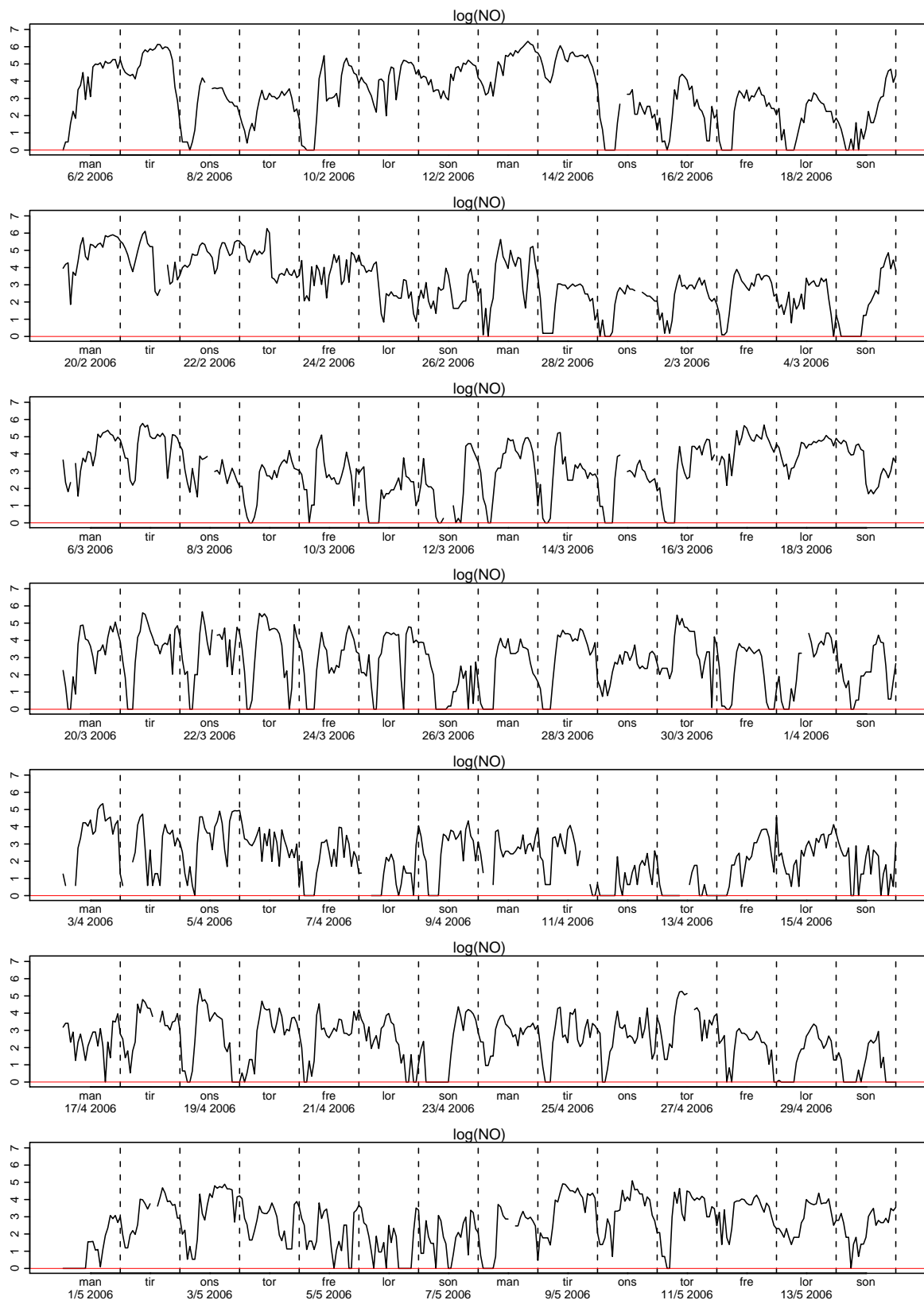
Figur 2.110. Plott av logaritmen til NO



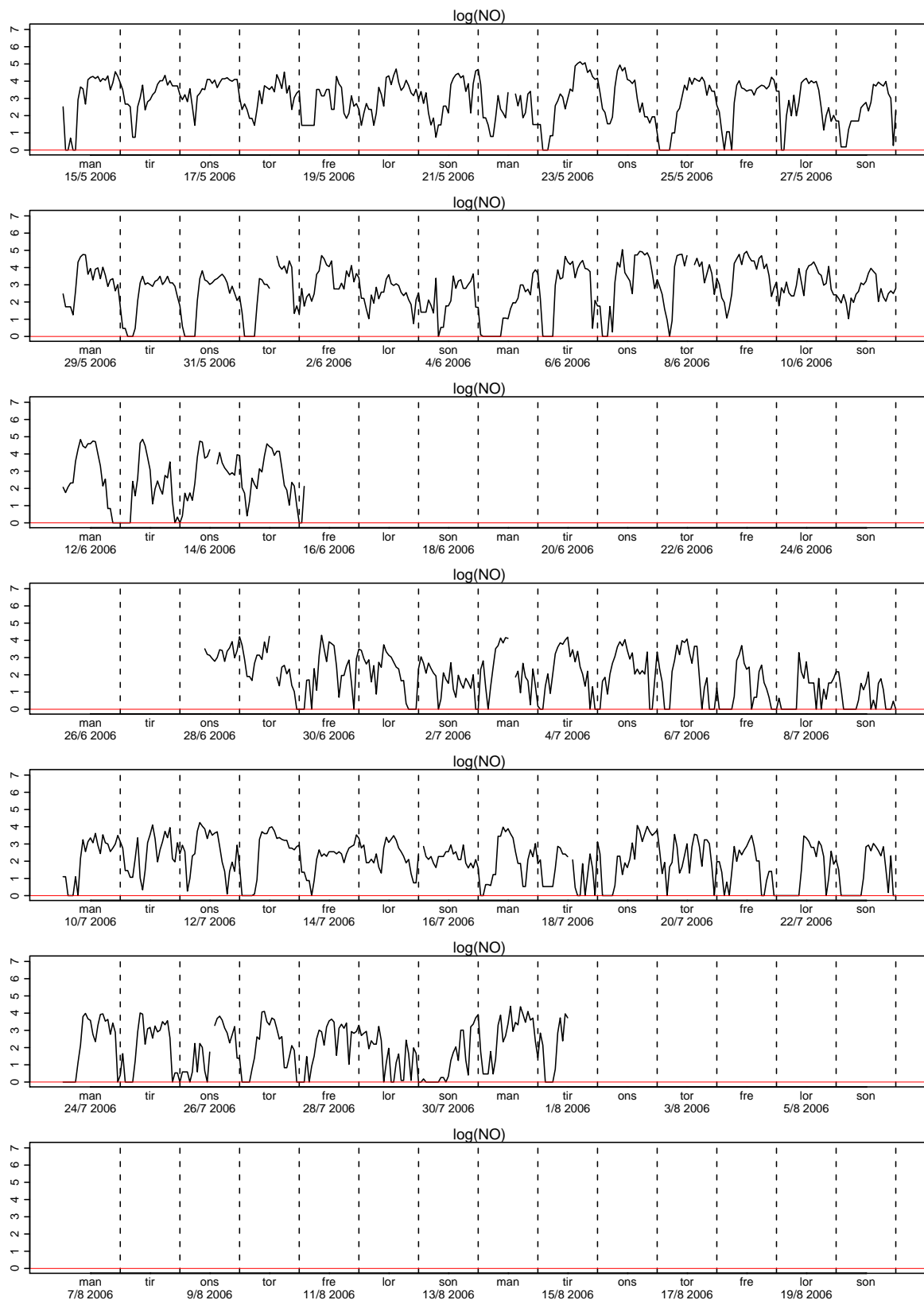
Figur 2.111. Plott av logaritmen til NO



Figur 2.112. Plott av logaritmen til NO

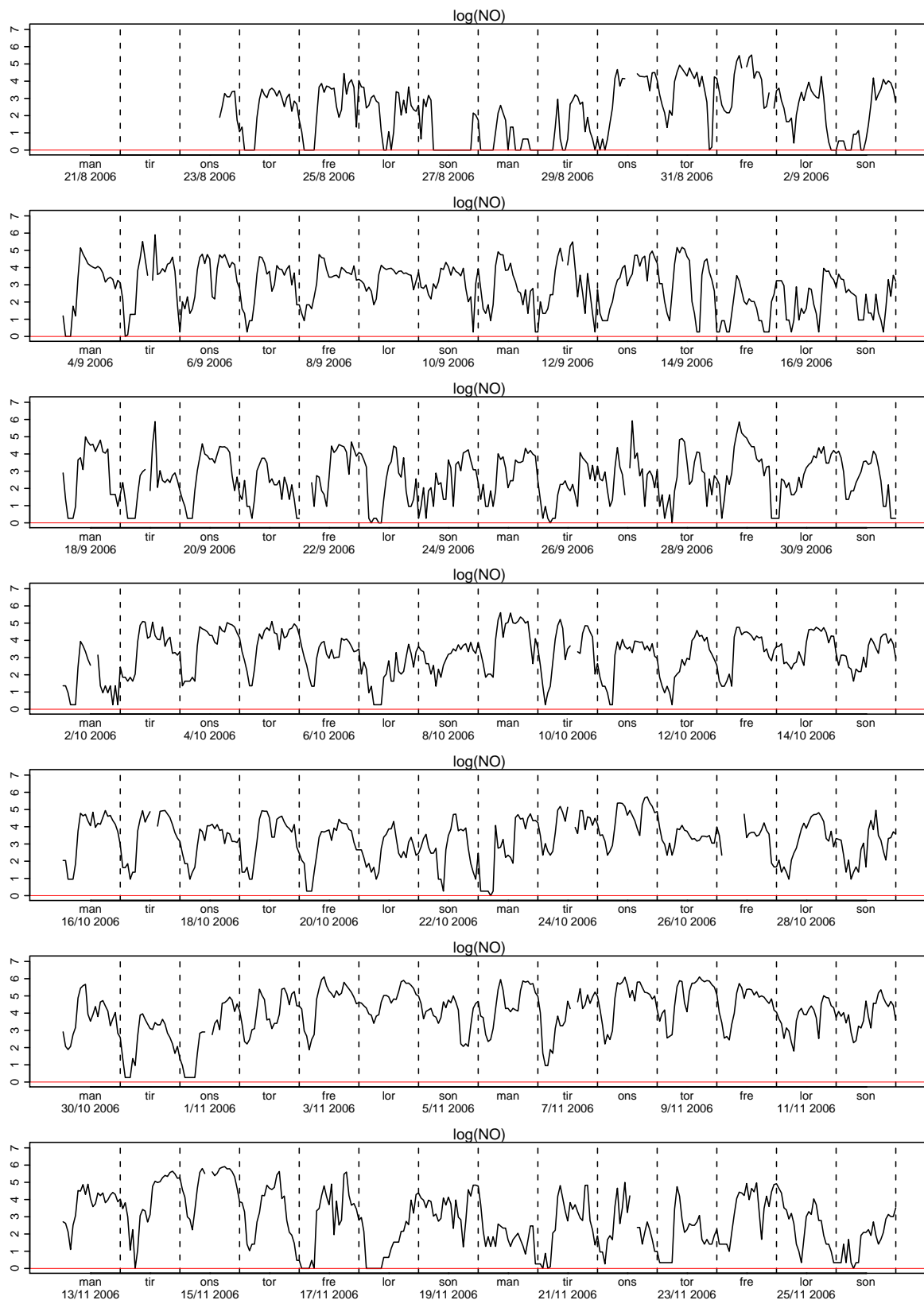


Figur 2.113. Plott av logaritmen til NO

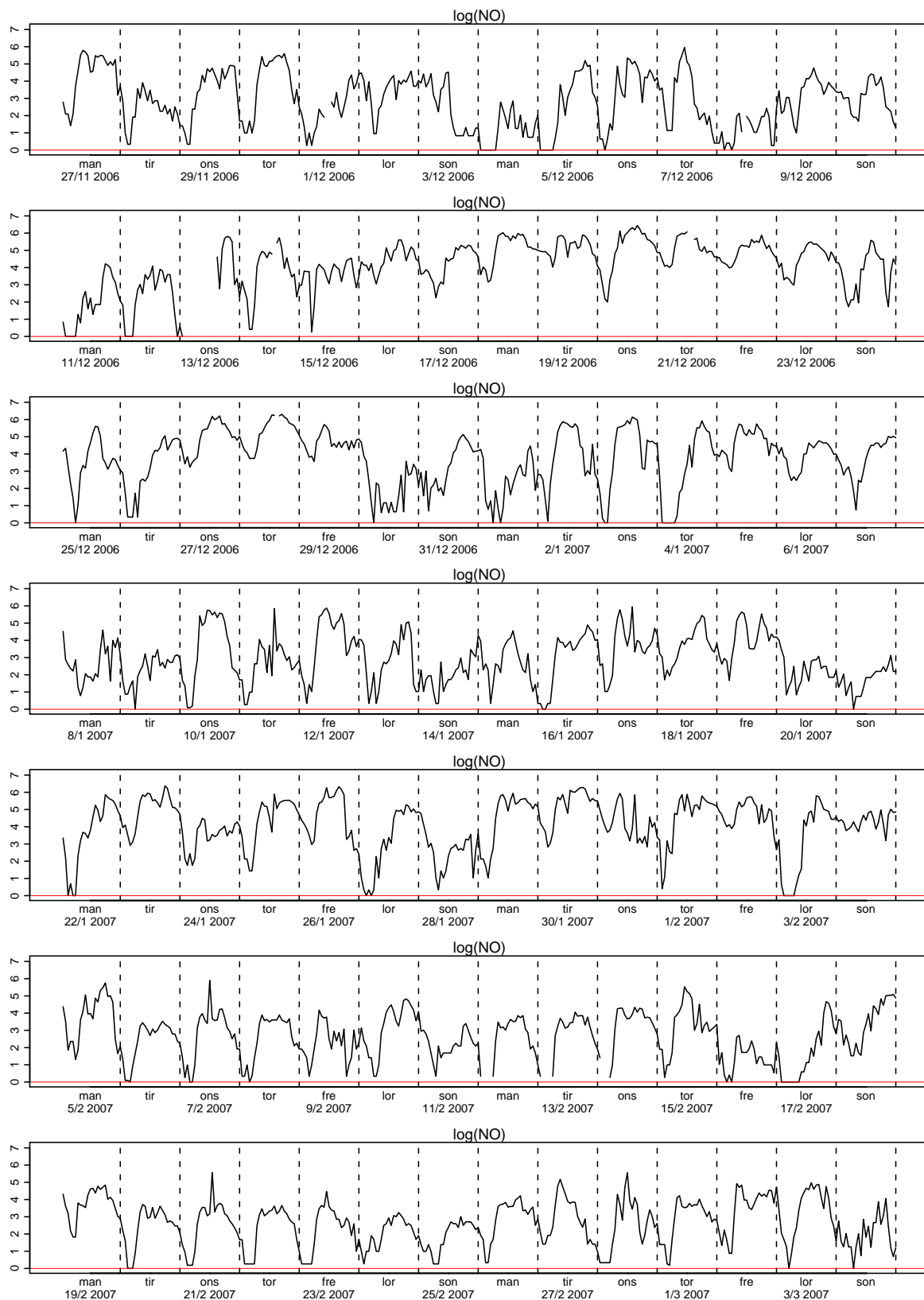


Figur 2.114. Plott av logaritmen til NO

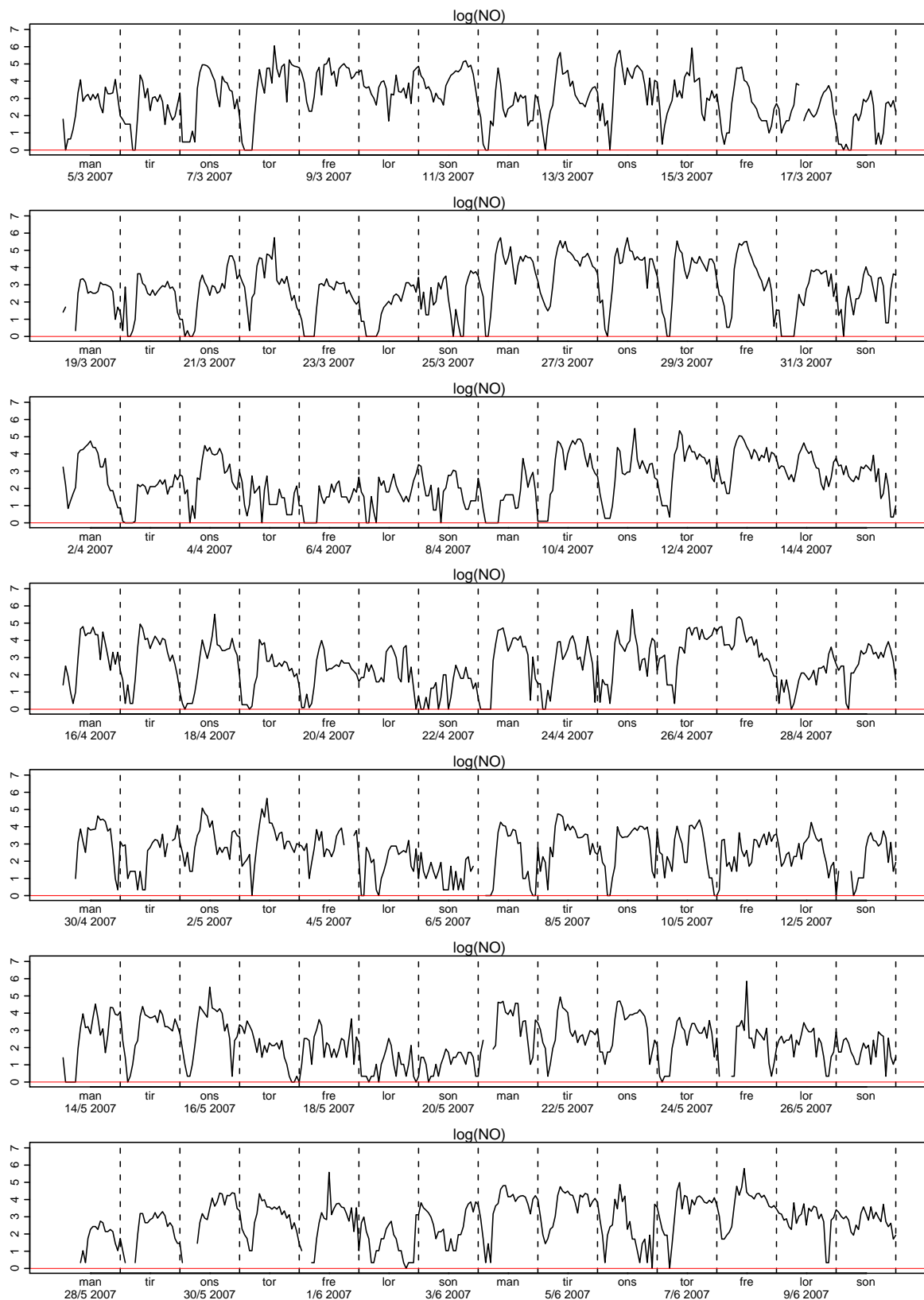




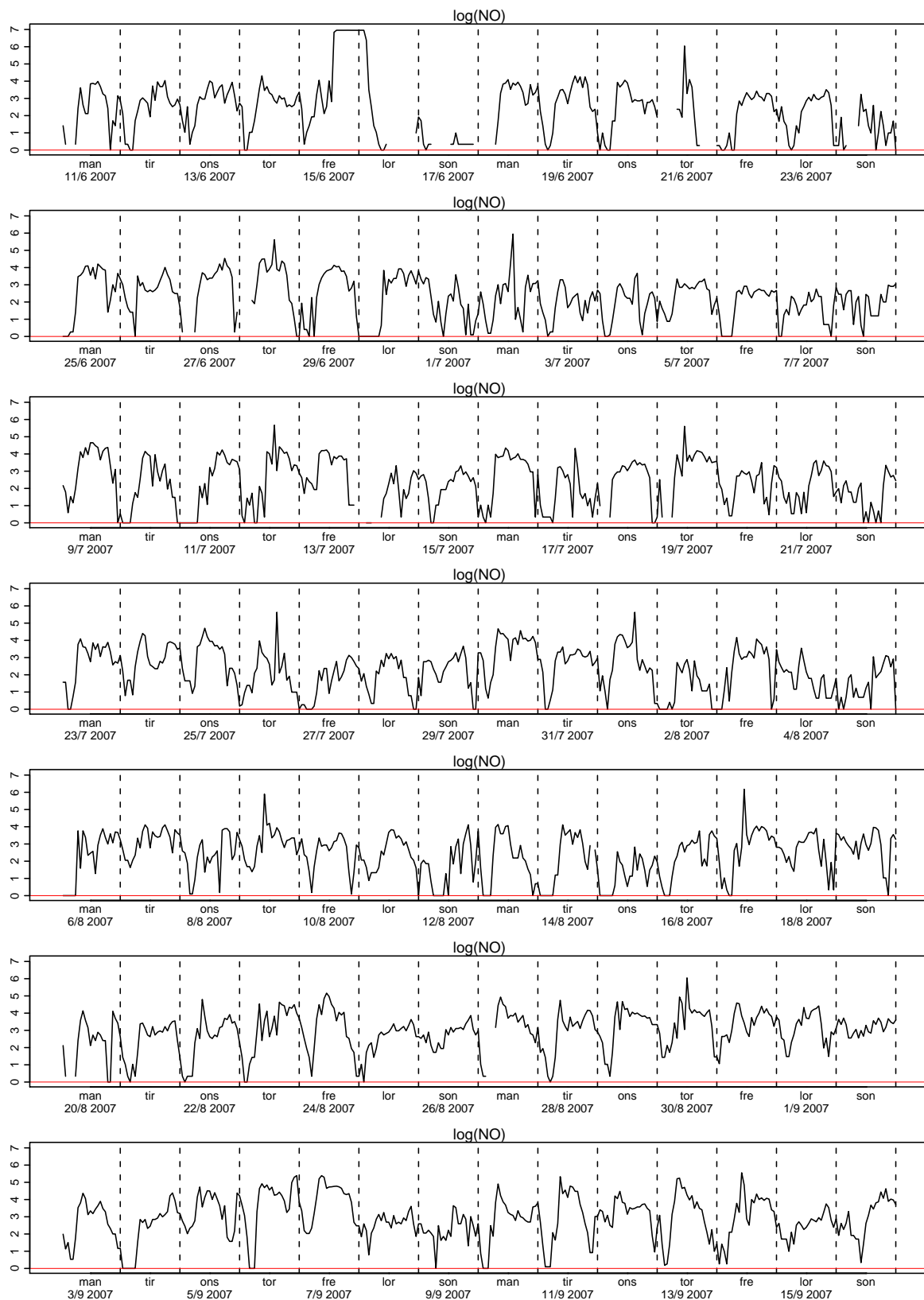
Figur 2.115. Plott av logaritmen til NO



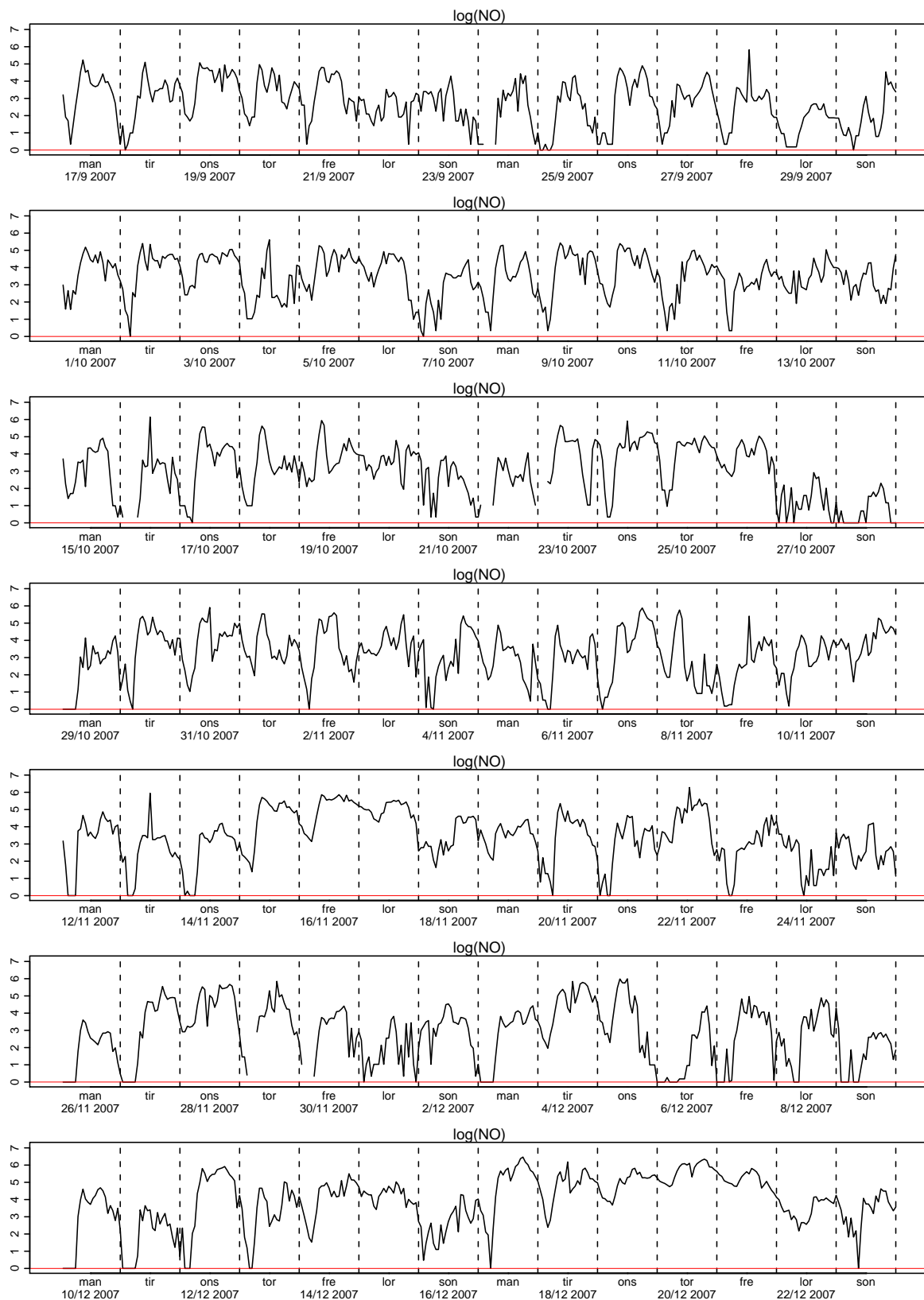
Figur 2.116. Plott av logaritmen til NO



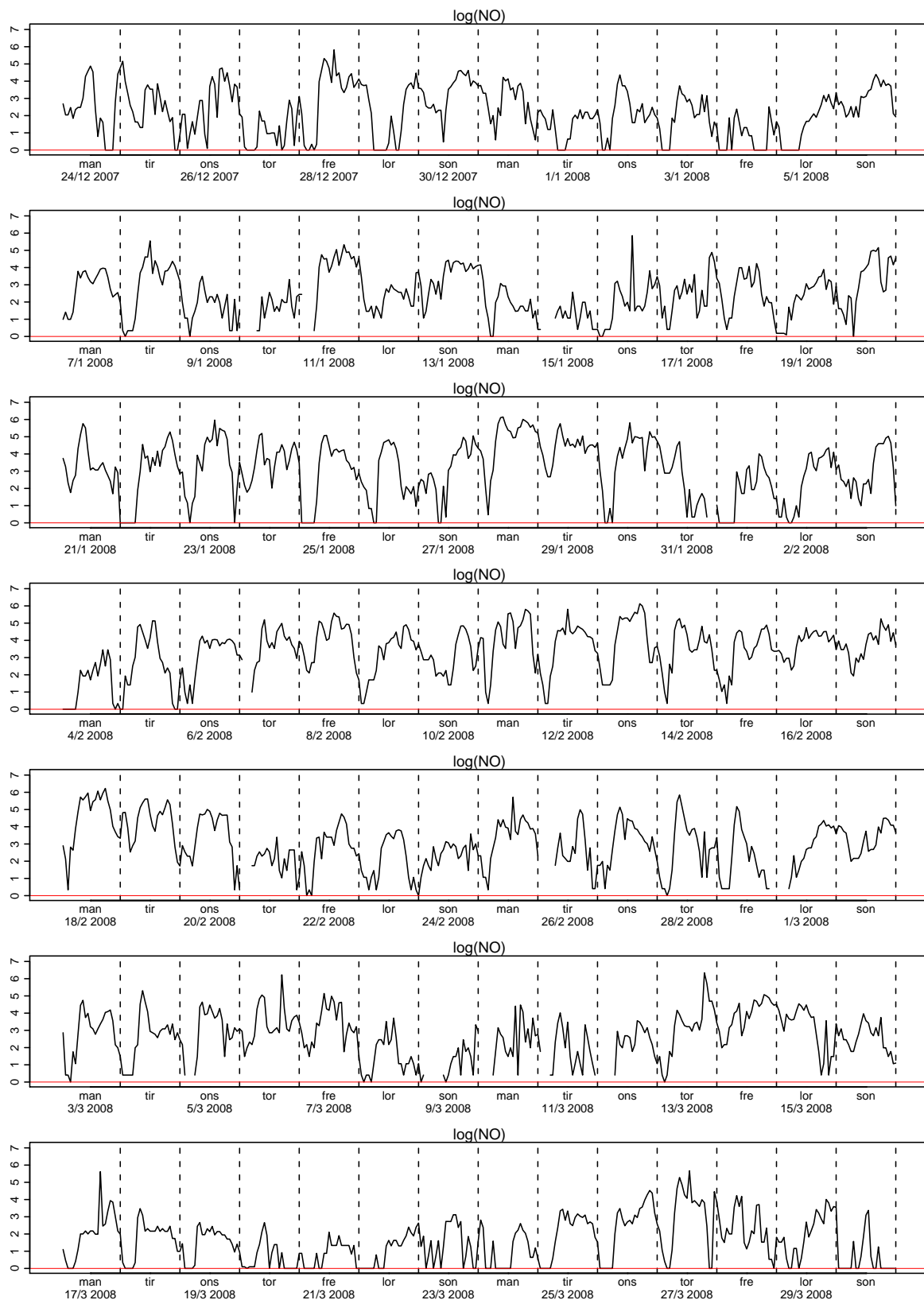
Figur 2.117. Plott av logaritmen til NO



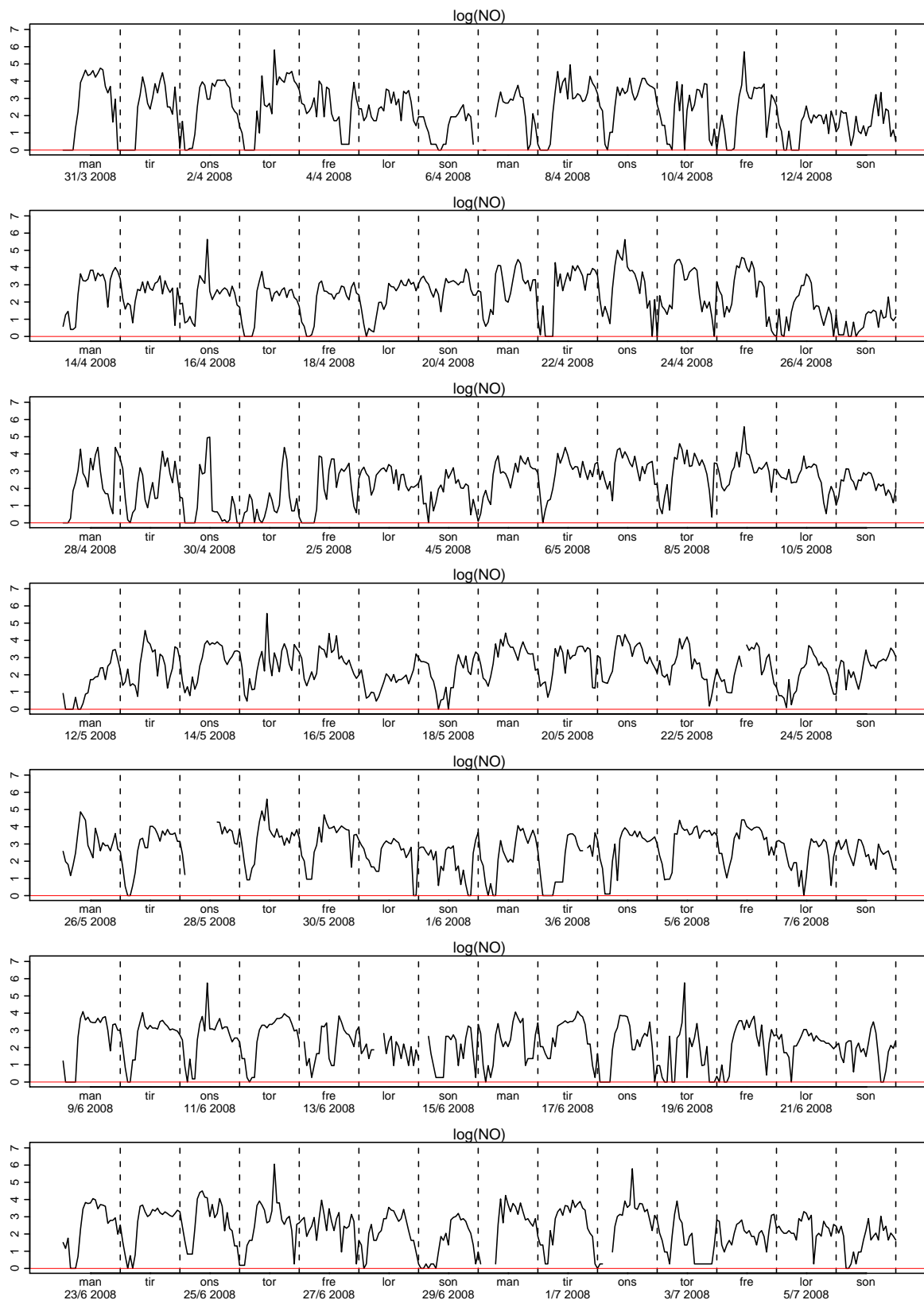
Figur 2.118. Plott av logaritmen til NO



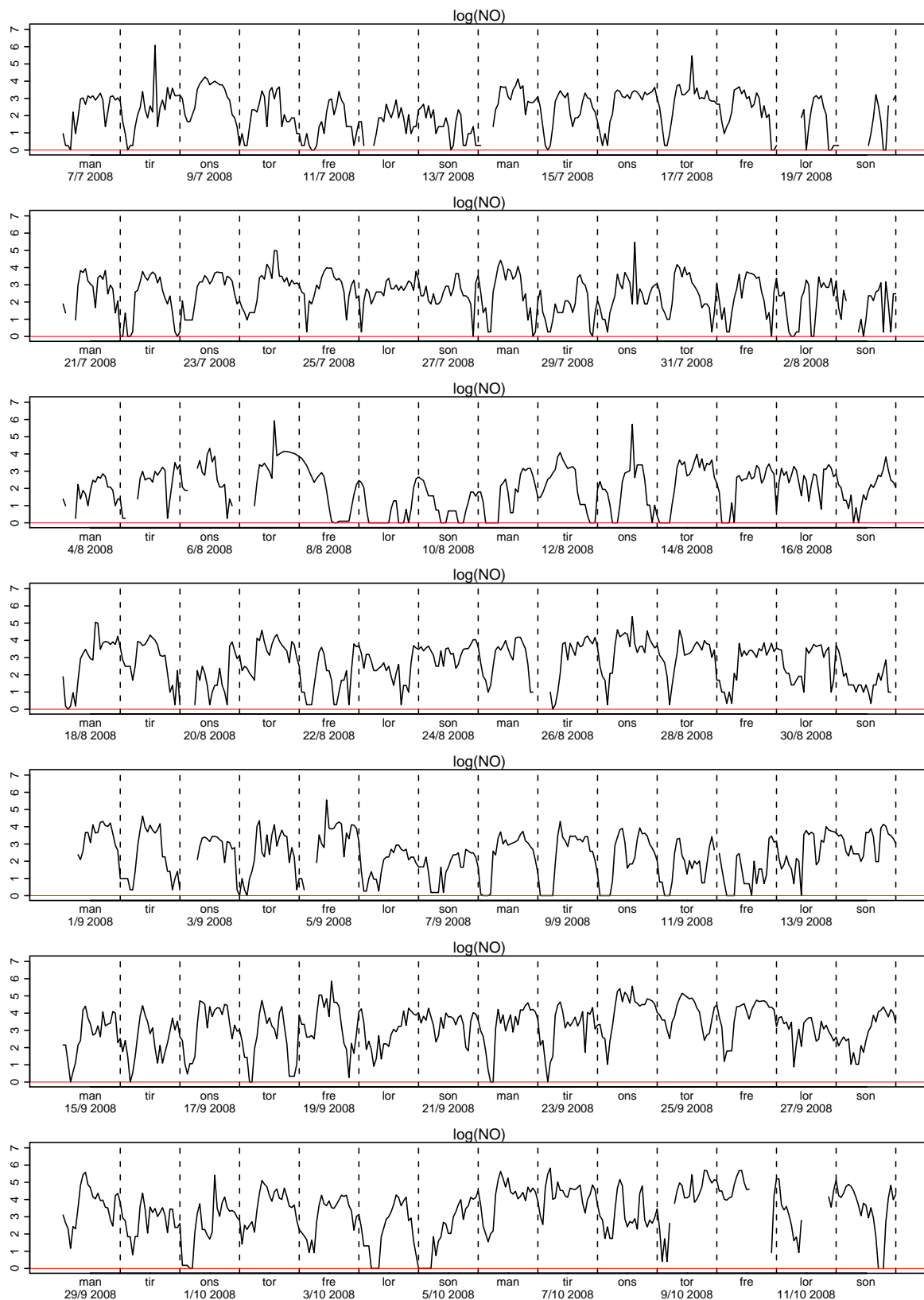
Figur 2.119. Plott av logaritmen til NO



Figur 2.120. Plott av logaritmen til NO

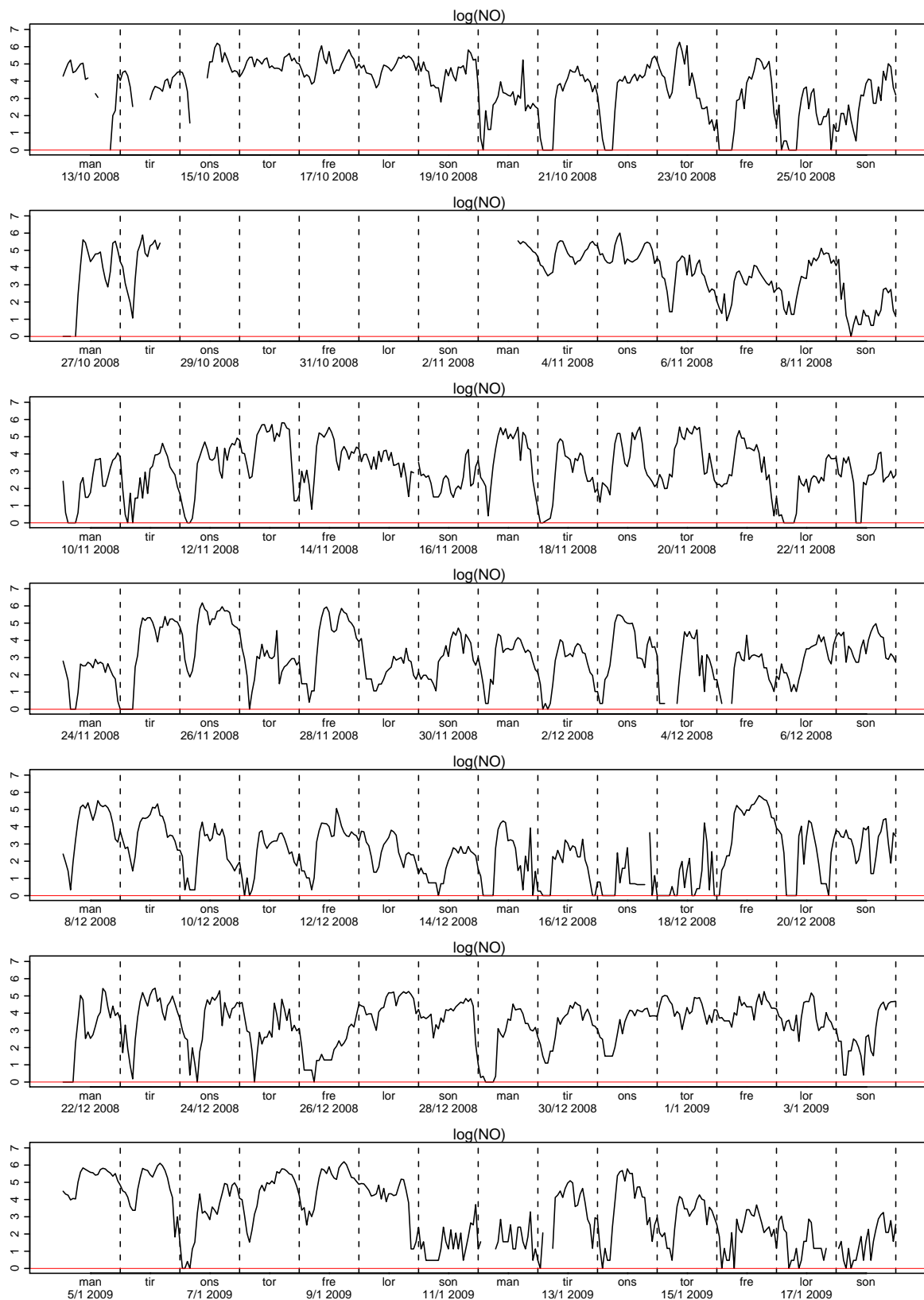


Figur 2.121. Plott av logaritmen til NO

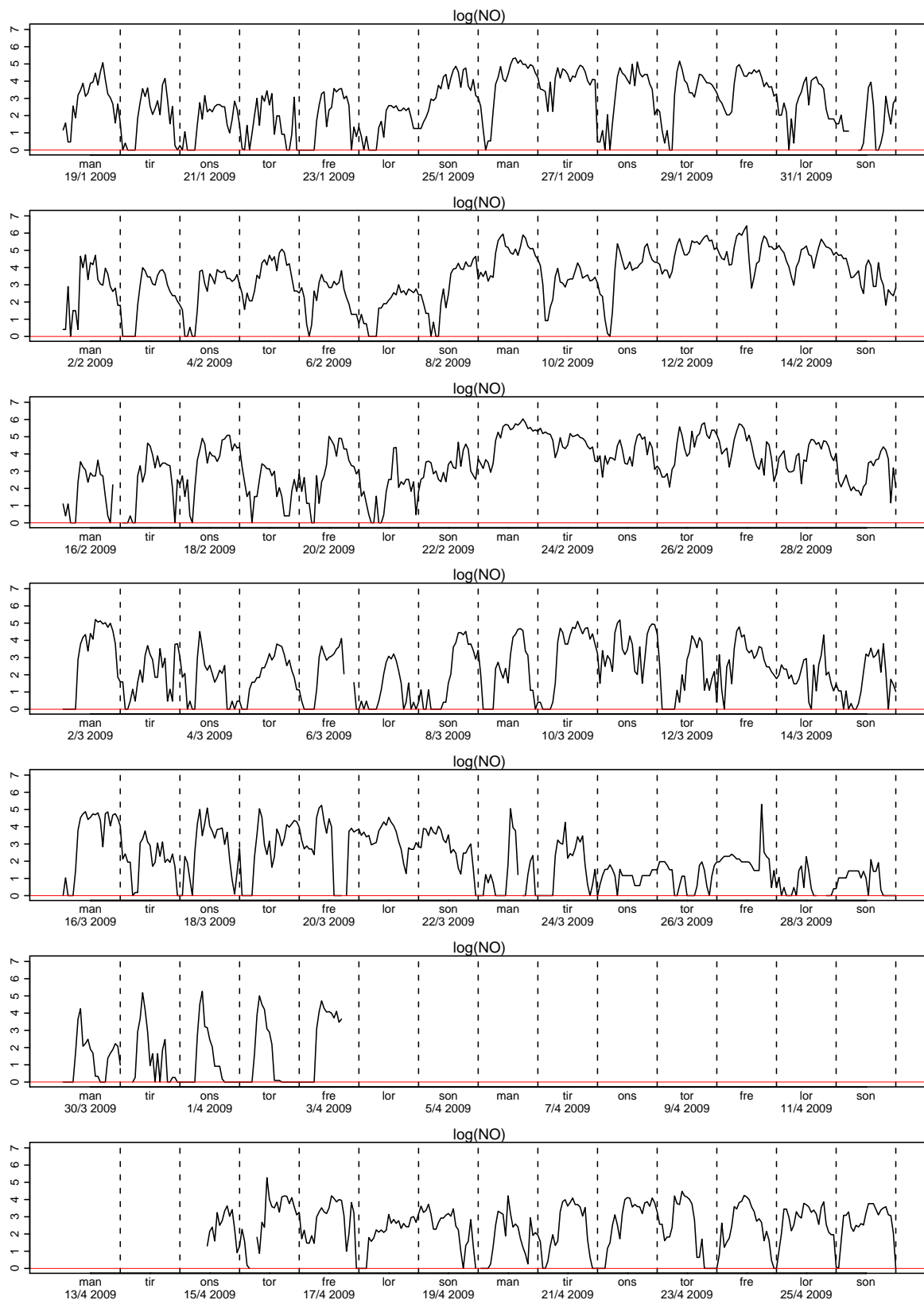


Figur 2.122. Plott av logaritmen til NO

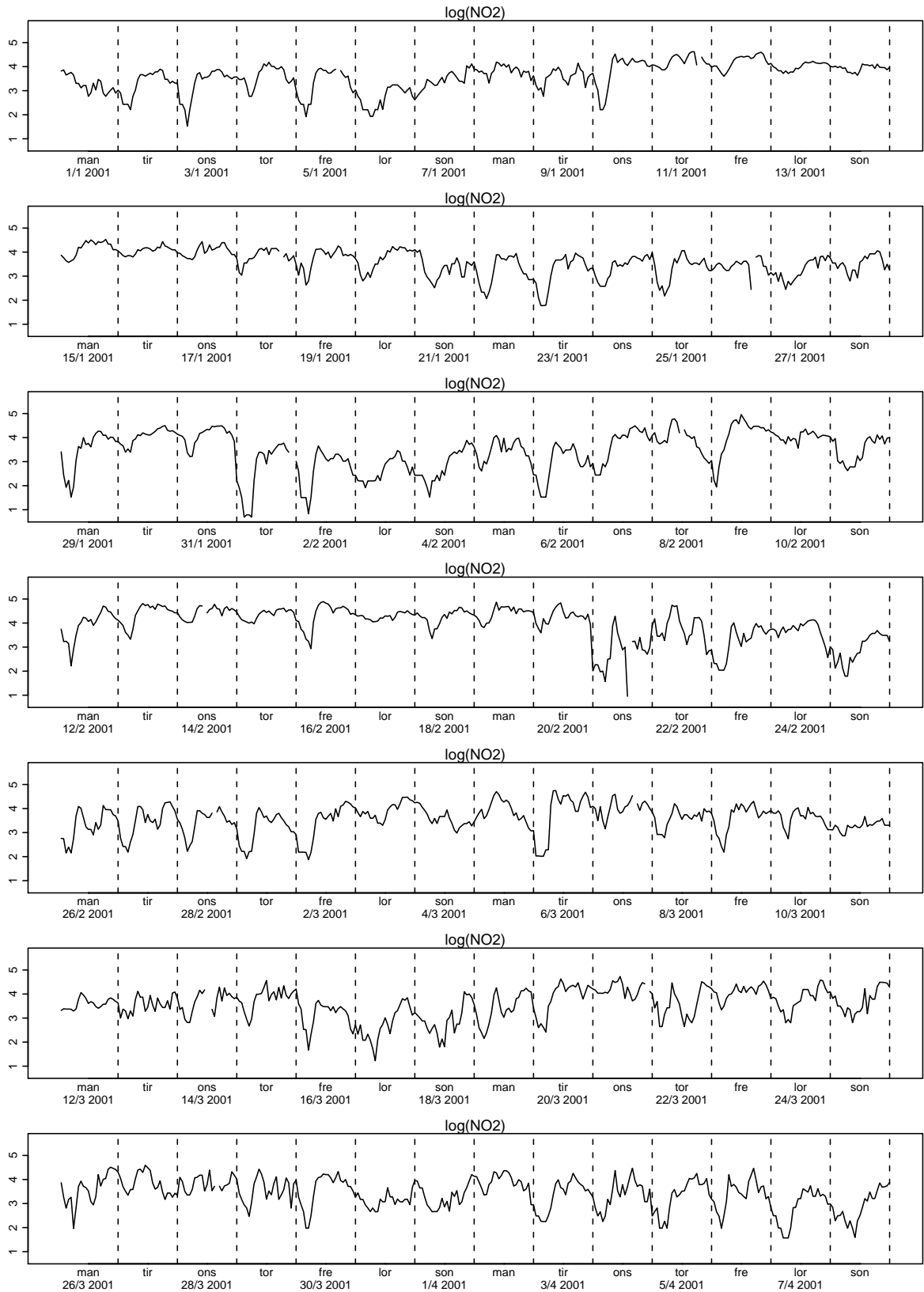




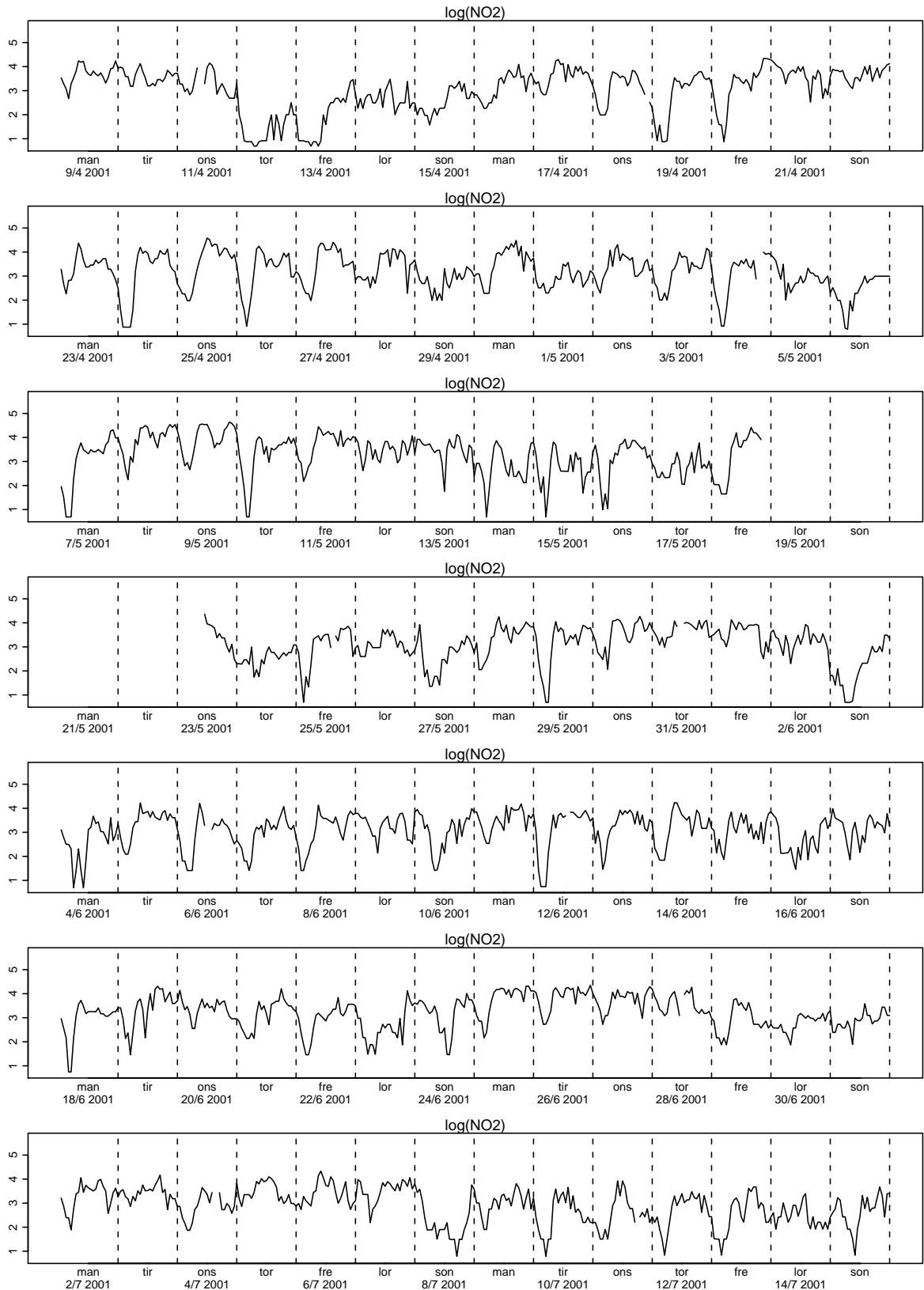
Figur 2.123. Plott av logaritmen til NO



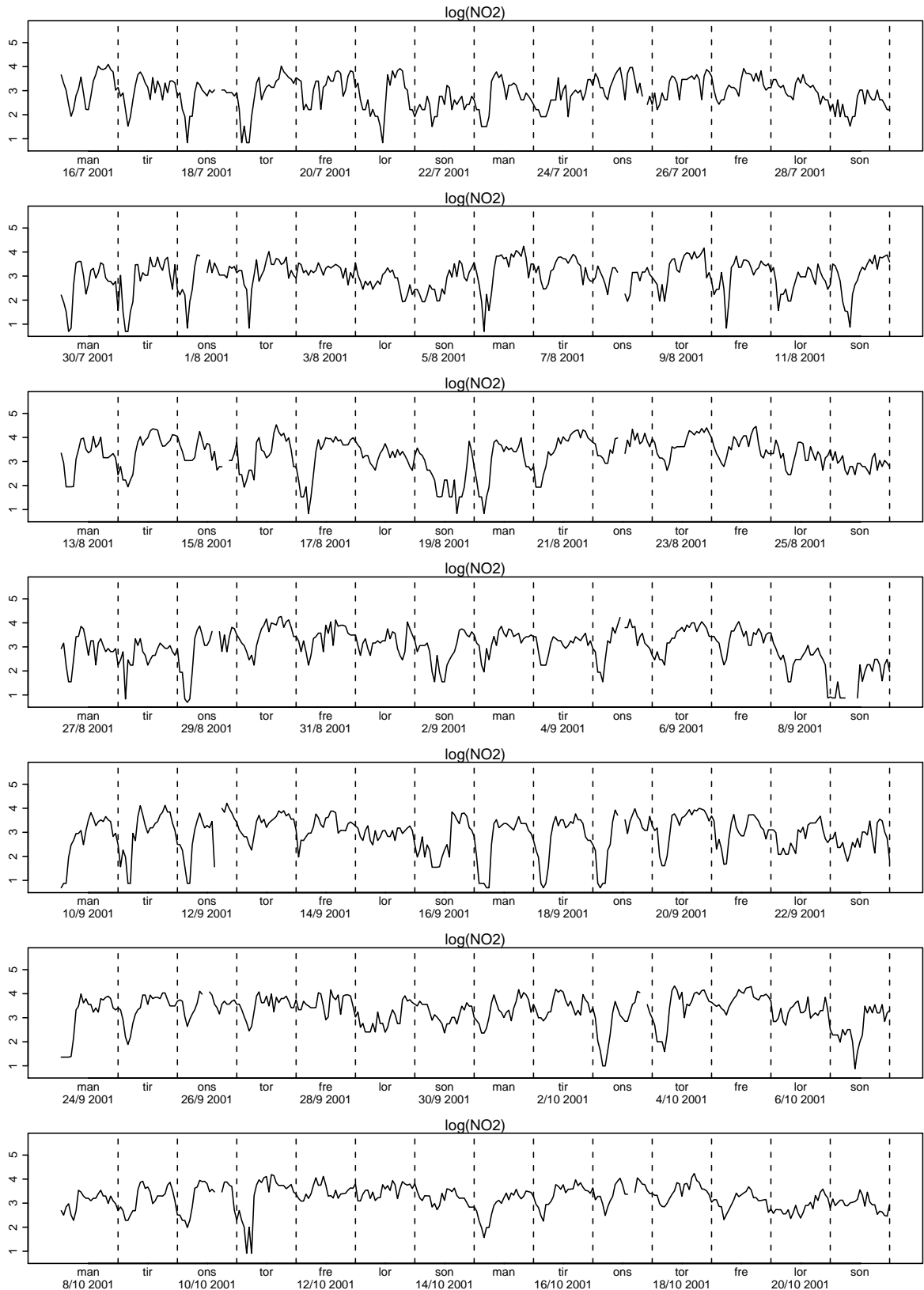
Figur 2.124. Plott av logaritmen til NO



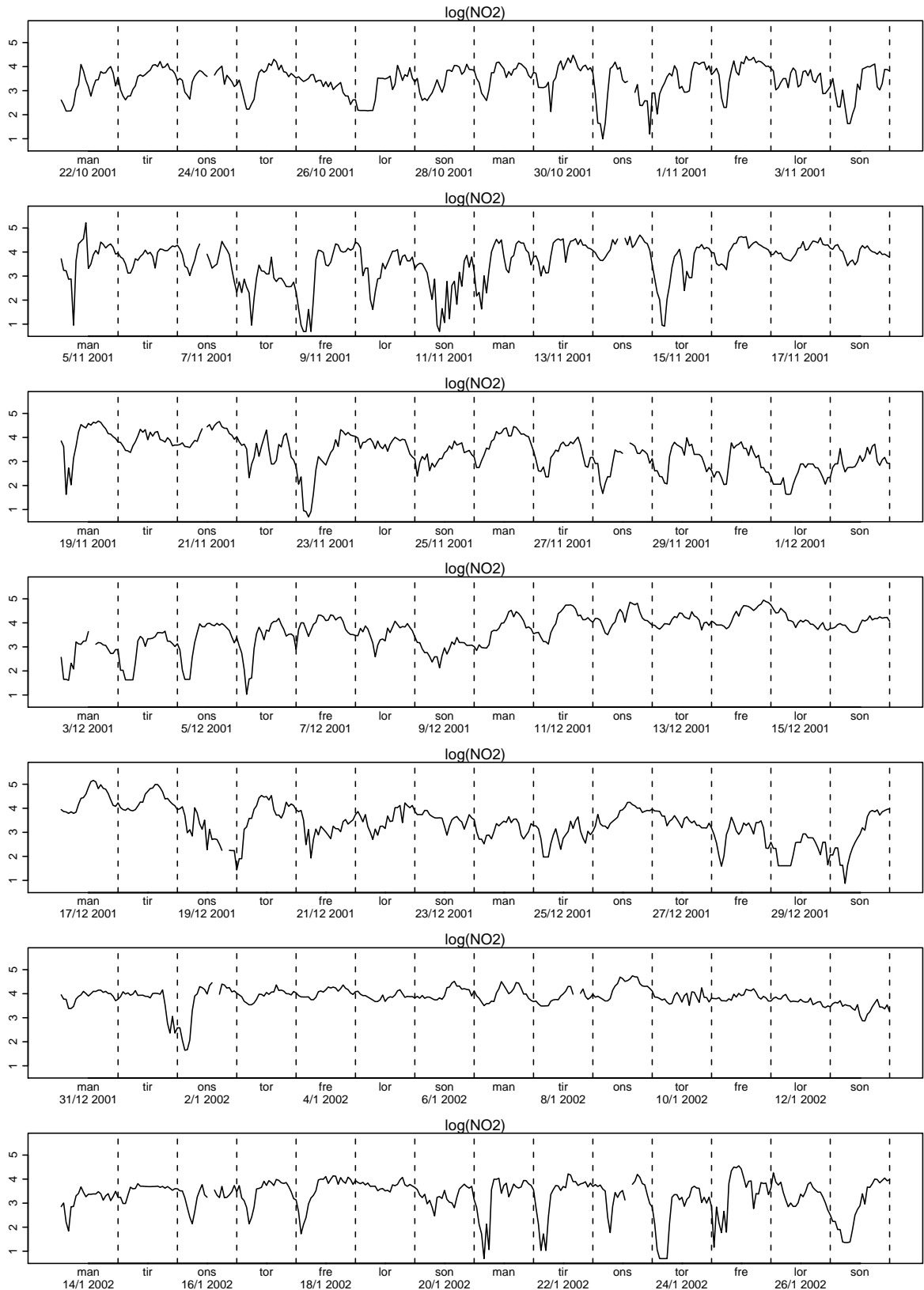
Figur 2.125. Plott av logaritmen til NO<sub>2</sub>



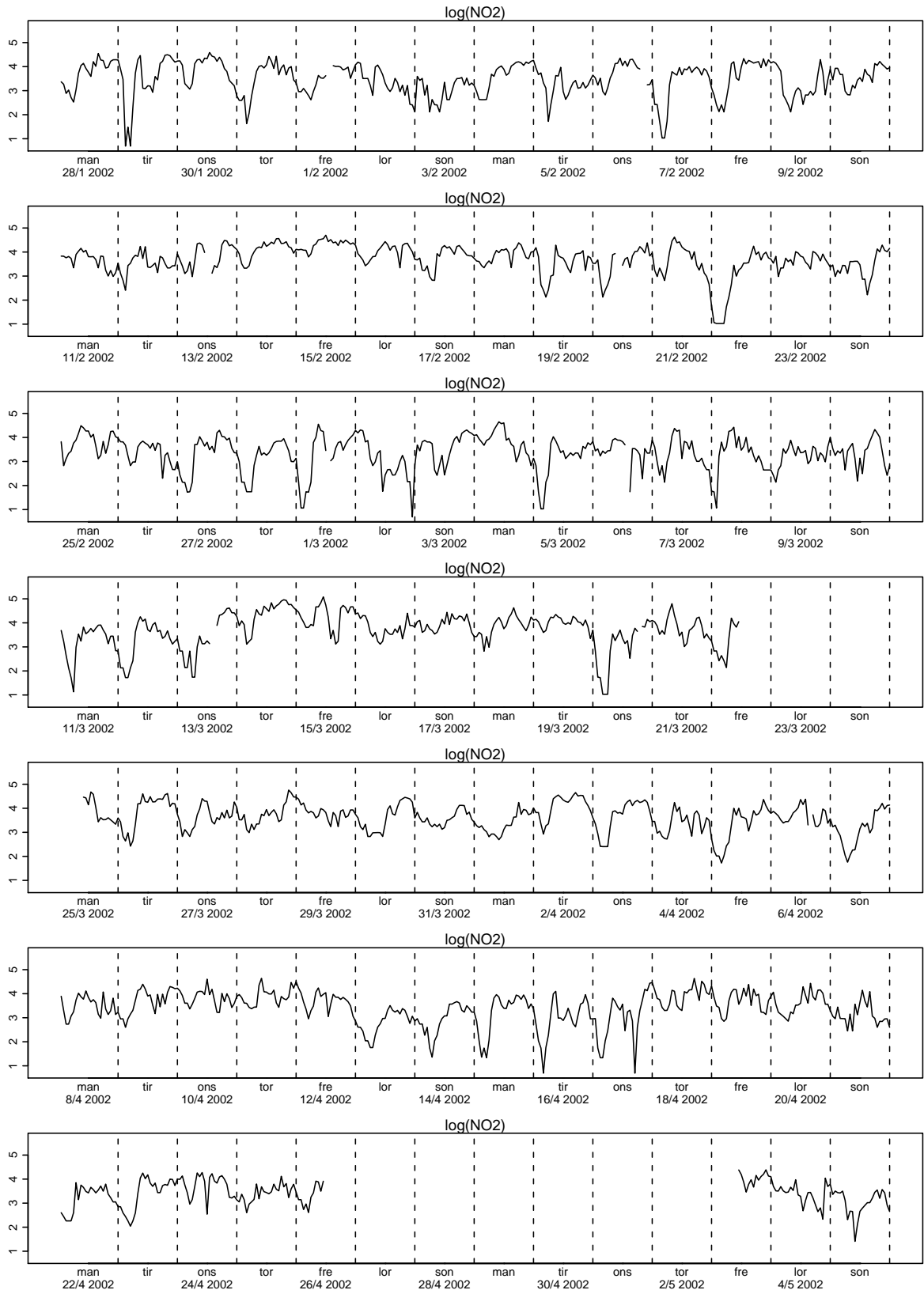
Figur 2.126. Plott av logaritmen til NO<sub>2</sub>



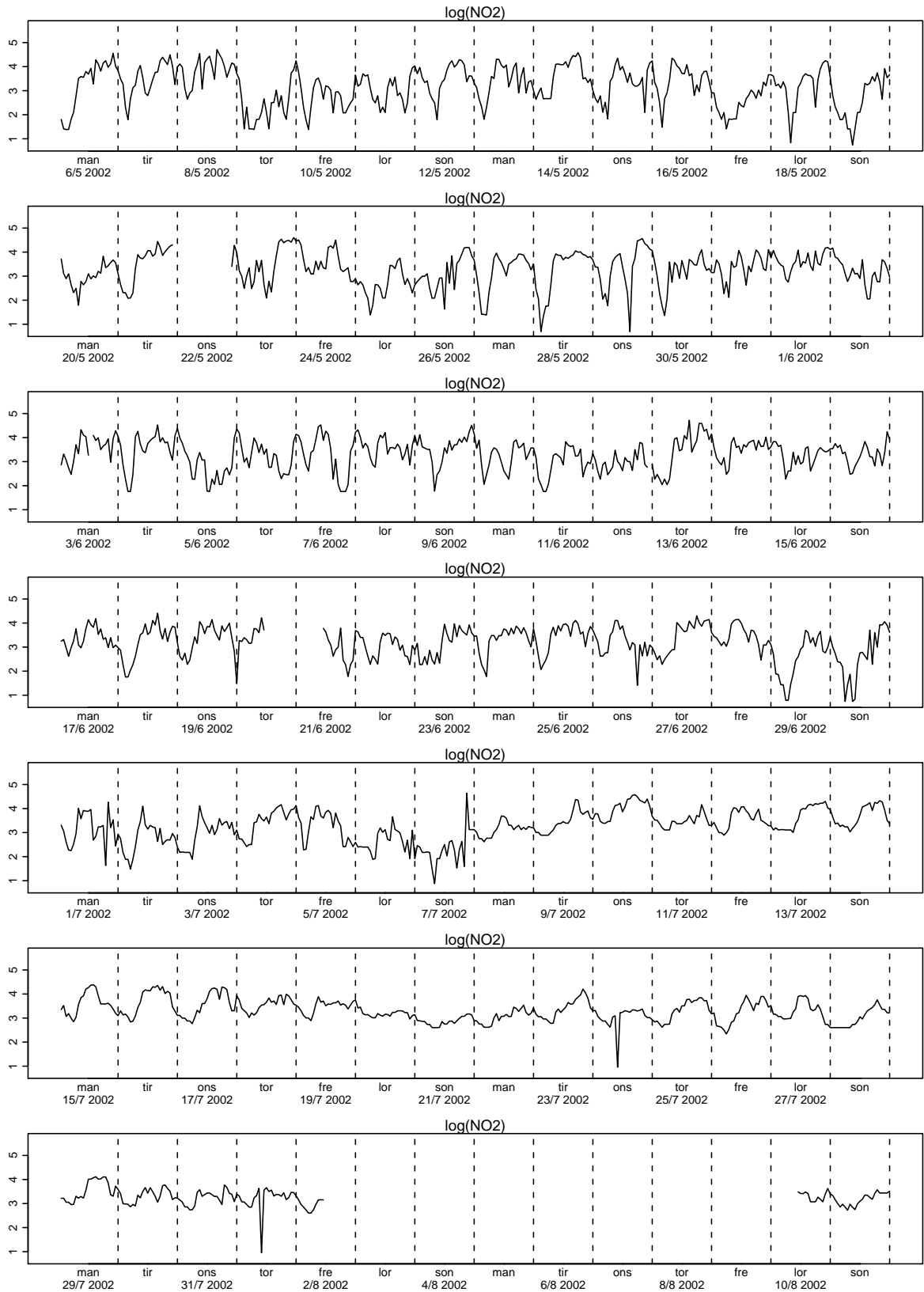
Figur 2.127. Plott av logaritmen til NO<sub>2</sub>



Figur 2.128. Plott av logaritmen til  $\text{NO}_2$

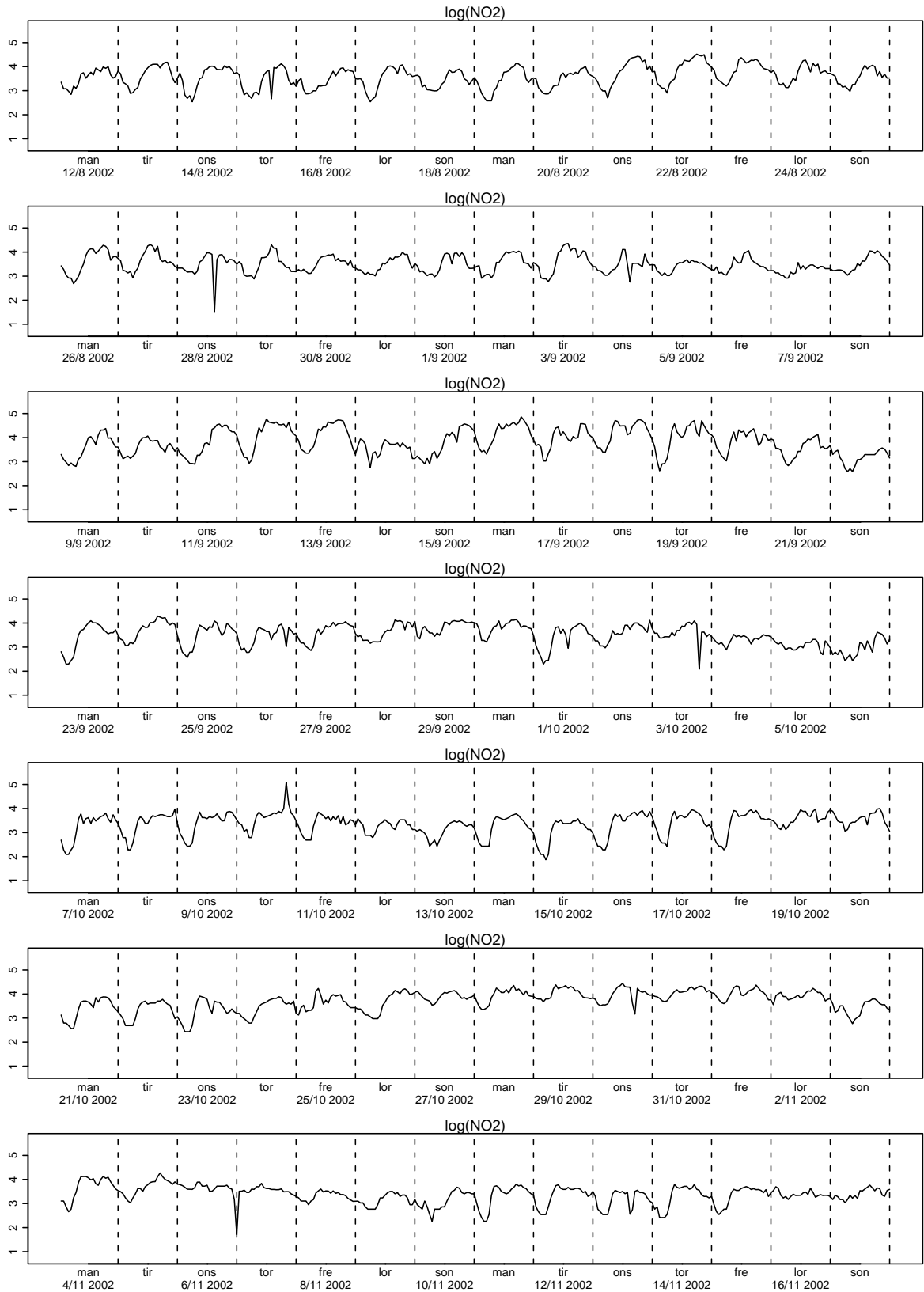


Figur 2.129. Plott av logaritmen til NO<sub>2</sub>

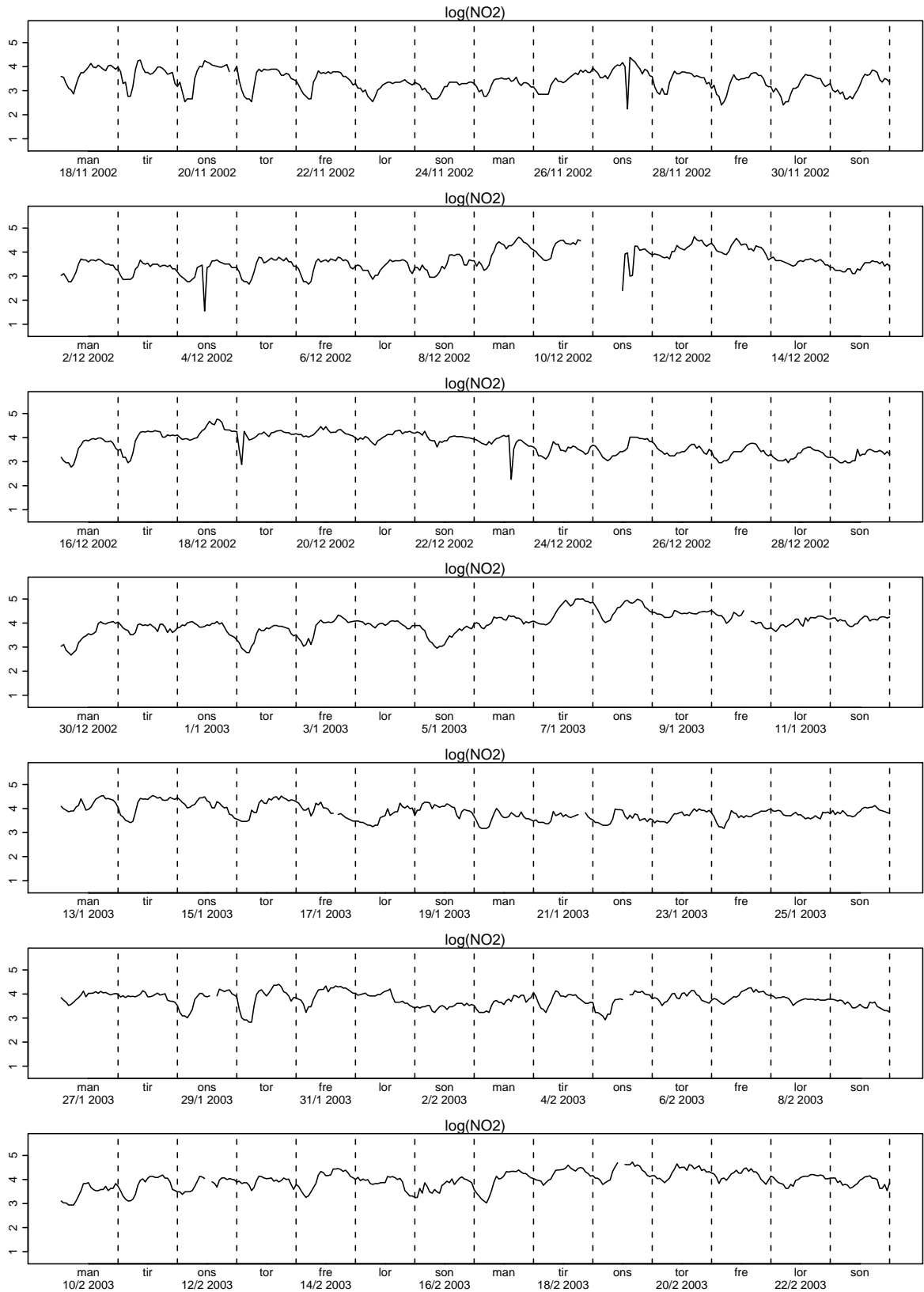


Figur 2.130. Plott av logaritmen til NO<sub>2</sub>

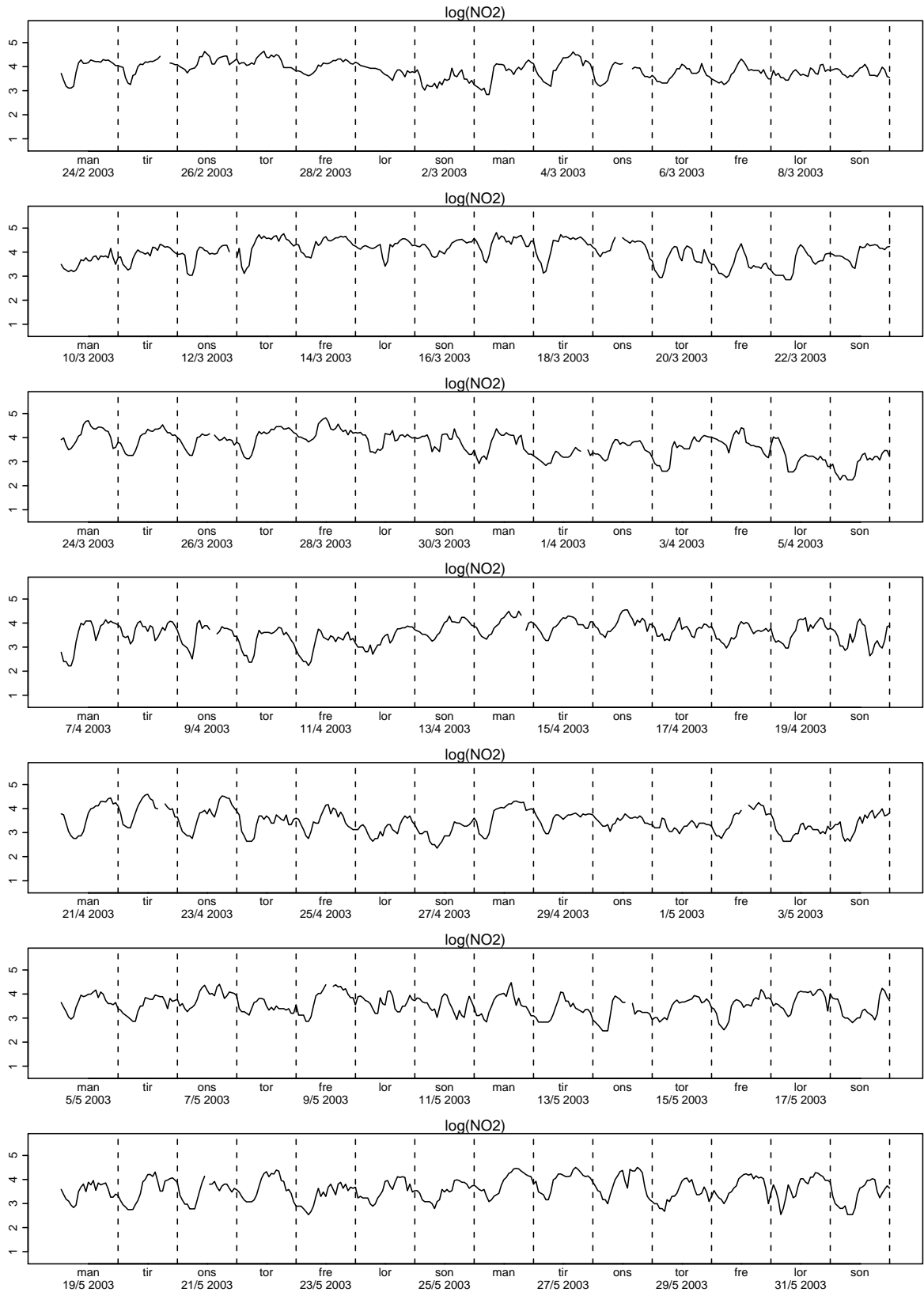




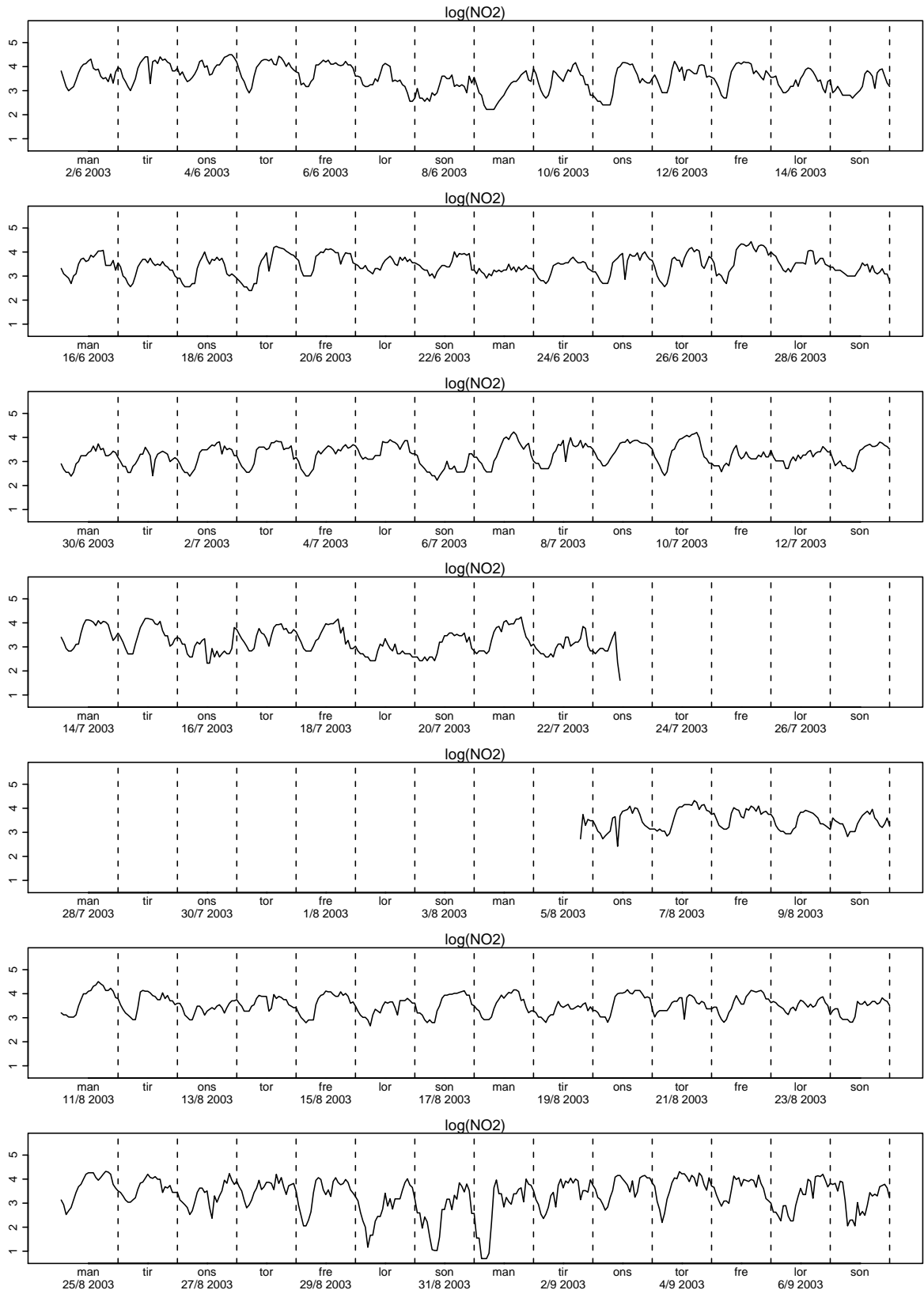
Figur 2.131. Plott av logaritmen til NO<sub>2</sub>



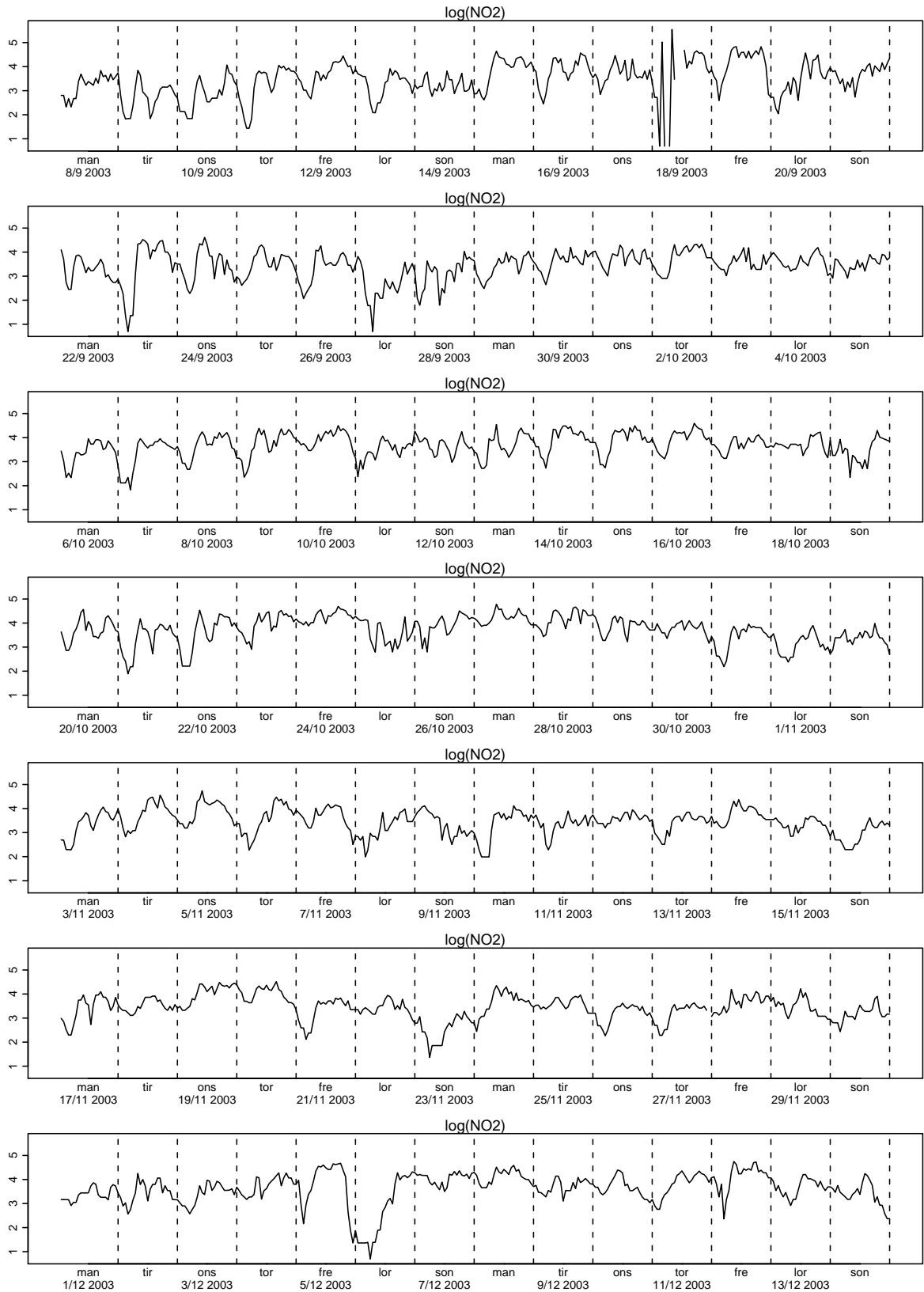
Figur 2.132. Plott av logaritmen til NO<sub>2</sub>



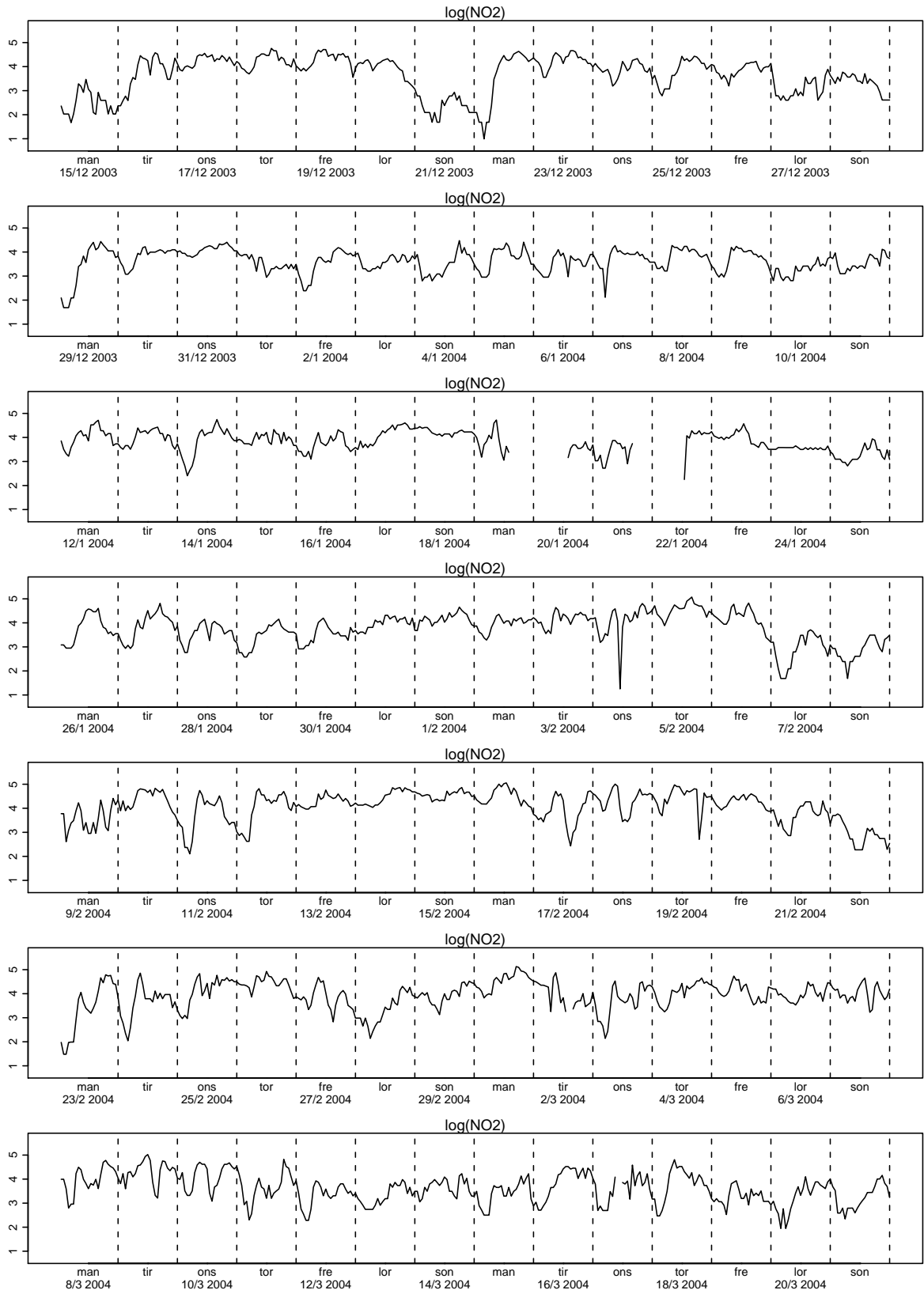
Figur 2.133. Plott av logaritmen til NO<sub>2</sub>



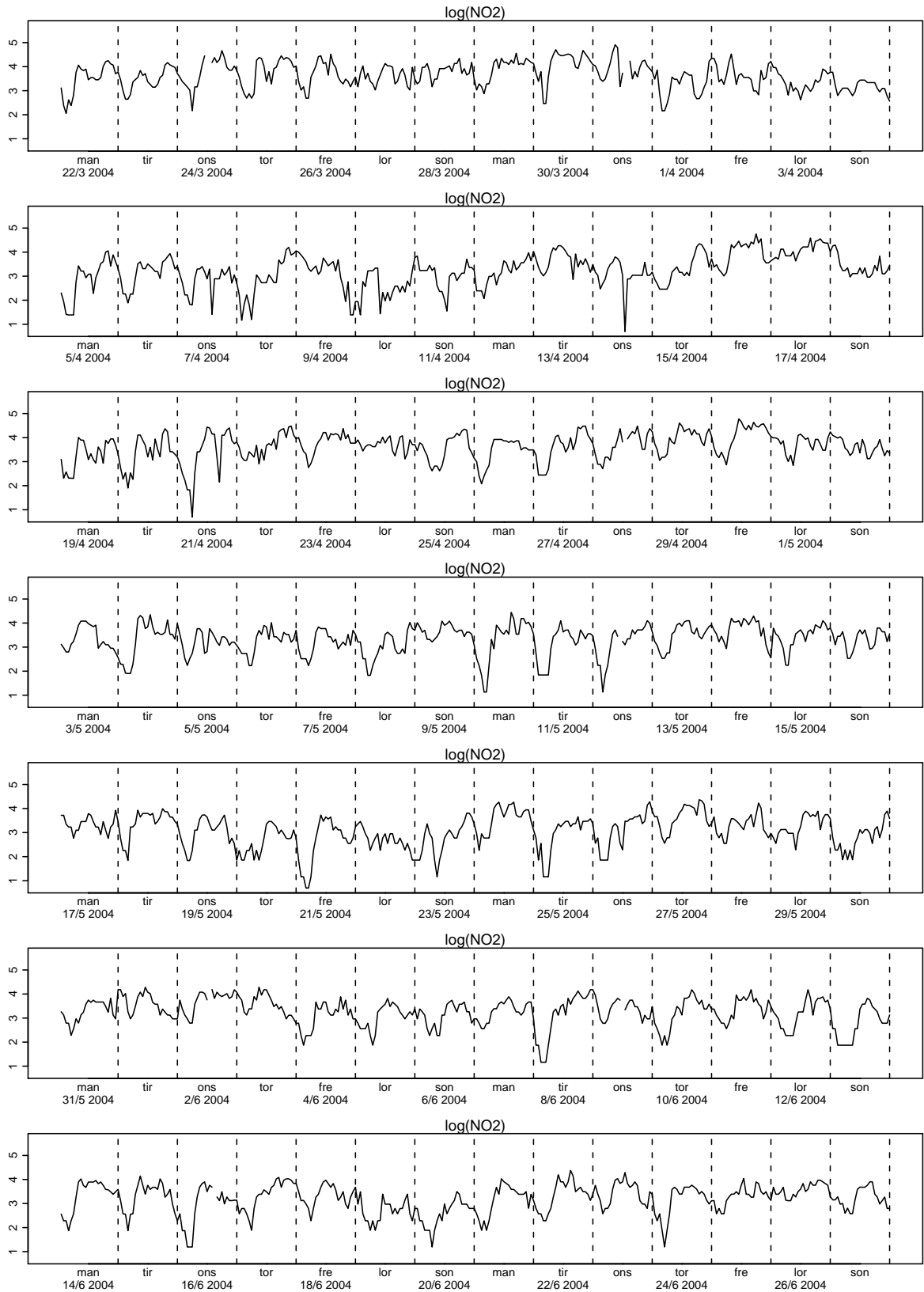
Figur 2.134. Plott av logaritmen til NO<sub>2</sub>



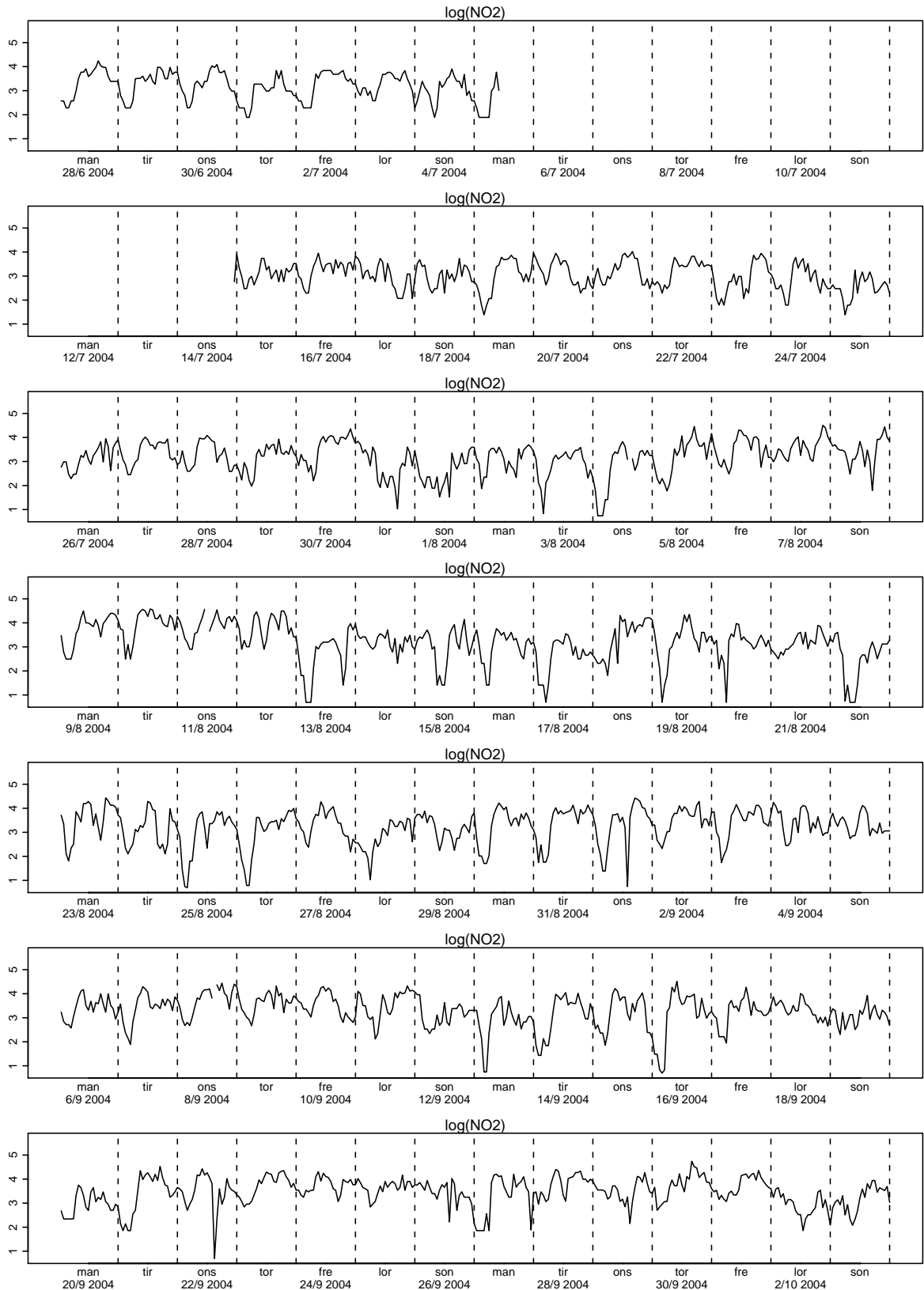
Figur 2.135. Plott av logaritmen til NO<sub>2</sub>



Figur 2.136. Plott av logaritmen til  $\text{NO}_2$

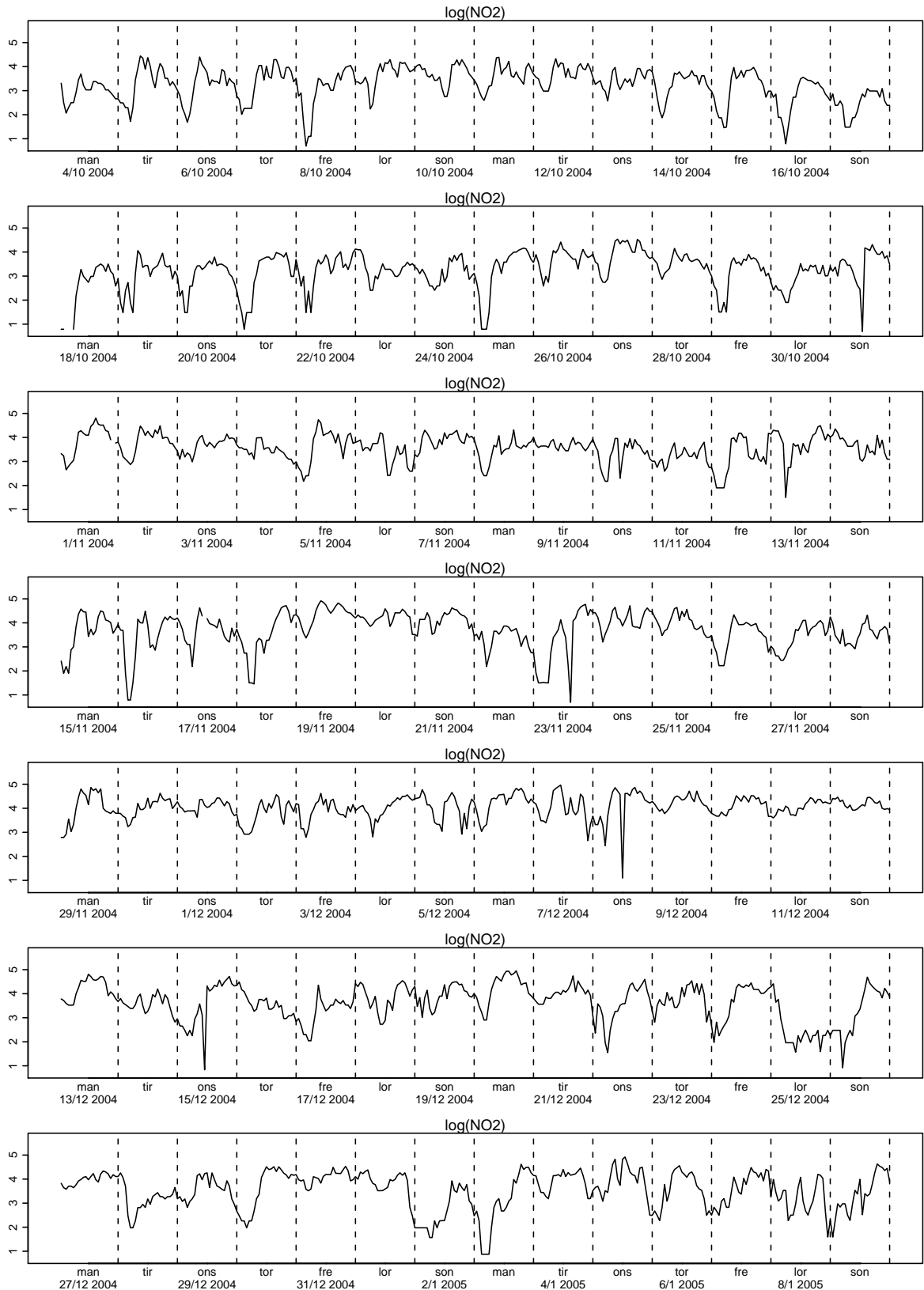


Figur 2.137. Plott av logaritmen til NO<sub>2</sub>

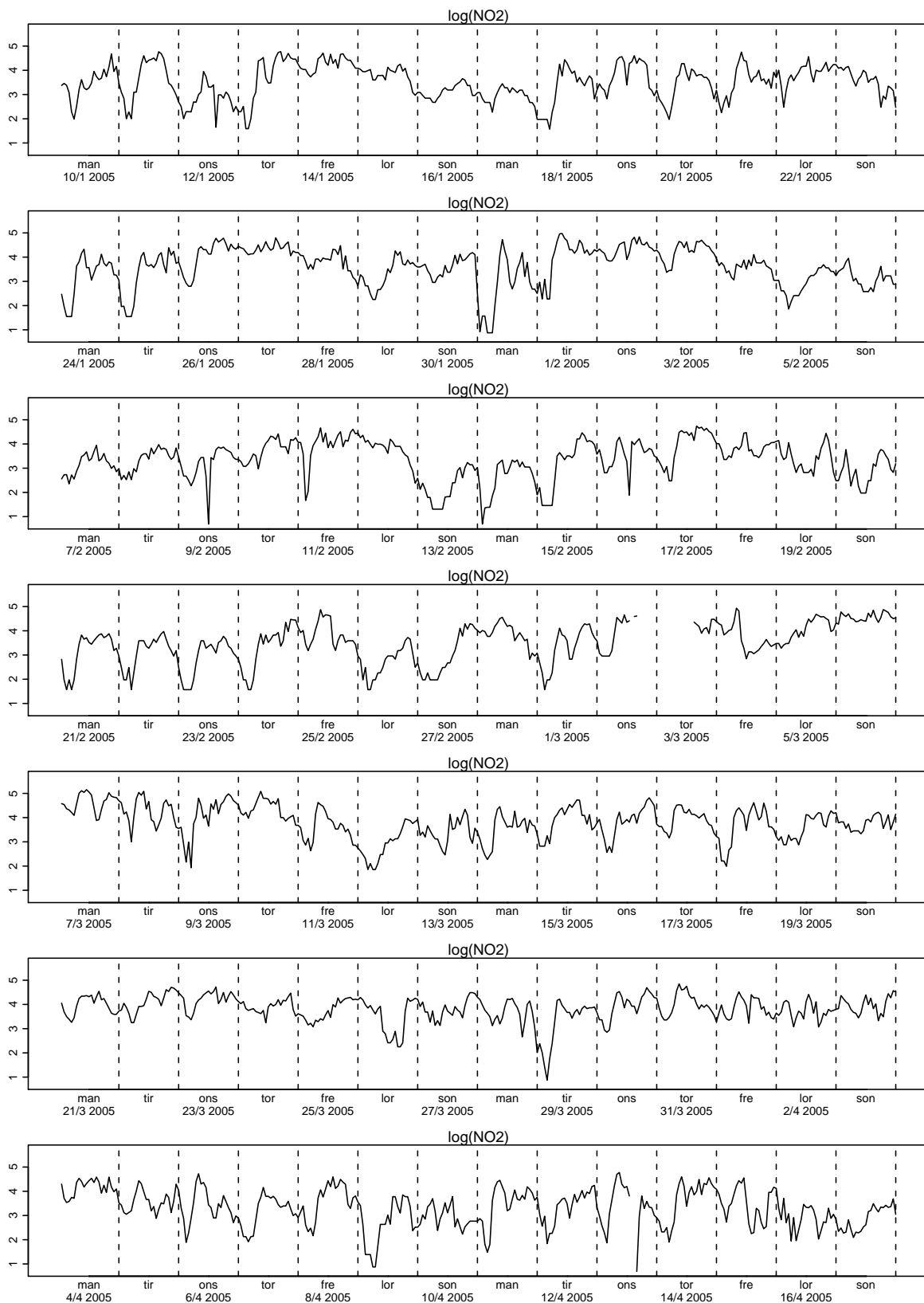


Figur 2.138. Plott av logaritmen til NO<sub>2</sub>

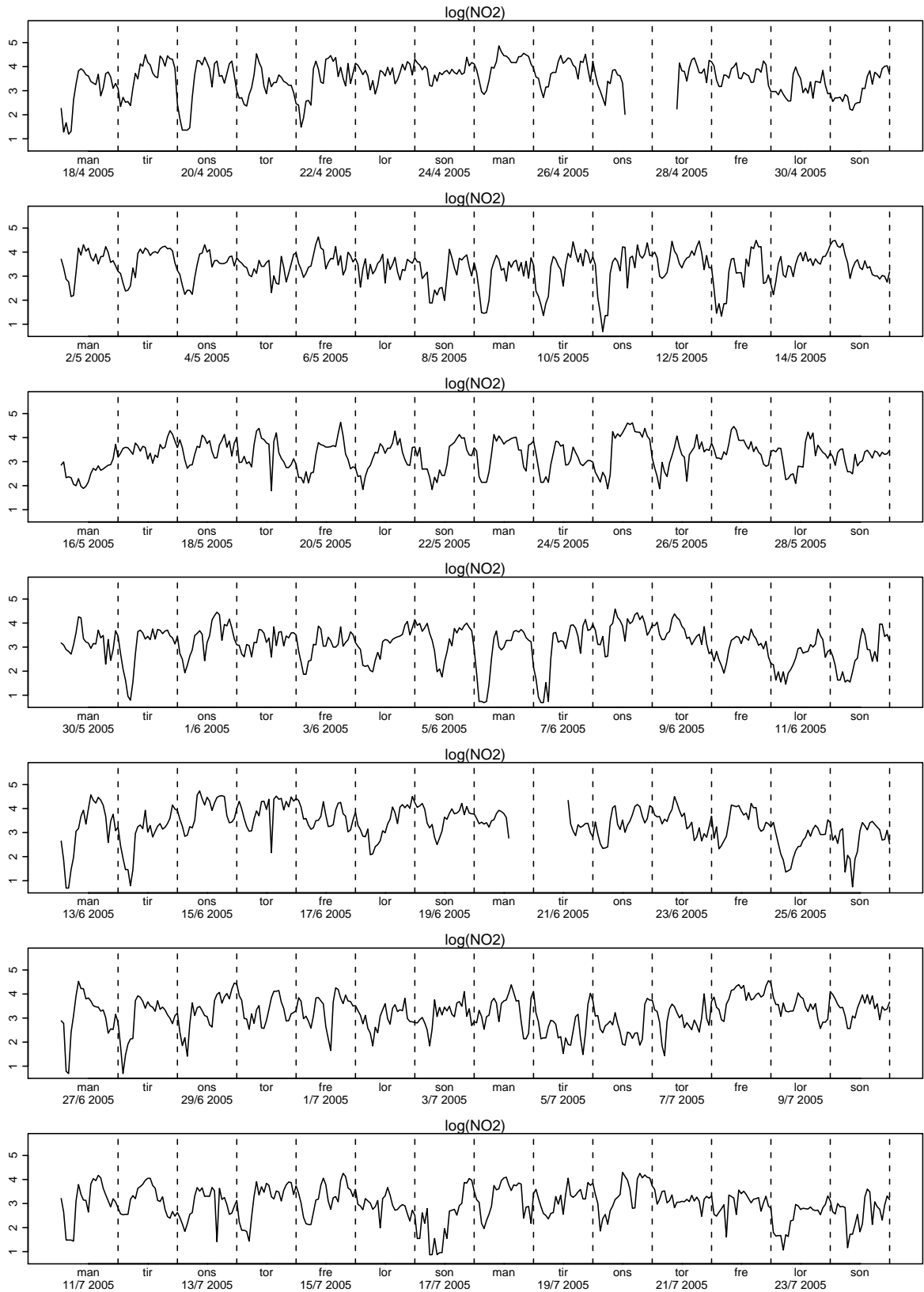




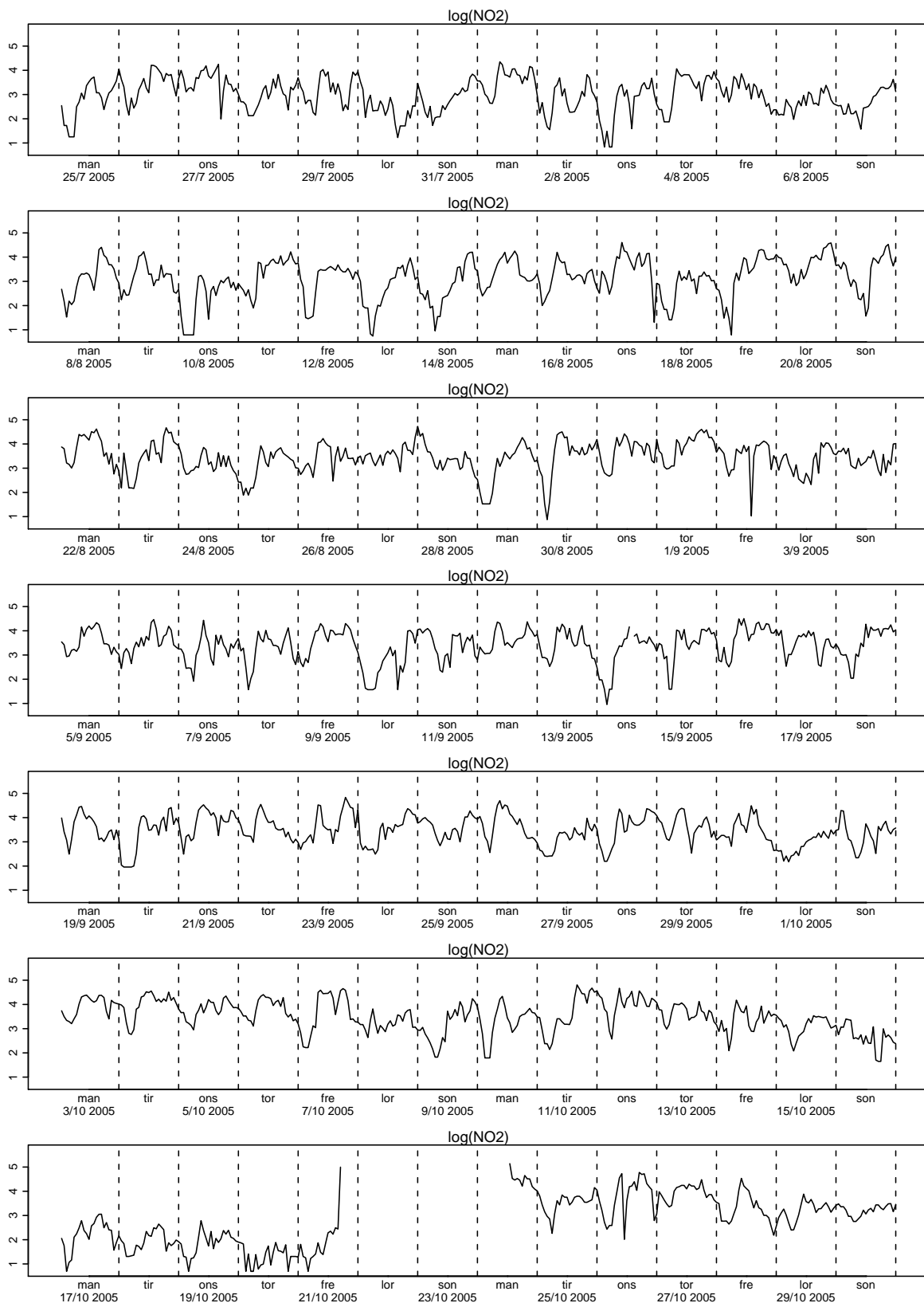
Figur 2.139. Plott av logaritmen til NO<sub>2</sub>



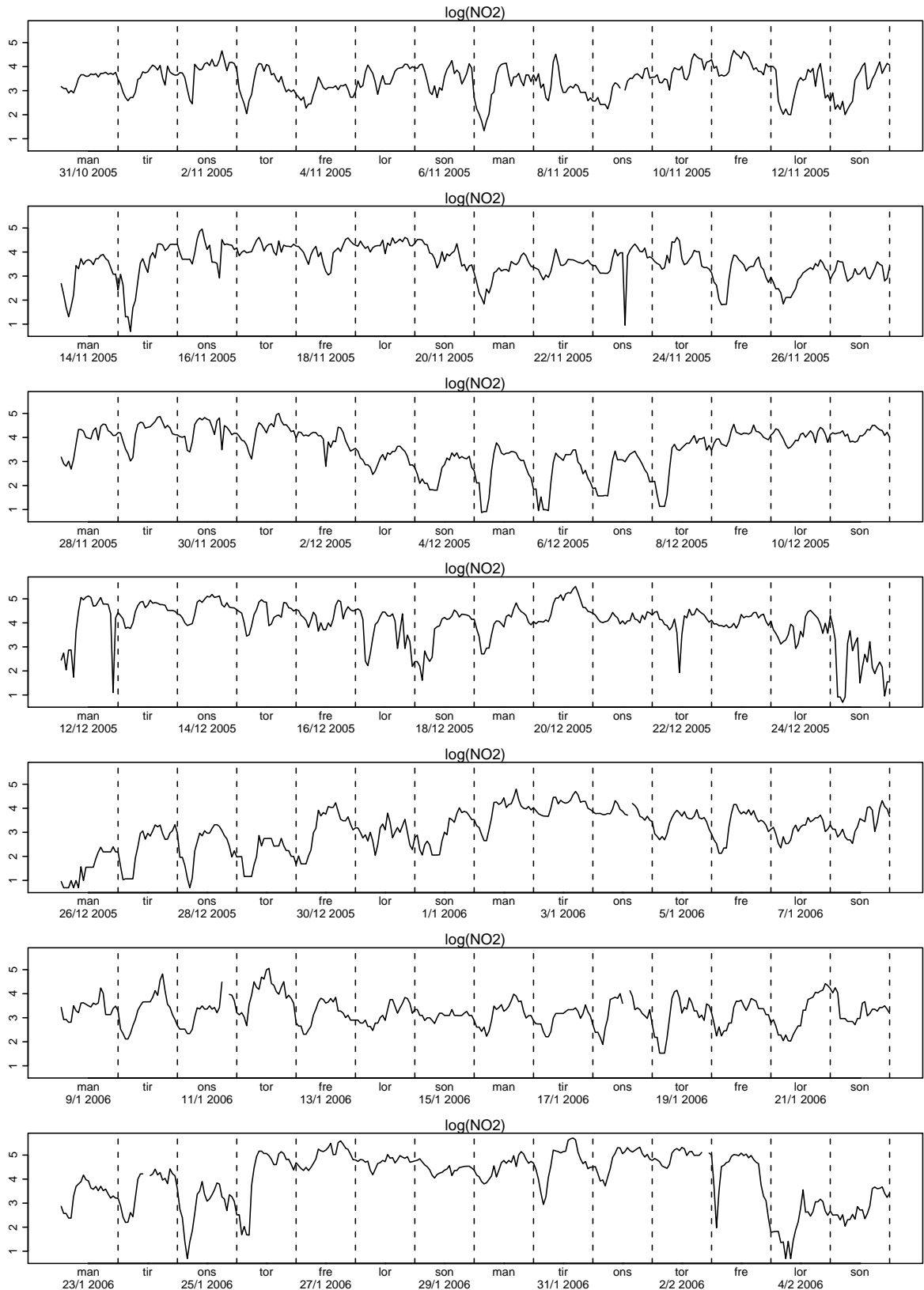
Figur 2.140. Plott av logaritmen til  $\text{NO}_2$



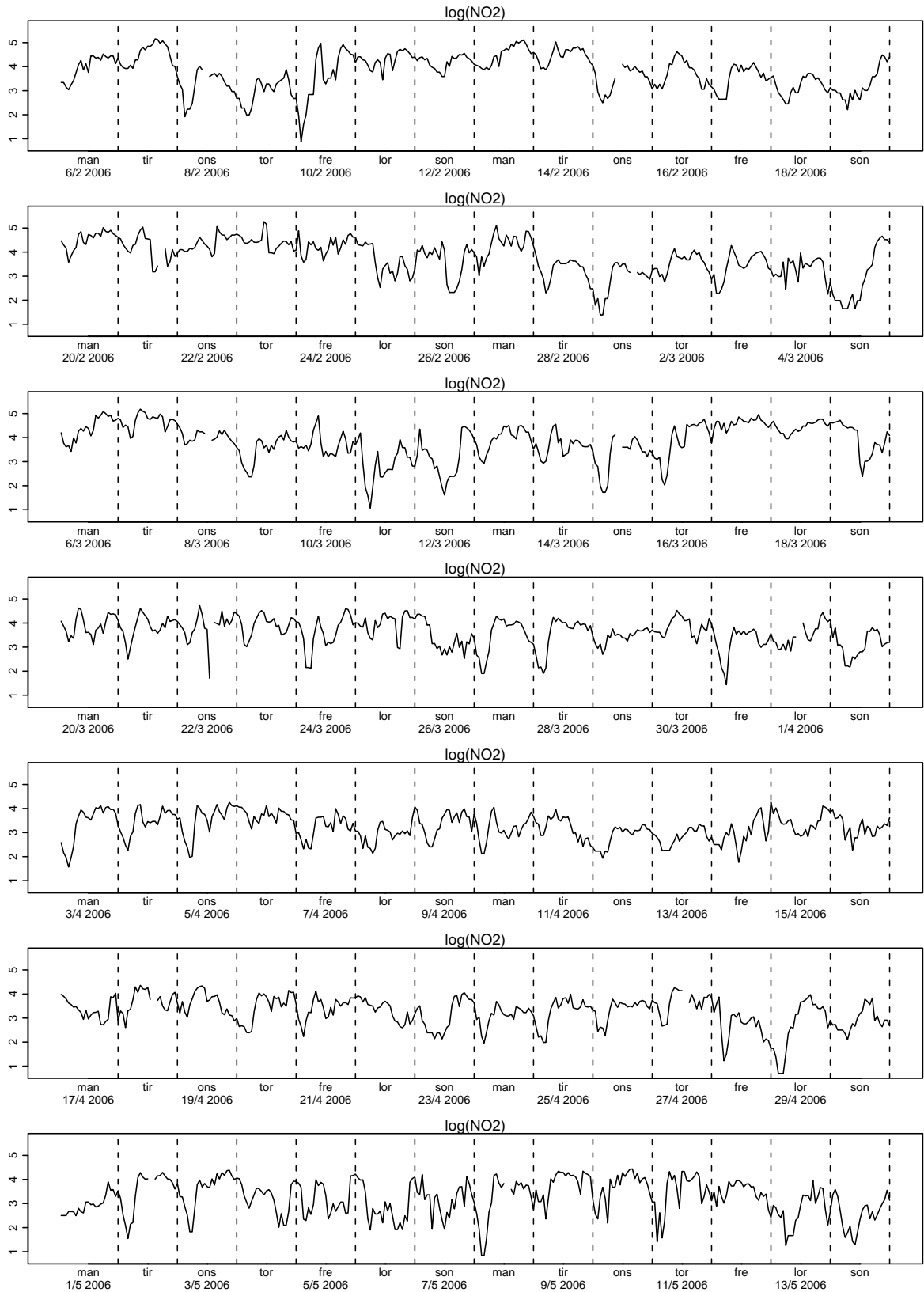
Figur 2.141. Plott av logaritmen til NO<sub>2</sub>



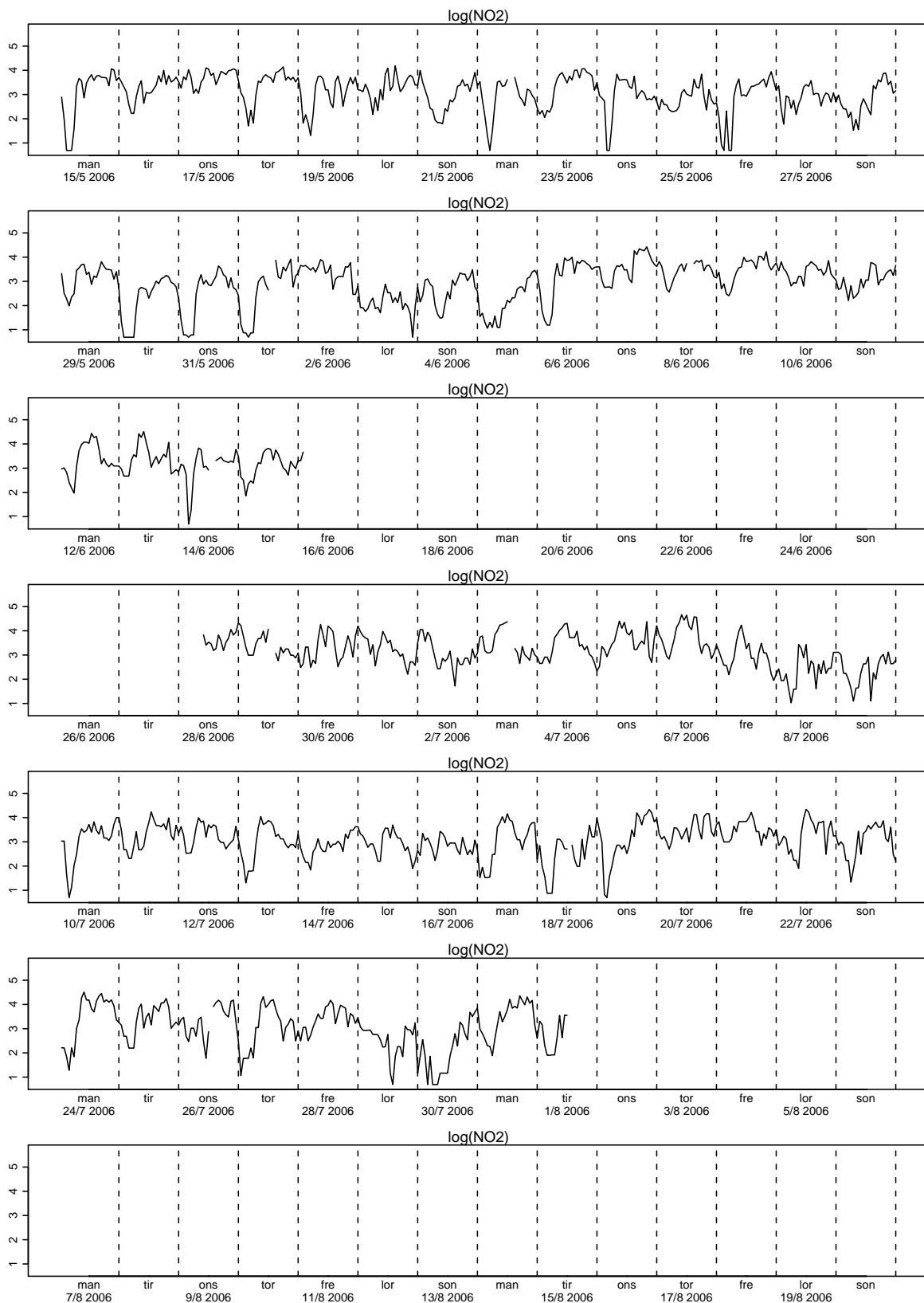
Figur 2.142. Plott av logaritmen til NO<sub>2</sub>



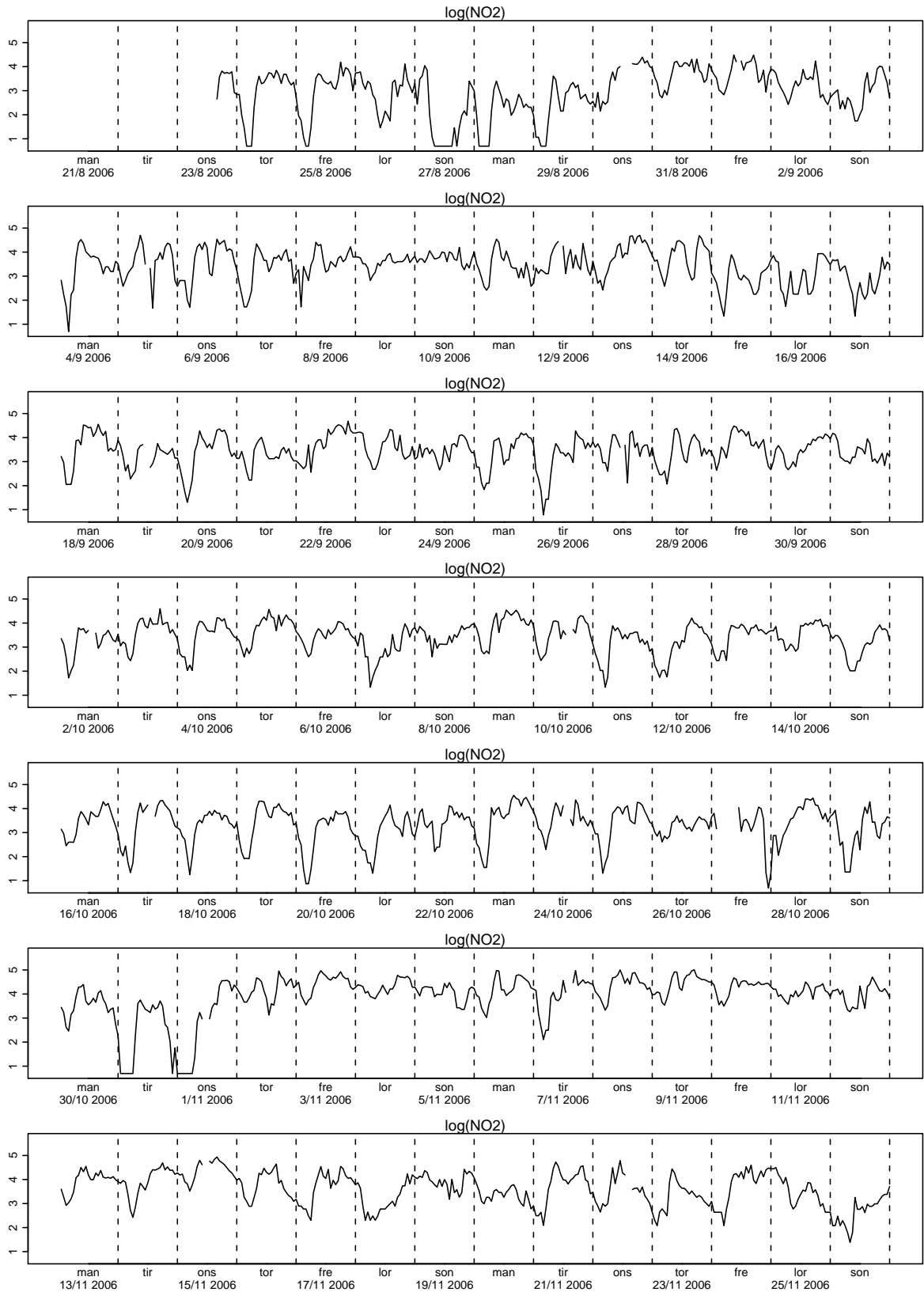
Figur 2.143. Plott av logaritmen til NO<sub>2</sub>



Figur 2.144. Plott av logaritmen til NO<sub>2</sub>

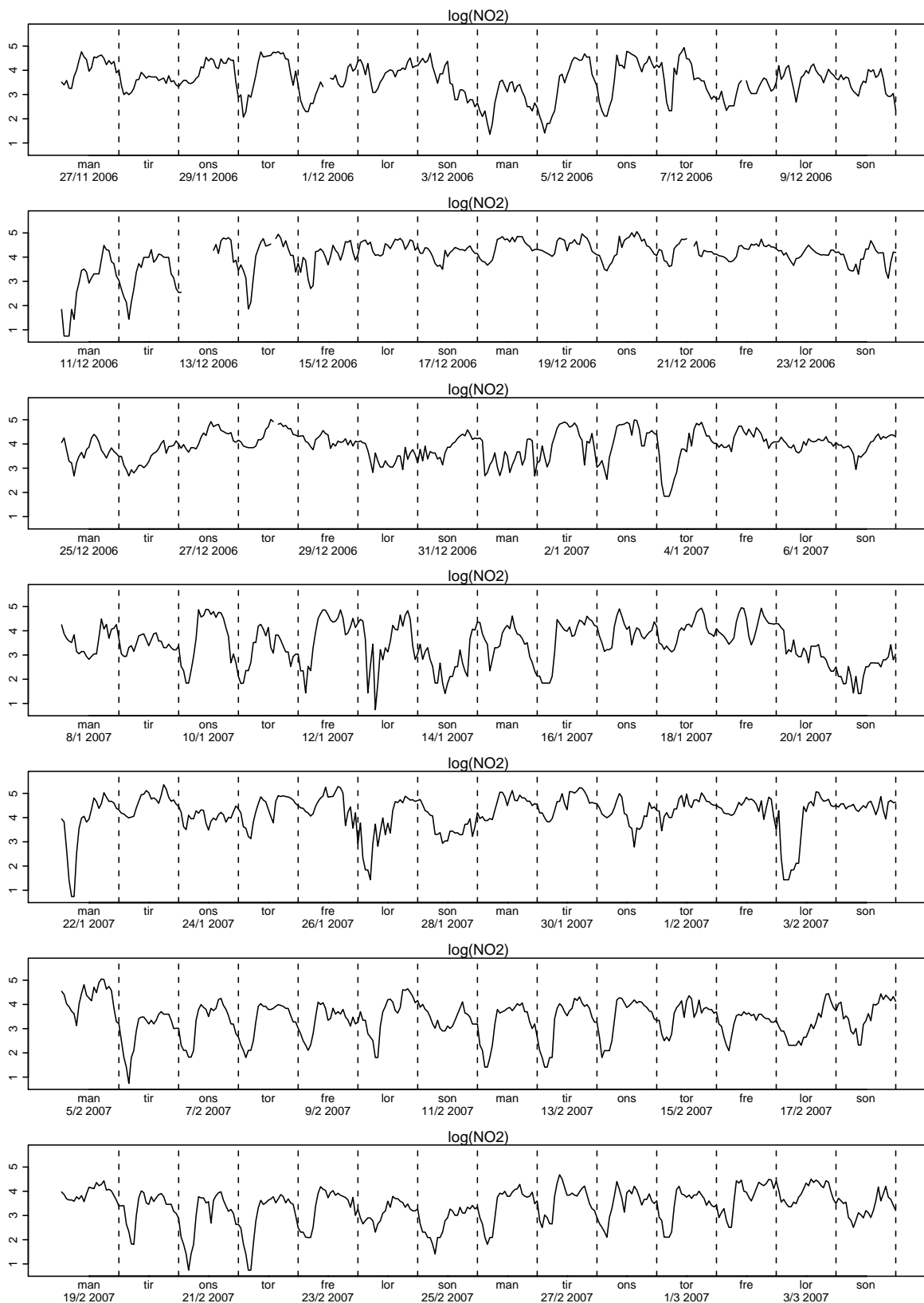


Figur 2.145. Plott av logaritmen til NO<sub>2</sub>

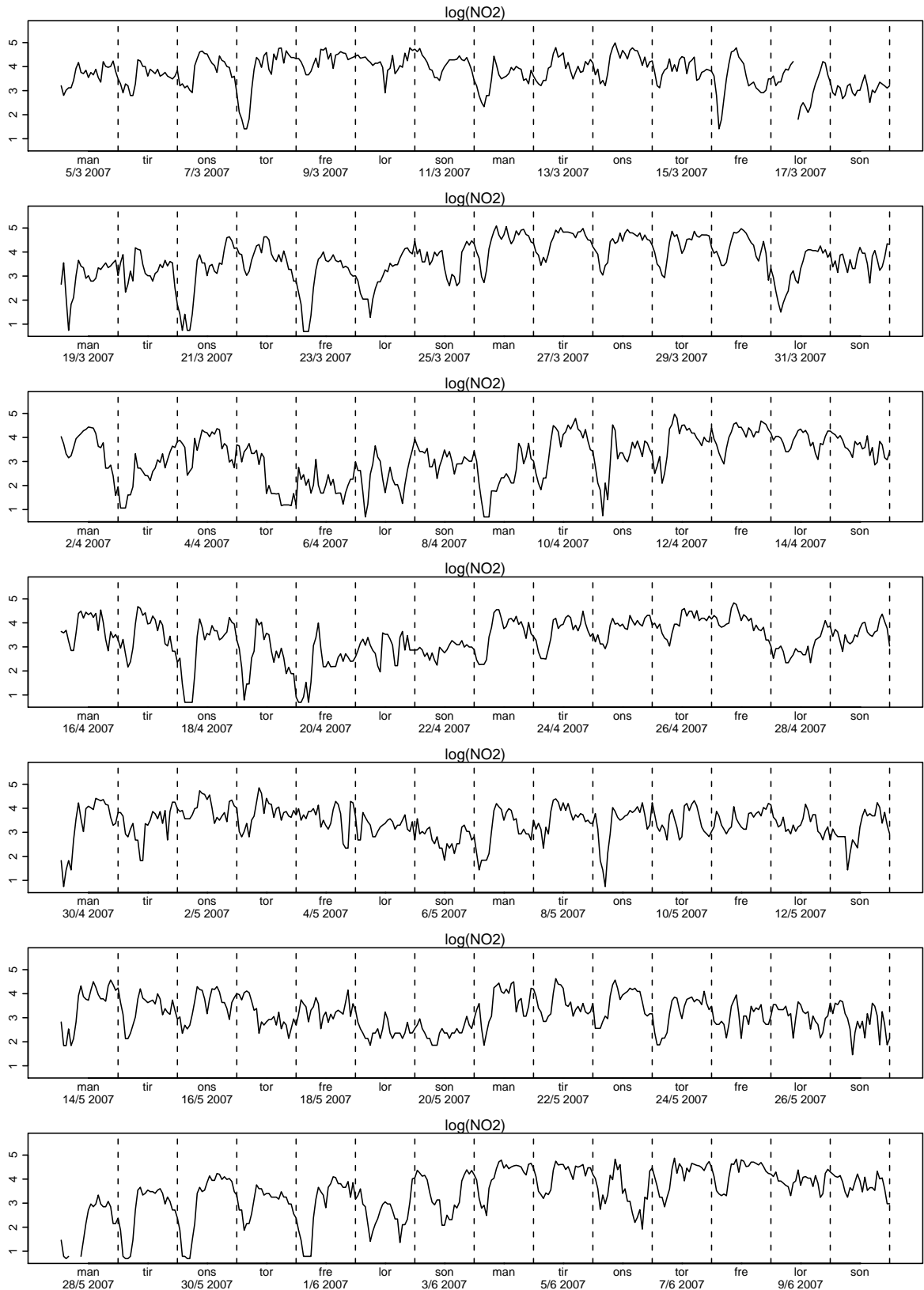


Figur 2.146. Plott av logaritmen til  $\text{NO}_2$

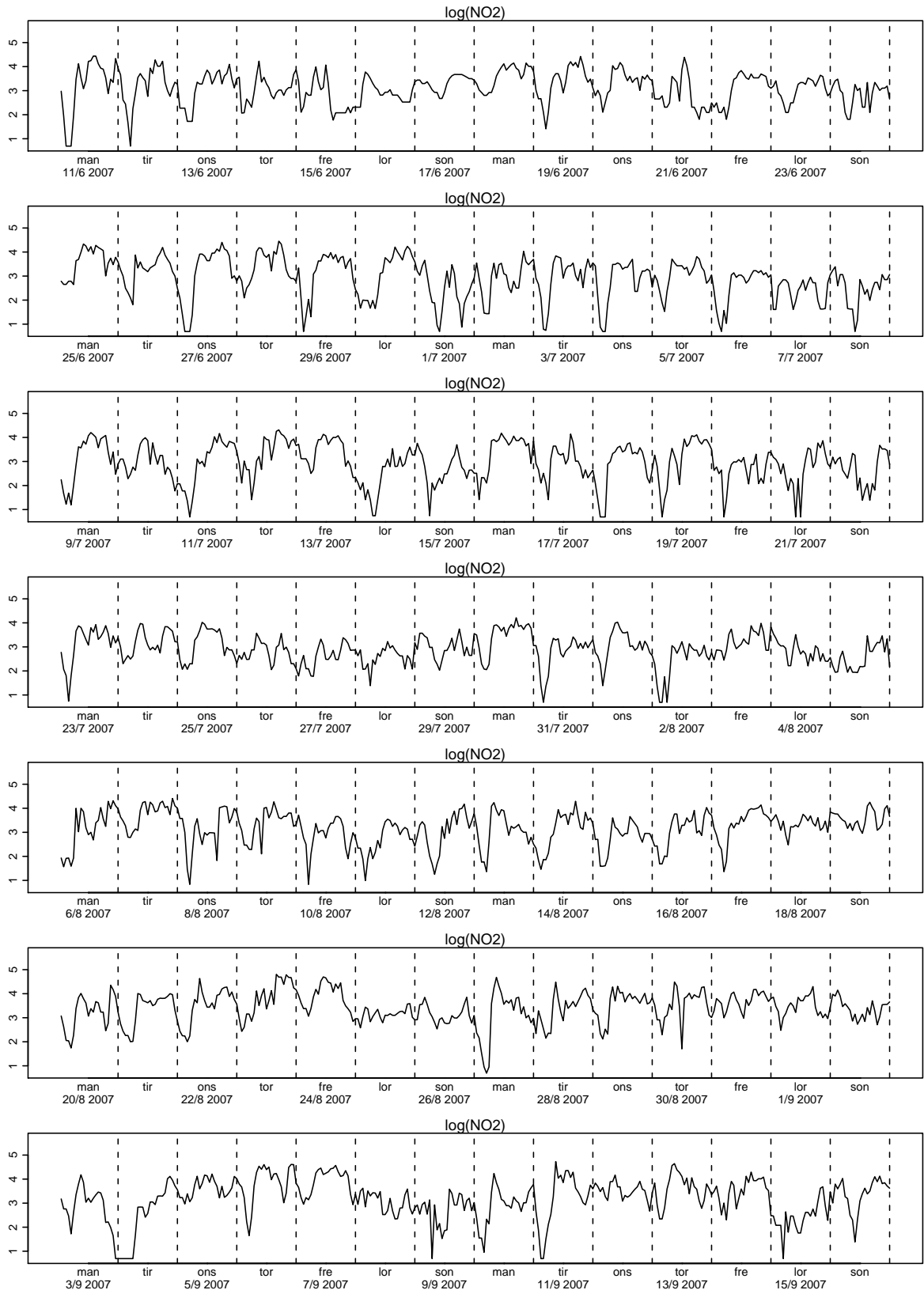




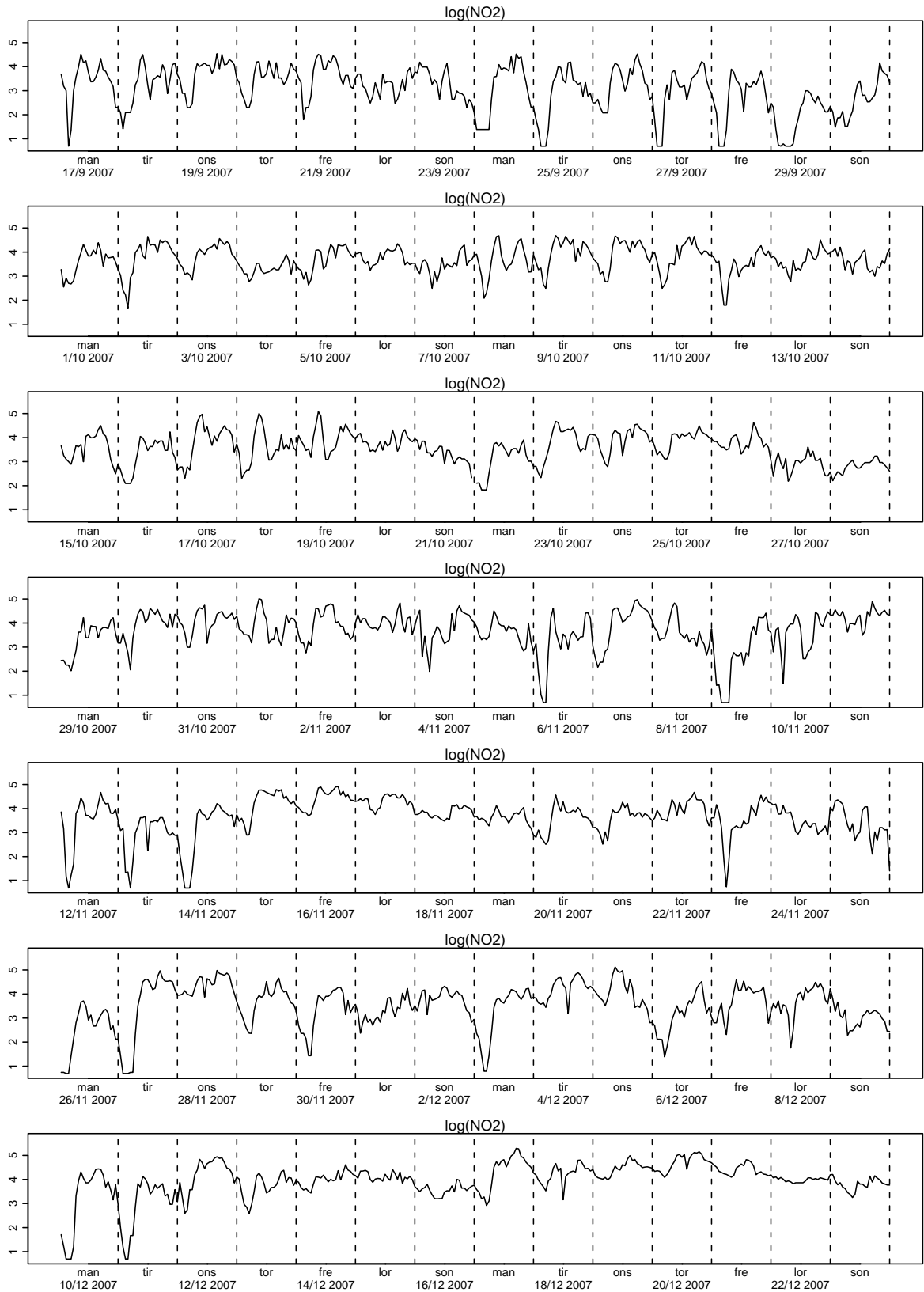
Figur 2.147. Plott av logaritmen til NO<sub>2</sub>



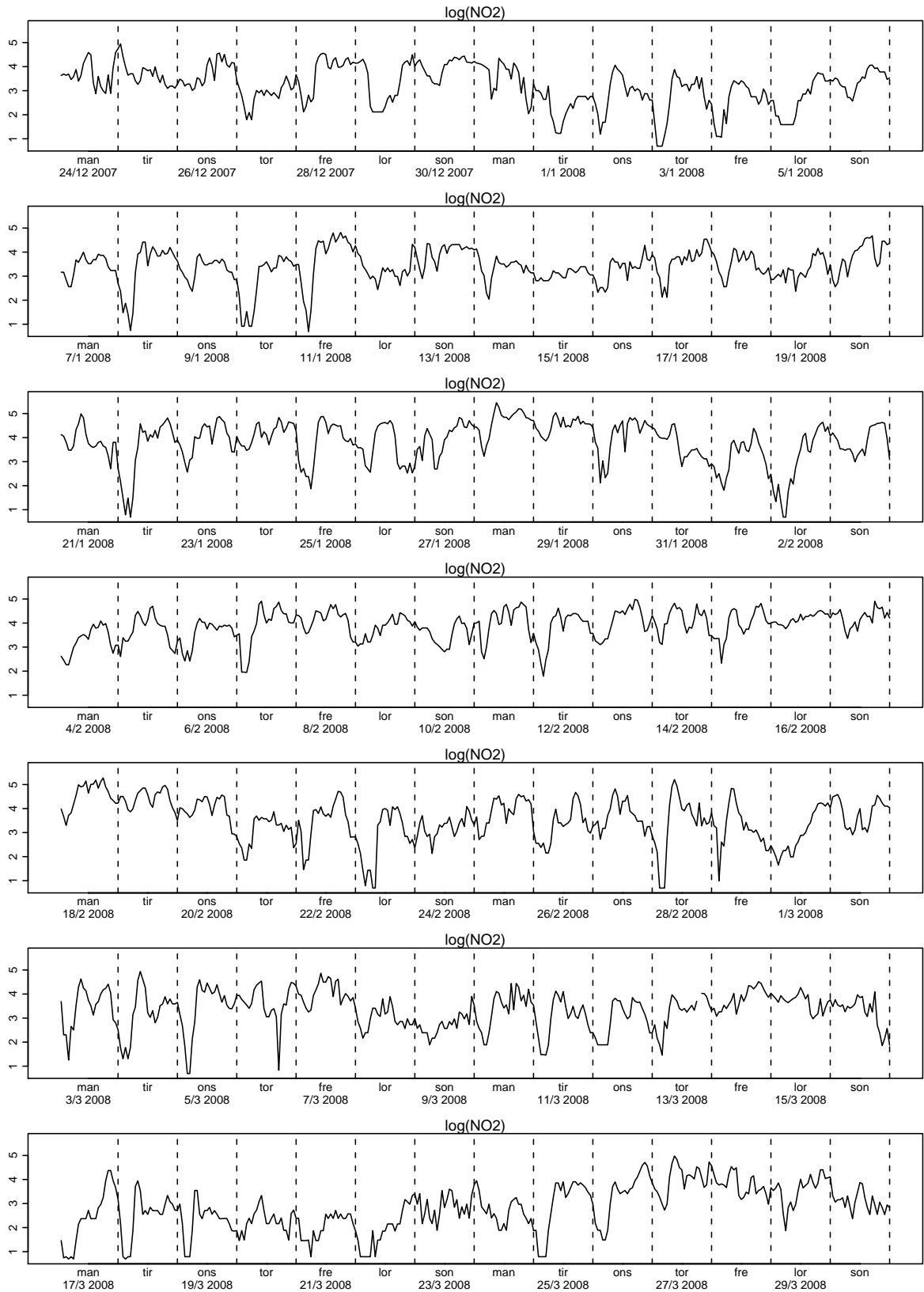
Figur 2.148. Plott av logaritmen til  $\text{NO}_2$



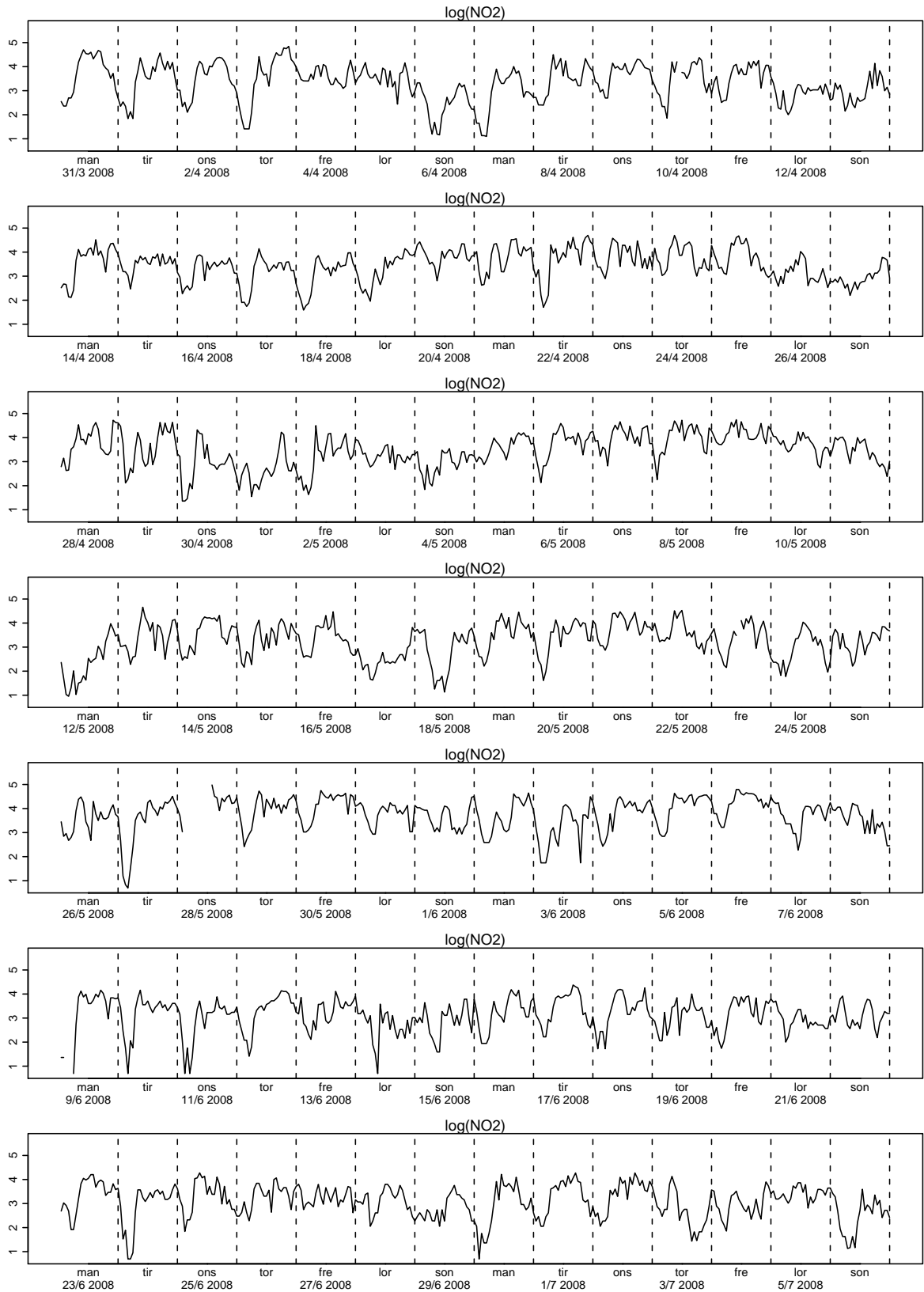
Figur 2.149. Plott av logaritmen til NO<sub>2</sub>



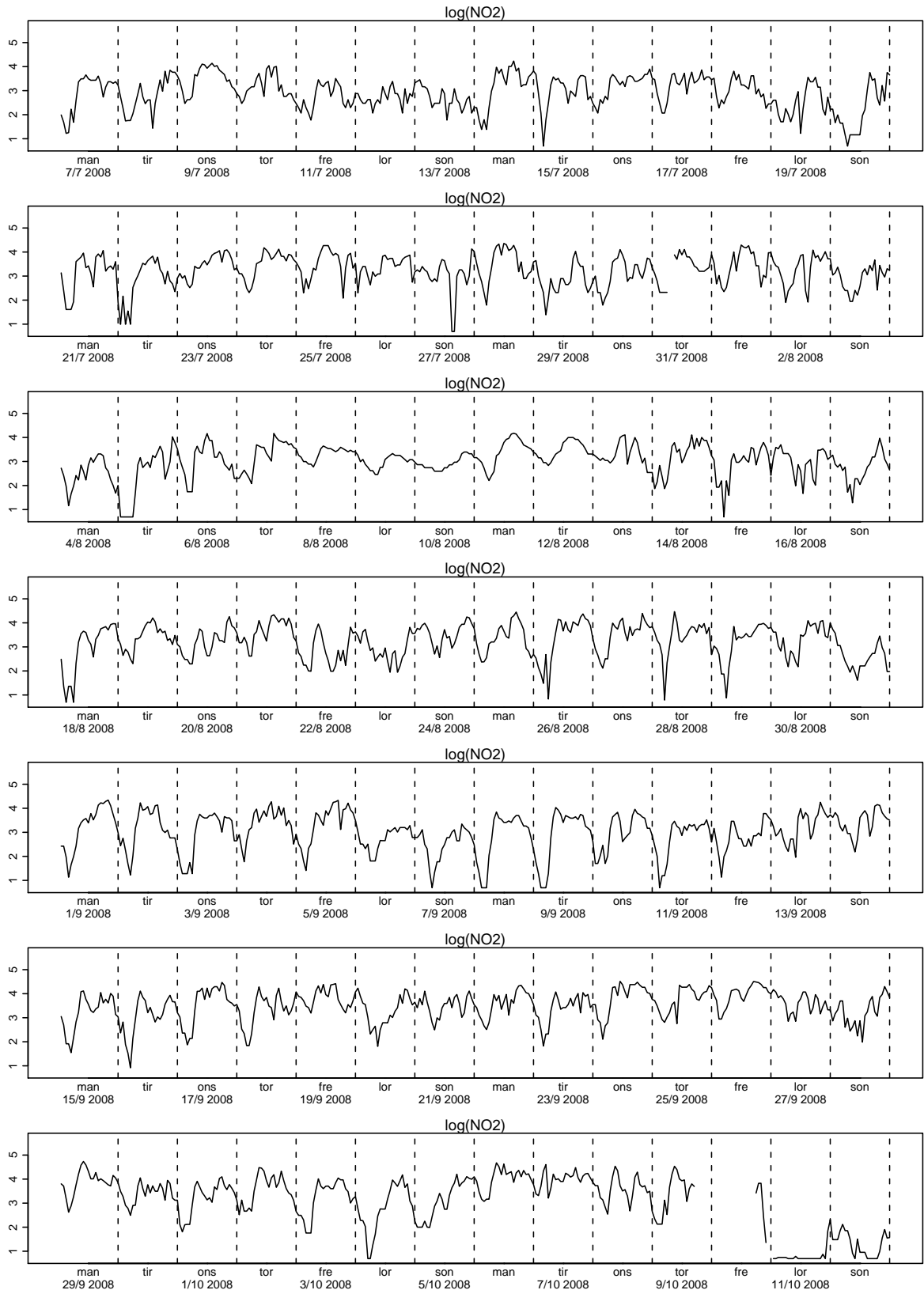
Figur 2.150. Plott av logaritmen til  $\text{NO}_2$



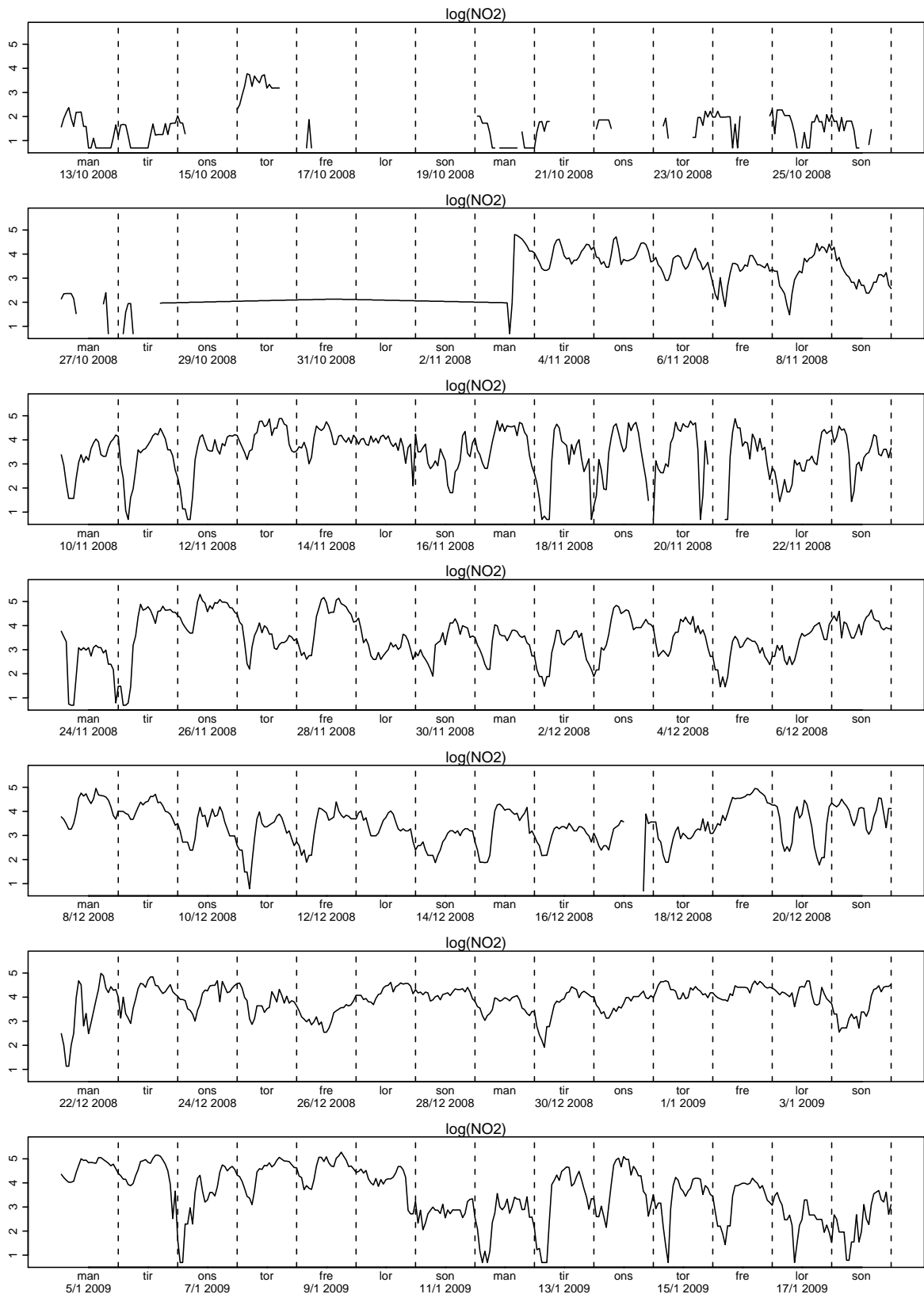
Figur 2.151. Plott av logaritmen til NO<sub>2</sub>



Figur 2.152. Plott av logaritmen til NO<sub>2</sub>

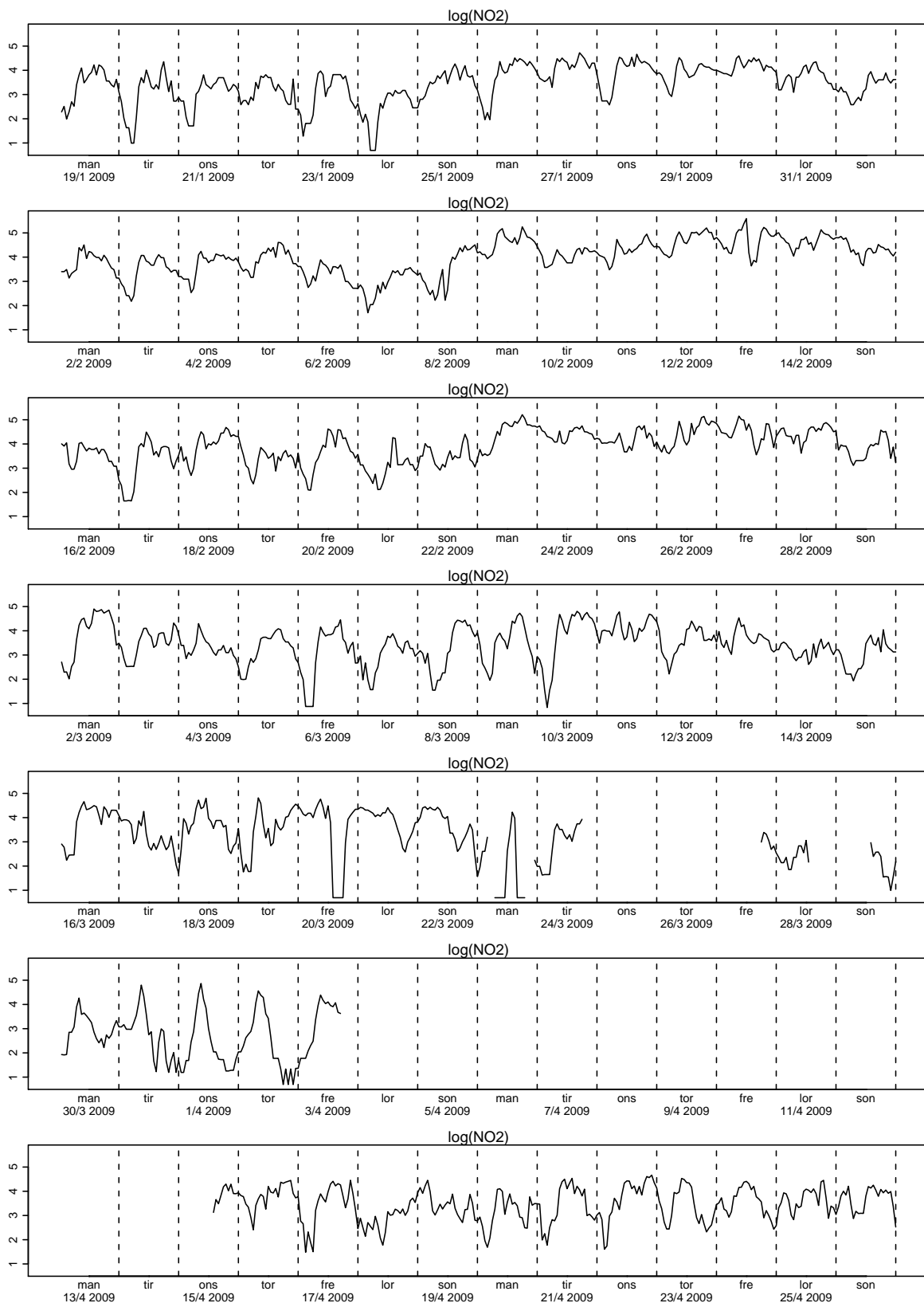


Figur 2.153. Plott av logaritmen til NO<sub>2</sub>

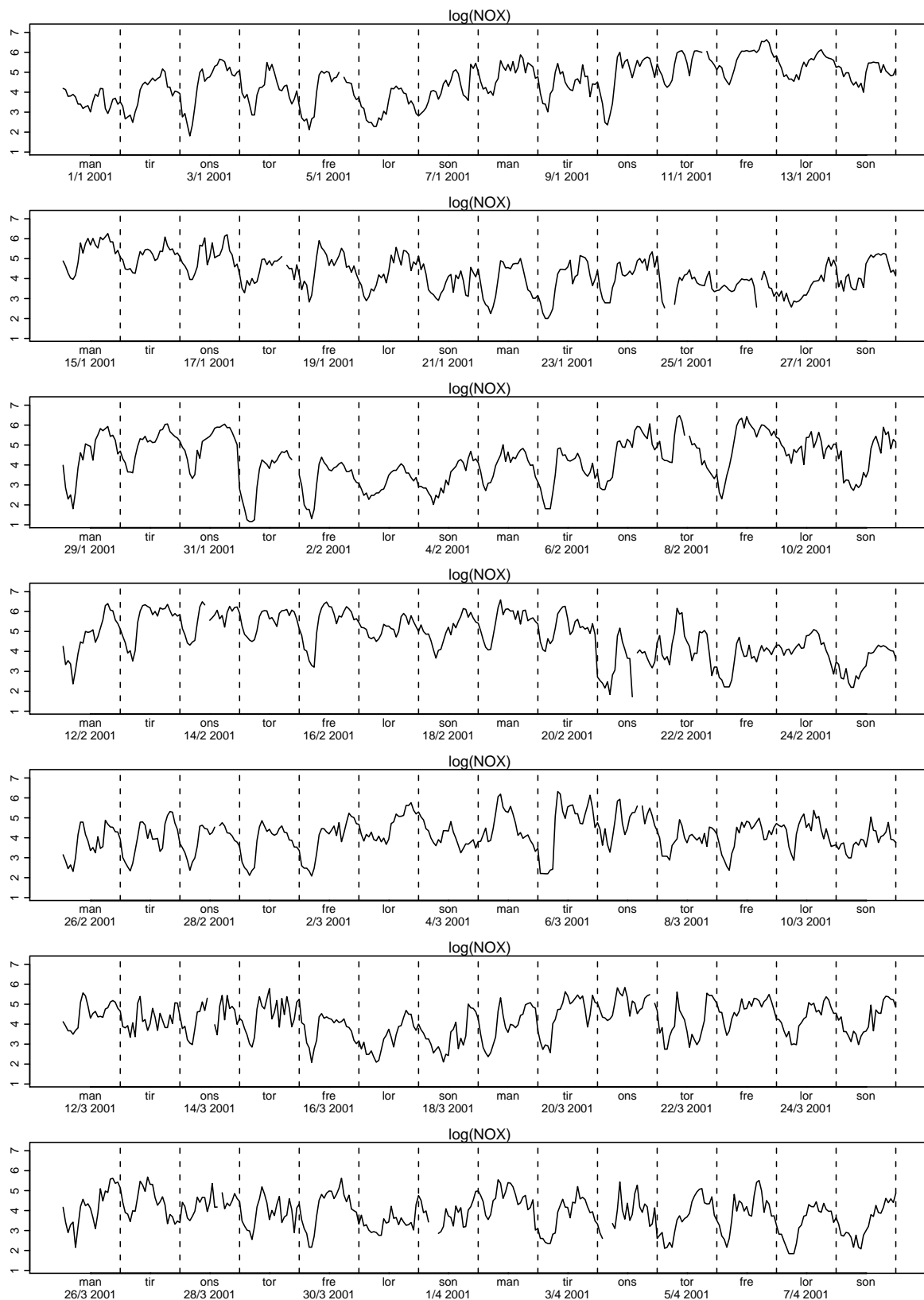


Figur 2.154. Plott av logaritmen til  $\text{NO}_2$

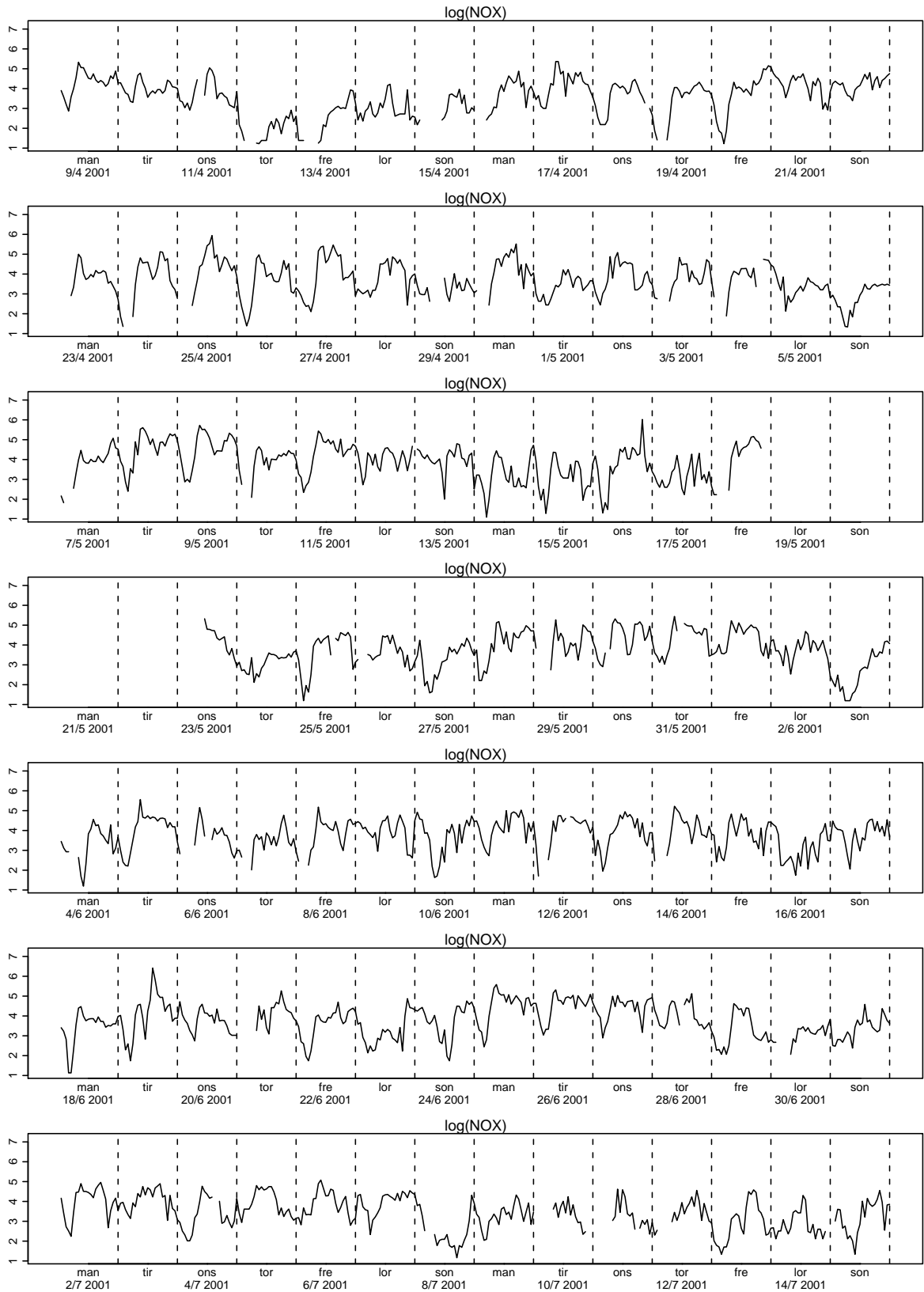




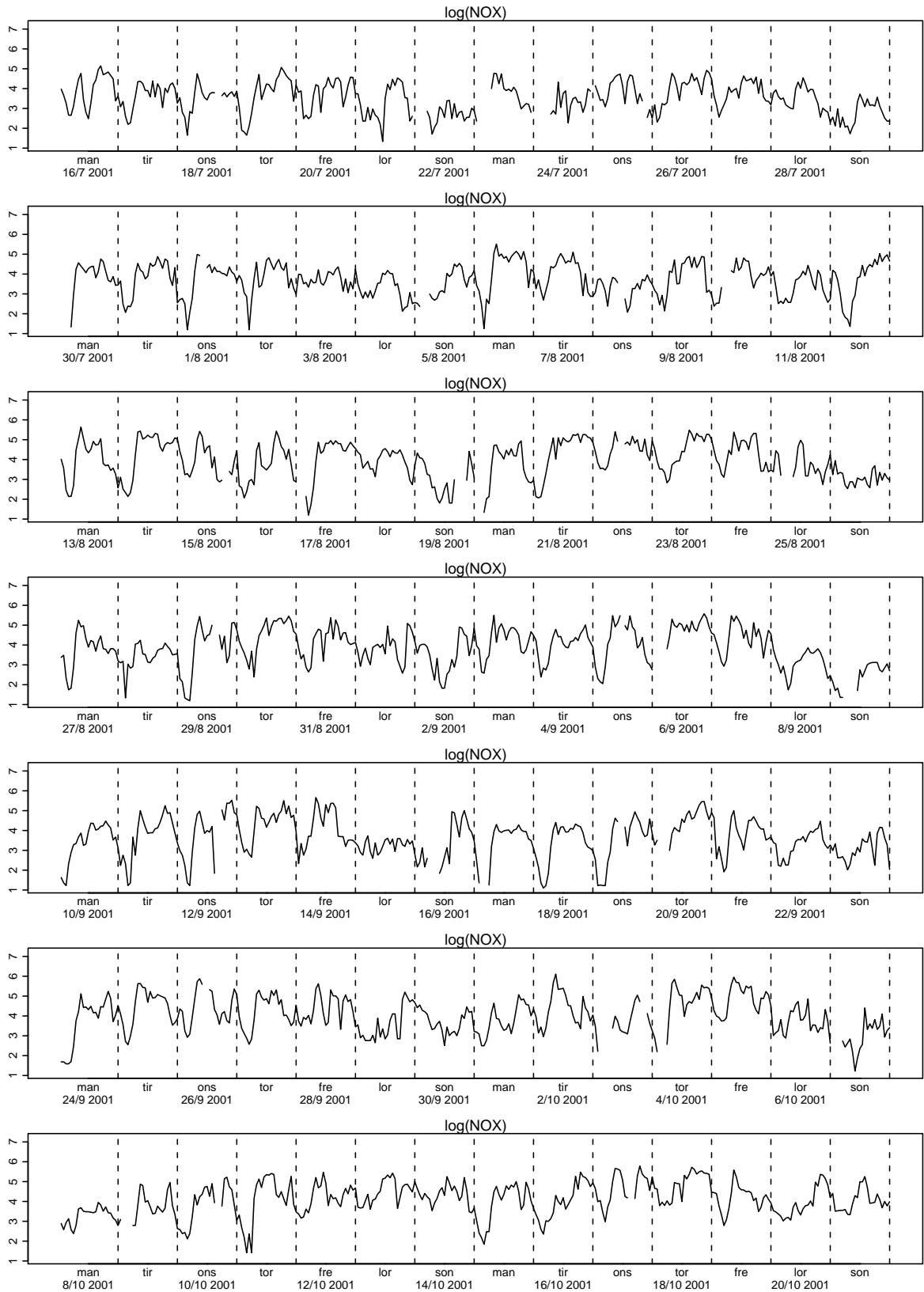
Figur 2.155. Plott av logaritmen til NO<sub>2</sub>



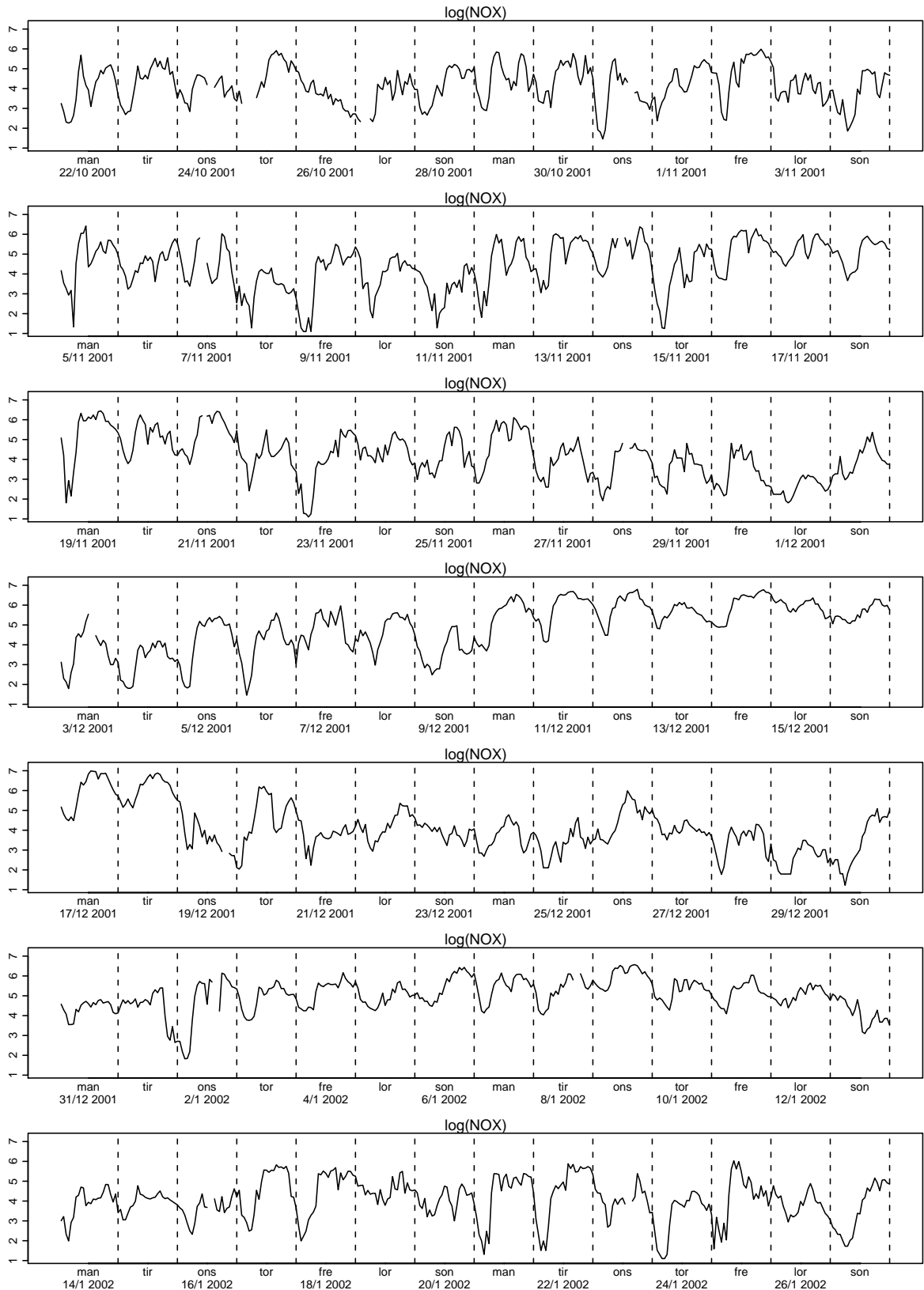
Figur 2.156. Plott av logaritmen til NO<sub>x</sub>



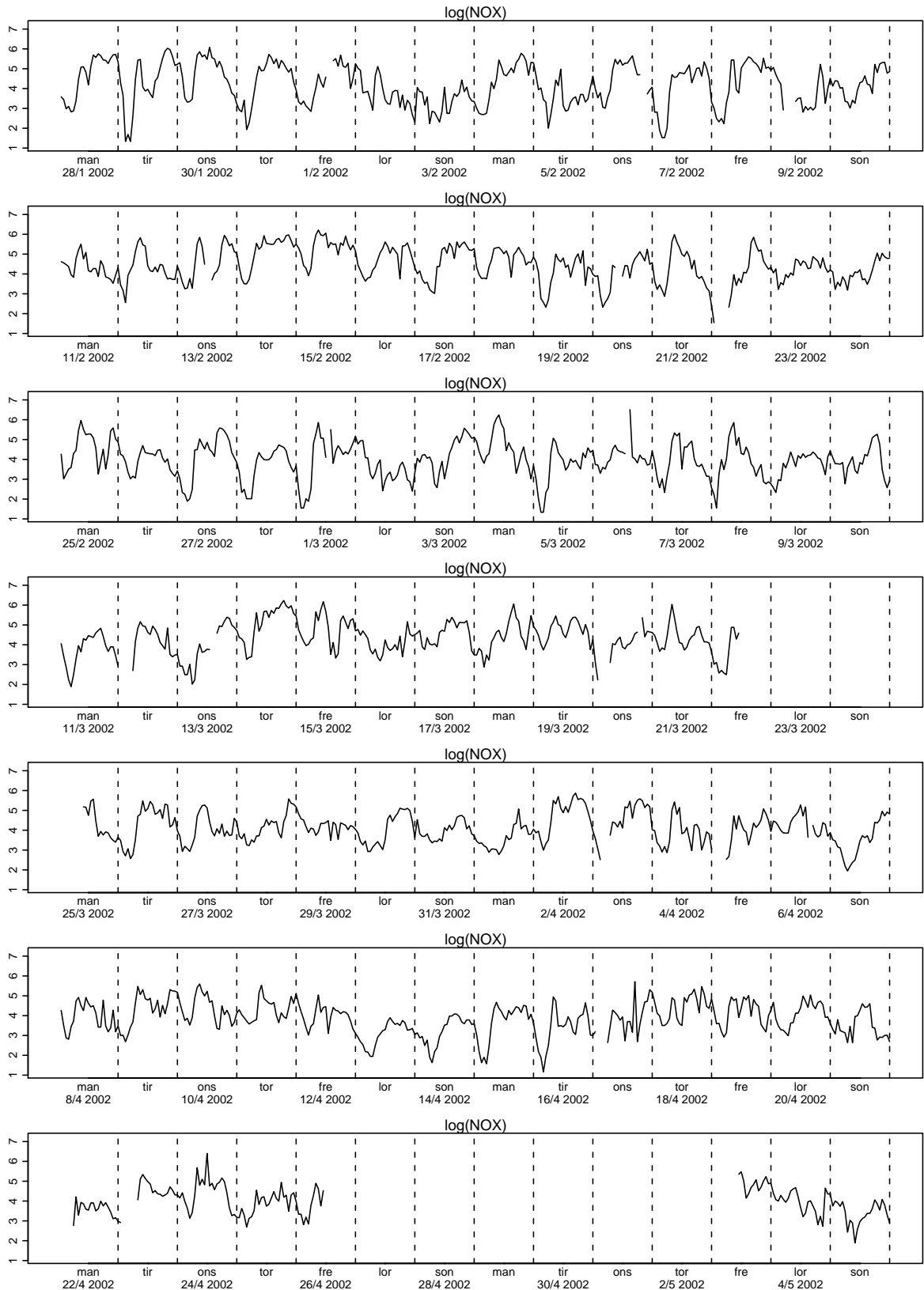
Figur 2.157. Plott av logaritmen til NO<sub>x</sub>



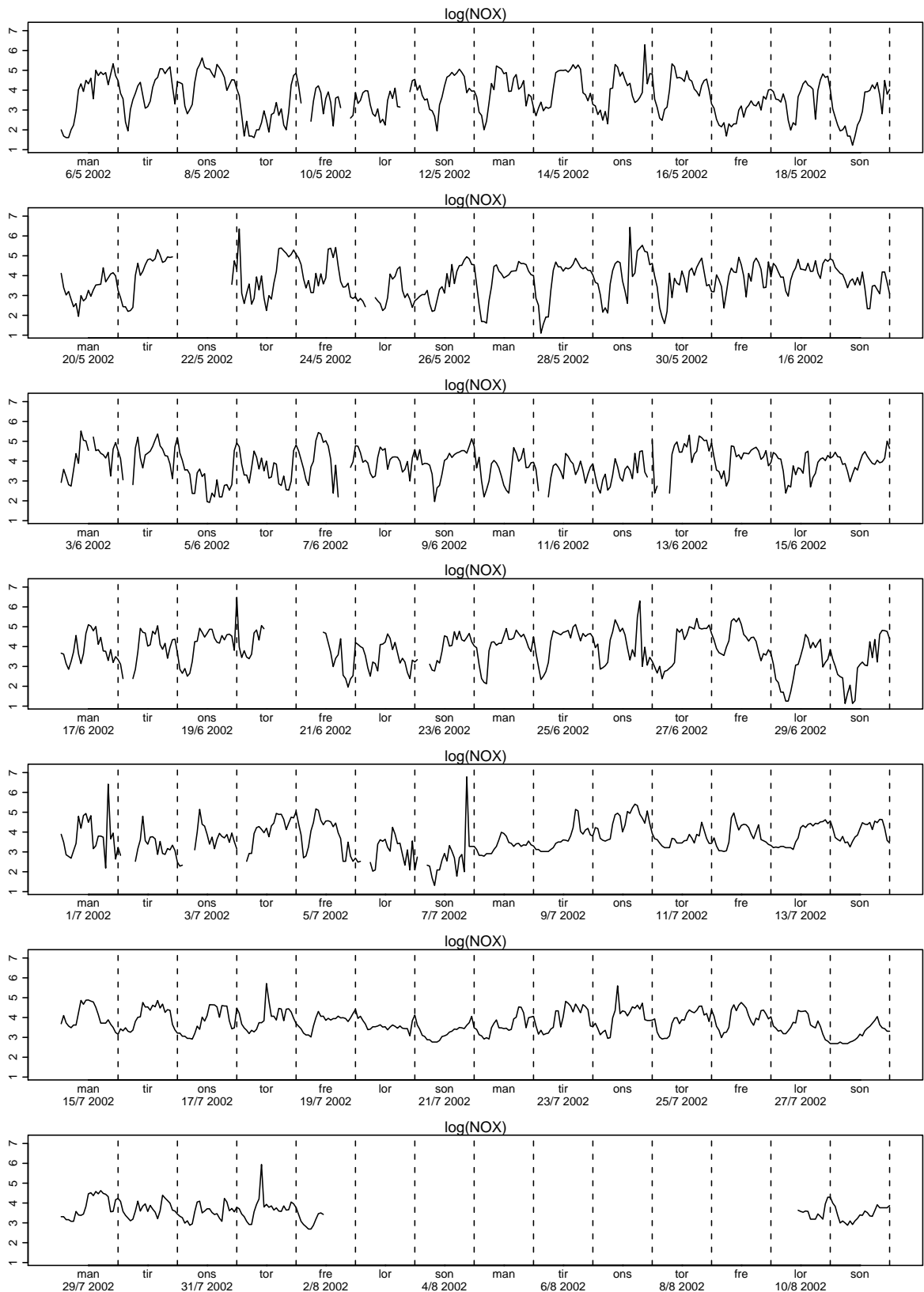
Figur 2.158. Plott av logaritmen til NO<sub>x</sub>



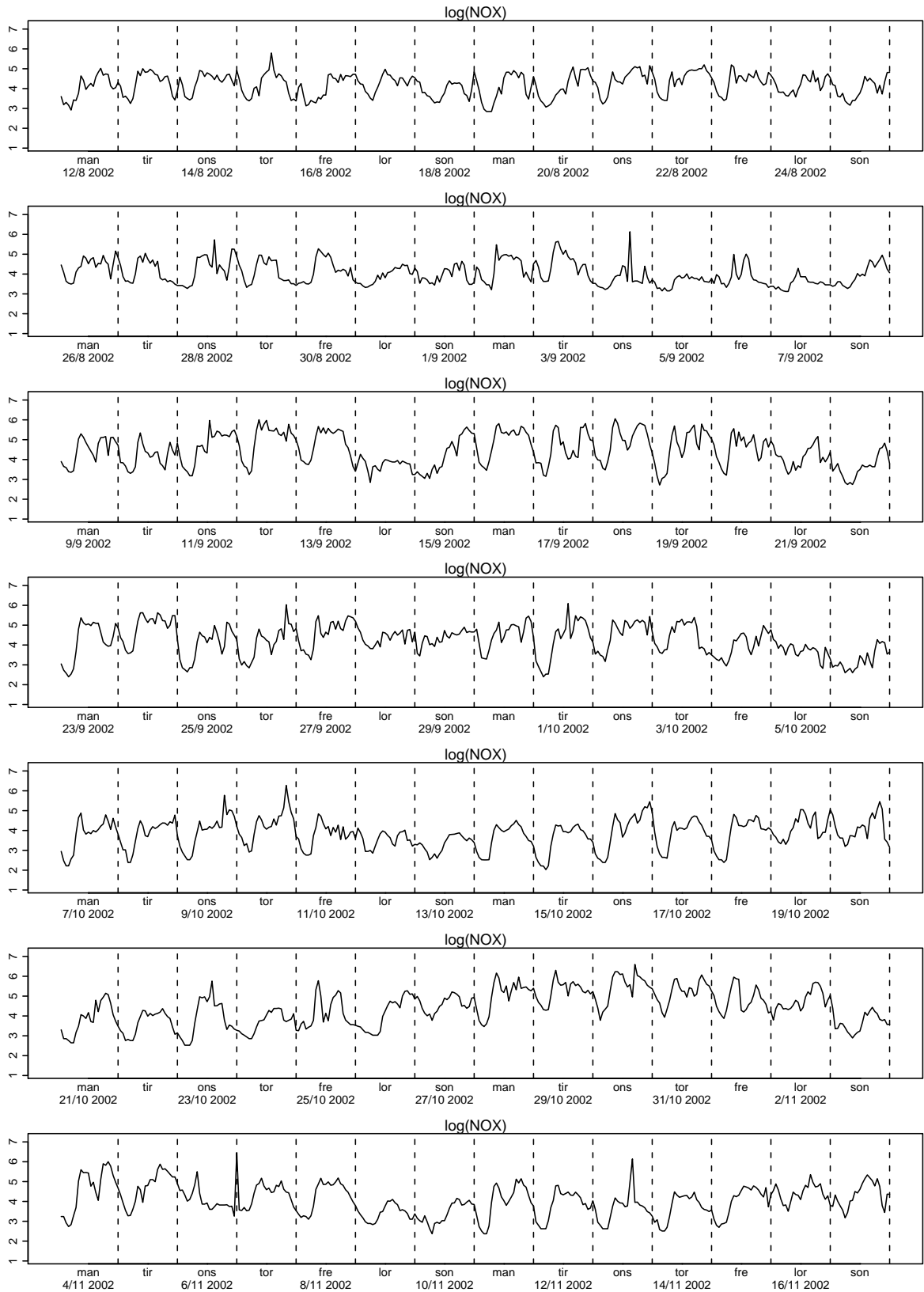
Figur 2.159. Plott av logaritmen til  $NO_x$



Figur 2.160. Plott av logaritmen til NO<sub>x</sub>

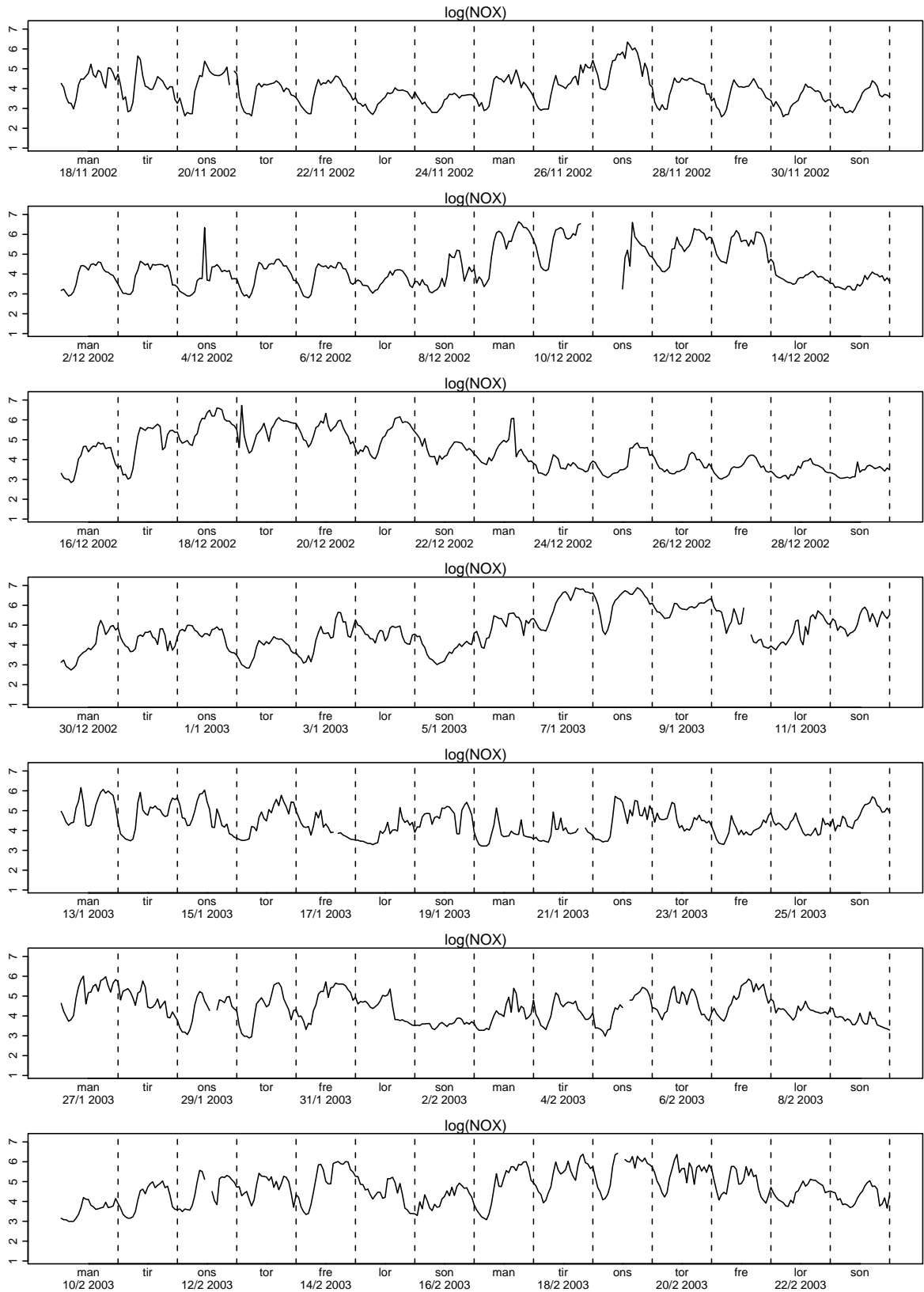


Figur 2.161. Plott av logaritmen til  $NO_x$

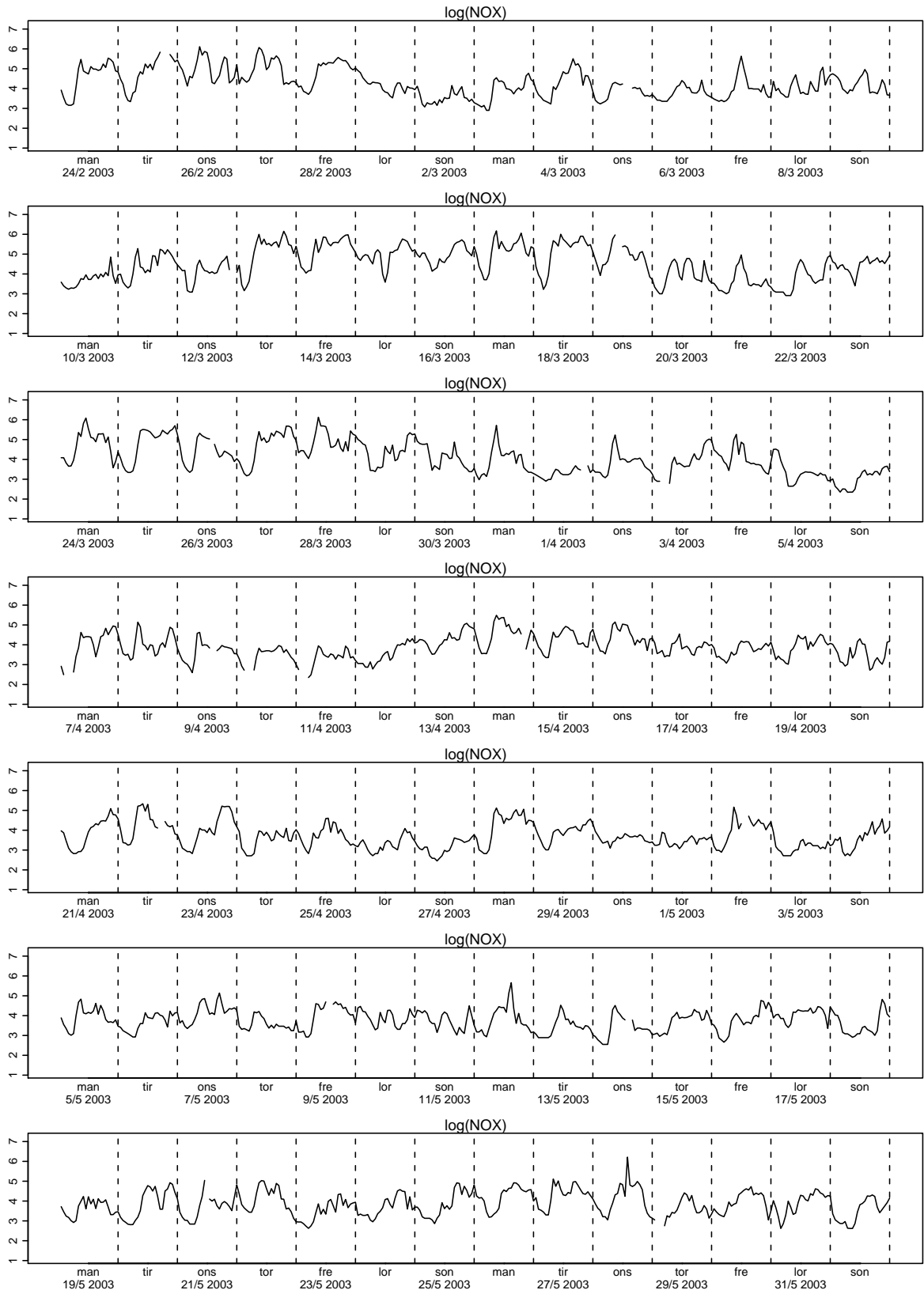


Figur 2.162. Plott av logaritmen til  $\text{NO}_x$

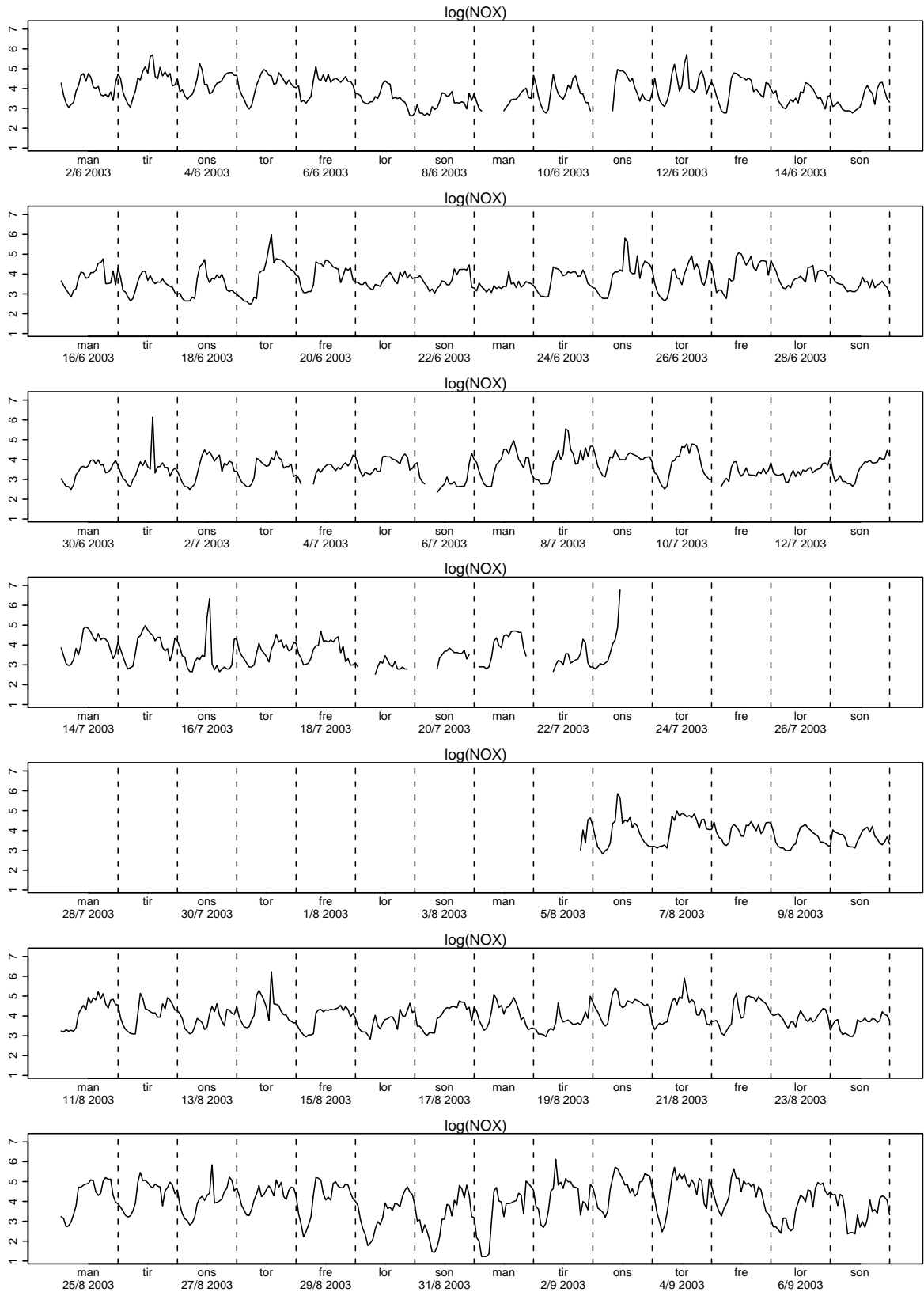




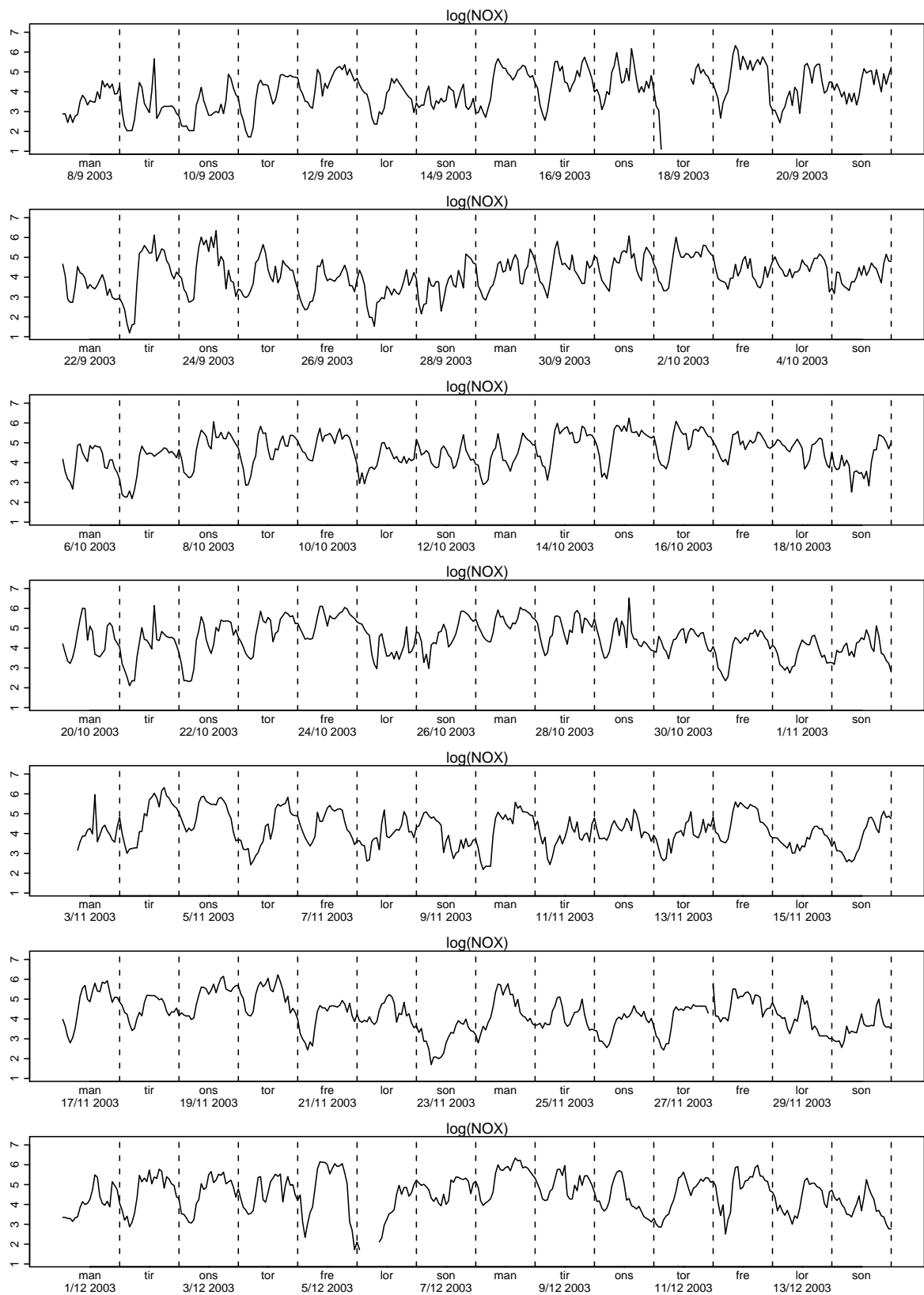
Figur 2.163. Plott av logaritmen til  $\text{NO}_x$



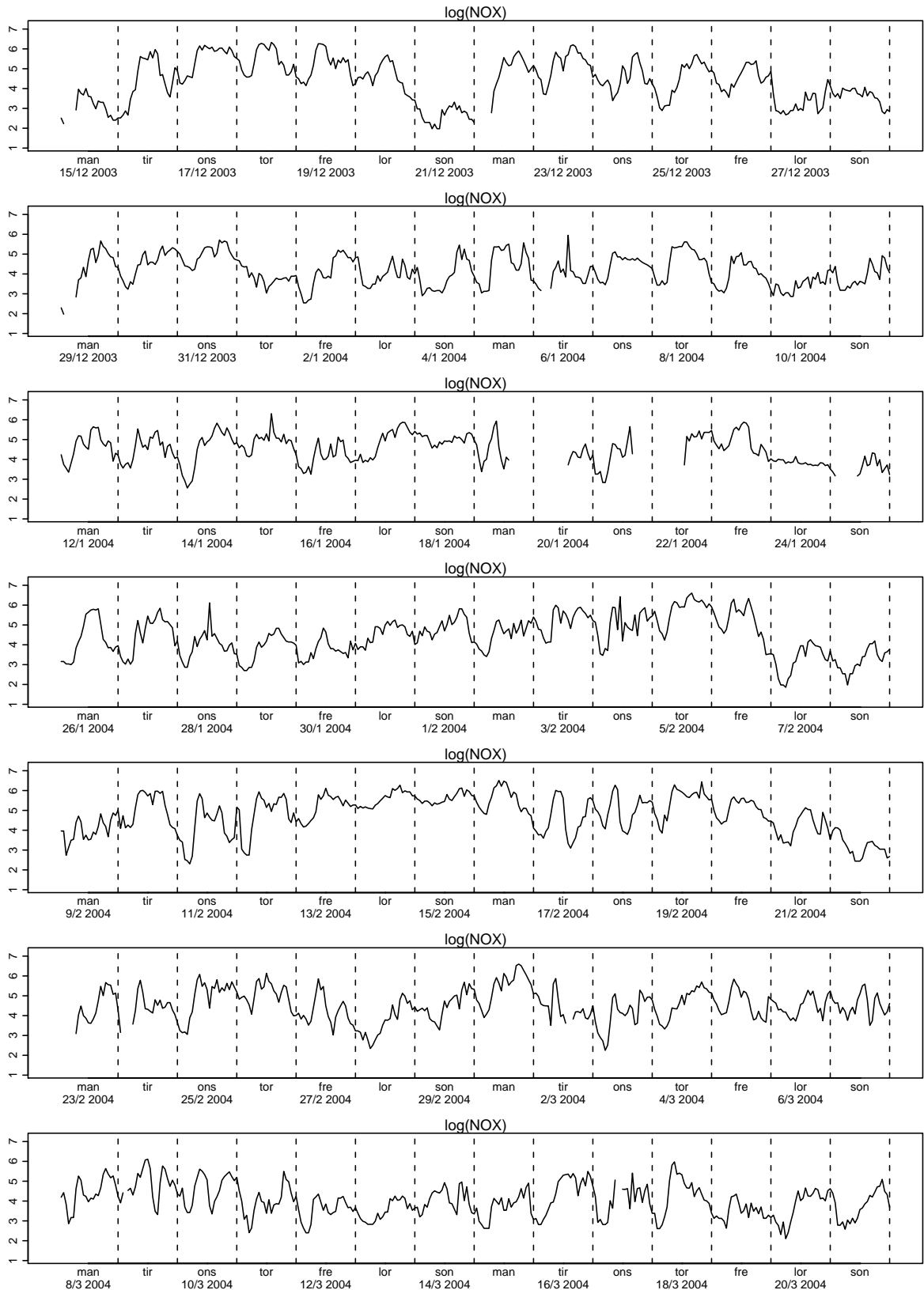
Figur 2.164. Plott av logaritmen til  $\text{NO}_x$



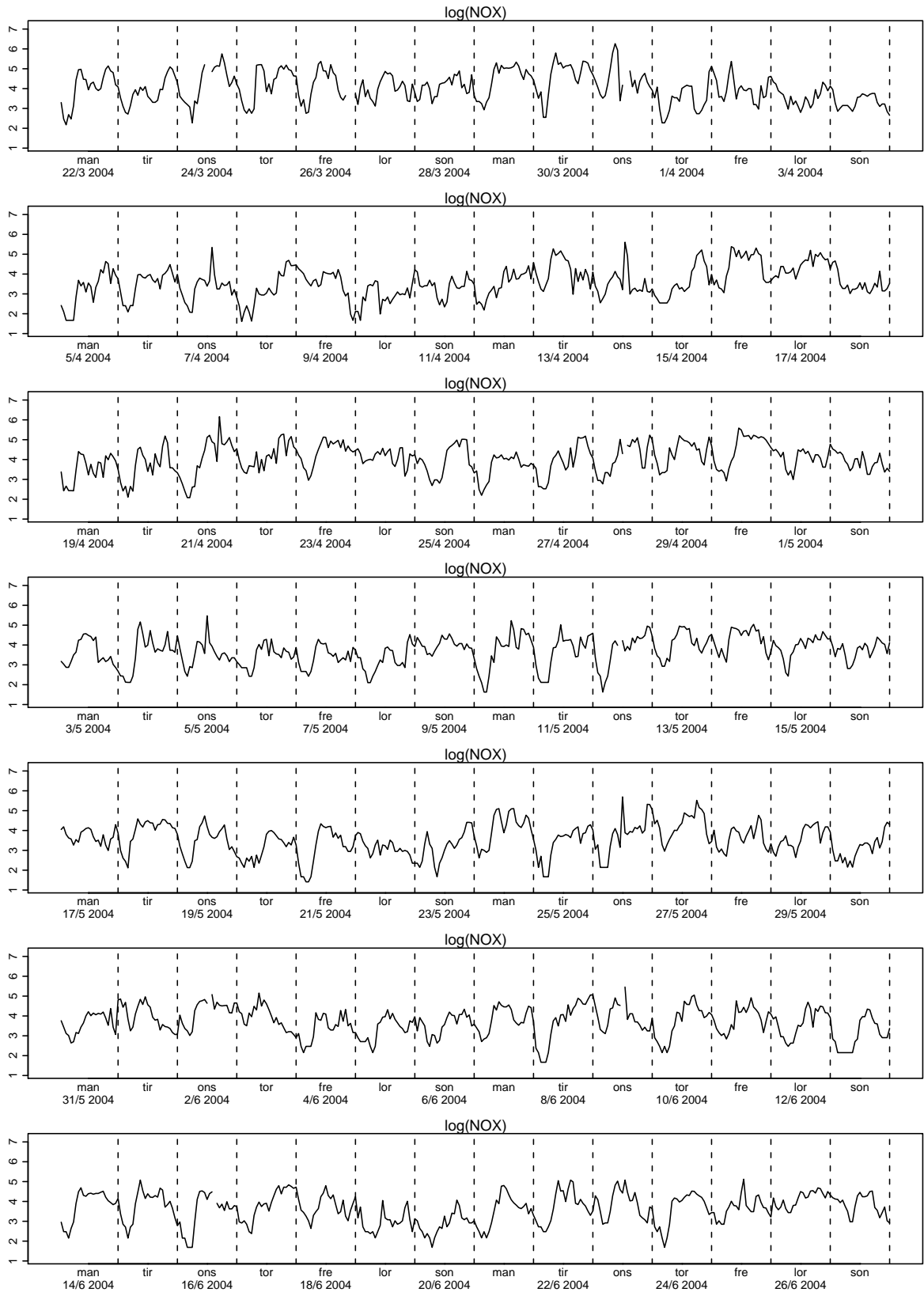
Figur 2.165. Plott av logaritmen til  $NO_x$



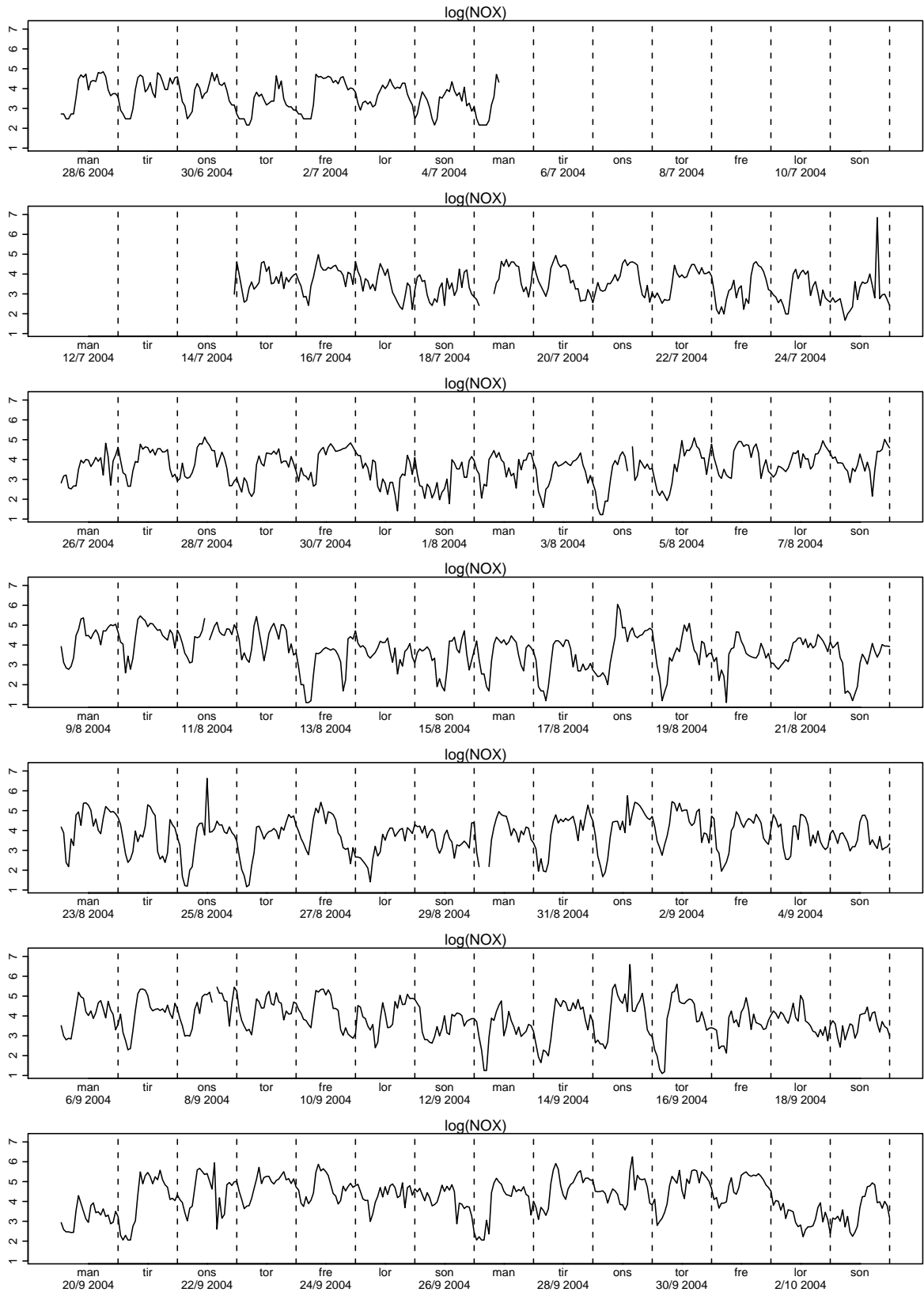
Figur 2.166. Plott av logaritmen til  $\text{NO}_x$



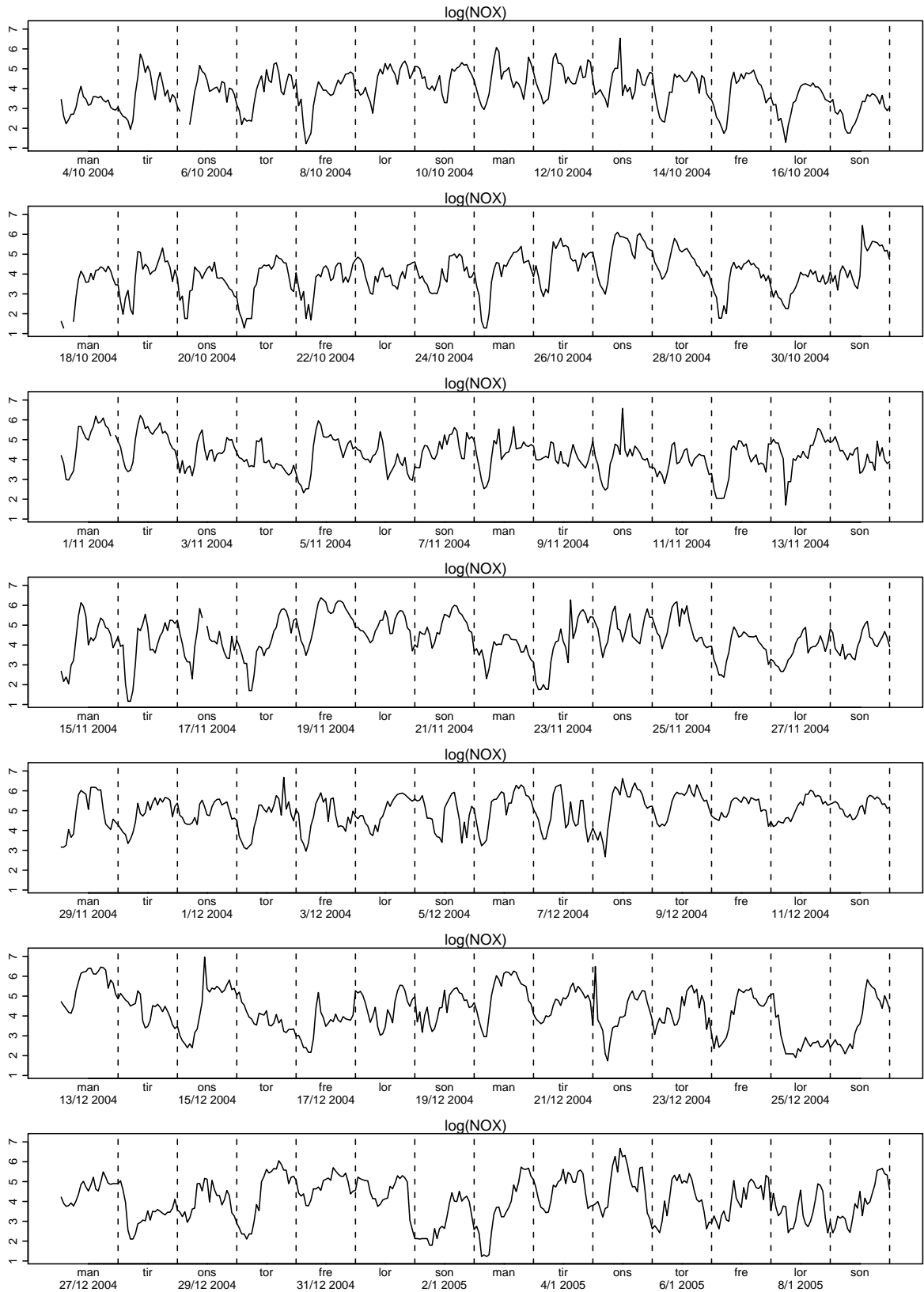
Figur 2.167. Plott av logaritmen til  $NO_x$



Figur 2.168. Plott av logaritmen til NO<sub>x</sub>

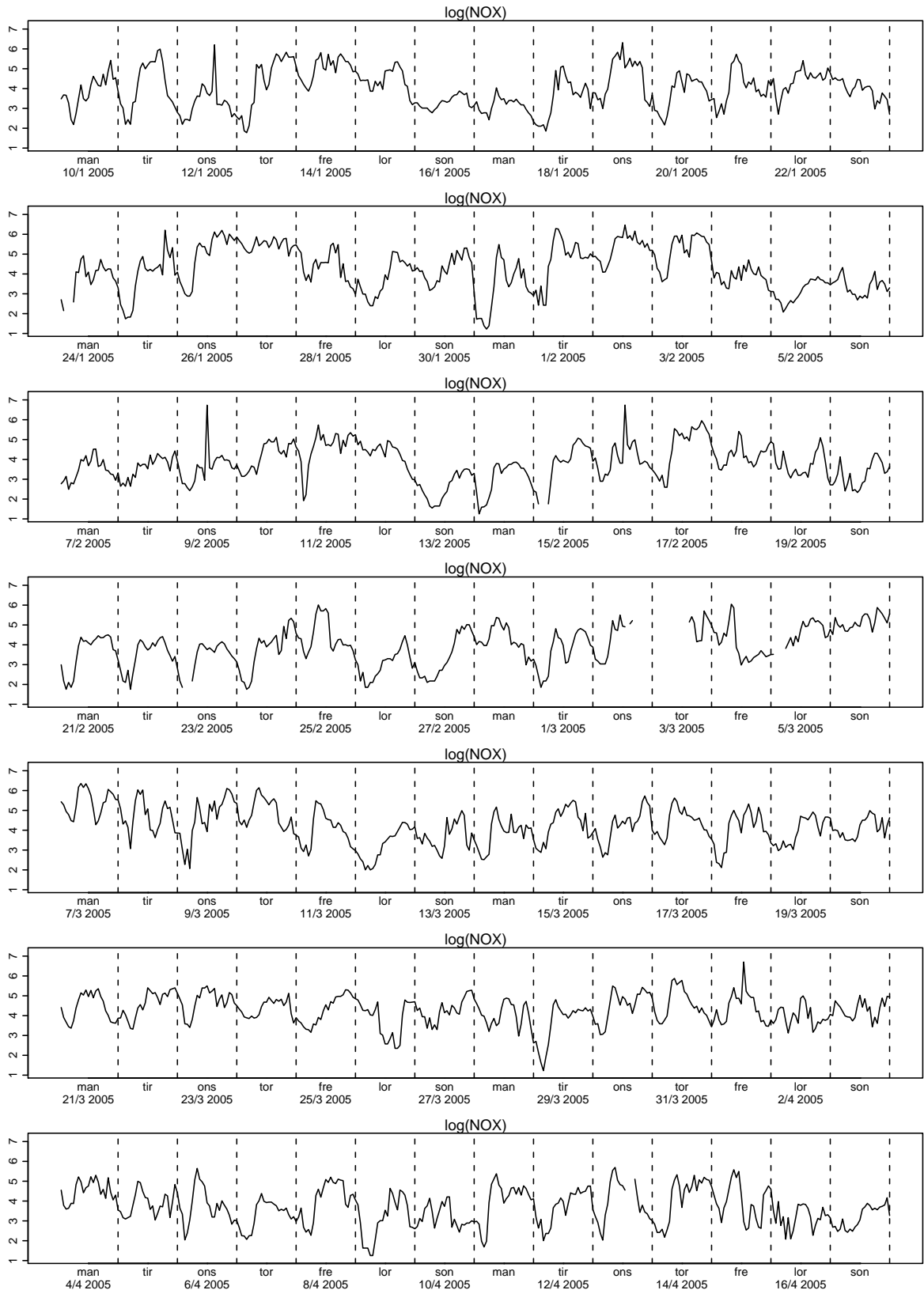


Figur 2.169. Plott av logaritmen til  $\text{NO}_x$

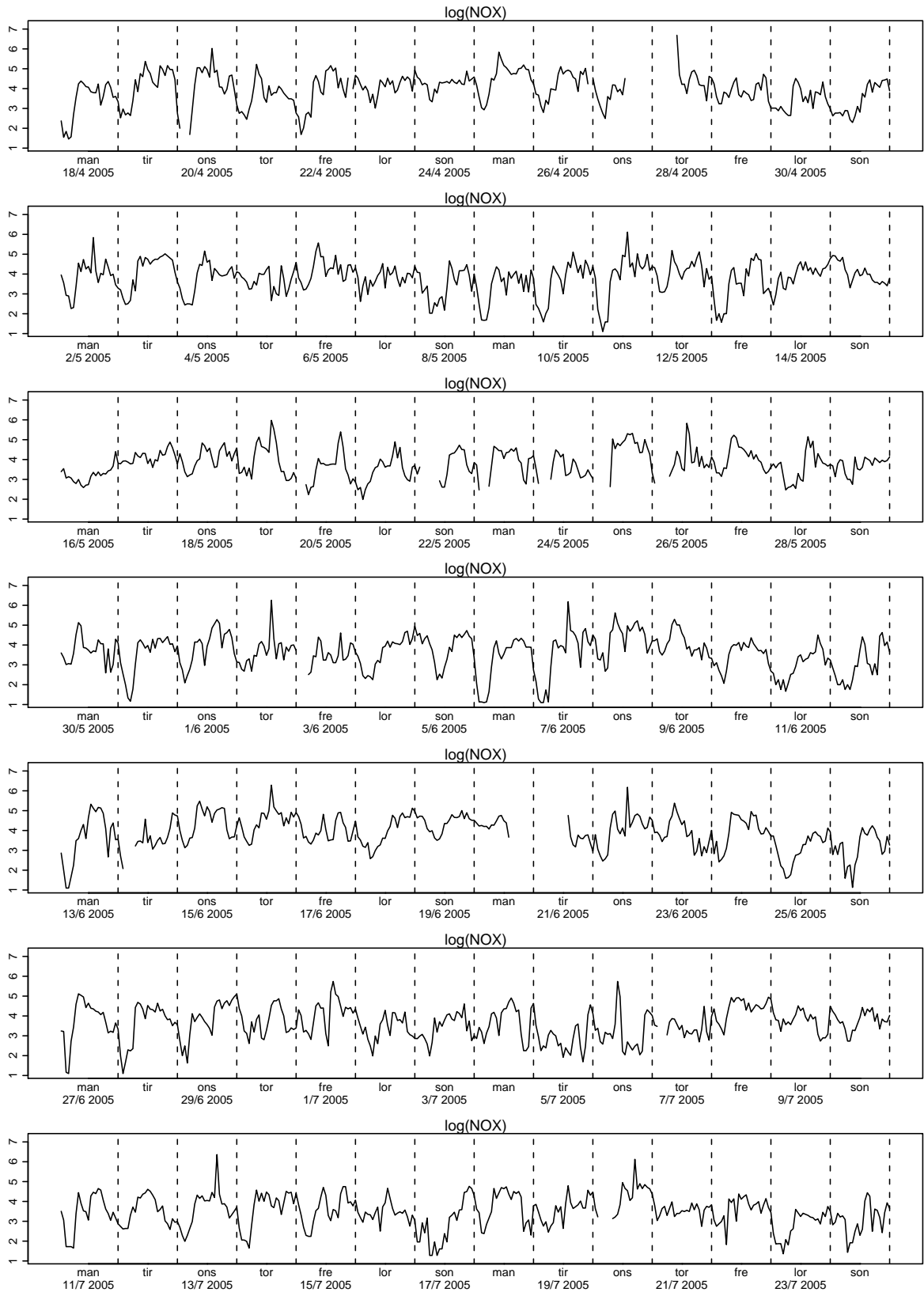


Figur 2.170. Plott av logaritmen til NO<sub>x</sub>

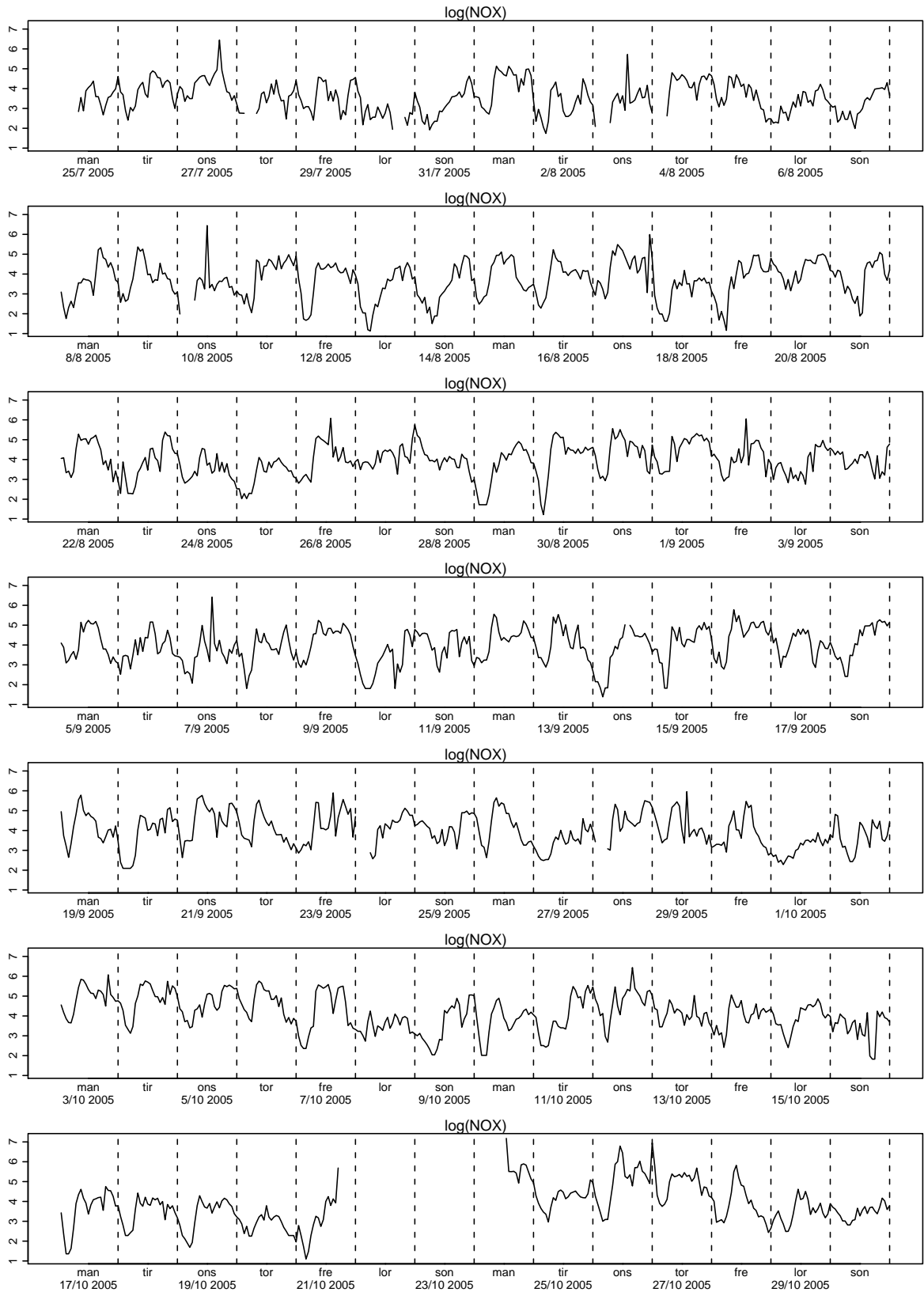




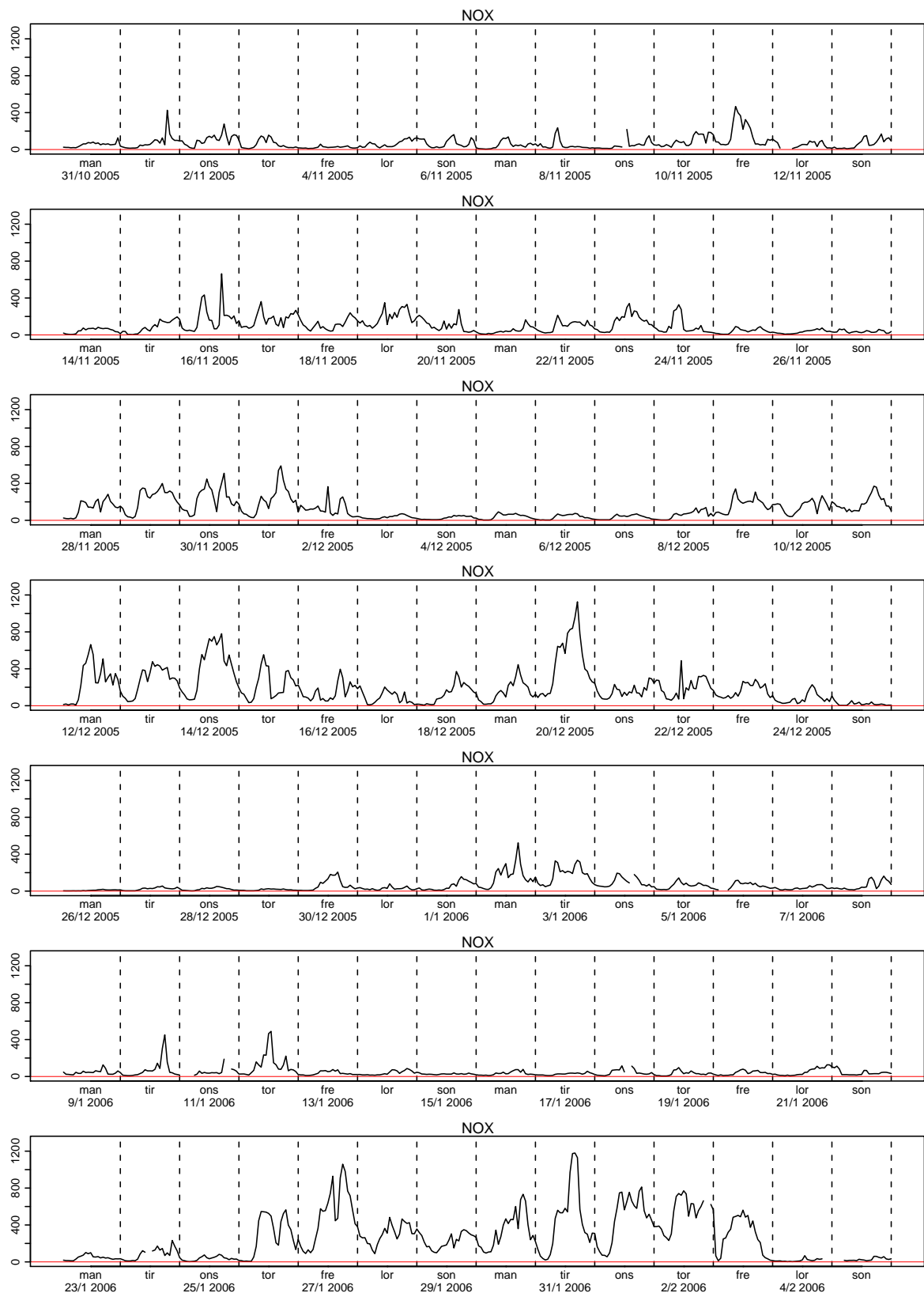
Figur 2.171. Plott av logaritmen til NO<sub>x</sub>



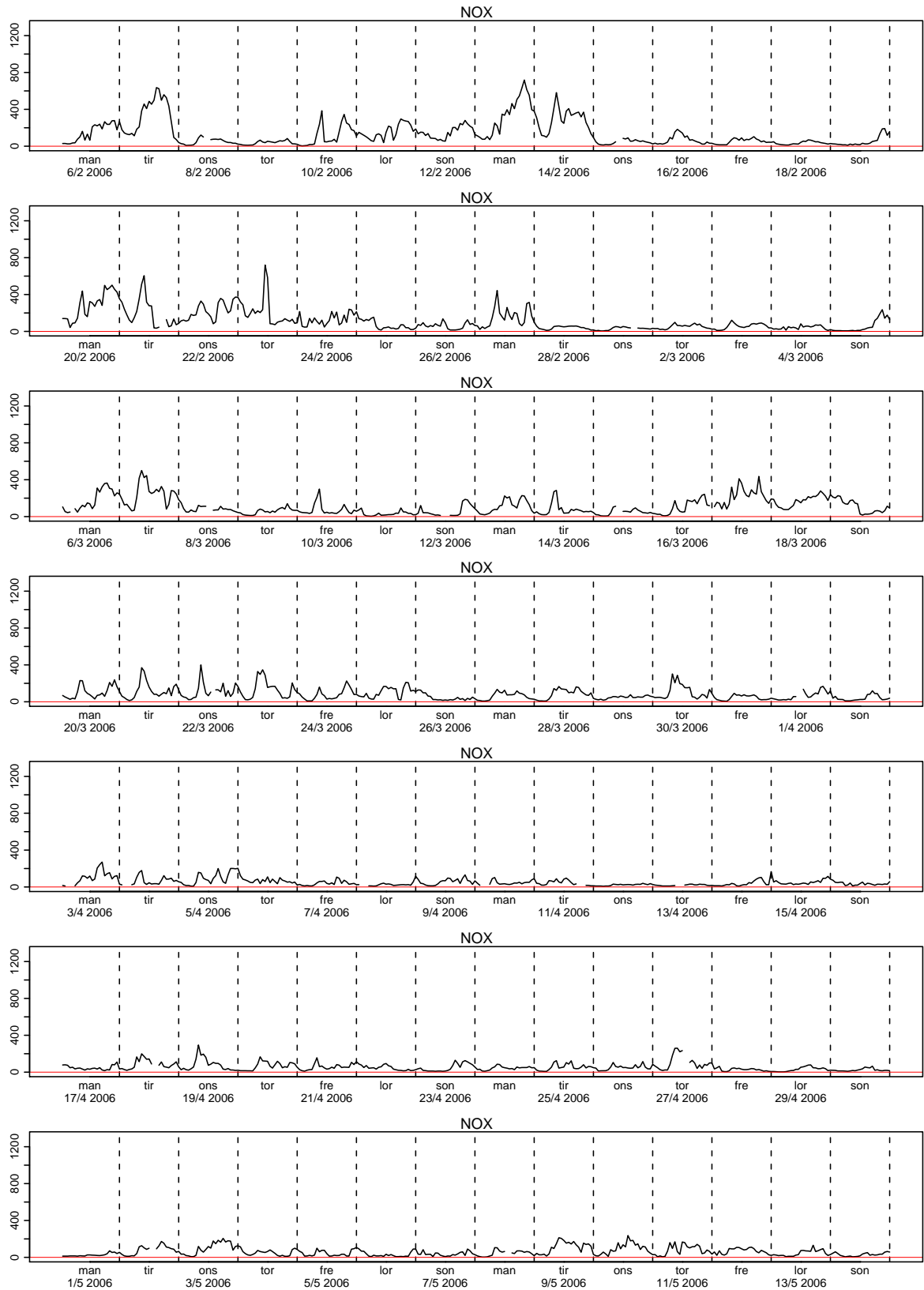
Figur 2.172. Plott av logaritmen til NO<sub>x</sub>



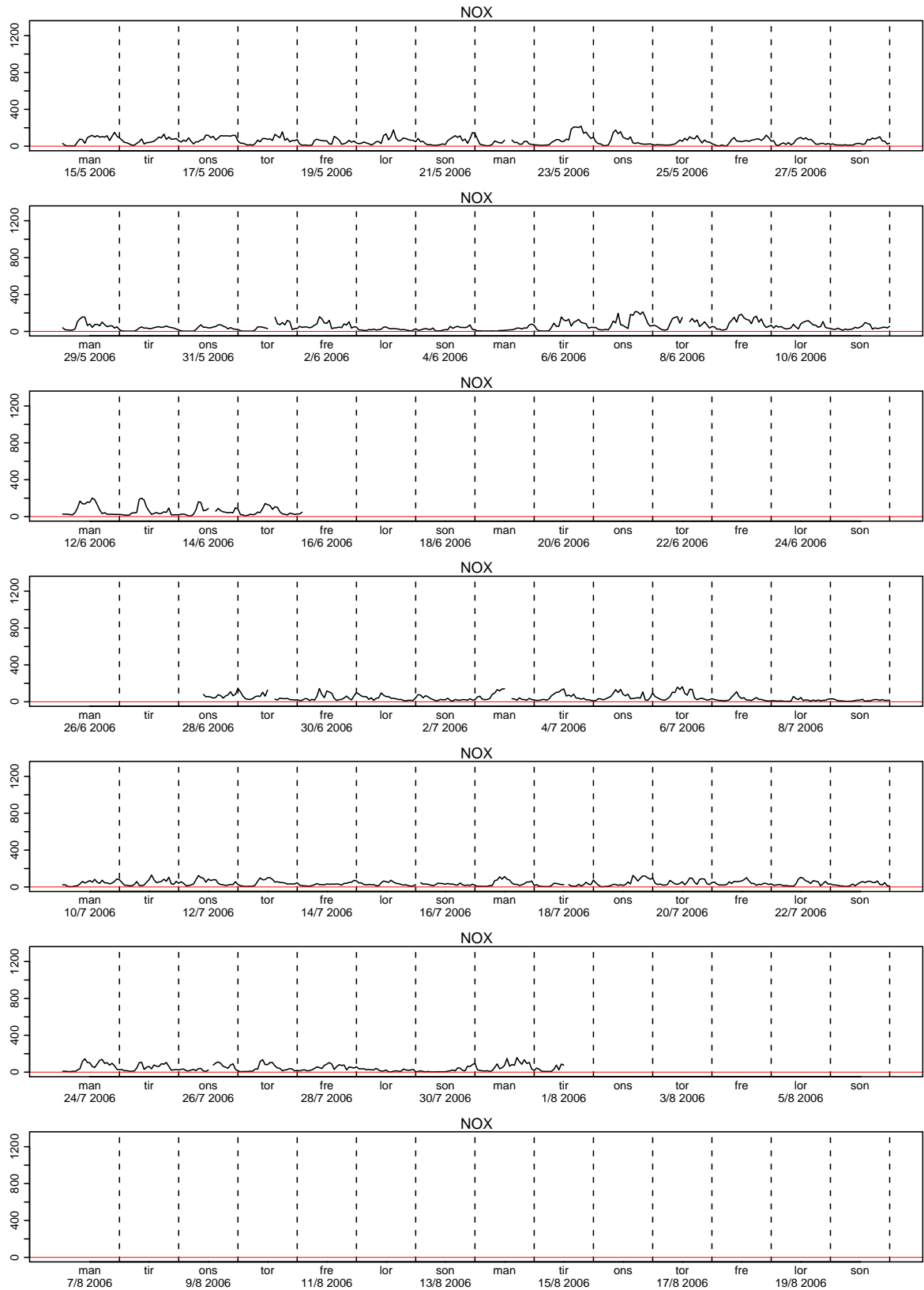
Figur 2.173. Plott av logaritmen til  $NO_x$



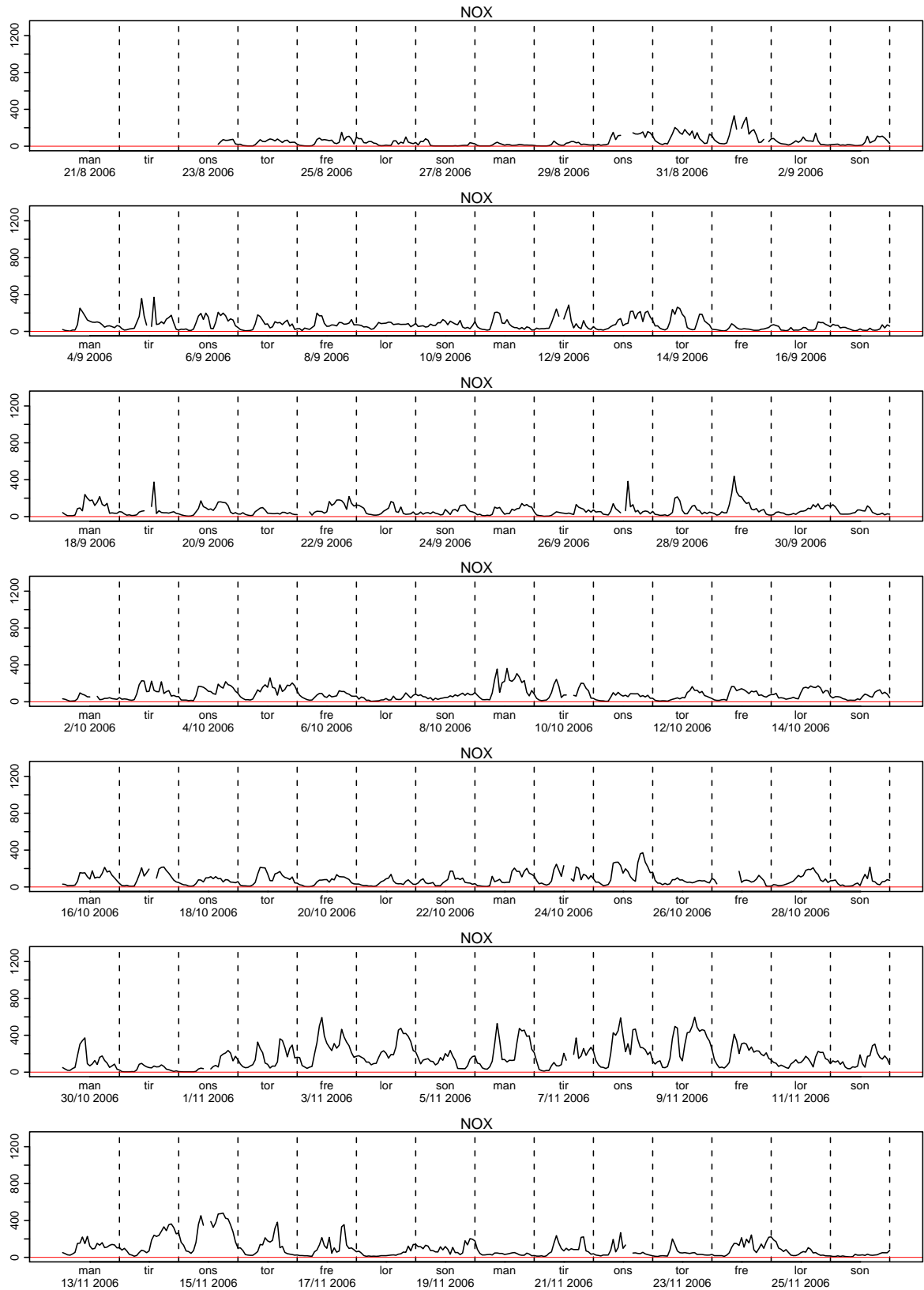
Figur 2.174. Plott av logaritmen til  $NO_x$



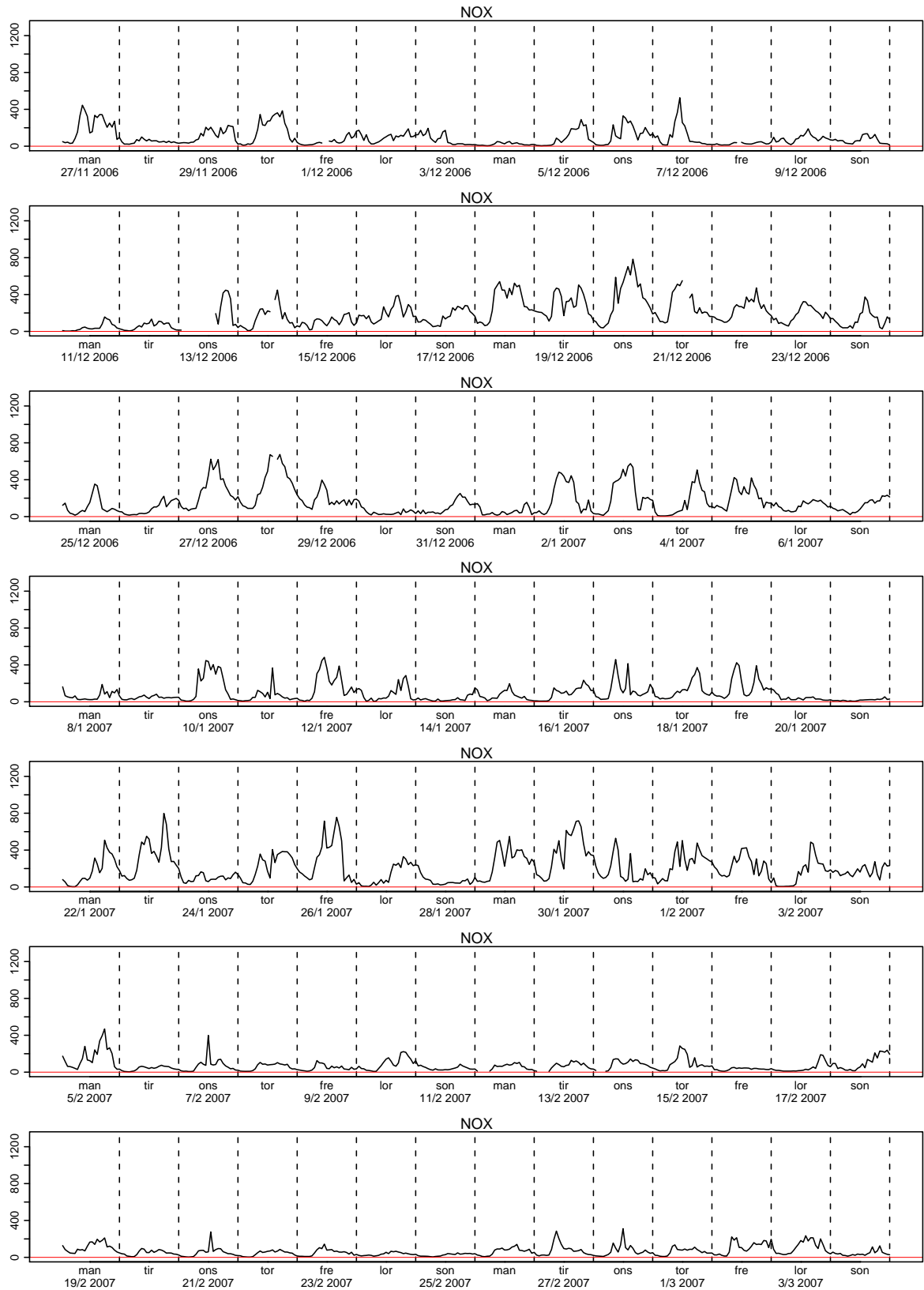
Figur 2.175. Plott av logaritmen til  $NO_x$



Figur 2.176. Plott av logaritmen til  $NO_x$

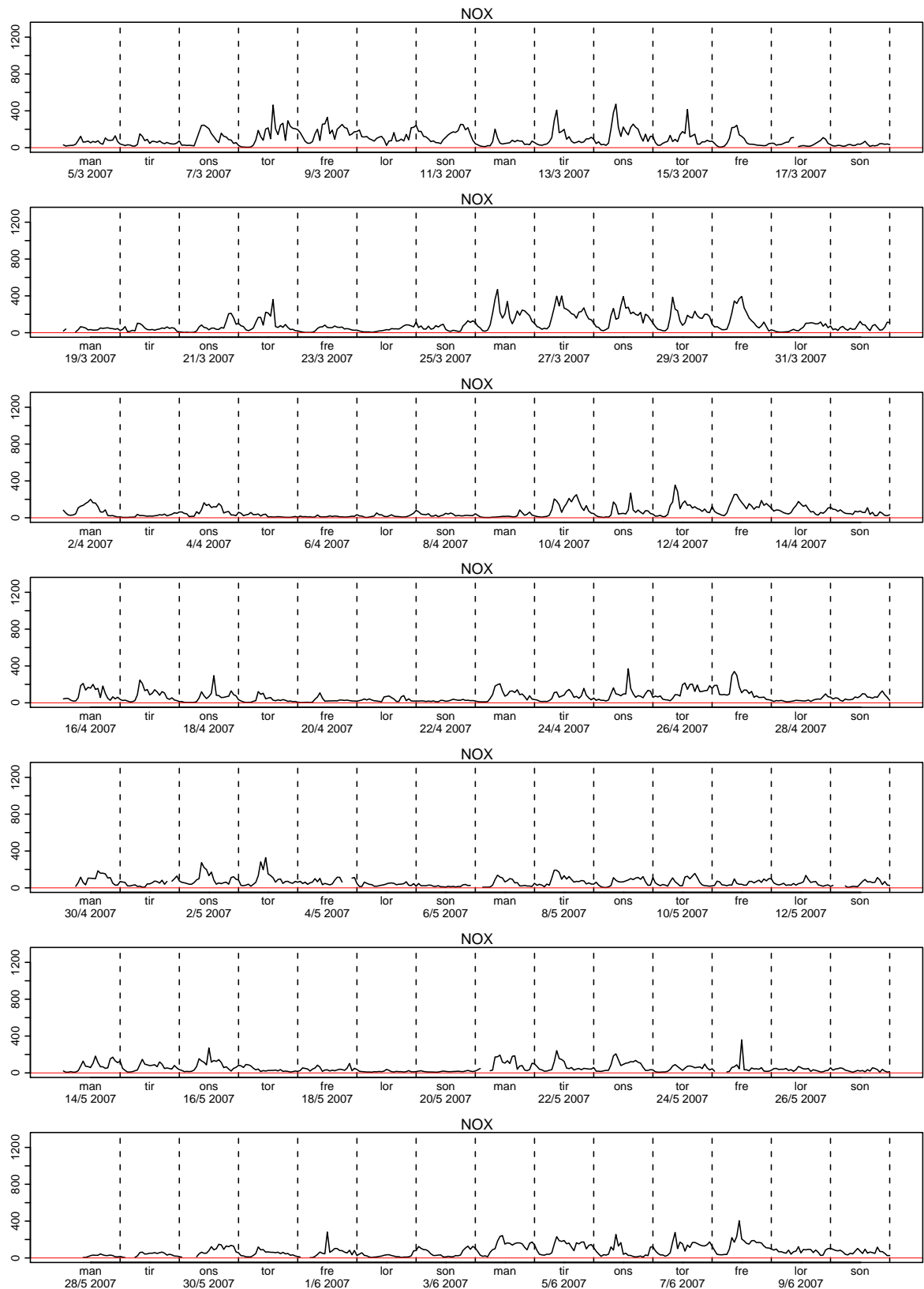


Figur 2.177. Plott av logaritmen til  $NO_x$

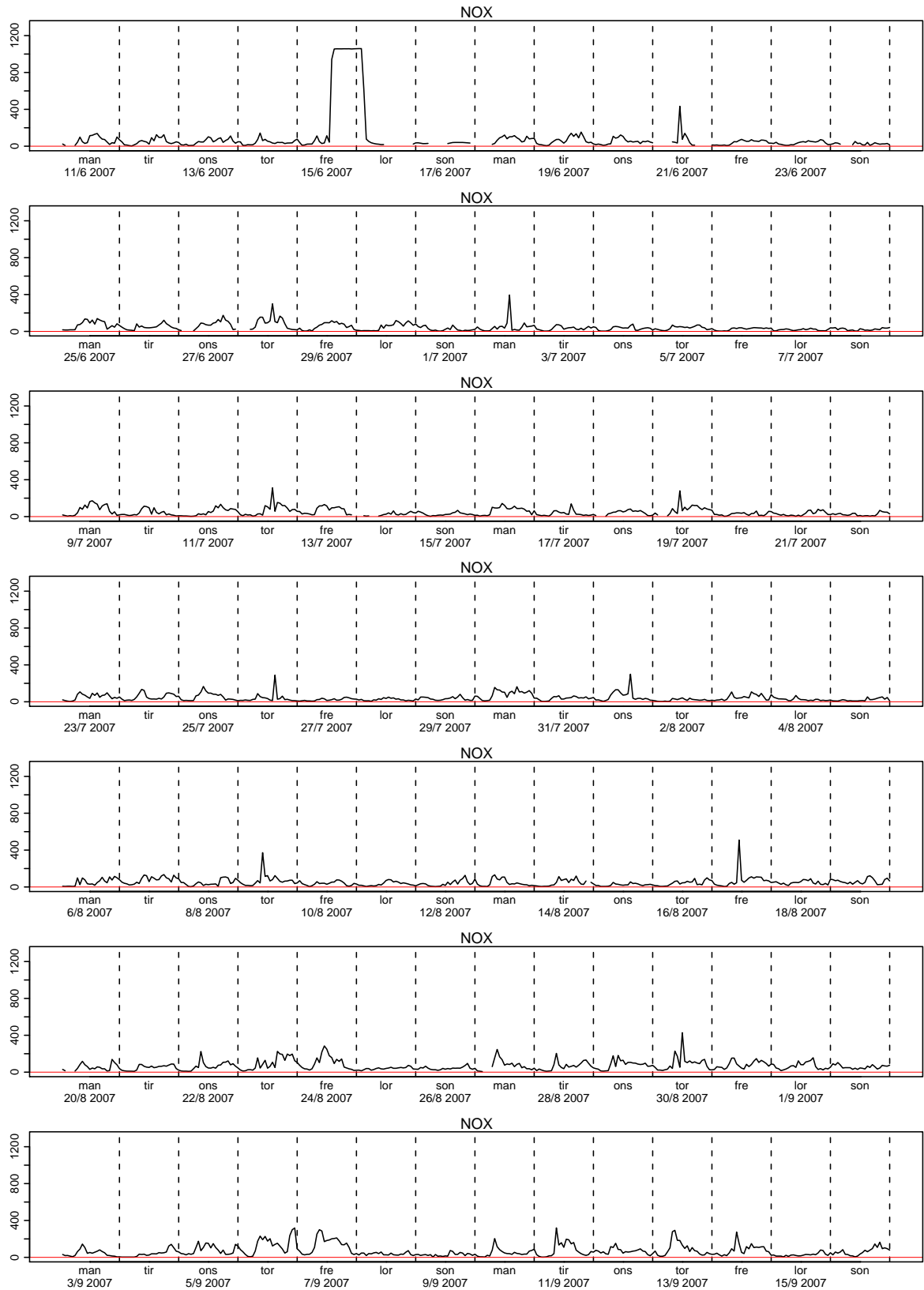


Figur 2.178. Plott av logaritmen til  $NO_x$

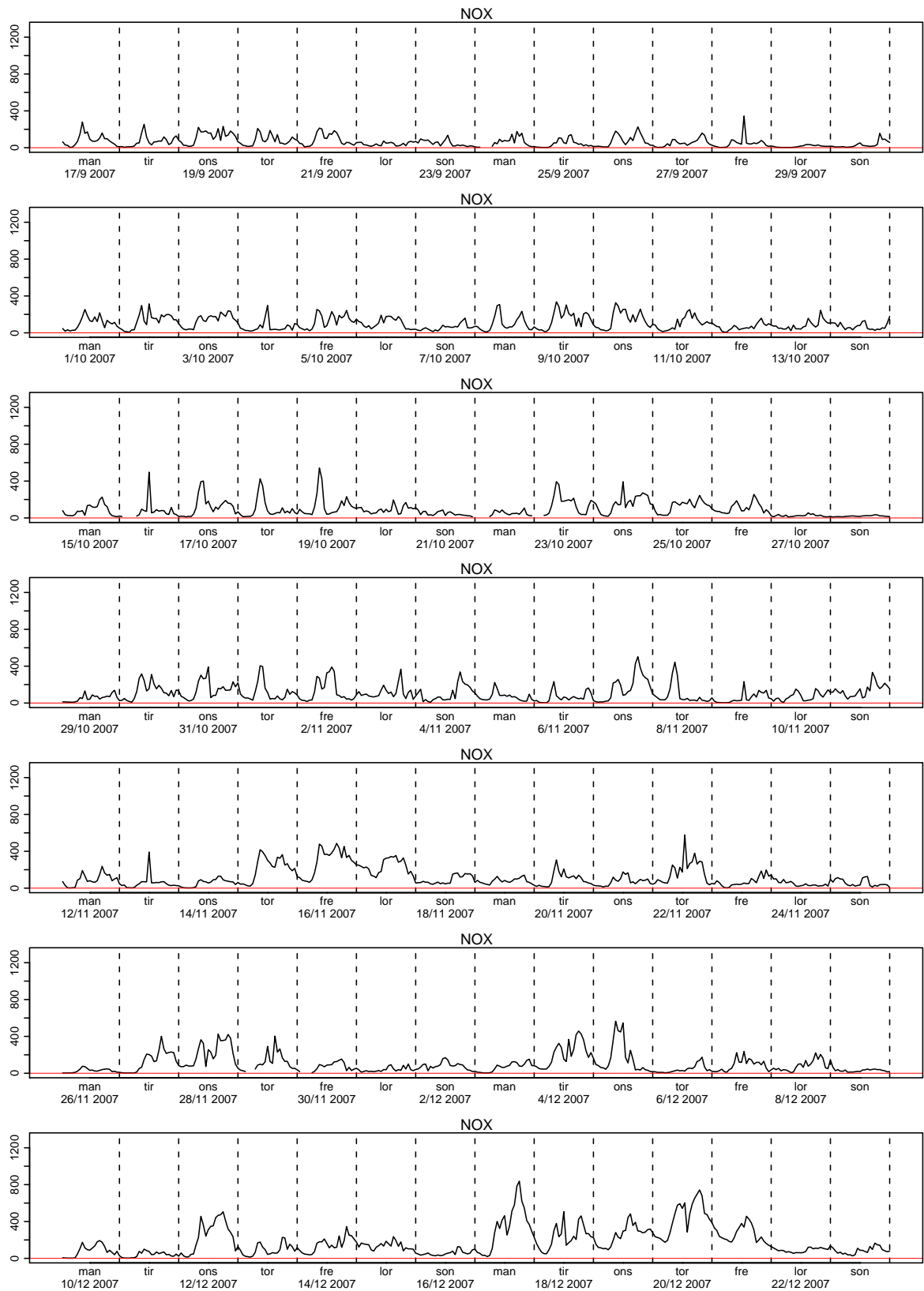




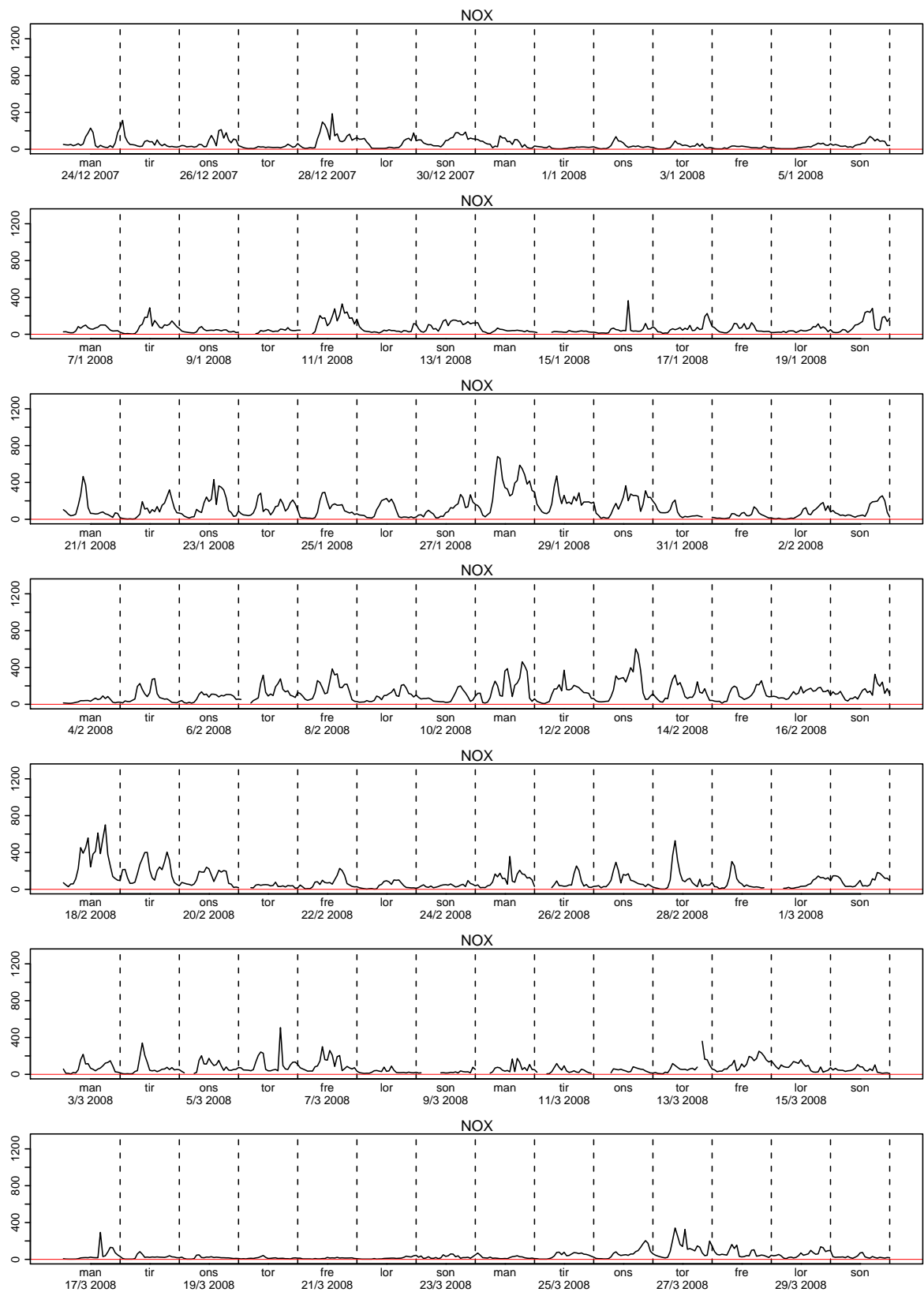
Figur 2.179. Plott av logaritmen til  $NO_x$



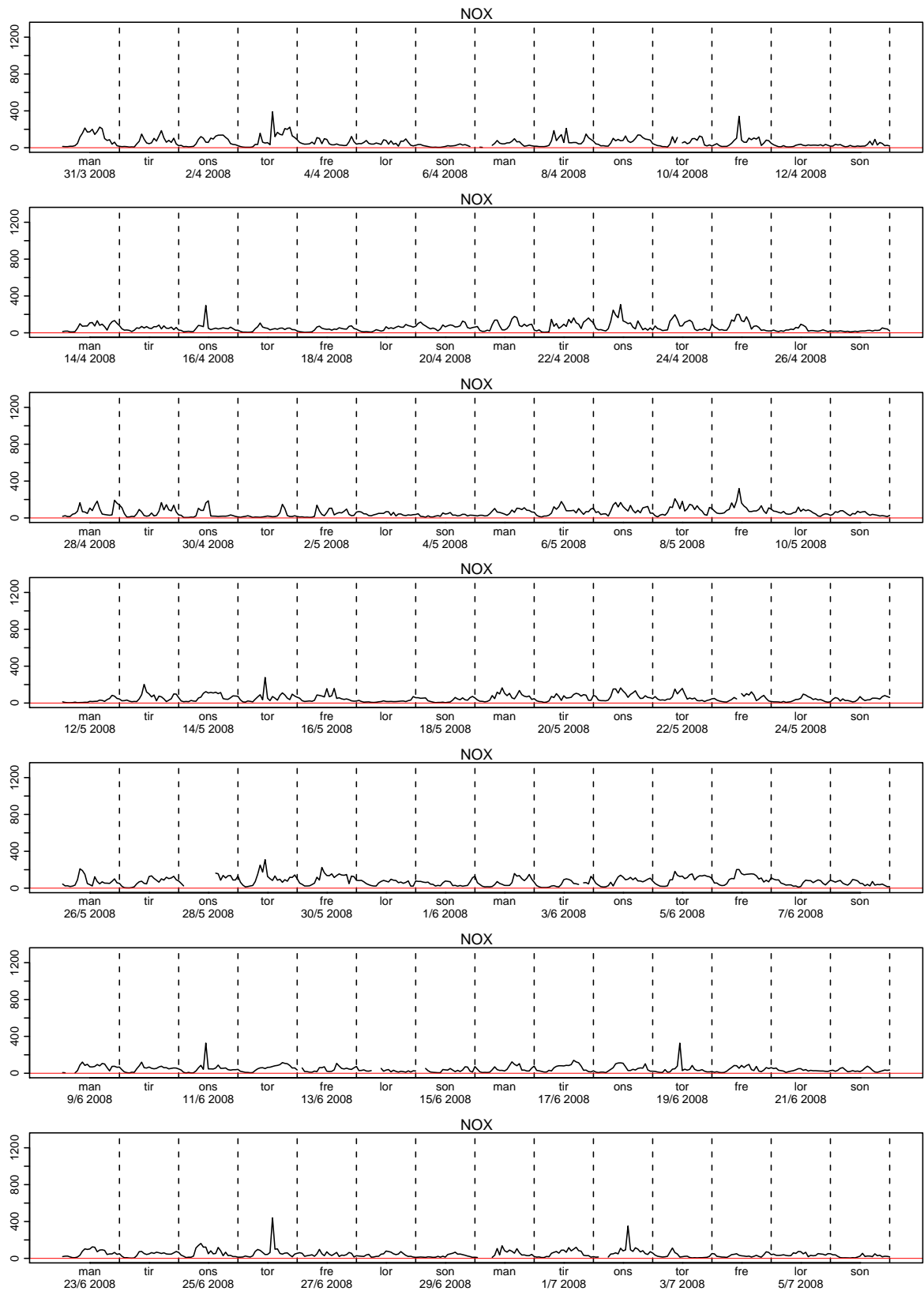
Figur 2.180. Plott av logaritmen til  $NO_x$



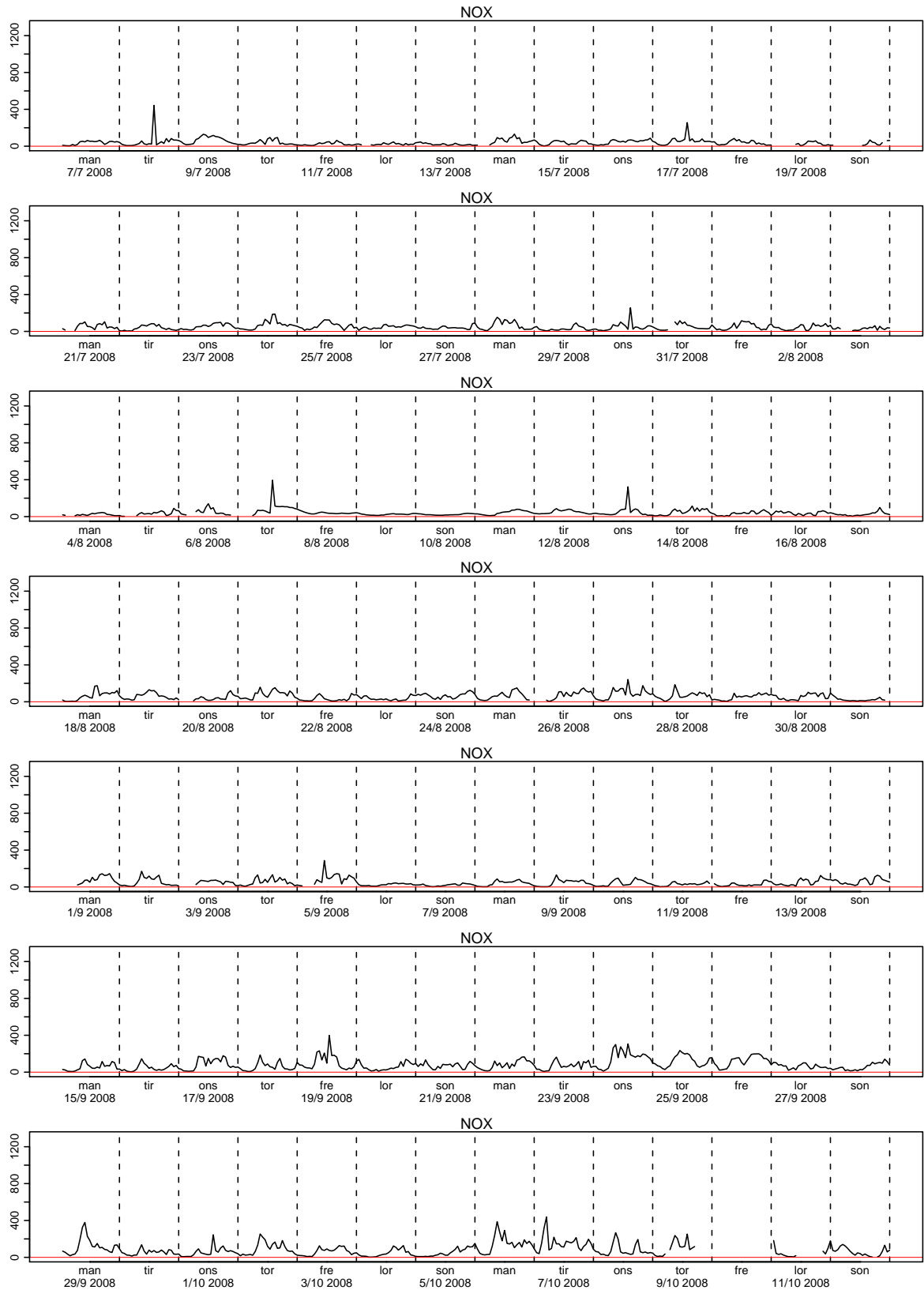
Figur 2.181. Plott av logaritmen til  $NO_x$



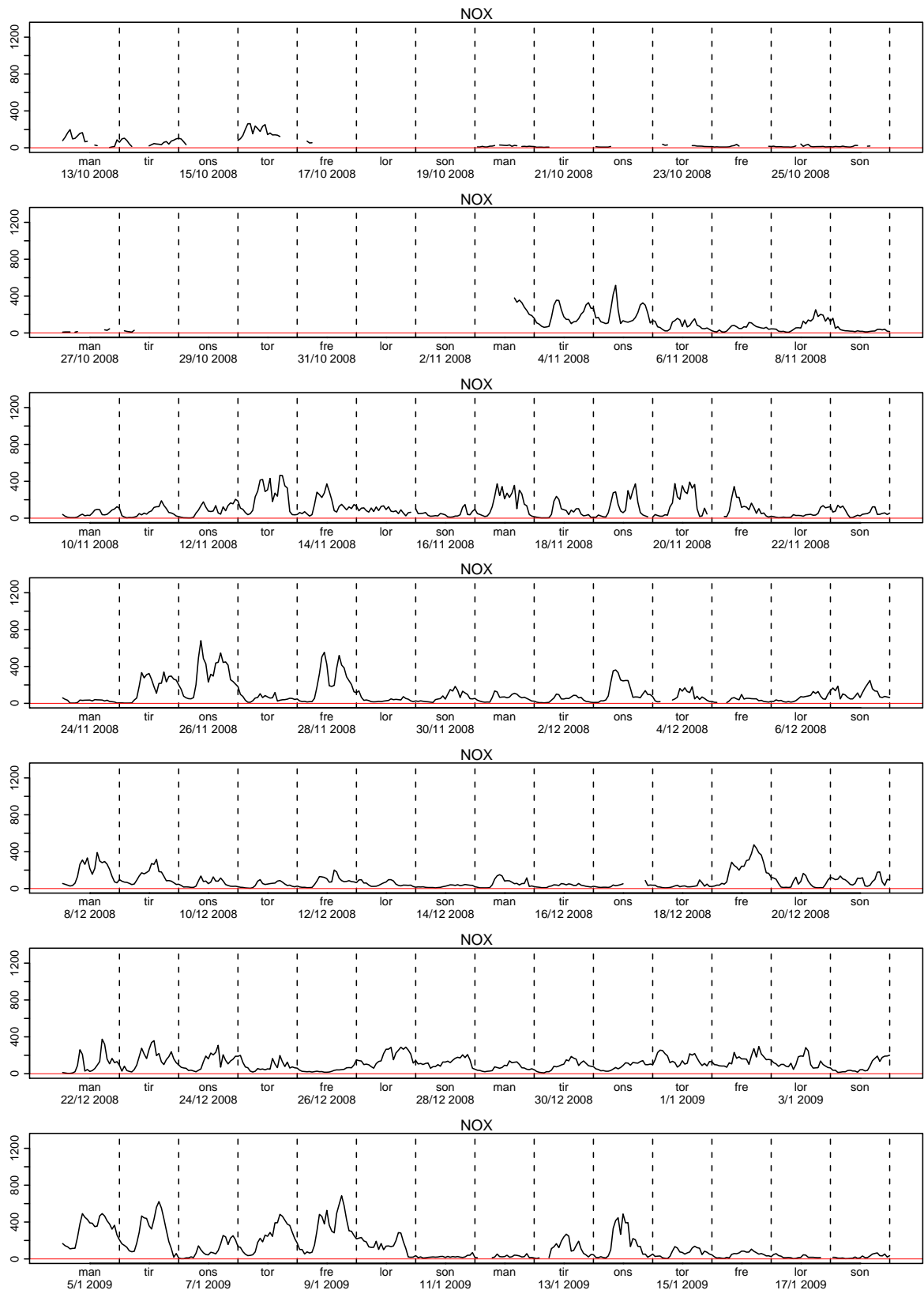
Figur 2.182. Plott av logaritmen til  $NO_x$



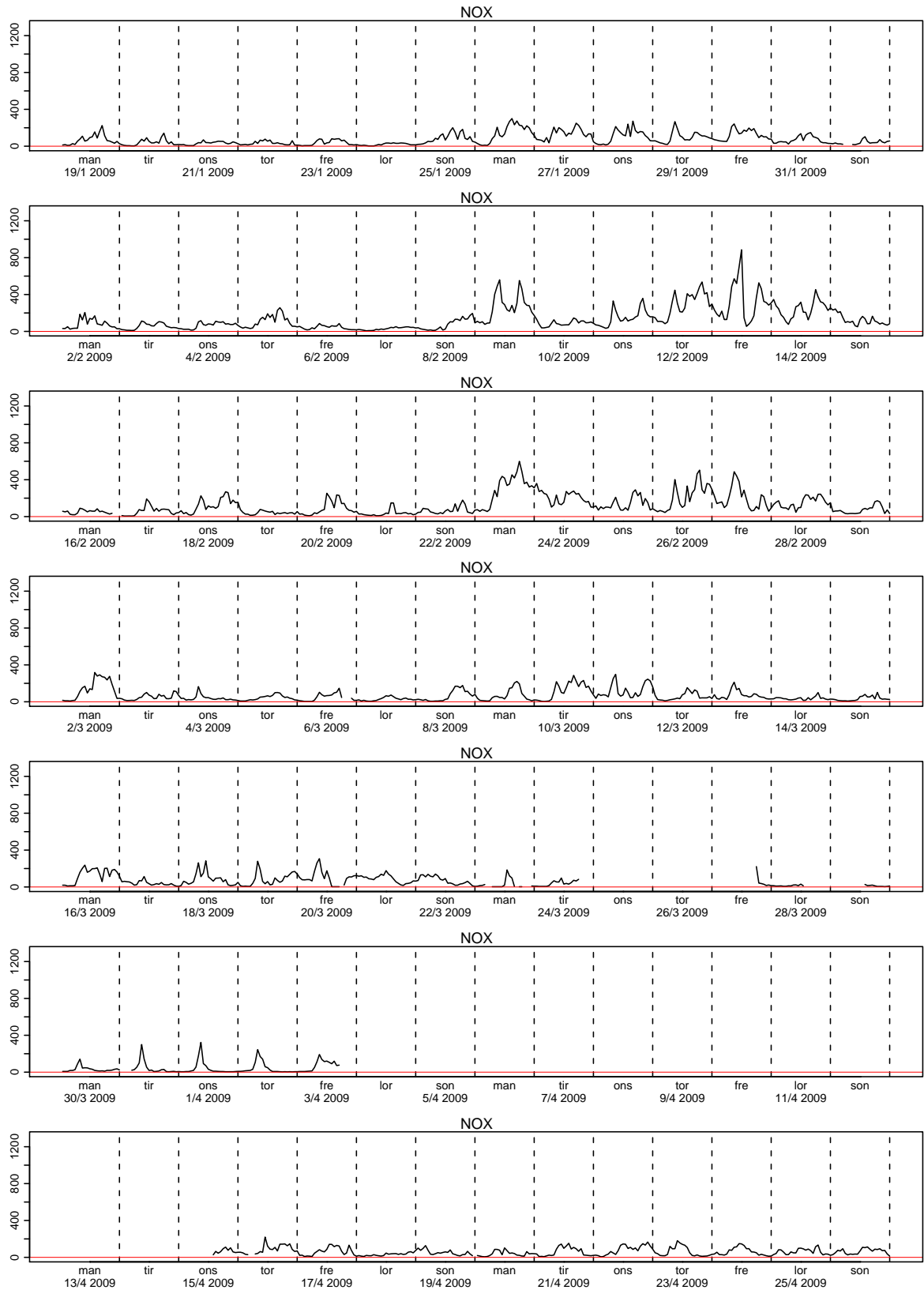
Figur 2.183. Plott av logaritmen til  $NO_x$



Figur 2.184. Plott av logaritmen til  $NO_x$

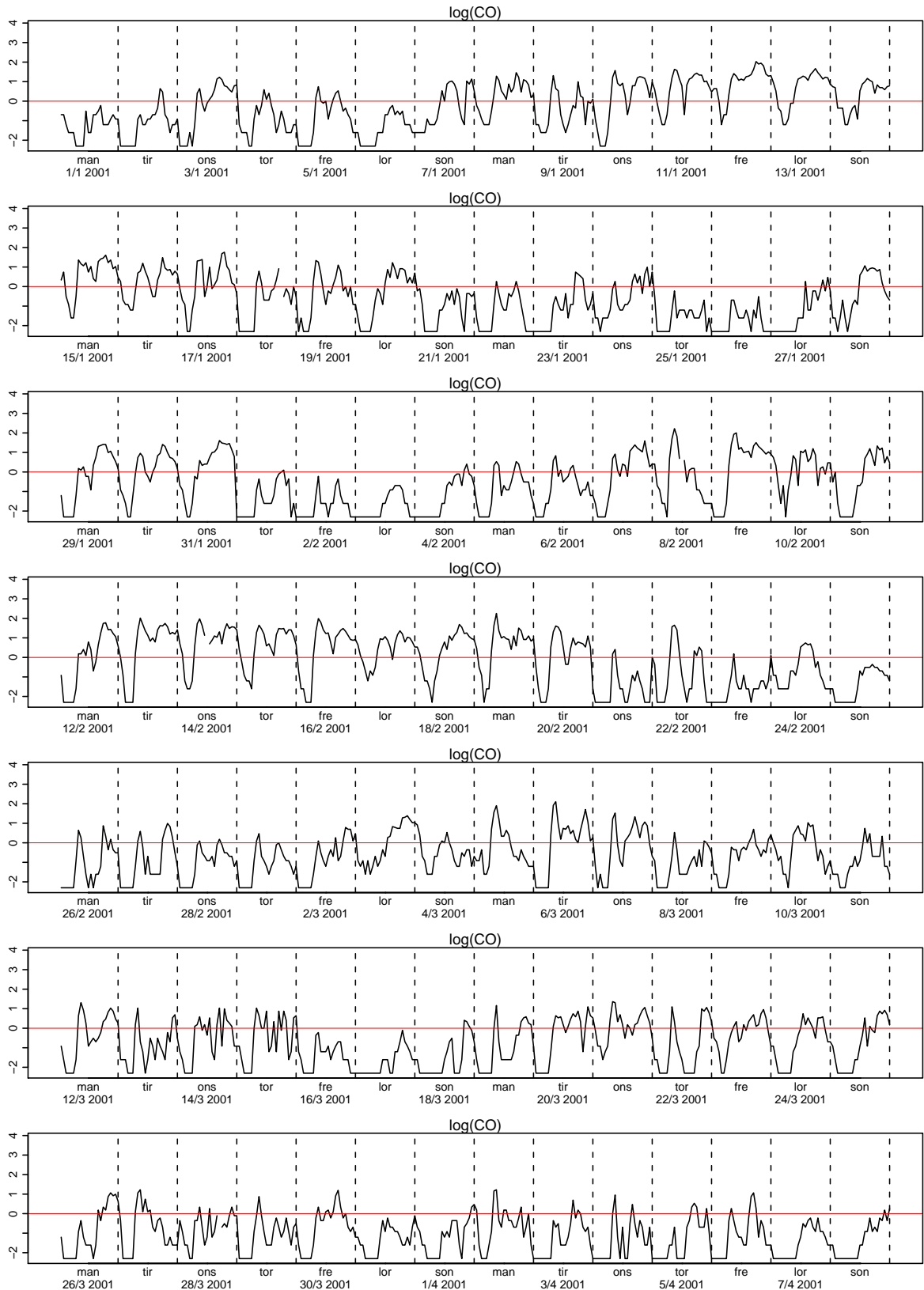


Figur 2.185. Plott av logaritmen til  $NO_x$

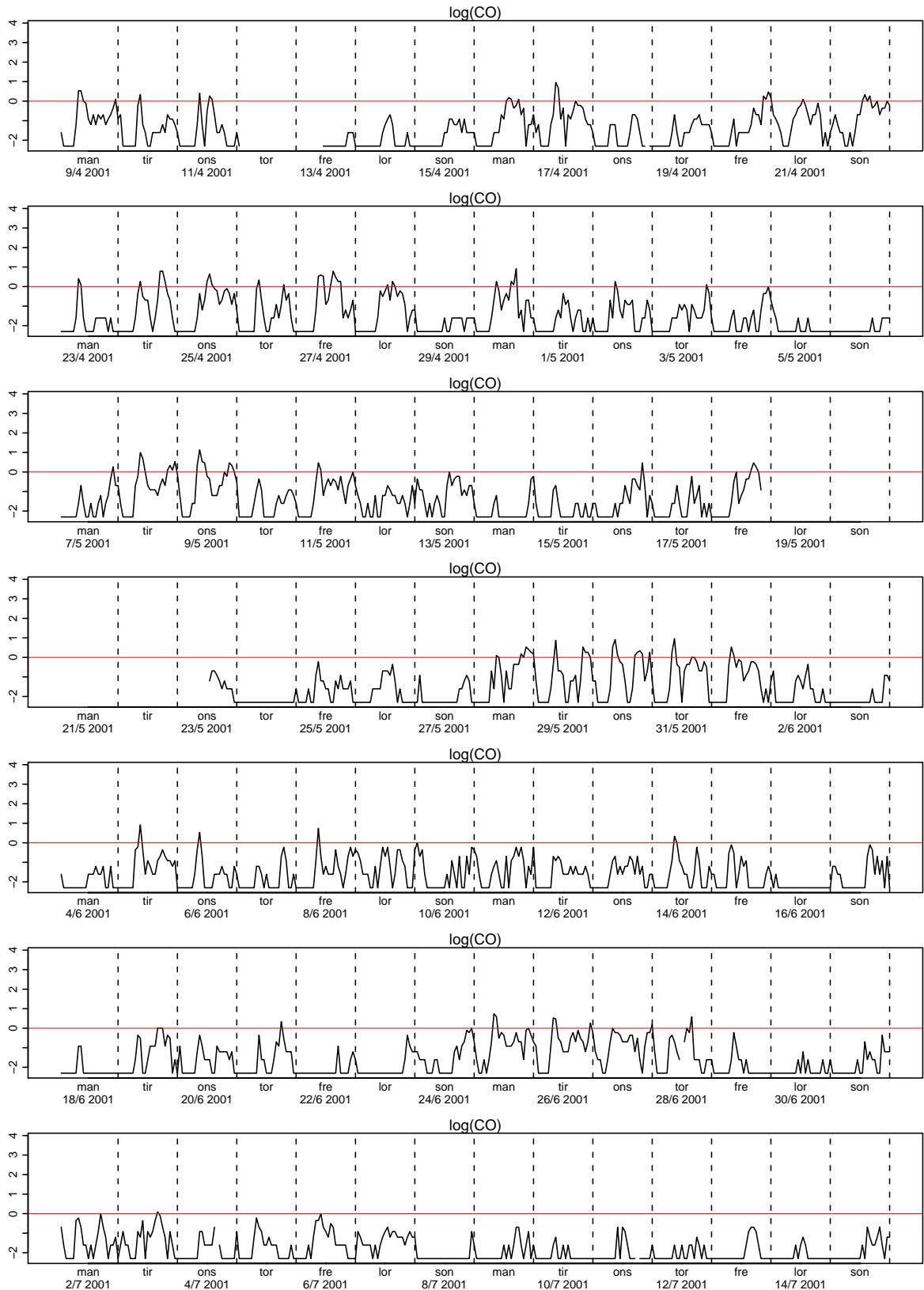


Figur 2.186. Plott av logaritmen til  $NO_x$

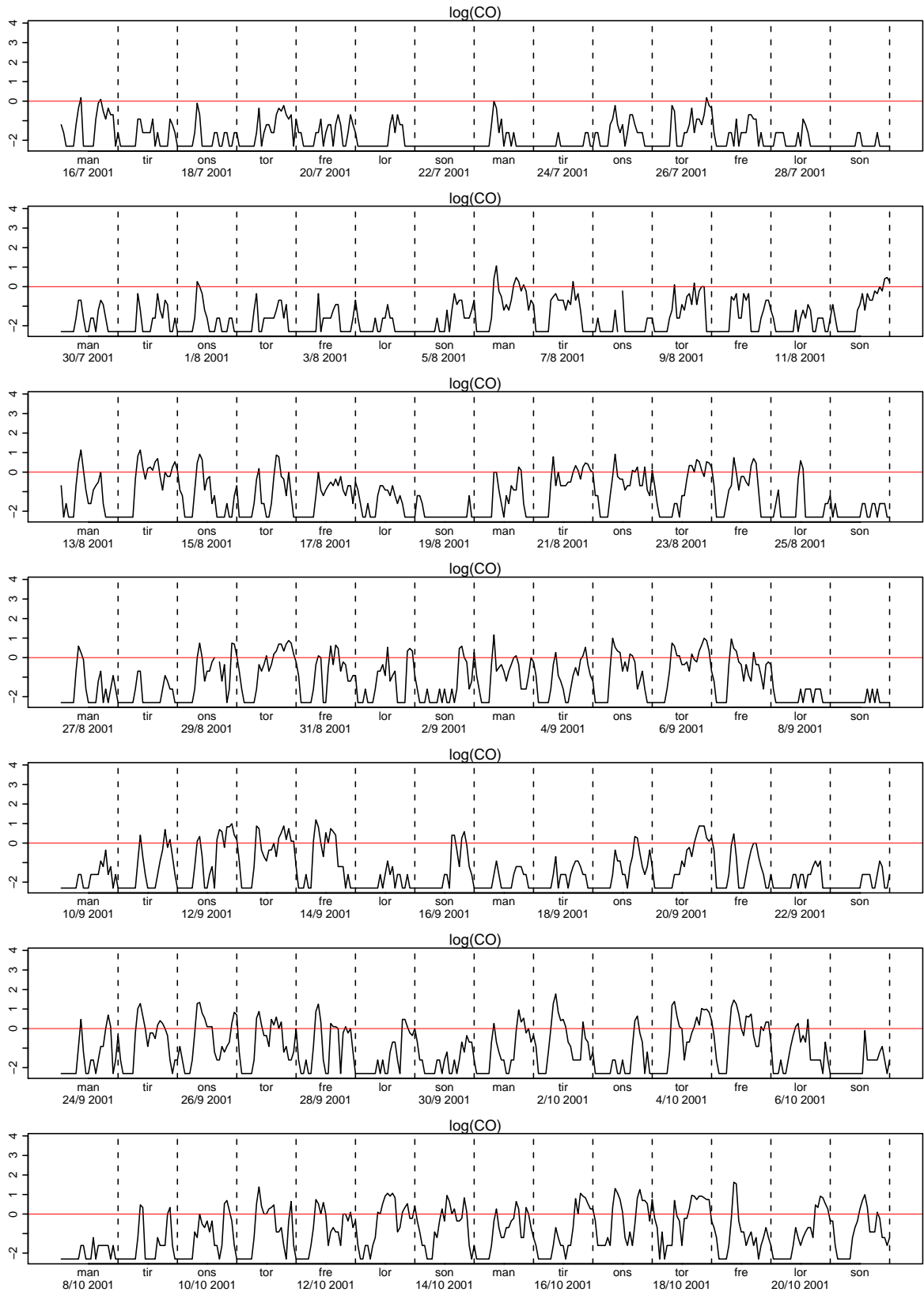




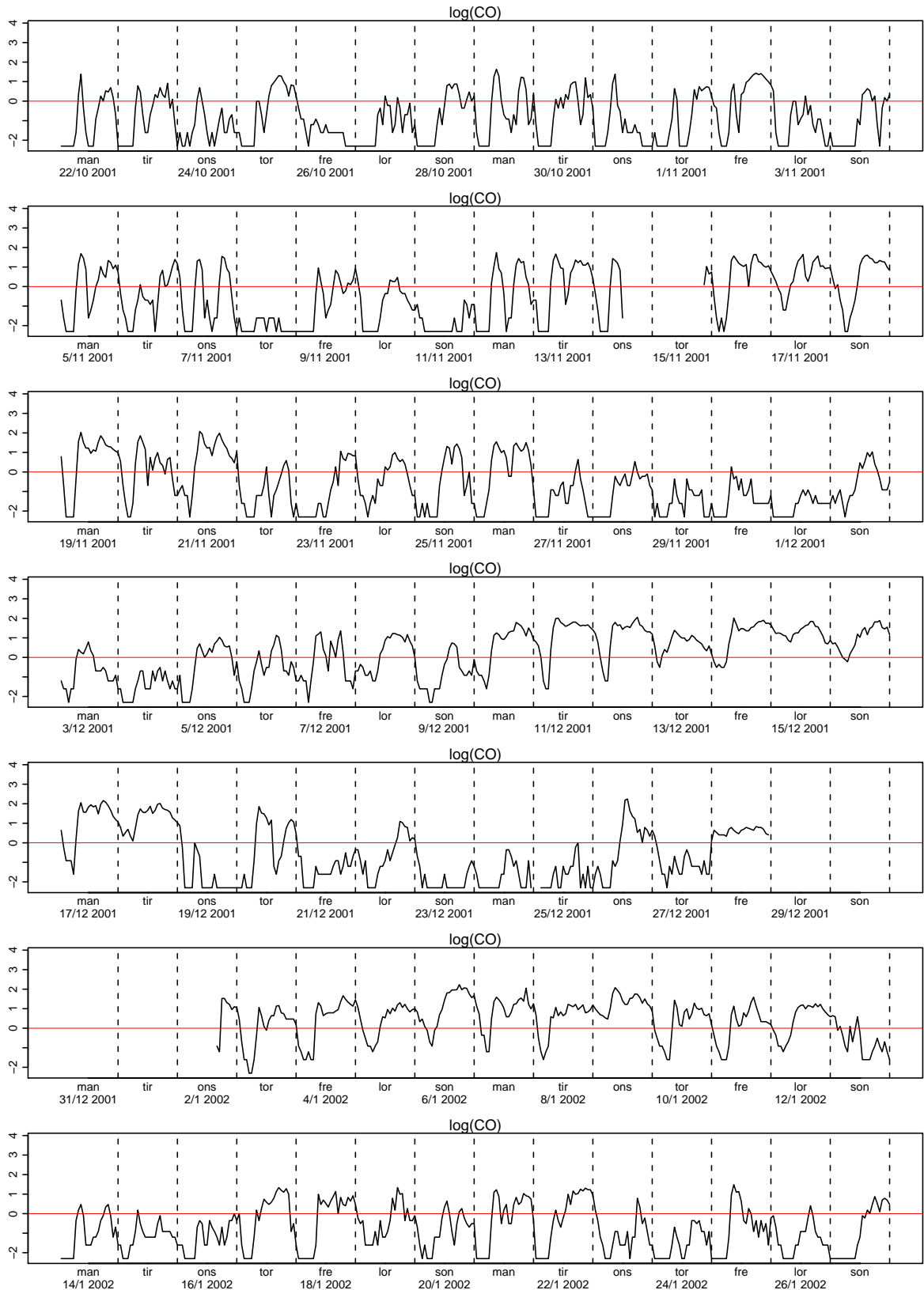
Figur 2.187. Plott av logaritmen til CO



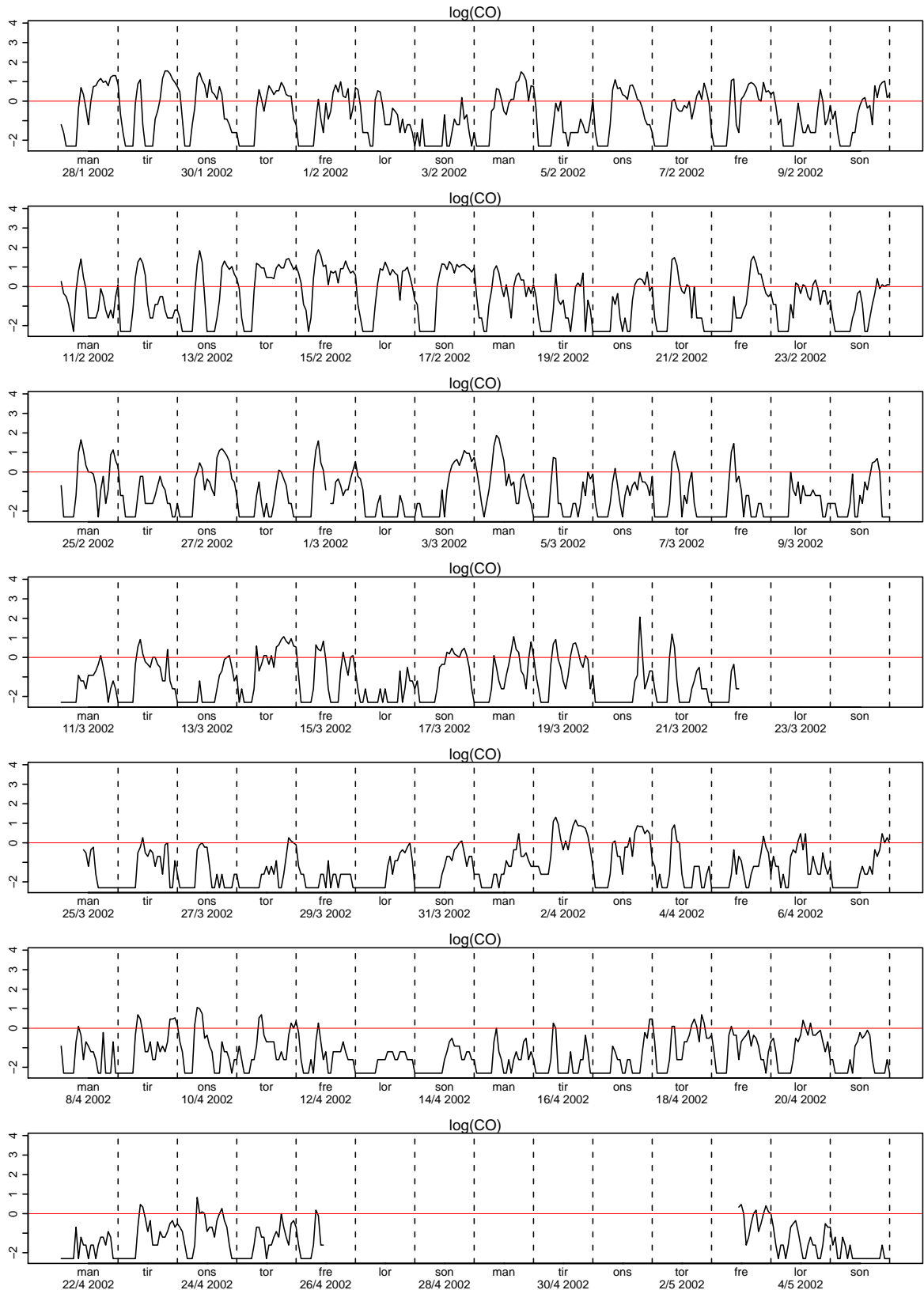
Figur 2.188. Plott av logaritmen til CO



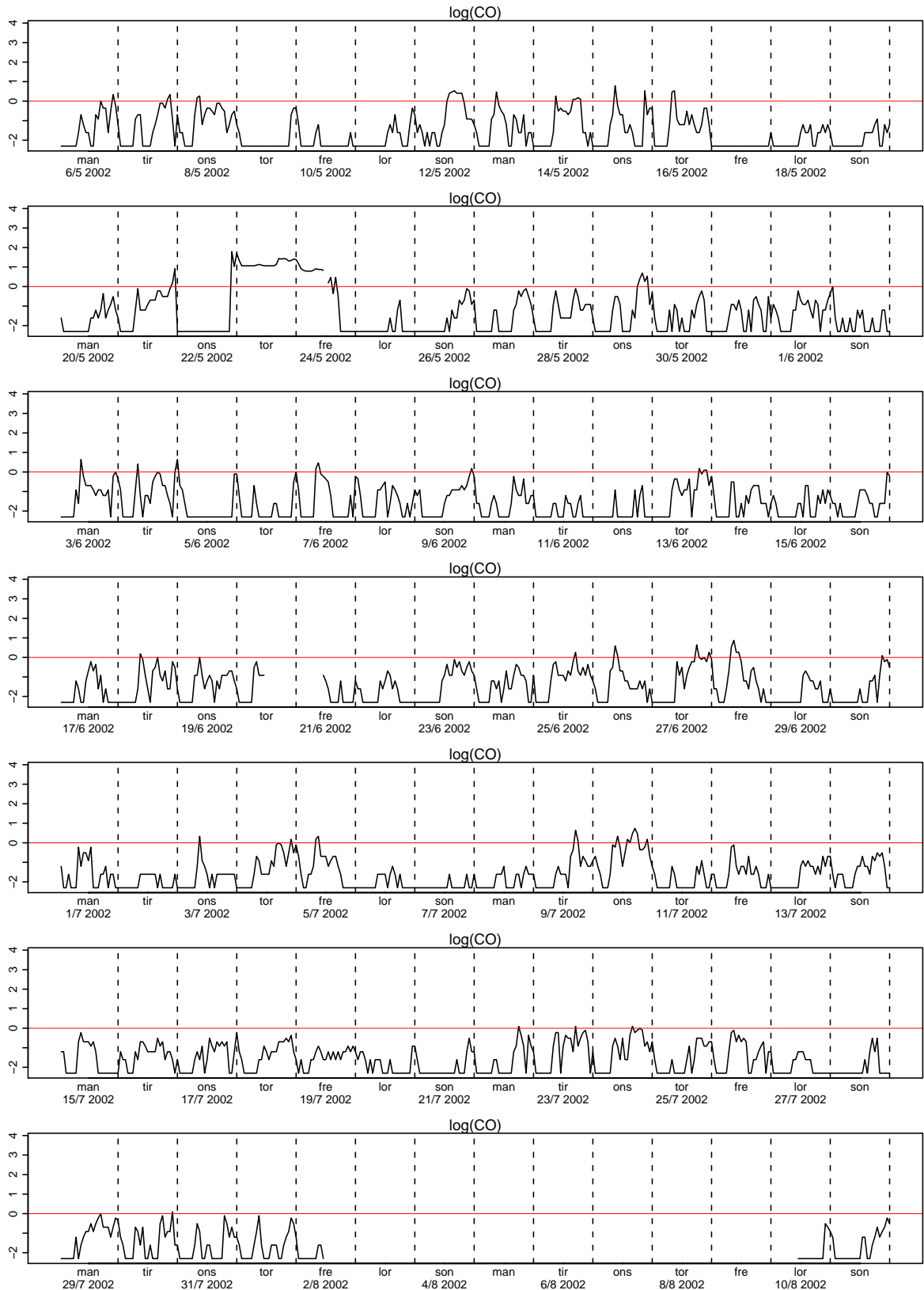
Figur 2.189. Plott av logaritmen til CO



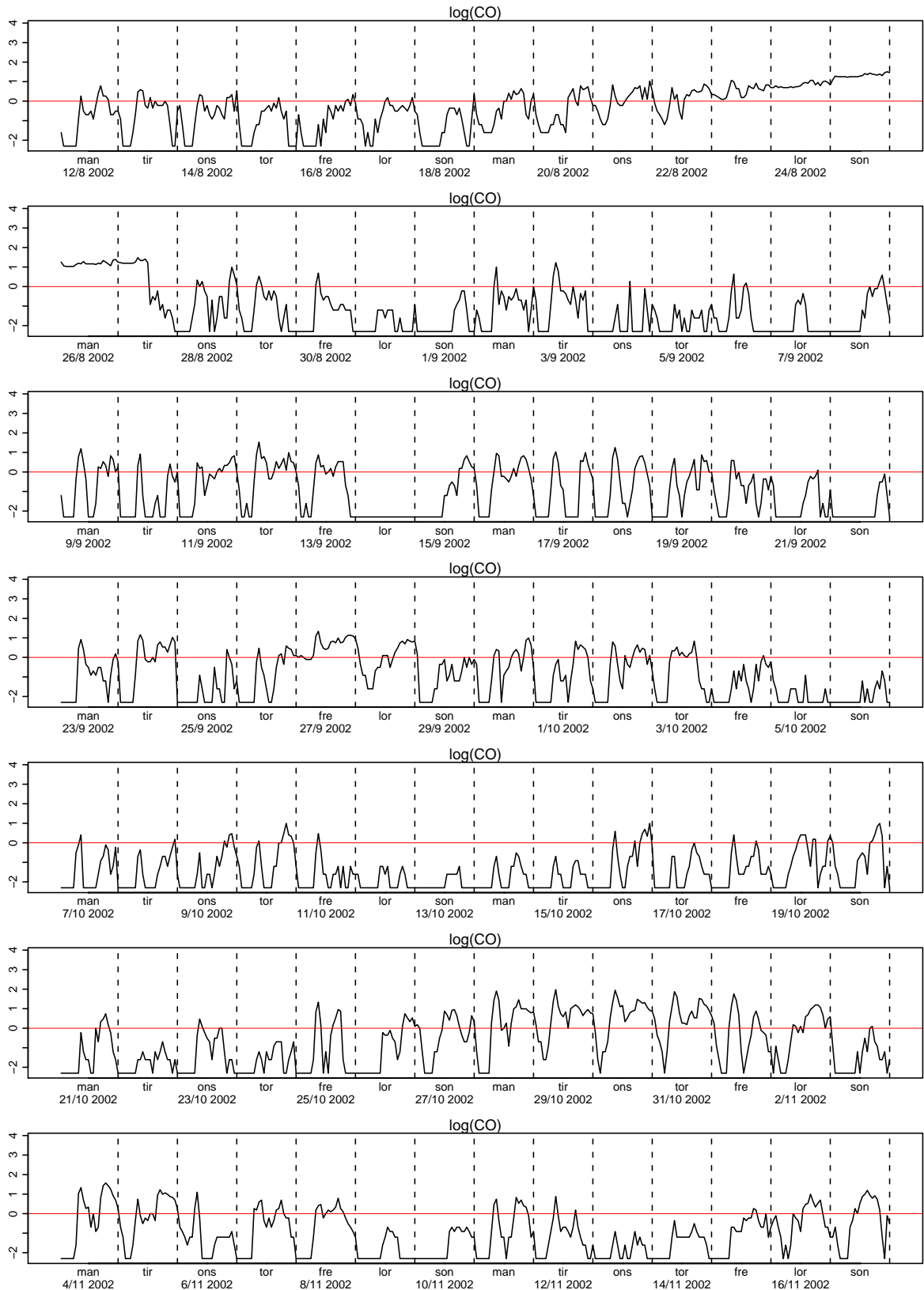
Figur 2.190. Plott av logaritmen til CO



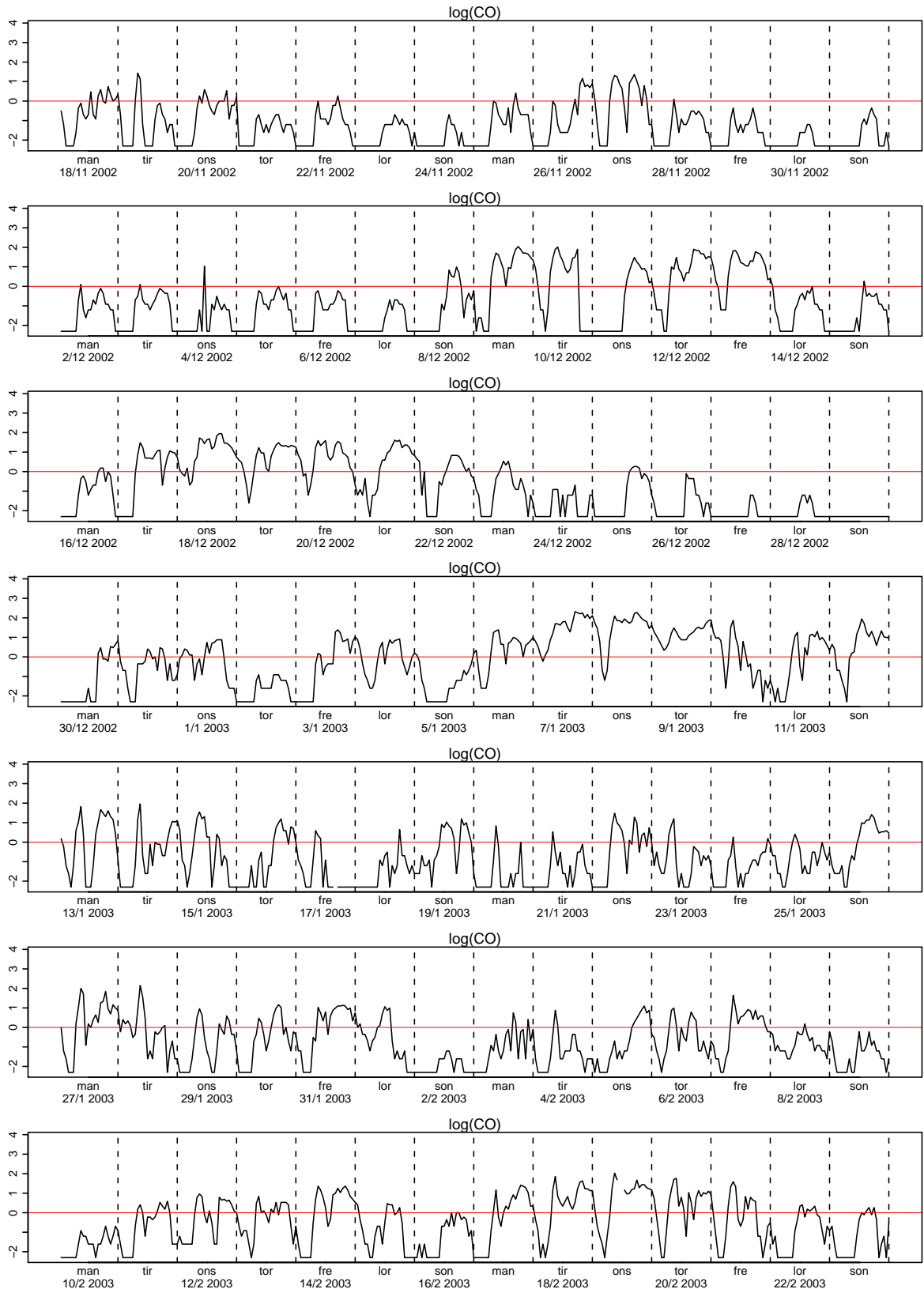
Figur 2.191. Plott av logaritmen til CO



Figur 2.192. Plott av logaritmen til CO

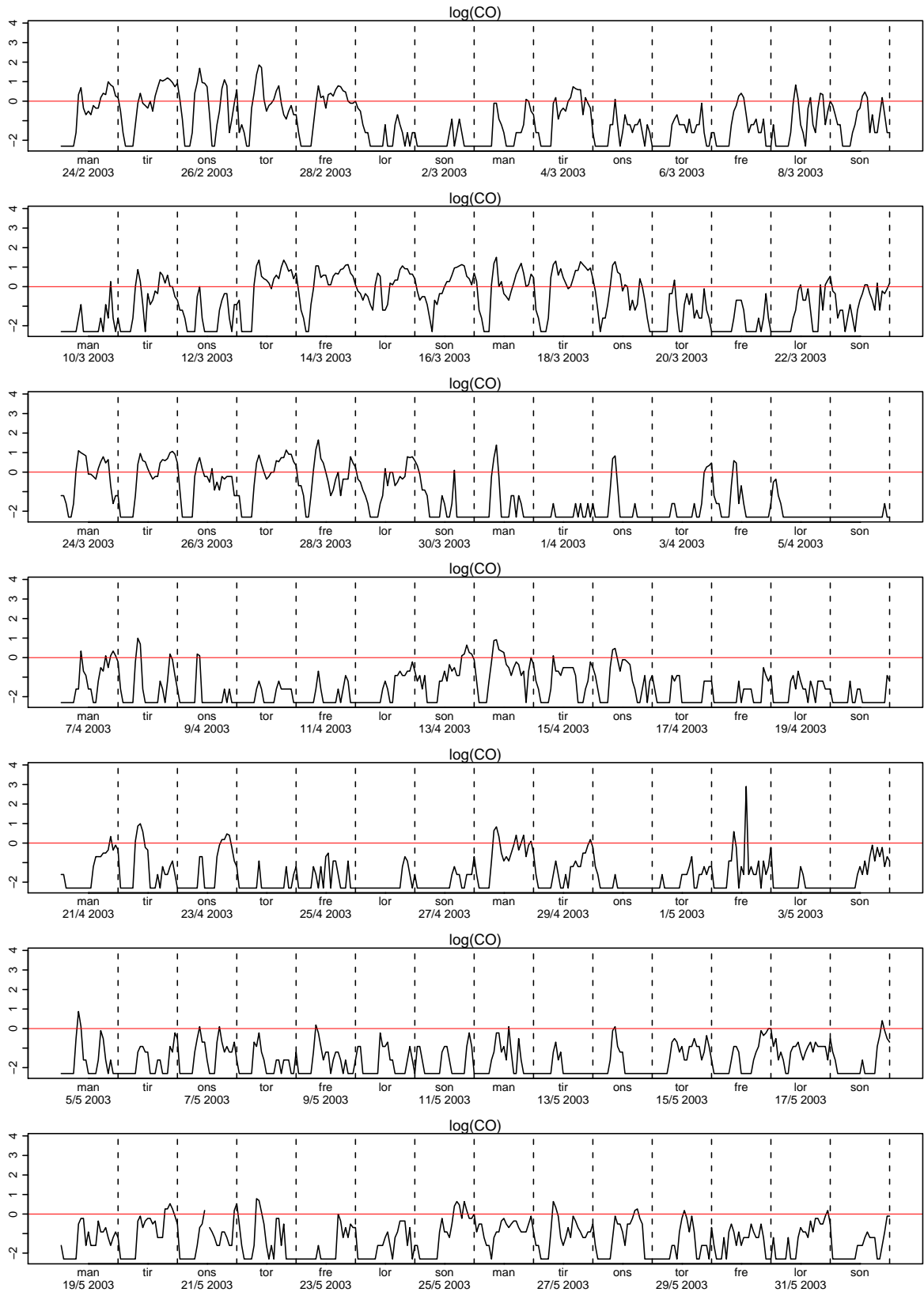


Figur 2.193. Plott av logaritmen til CO

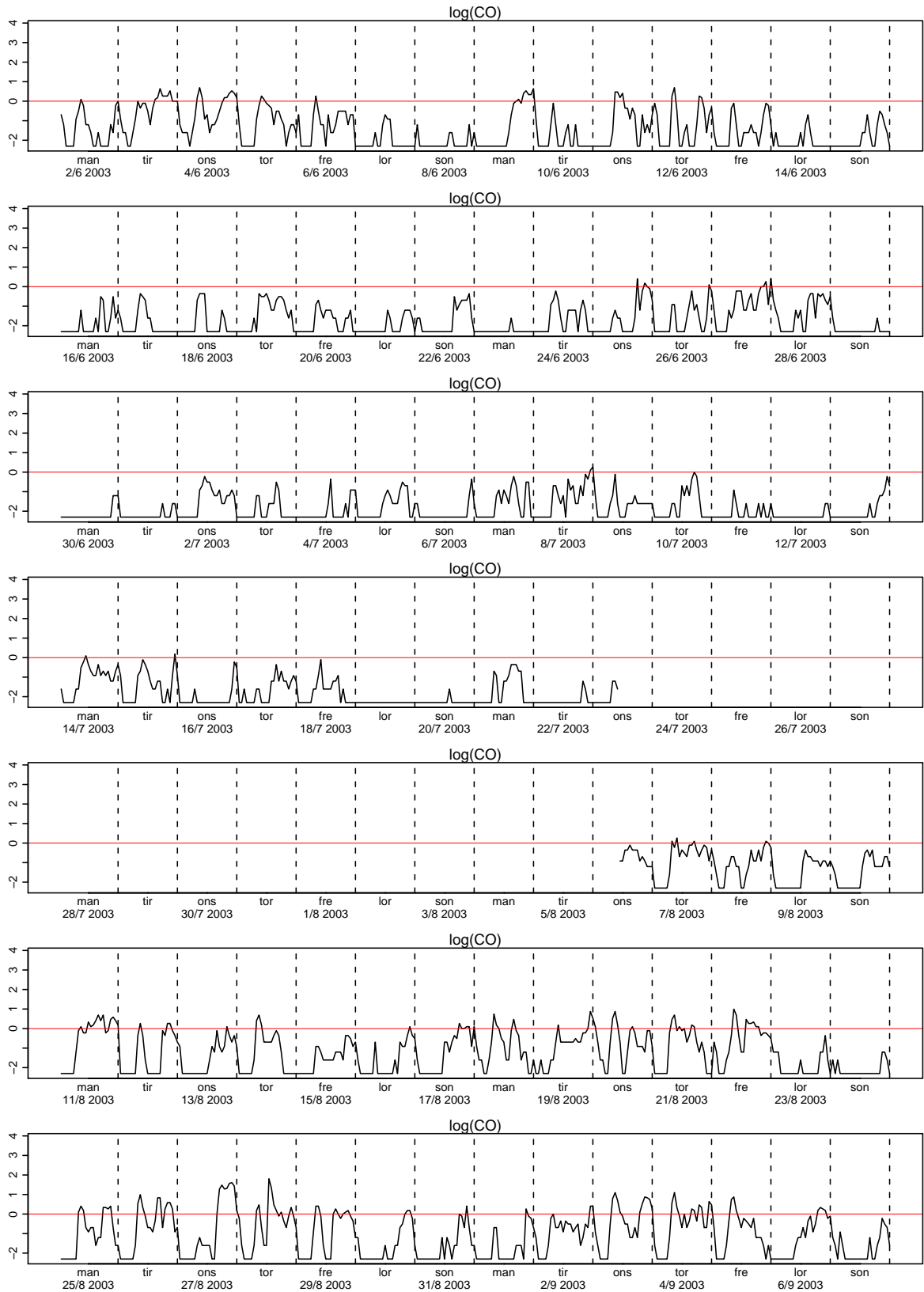


Figur 2.194. Plott av logaritmen til CO

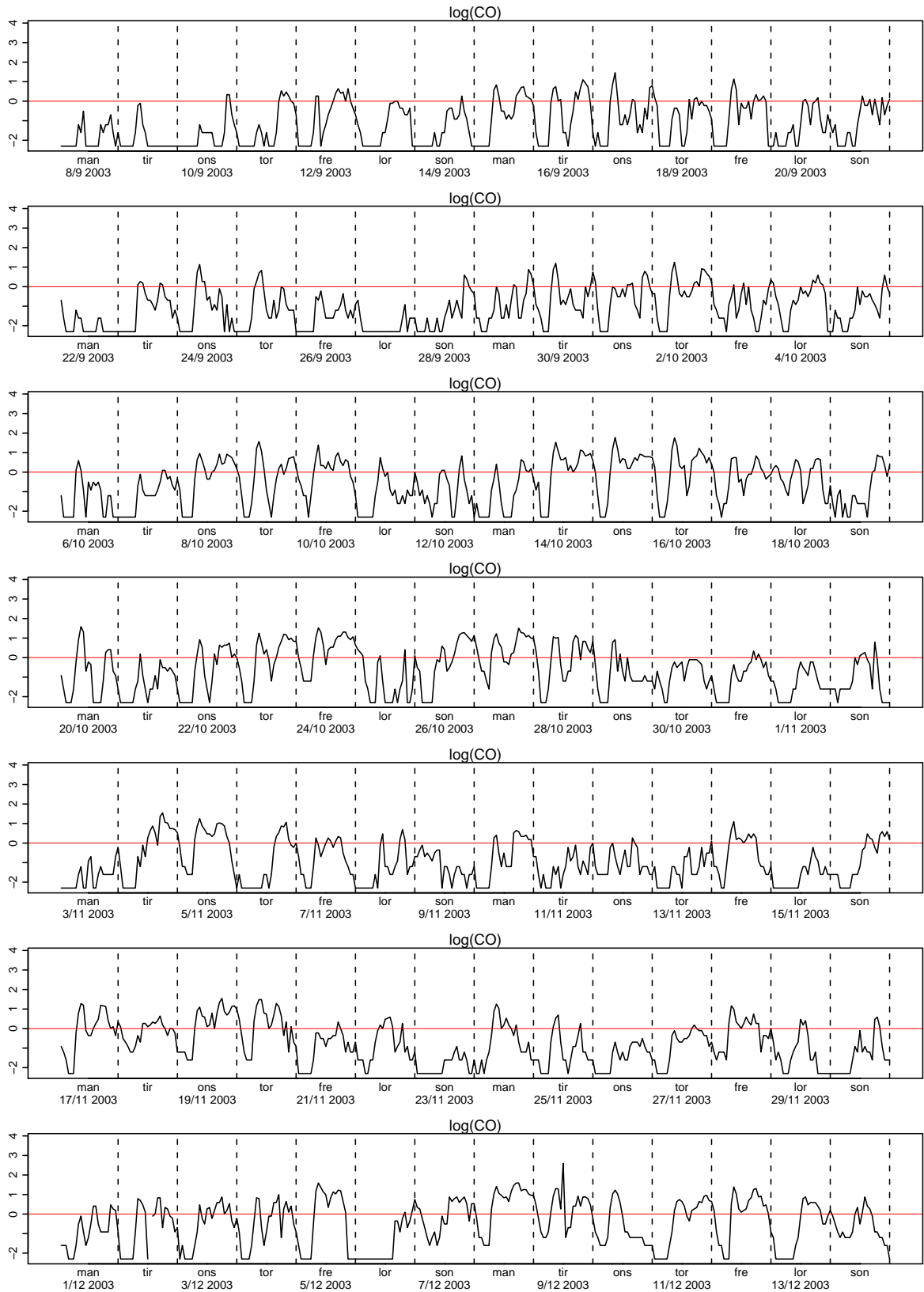




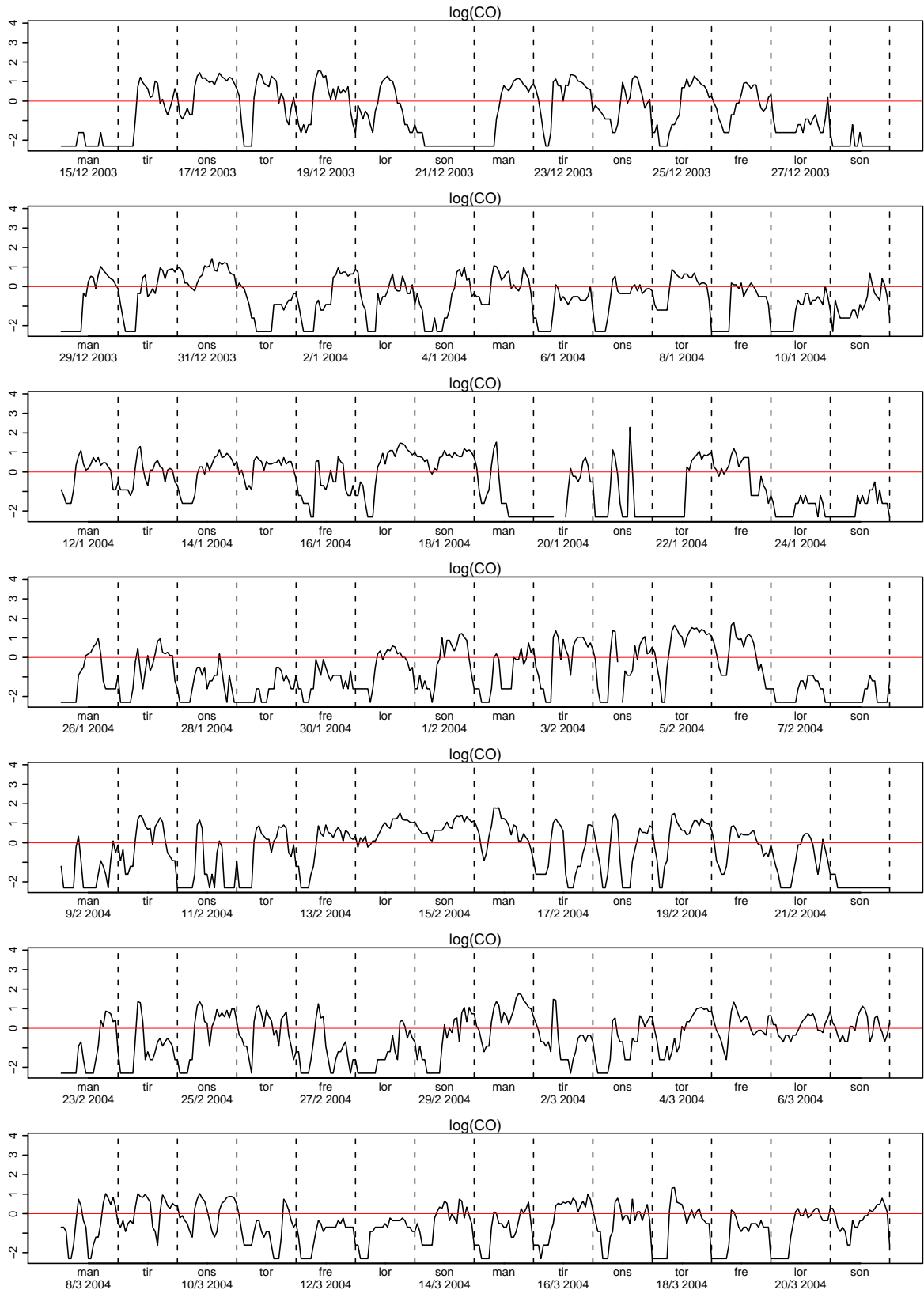
Figur 2.195. Plott av logaritmen til CO



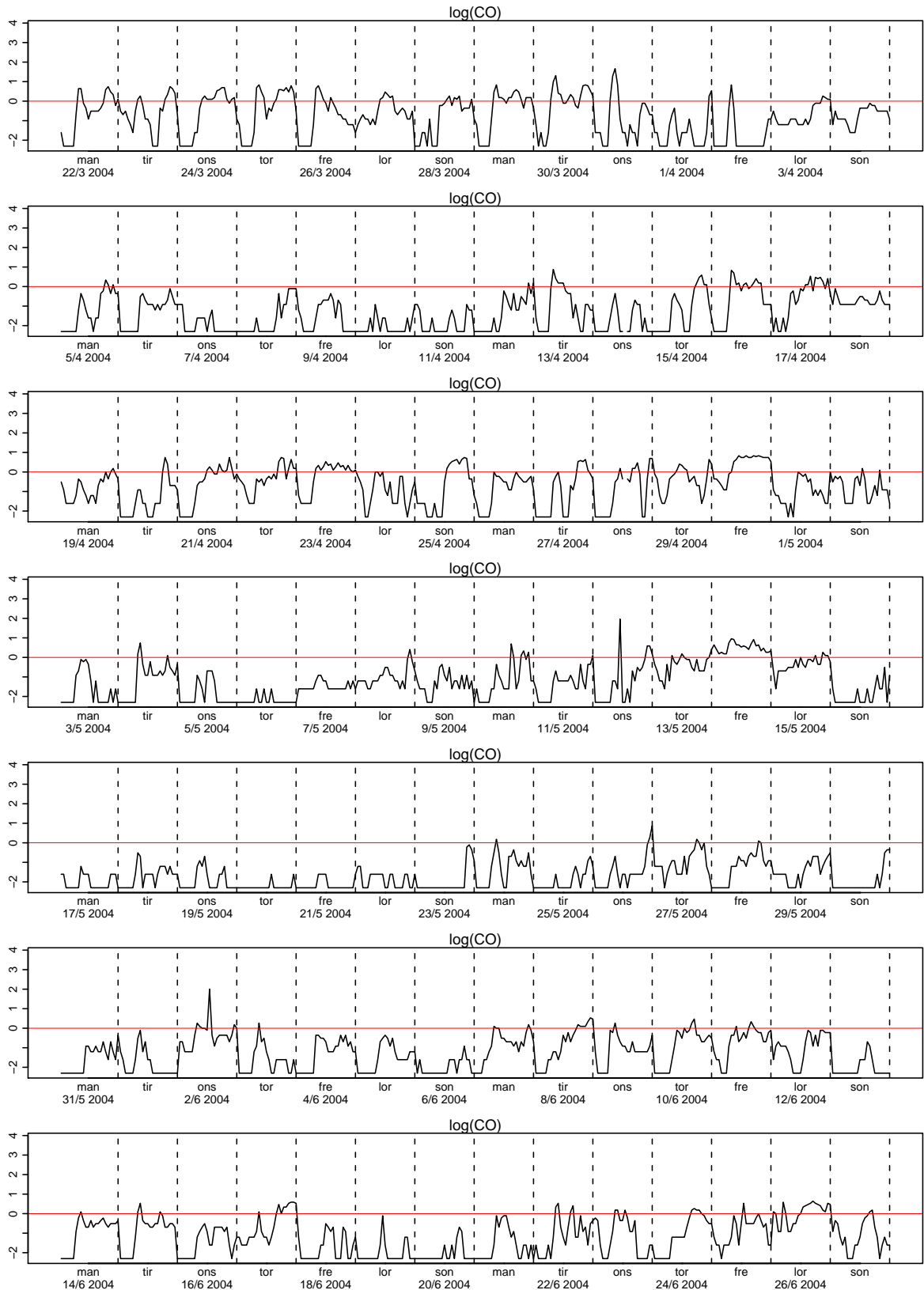
Figur 2.196. Plott av logaritmen til CO



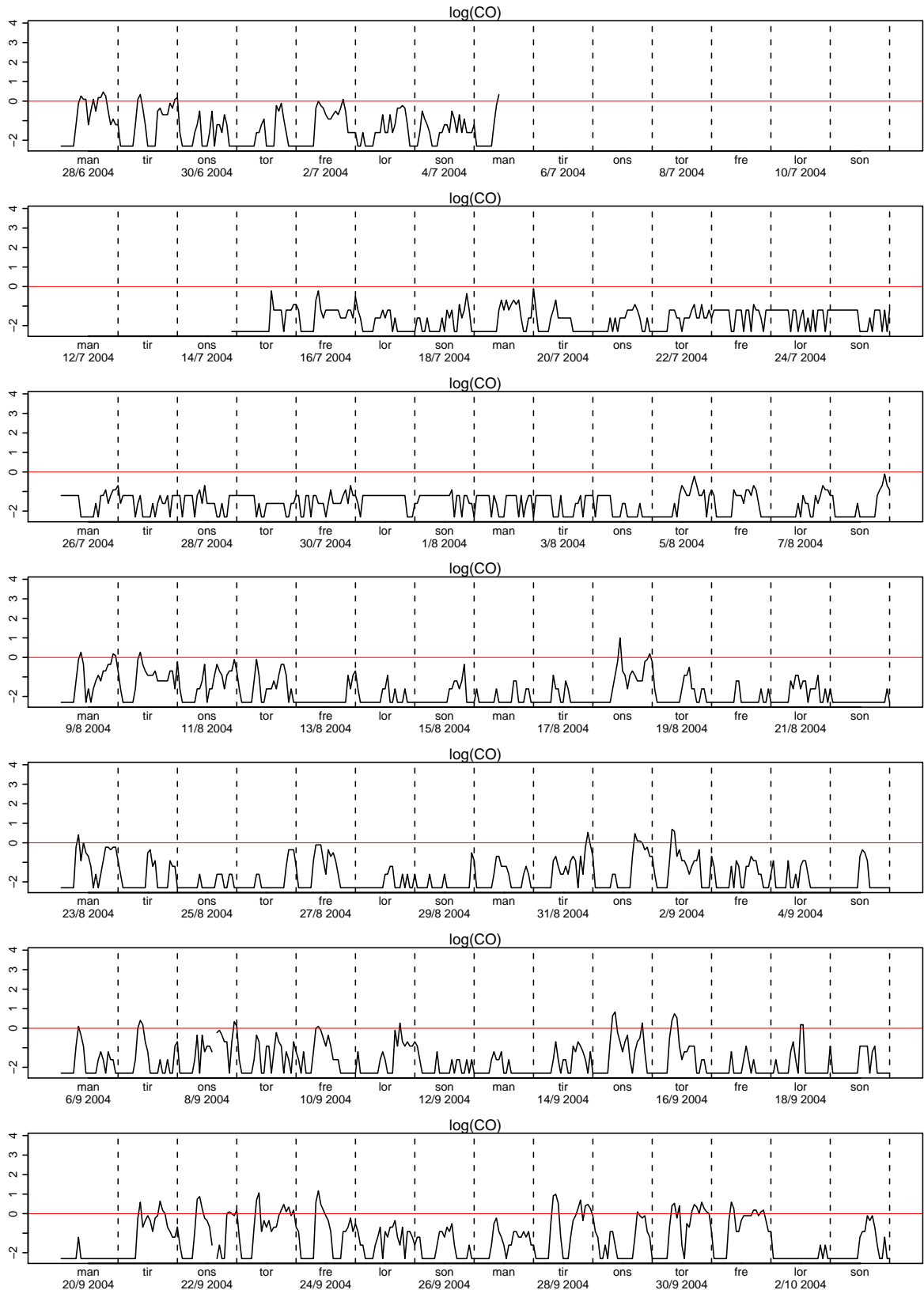
Figur 2.197. Plott av logaritmen til CO



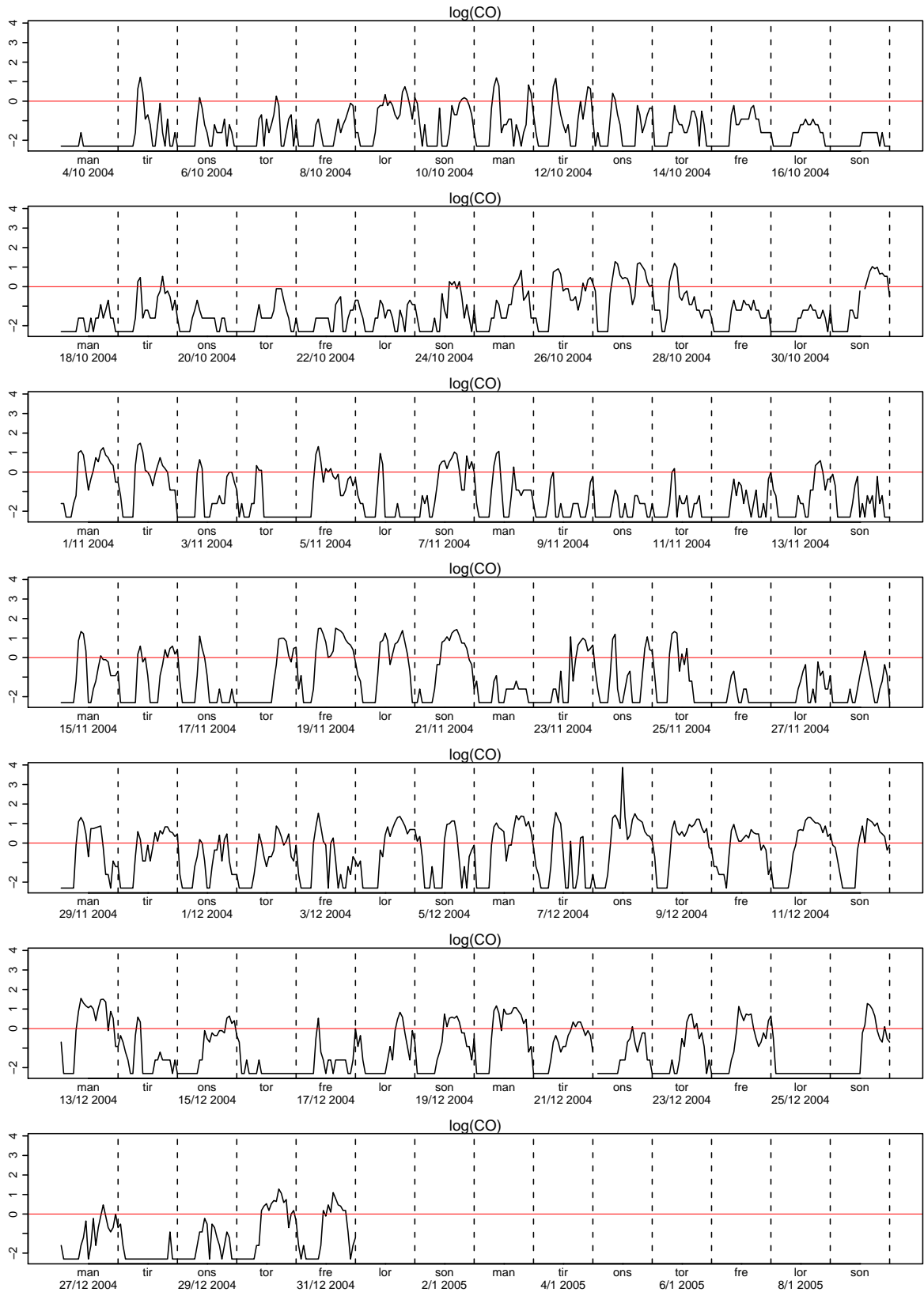
Figur 2.198. Plott av logaritmen til CO



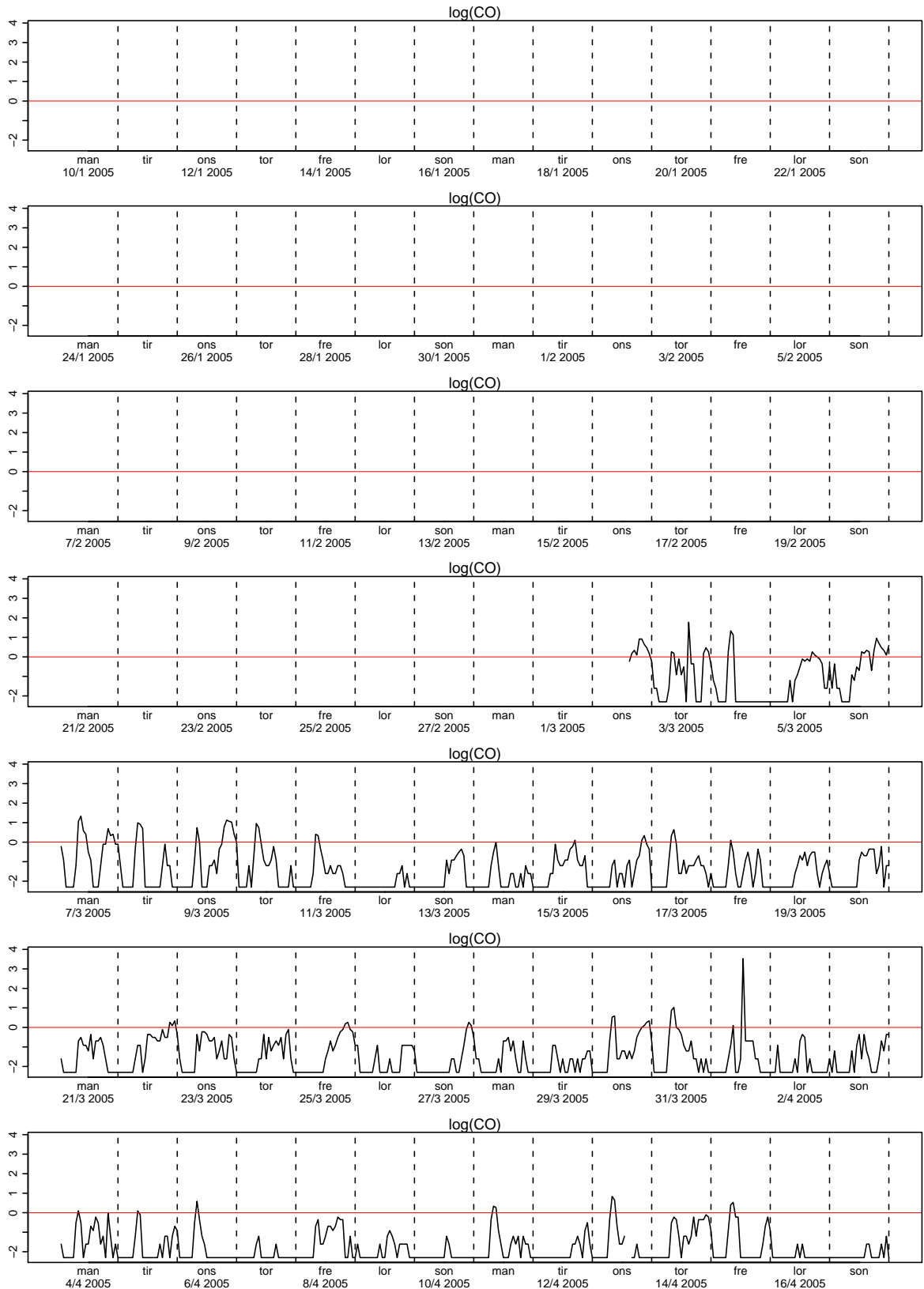
Figur 2.199. Plott av logaritmen til CO



Figur 2.200. Plott av logaritmen til CO

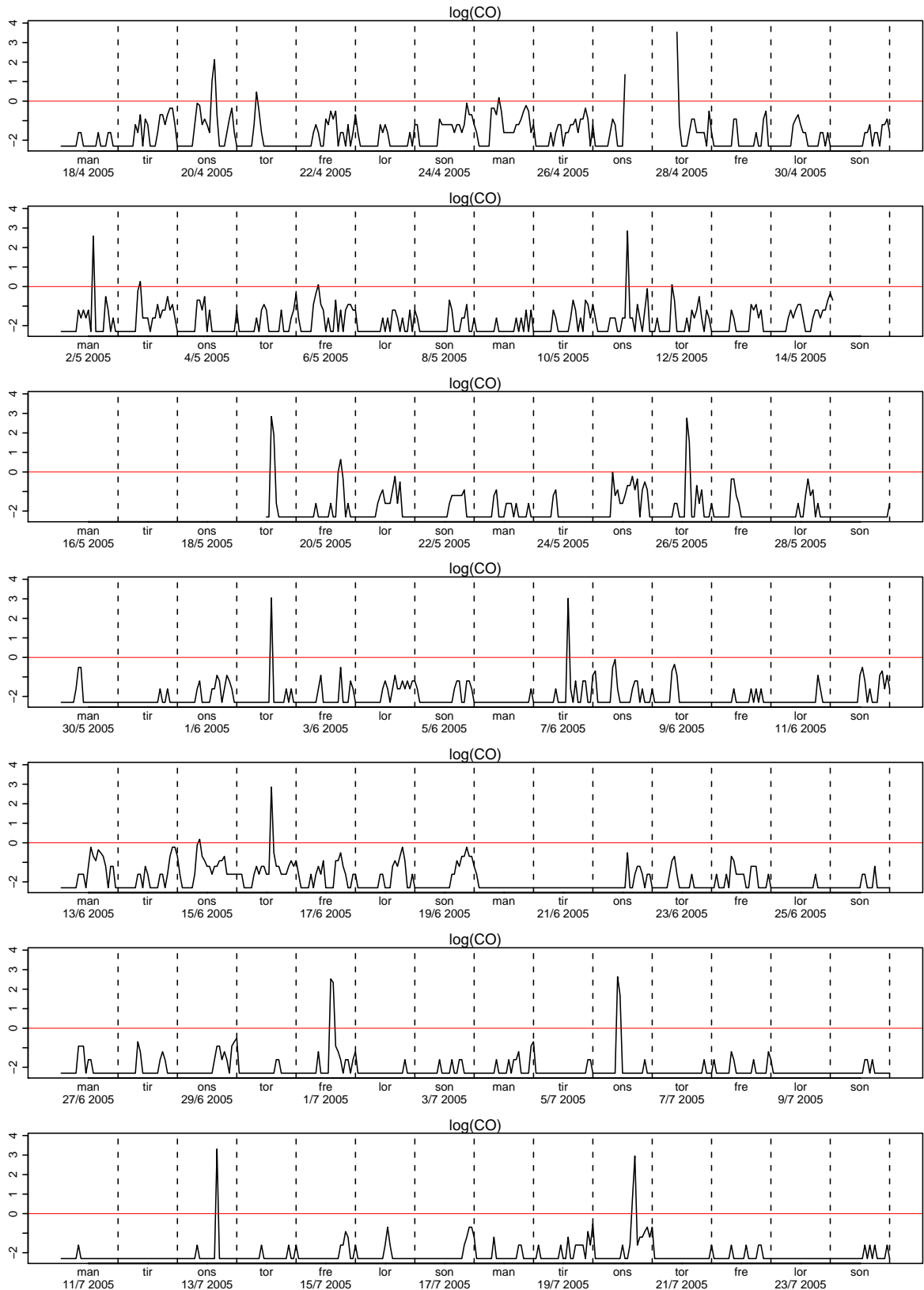


Figur 2.201. Plott av logaritmen til CO

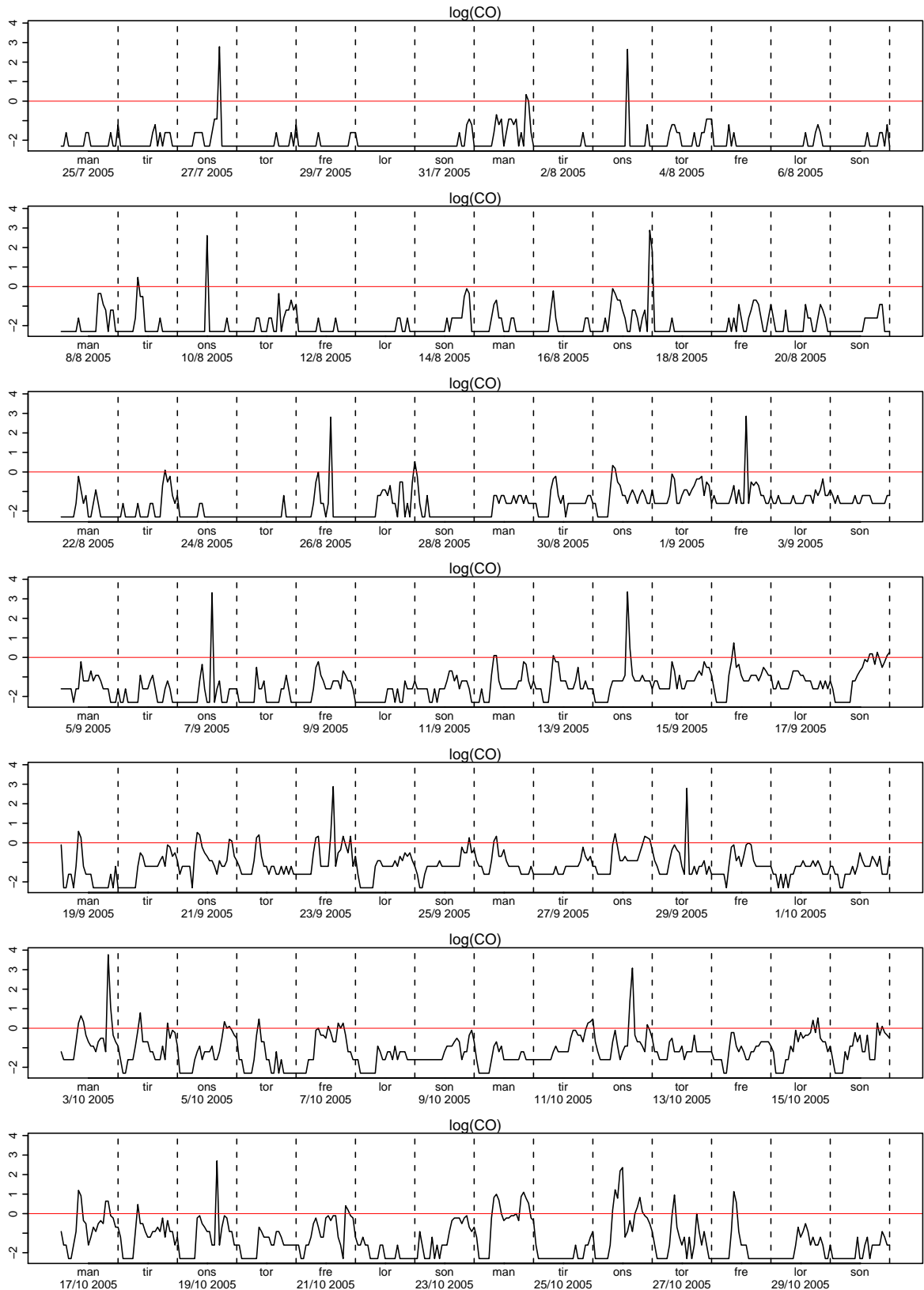


Figur 2.202. Plott av logaritmen til CO

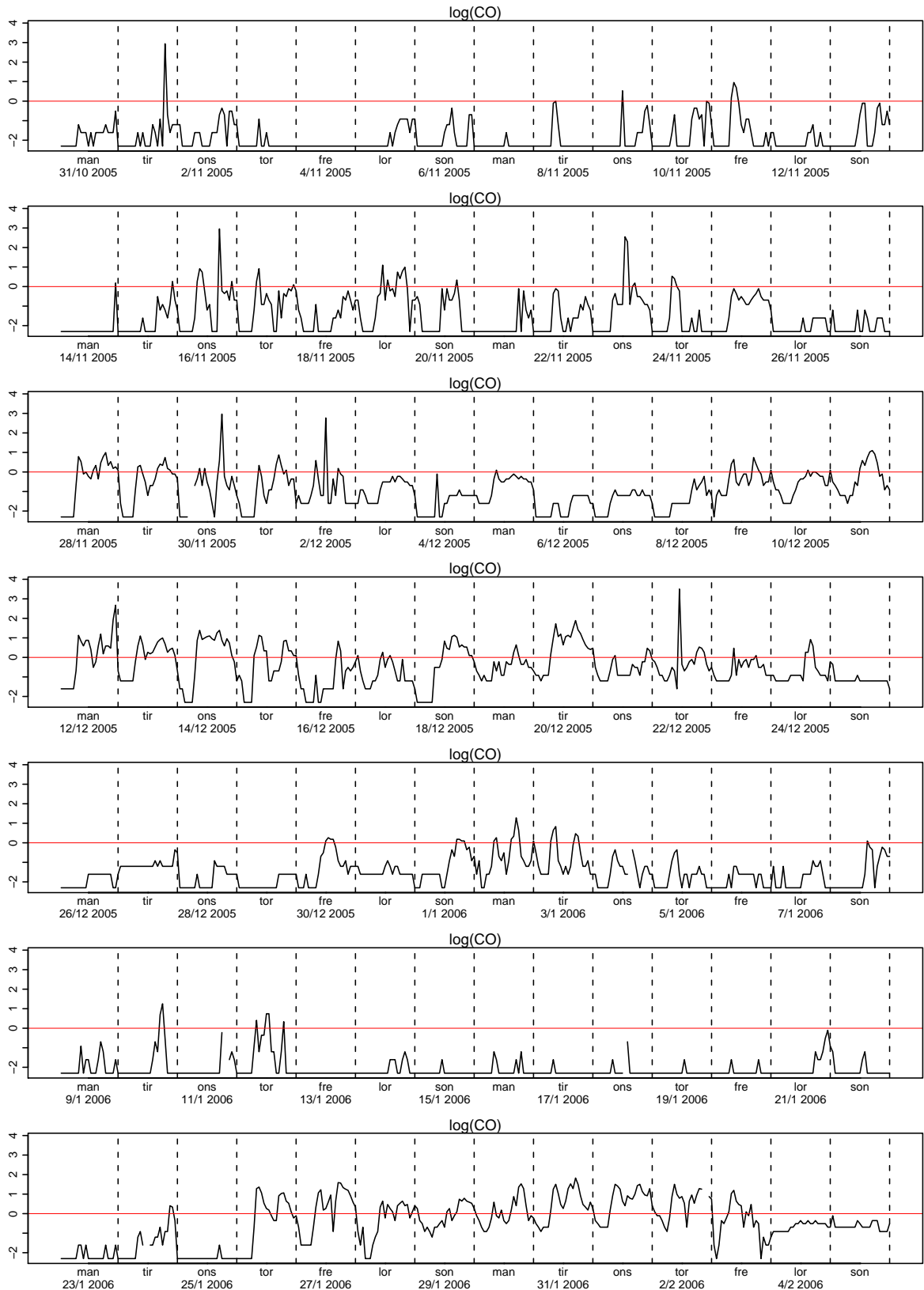




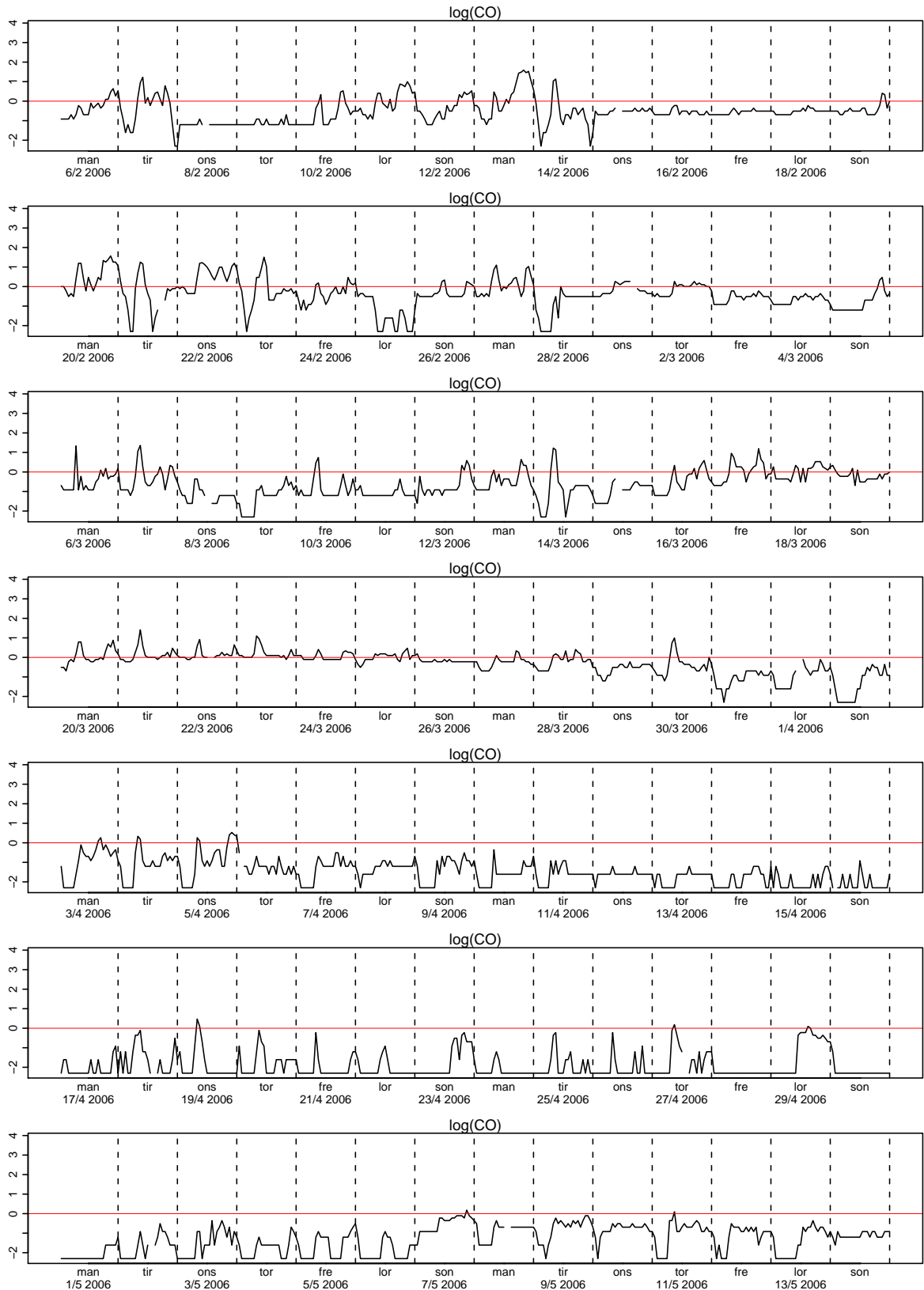
Figur 2.203. Plott av logaritmen til CO



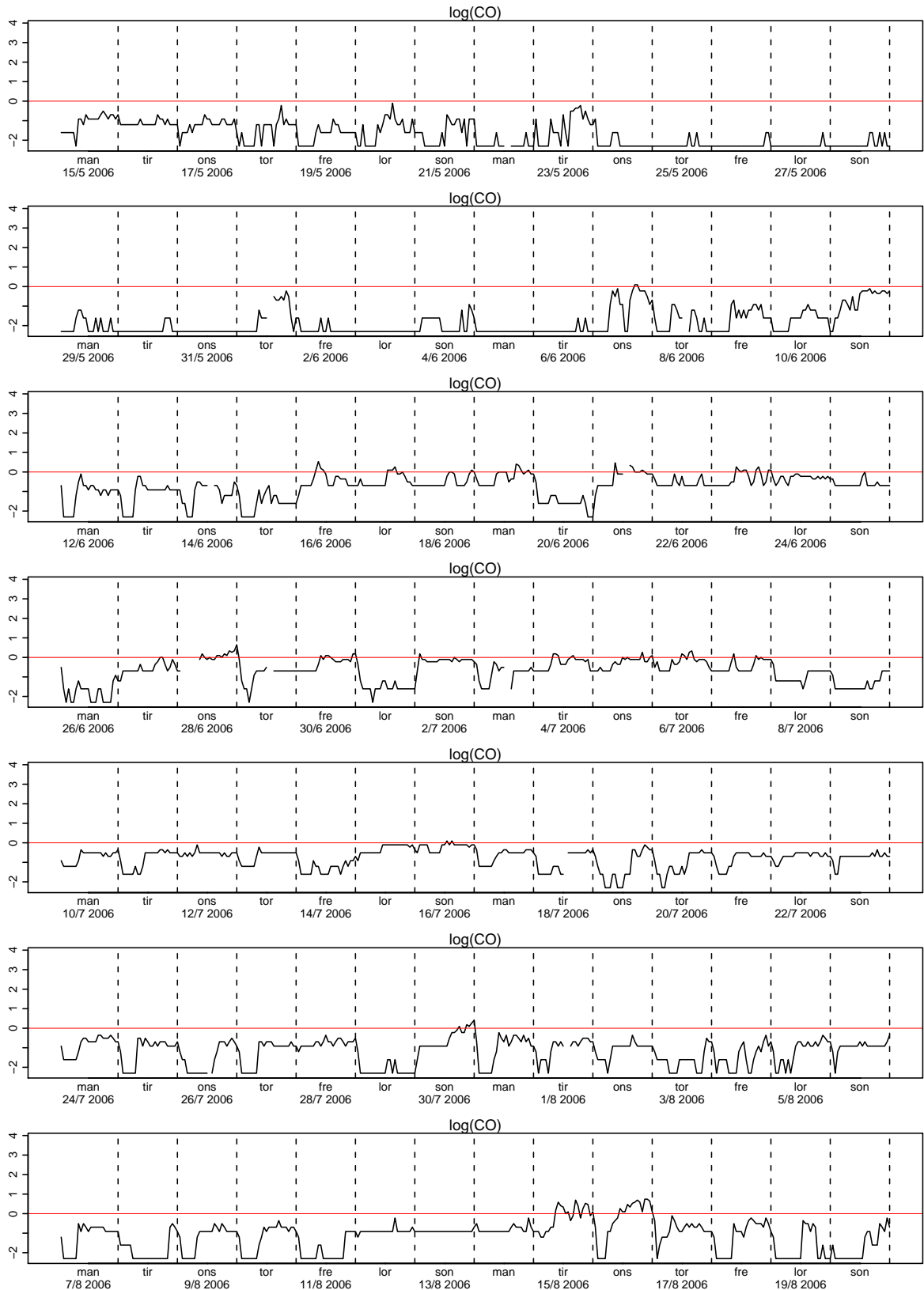
Figur 2.204. Plott av logaritmen til CO



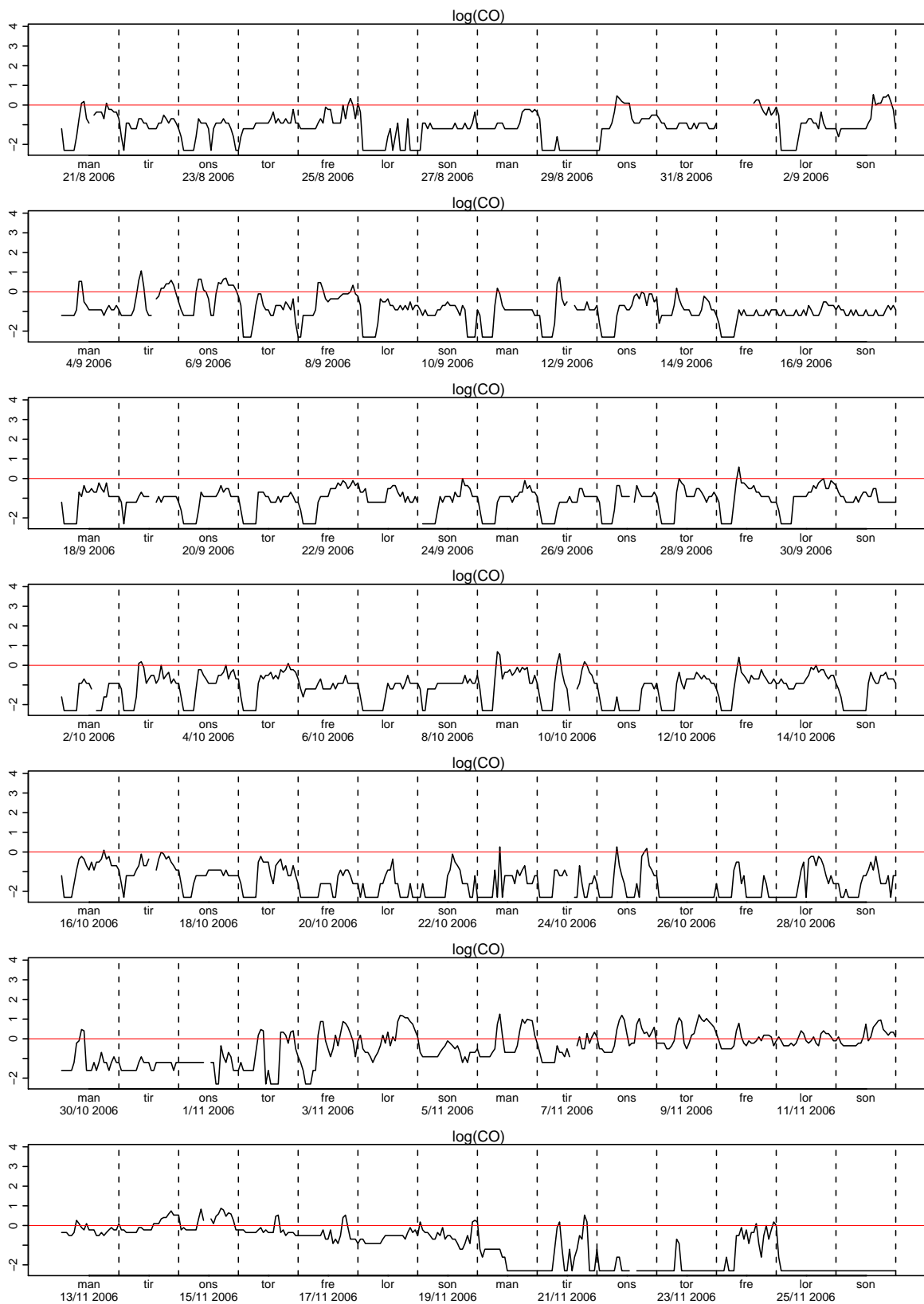
Figur 2.205. Plott av logaritmen til CO



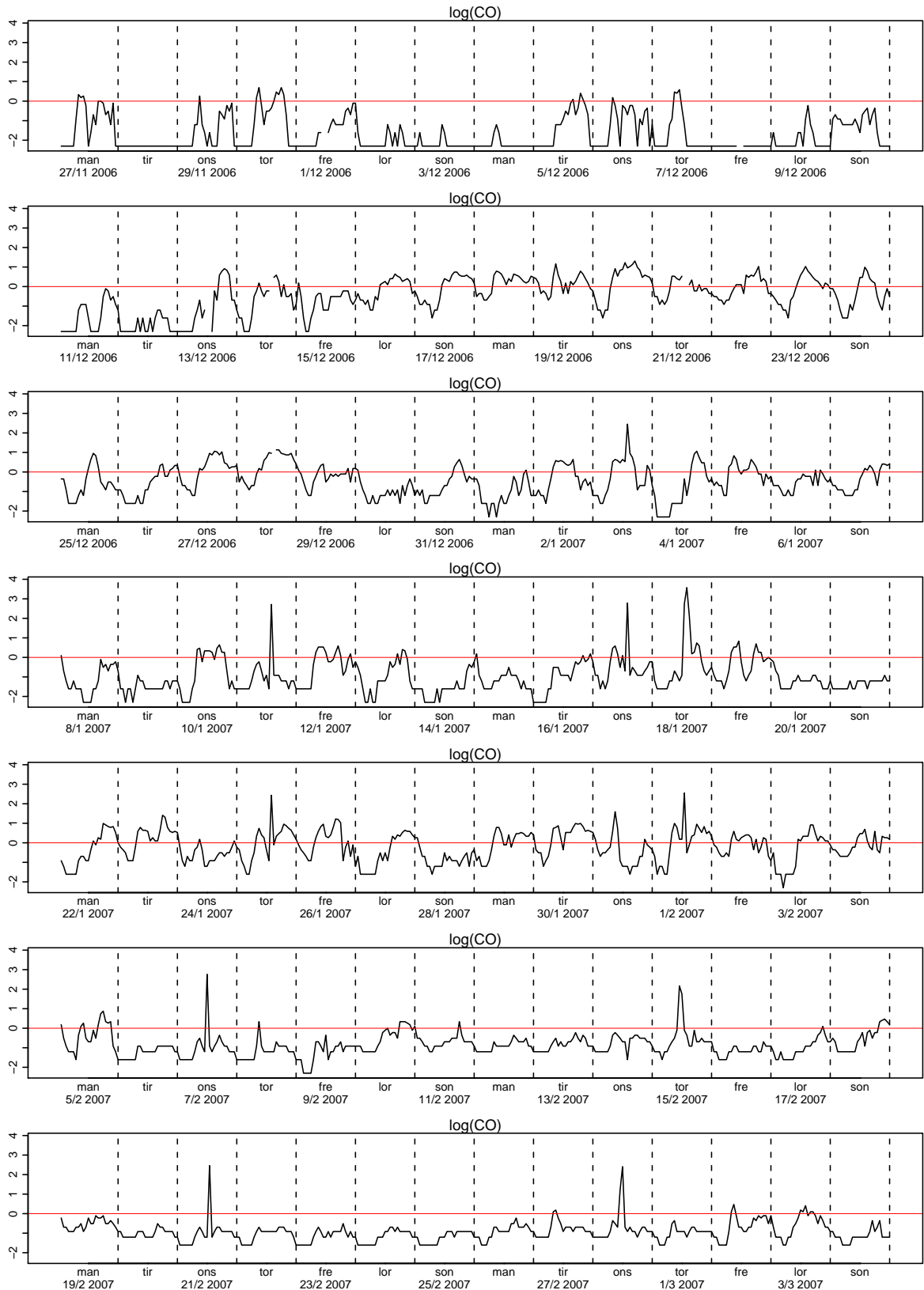
Figur 2.206. Plott av logaritmen til CO



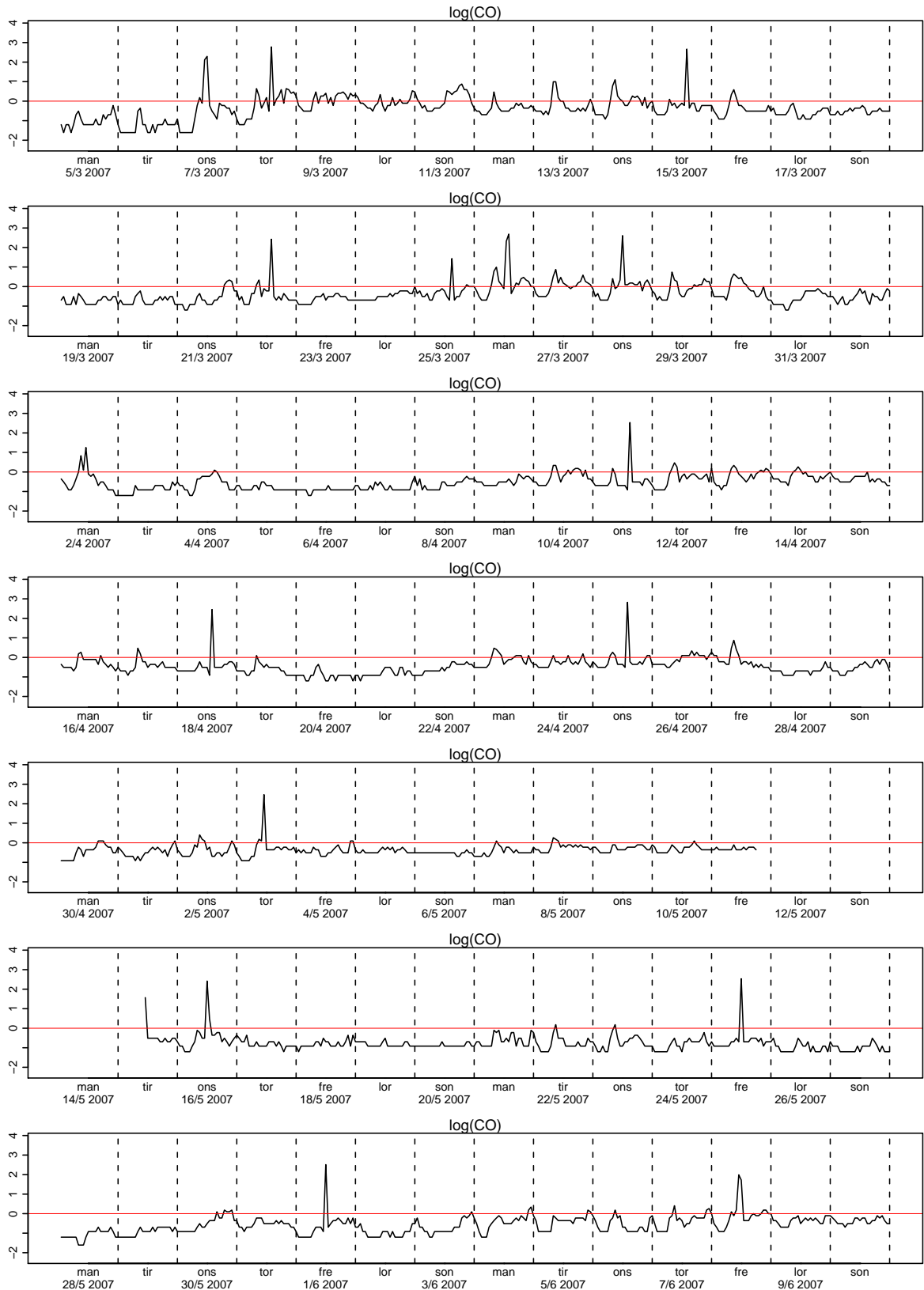
Figur 2.207. Plott av logaritmen til CO



Figur 2.208. Plott av logaritmen til CO

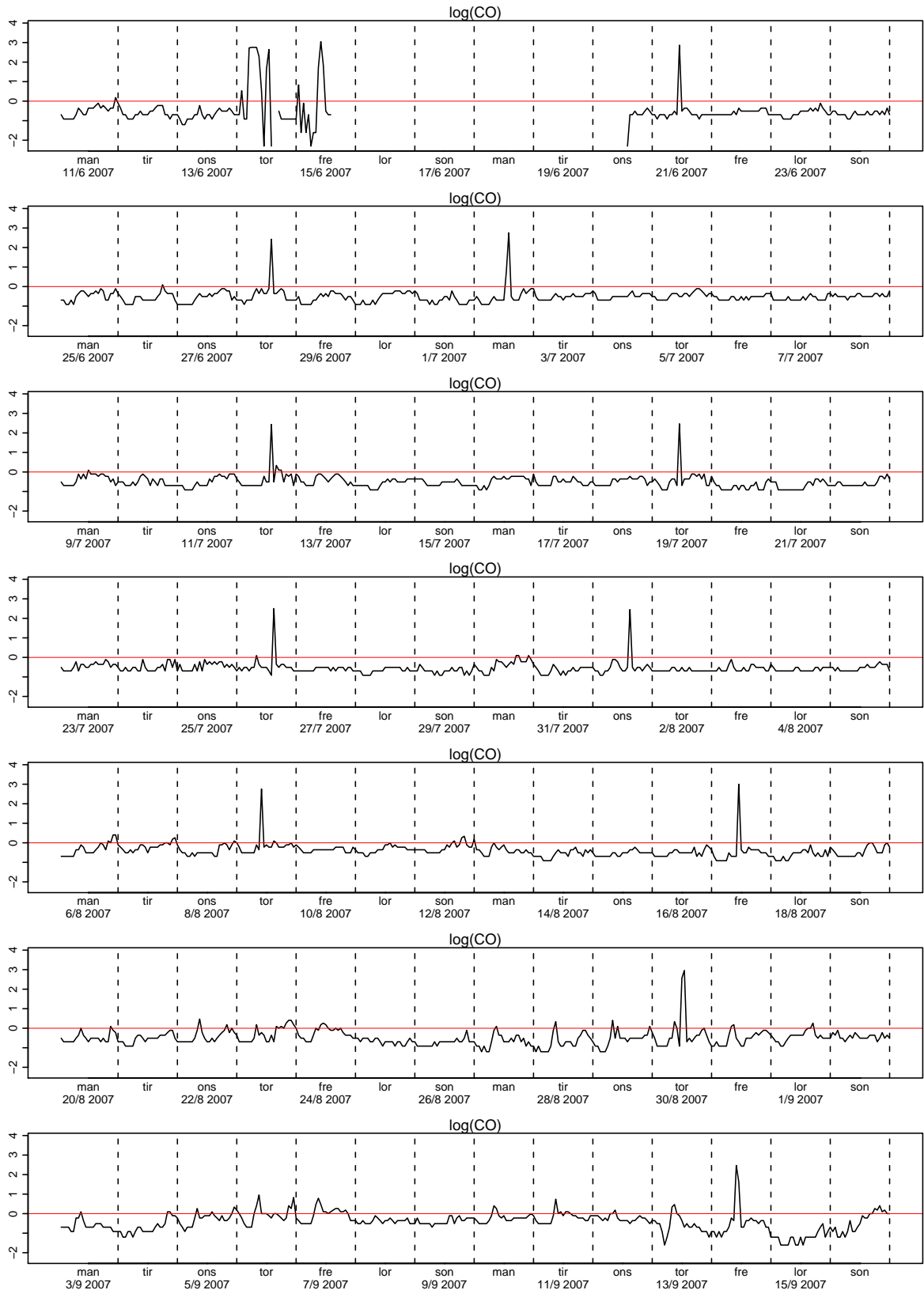


Figur 2.209. Plott av logaritmen til CO

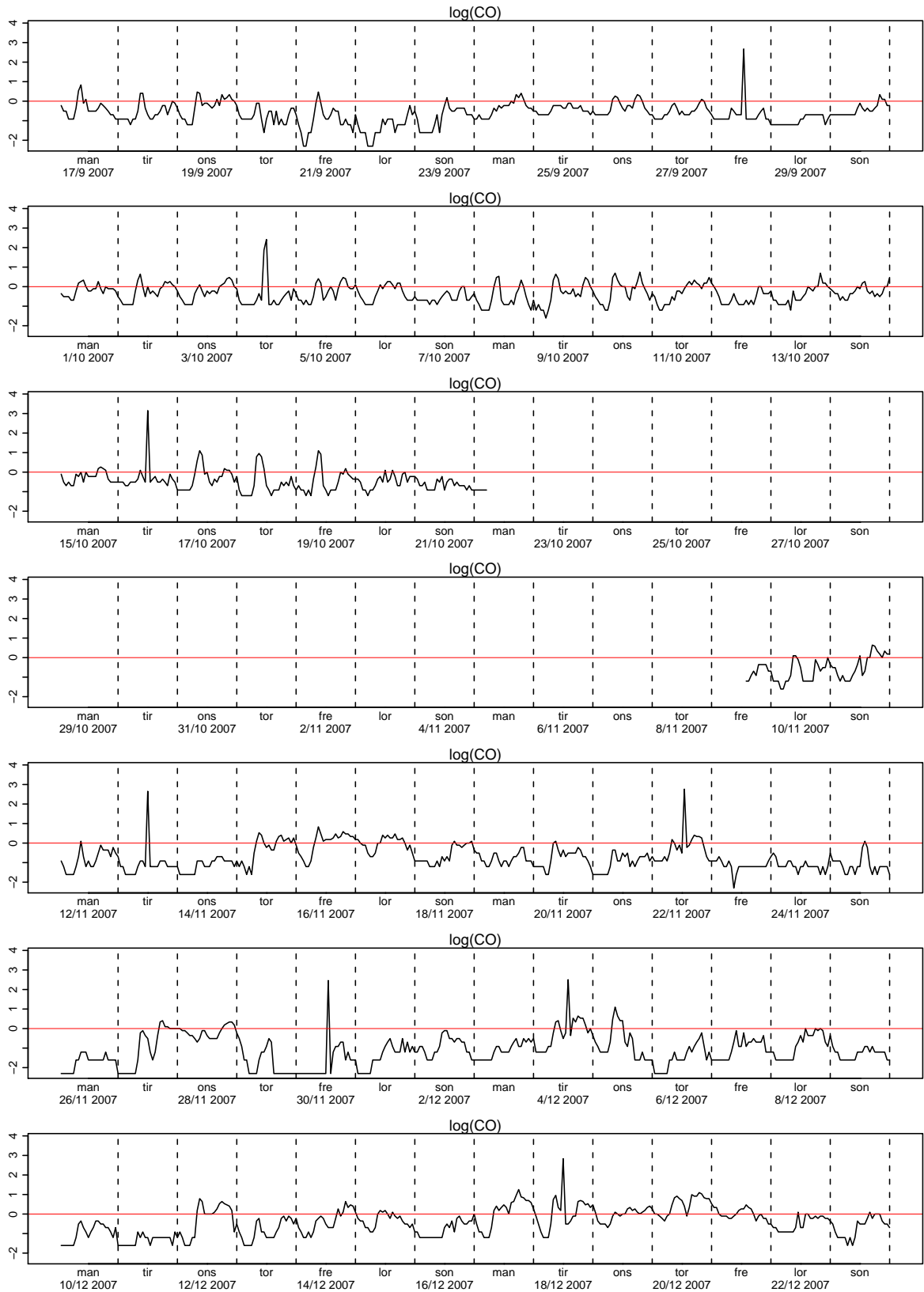


Figur 2.210. Plott av logaritmen til CO

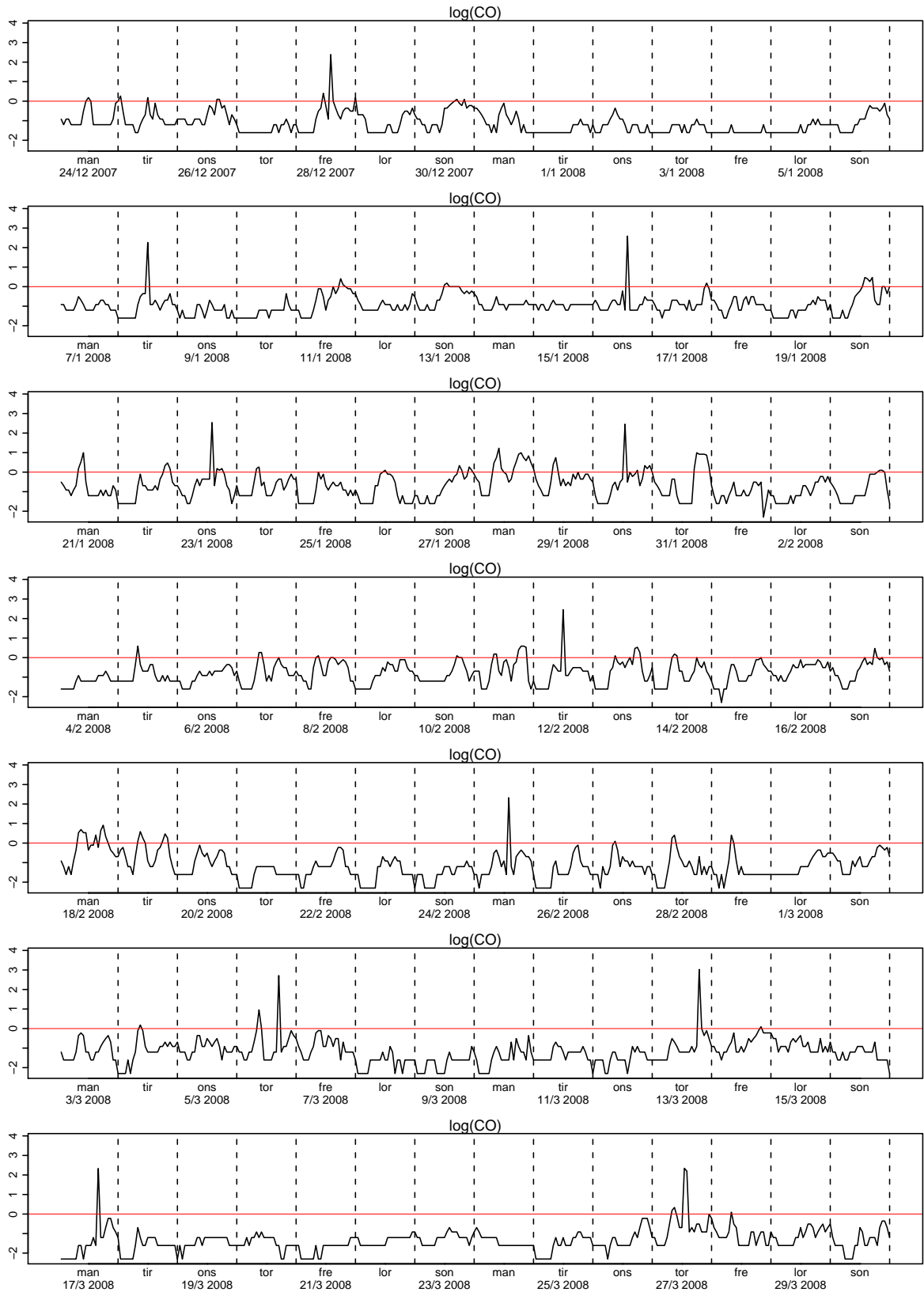




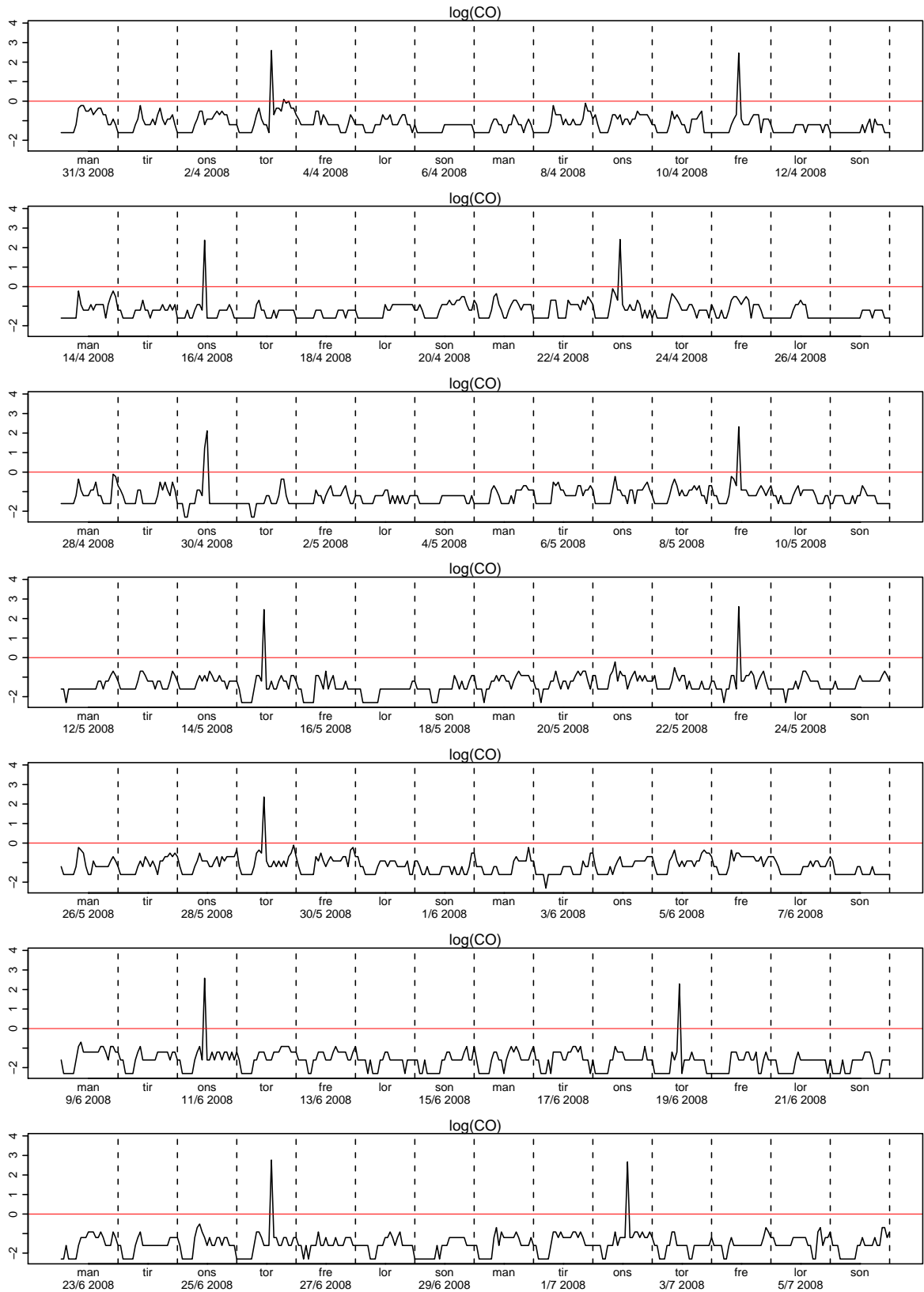
Figur 2.211. Plott av logaritmen til CO



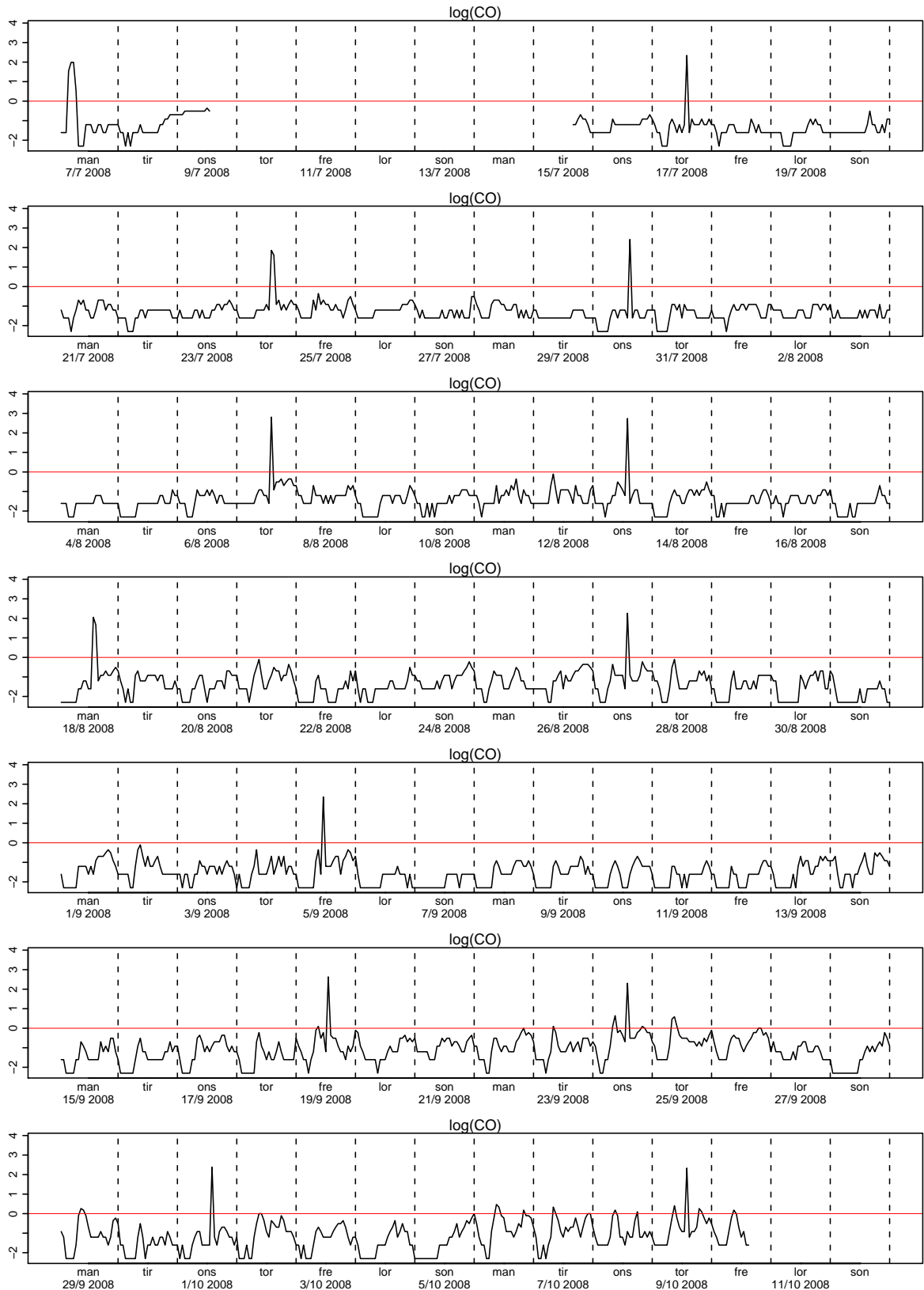
Figur 2.212. Plott av logaritmen til CO



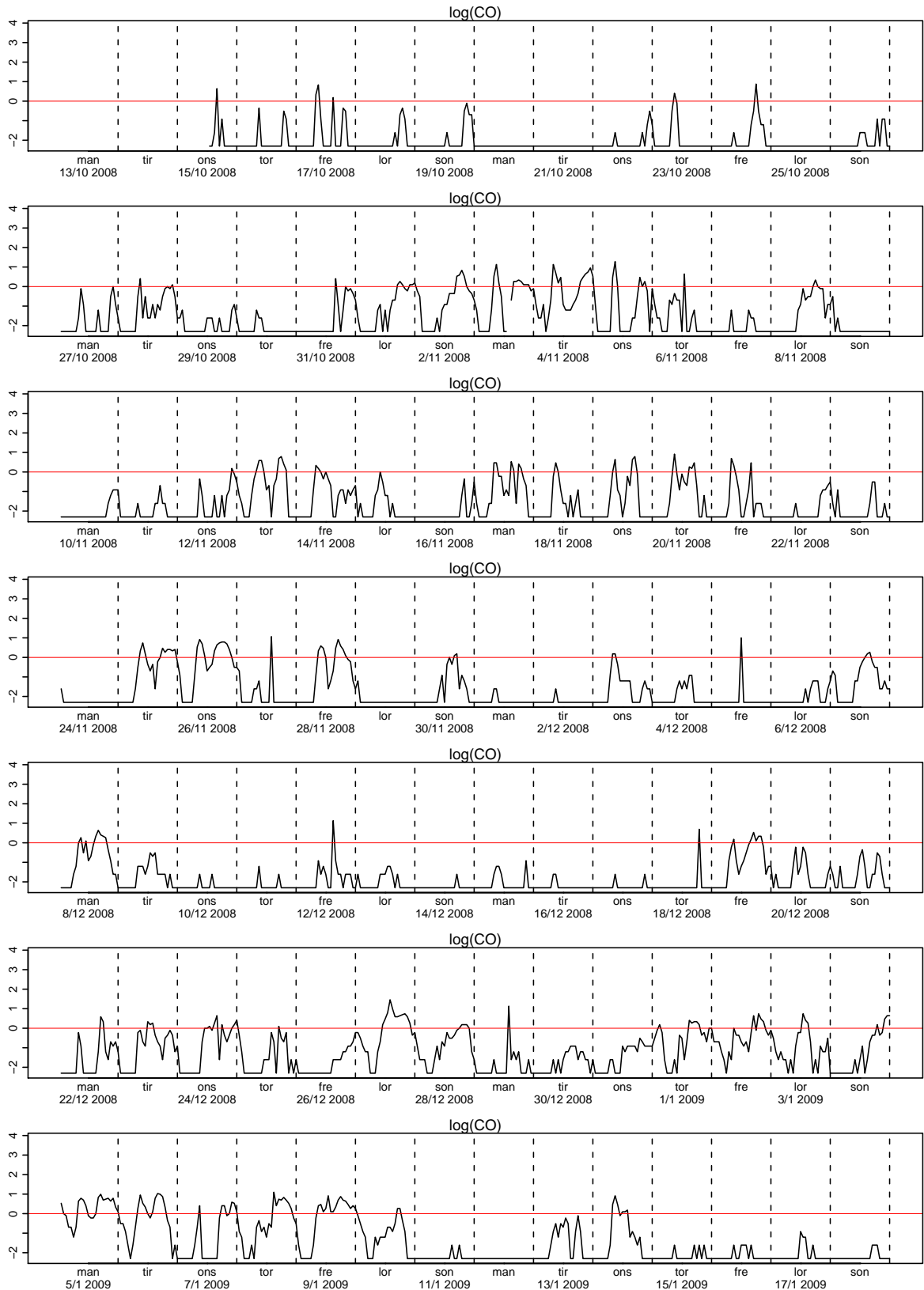
Figur 2.213. Plott av logaritmen til CO



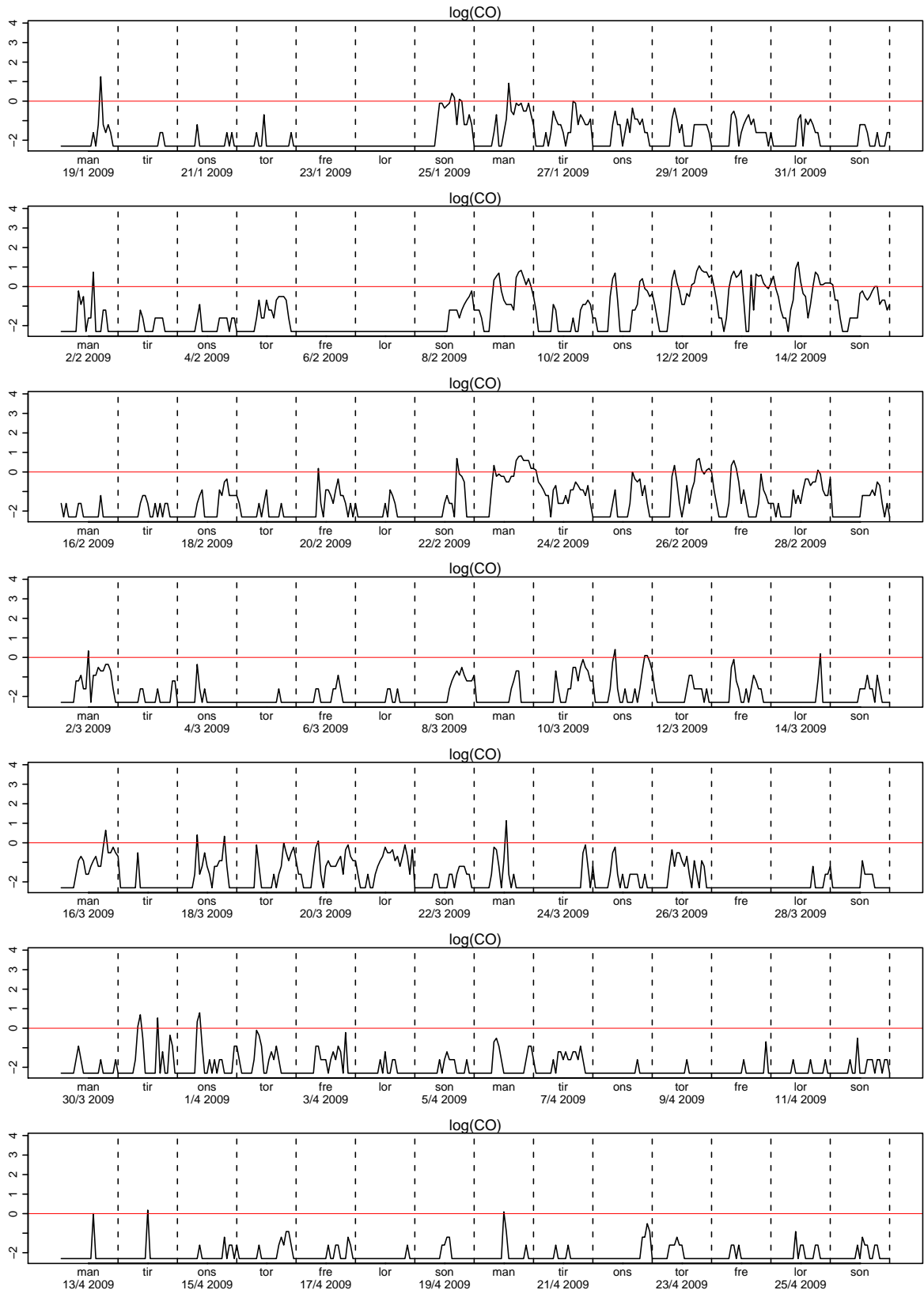
Figur 2.214. Plott av logaritmen til CO



Figur 2.215. Plott av logaritmen til CO



Figur 2.216. Plott av logaritmen til CO



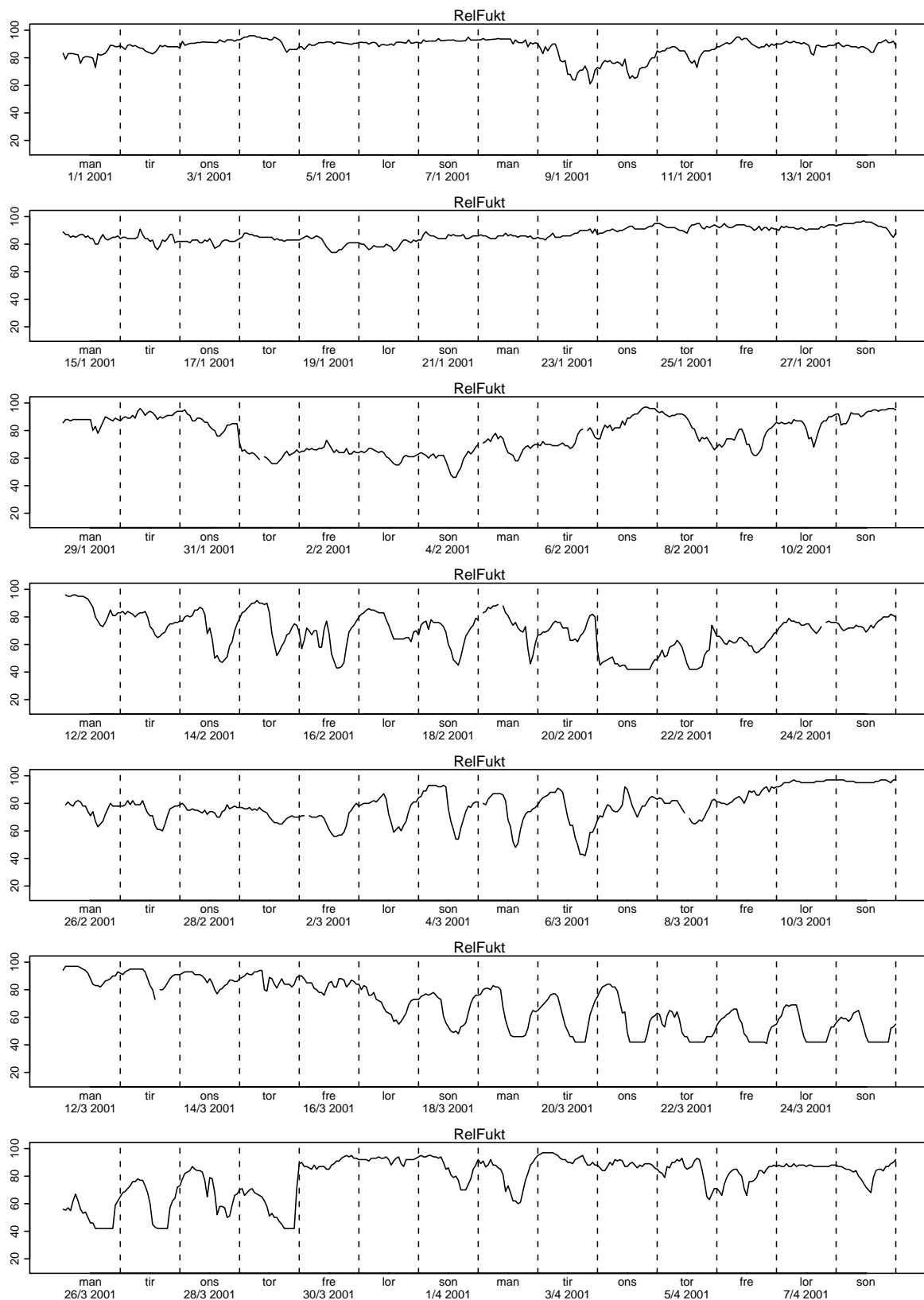
Figur 2.217. Plott av logaritmen til CO



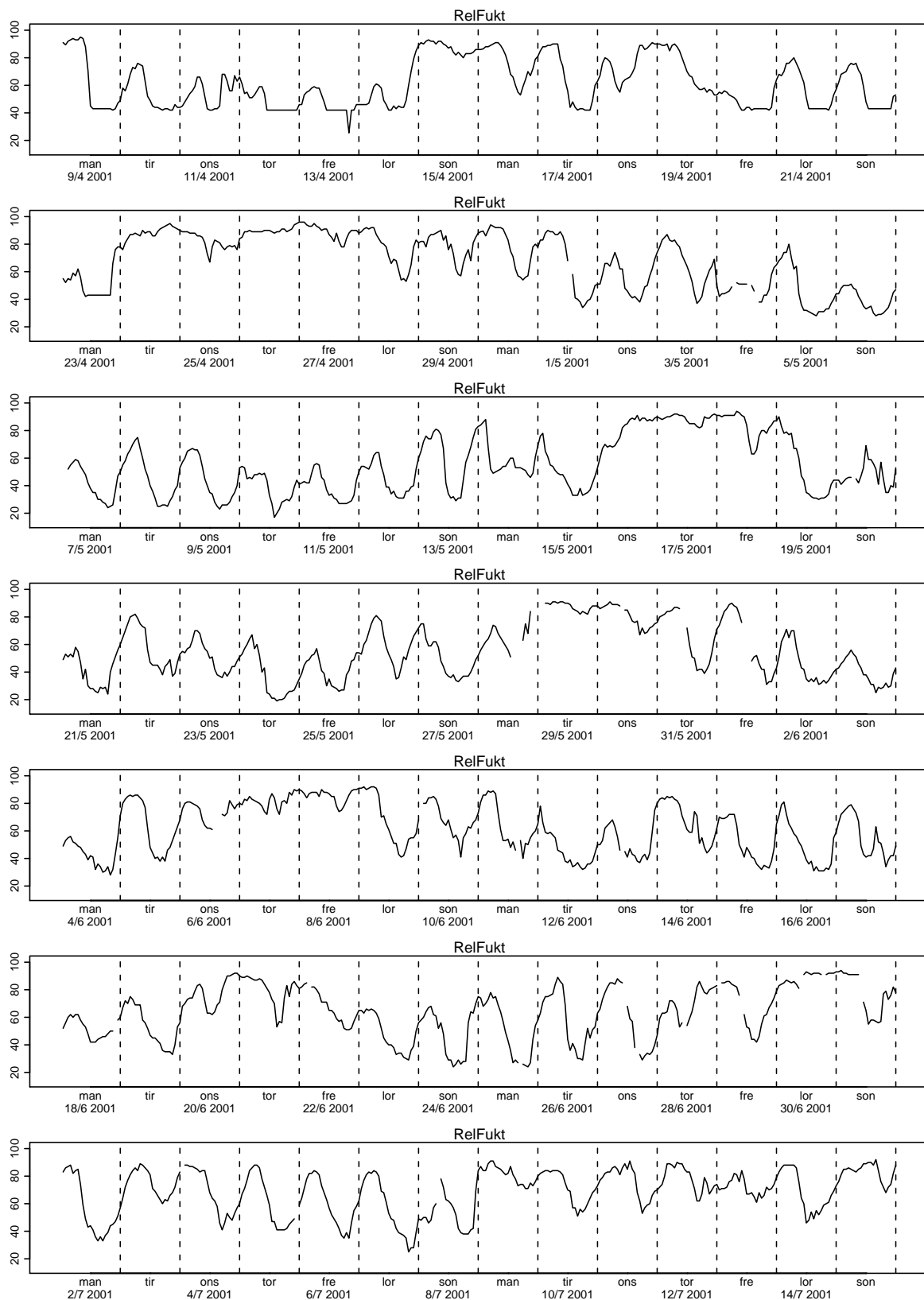


### 3 Meteorologiske data

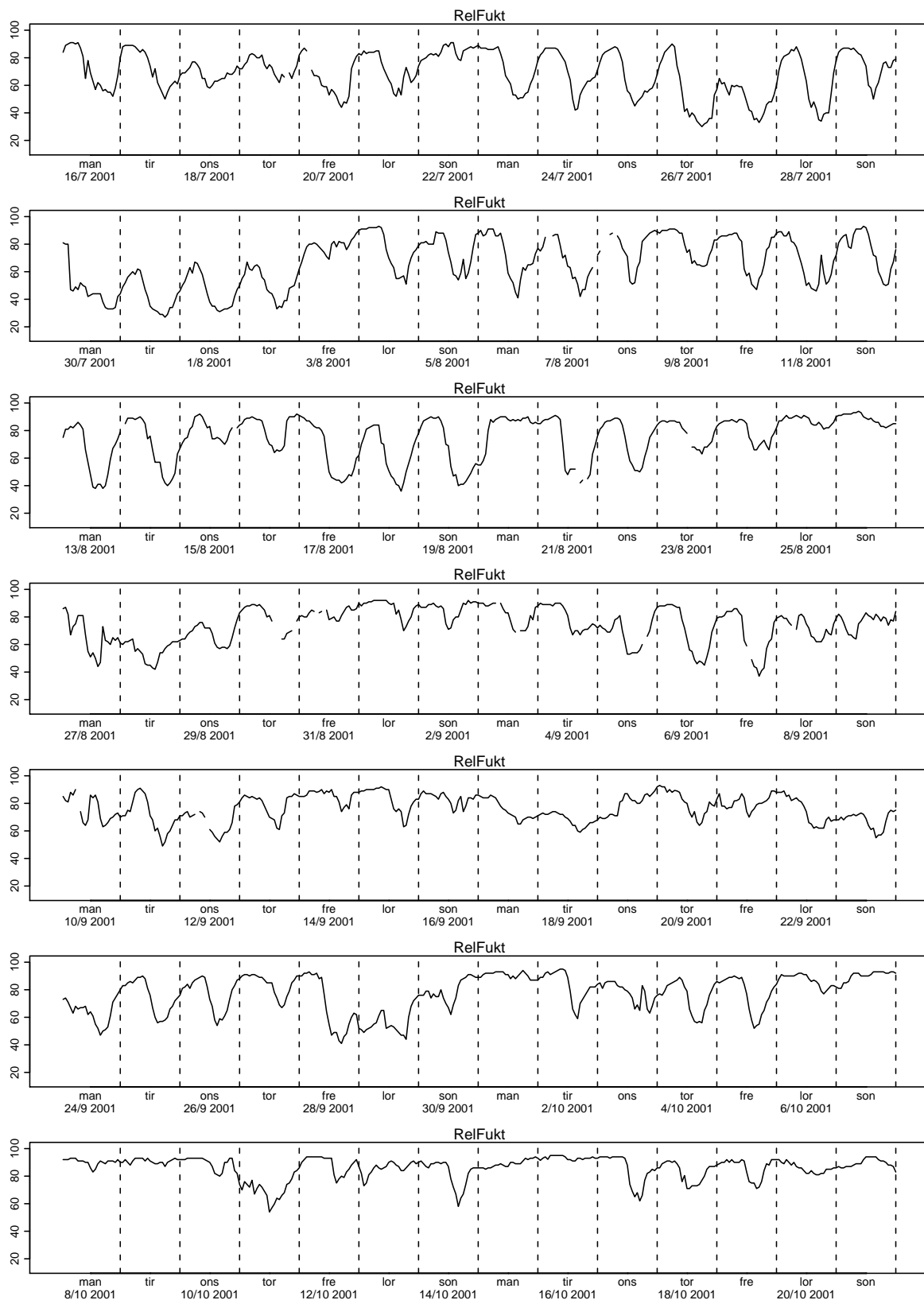
De meteorologiske dataene er på timesoppløsning og består av temperatur 2 meter over bakken, vindstyrke, vindretning, relativ fuktighet, nedbør, temperaturdifferansen (beregnet som differansen mellom 2 og 25 meter over bakken) og snødybde. Vi har brukt data fra målestasjoner på Valle Hovin, bortsett fra snødybde som er registrert på Blindern. I tillegg har vi komplementert med data fra Blindern og kalibrert for riktig nivå for å fylle inn for manglende observasjoner på Valle Hovin der det har vært mulig. For variablene nedbør og temperaturdifferansen var det perioder med manglende observasjoner på begge målestasjonene og for disse periodene har vi ikke kunnet fylt inn for manglende data. Alle meteorologiske data er i vintertid og er derfor justert til klokketid.



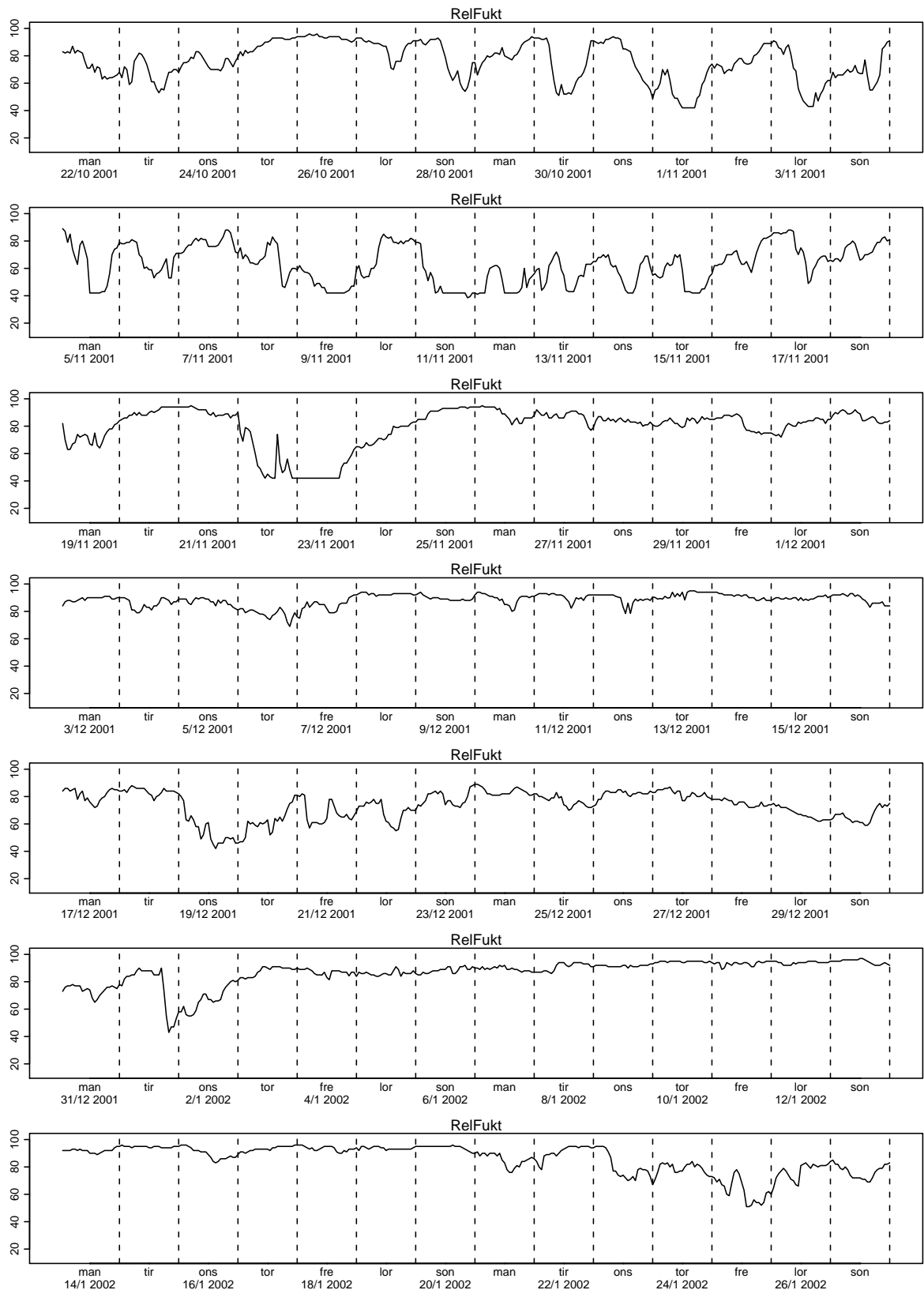
Figur 3.1. Relativ fuktighet



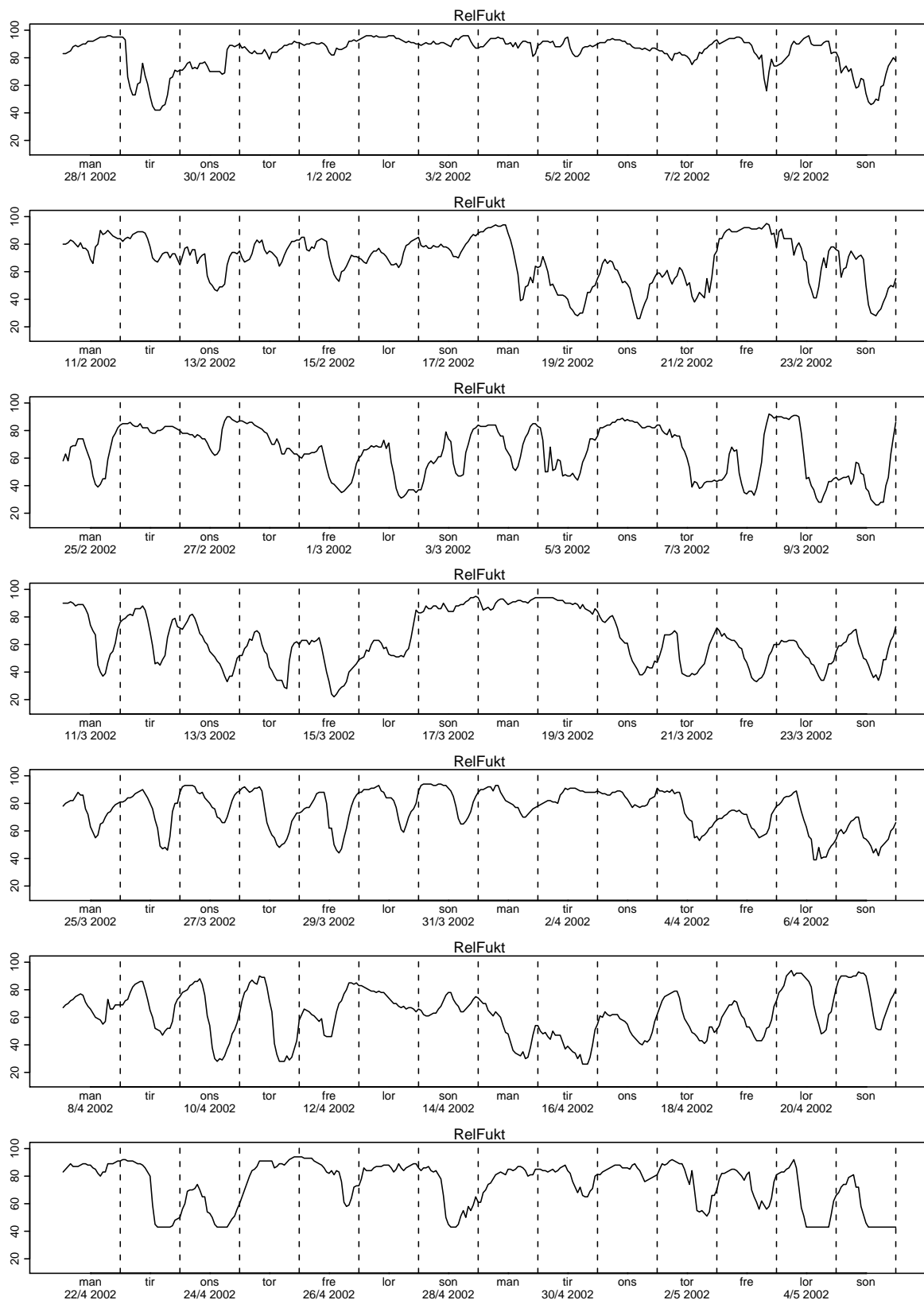
Figur 3.2. Relativ fuktighet



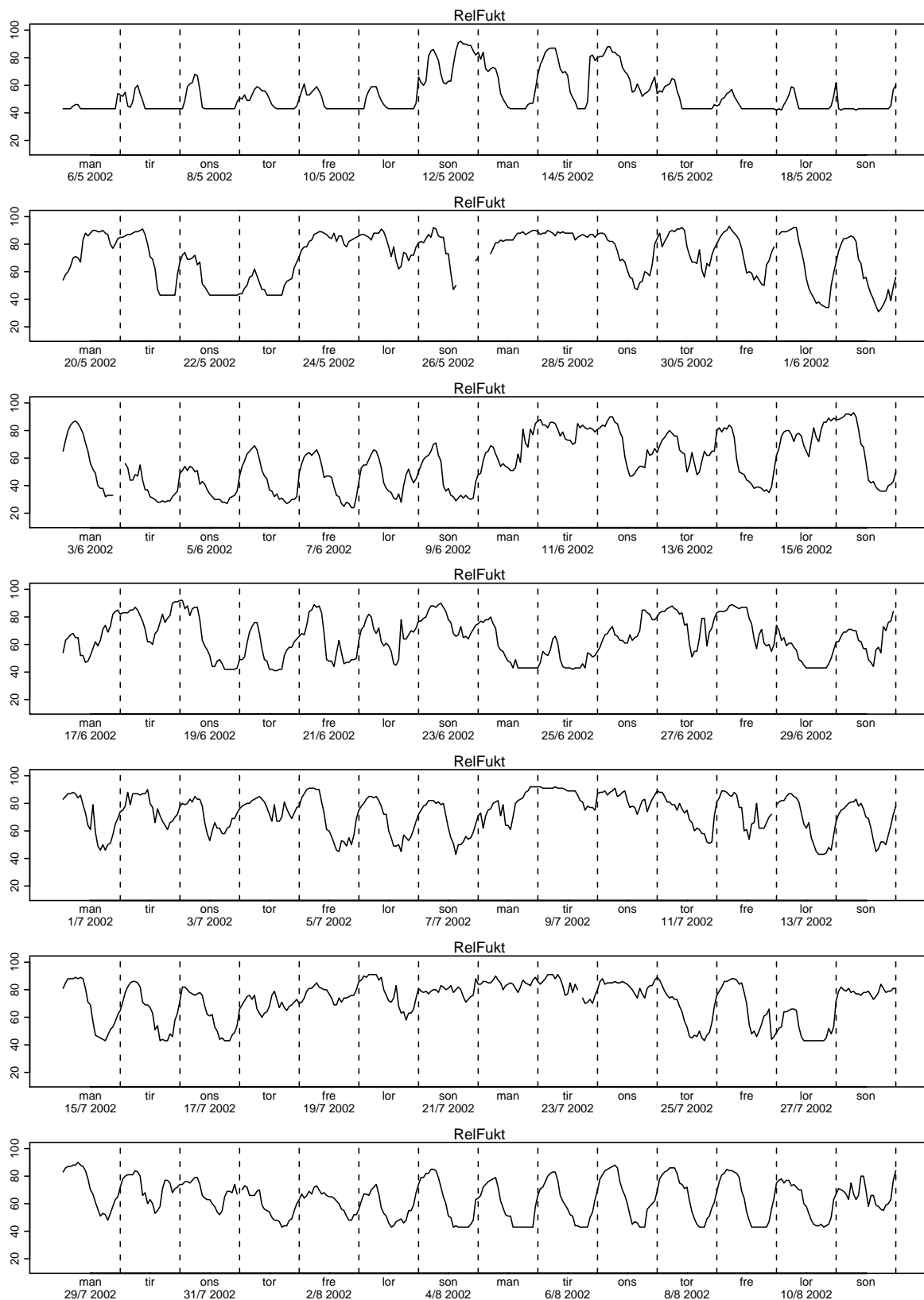
Figur 3.3. Relativ fuktighet



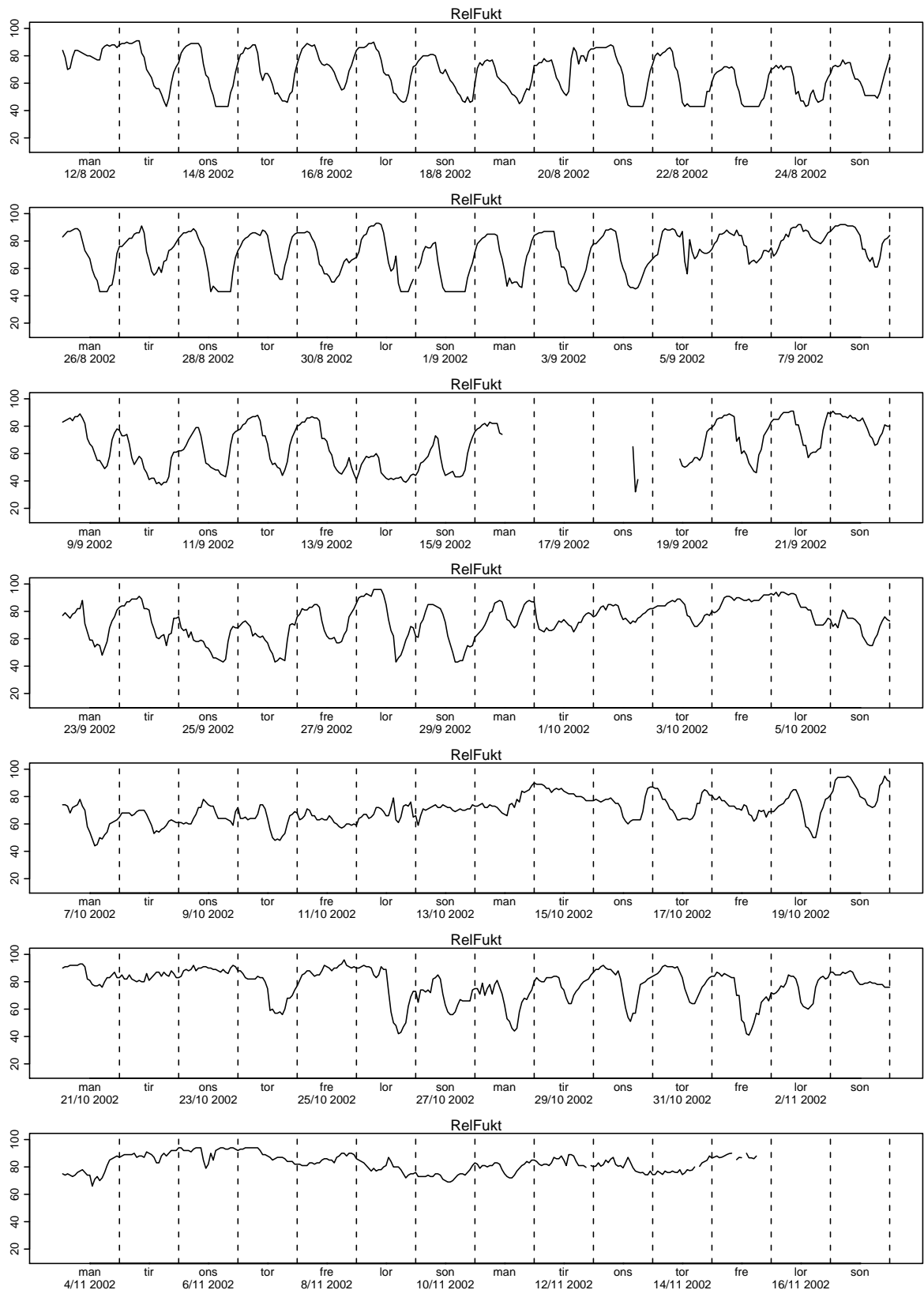
Figur 3.4. Relativ fuktighet



Figur 3.5. Relativ fuktighet

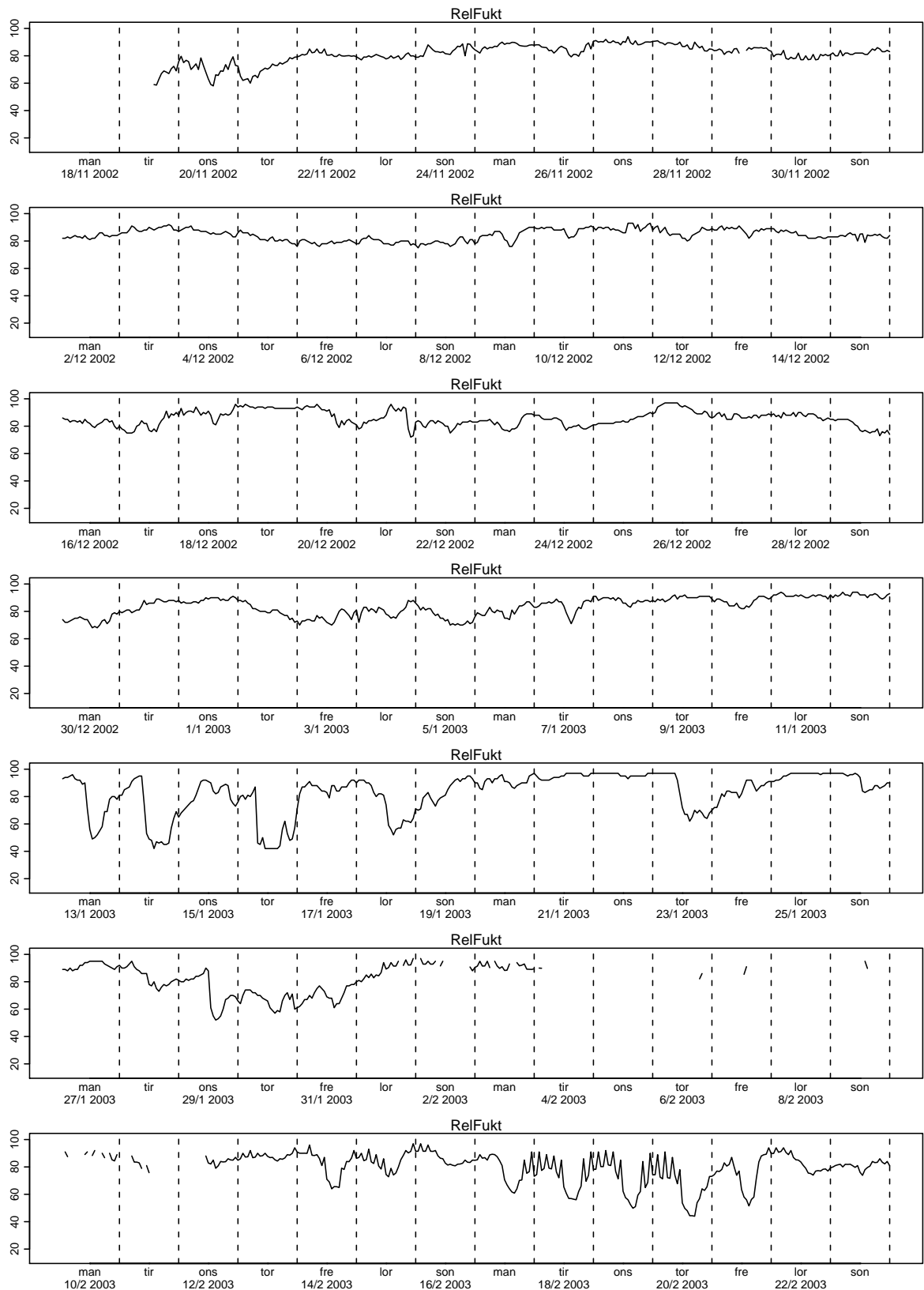


Figur 3.6. Relativ fuktighet

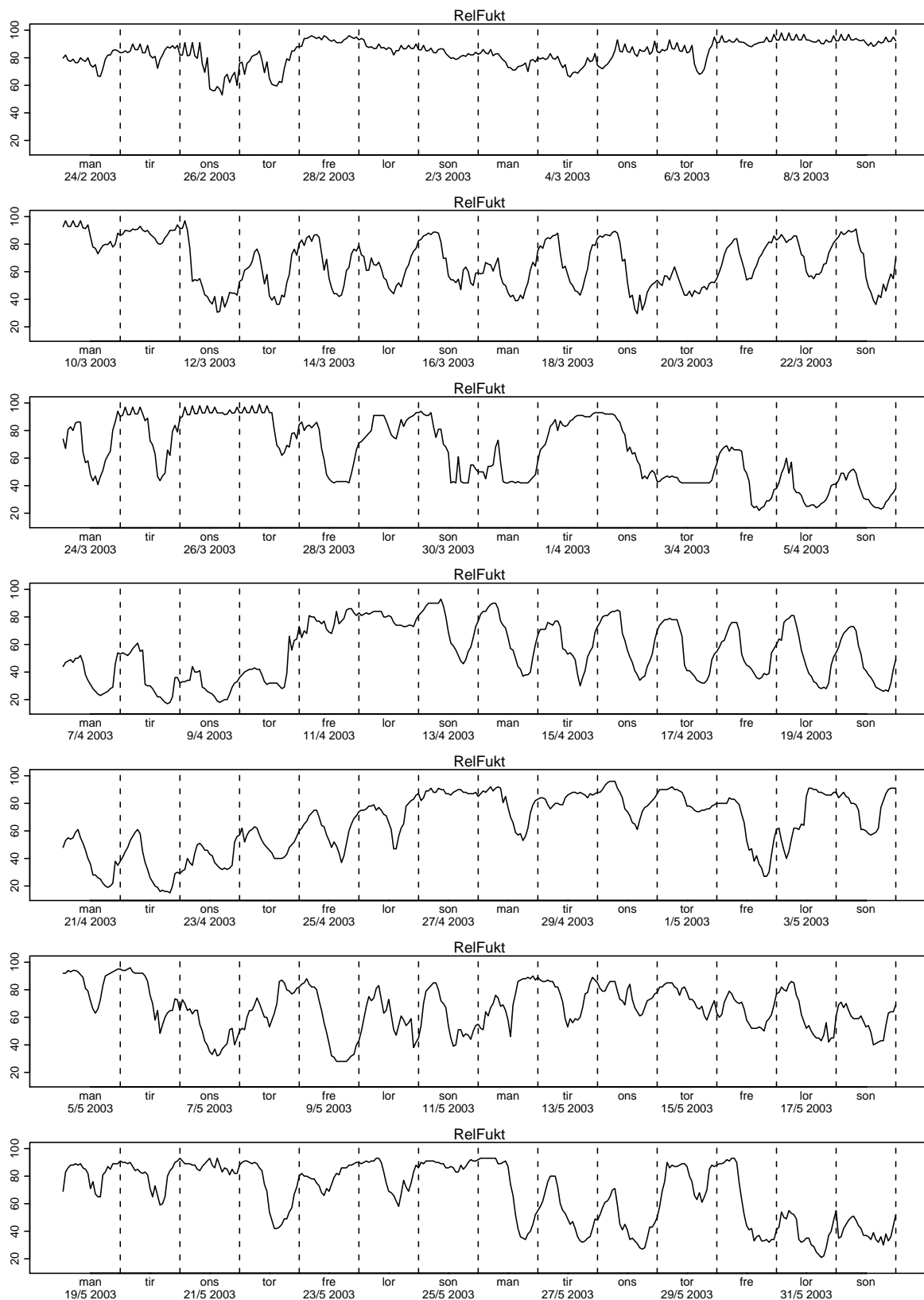


Figur 3.7. Relativ fuktighet

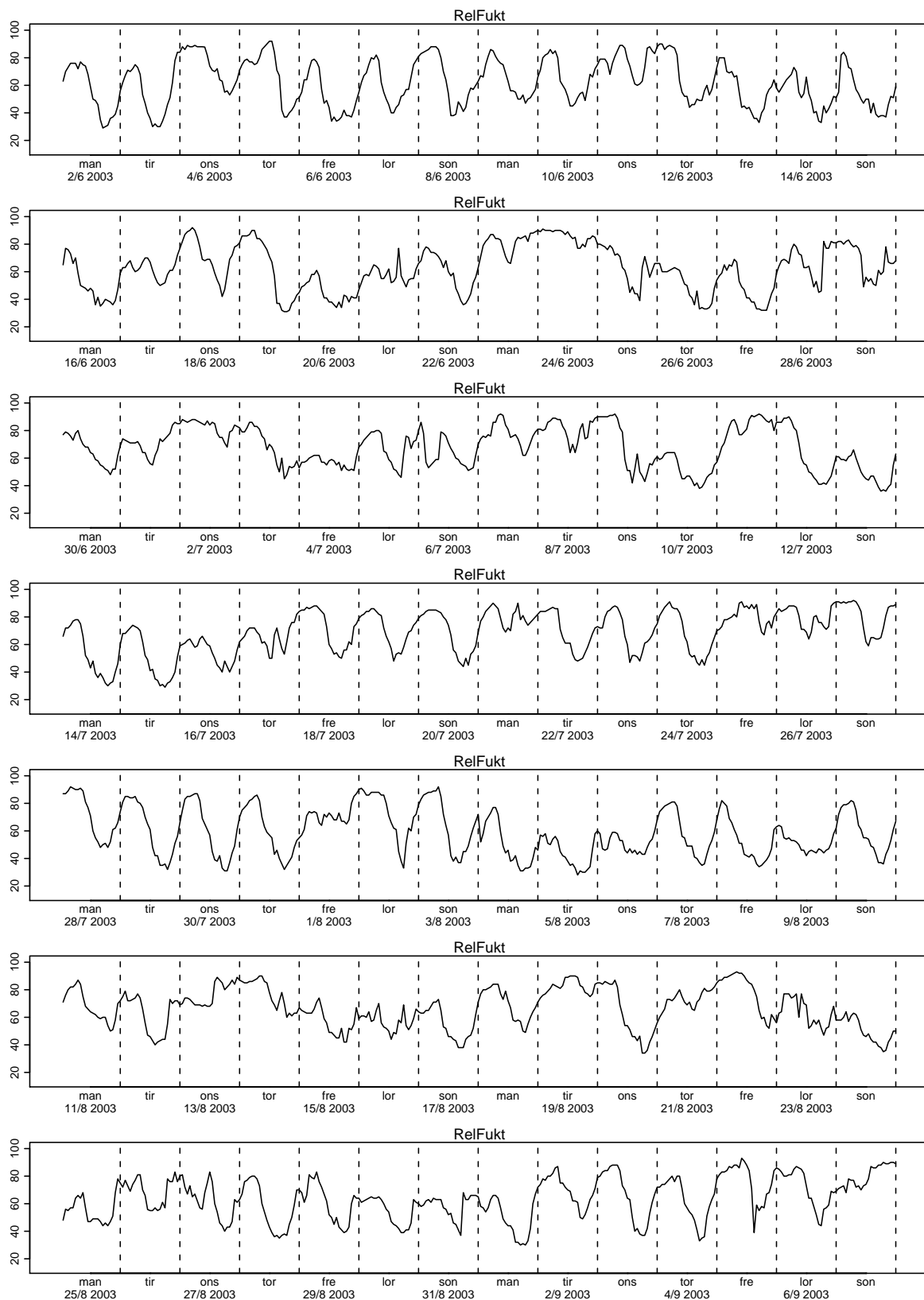




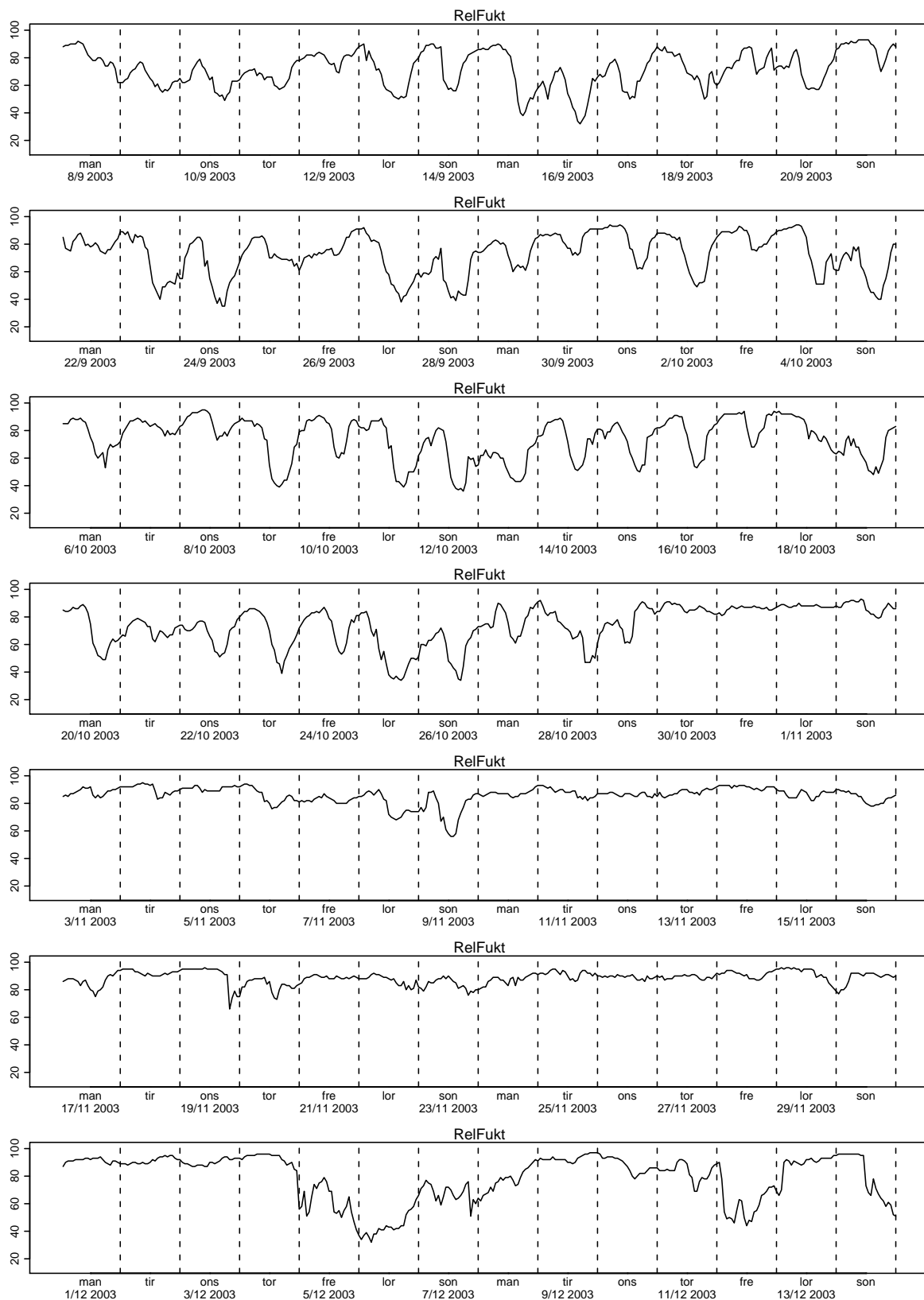
Figur 3.8. Relativ fuktighet



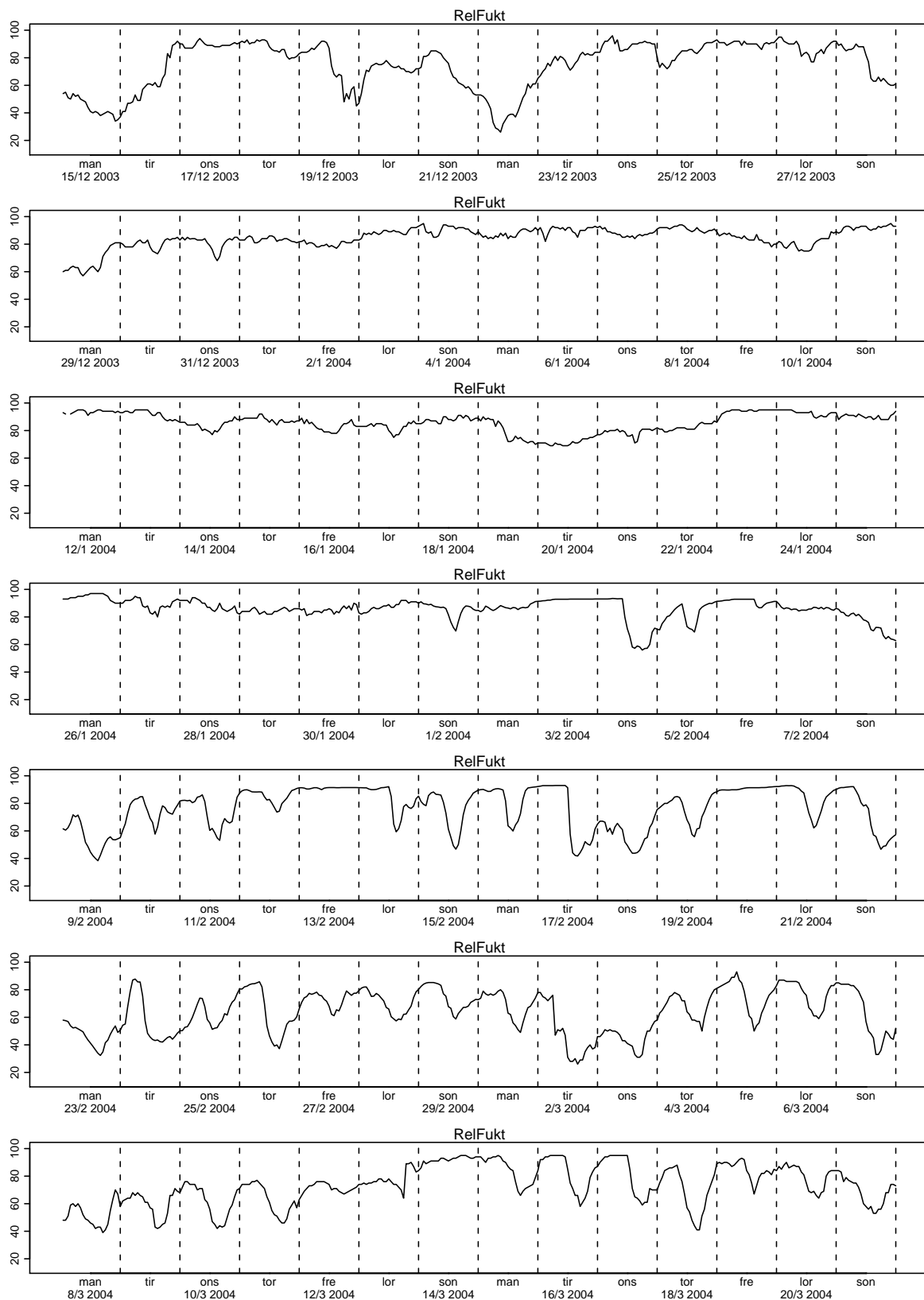
Figur 3.9. Relativ fuktighet



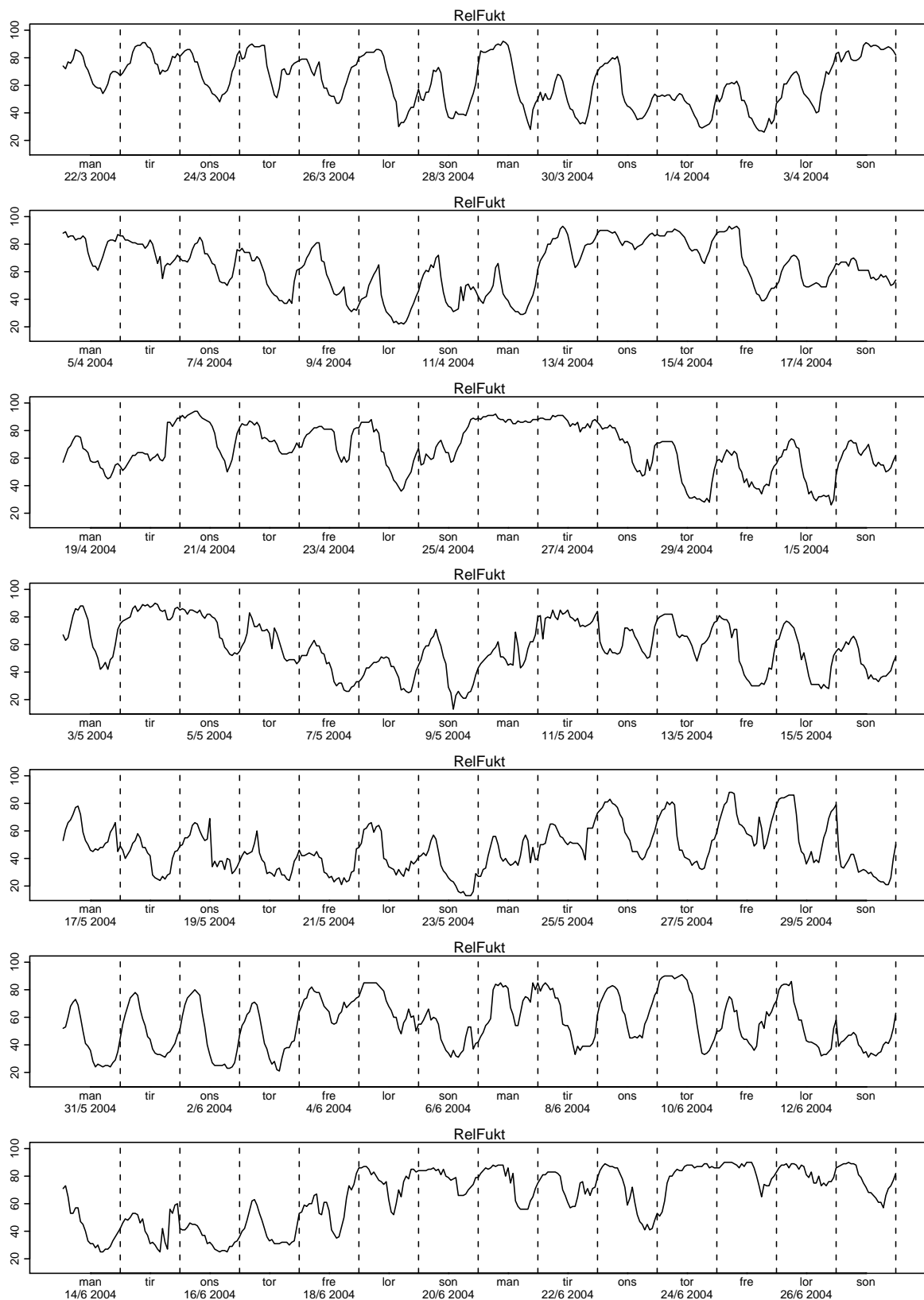
Figur 3.10. Relativ fuktighet



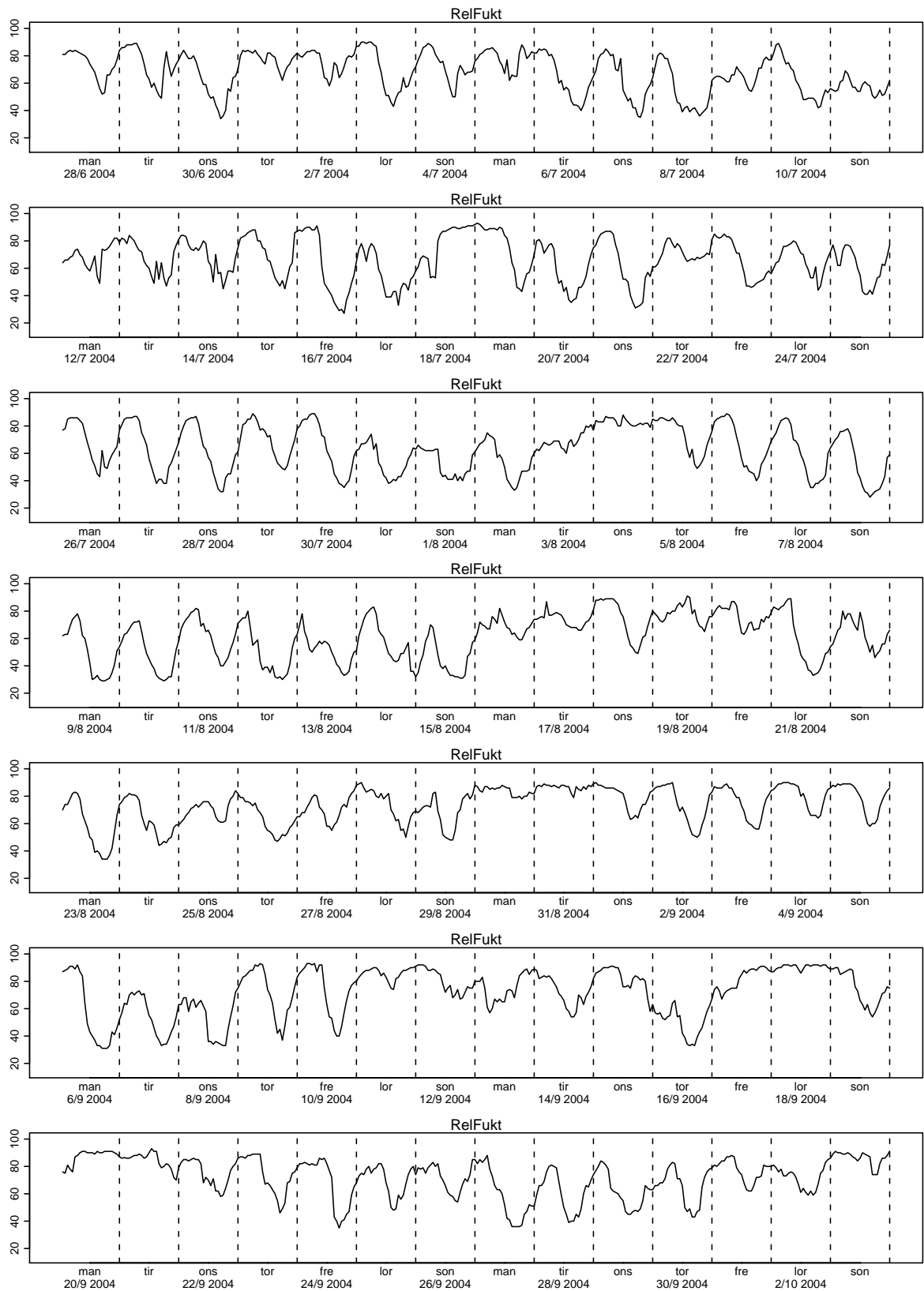
Figur 3.11. Relativ fuktighet



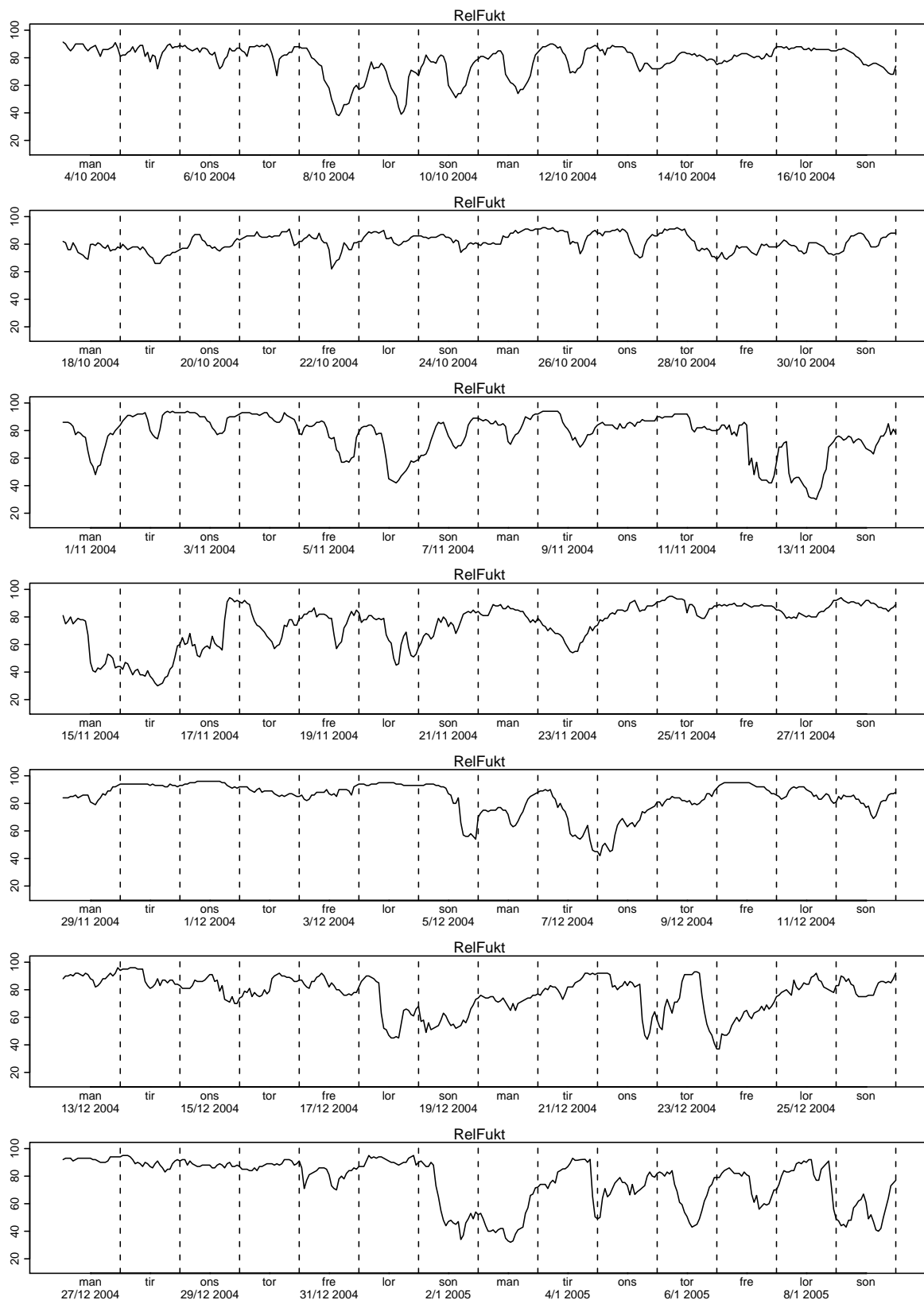
Figur 3.12. Relativ fuktighet



Figur 3.13. Relativ fuktighet

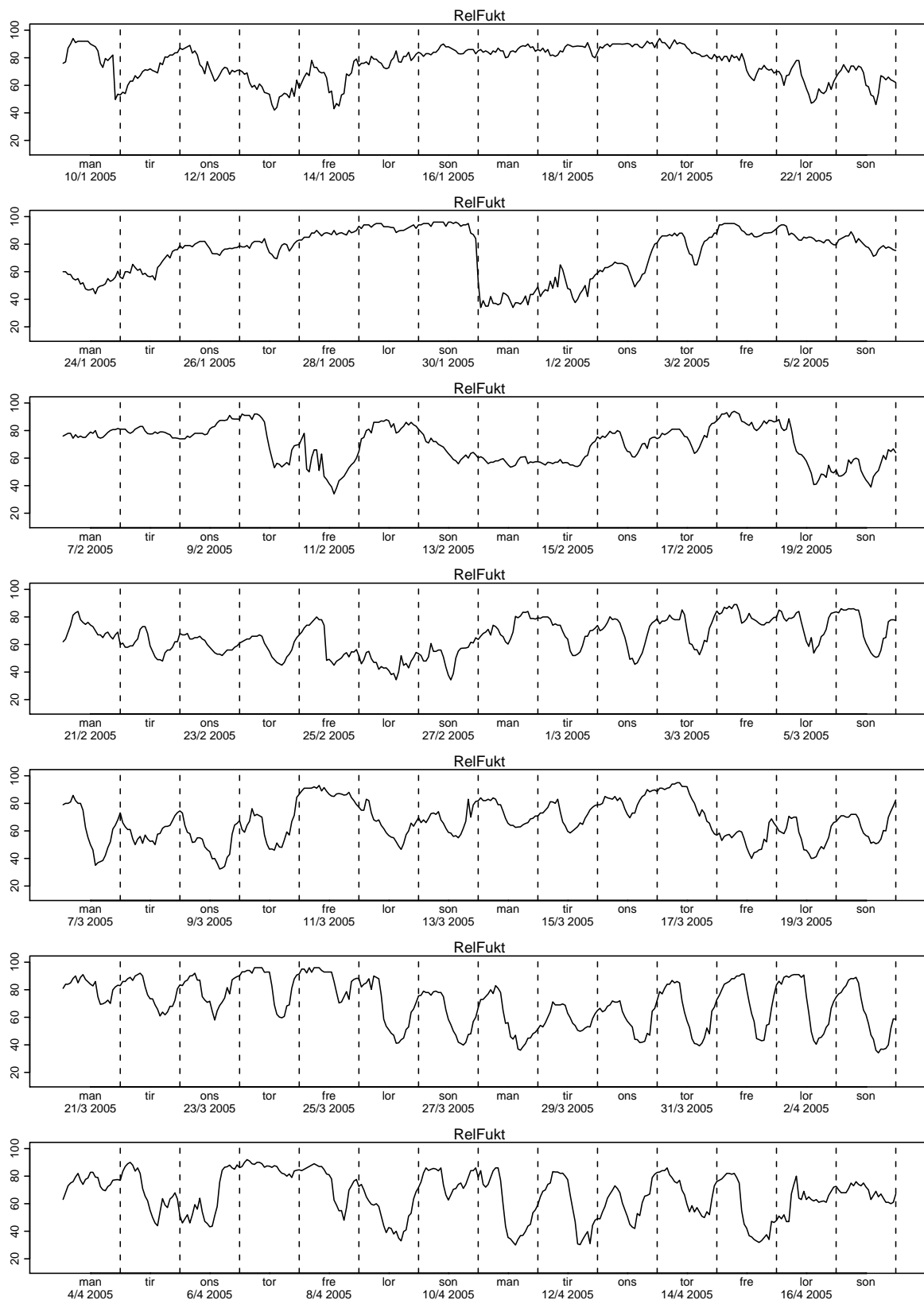


Figur 3.14. Relativ fuktighet

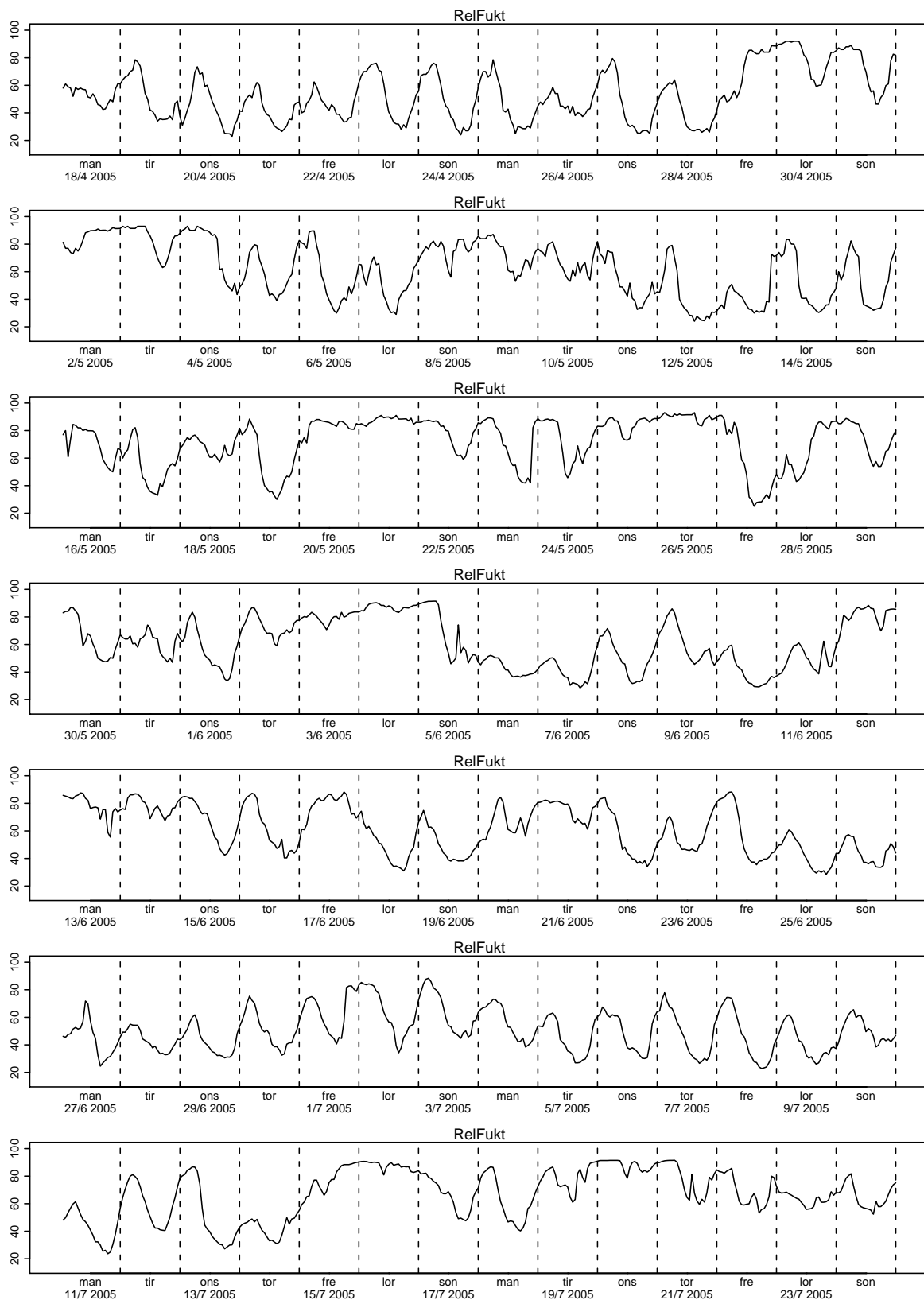


Figur 3.15. Relativ fuktighet

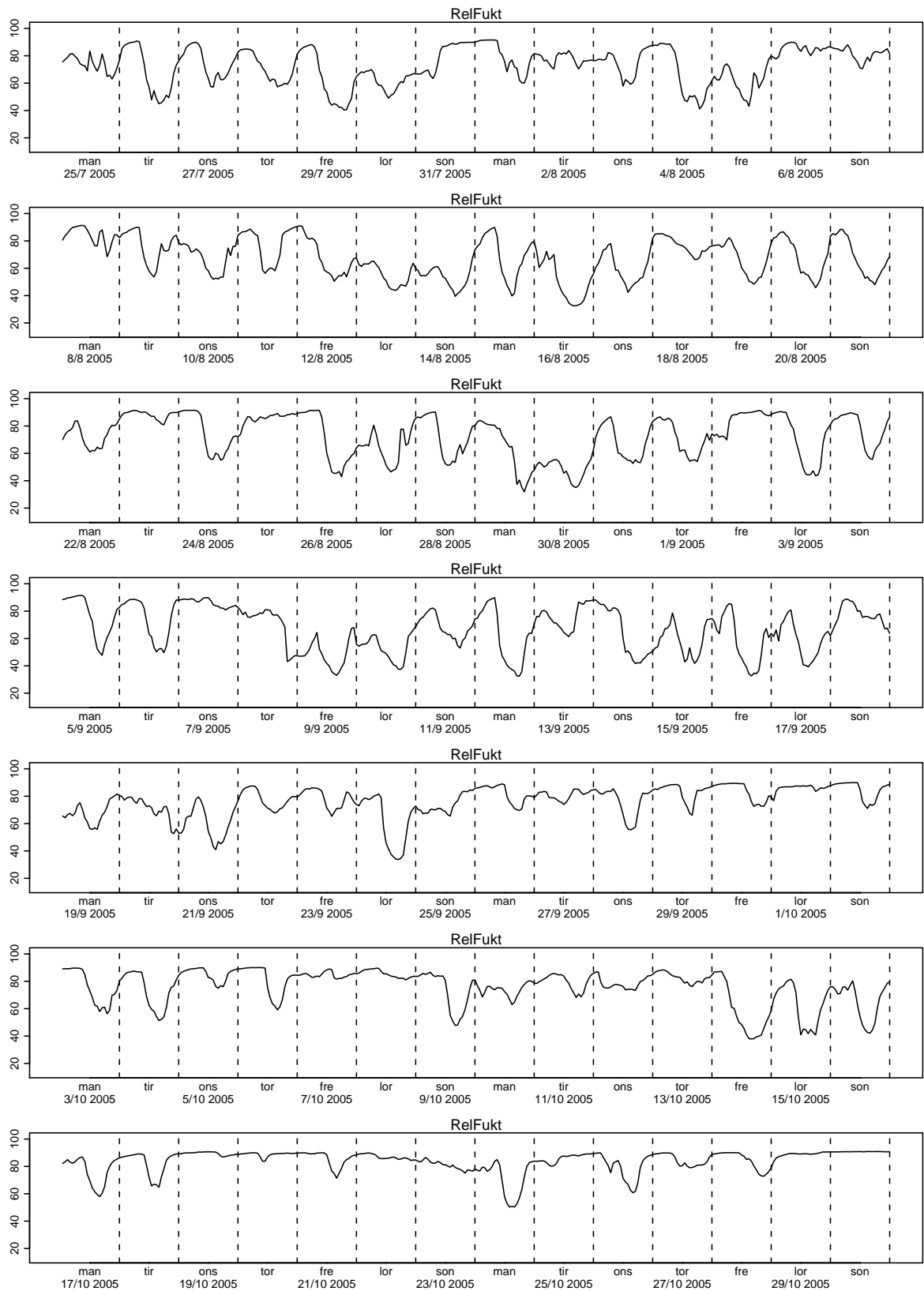




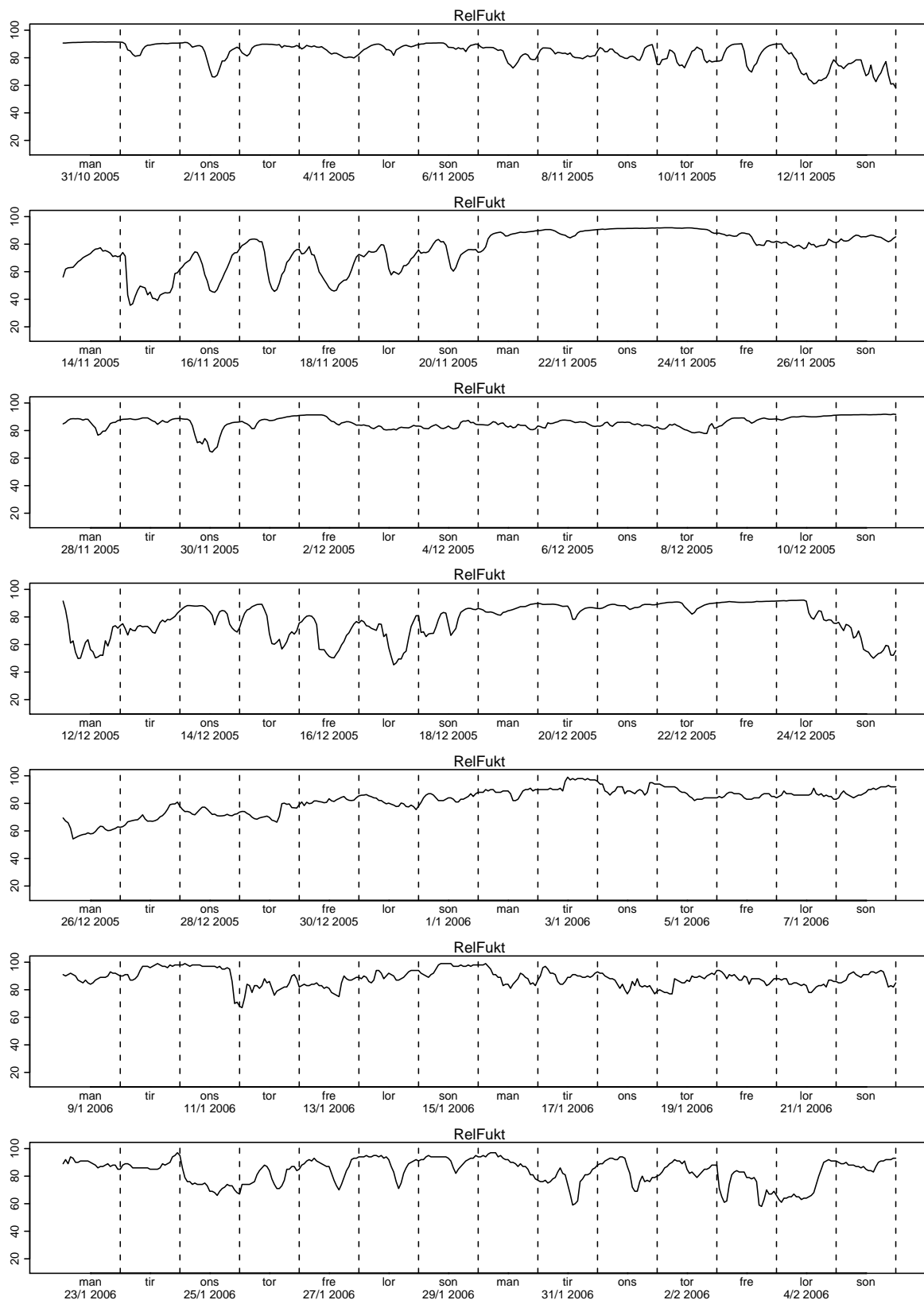
Figur 3.16. Relativ fuktighet



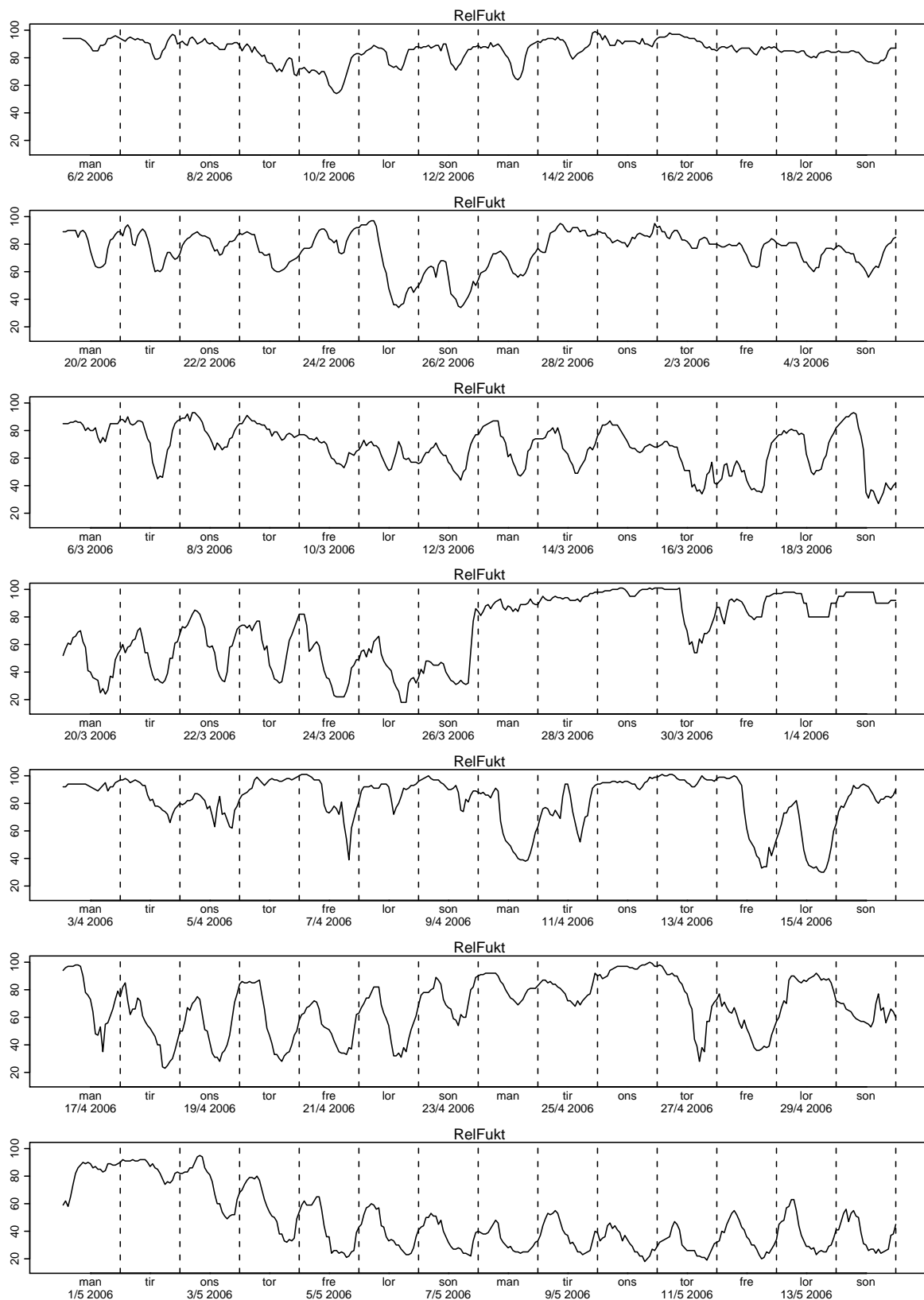
Figur 3.17. Relativ fuktighet



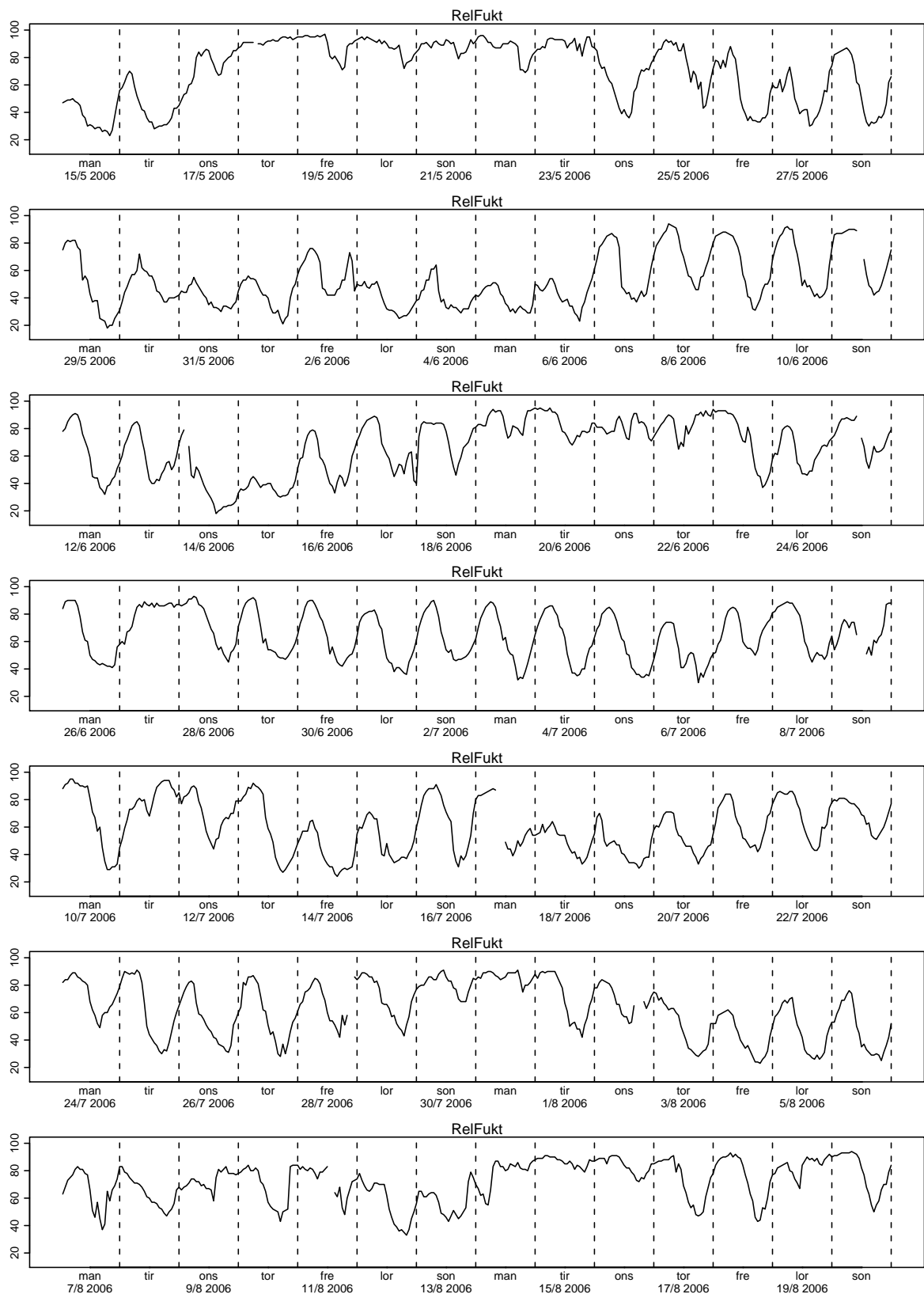
Figur 3.18. Relativ fuktighet



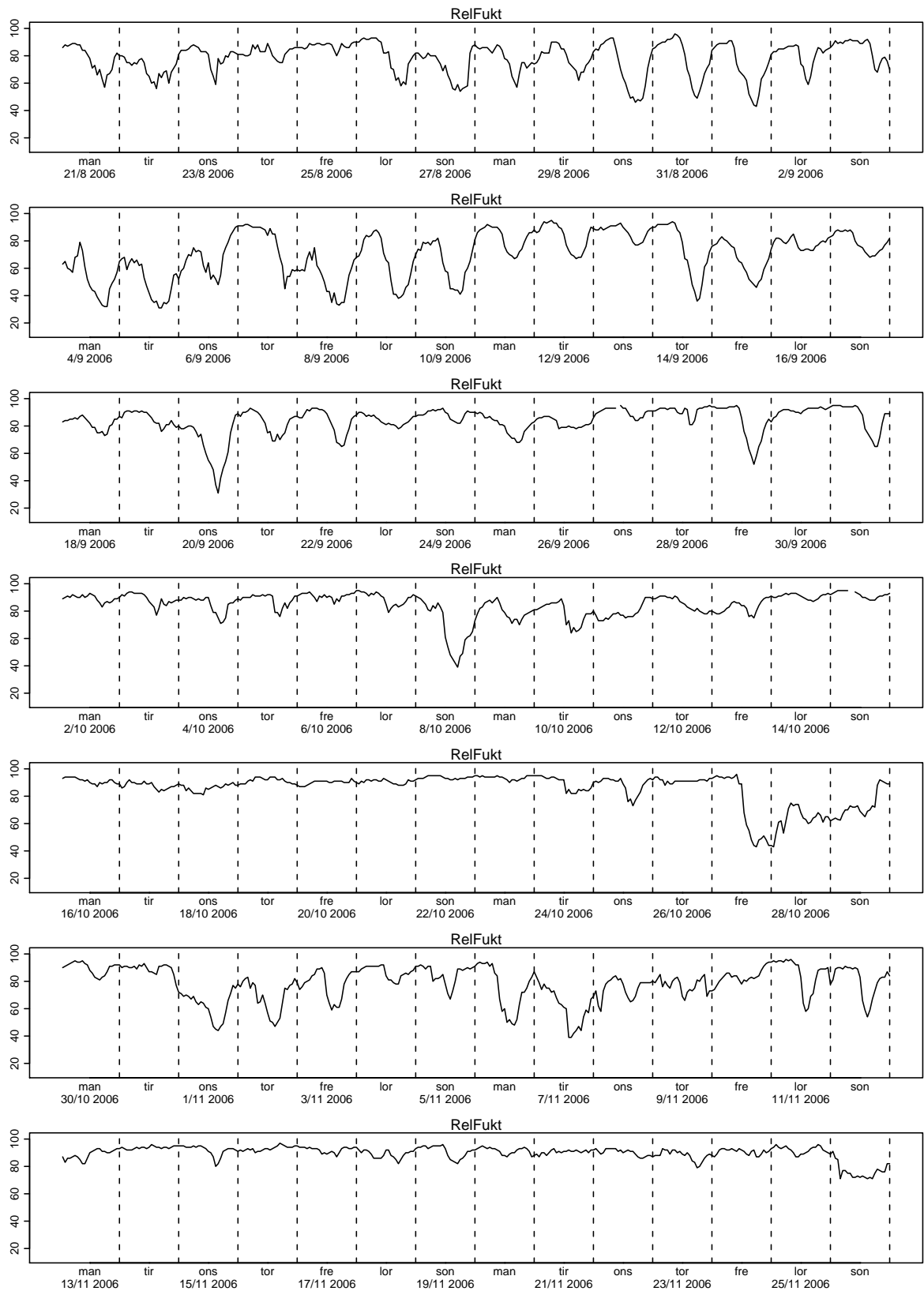
Figur 3.19. Relativ fuktighet



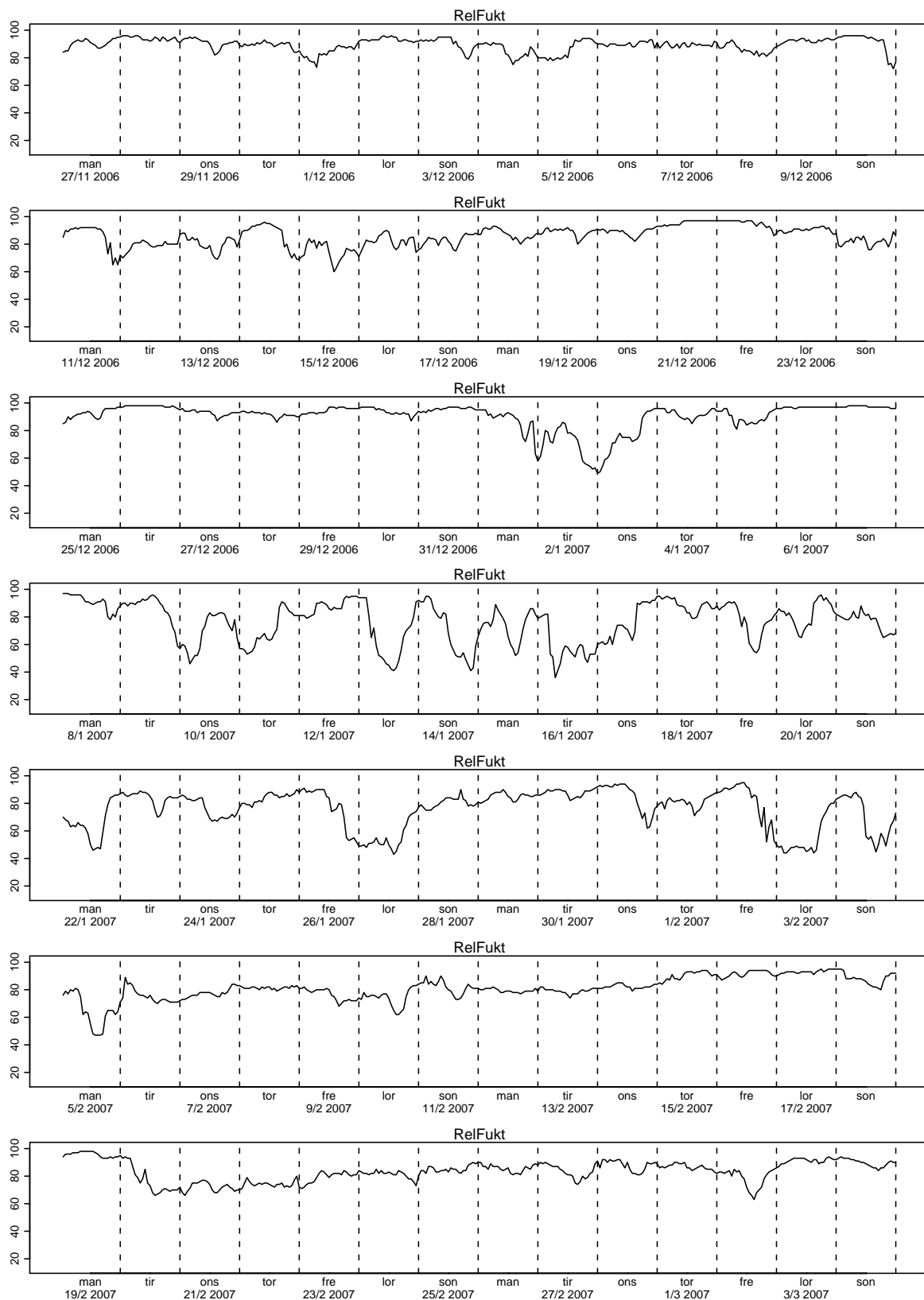
Figur 3.20. Relativ fuktighet



Figur 3.21. Relativ fuktighet

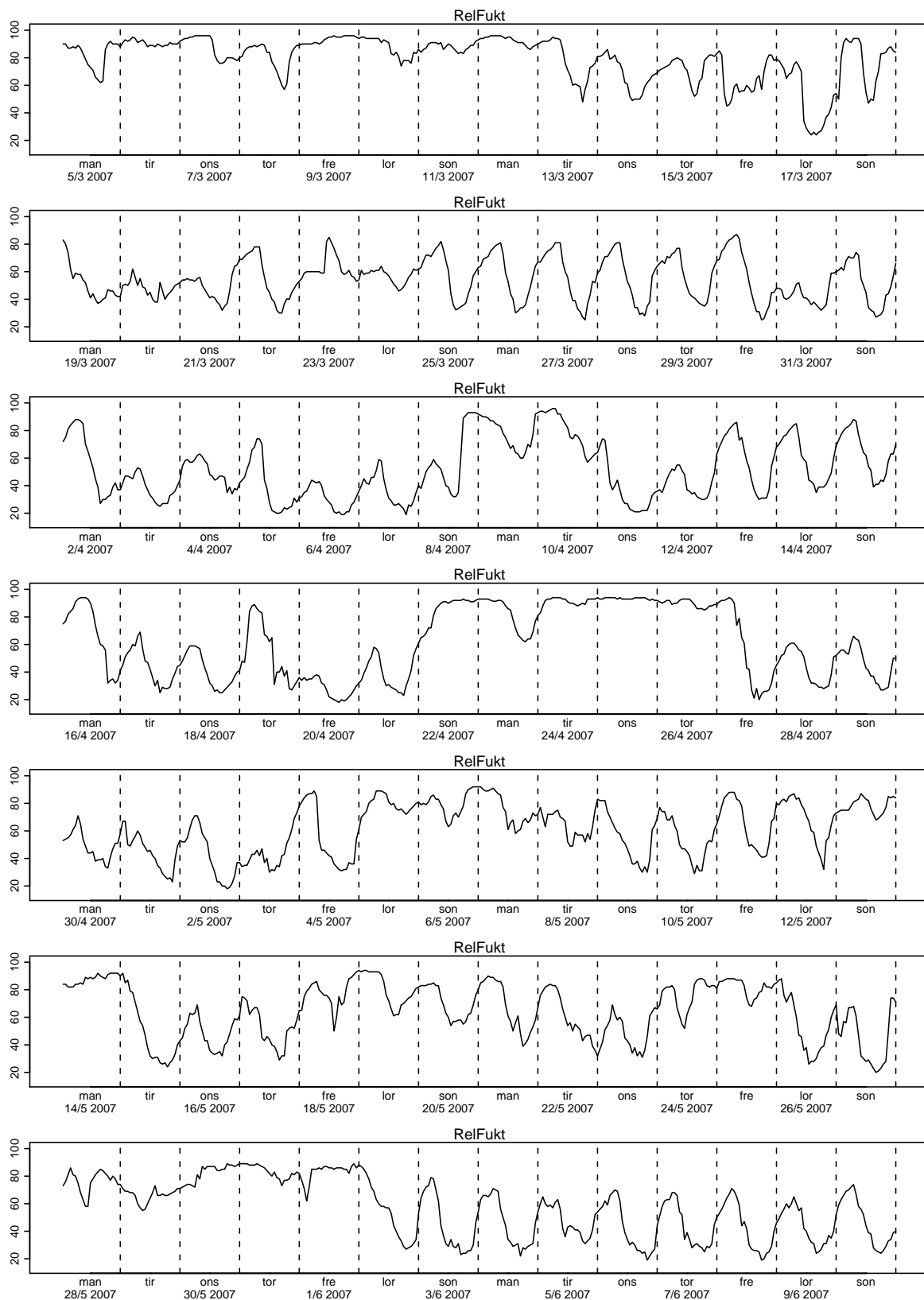


Figur 3.22. Relativ fuktighet

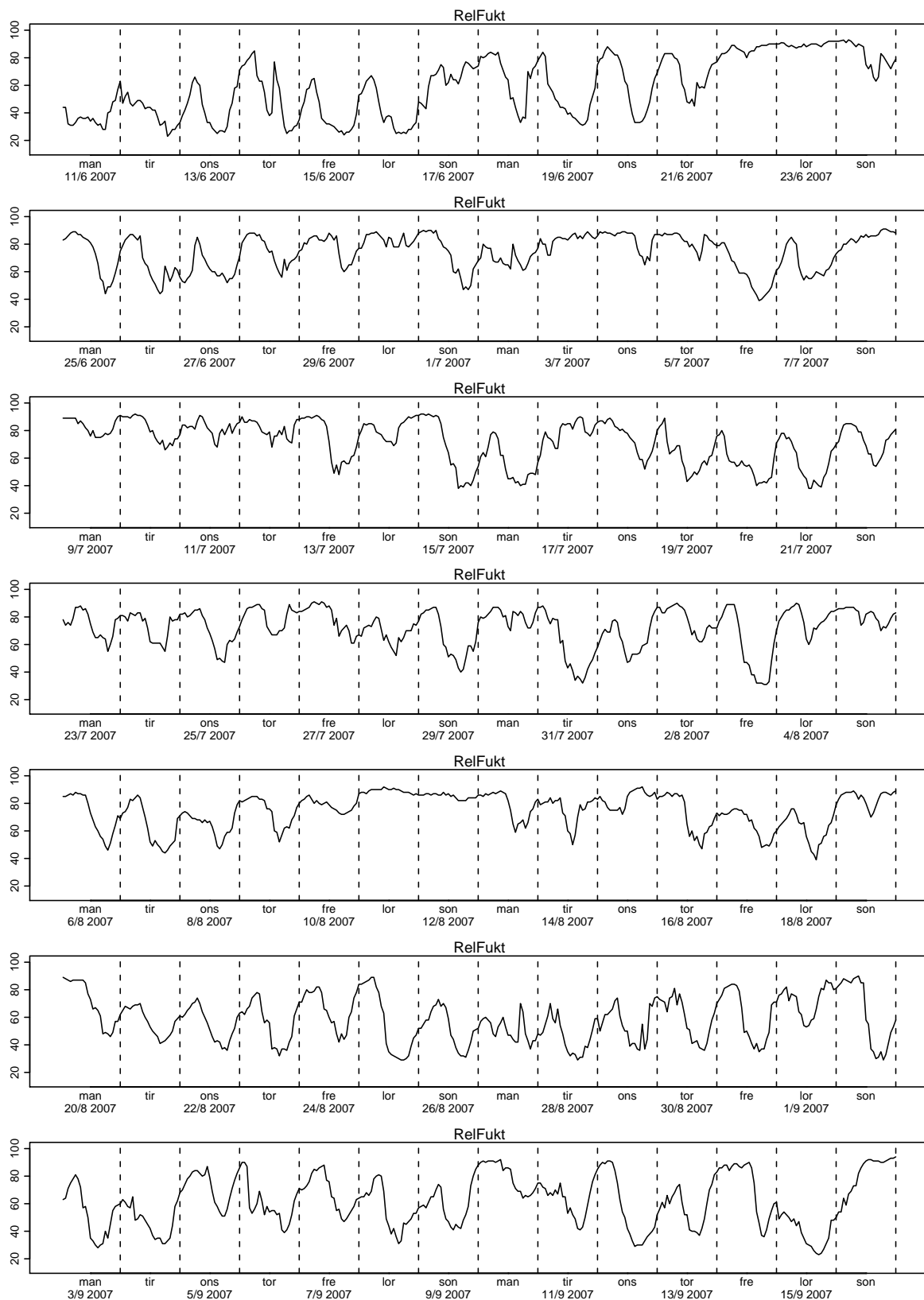


Figur 3.23. Relativ fuktighet

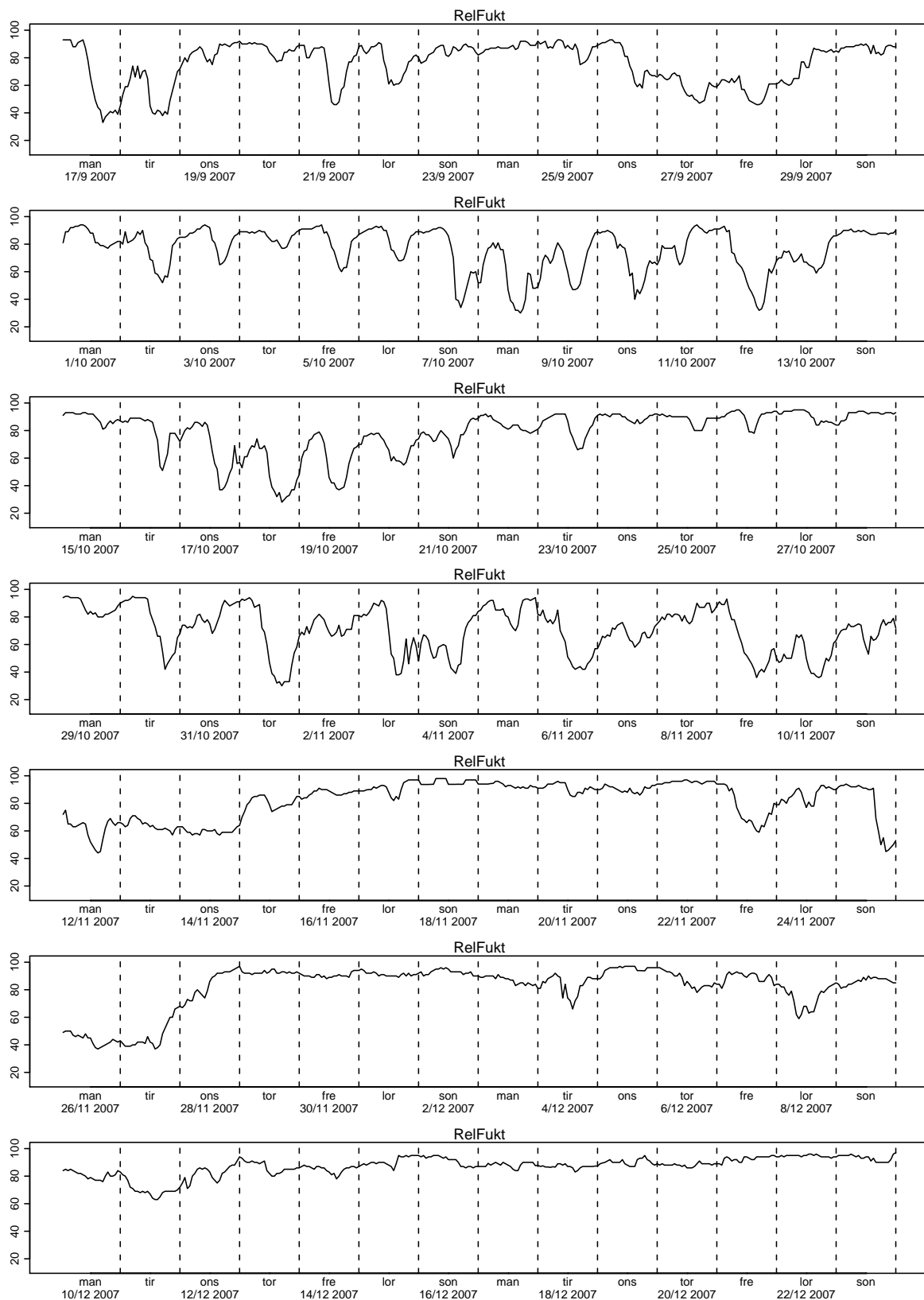




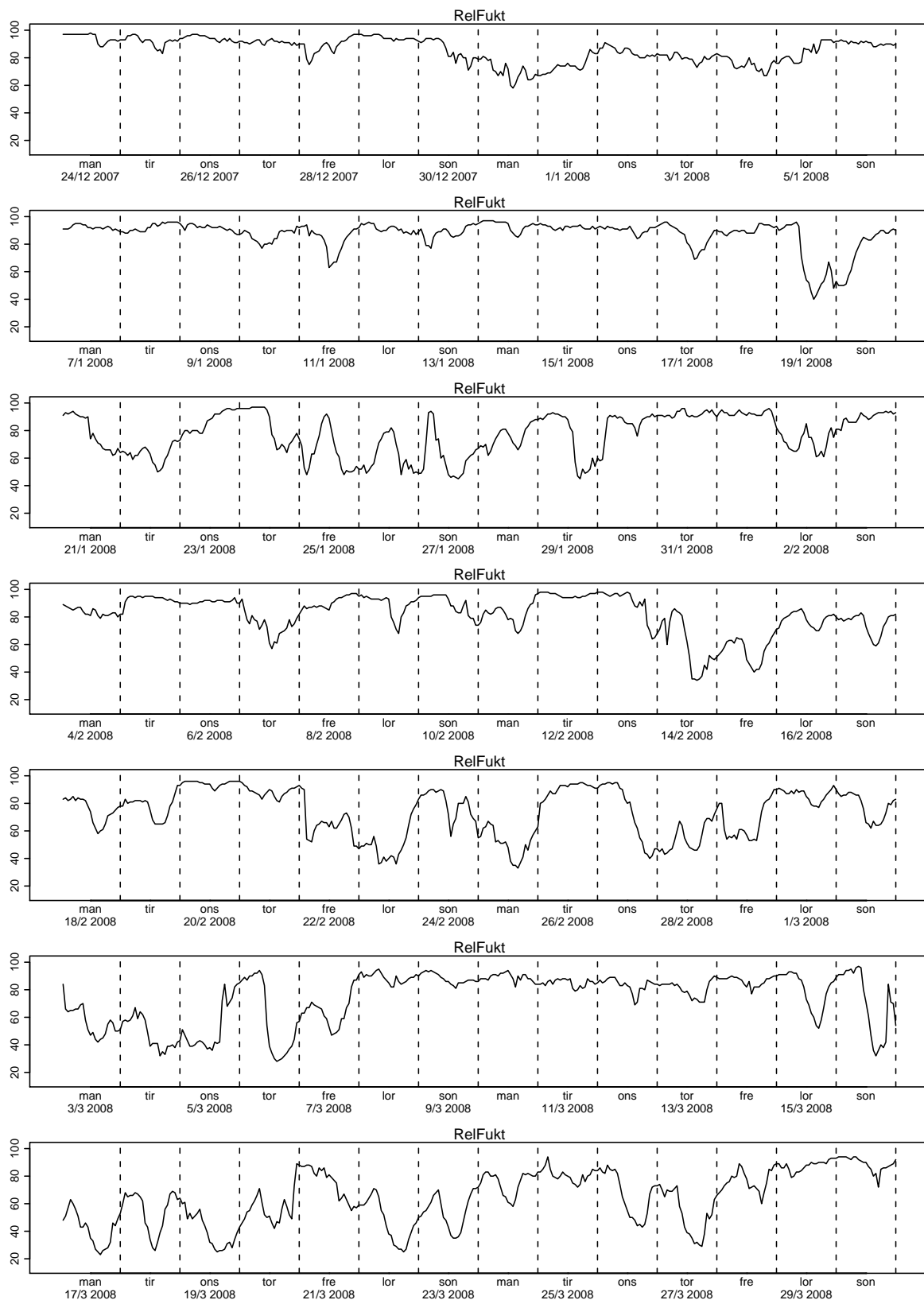
Figur 3.24. Relativ fuktighet



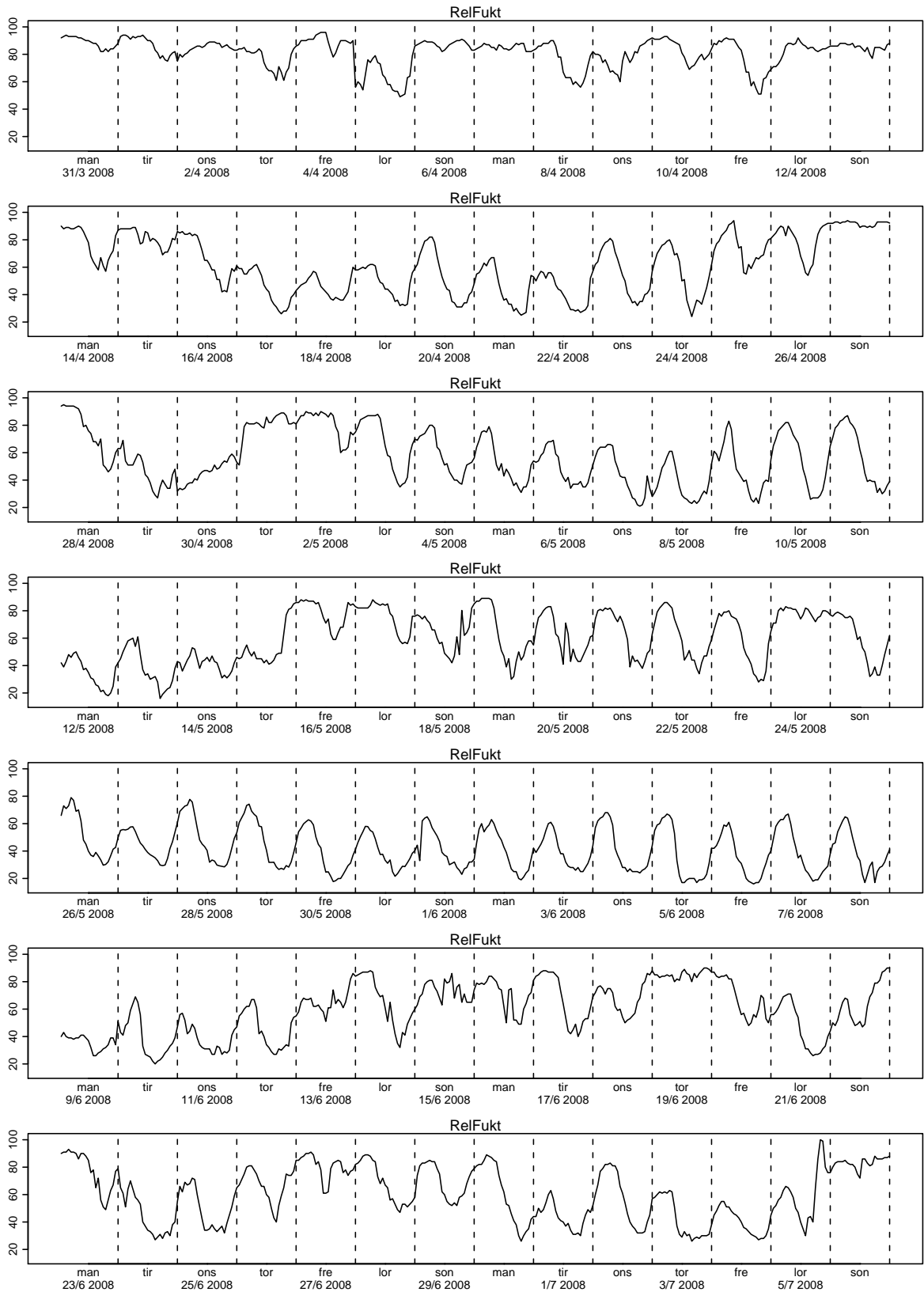
Figur 3.25. Relativ fuktighet



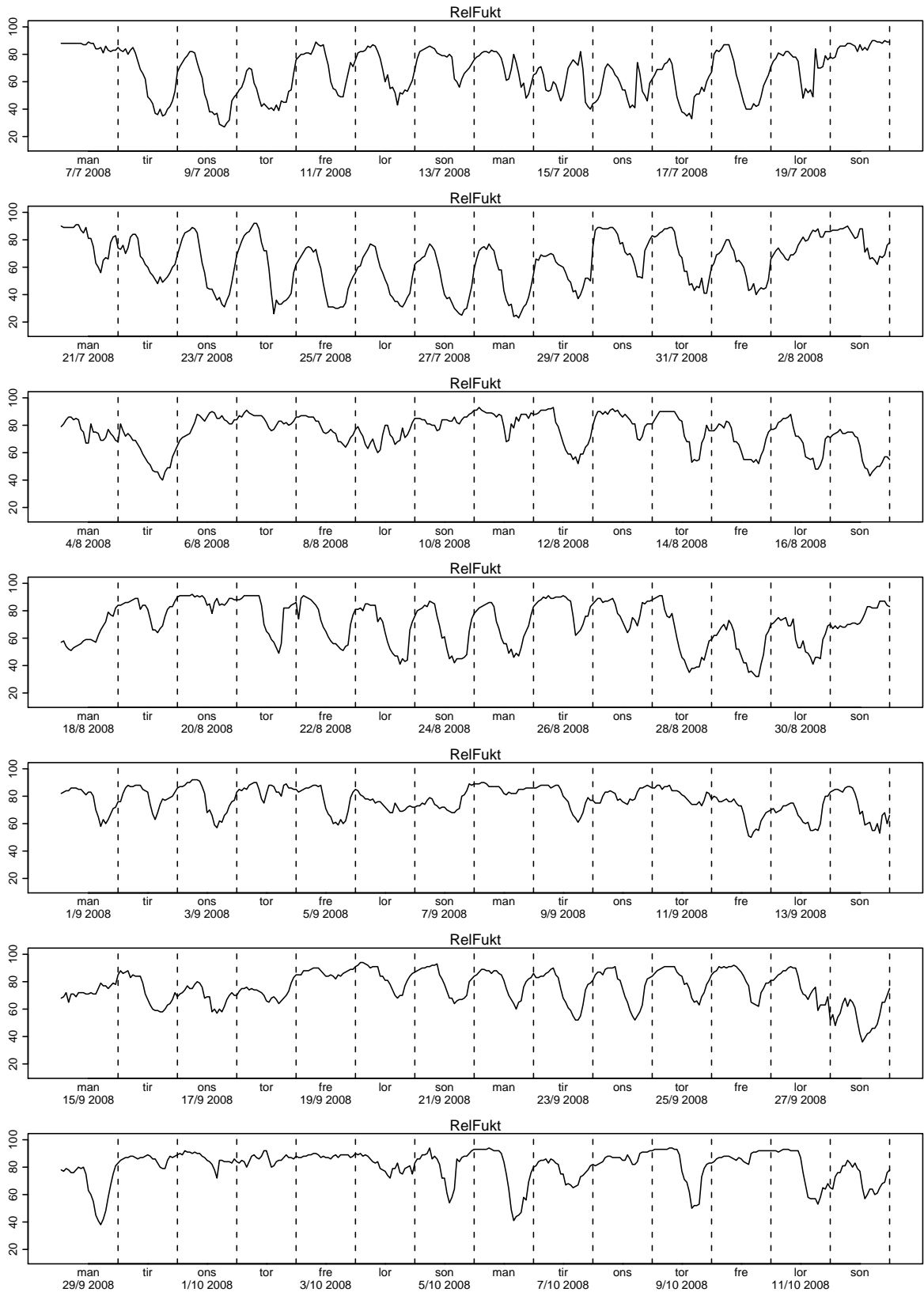
Figur 3.26. Relativ fuktighet



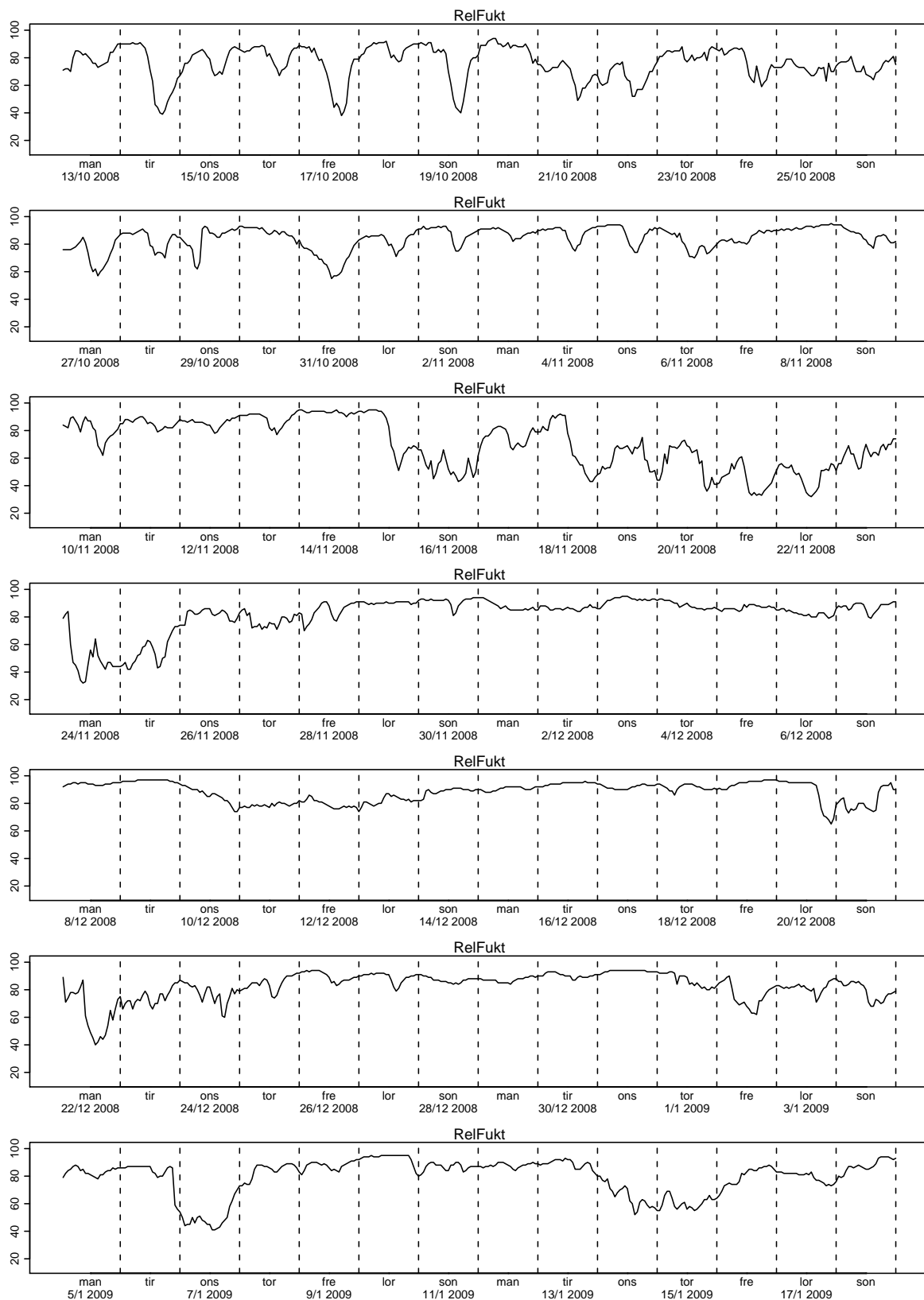
Figur 3.27. Relativ fuktighet



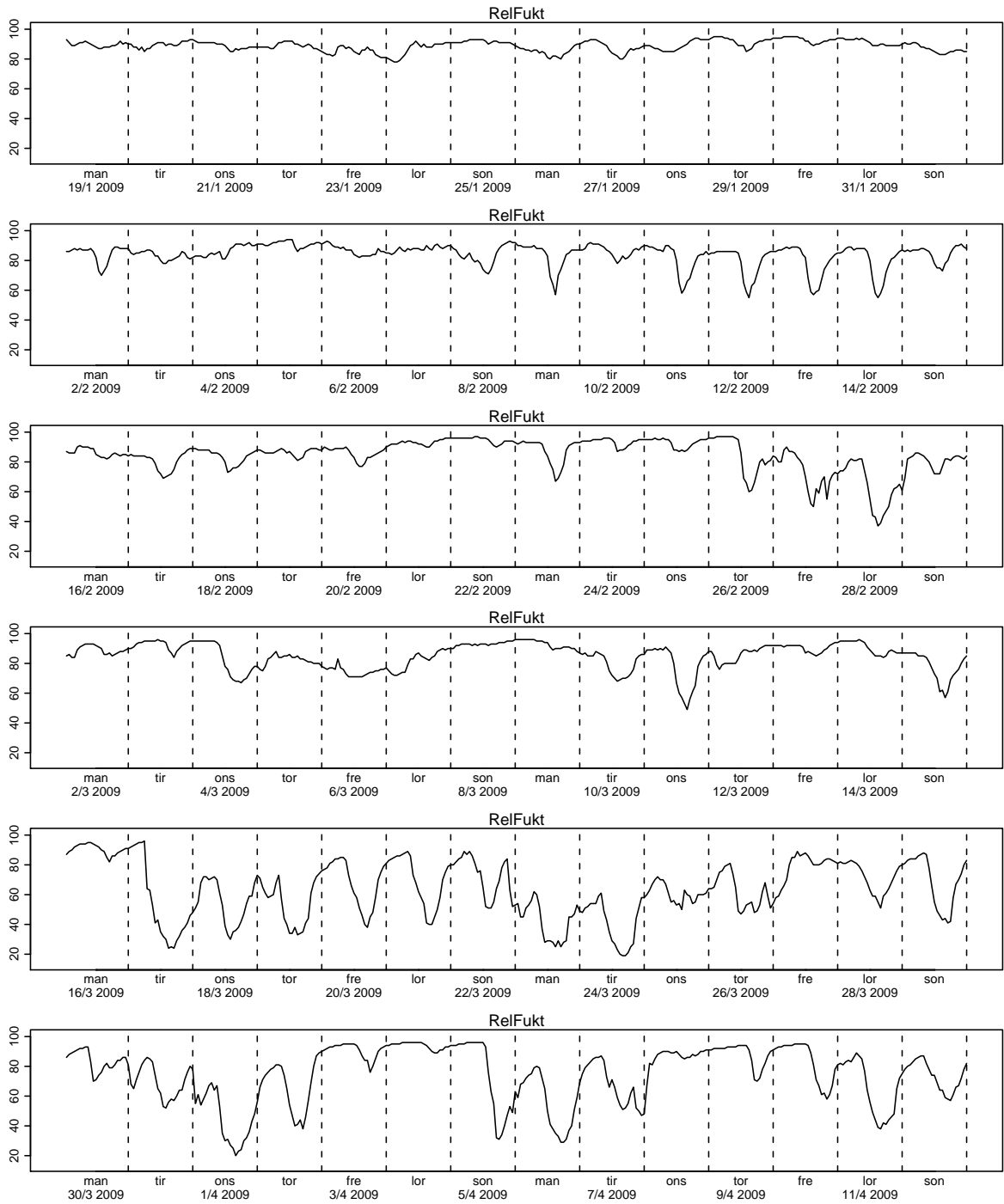
Figur 3.28. Relativ fuktighet



Figur 3.29. Relativ fuktighet

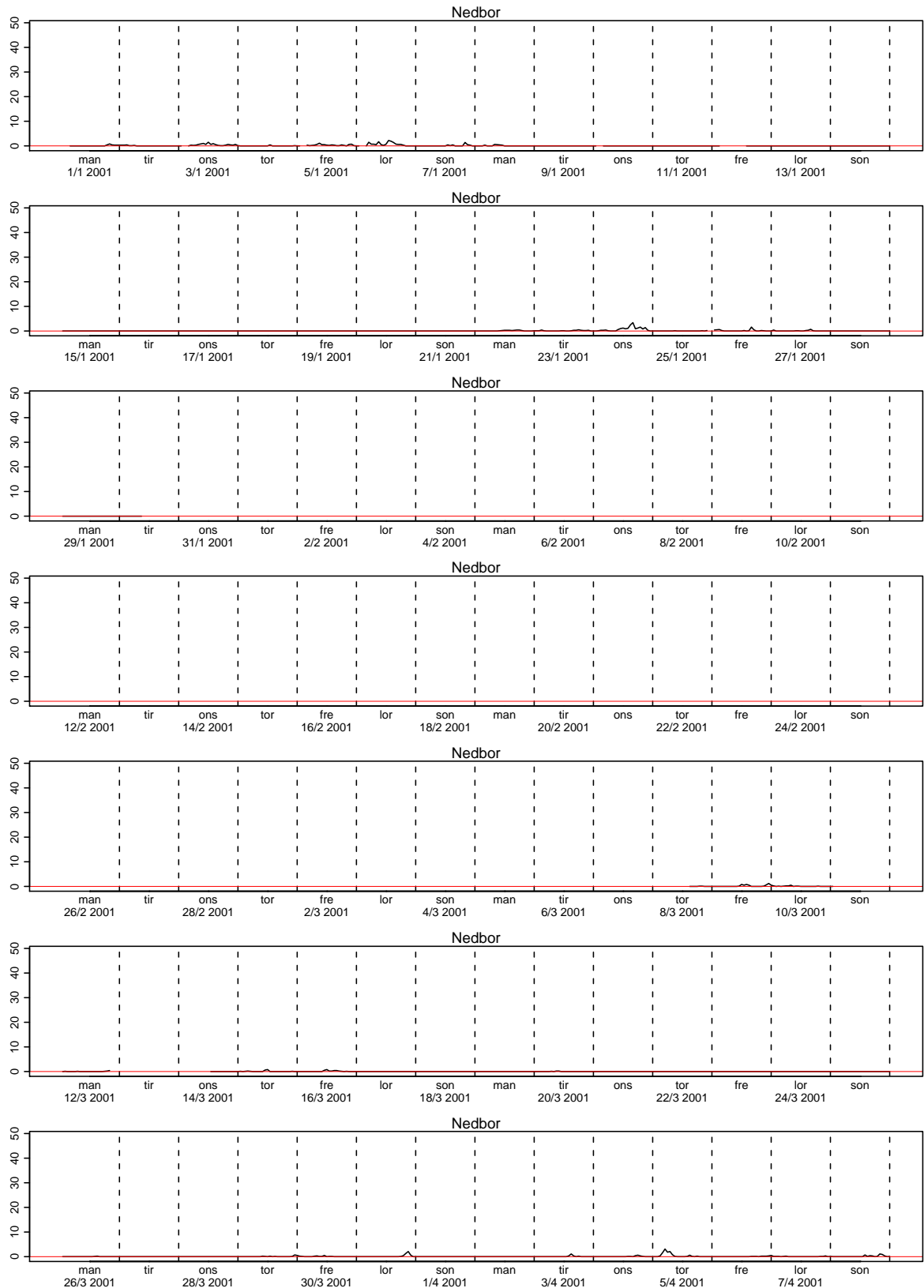


Figur 3.30. Relativ fuktighet

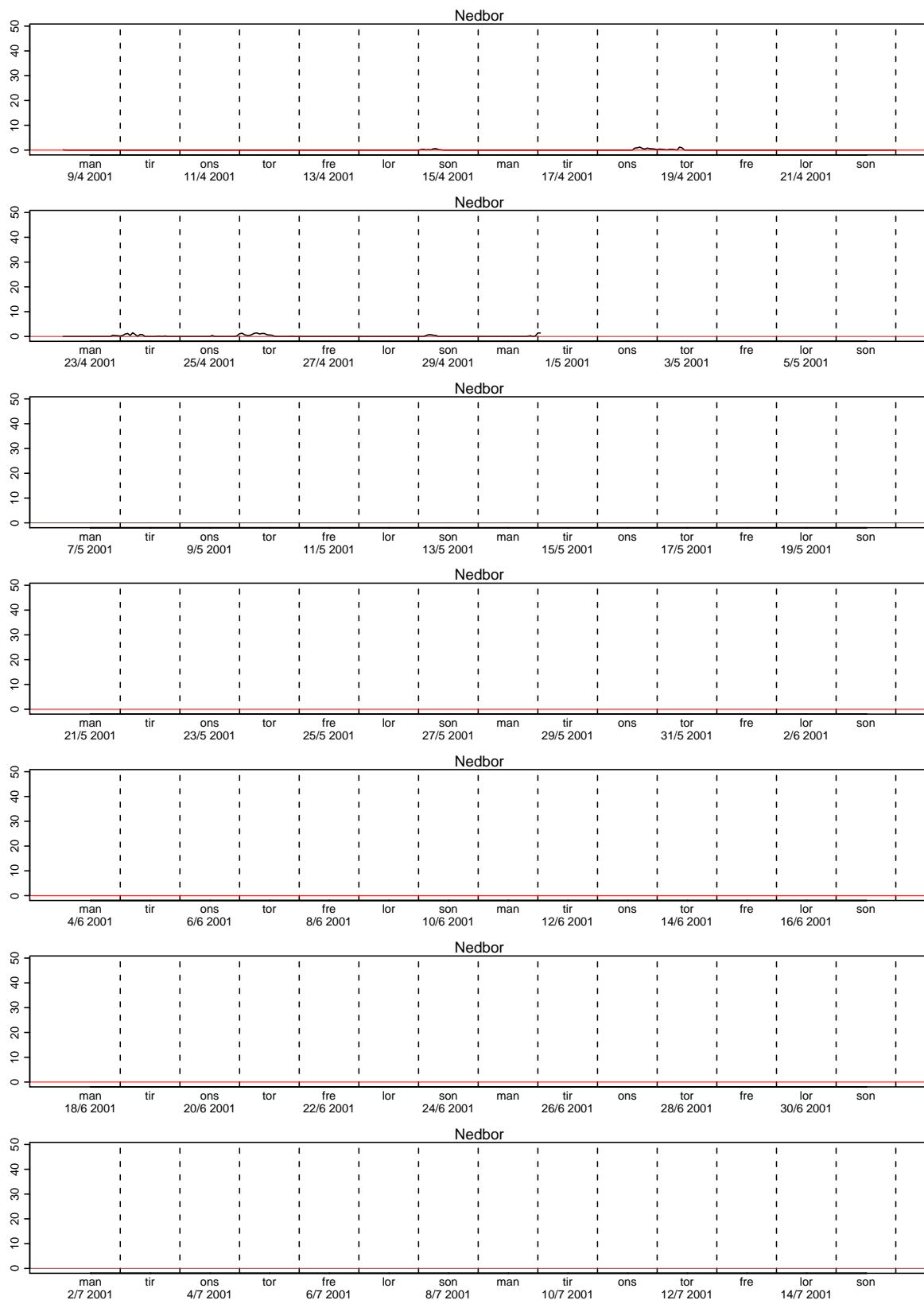


Figur 3.31. Relativ fuktighet

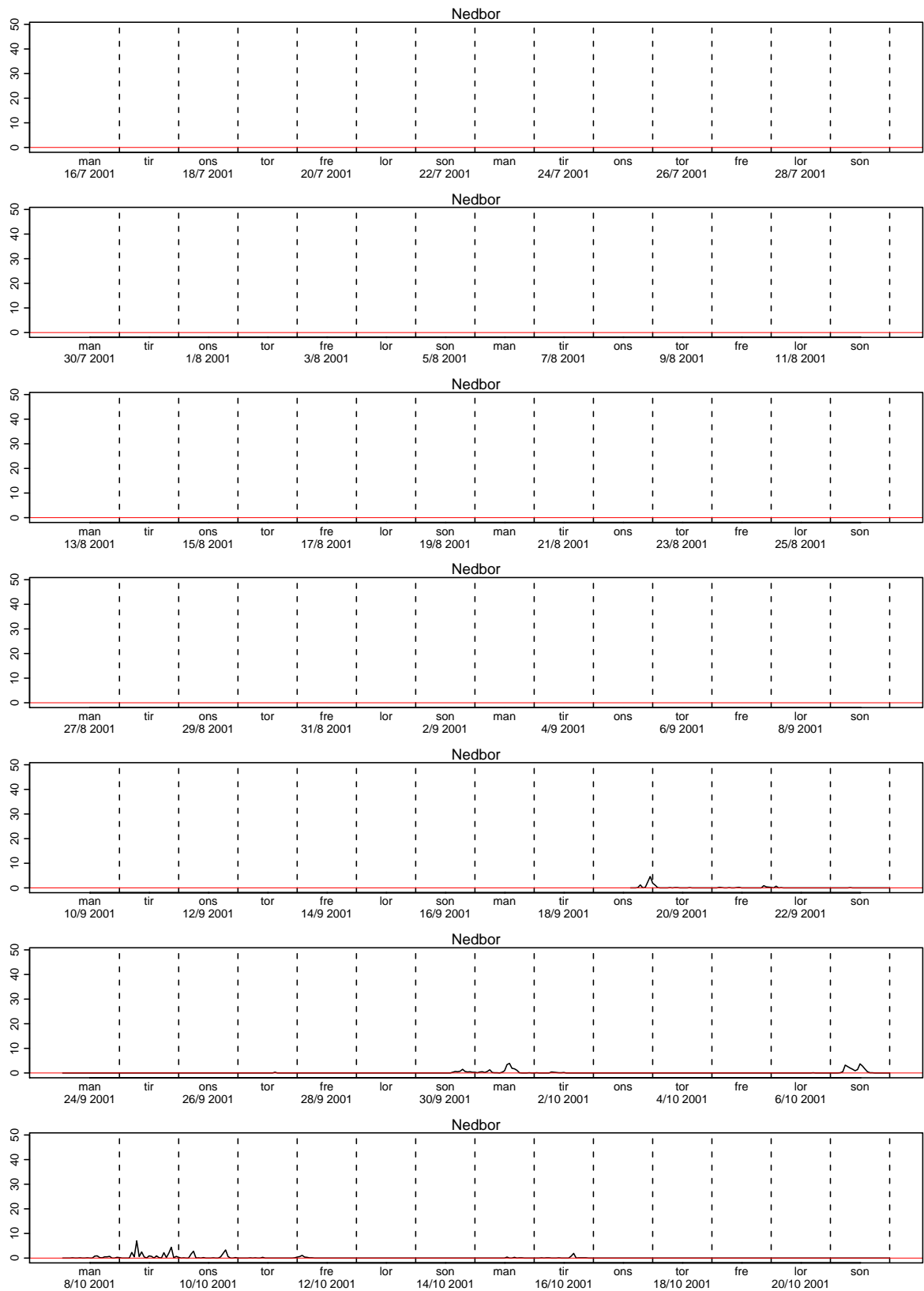




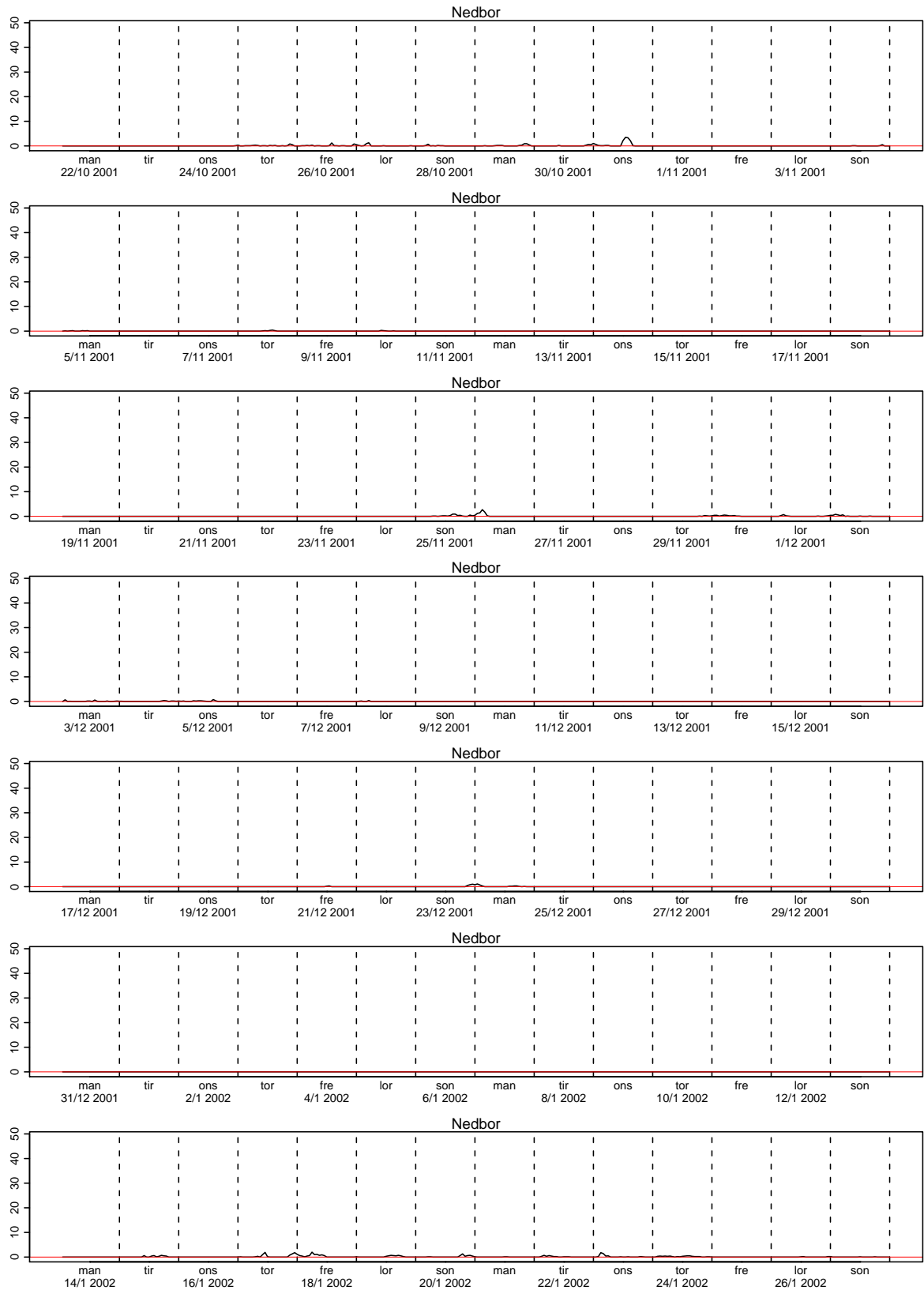
Figur 3.32. Nedbør



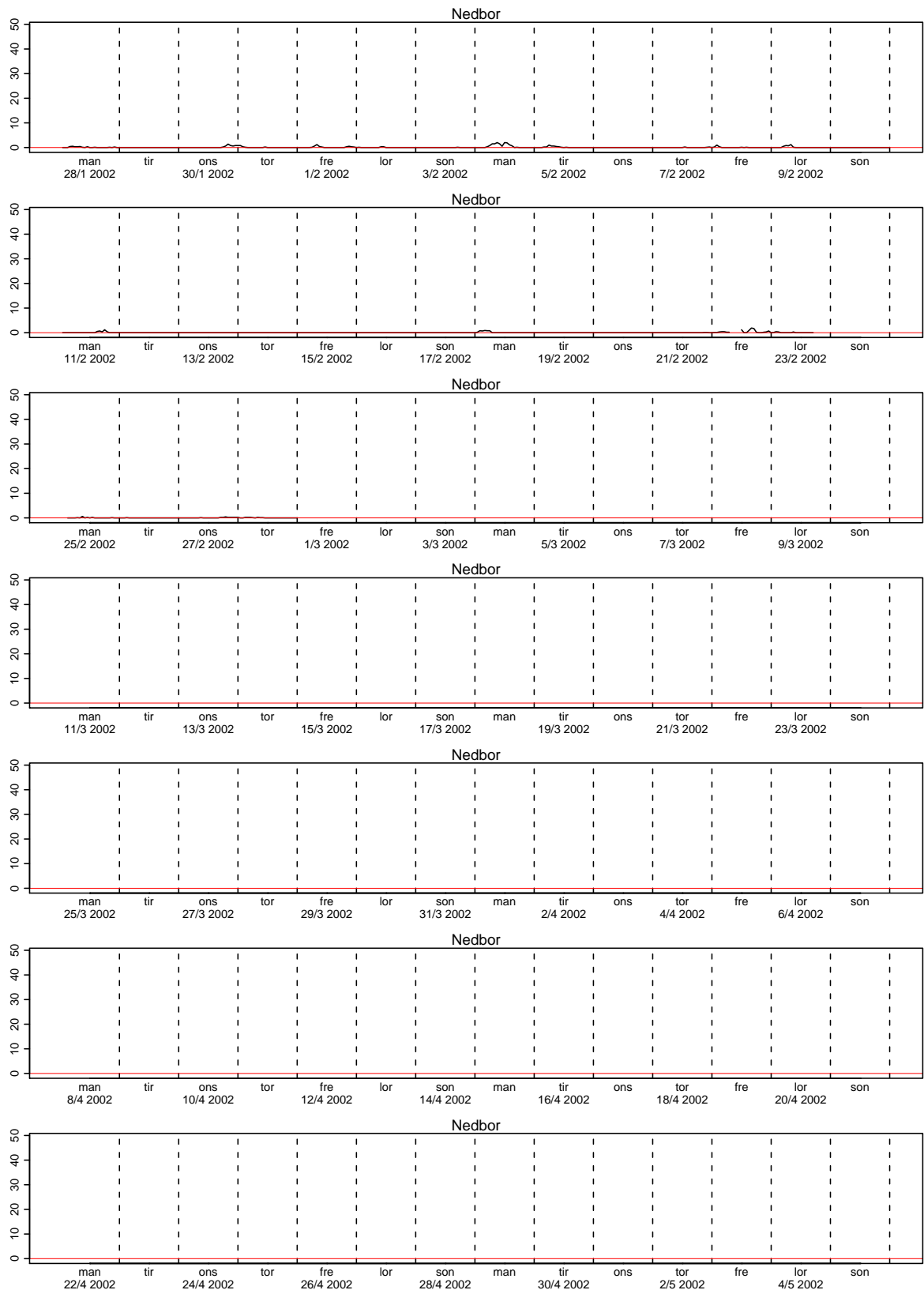
Figur 3.33. Nedbør



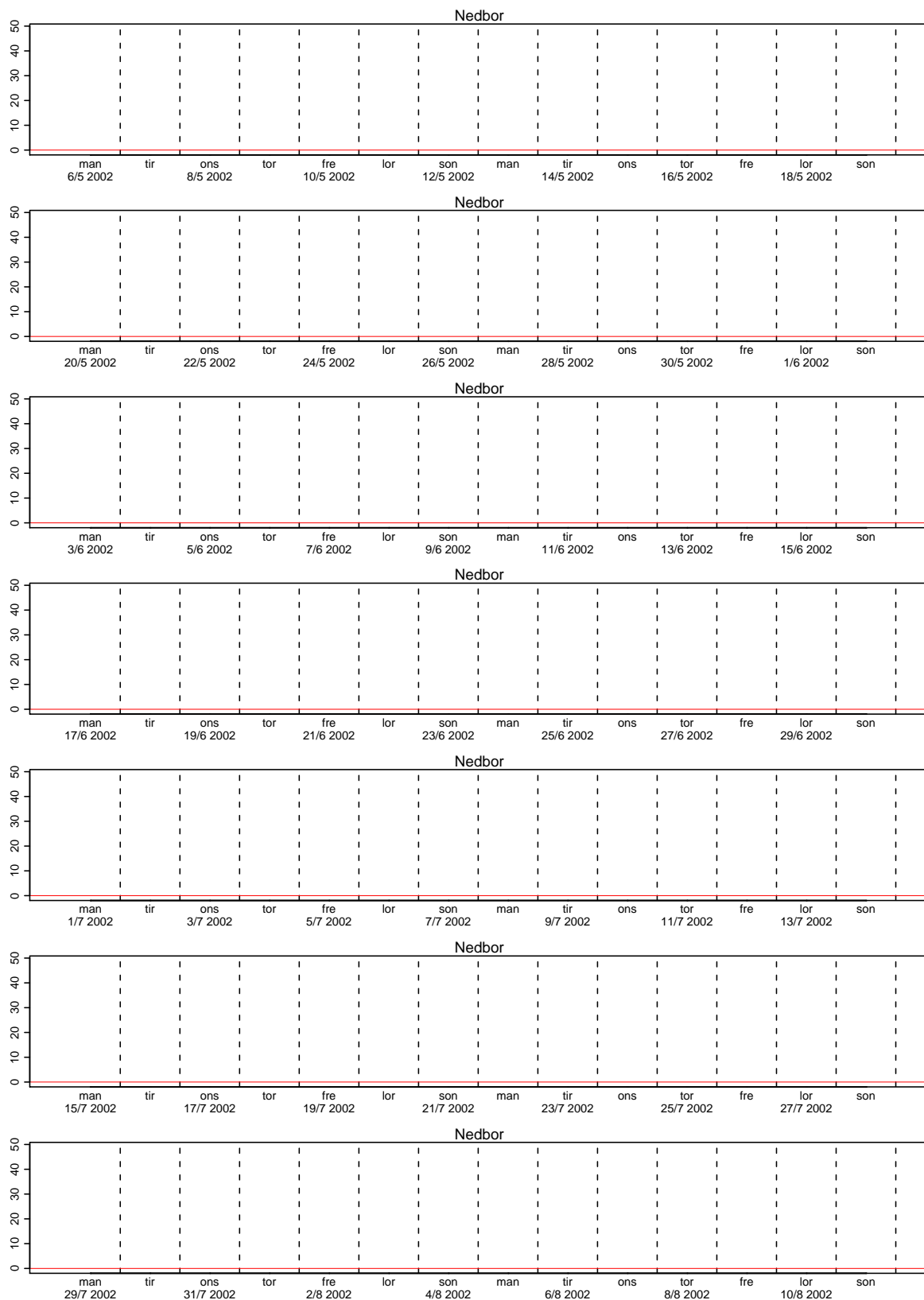
Figur 3.34. Nedbør



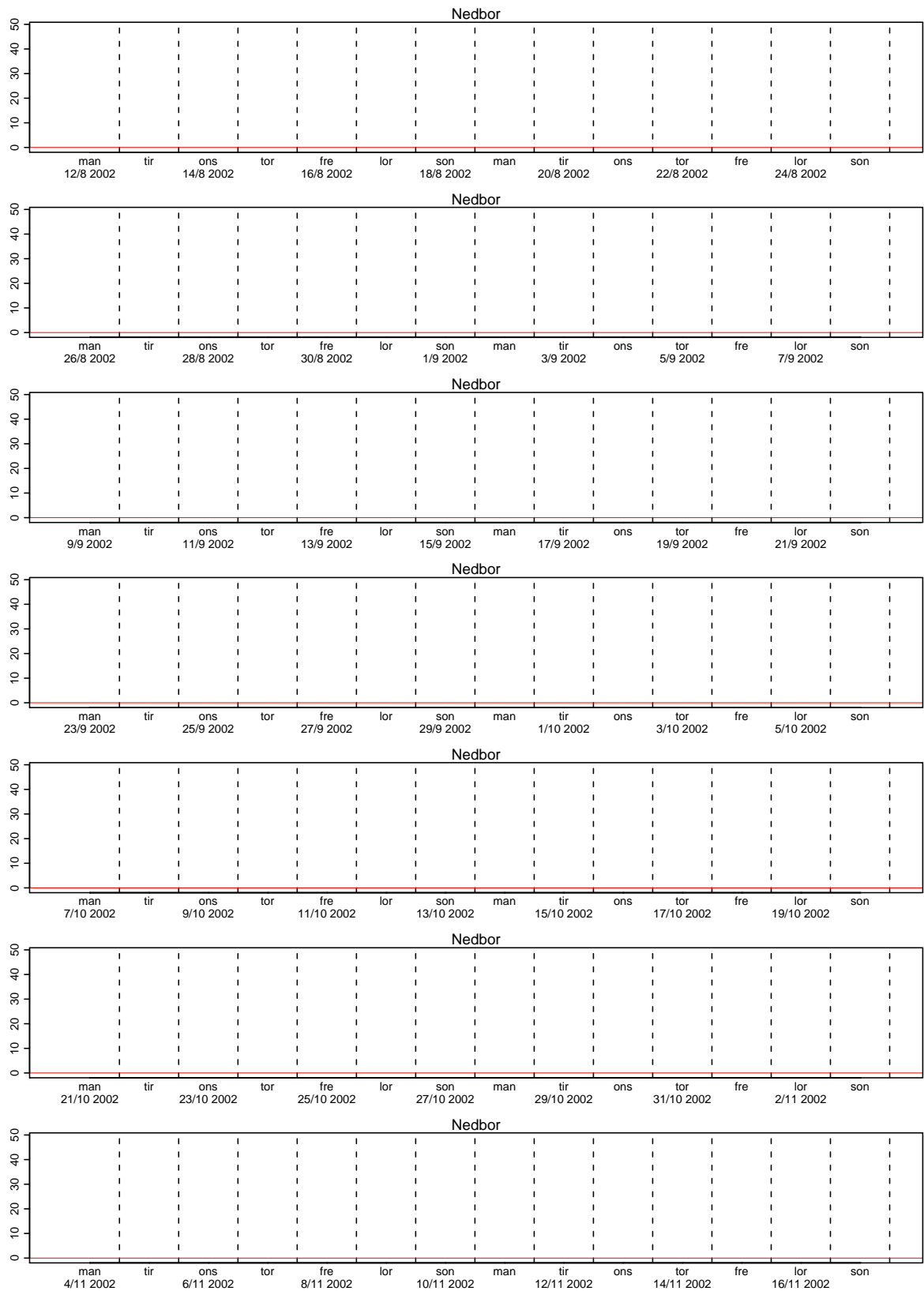
Figur 3.35. Nedbør



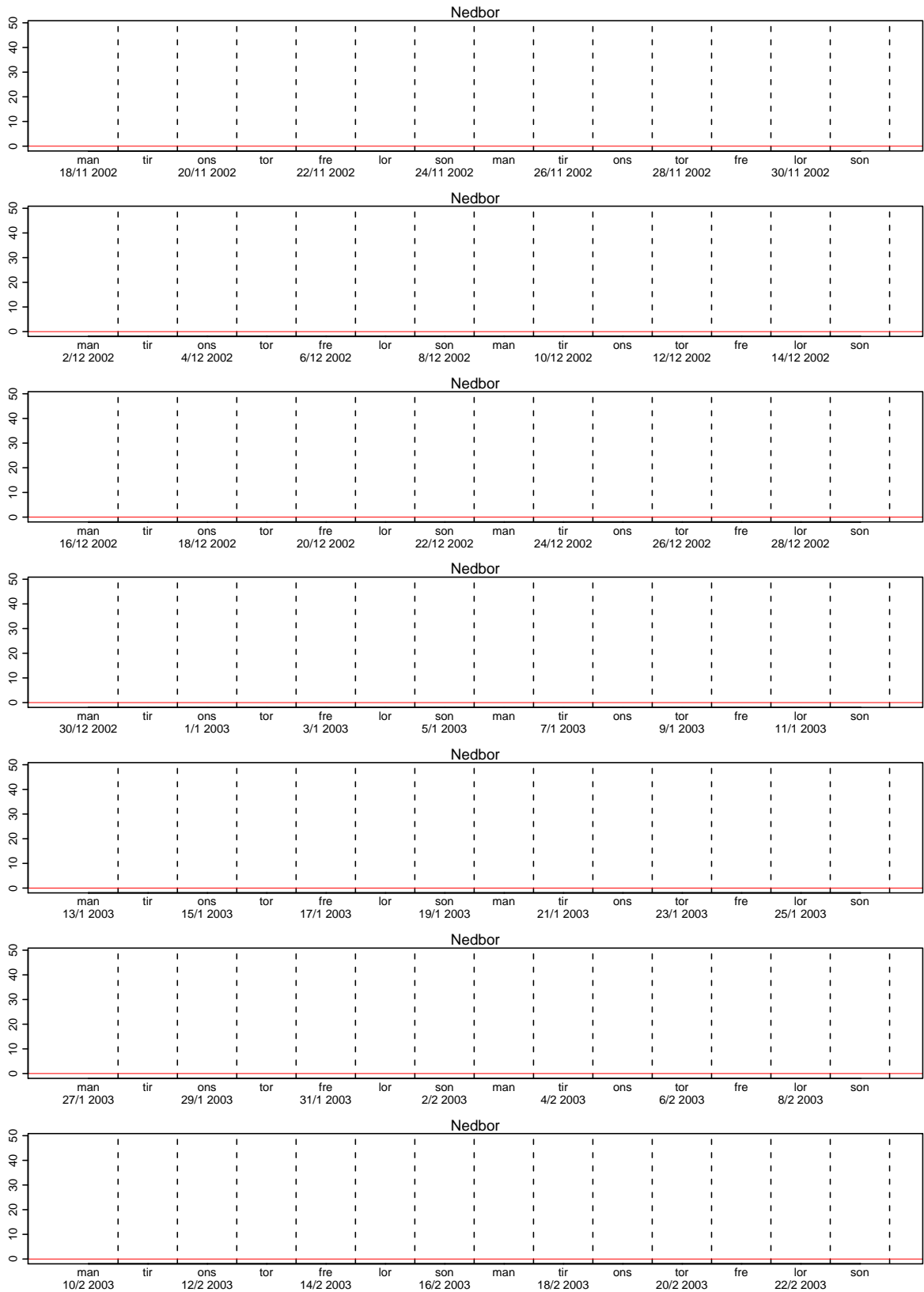
Figur 3.36. Nedbør



Figur 3.37. Nedbør

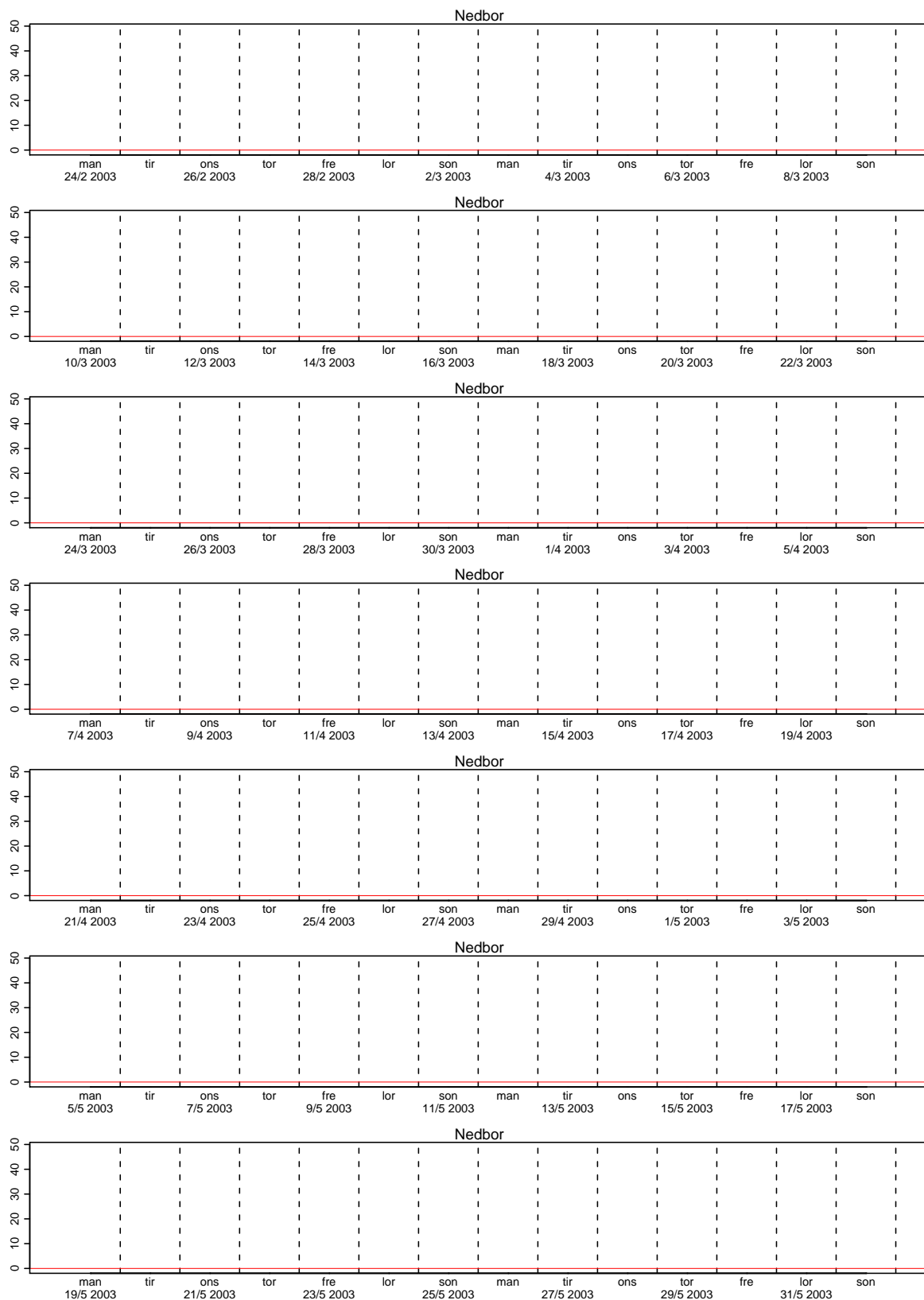


Figur 3.38. Nedbør

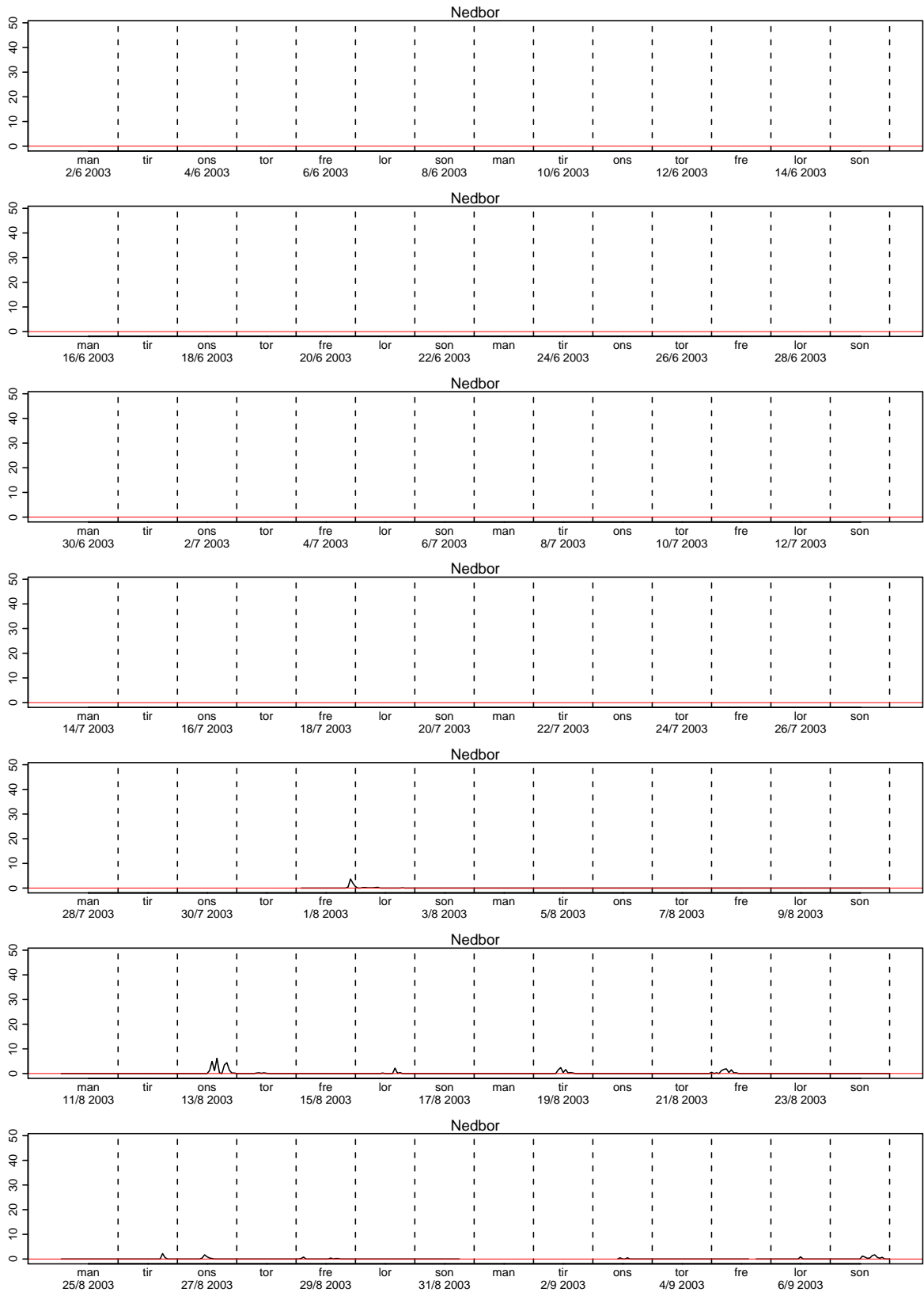


Figur 3.39. Nedbør

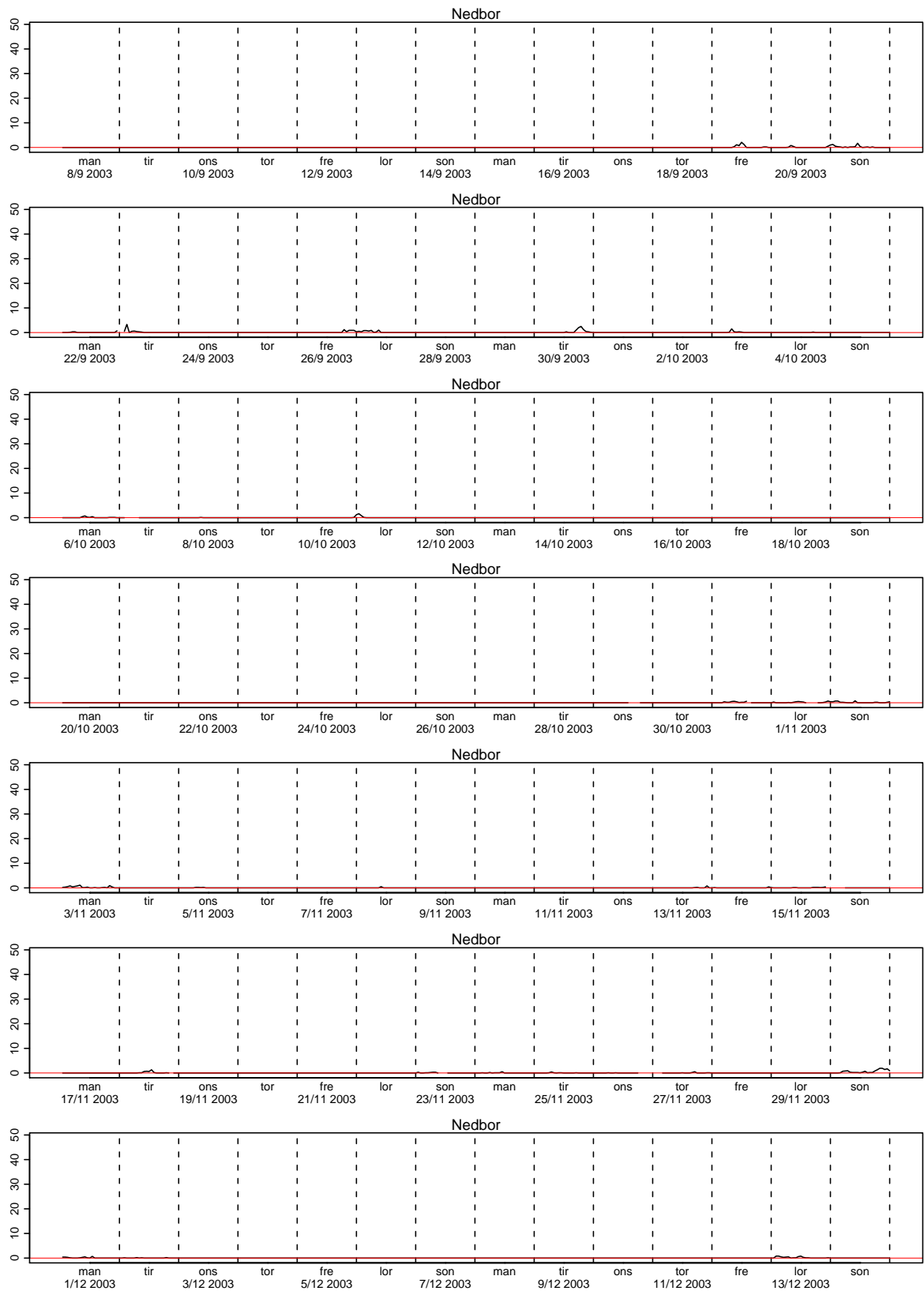




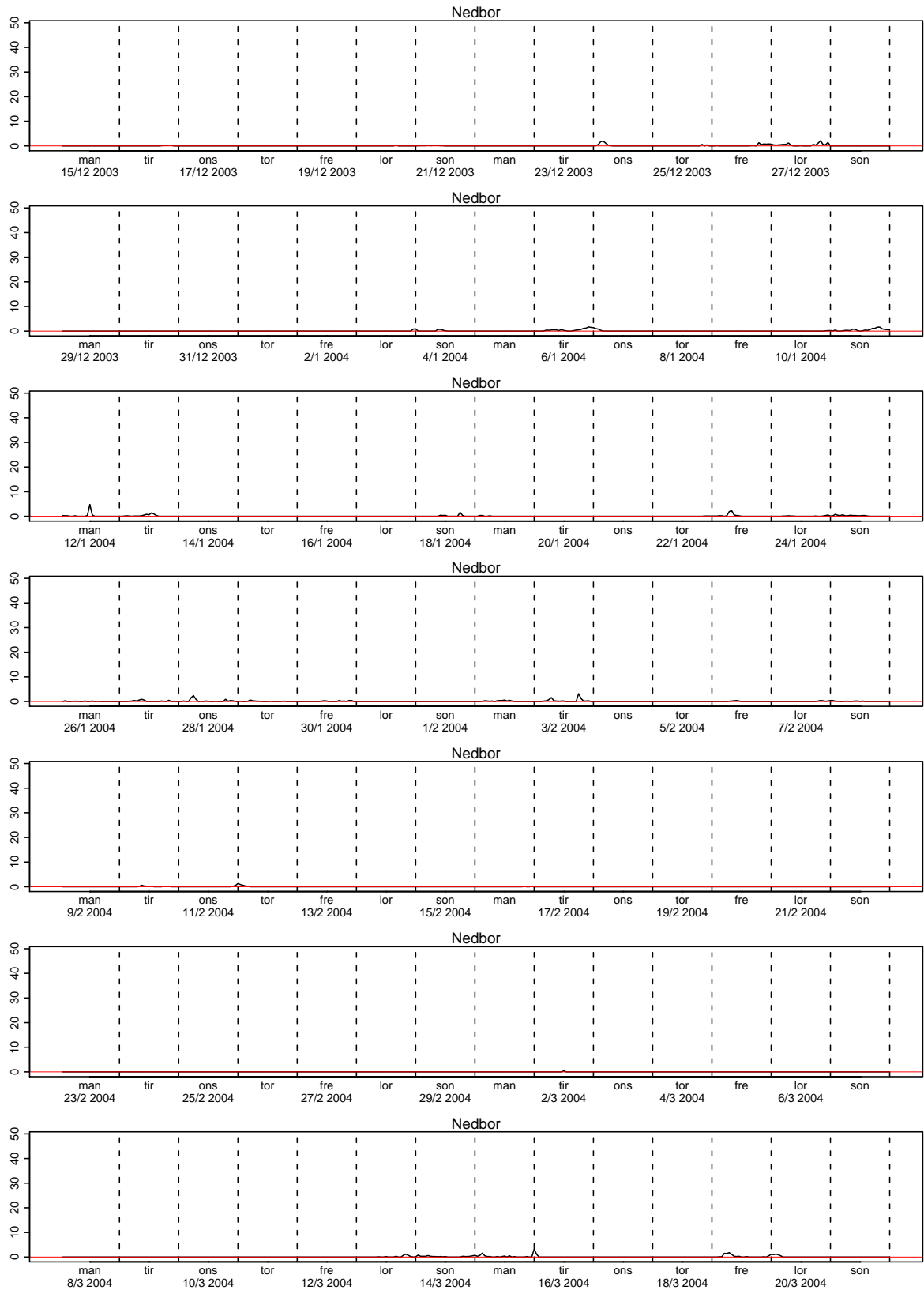
Figur 3.40. Nedbør



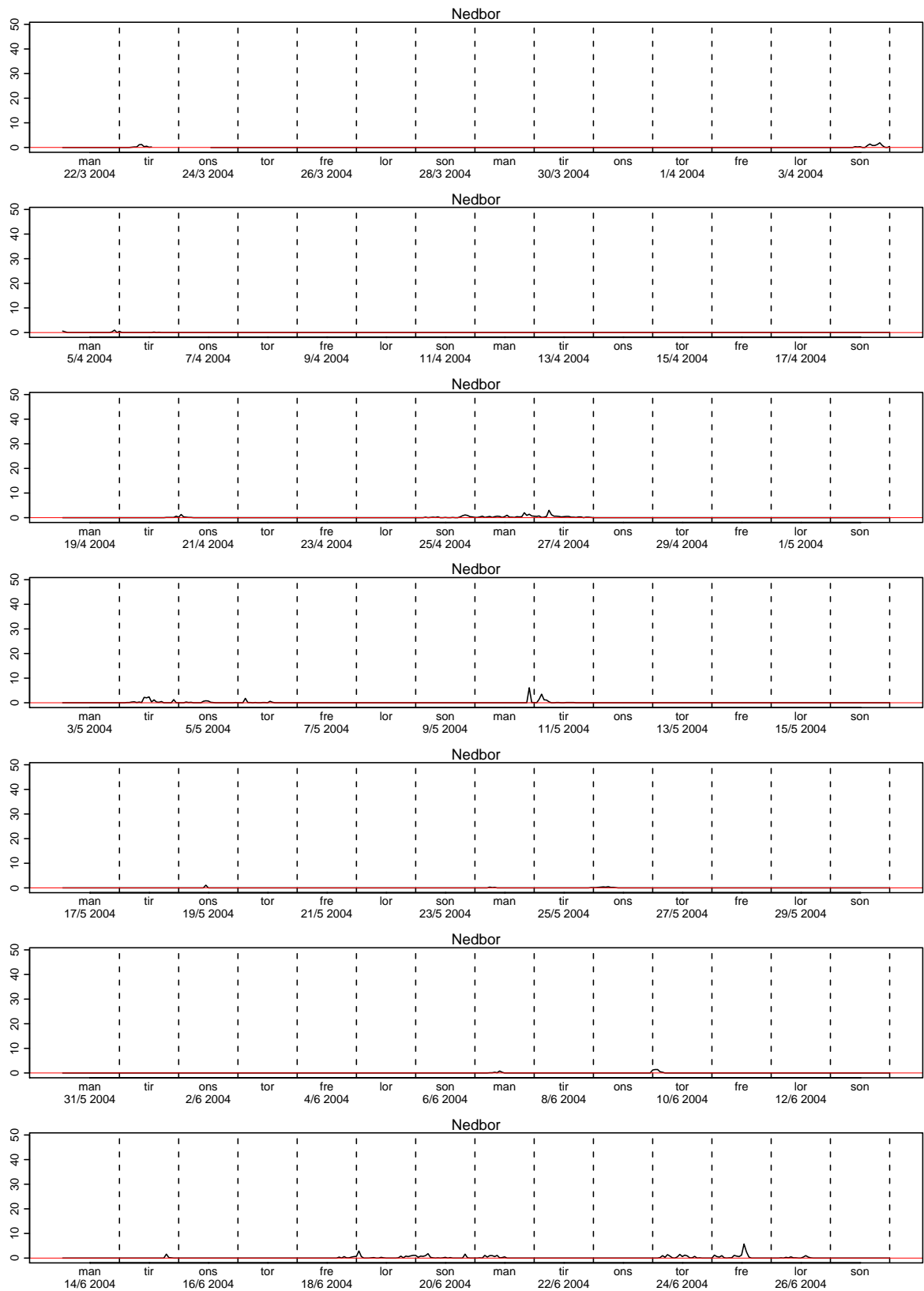
Figur 3.41. Nedbør



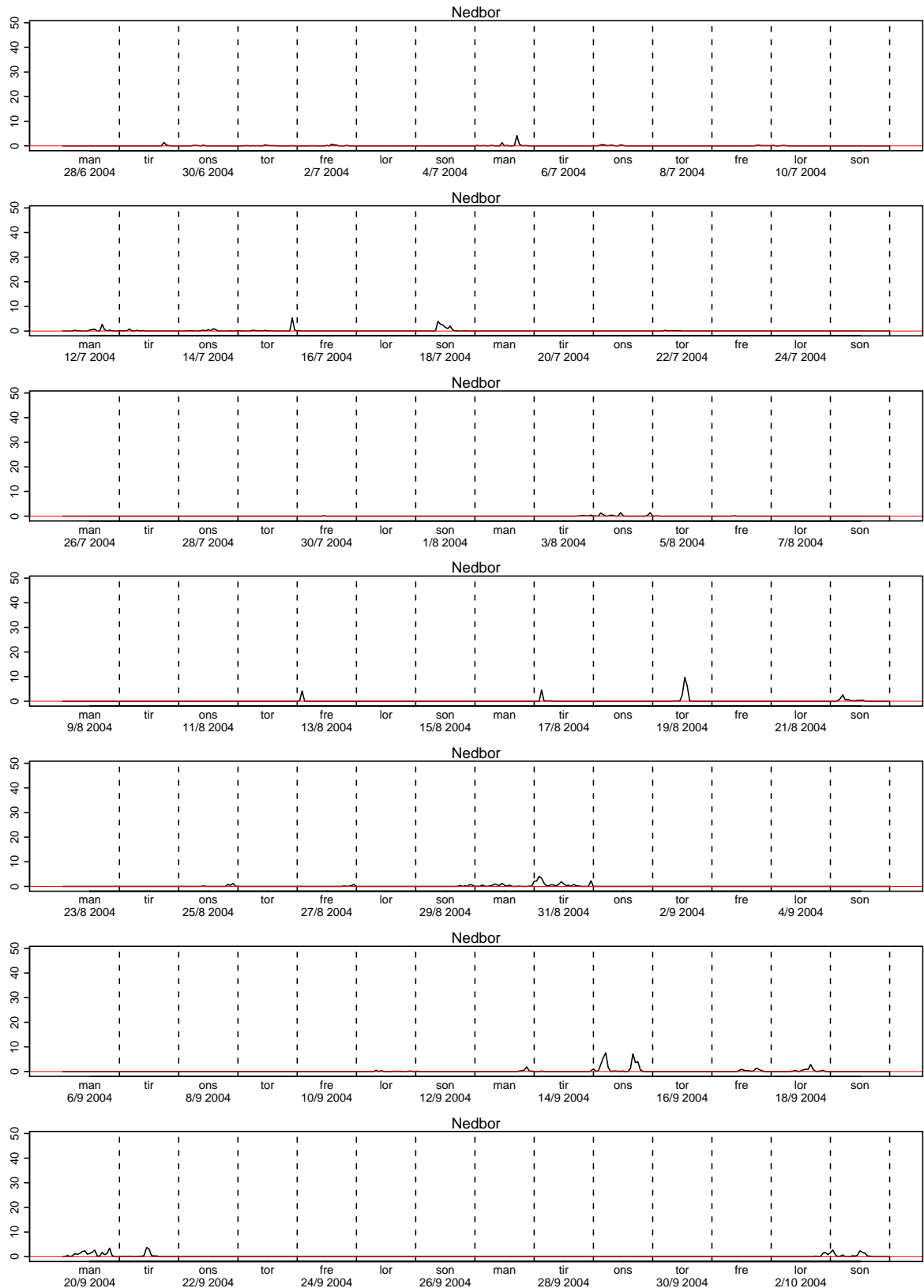
Figur 3.42. Nedbør



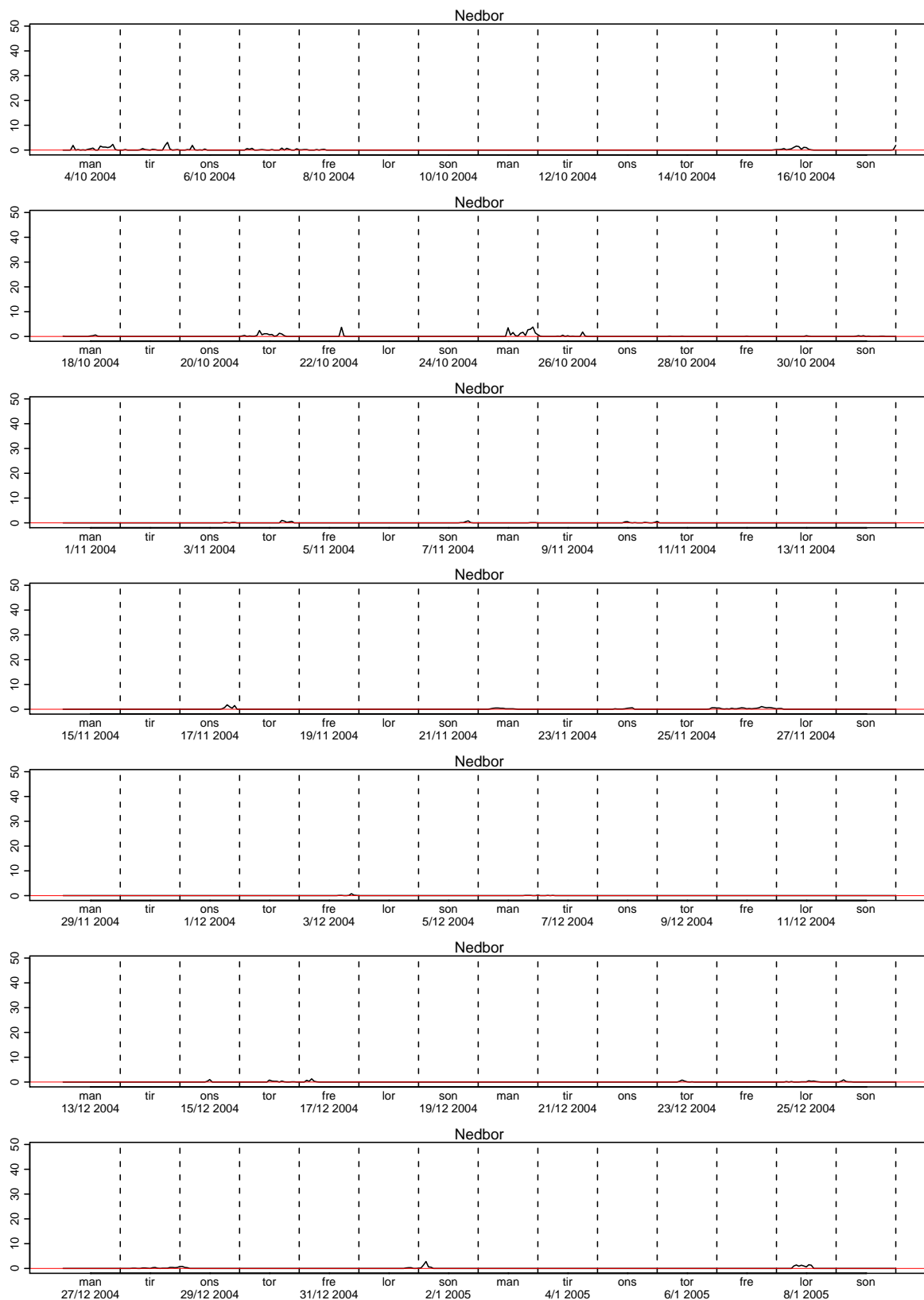
Figur 3.43. Nedbør



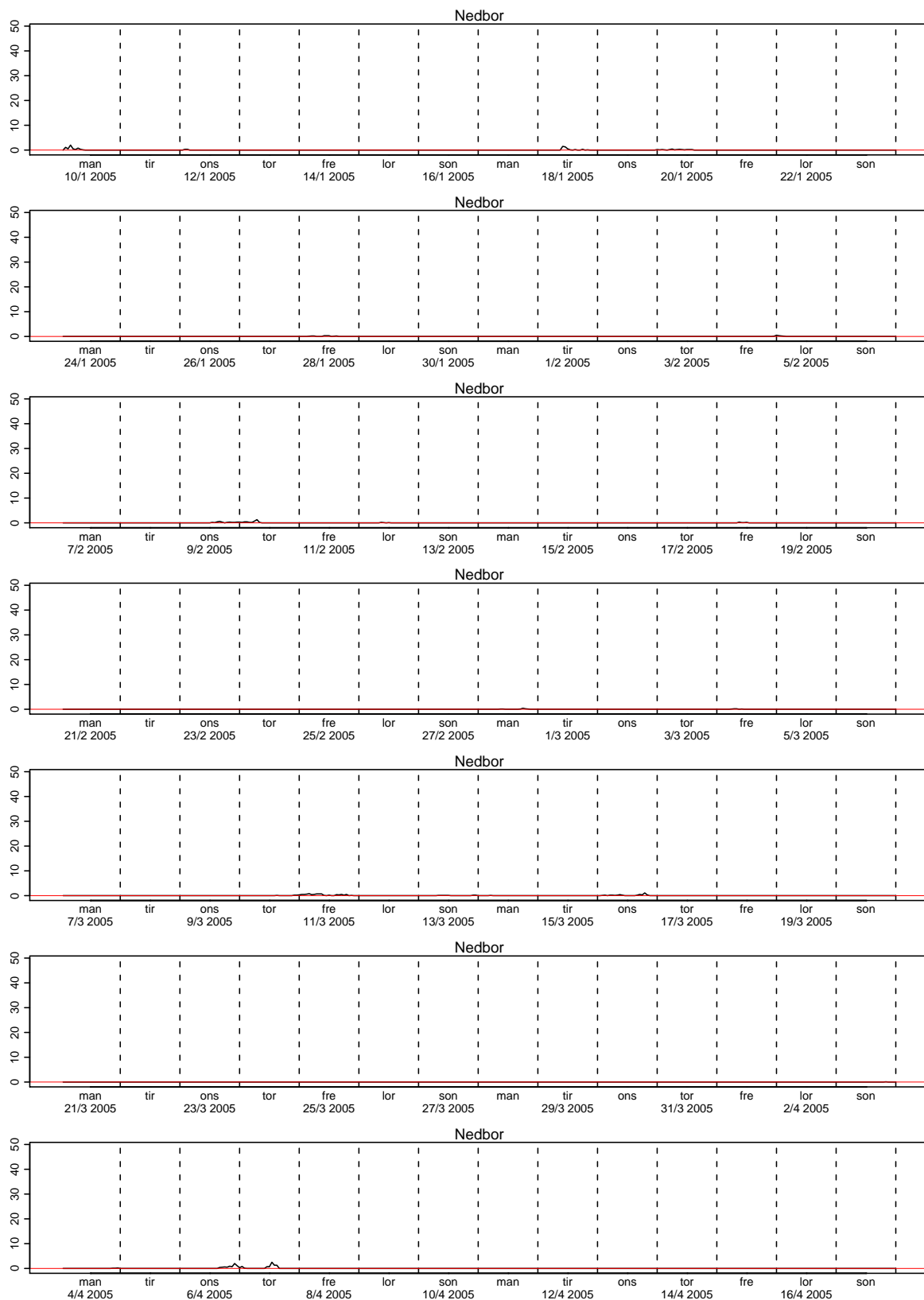
Figur 3.44. Nedbør



Figur 3.45. Nedbør

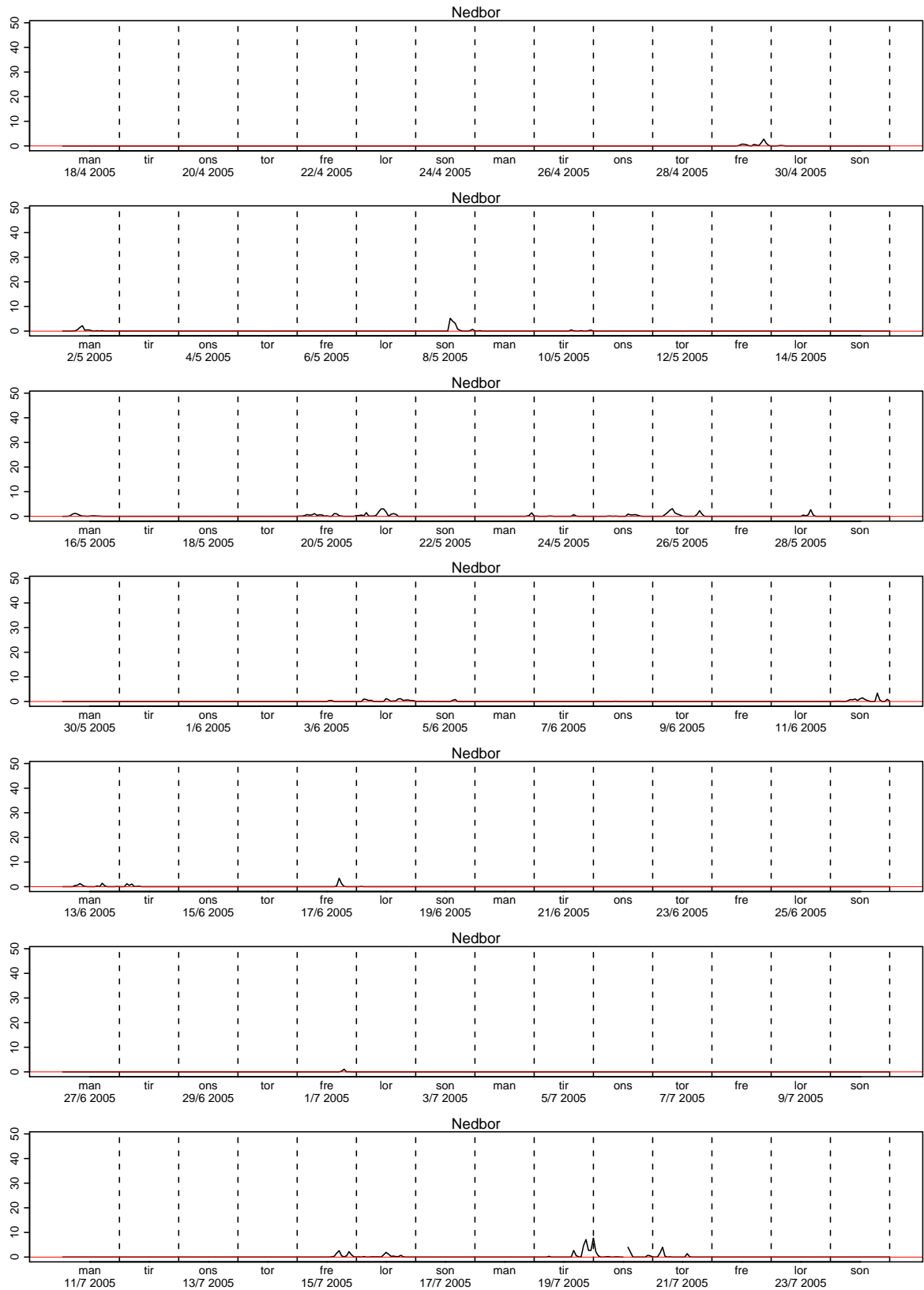


Figur 3.46. Nedbør

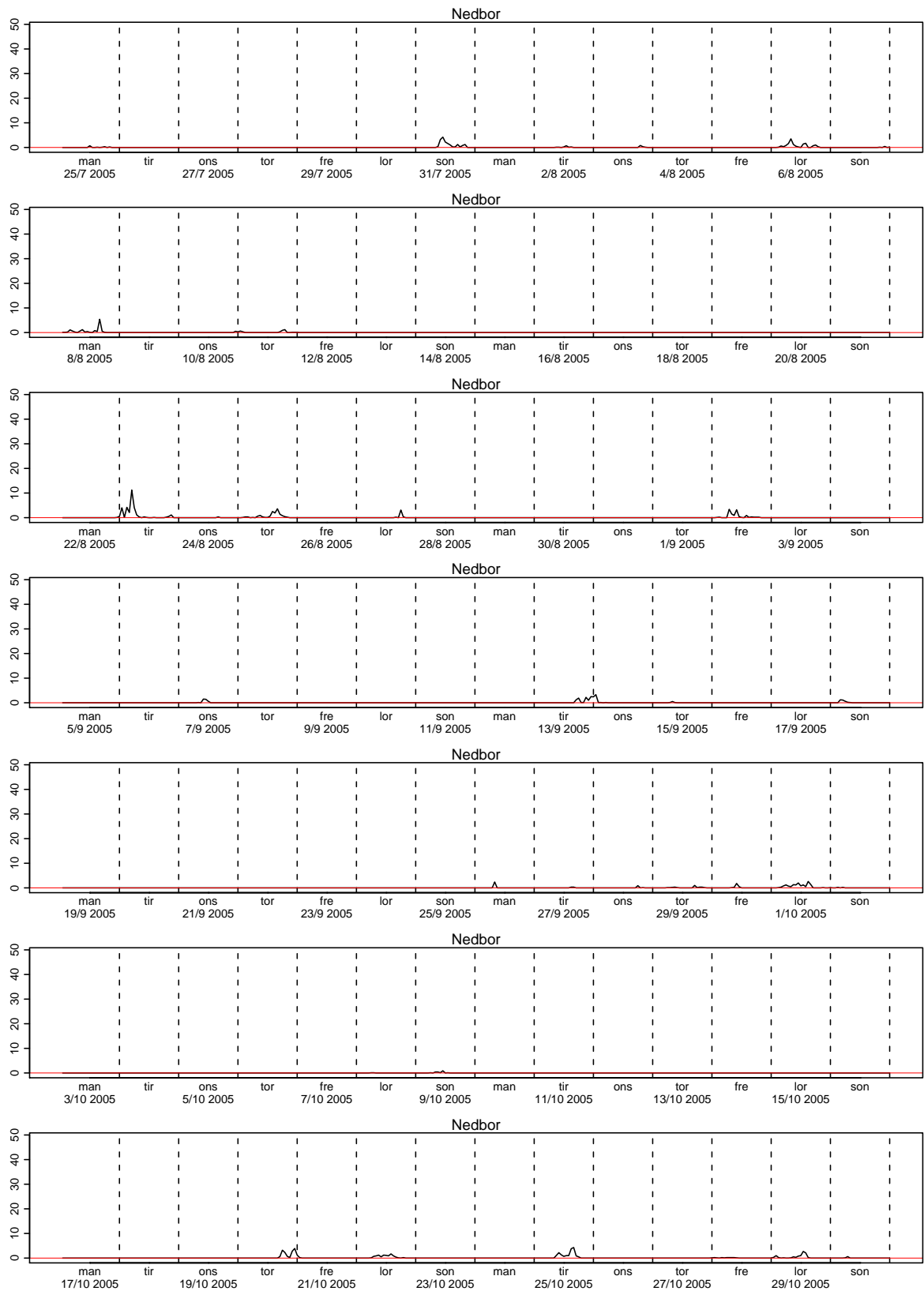


Figur 3.47. Nedbør

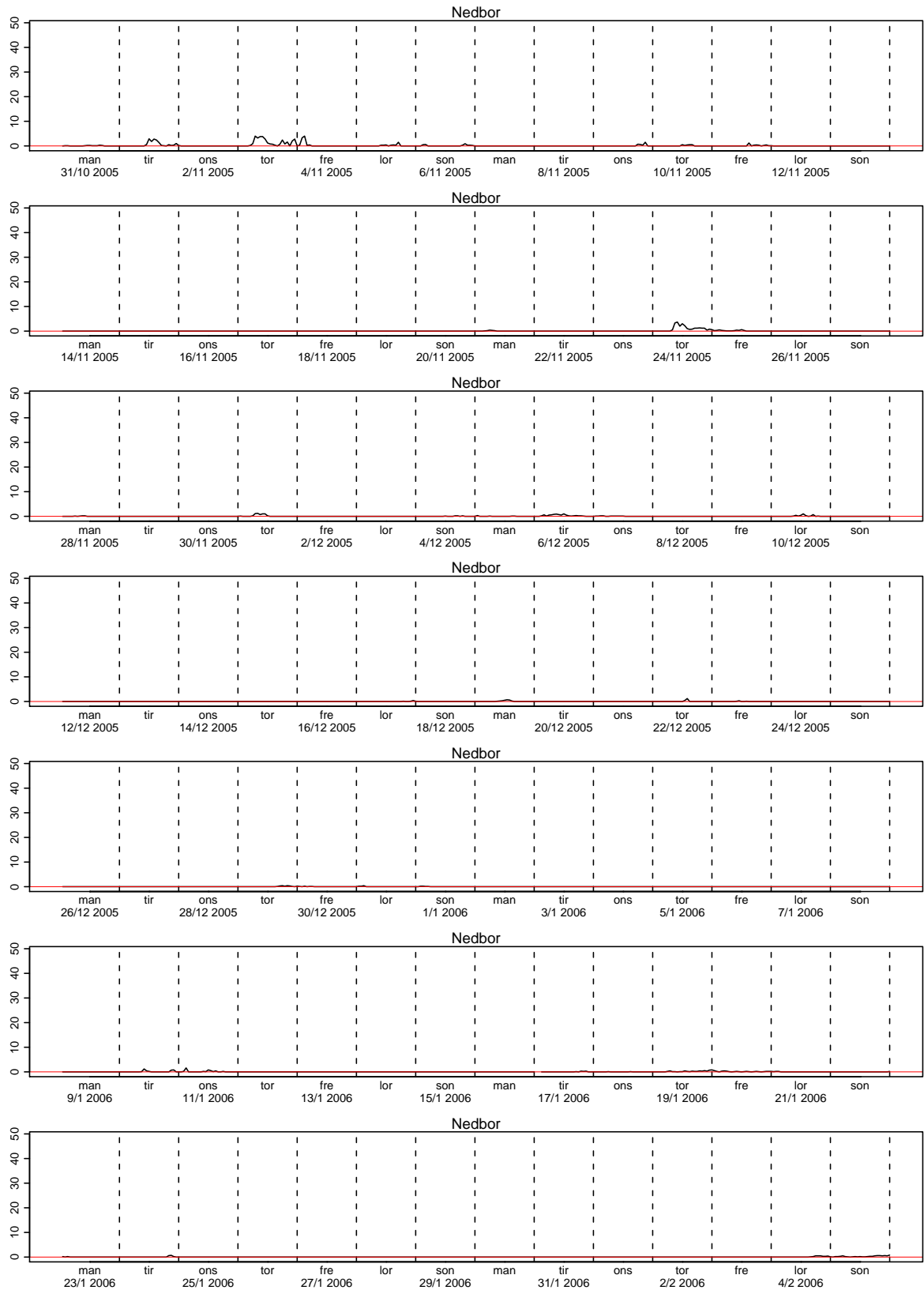




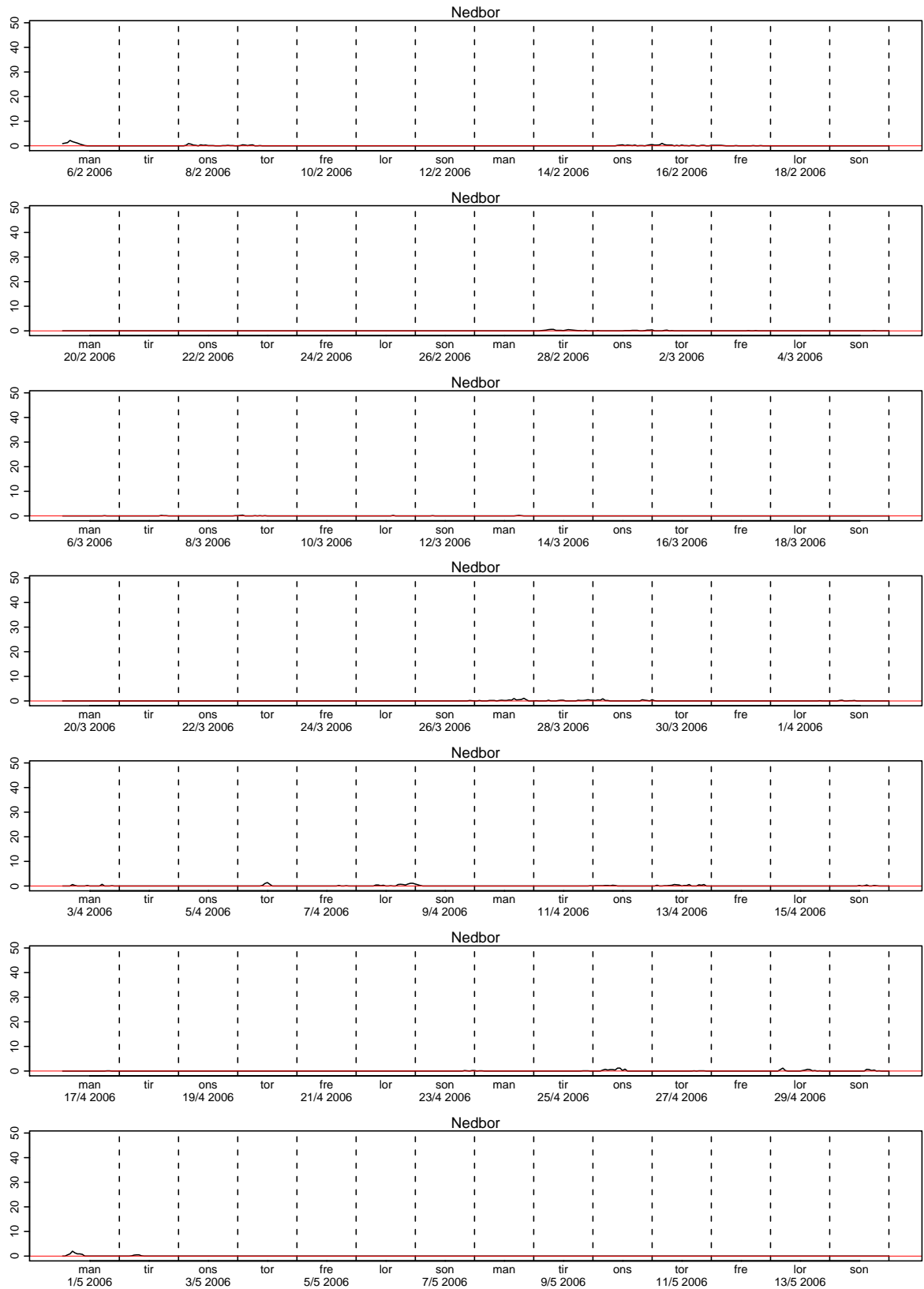
Figur 3.48. Nedbør



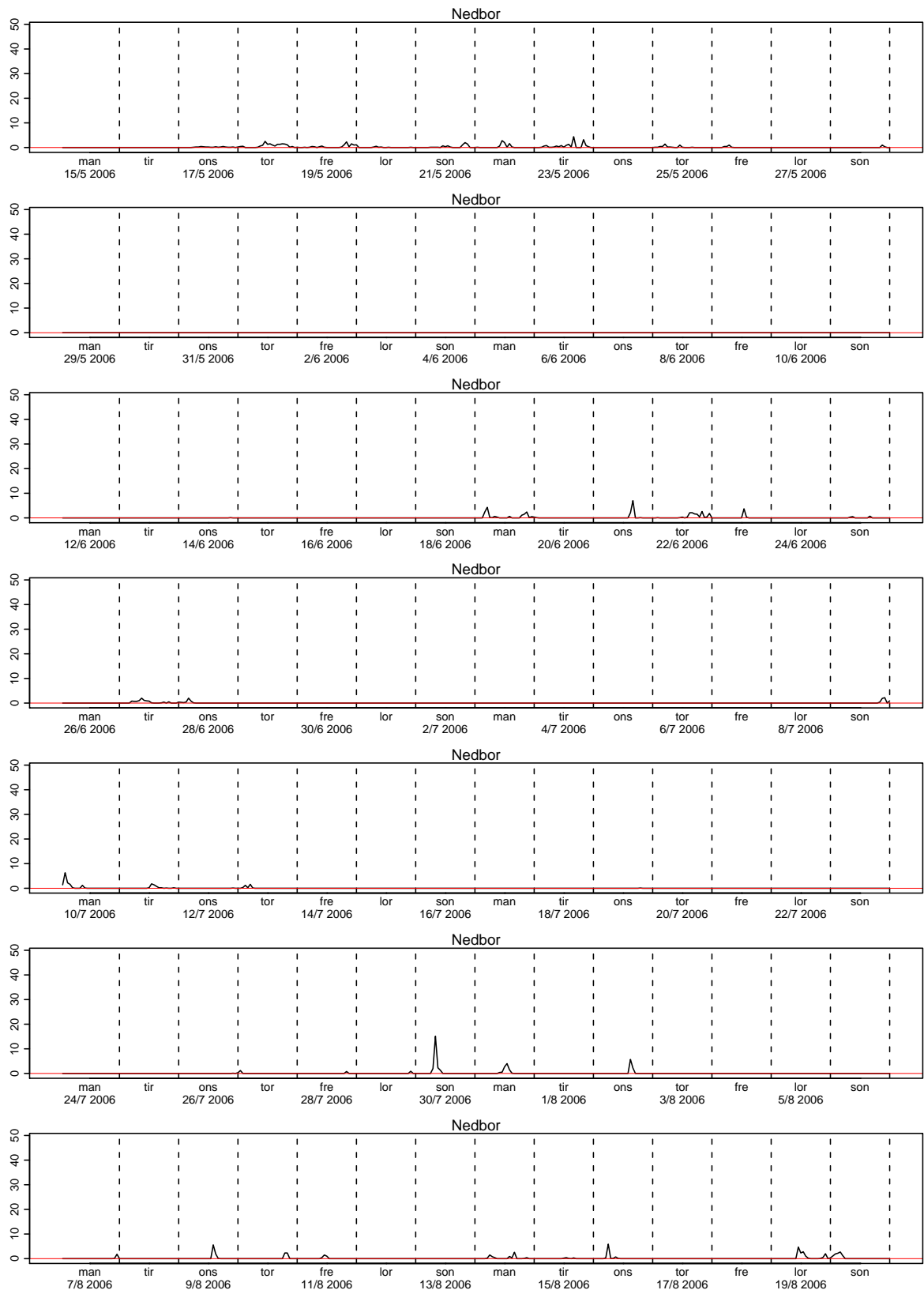
Figur 3.49. Nedbør



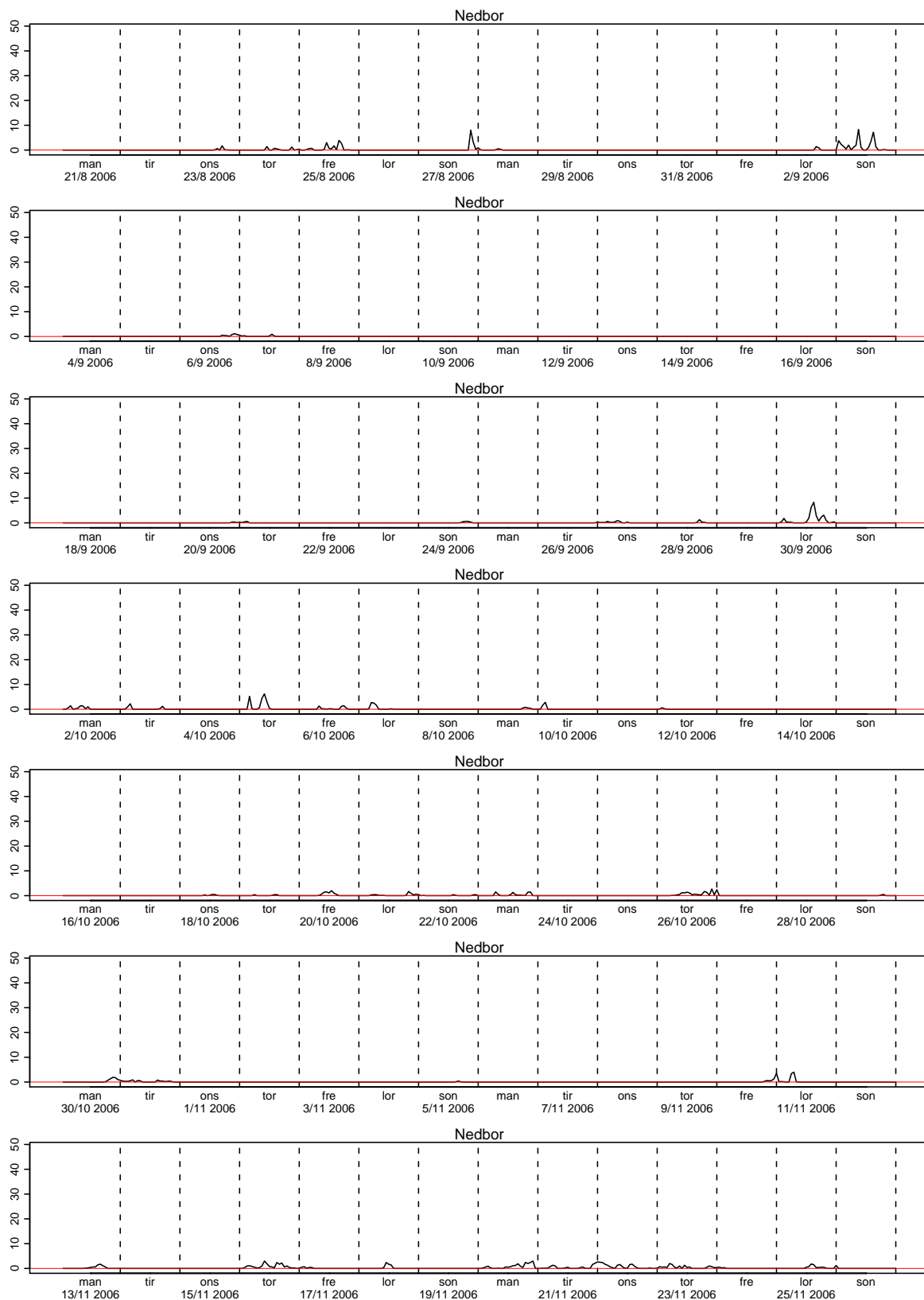
Figur 3.50. Nedbør



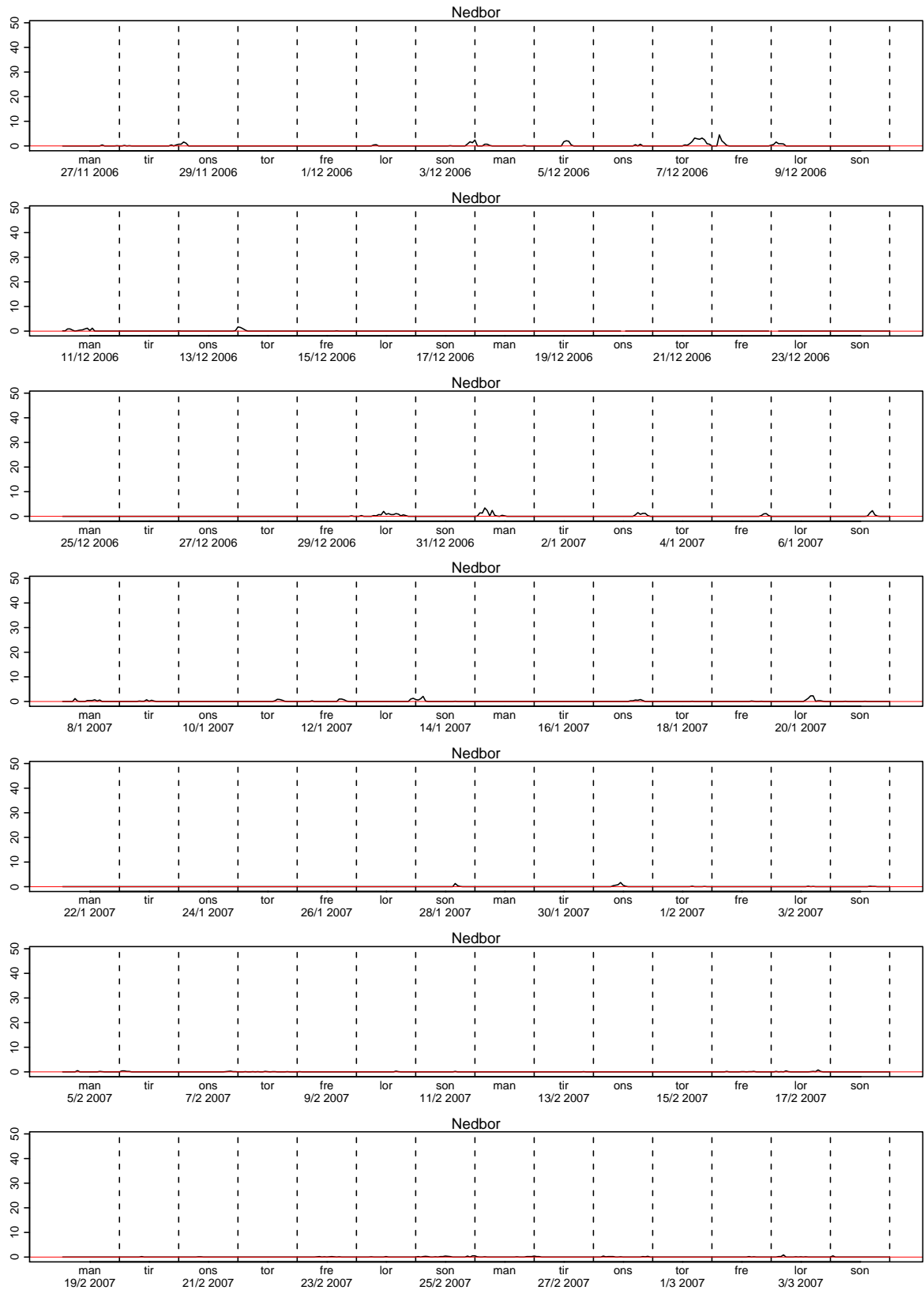
Figur 3.51. Nedbør



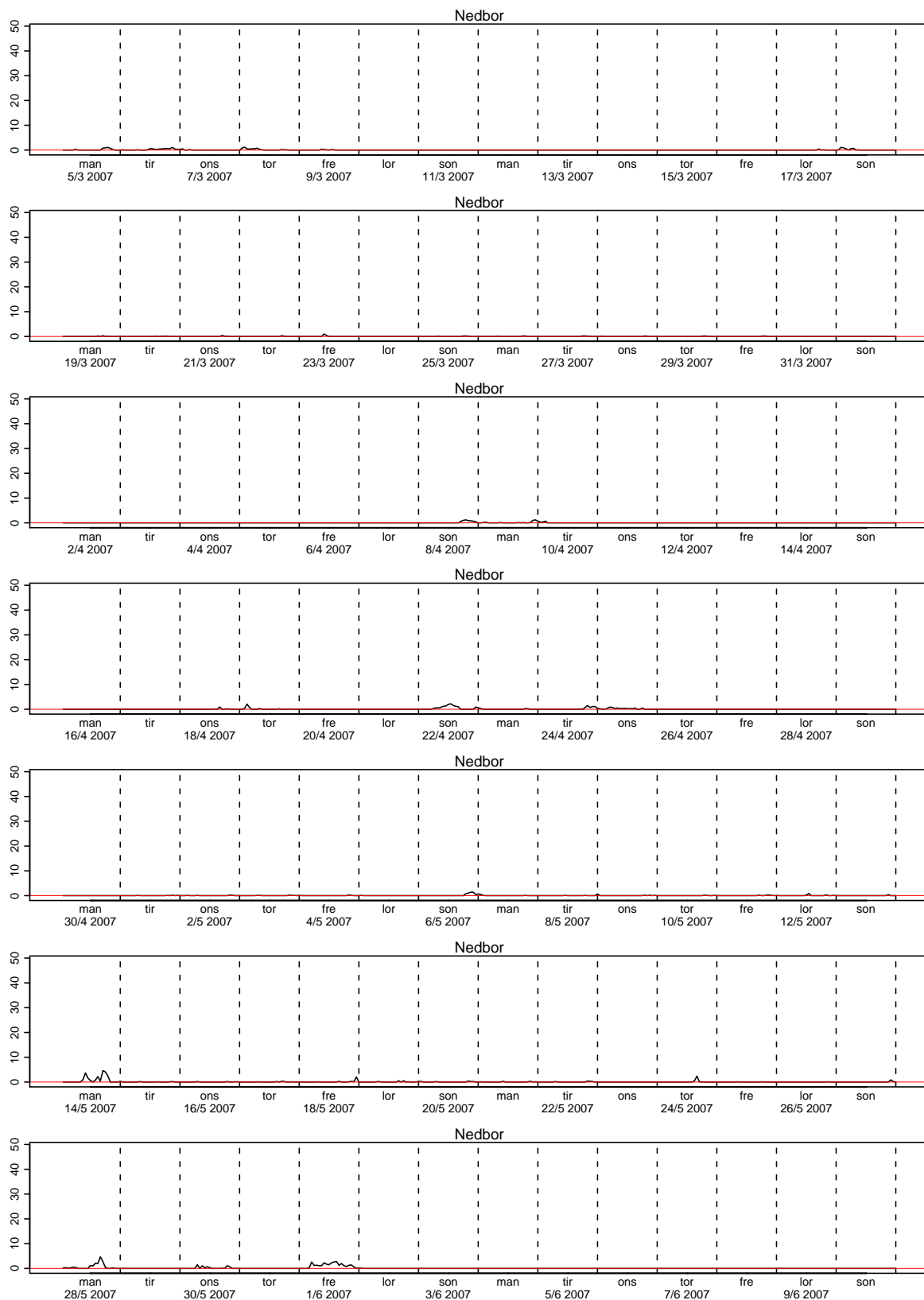
Figur 3.52. Nedbør



Figur 3.53. Nedbør

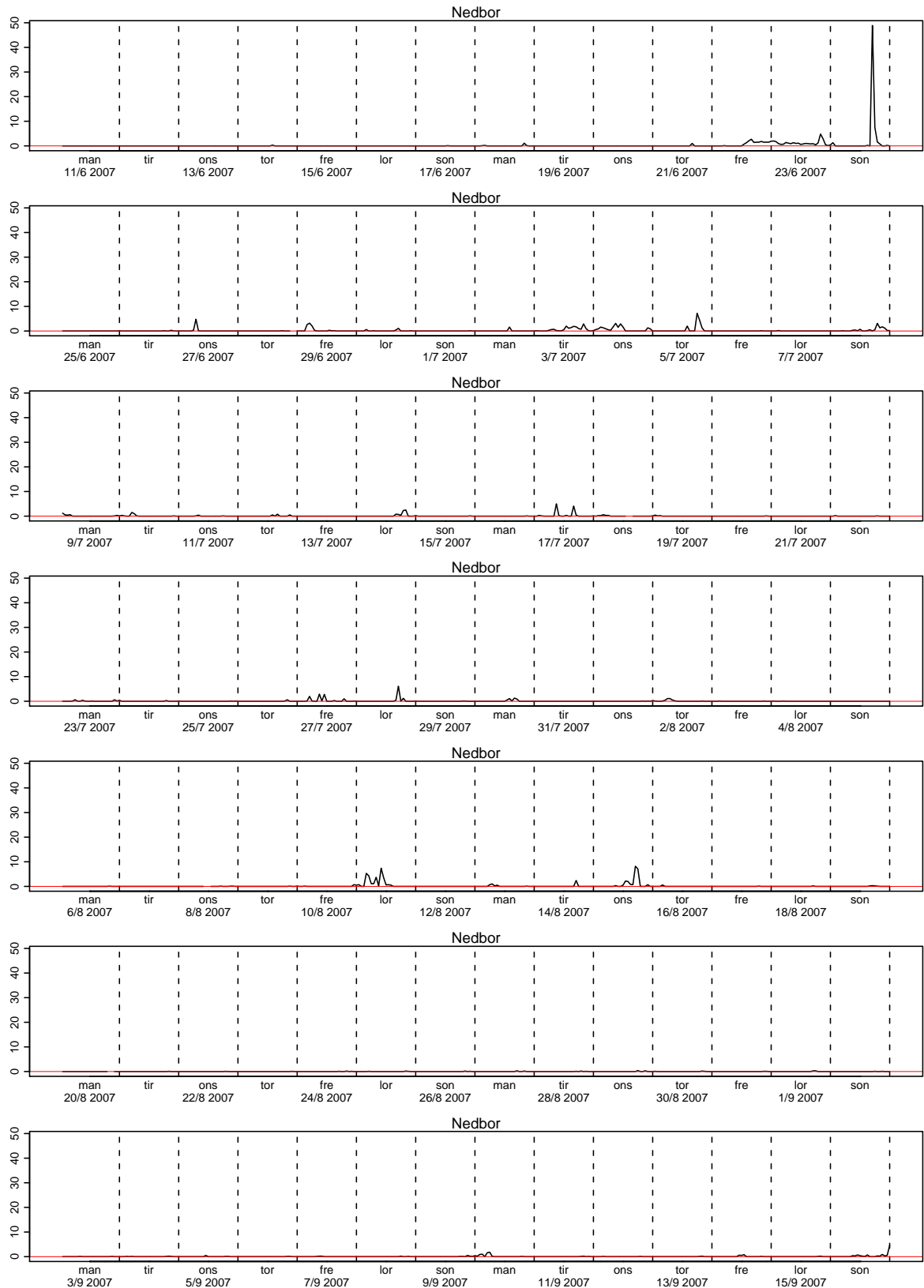


Figur 3.54. Nedbør

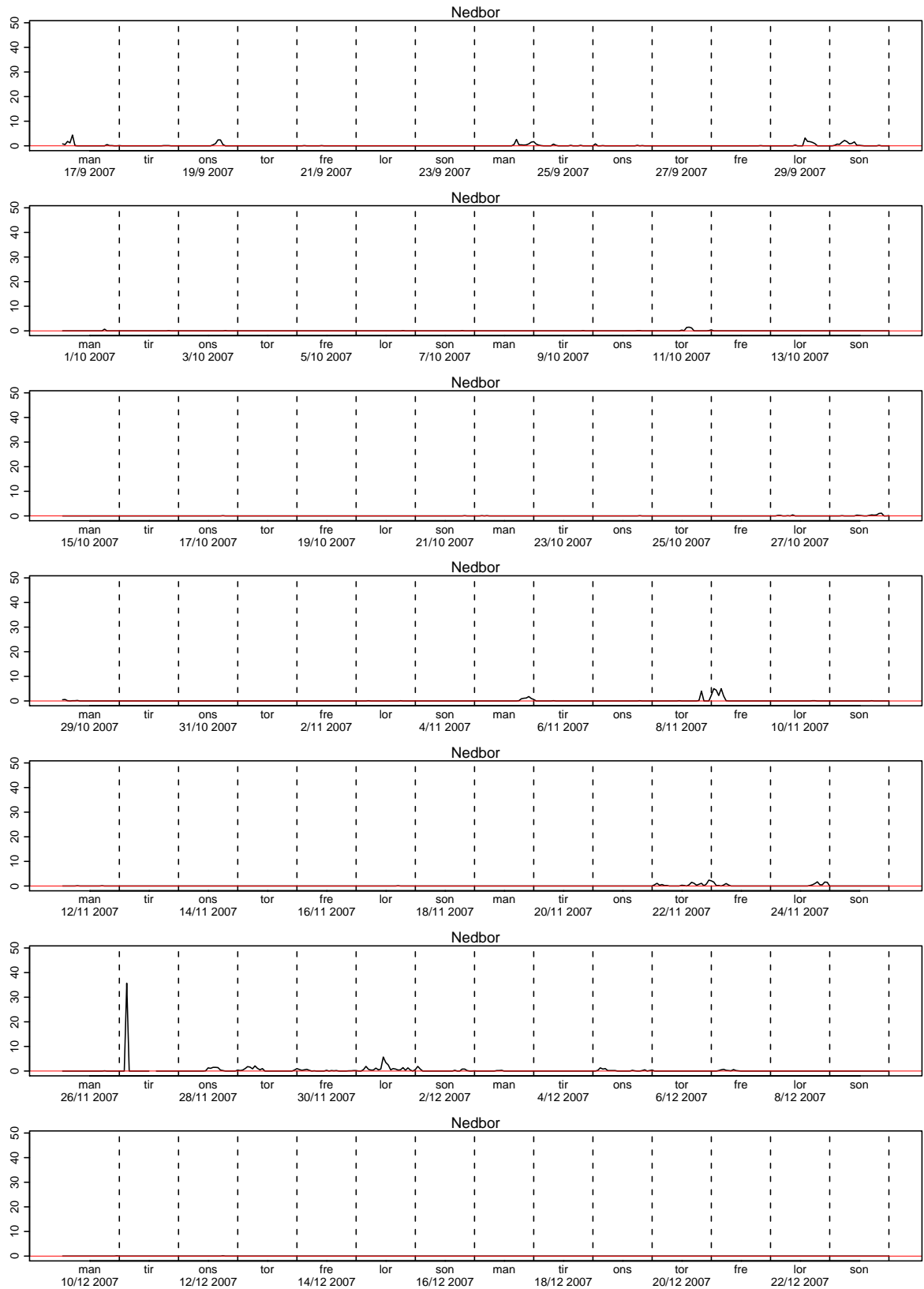


Figur 3.55. Nedbør

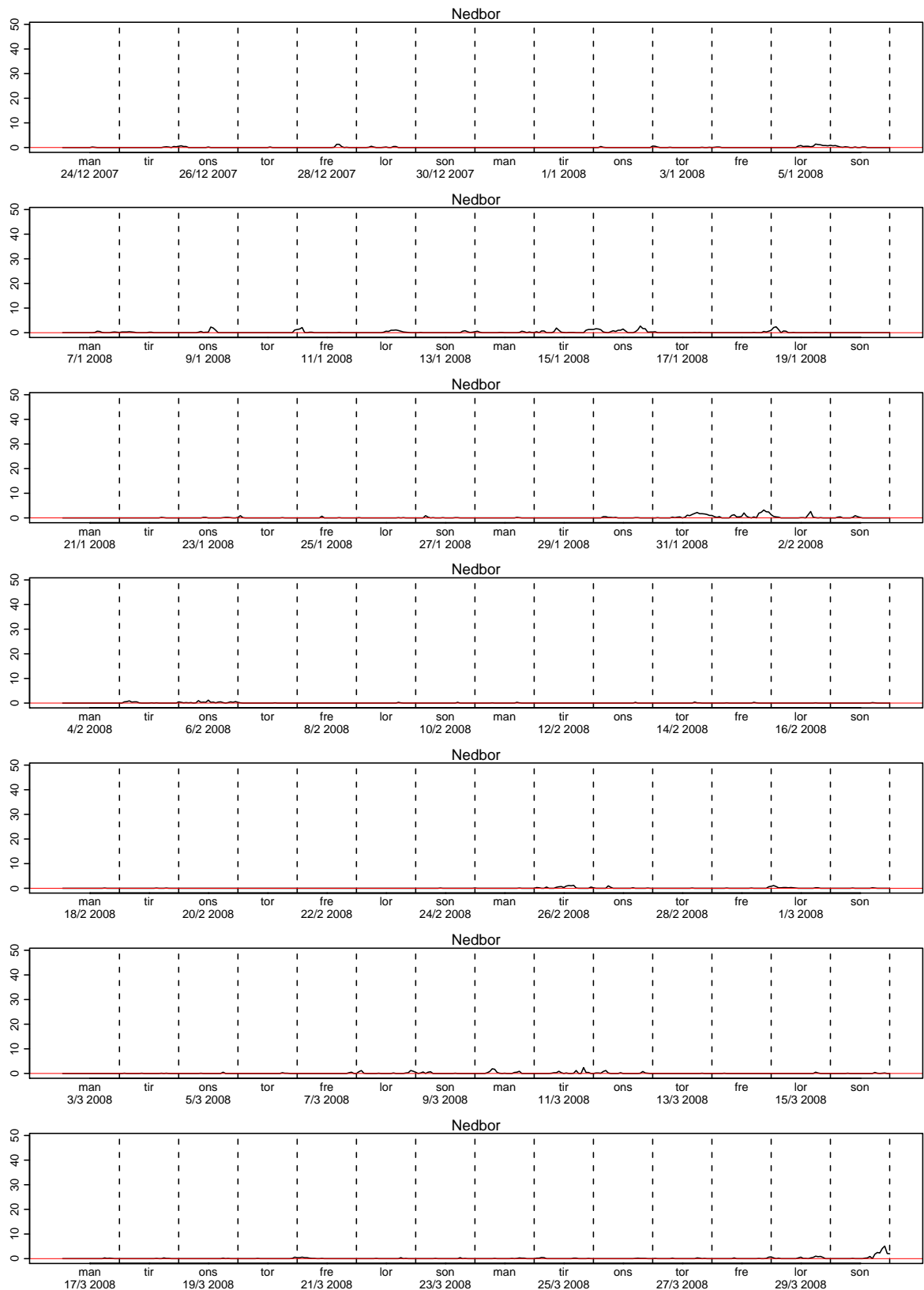




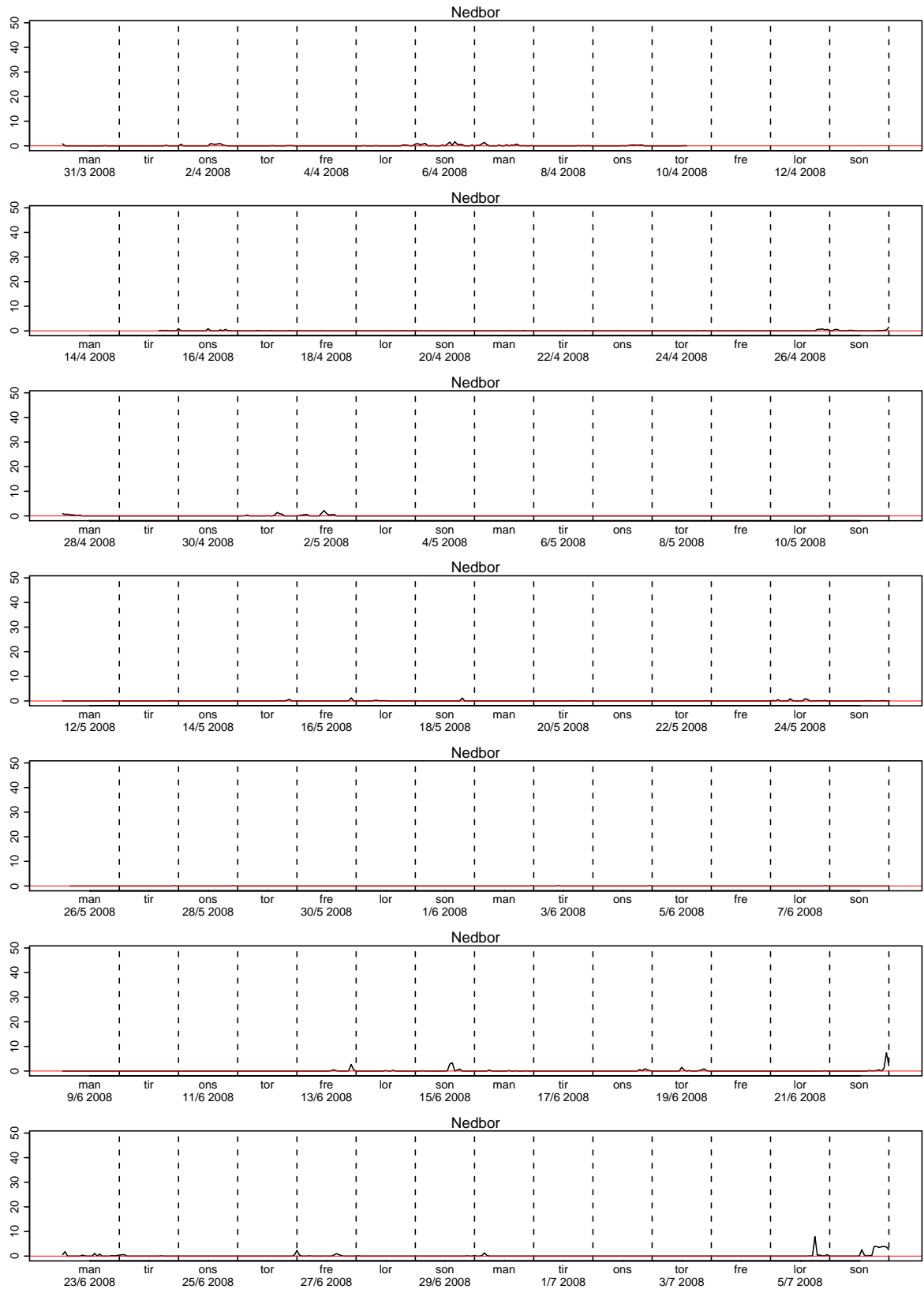
Figur 3.56. Nedbør



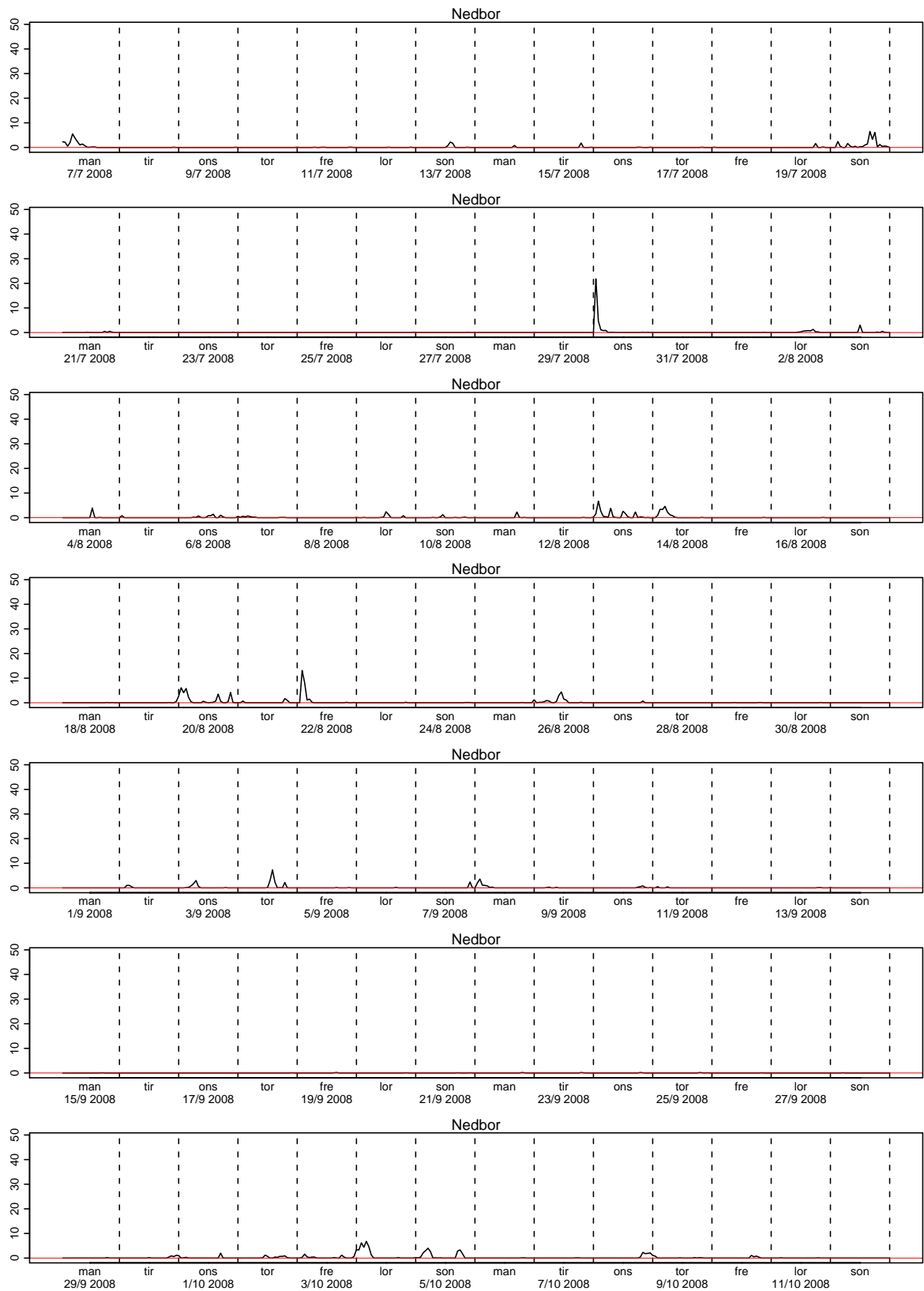
Figur 3.57. Nedbør



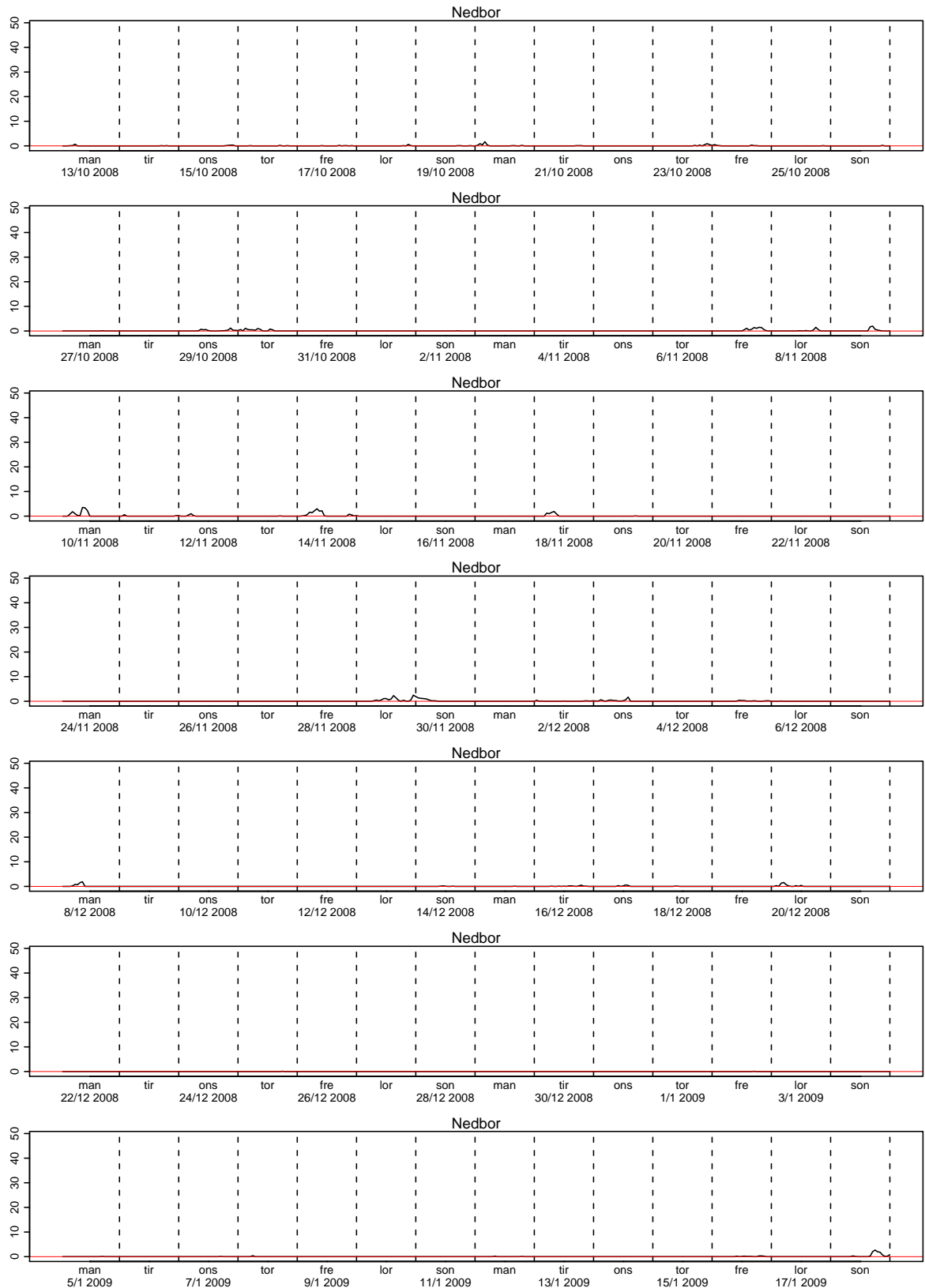
Figur 3.58. Nedbør



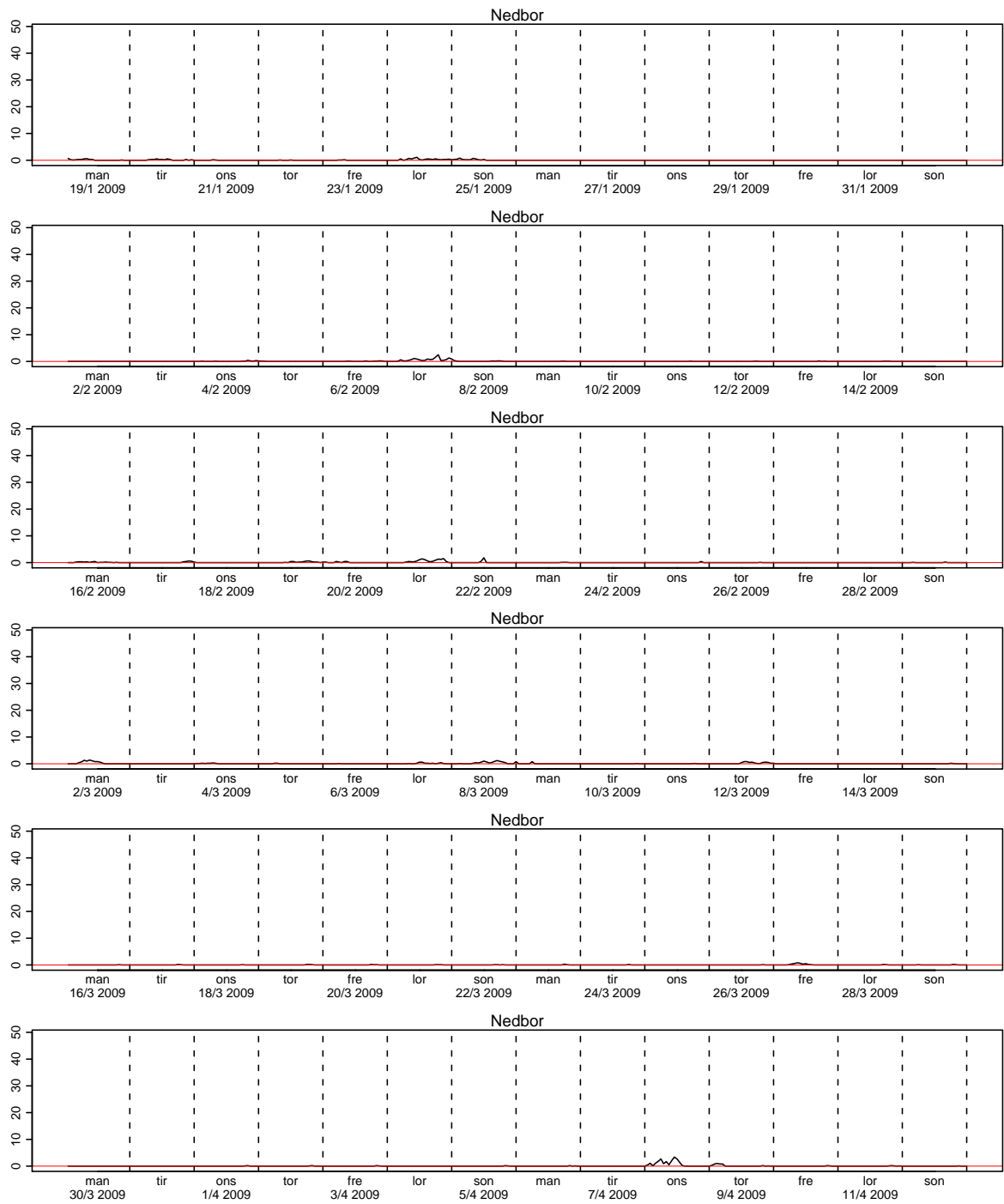
Figur 3.59. Nedbør



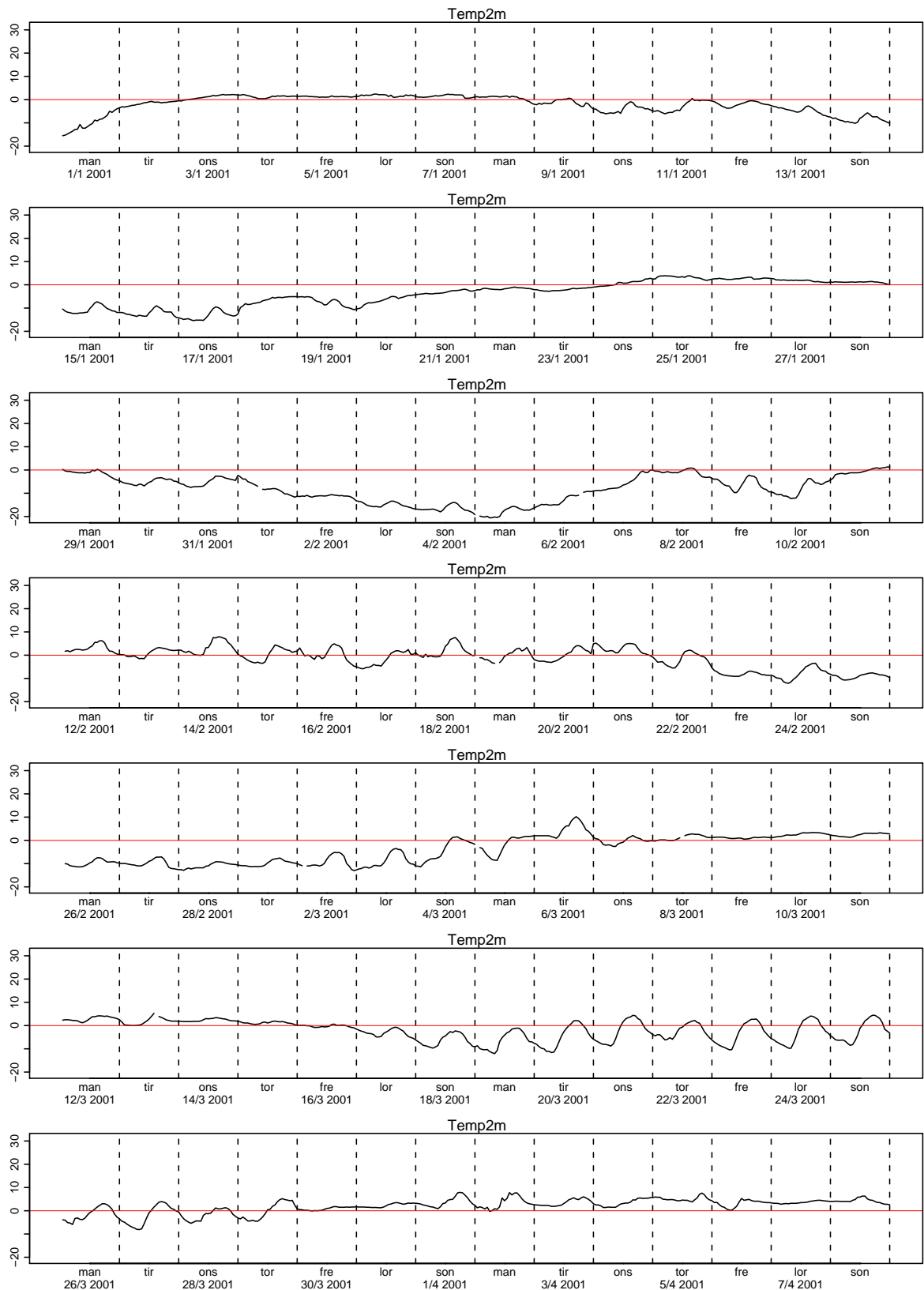
Figur 3.60. Nedbør



Figur 3.61. Nedbør

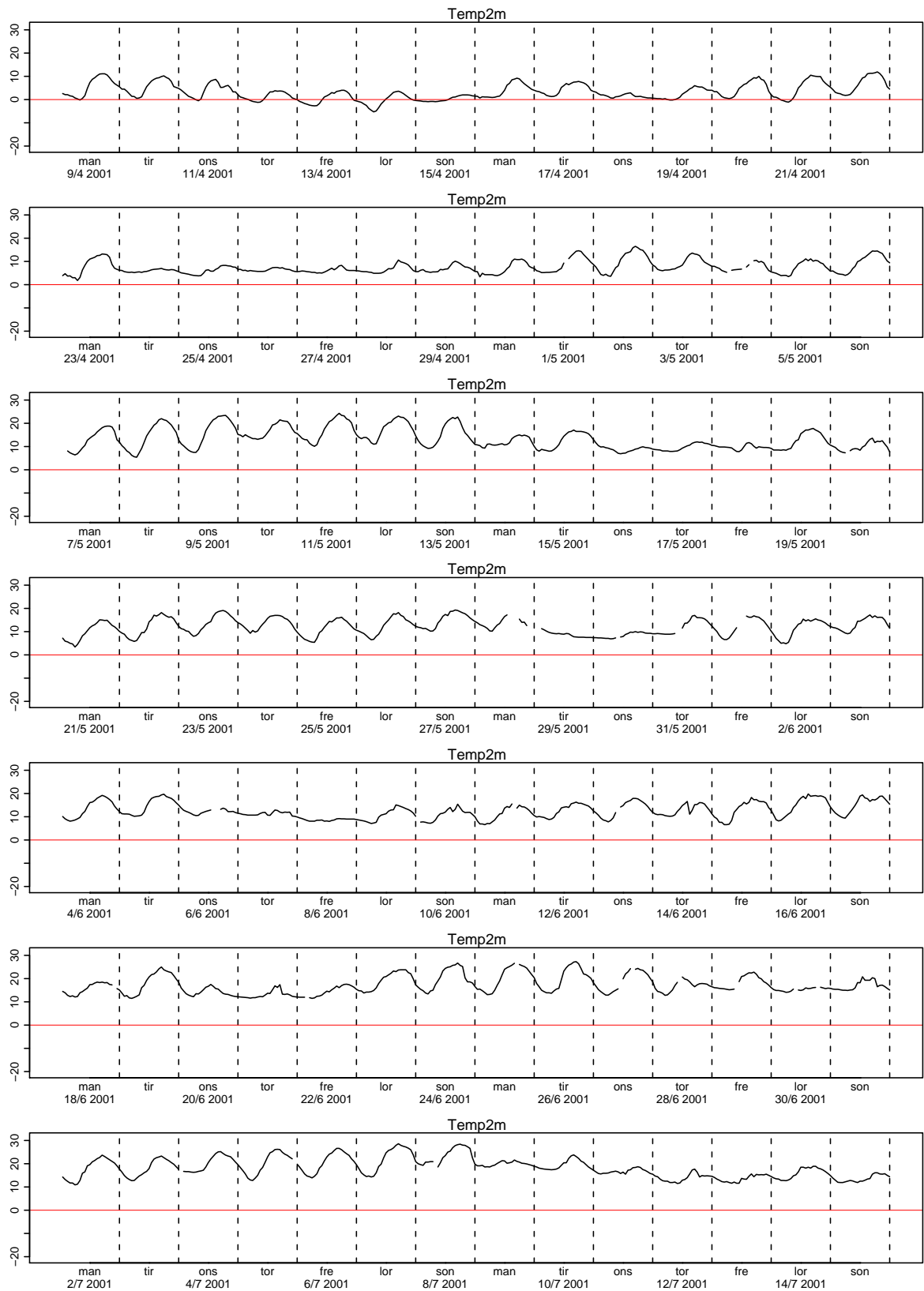


Figur 3.62. Nedbør

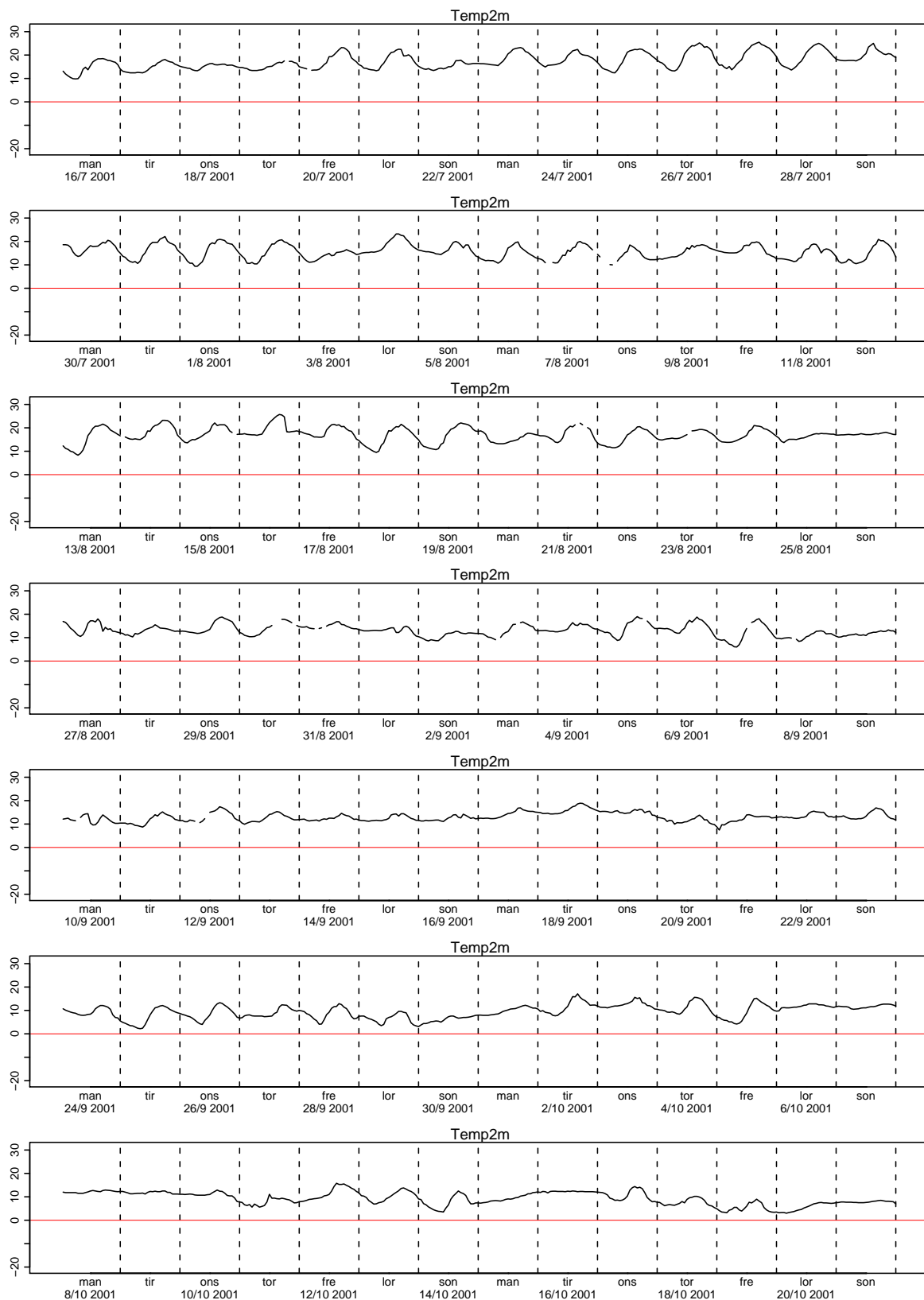


Figur 3.63. Temperatur 2 meter

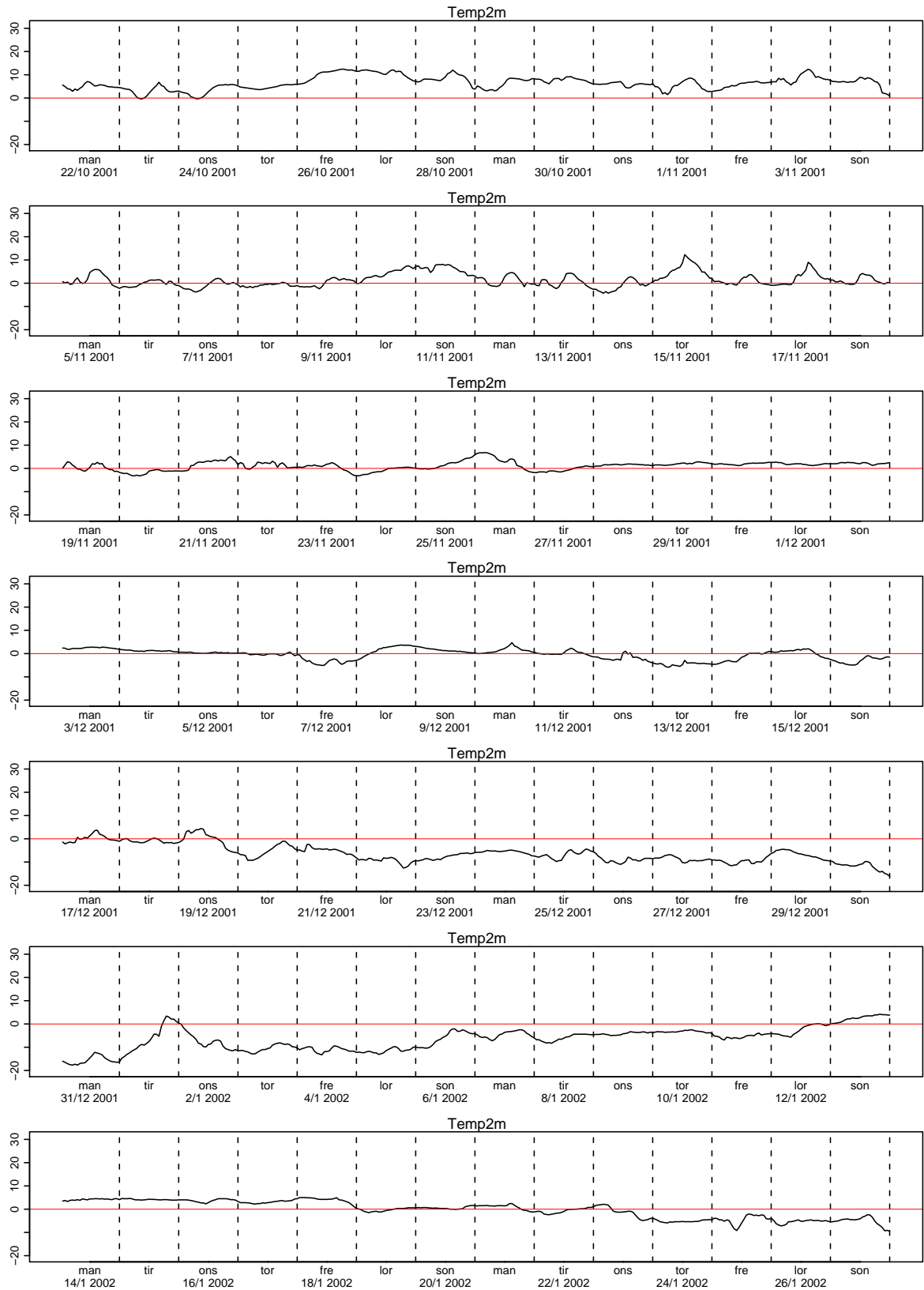




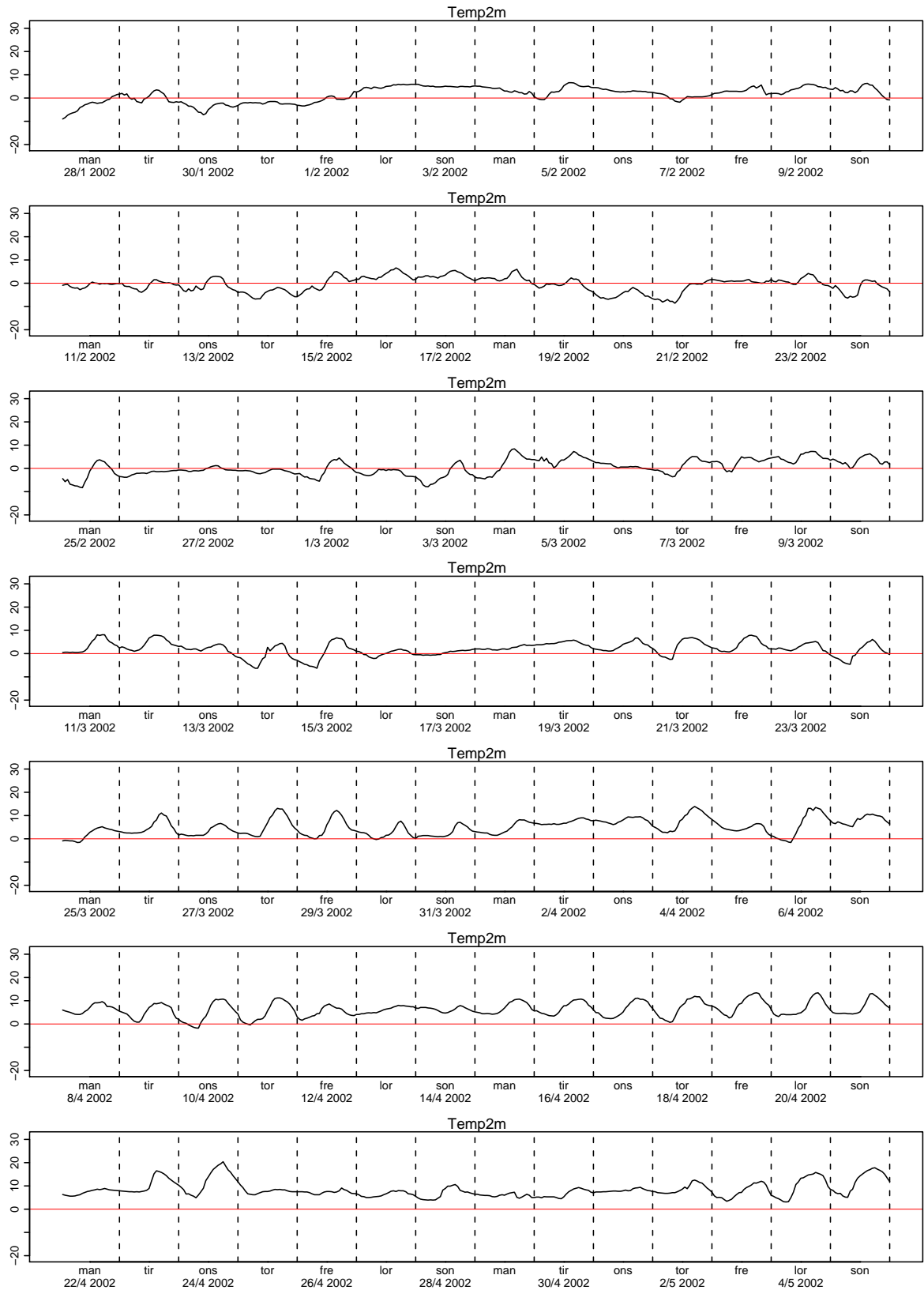
Figur 3.64. Temperatur 2 meter



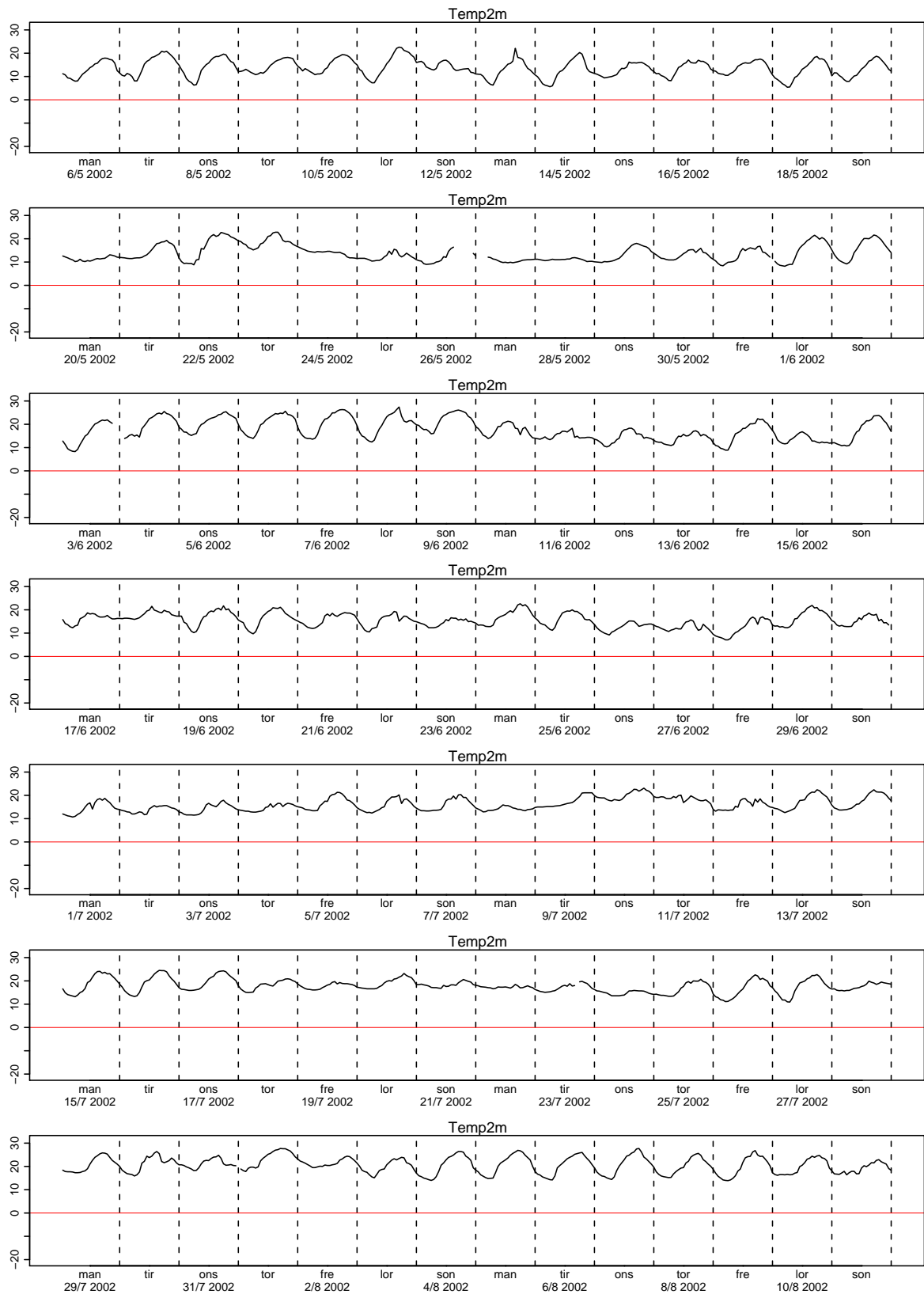
Figur 3.65. Temperatur 2 meter



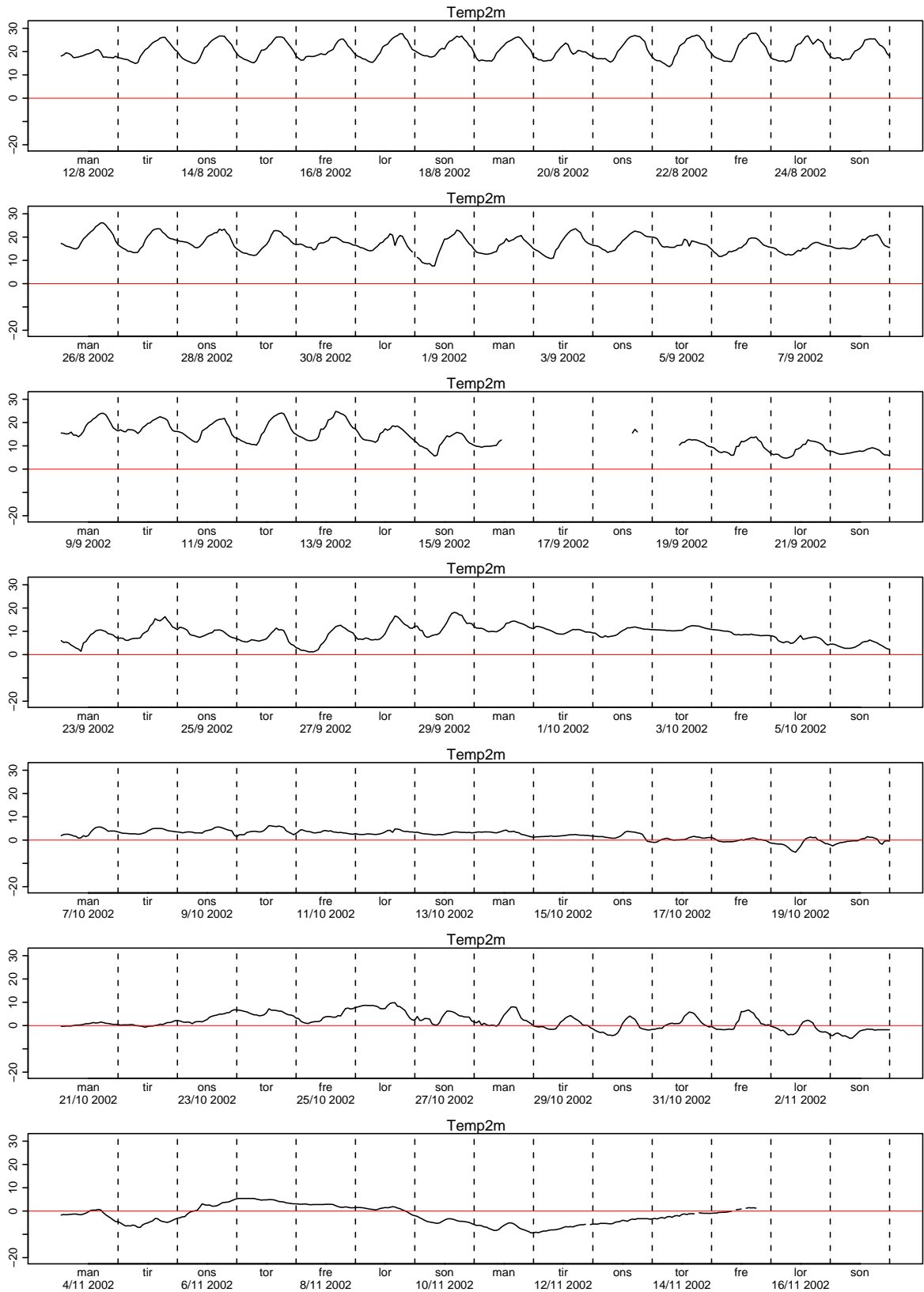
Figur 3.66. Temperatur 2 meter



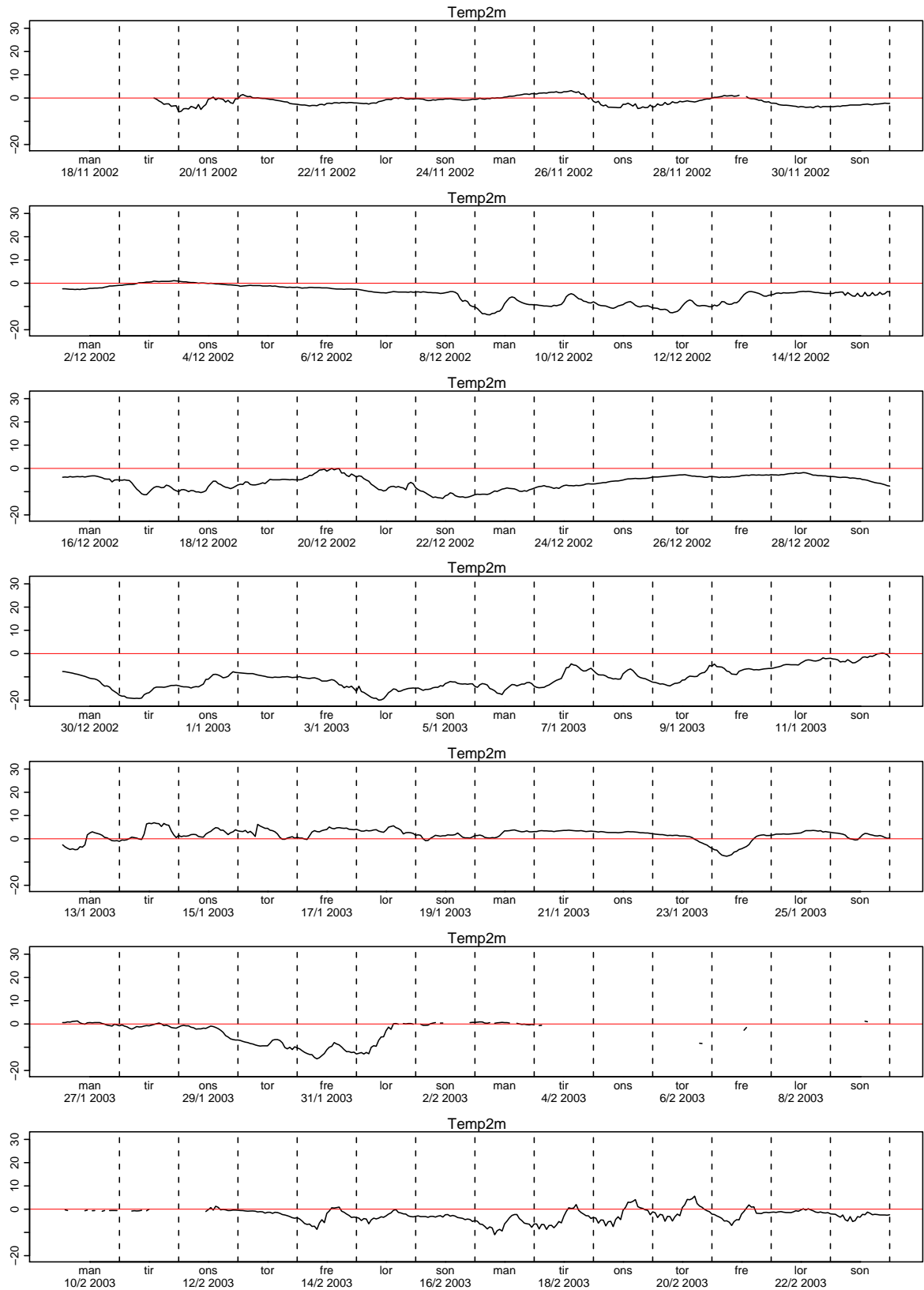
Figur 3.67. Temperatur 2 meter



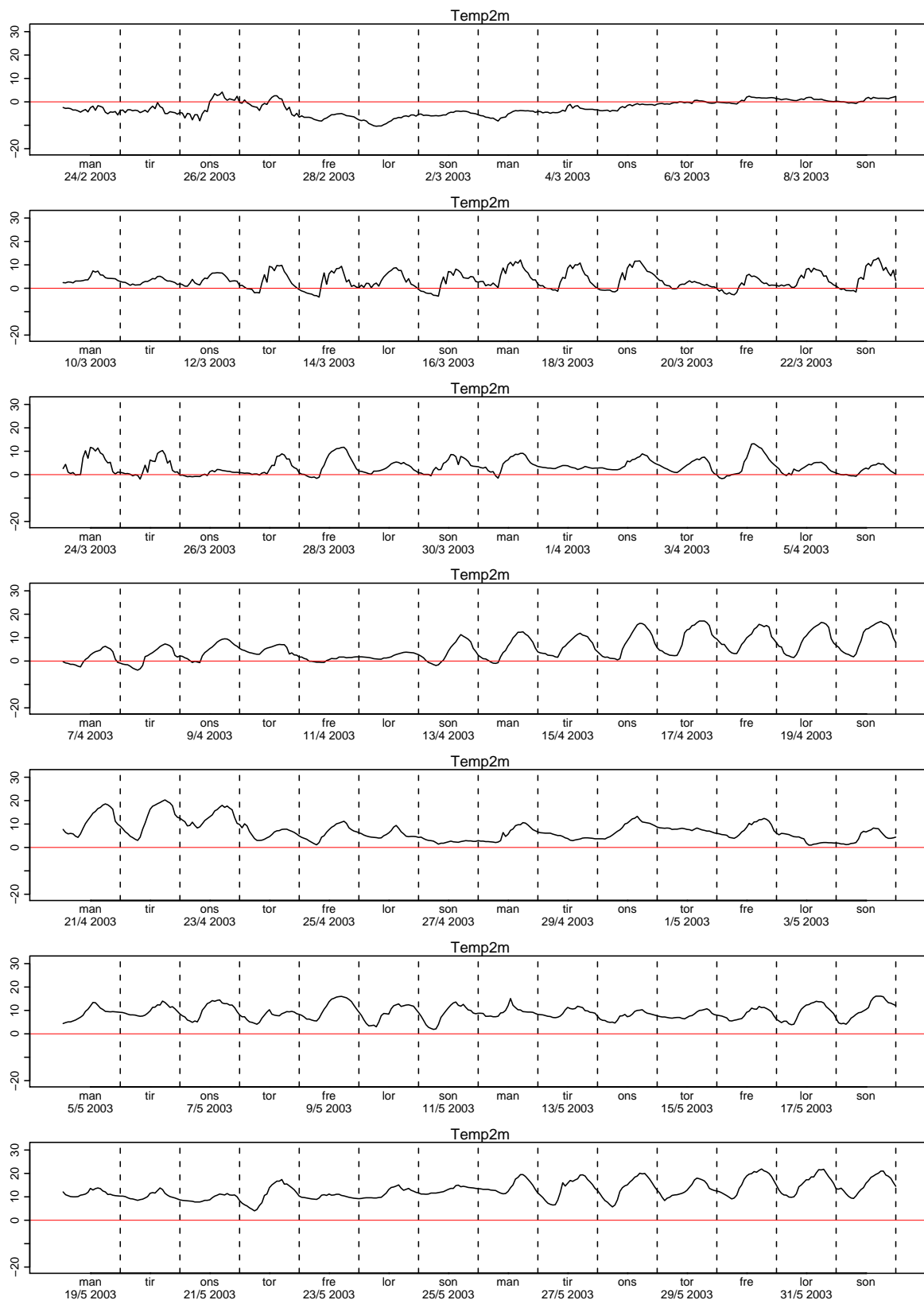
Figur 3.68. Temperatur 2 meter



Figur 3.69. Temperatur 2 meter

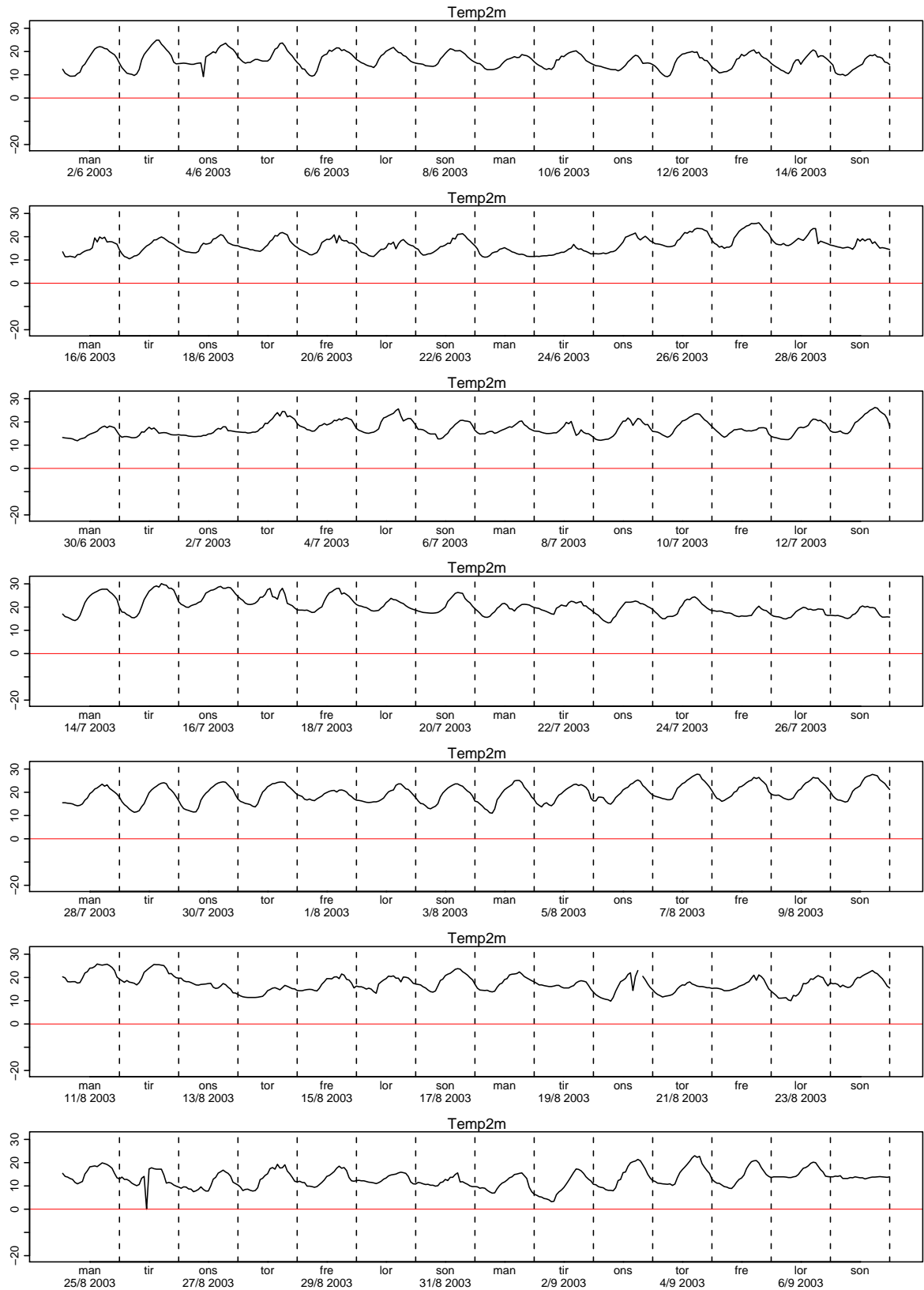


Figur 3.70. Temperatur 2 meter

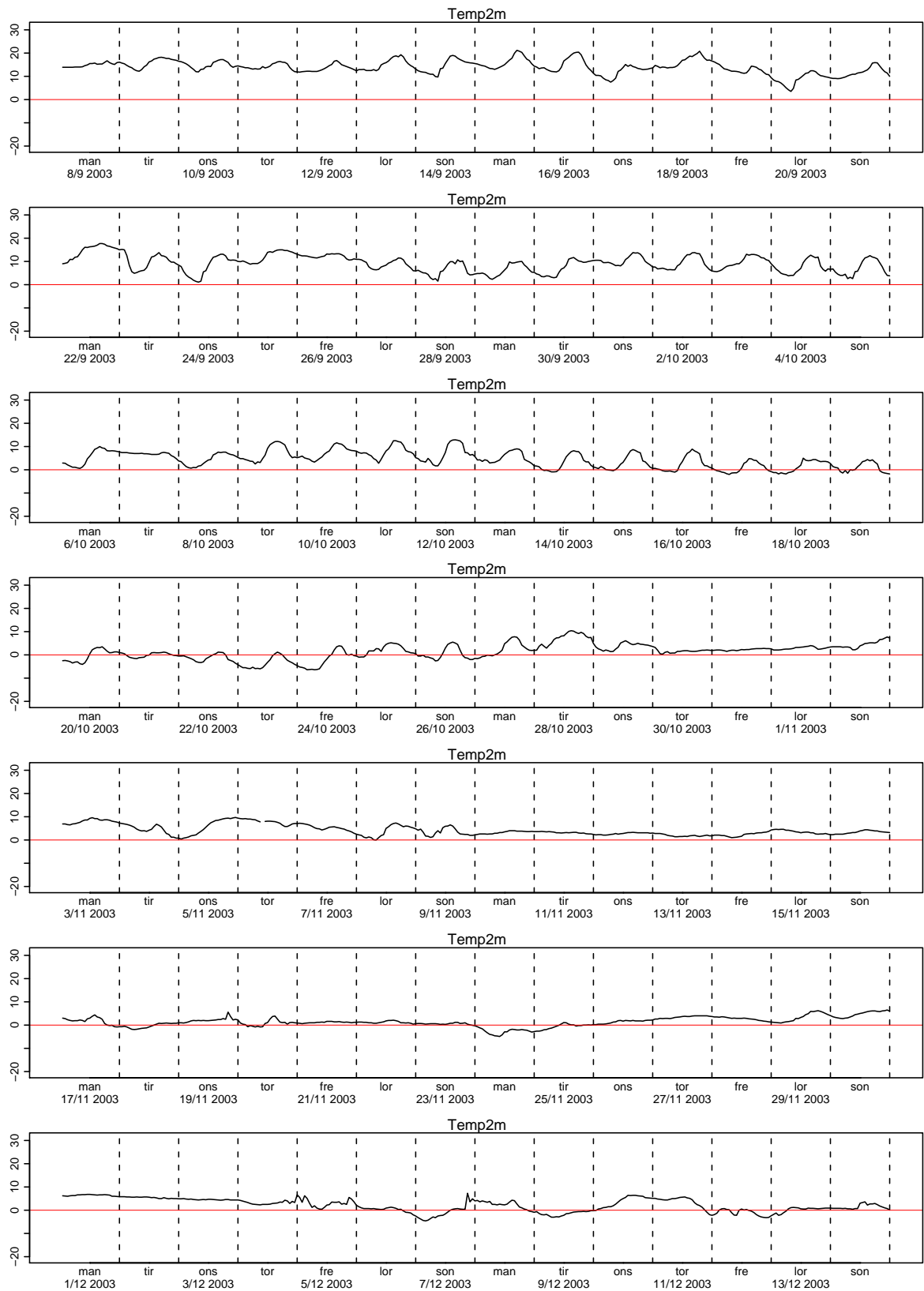


Figur 3.71. Temperatur 2 meter

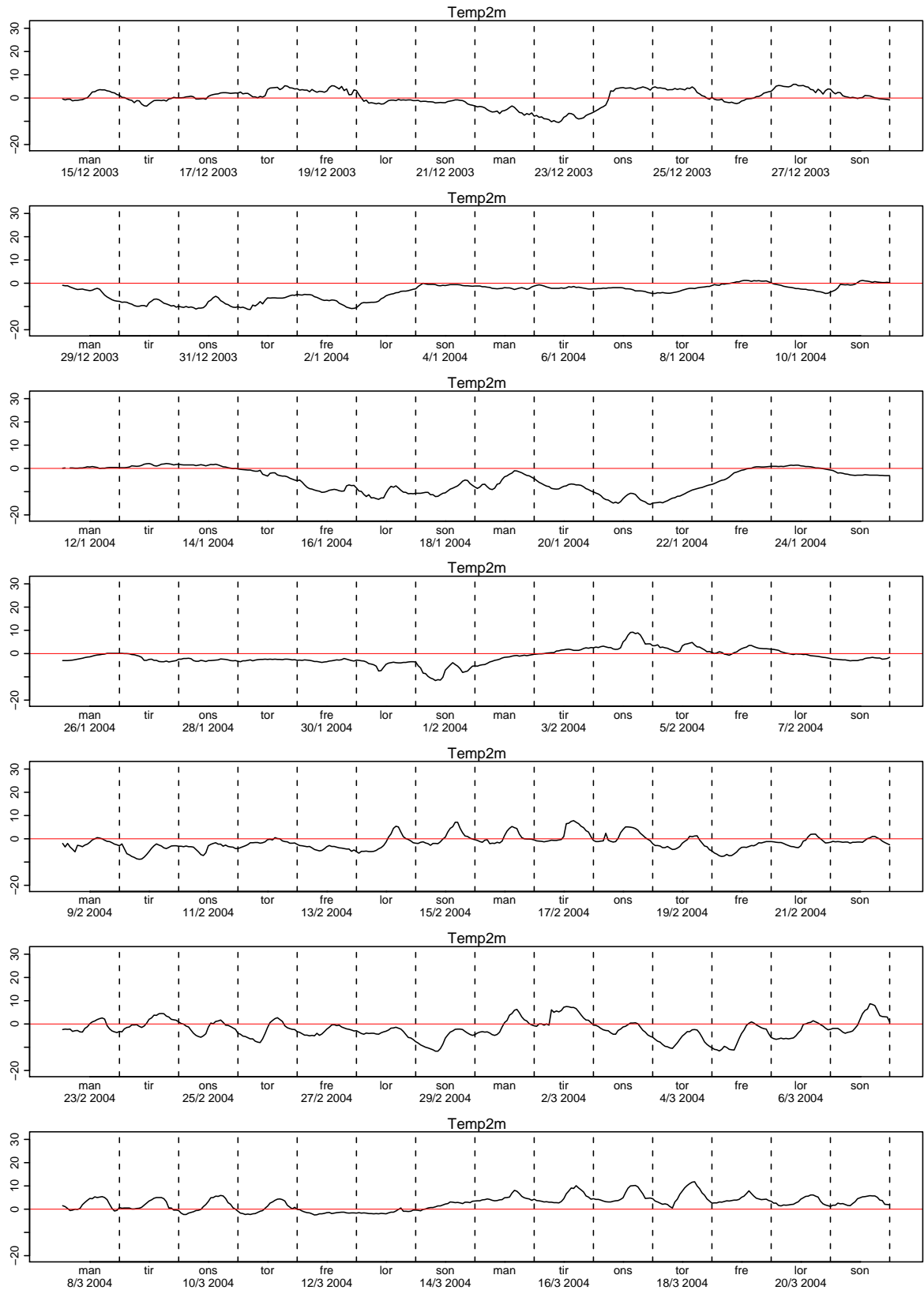




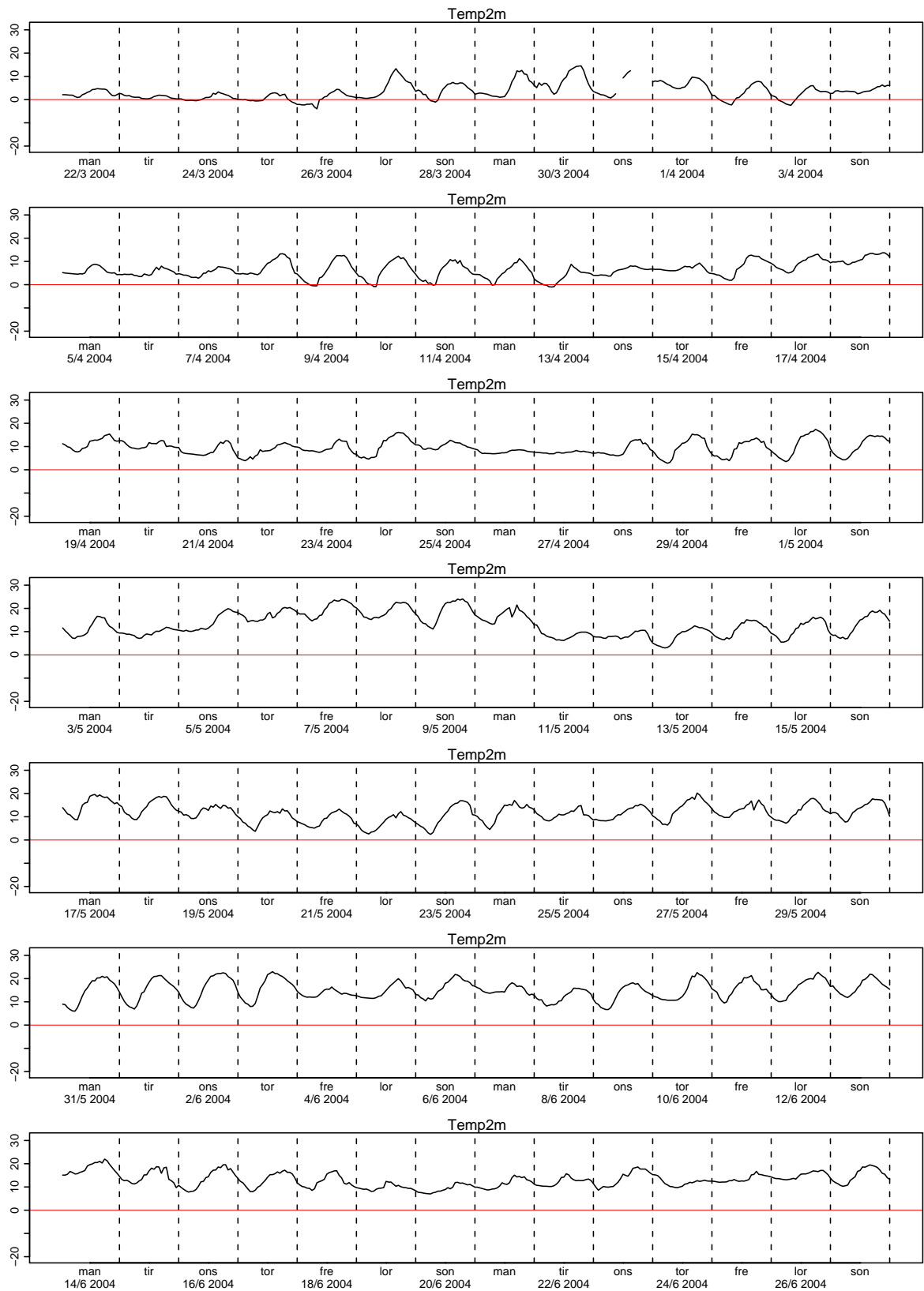
Figur 3.72. Temperatur 2 meter



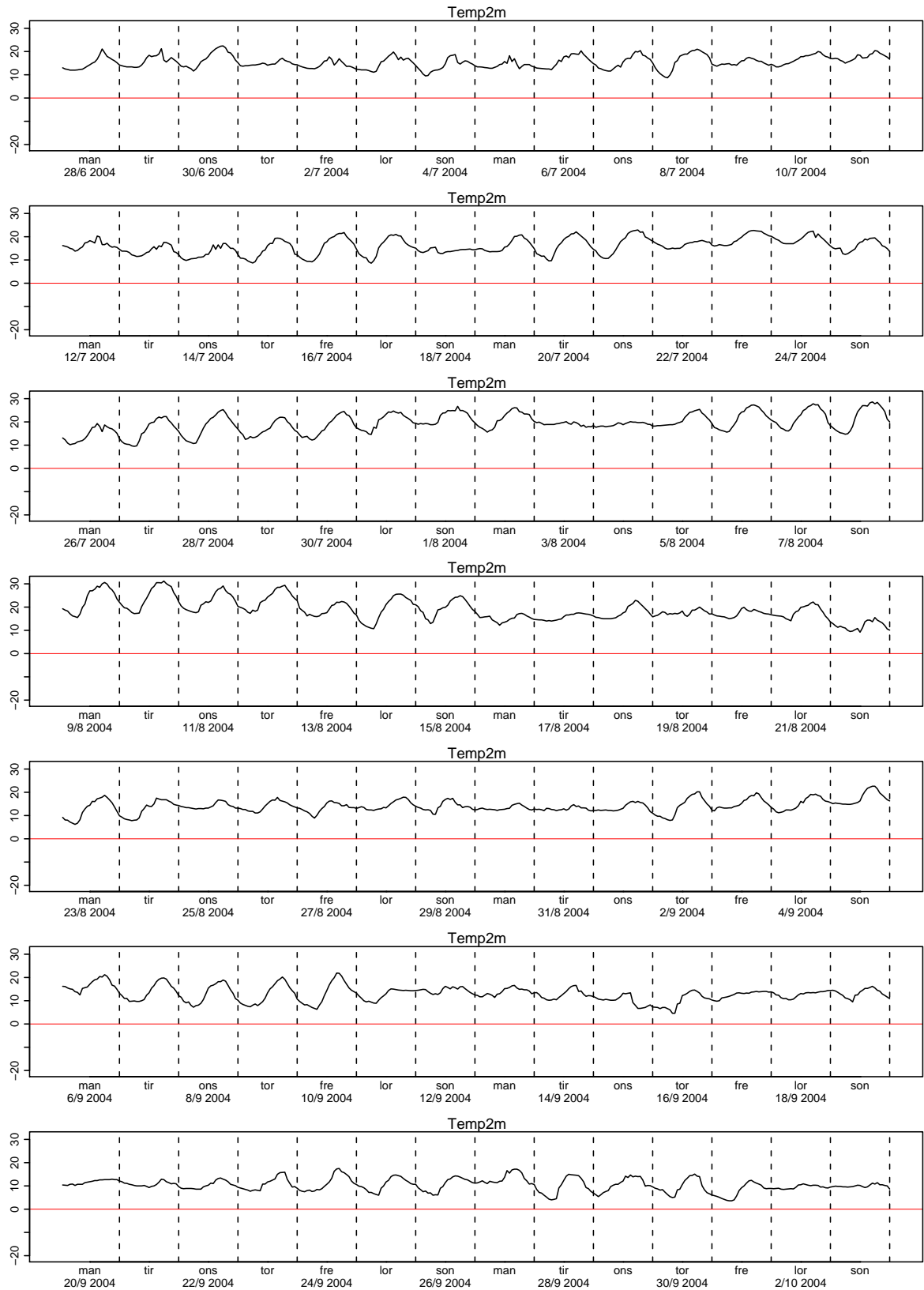
Figur 3.73. Temperatur 2 meter



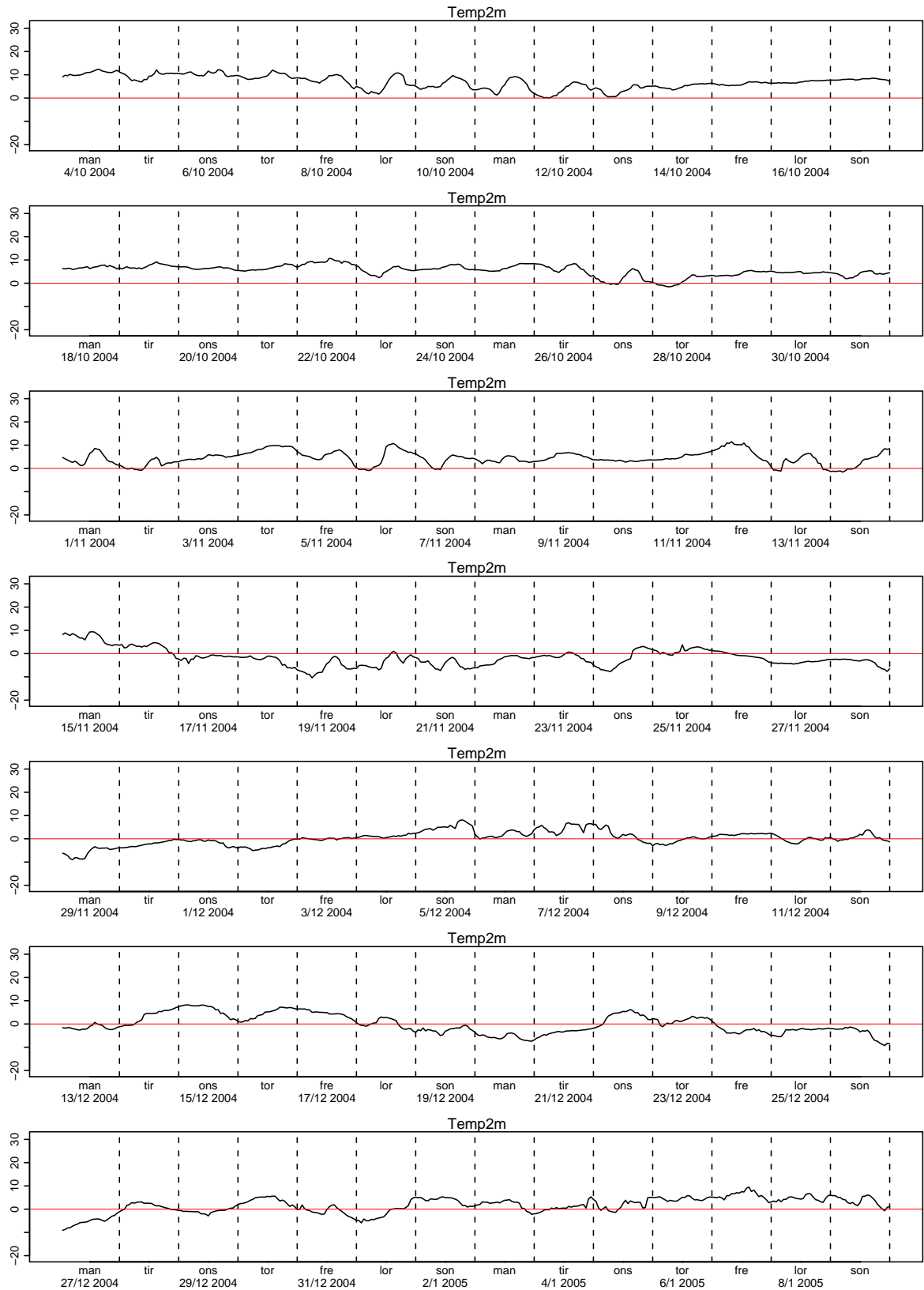
Figur 3.74. Temperatur 2 meter



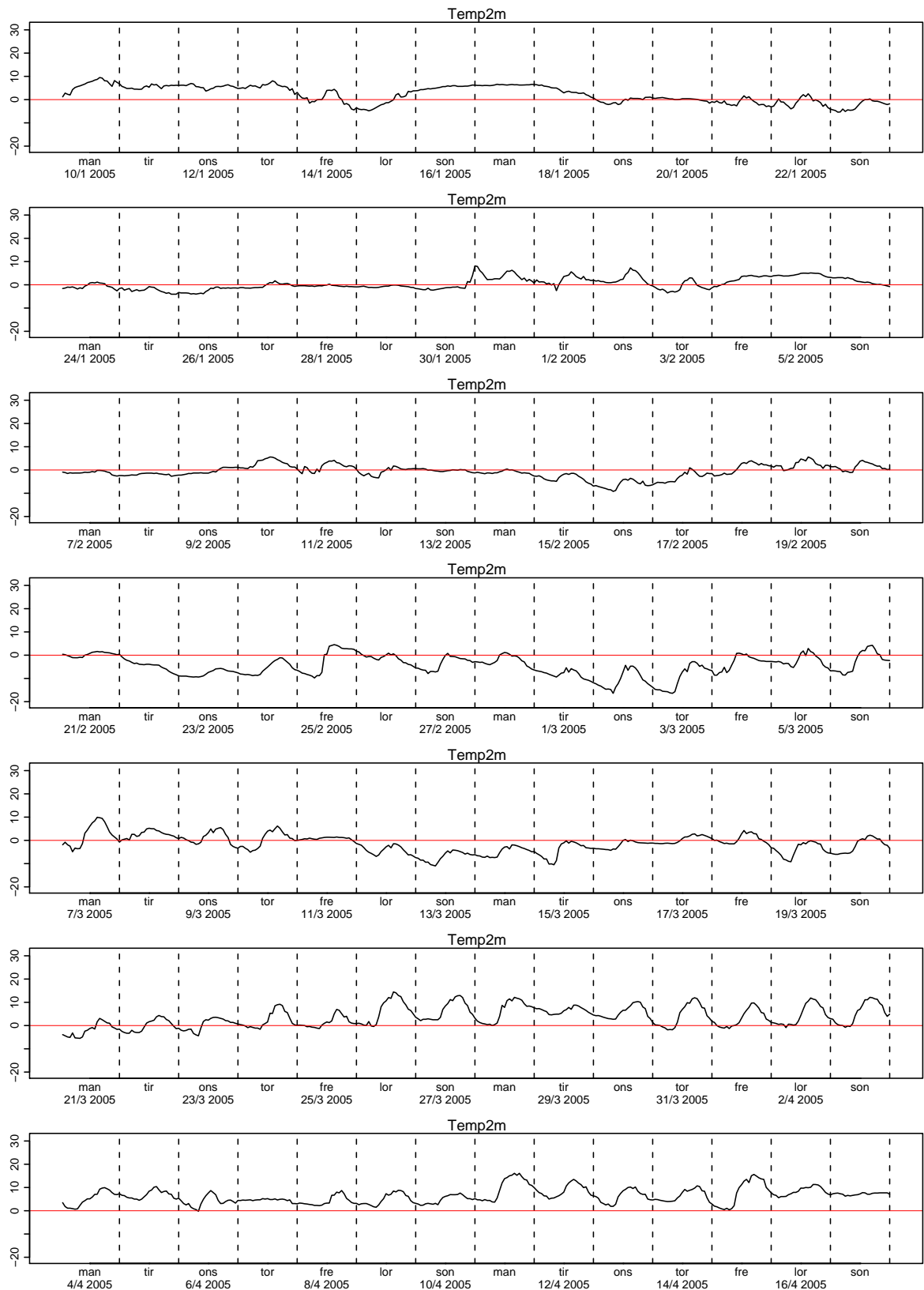
Figur 3.75. Temperatur 2 meter



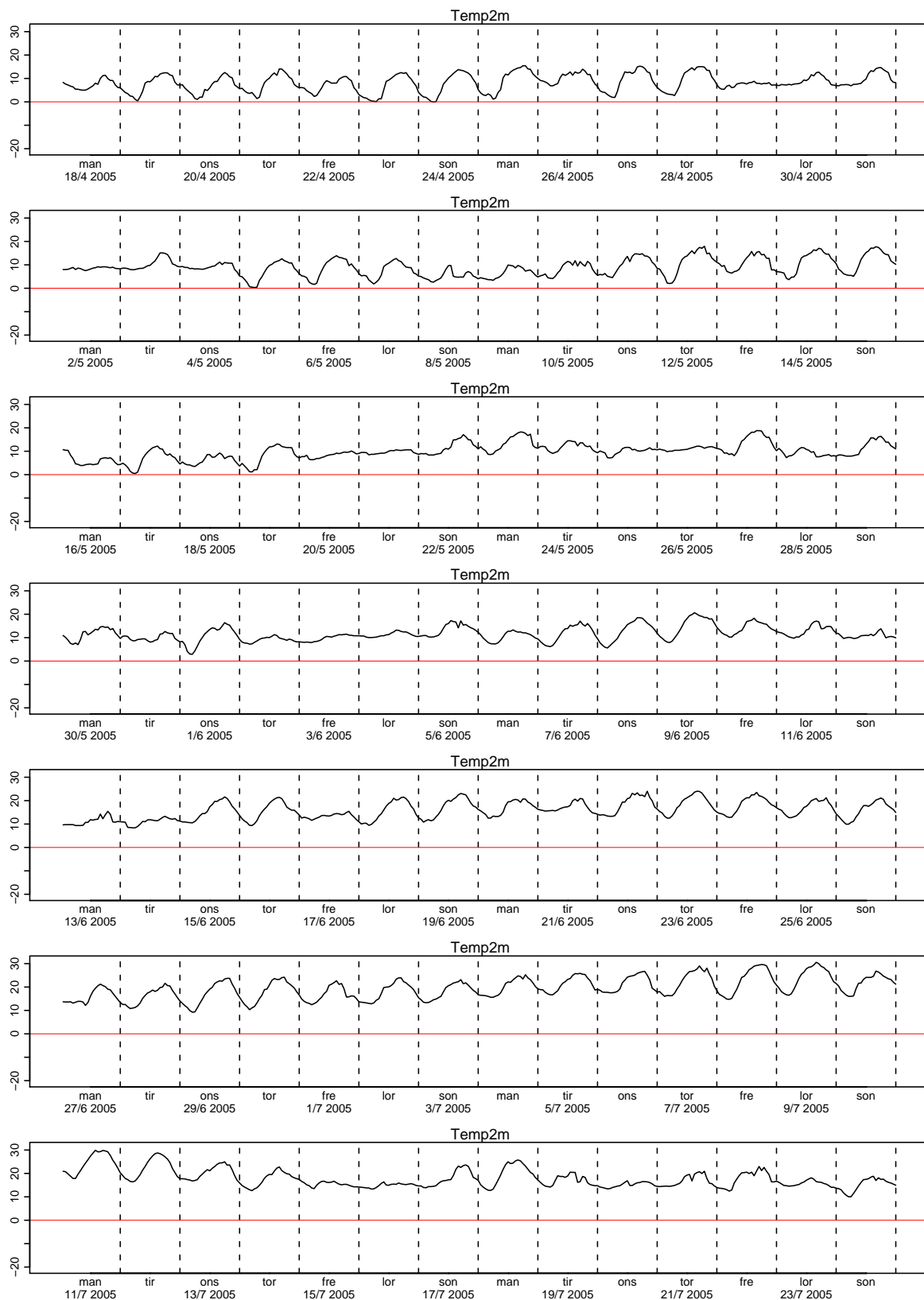
Figur 3.76. Temperatur 2 meter



Figur 3.77. Temperatur 2 meter

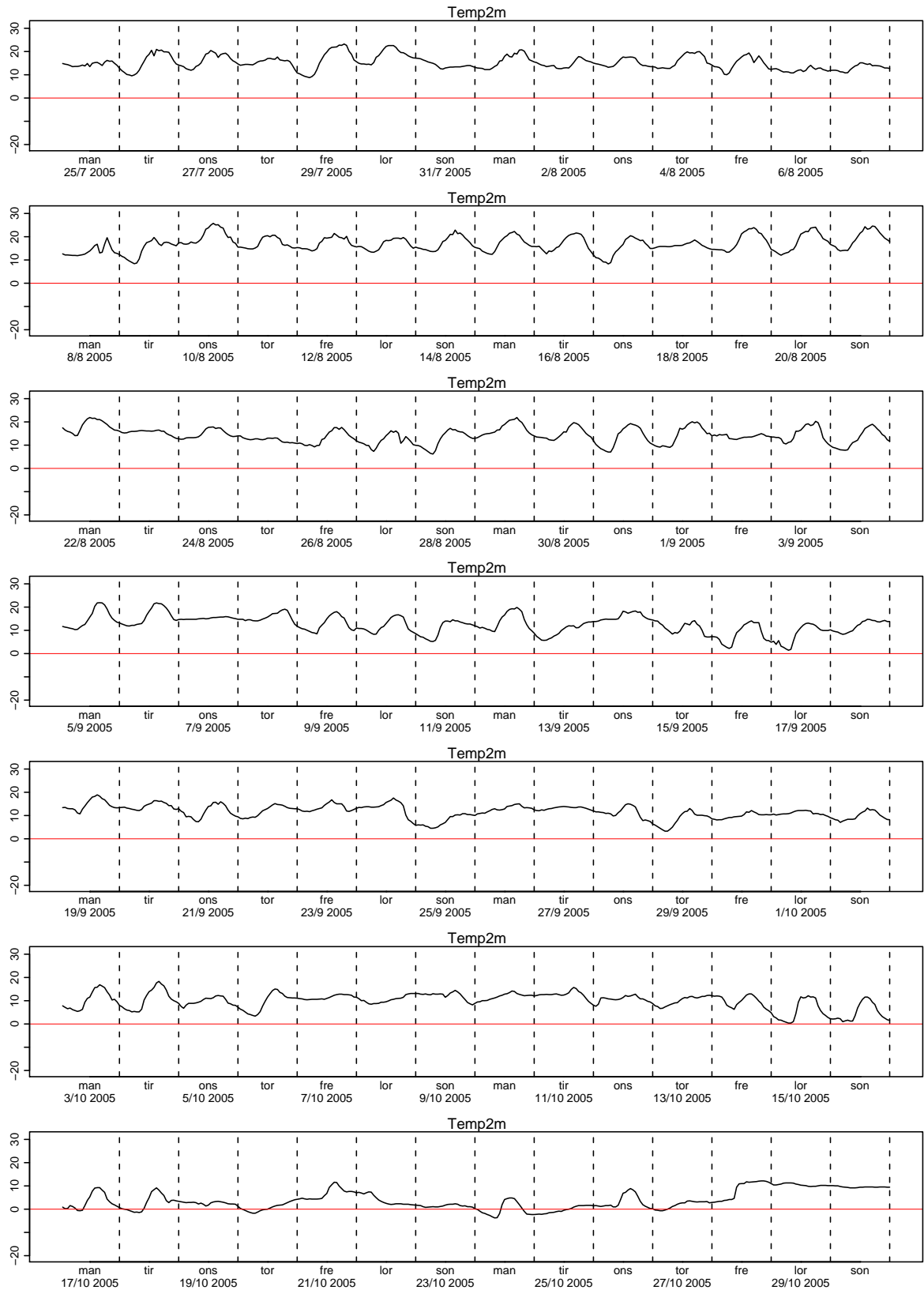


Figur 3.78. Temperatur 2 meter

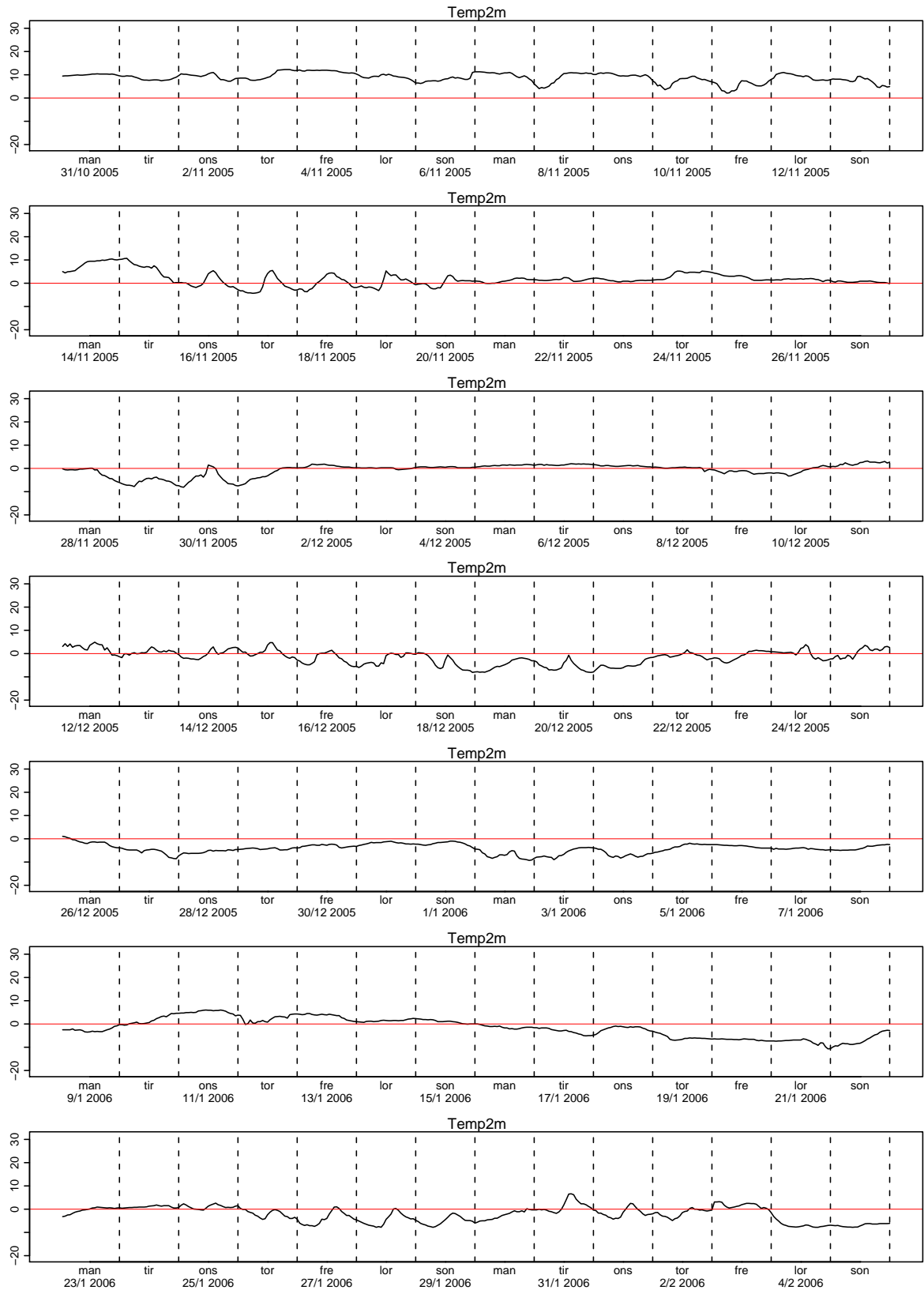


Figur 3.79. Temperatur 2 meter

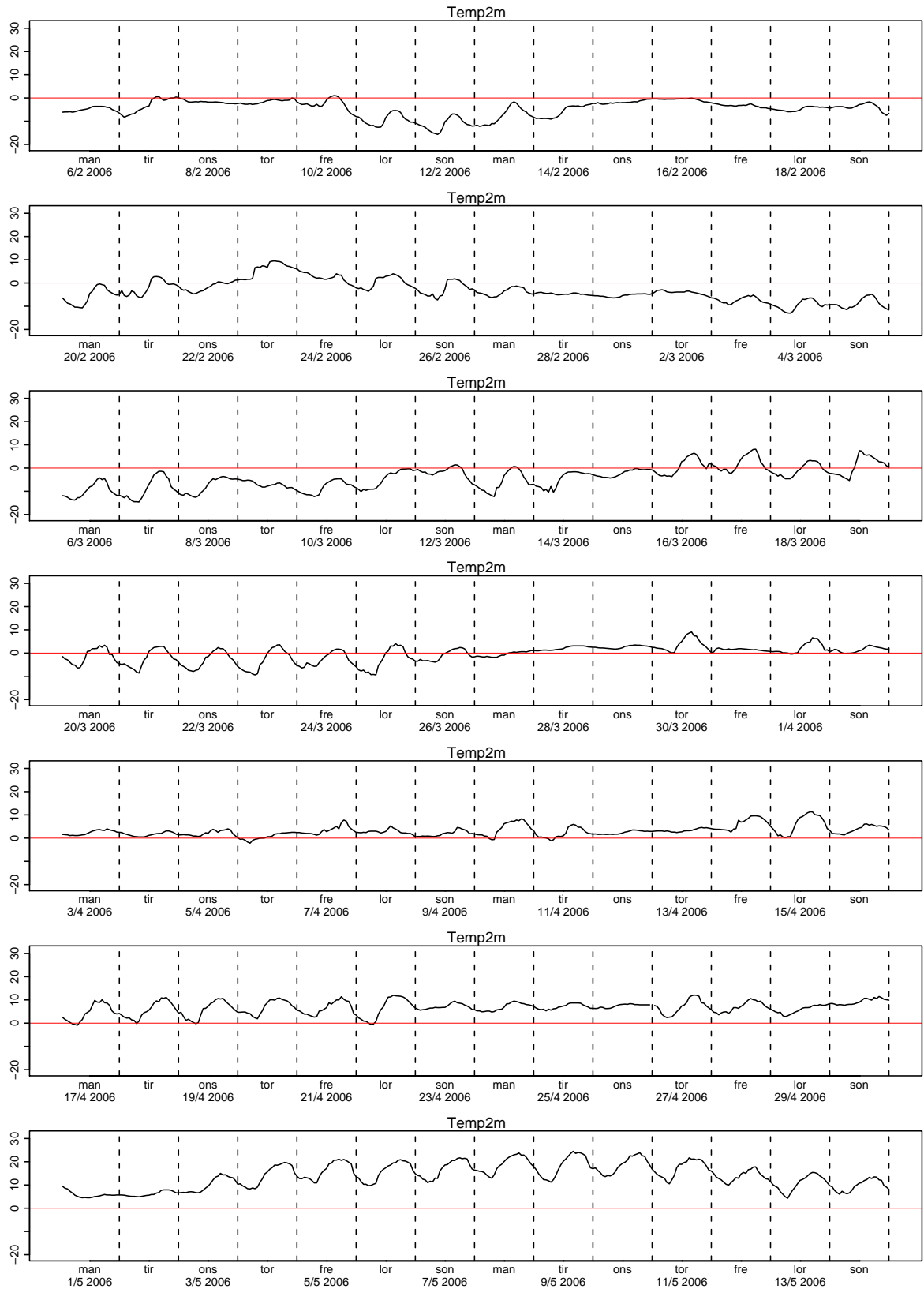




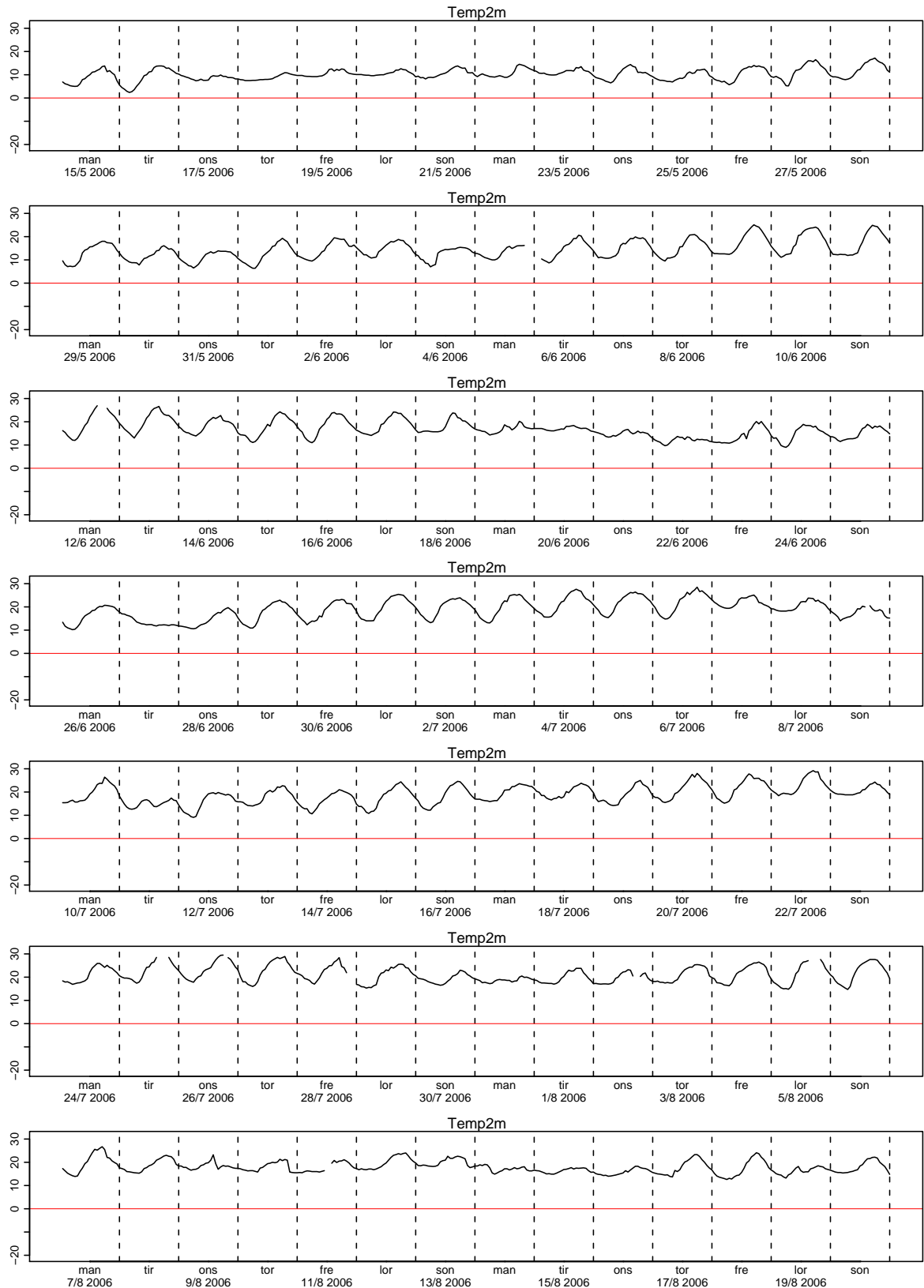
Figur 3.80. Temperatur 2 meter



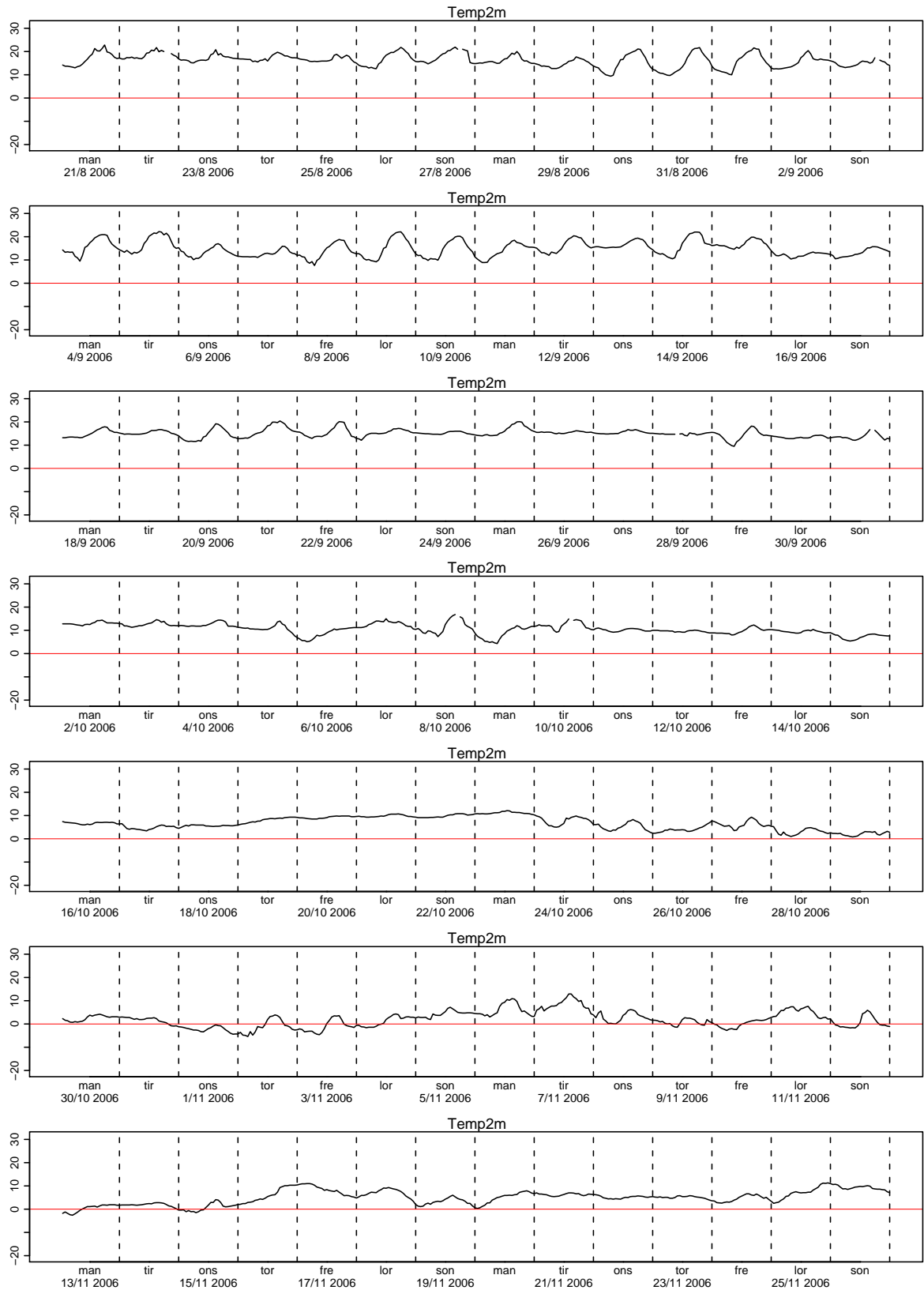
Figur 3.81. Temperatur 2 meter



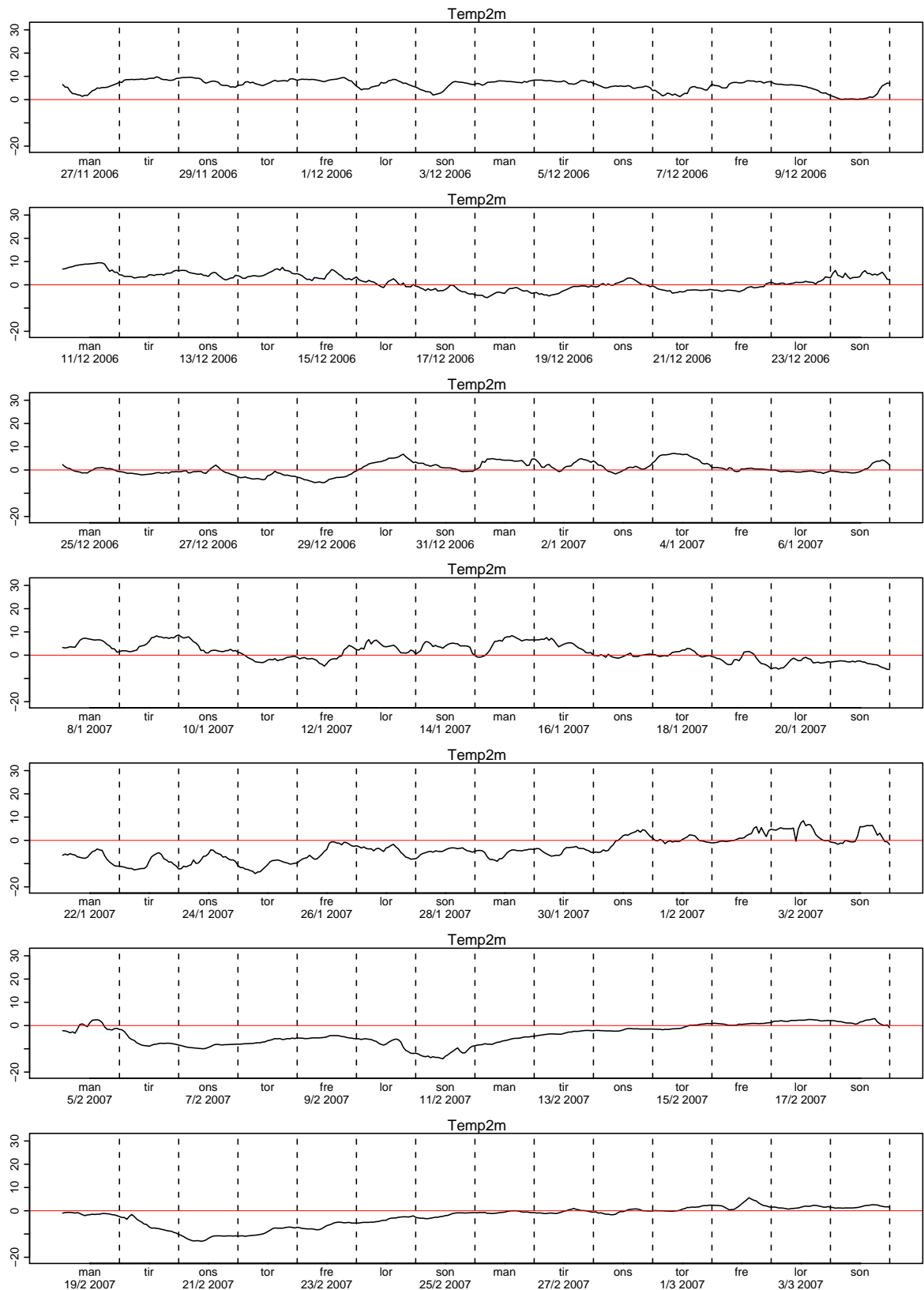
Figur 3.82. Temperatur 2 meter



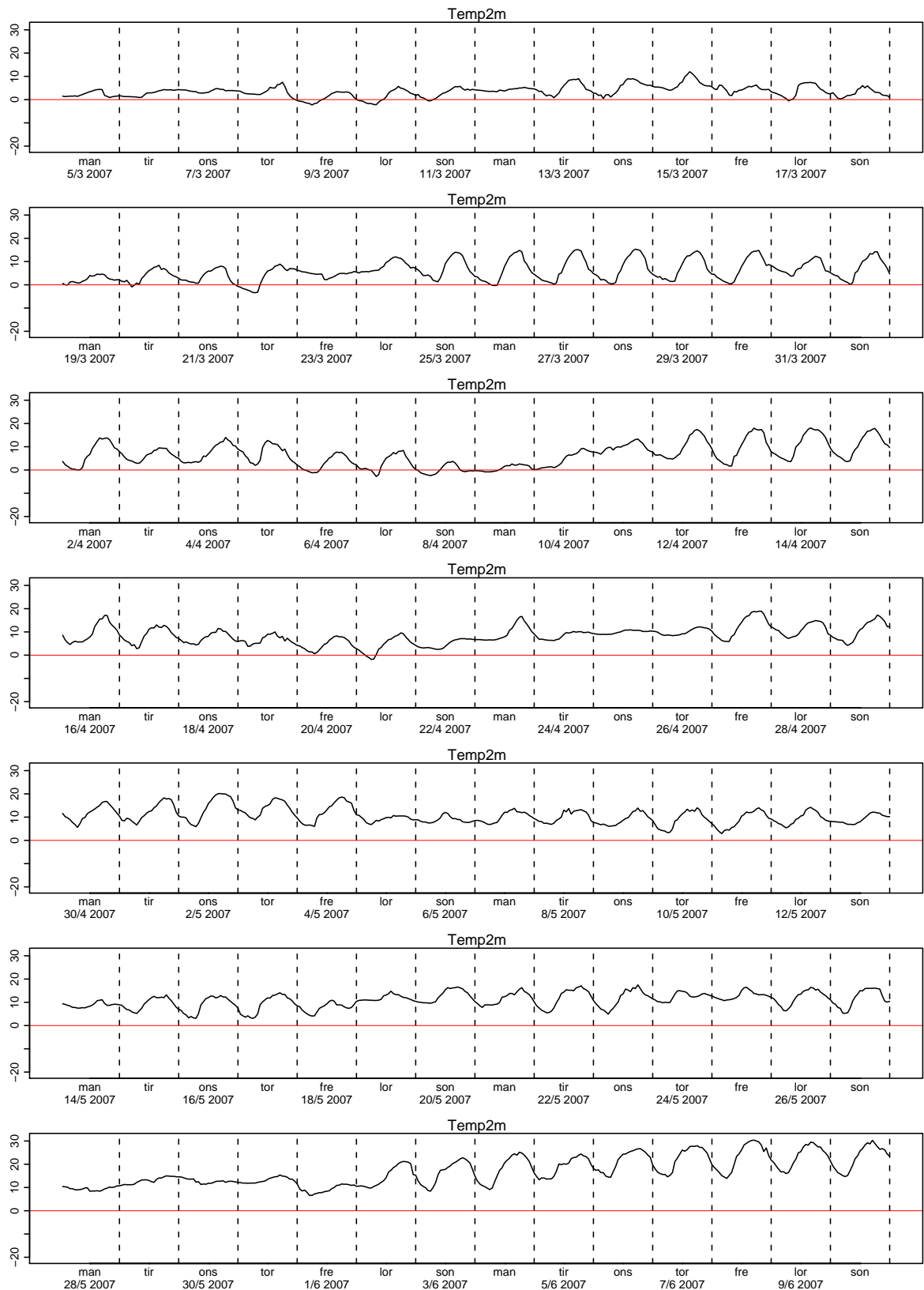
Figur 3.83. Temperatur 2 meter



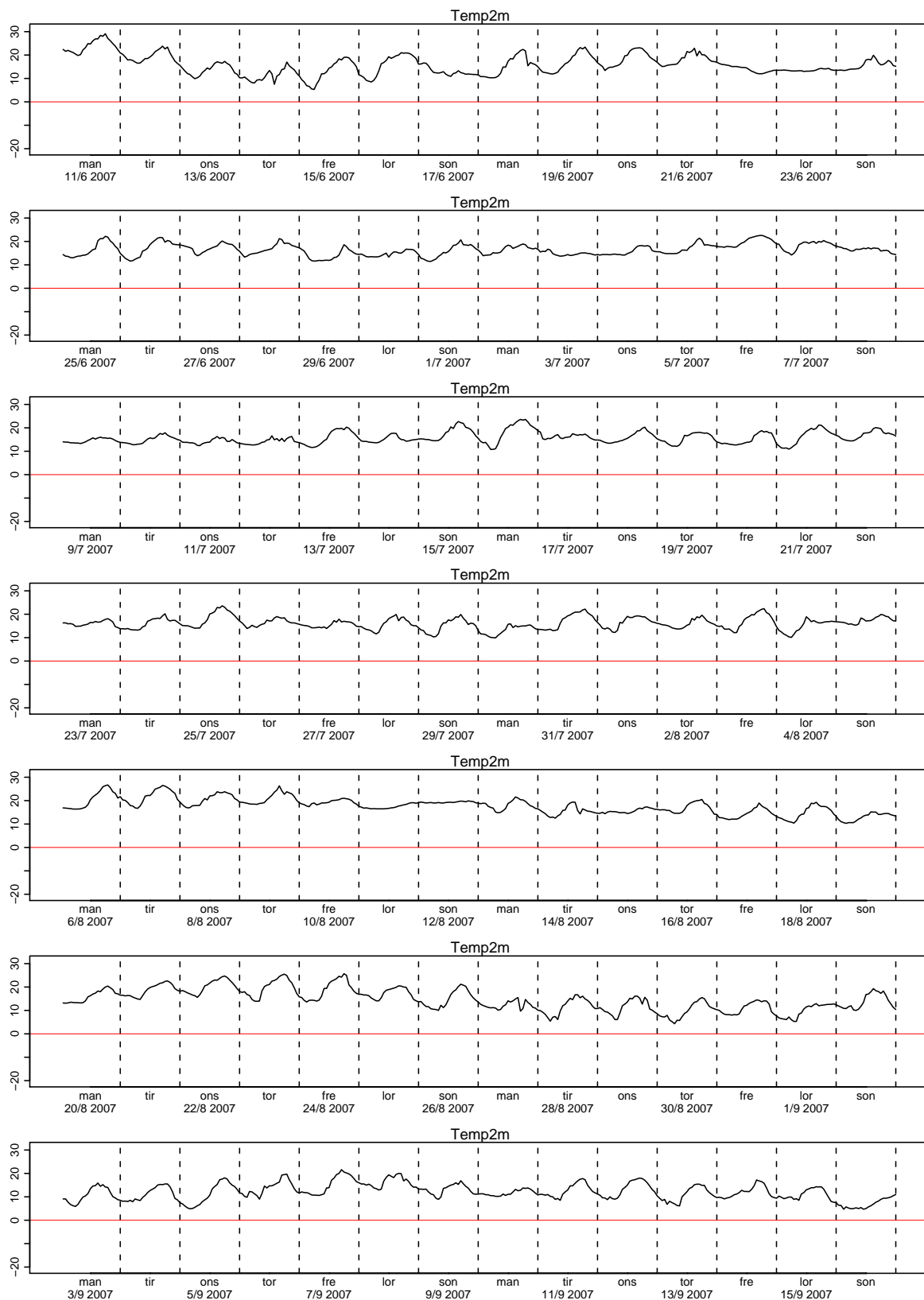
Figur 3.84. Temperatur 2 meter



Figur 3.85. Temperatur 2 meter

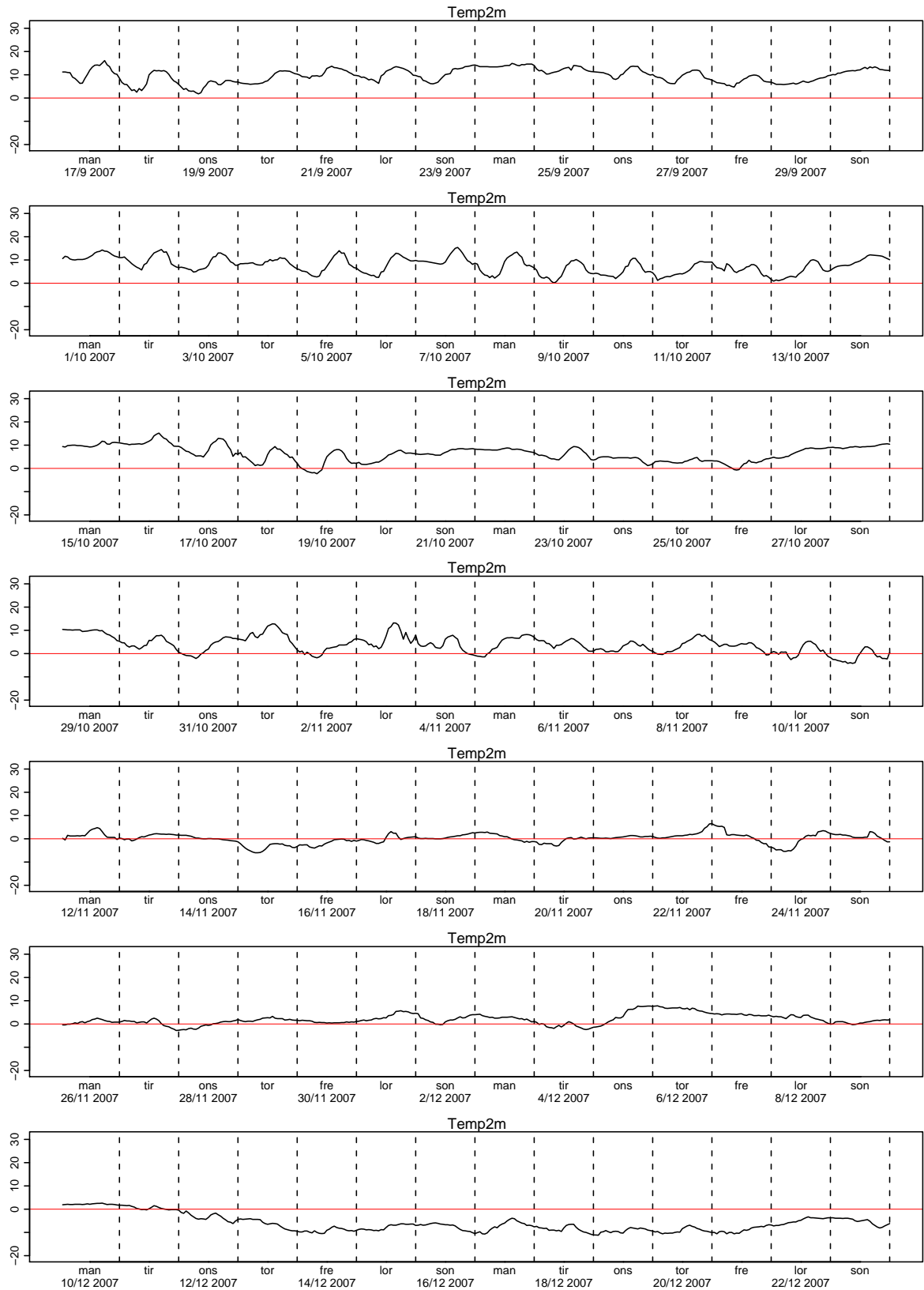


Figur 3.86. Temperatur 2 meter

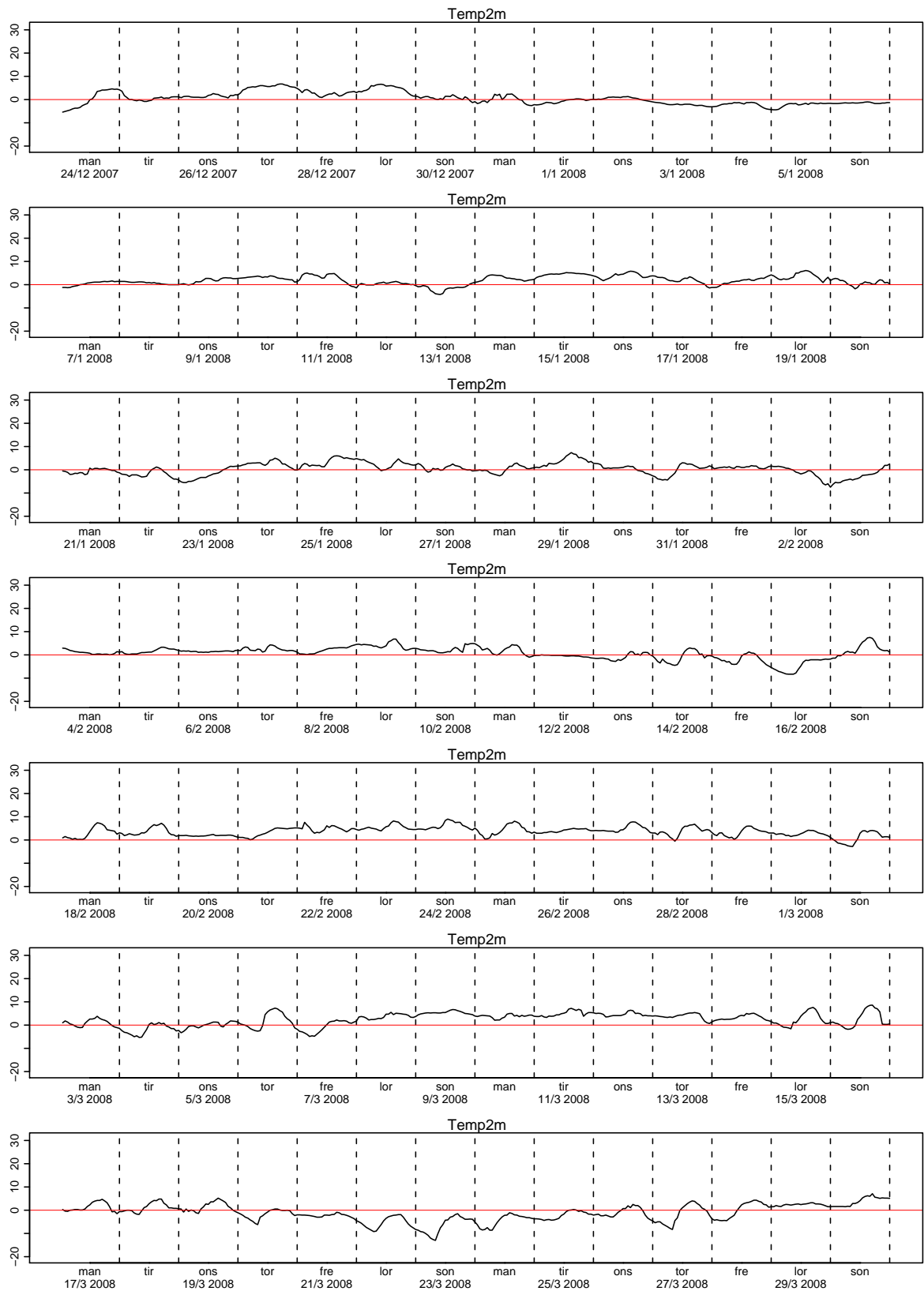


Figur 3.87. Temperatur 2 meter

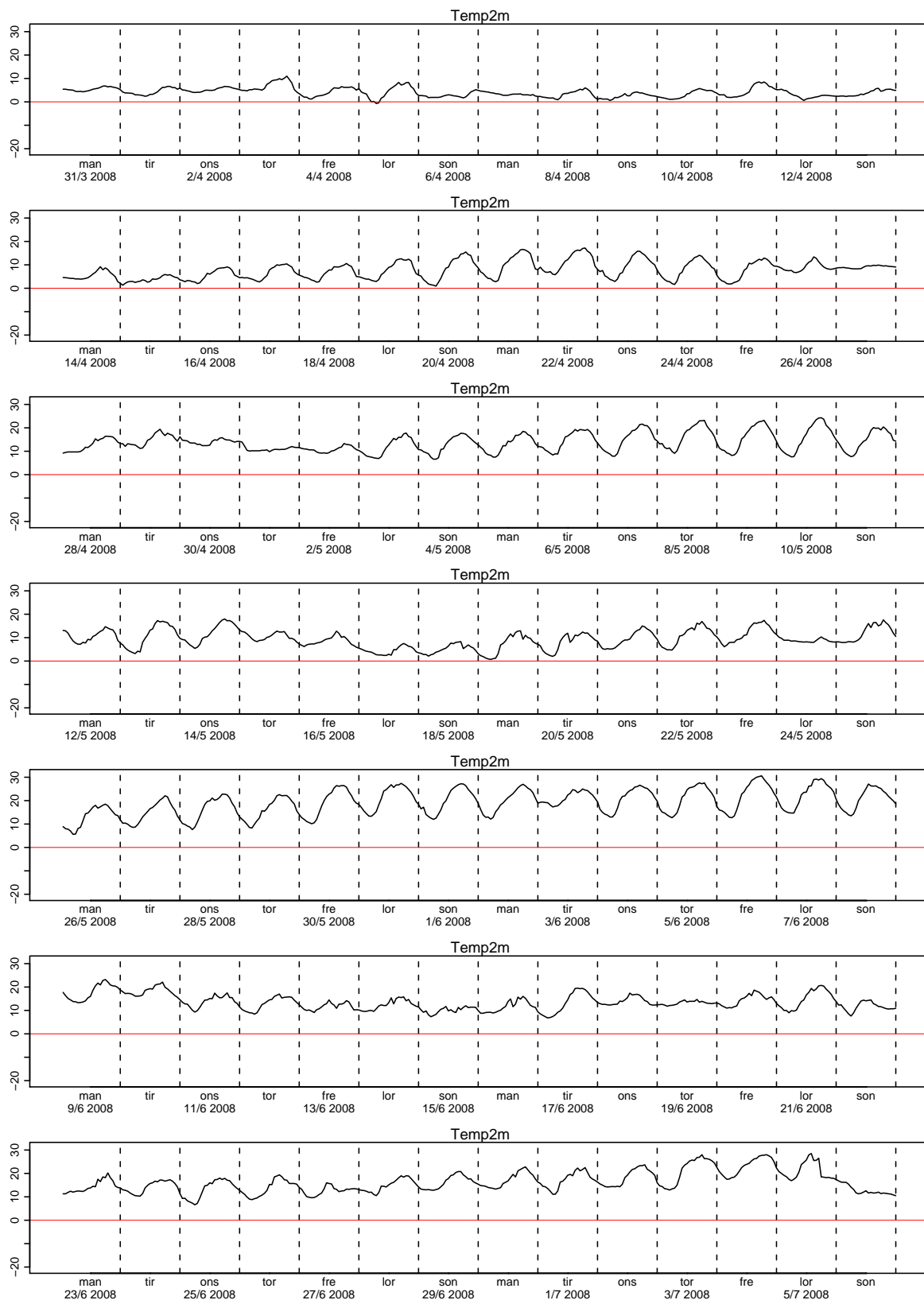




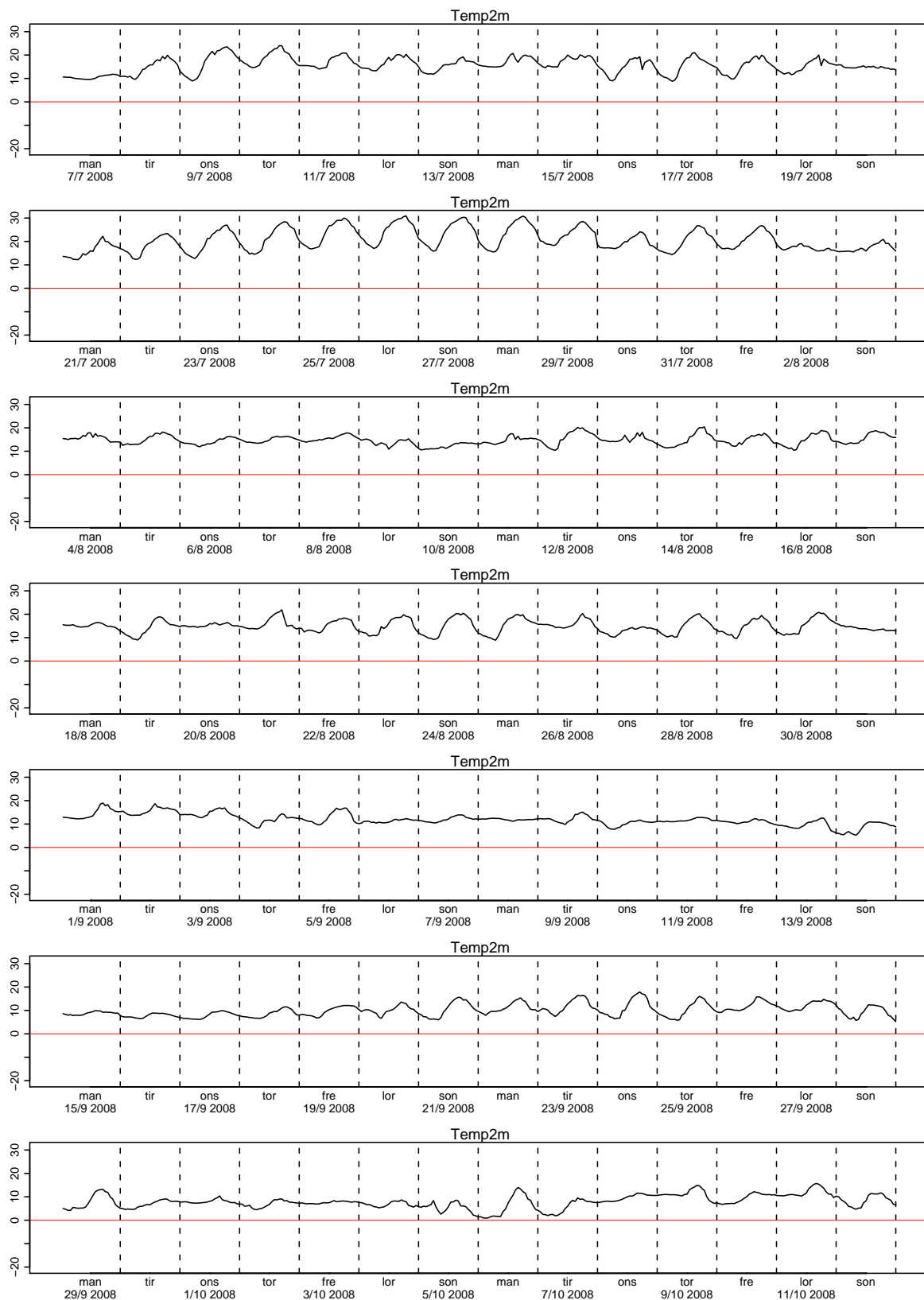
Figur 3.88. Temperatur 2 meter



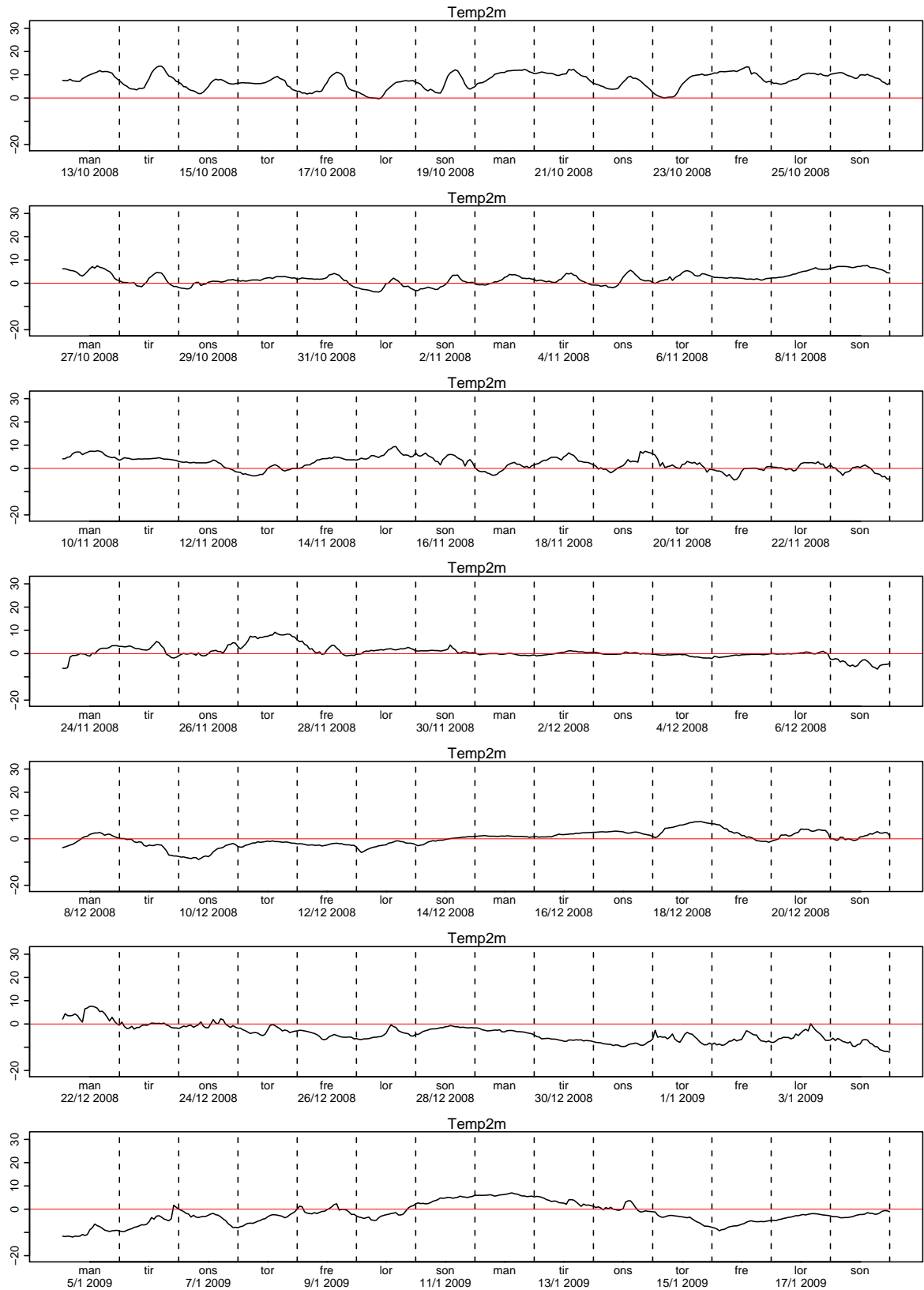
Figur 3.89. Temperatur 2 meter



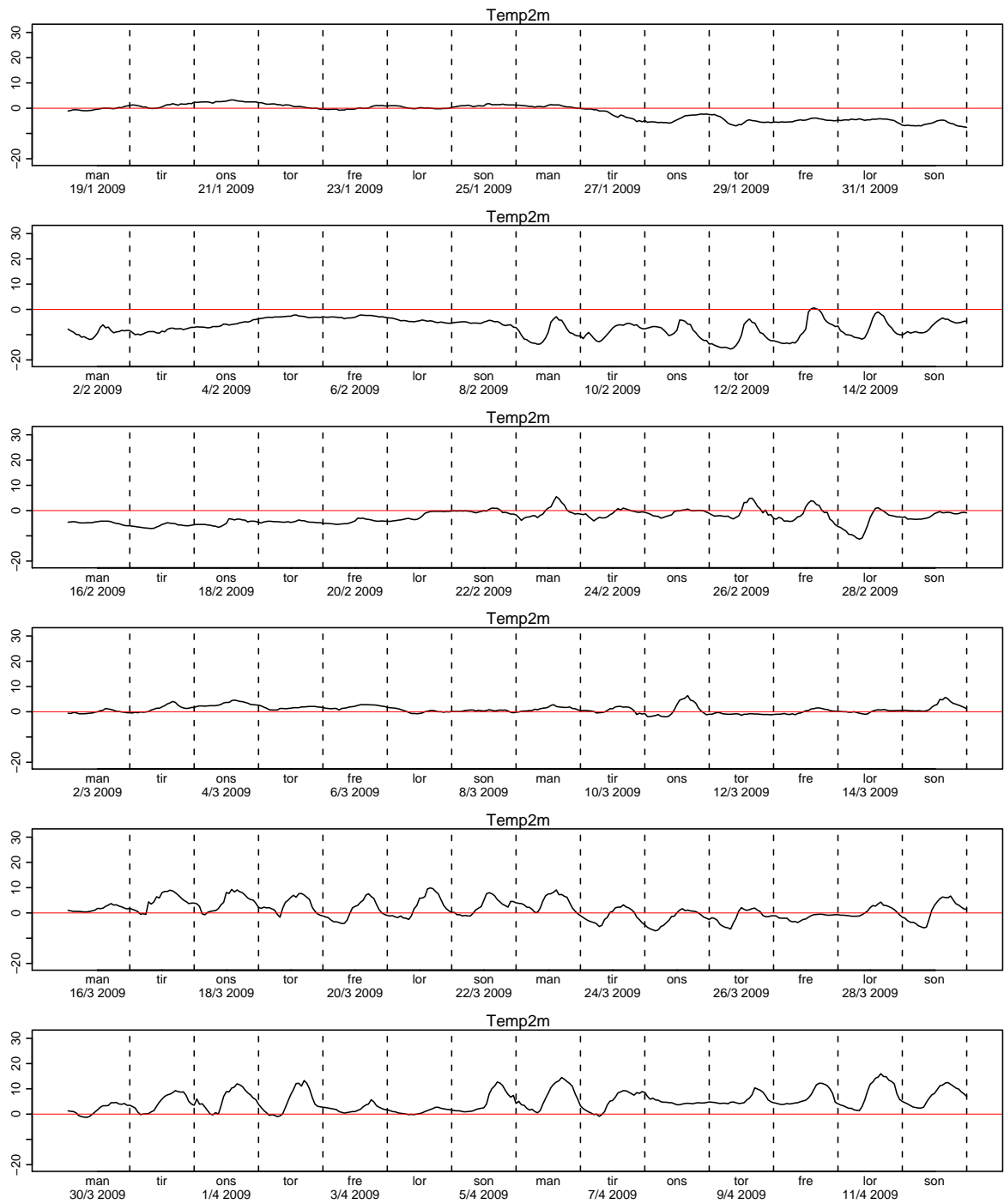
Figur 3.90. Temperatur 2 meter



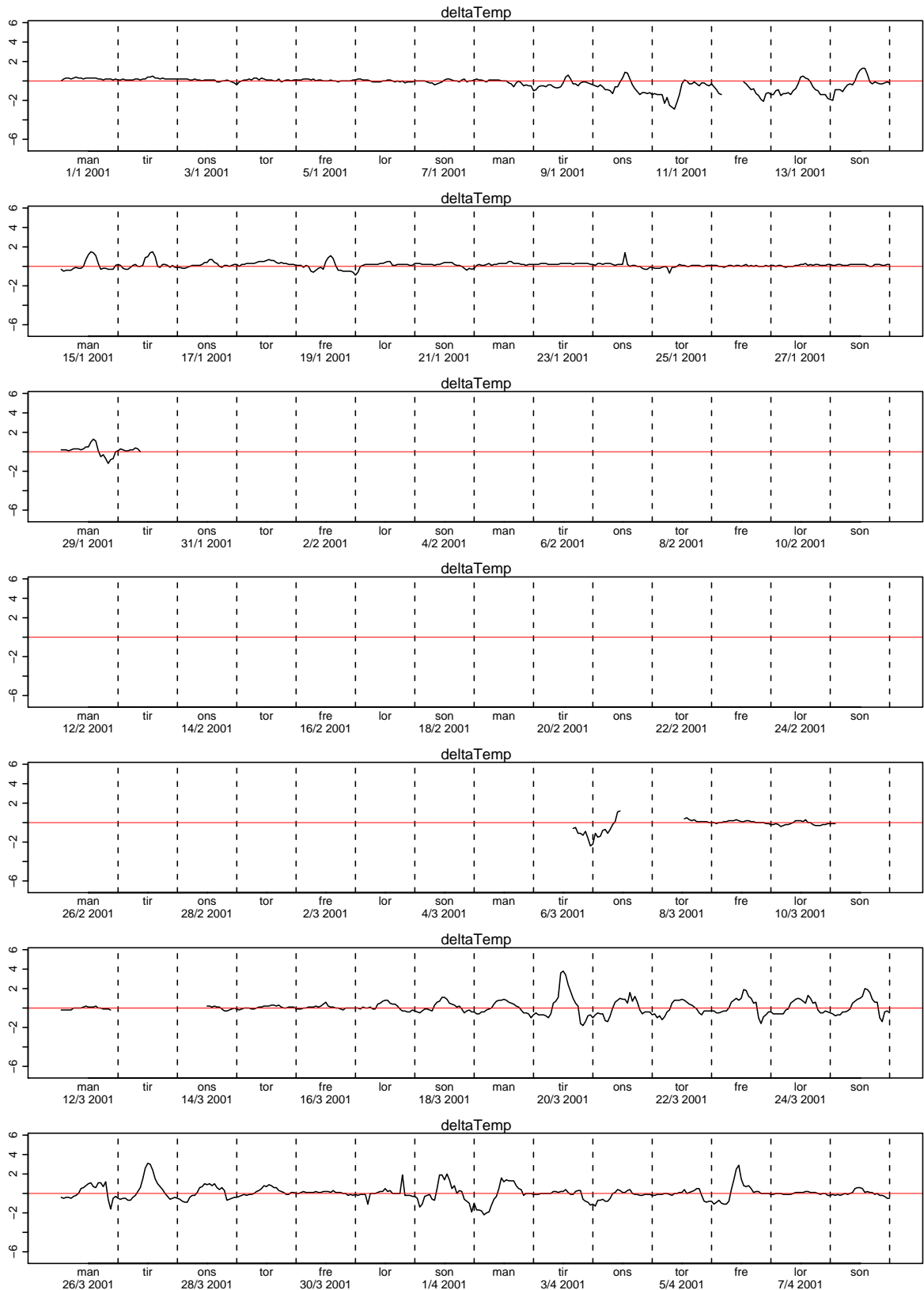
Figur 3.91. Temperatur 2 meter



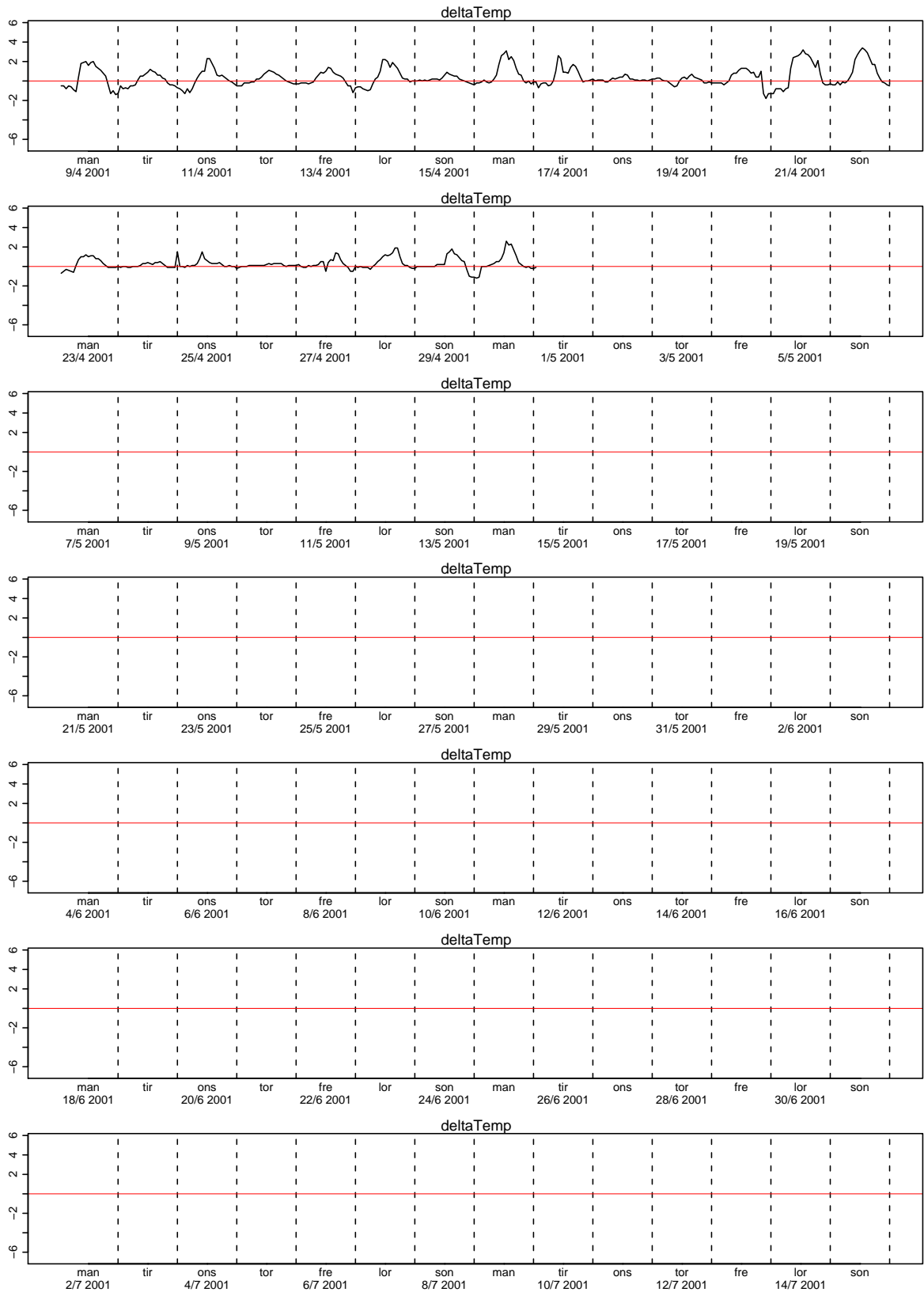
Figur 3.92. Temperatur 2 meter



Figur 3.93. Temperatur 2 meter

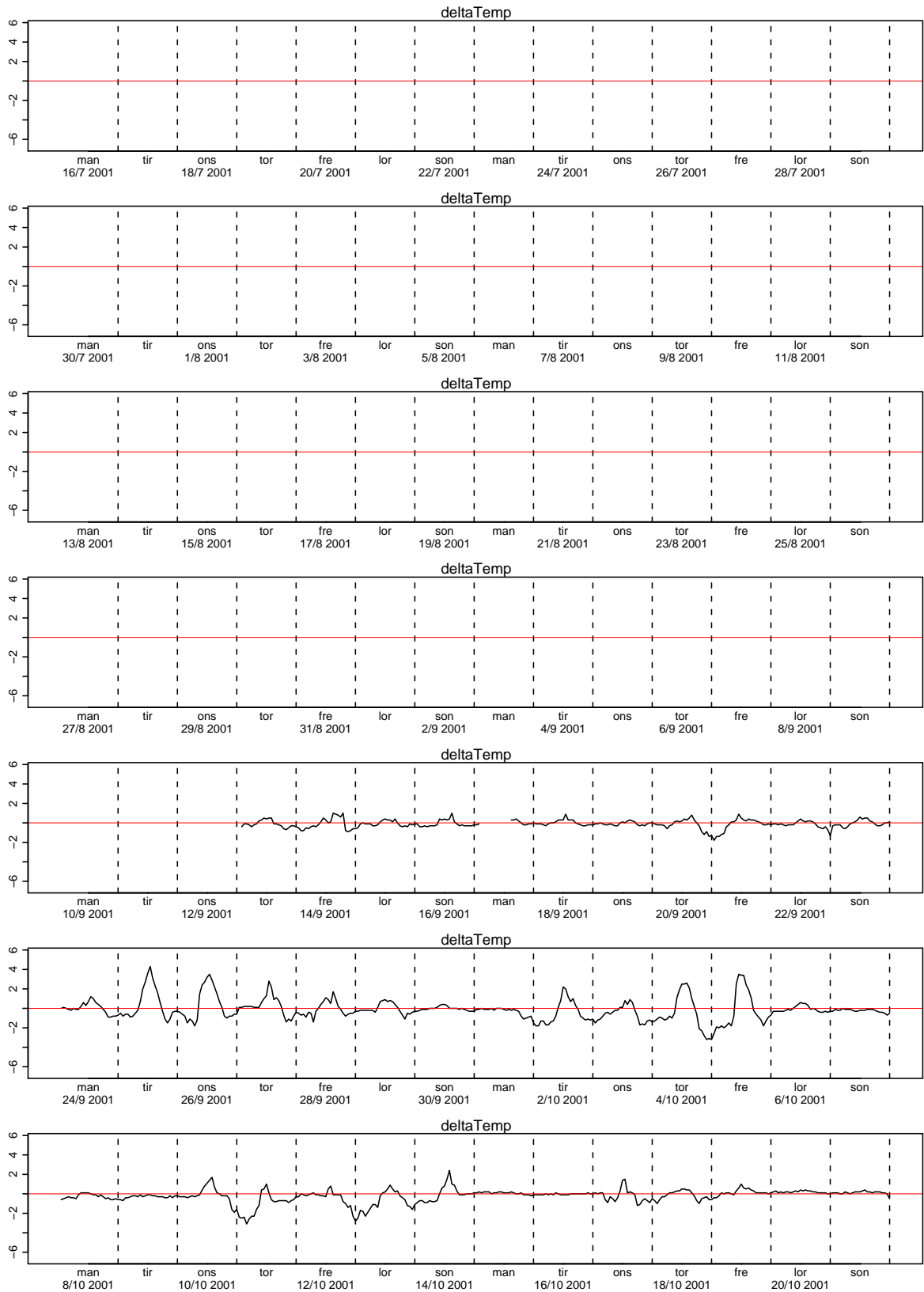


Figur 3.94. Temperatur 2-25 meter

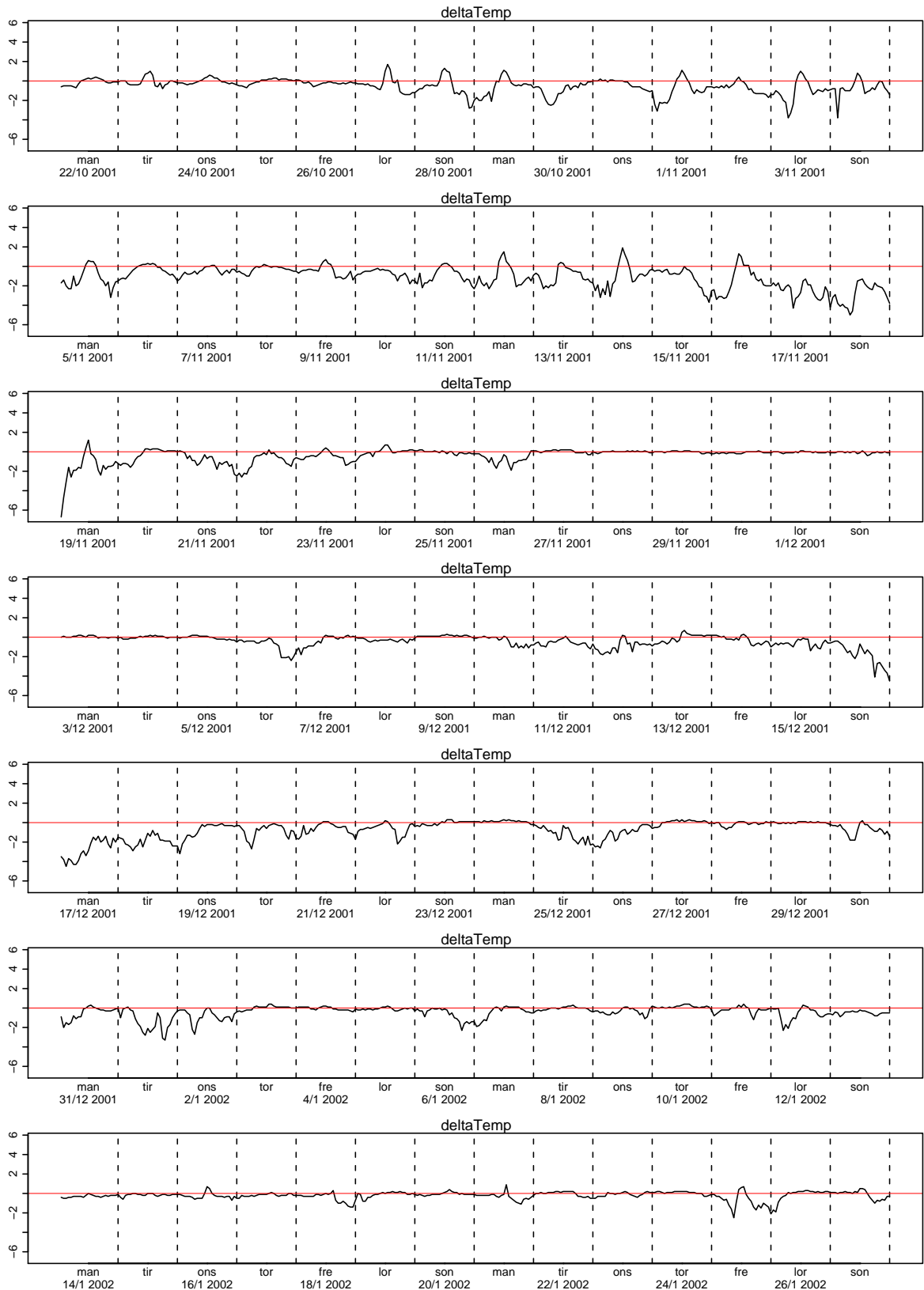


Figur 3.95. Temperatur 2-25 meter

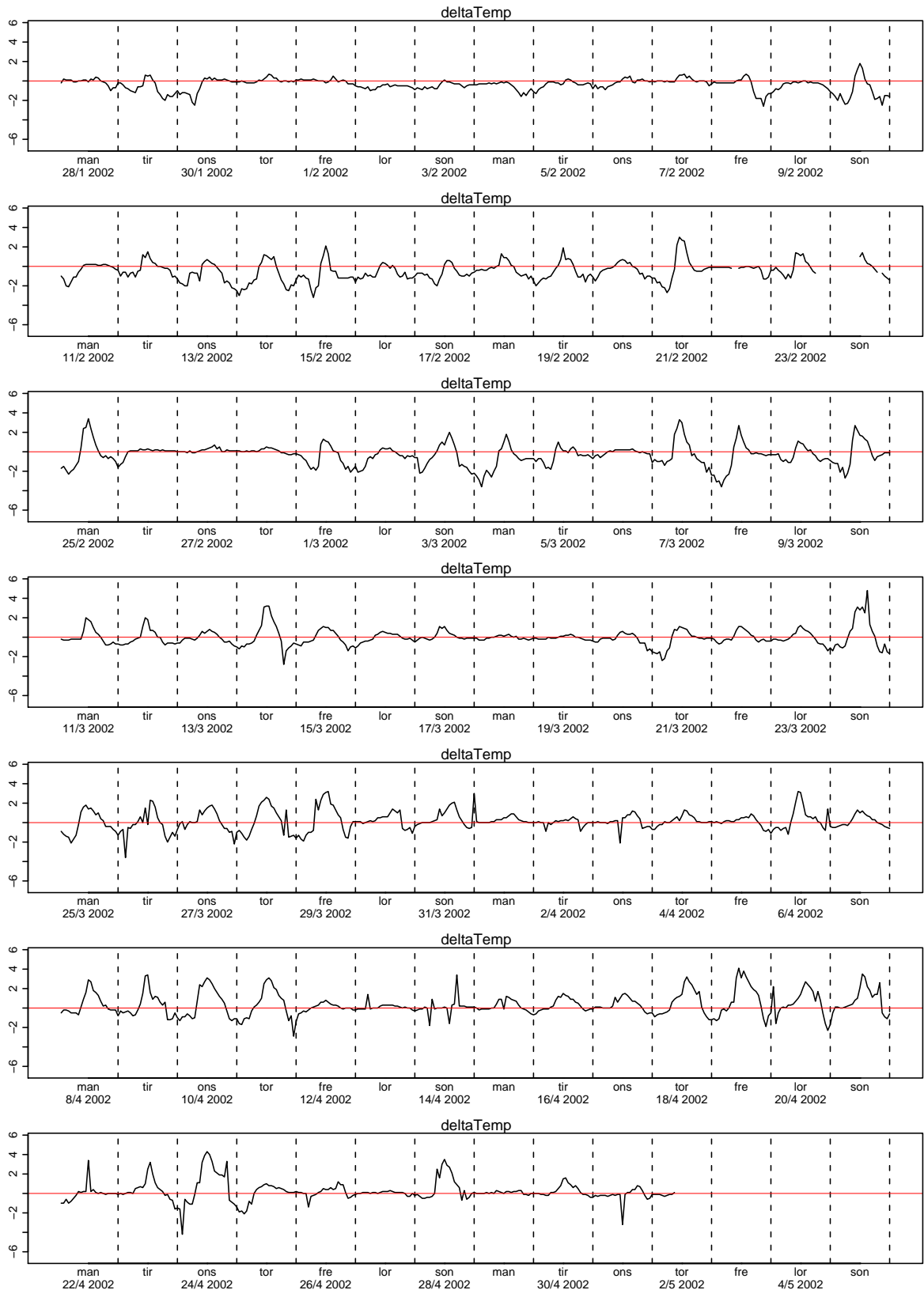




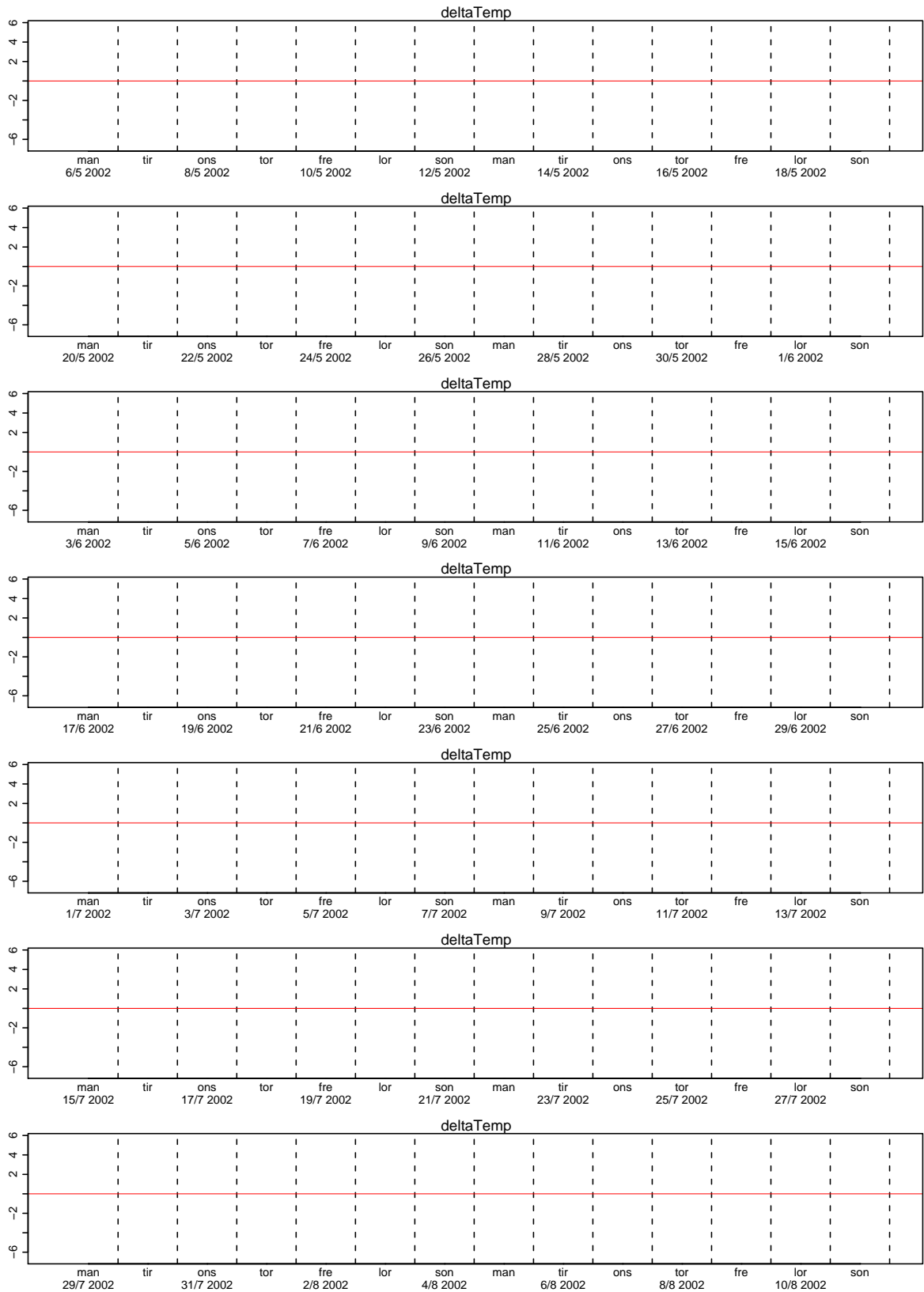
Figur 3.96. Temperatur 2-25 meter



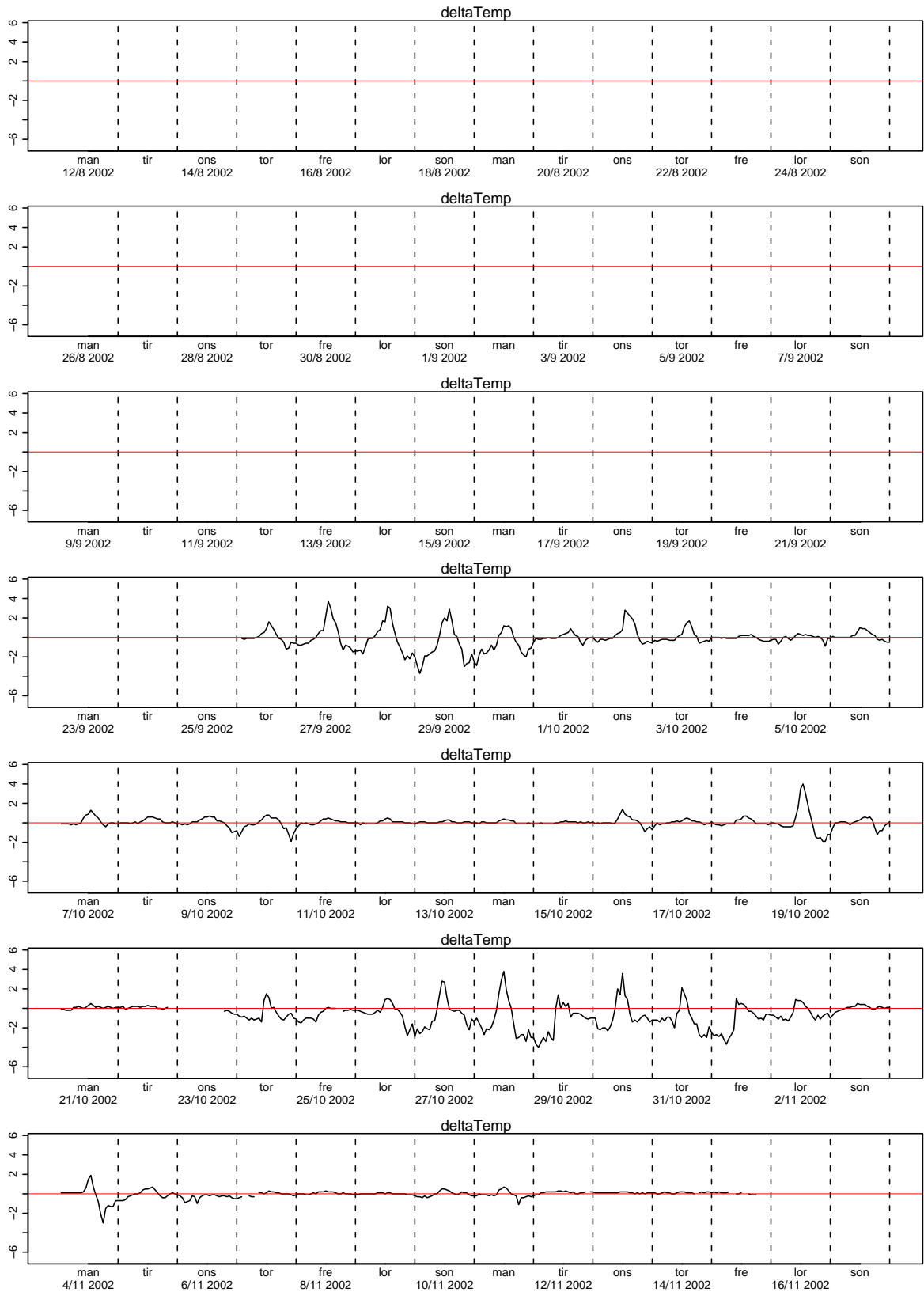
Figur 3.97. Temperatur 2-25 meter



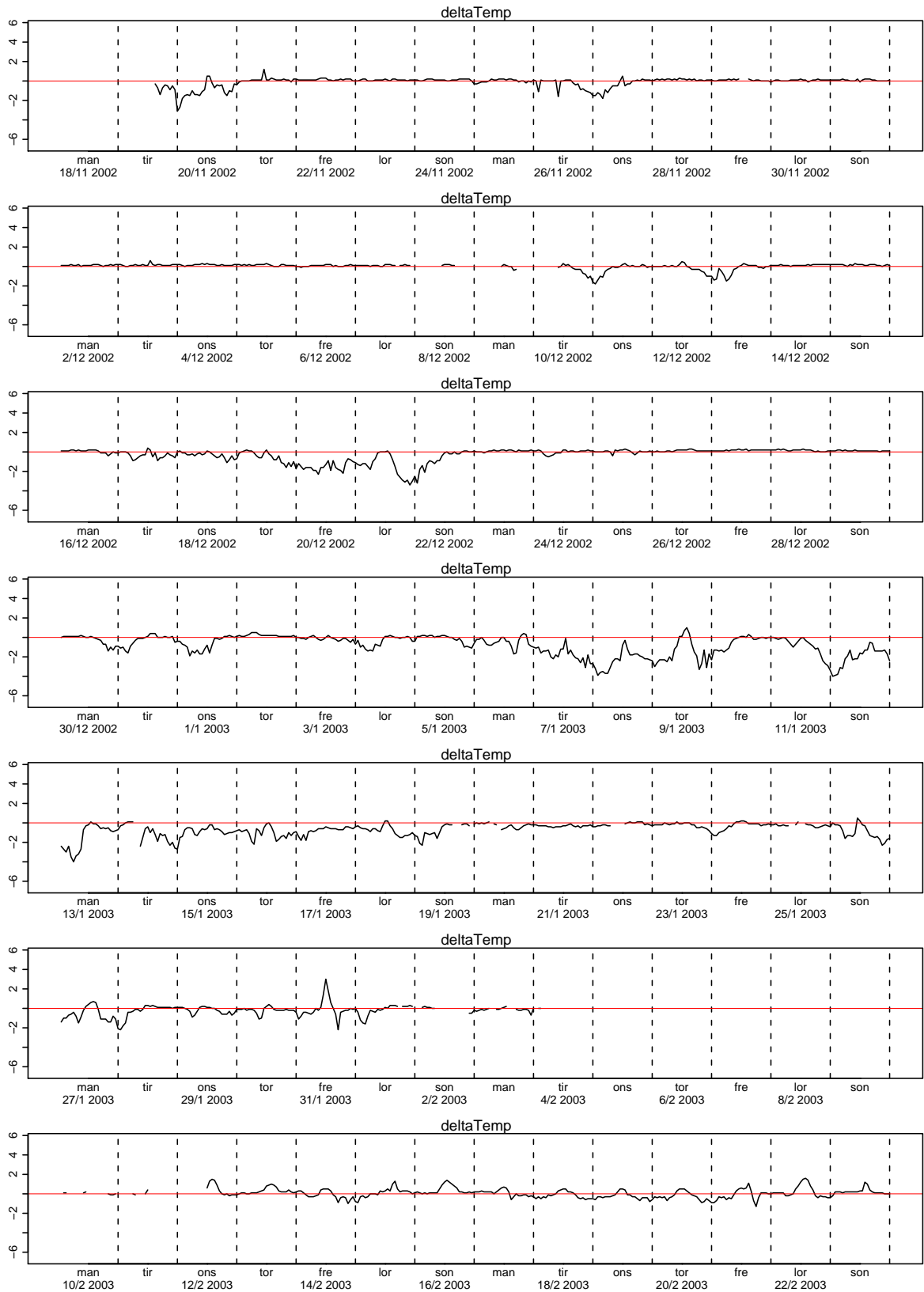
Figur 3.98. Temperatur 2-25 meter



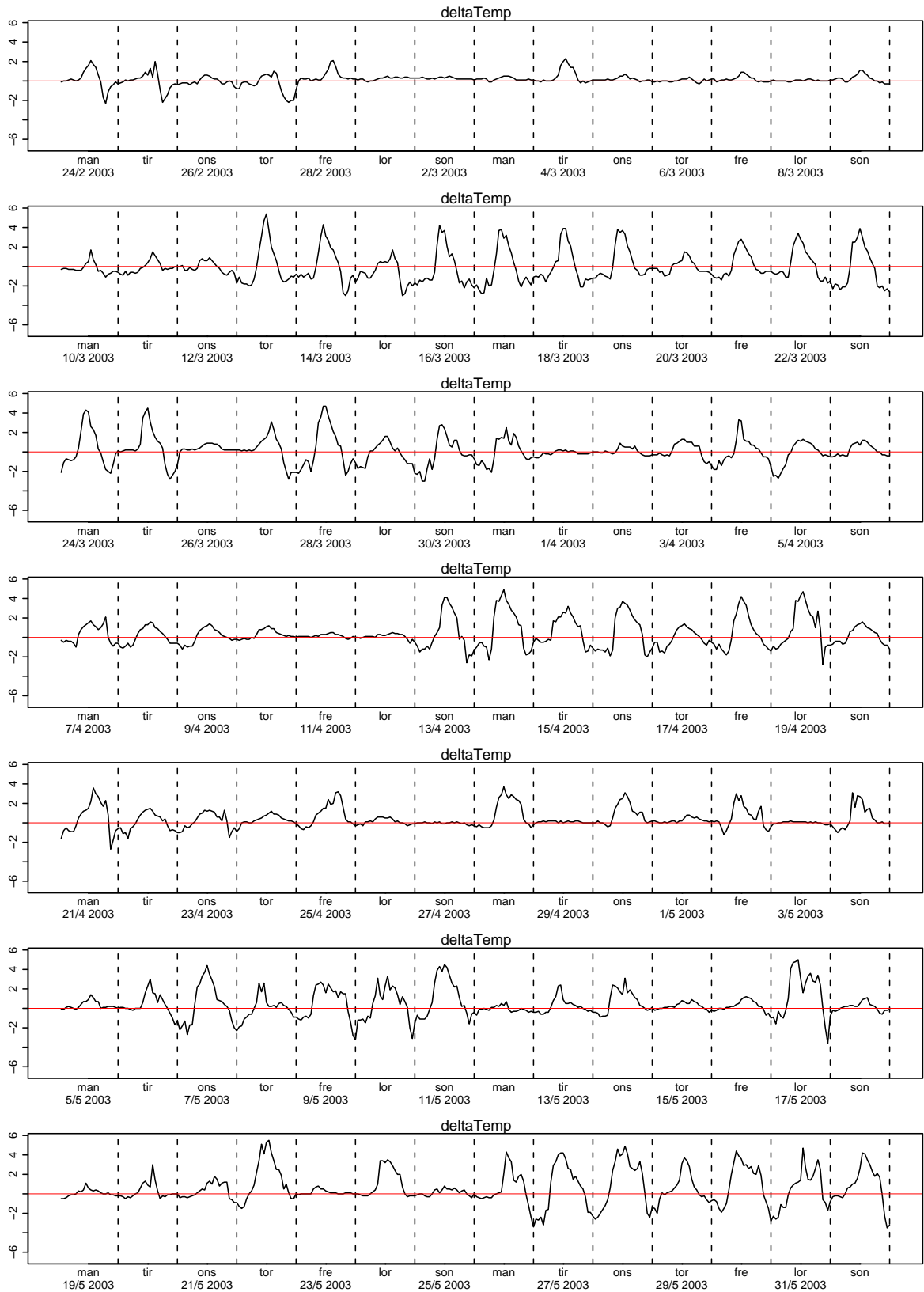
Figur 3.99. Temperatur 2-25 meter



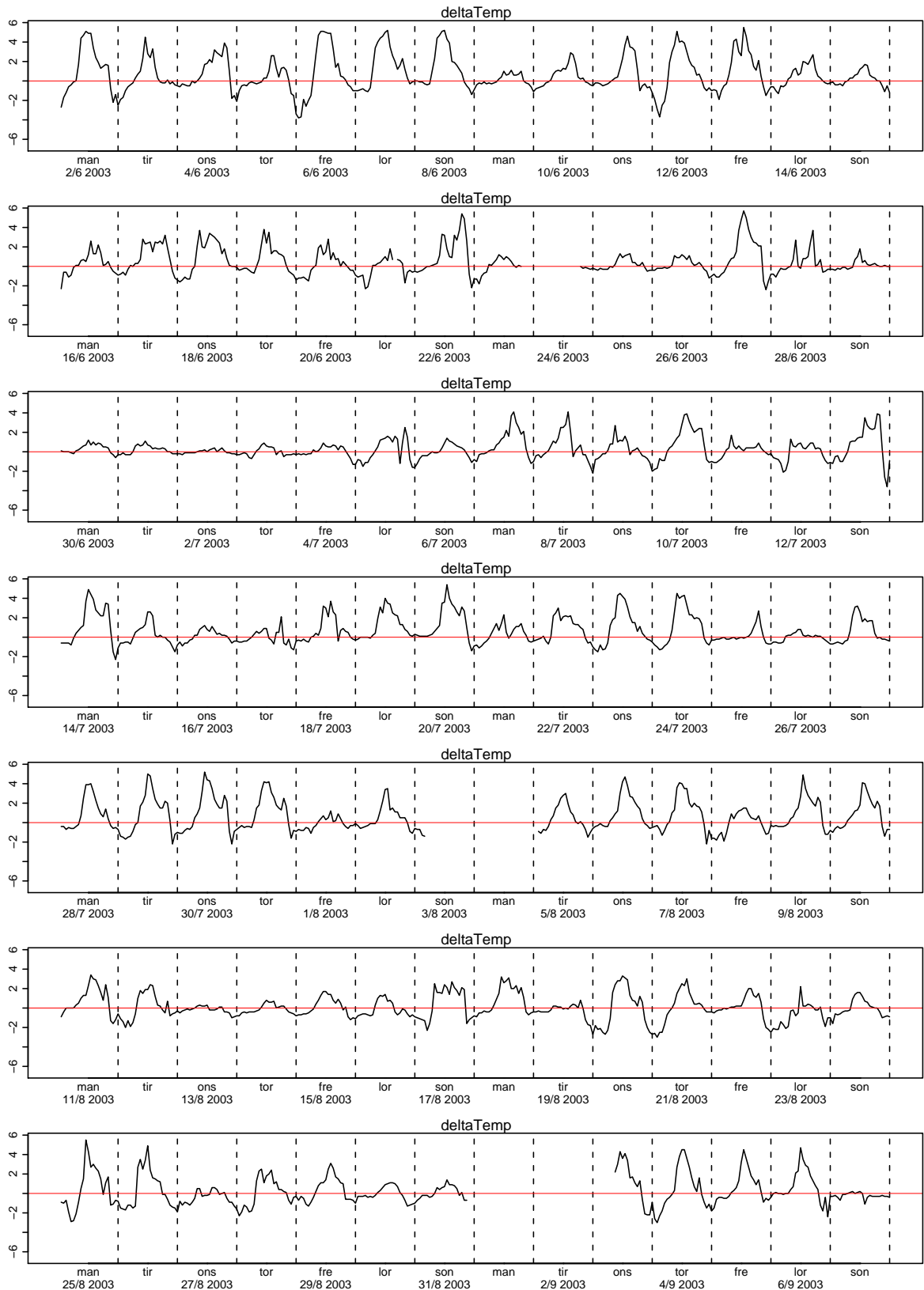
Figur 3.100. Temperatur 2-25 meter



Figur 3.101. Temperatur 2-25 meter

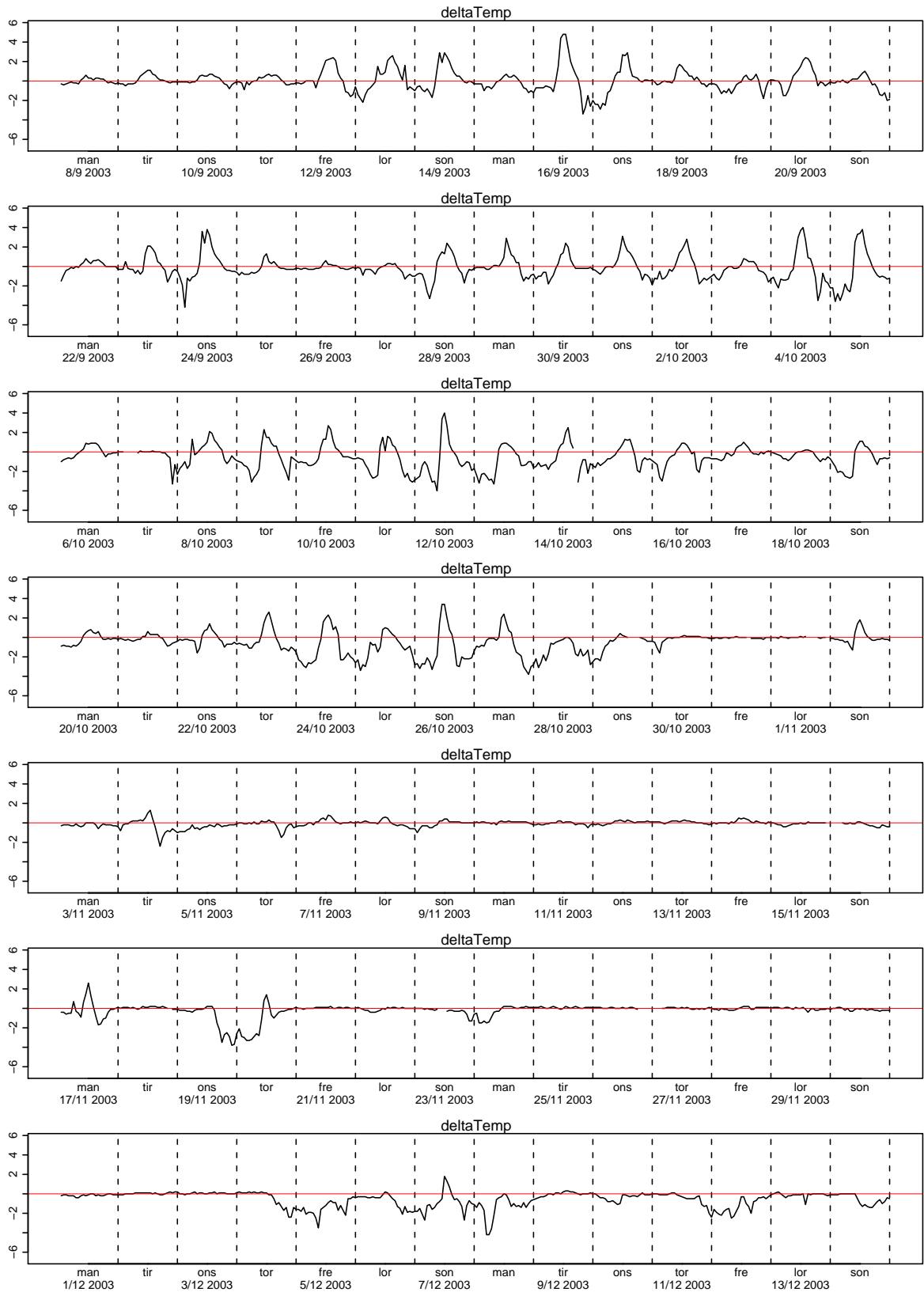


Figur 3.102. Temperatur 2-25 meter

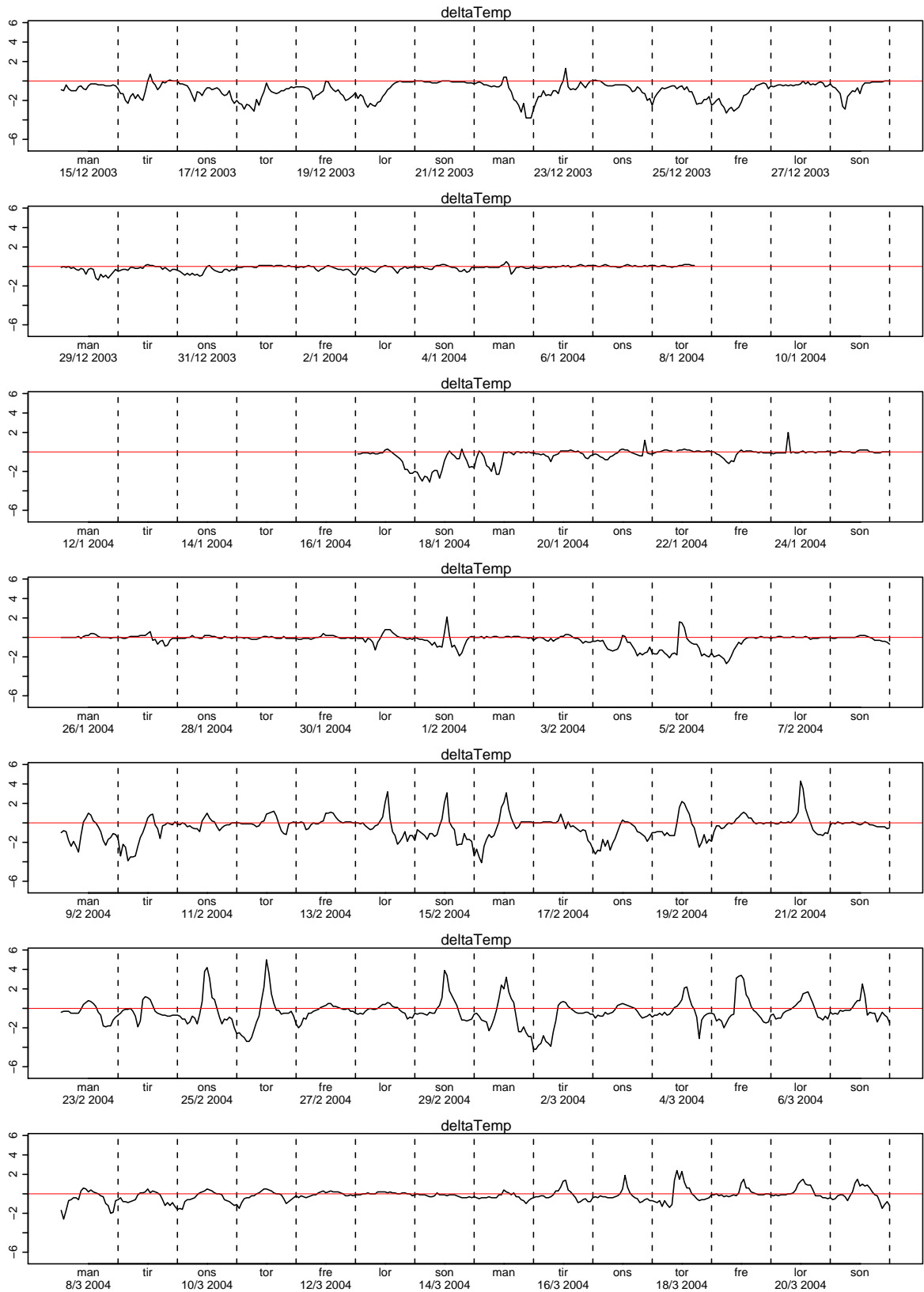


Figur 3.103. Temperatur 2-25 meter

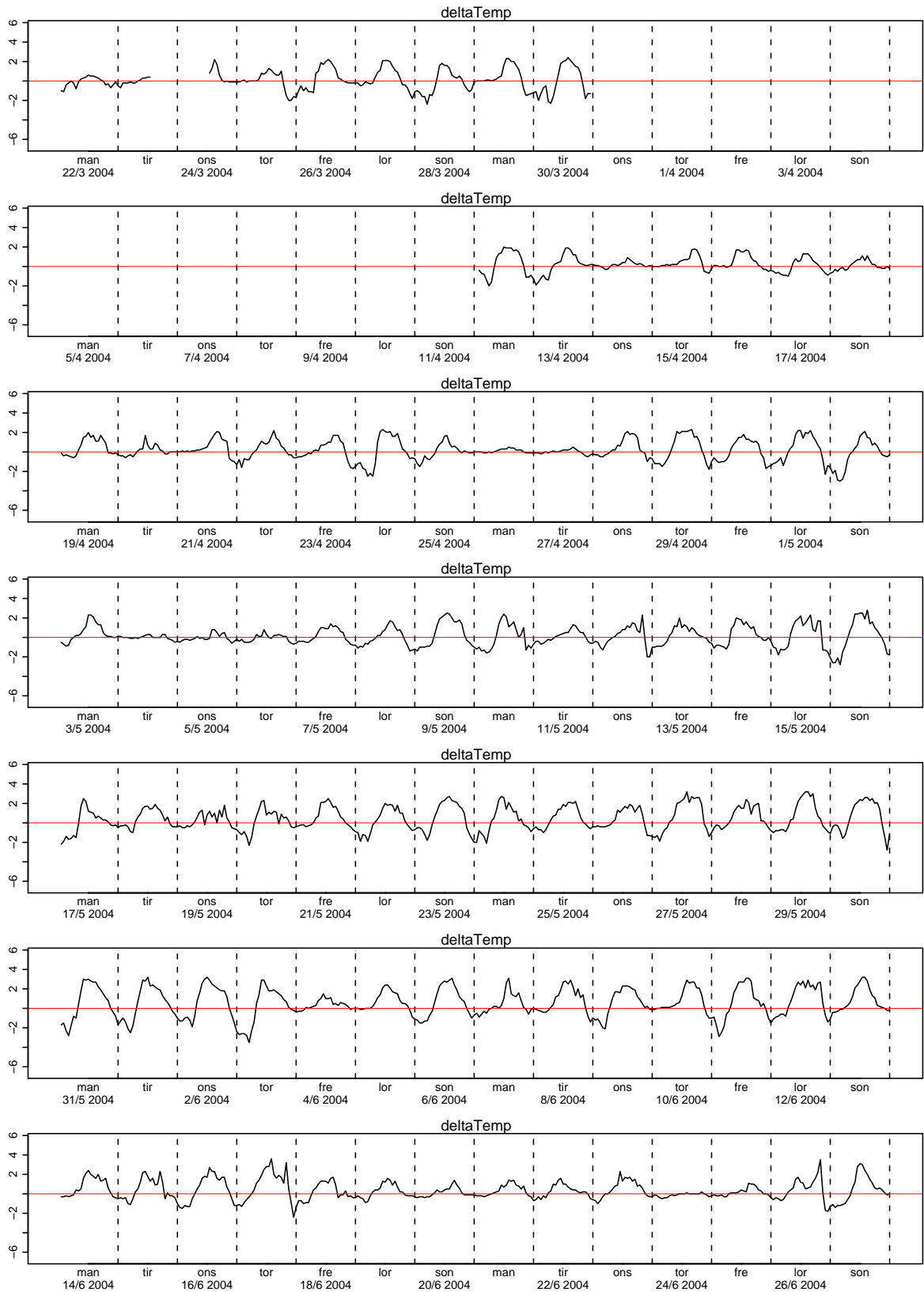




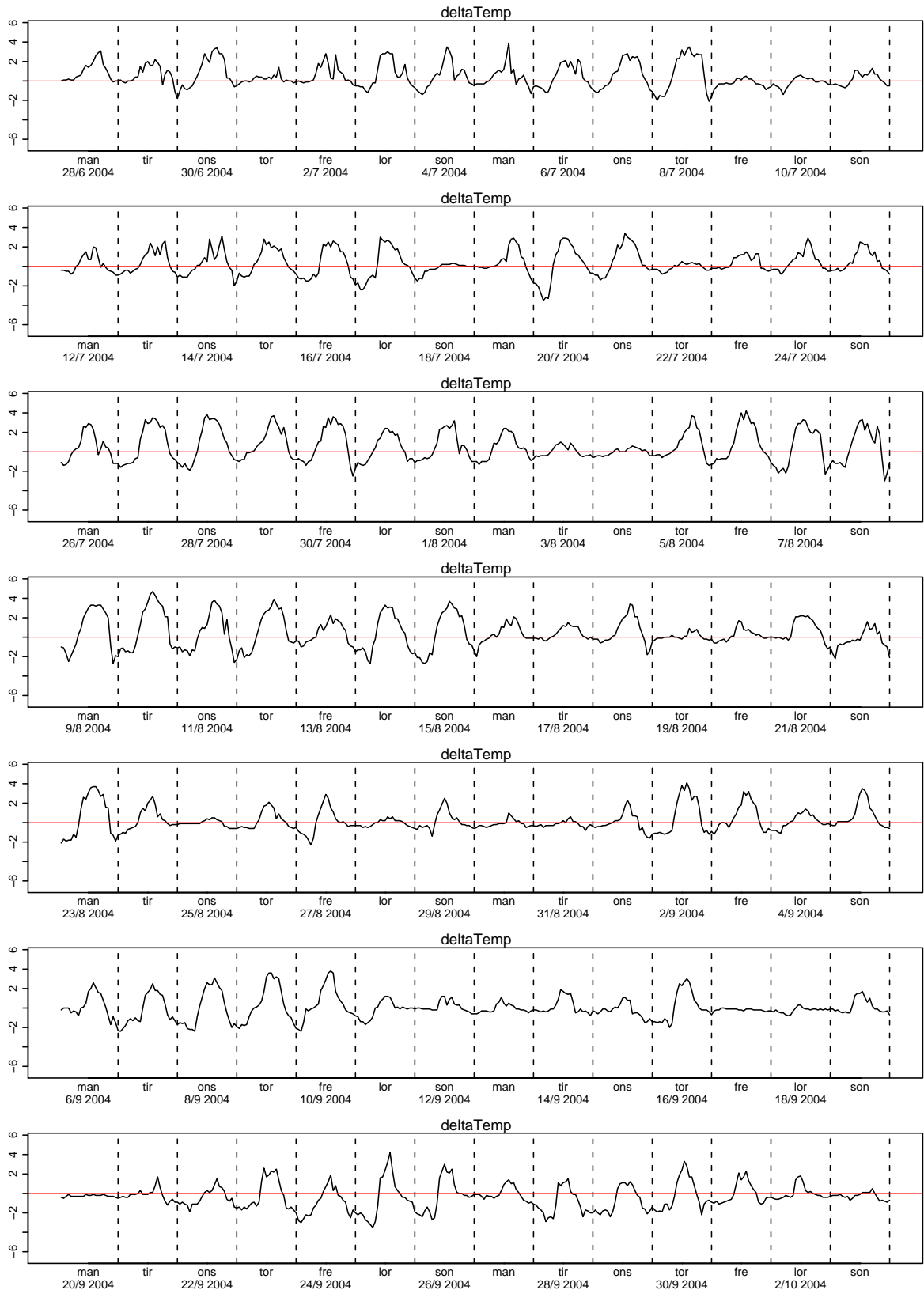
Figur 3.104. Temperatur 2-25 meter



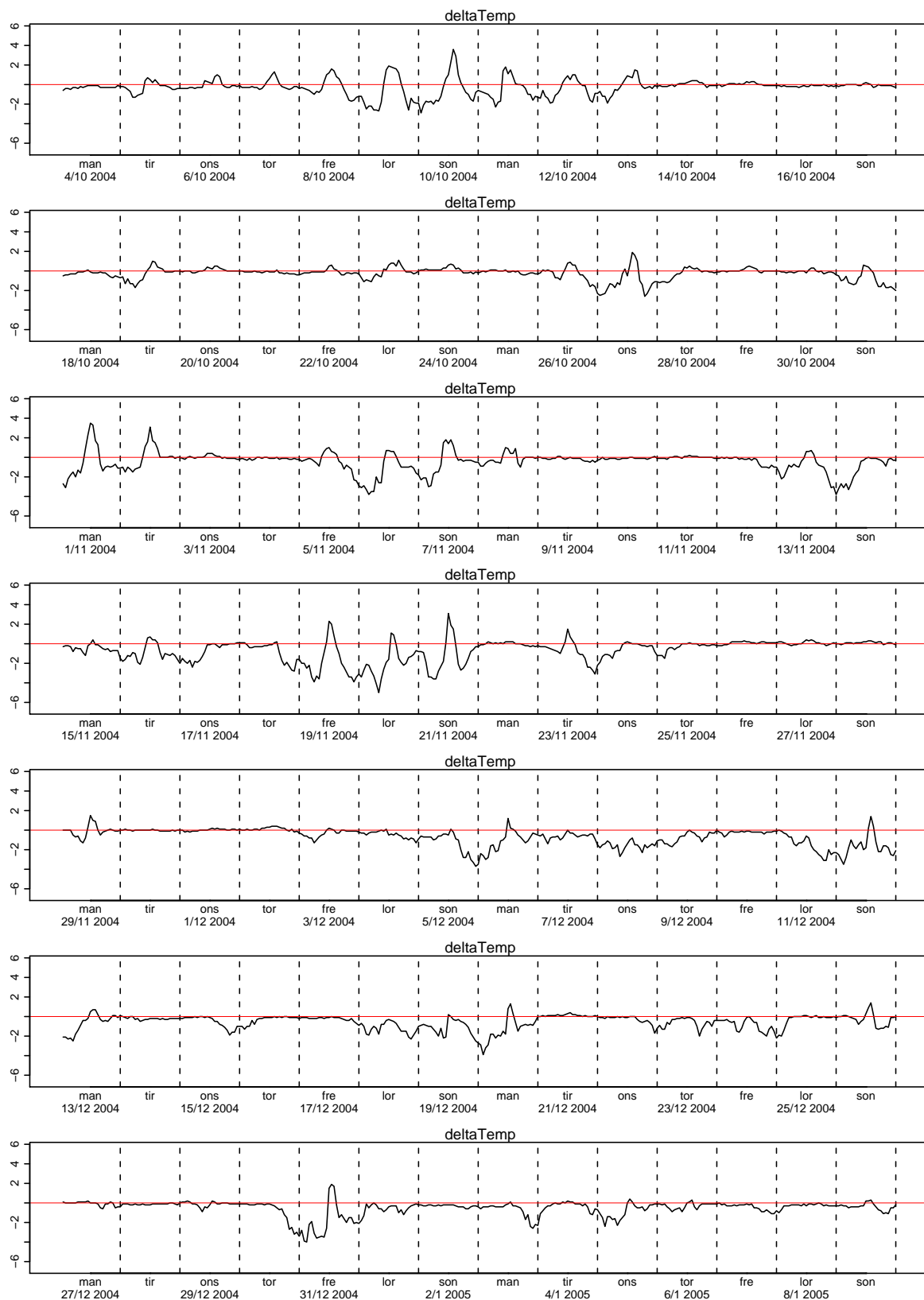
Figur 3.105. Temperatur 2-25 meter



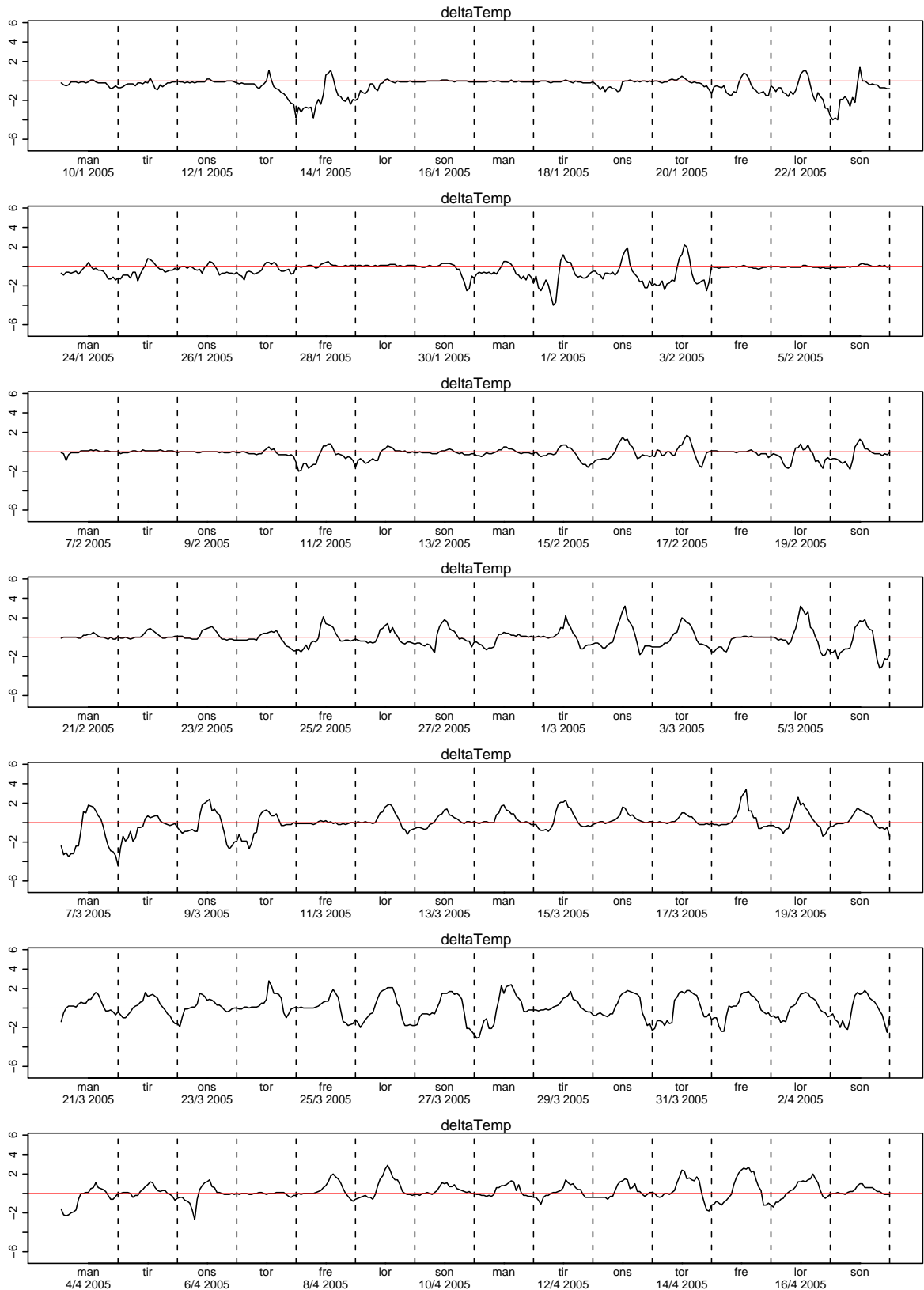
Figur 3.106. Temperatur 2-25 meter



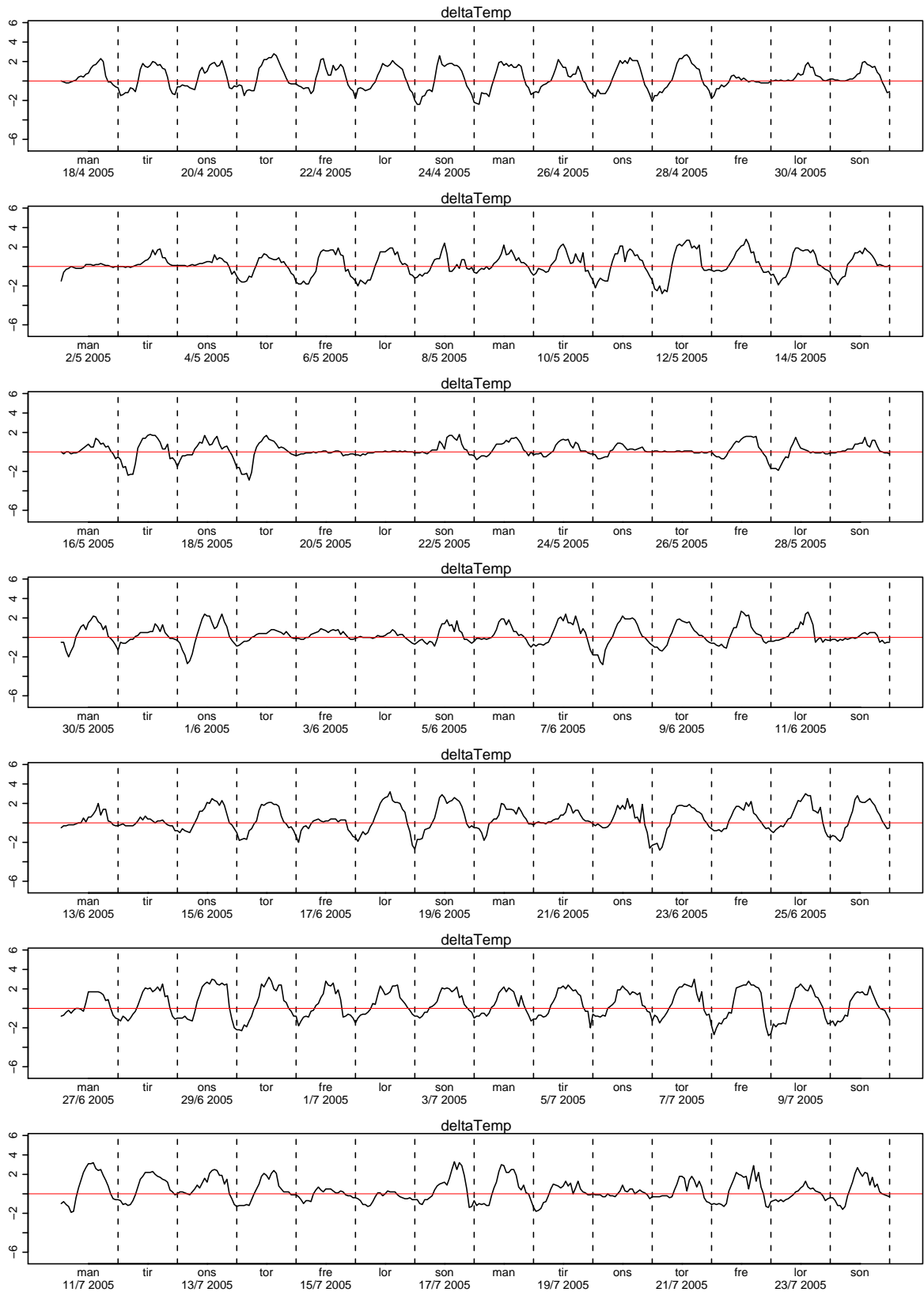
Figur 3.107. Temperatur 2-25 meter



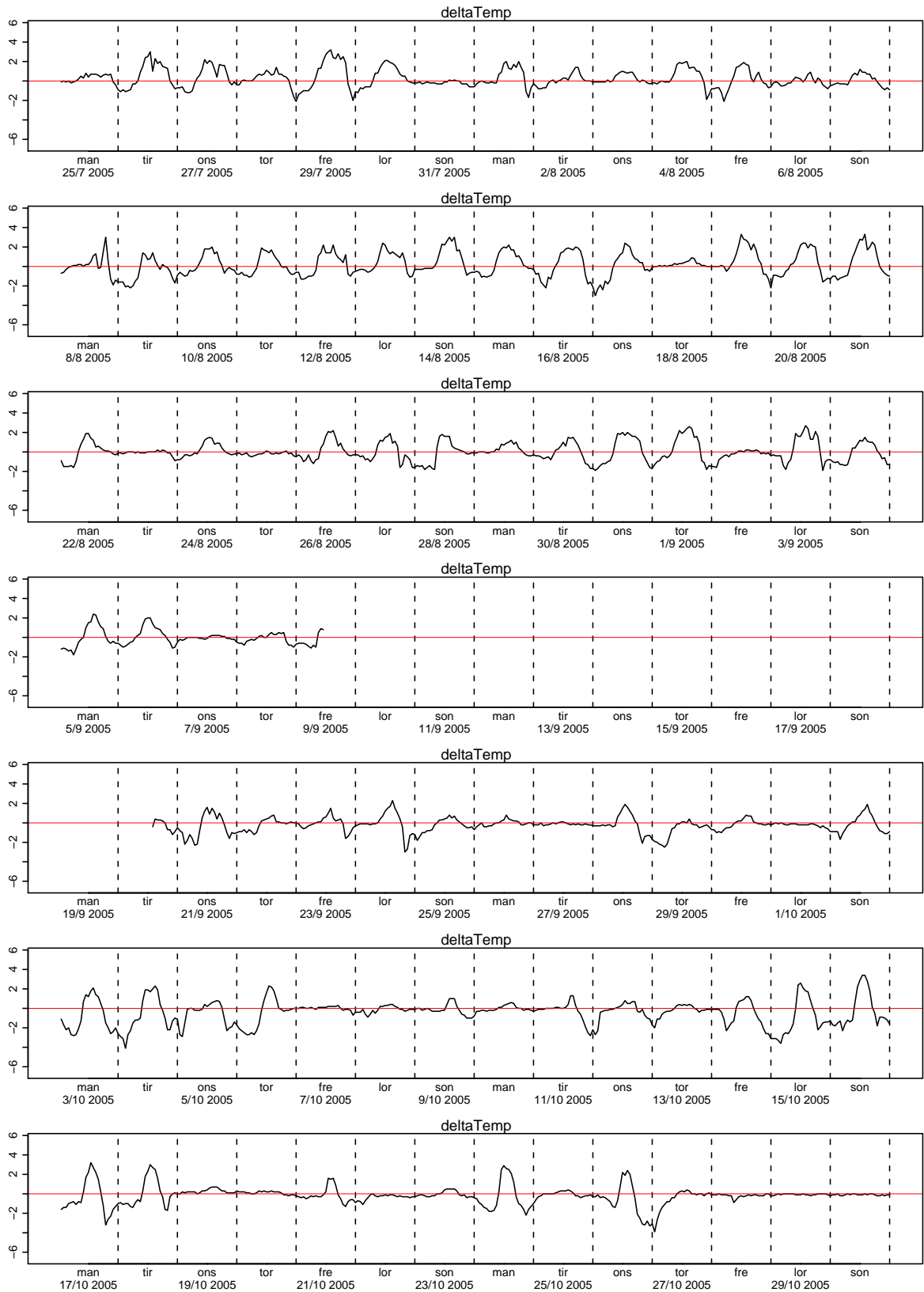
Figur 3.108. Temperatur 2-25 meter



Figur 3.109. Temperatur 2-25 meter

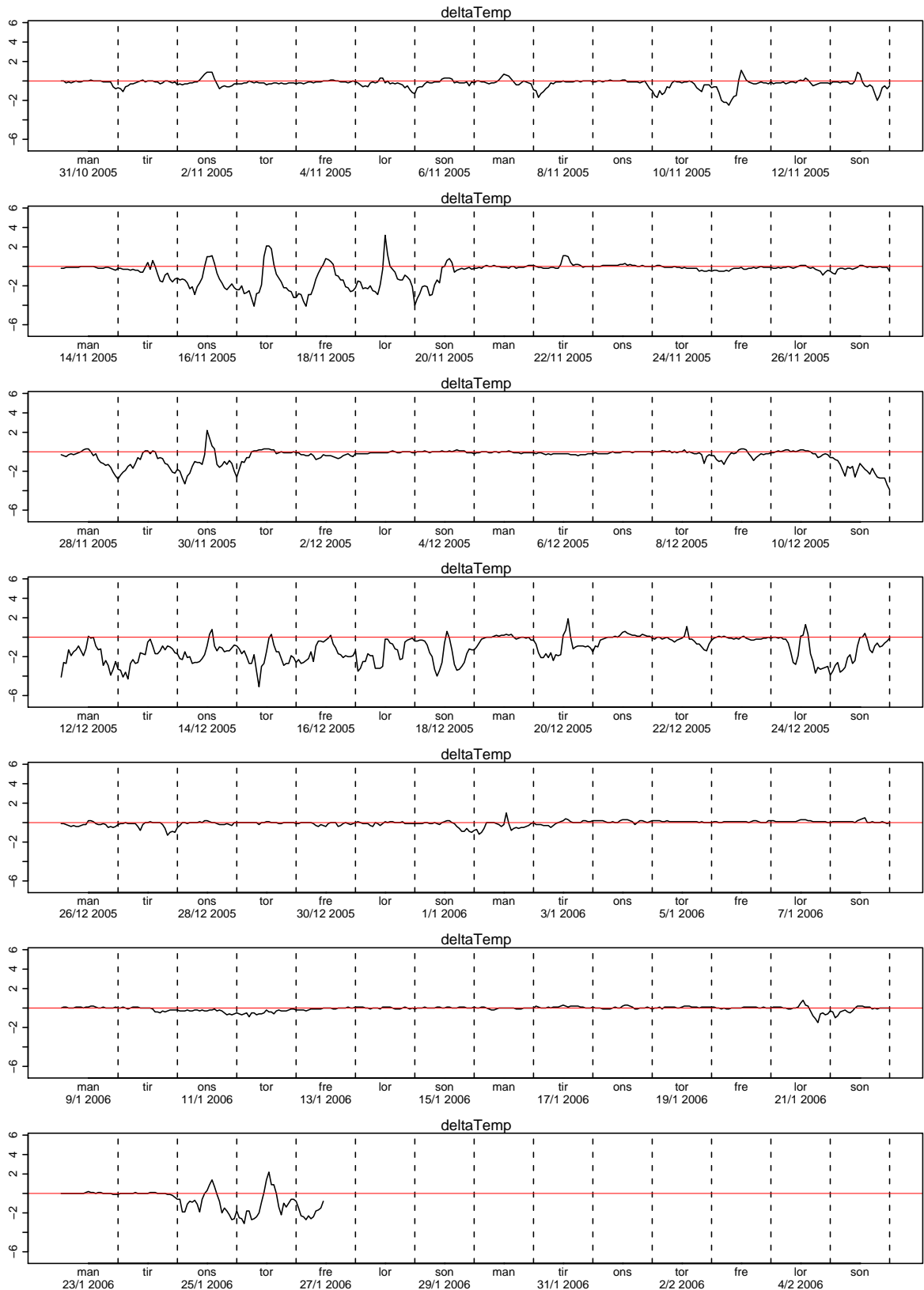


Figur 3.110. Temperatur 2-25 meter

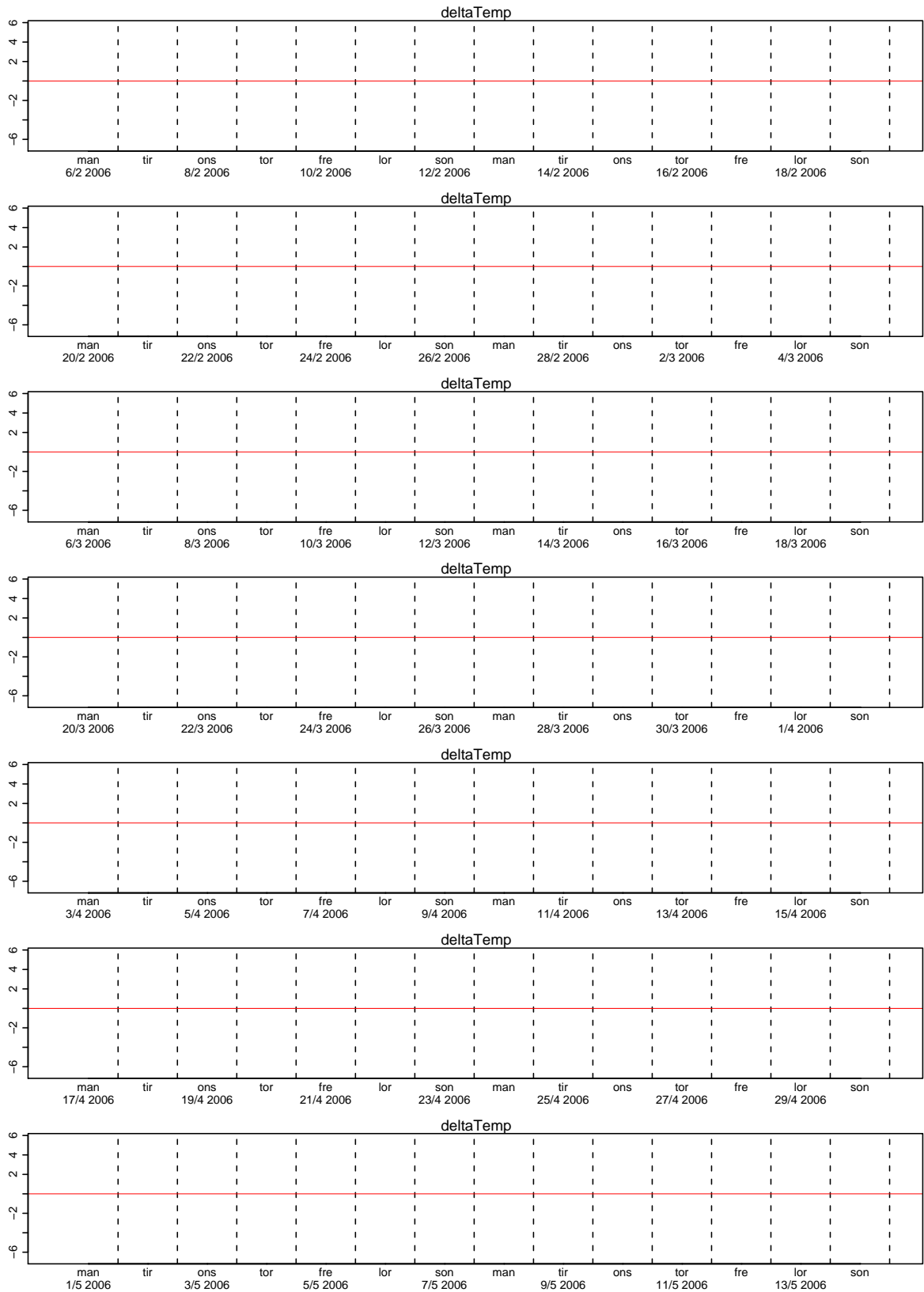


Figur 3.111. Temperatur 2-25 meter

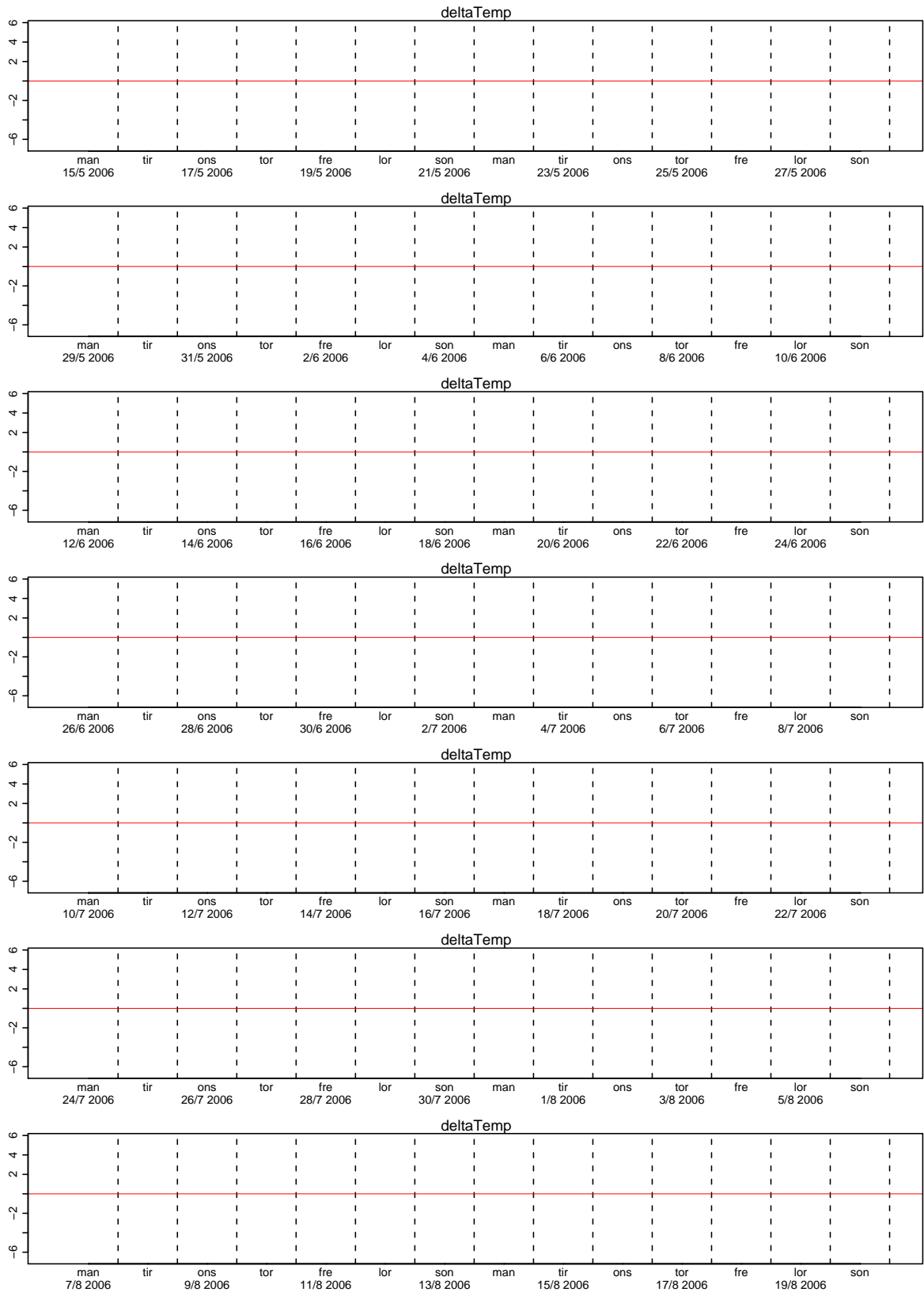




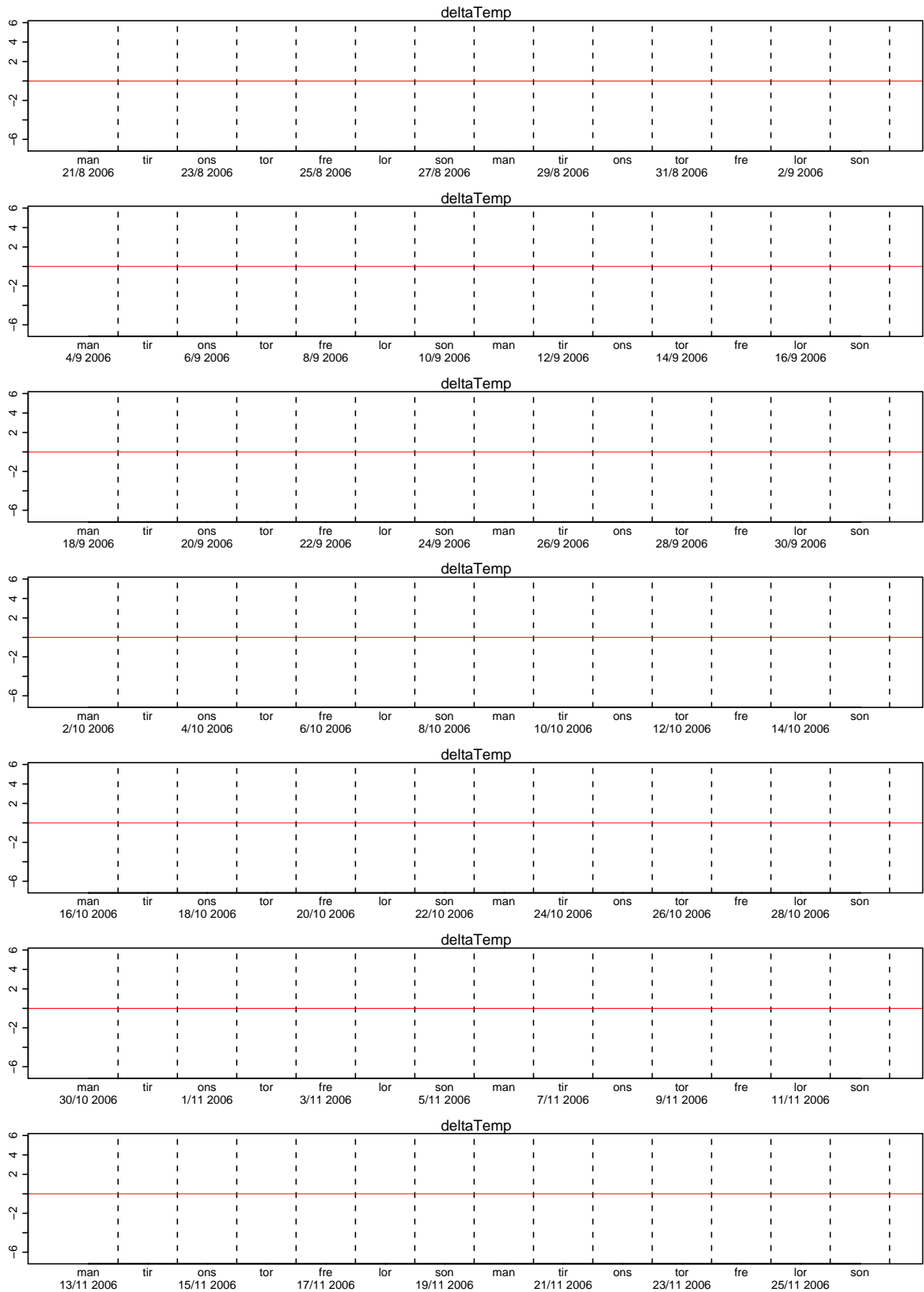
Figur 3.112. Temperatur 2-25 meter



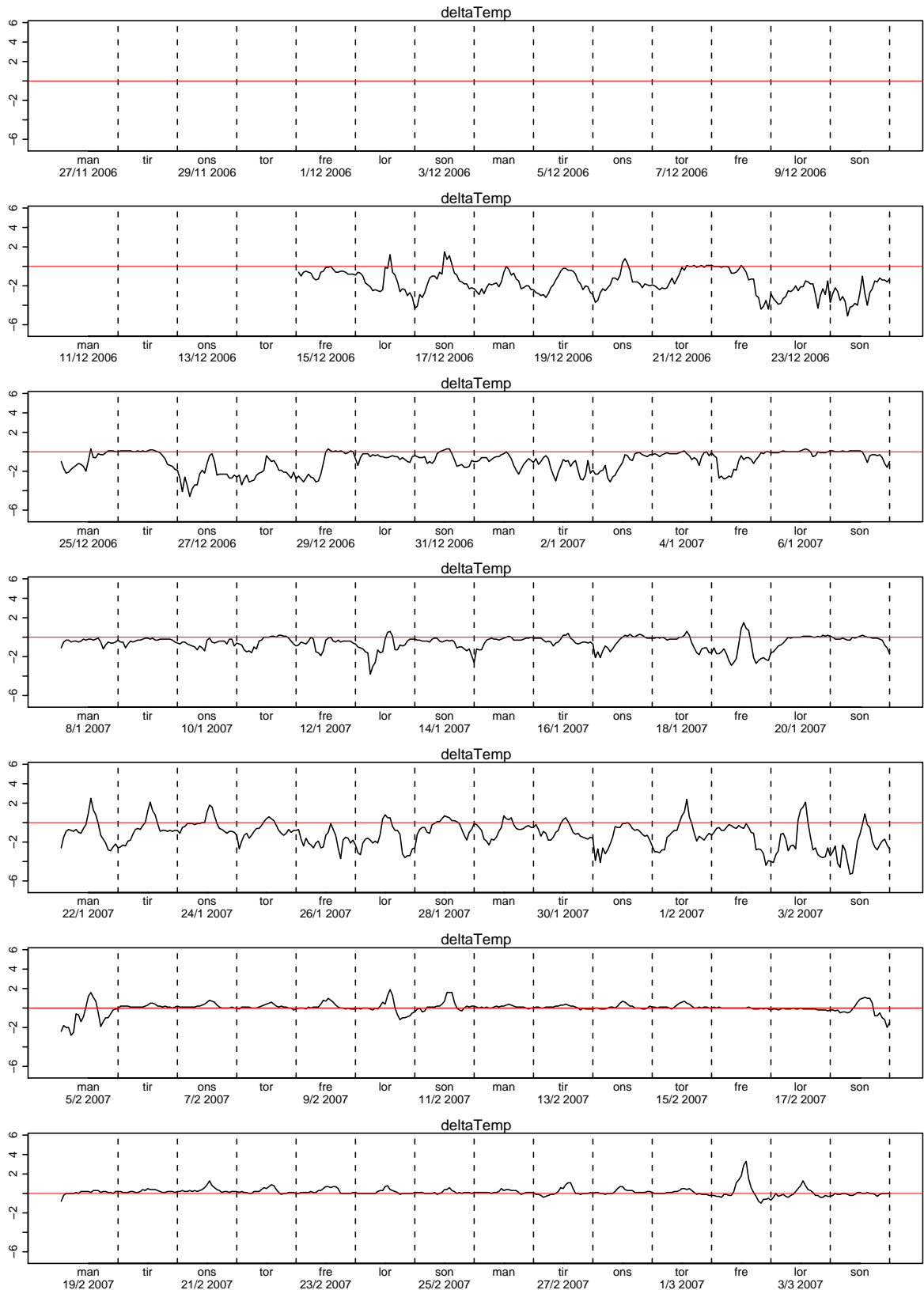
Figur 3.113. Temperatur 2-25 meter



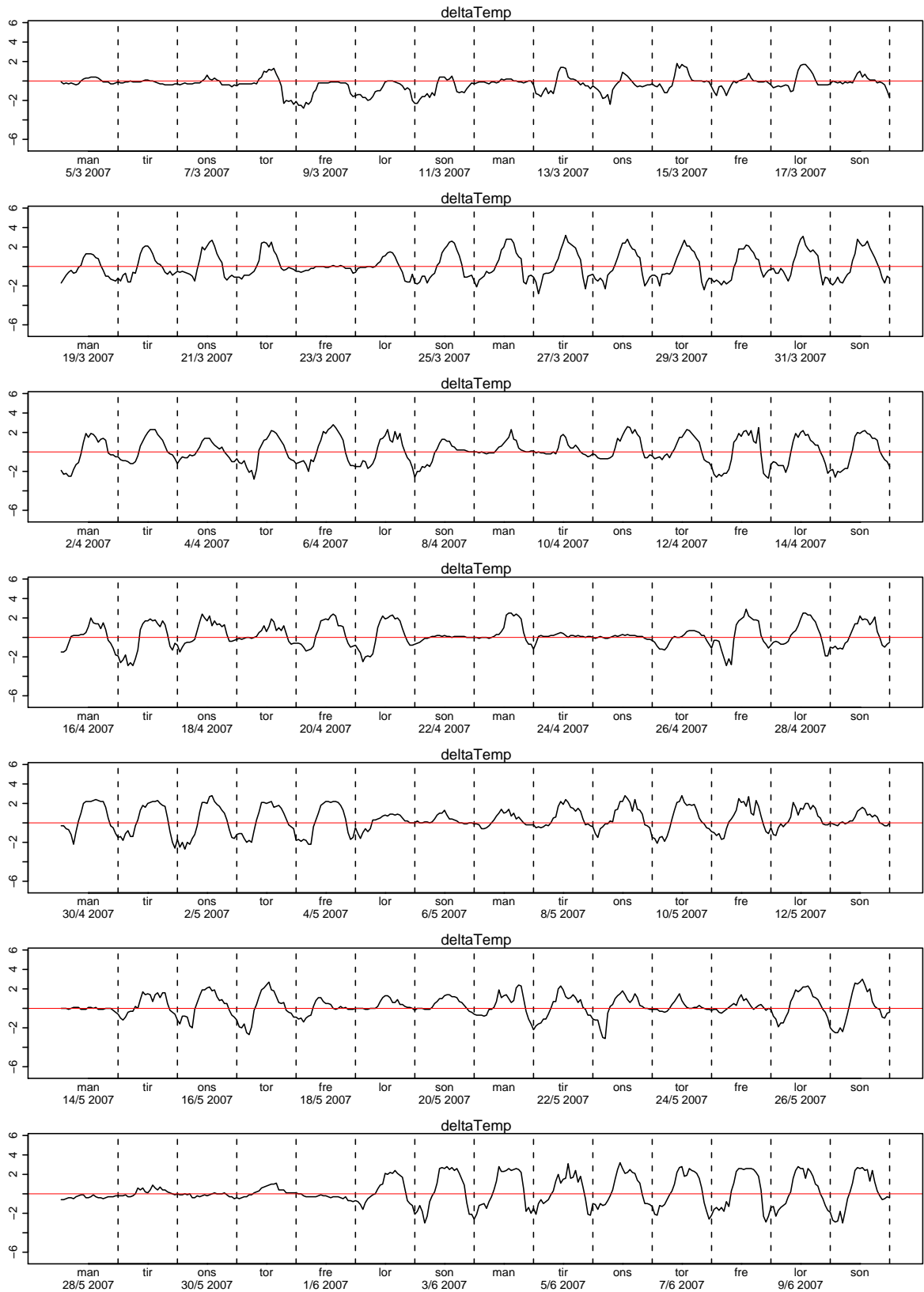
Figur 3.114. Temperatur 2-25 meter



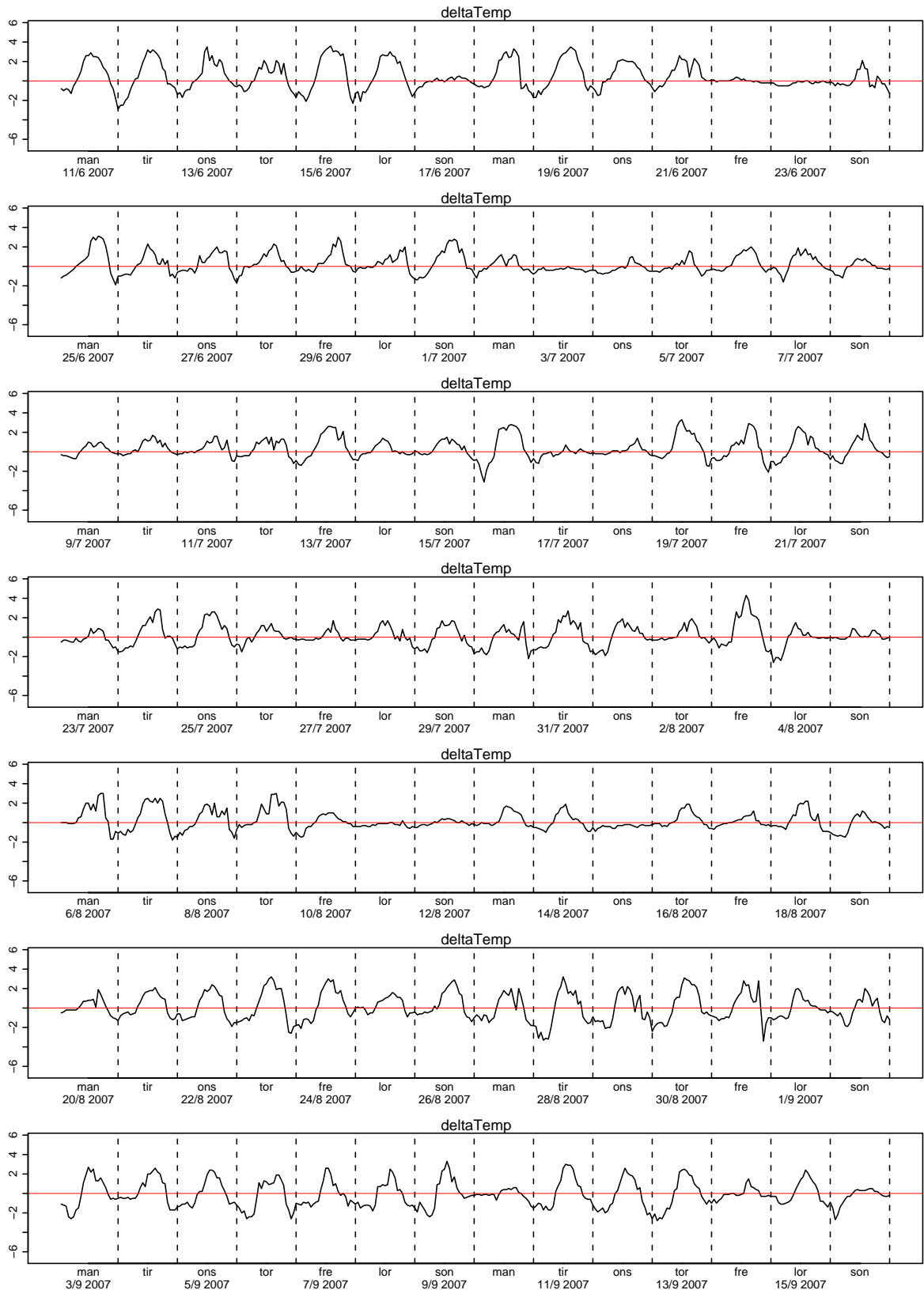
Figur 3.115. Temperatur 2-25 meter



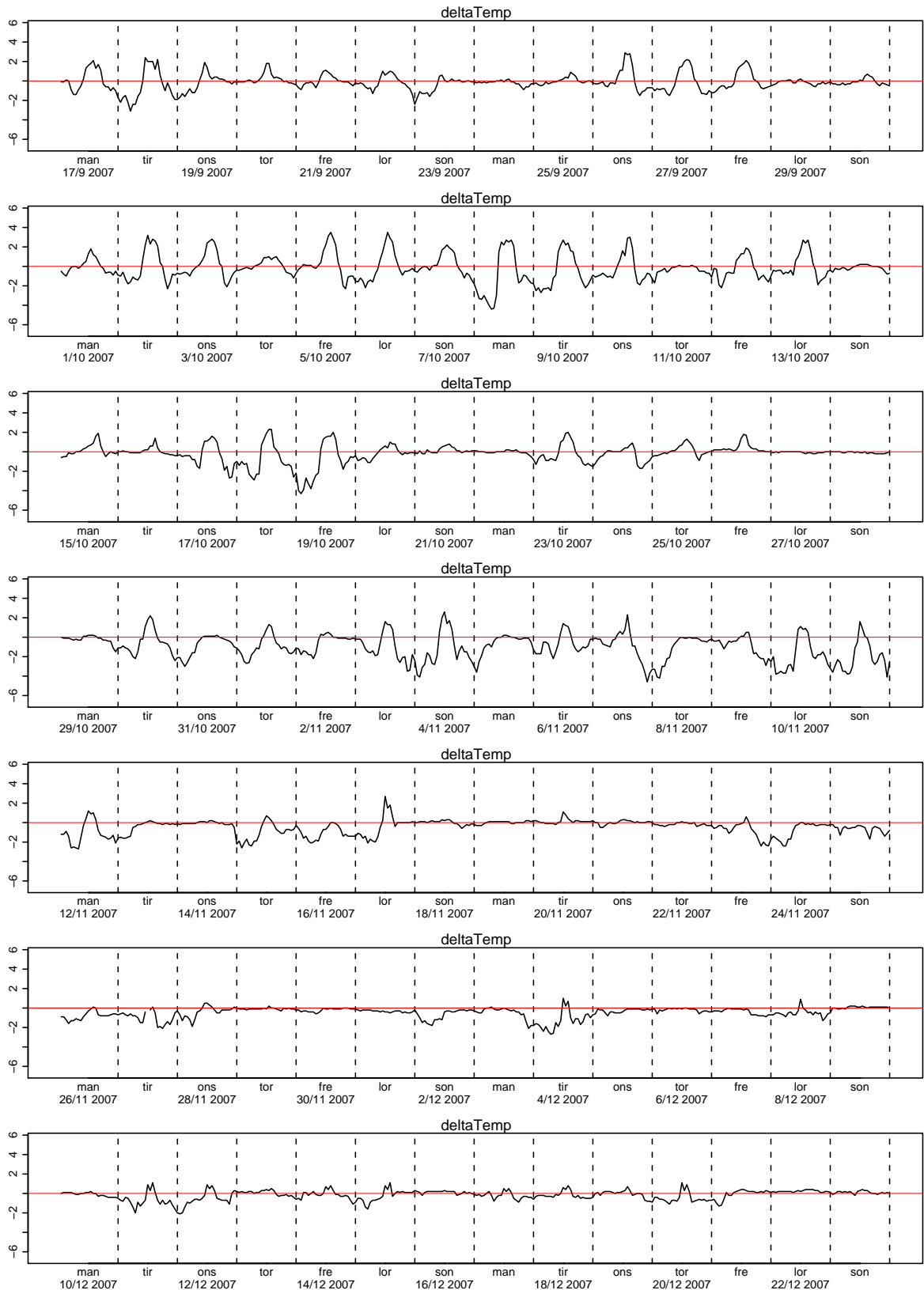
Figur 3.116. Temperatur 2-25 meter



Figur 3.117. Temperatur 2-25 meter

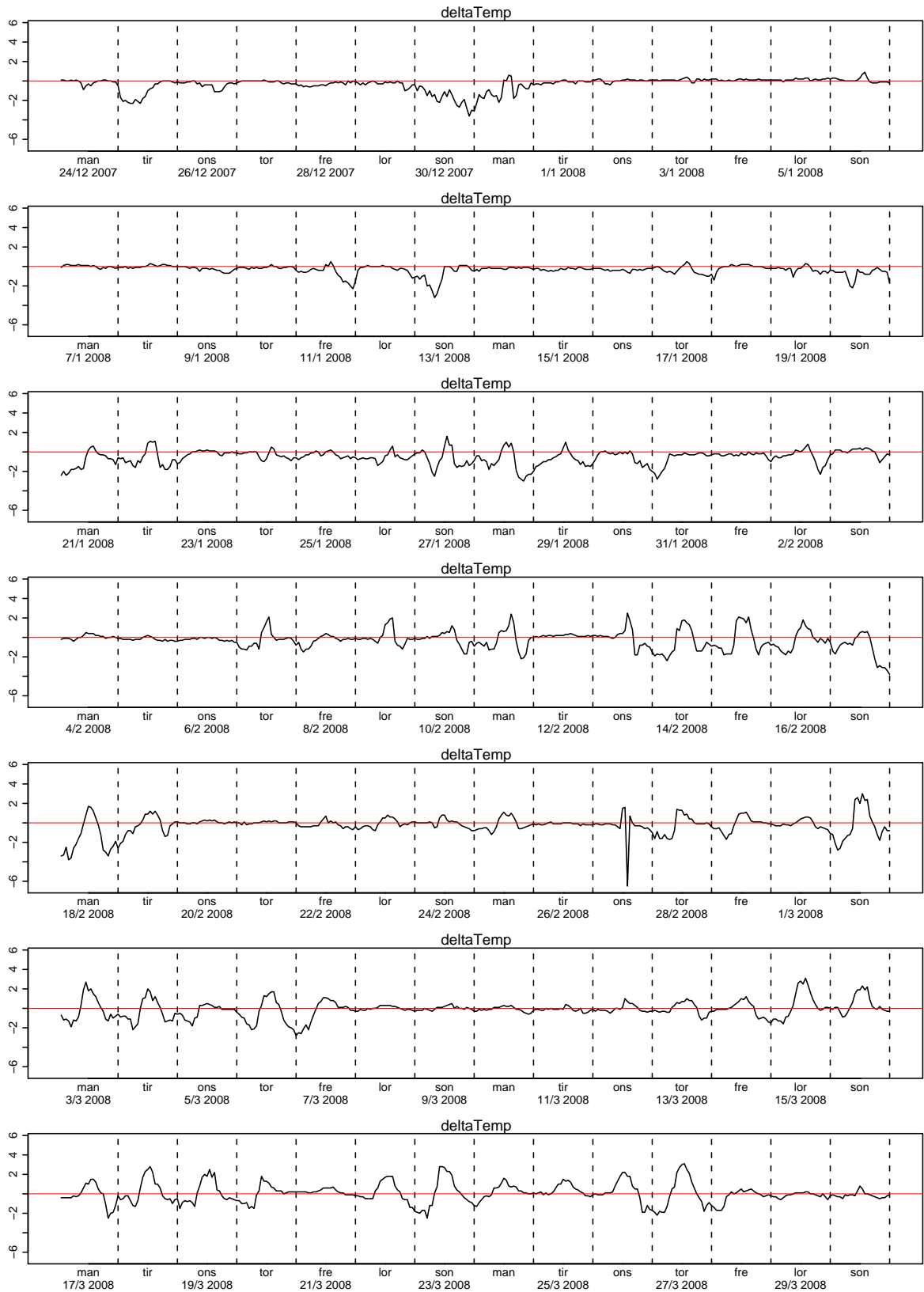


Figur 3.118. Temperatur 2-25 meter

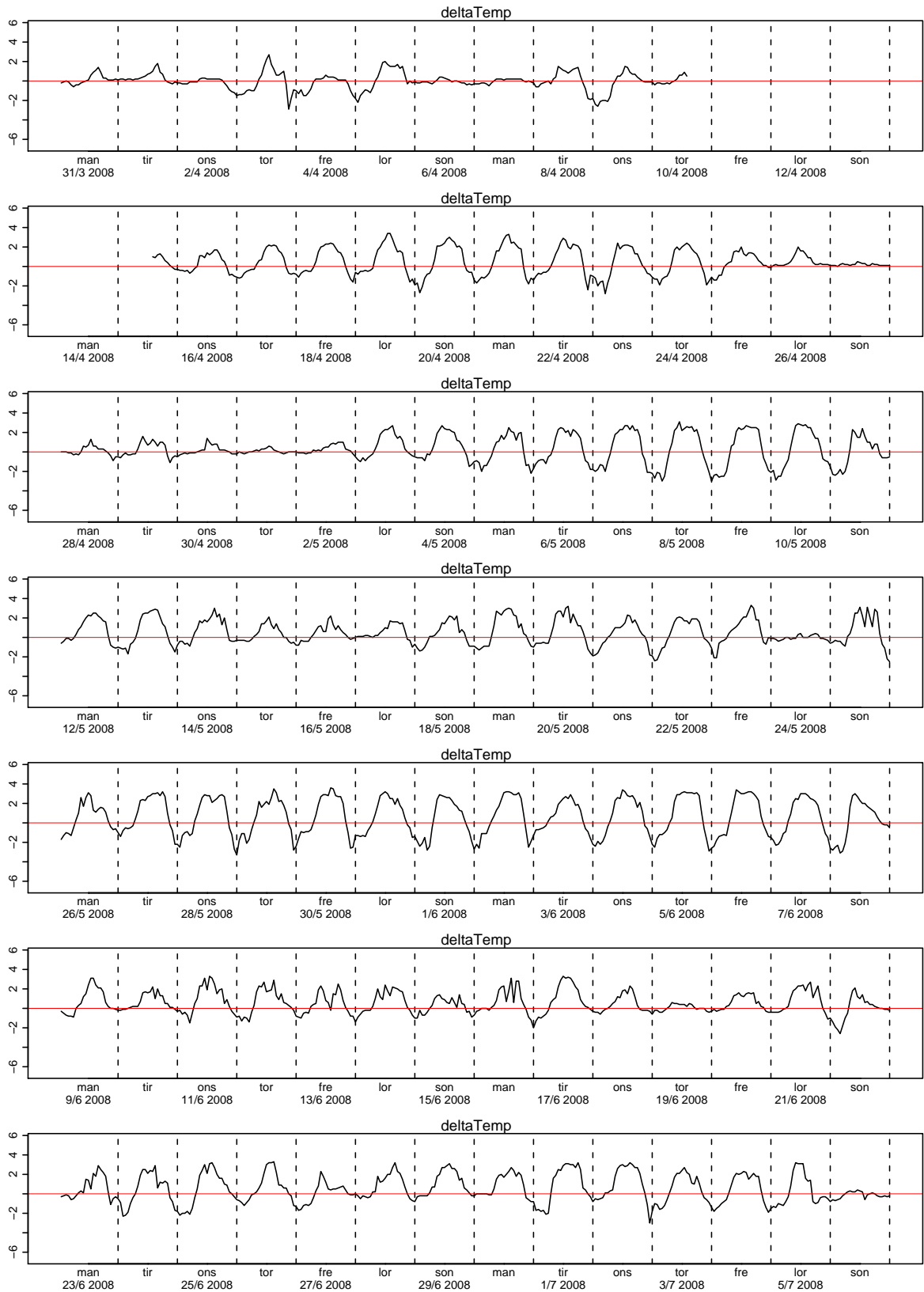


Figur 3.119. Temperatur 2-25 meter

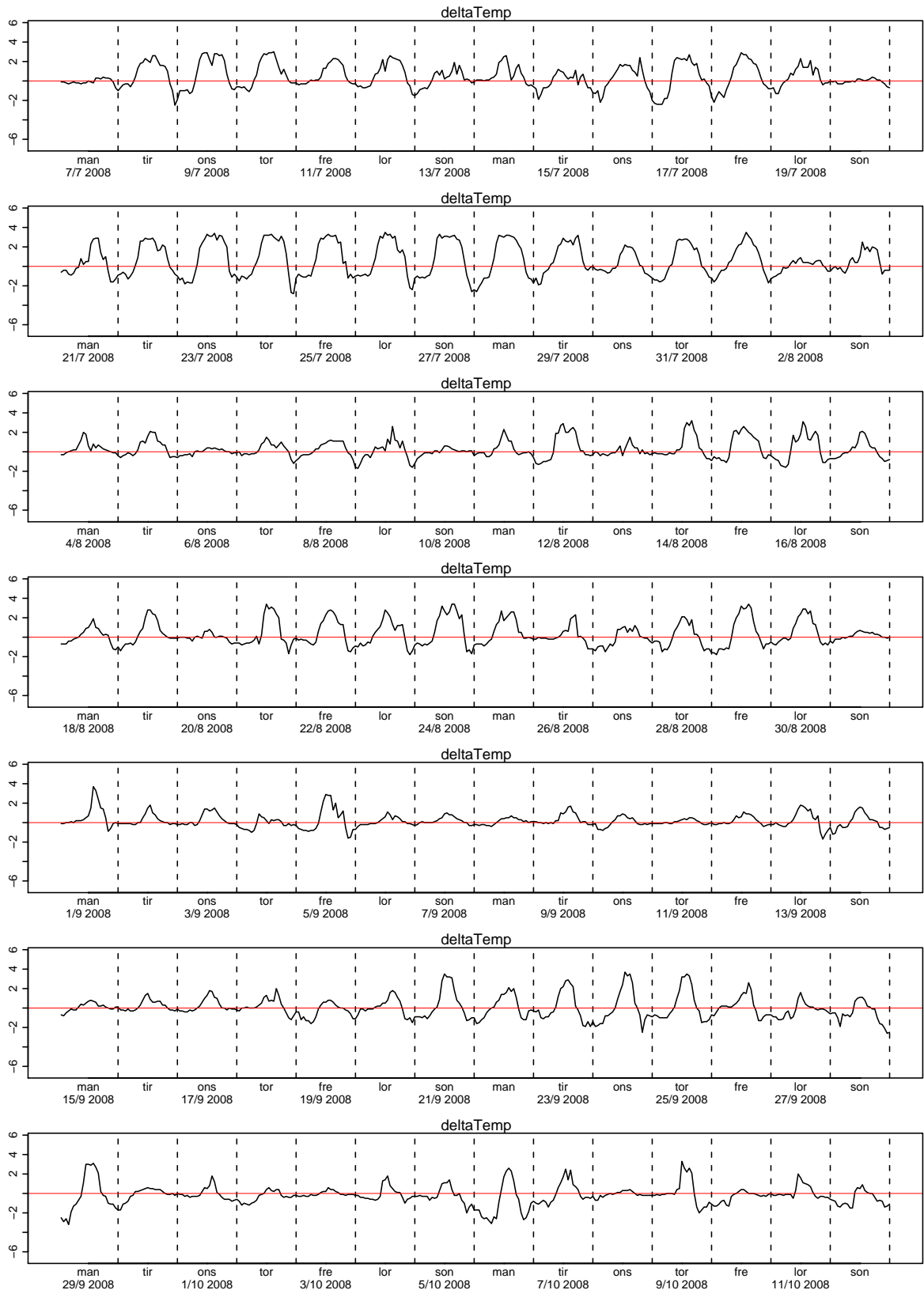




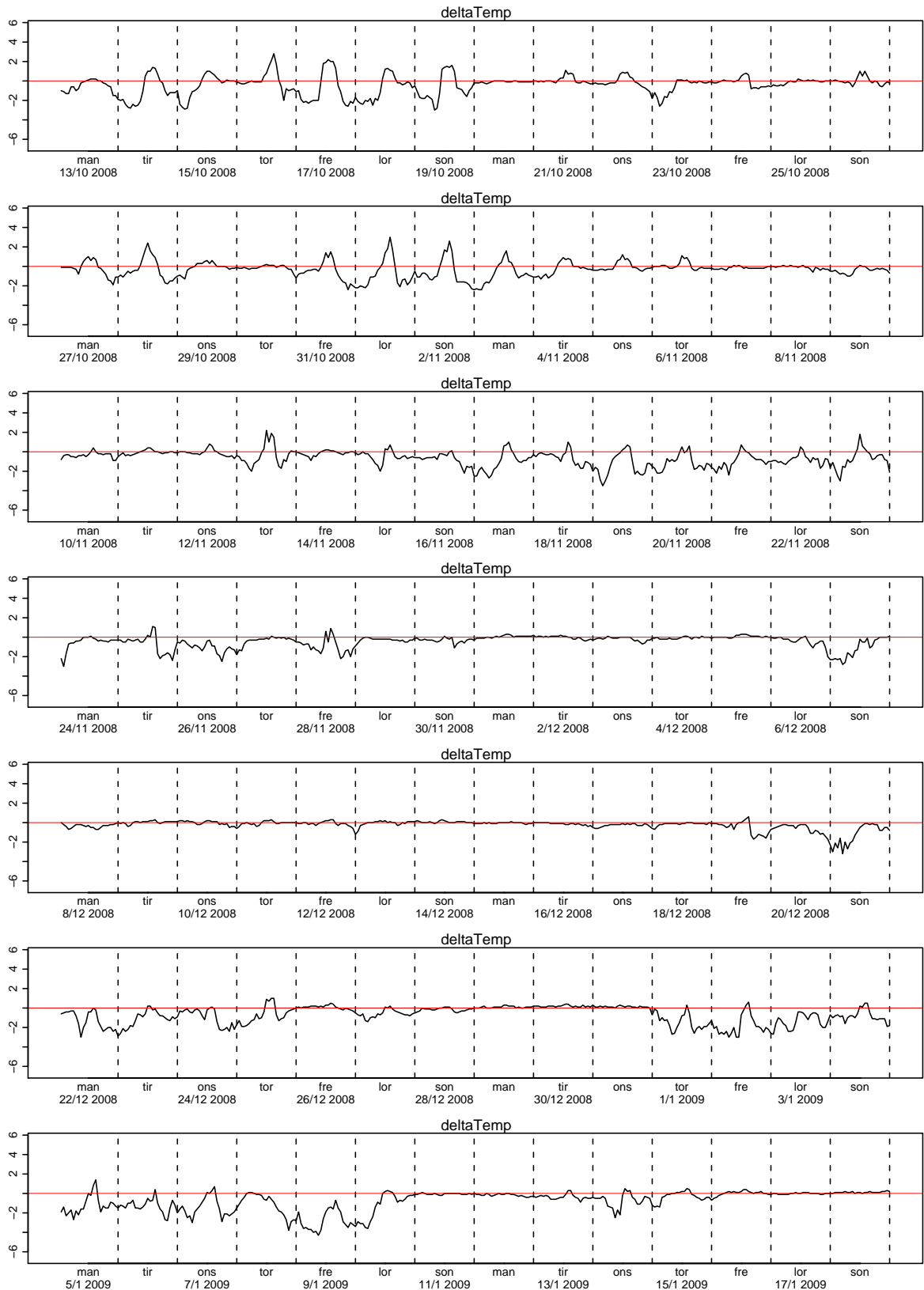
Figur 3.120. Temperatur 2-25 meter



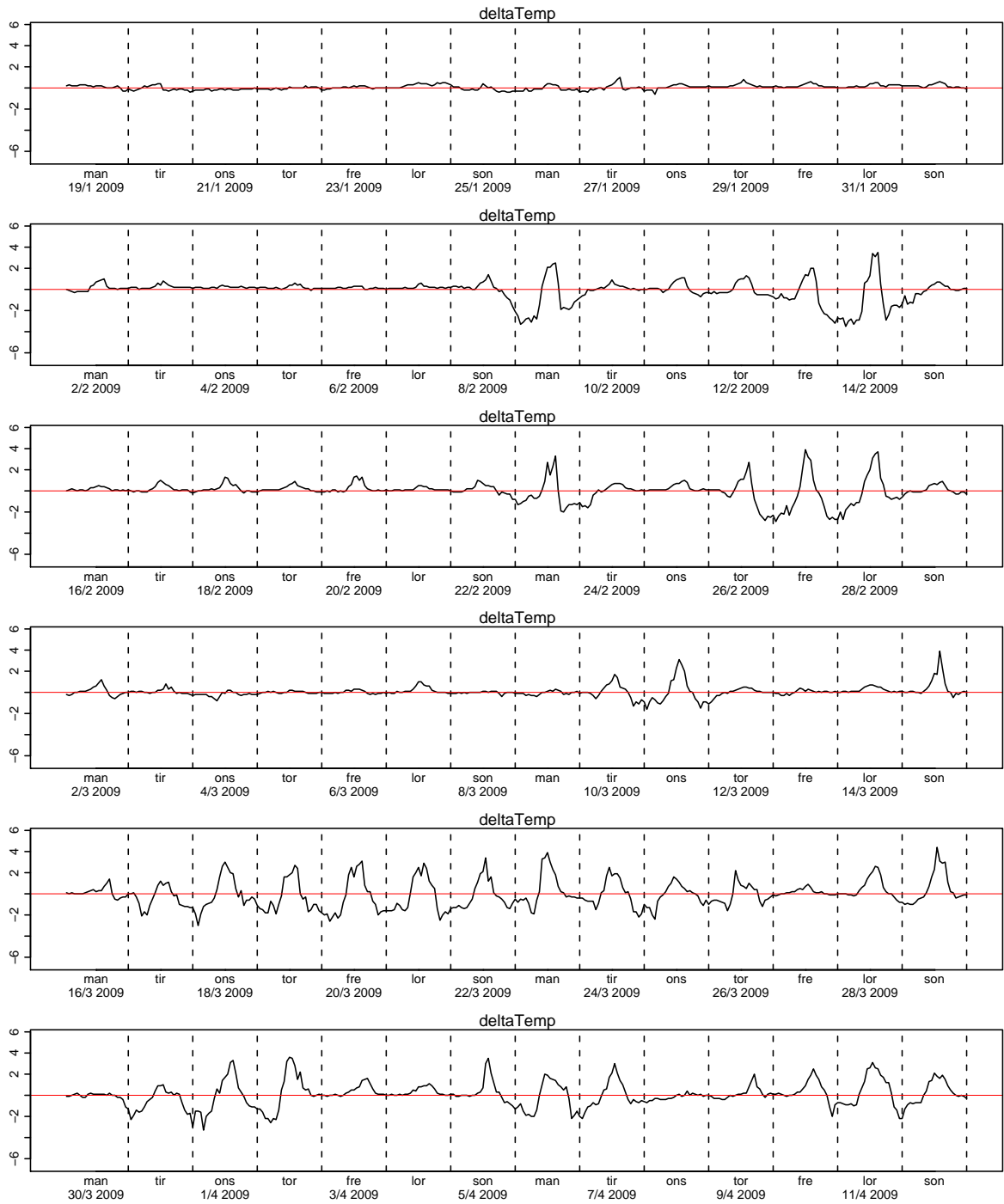
Figur 3.121. Temperatur 2-25 meter



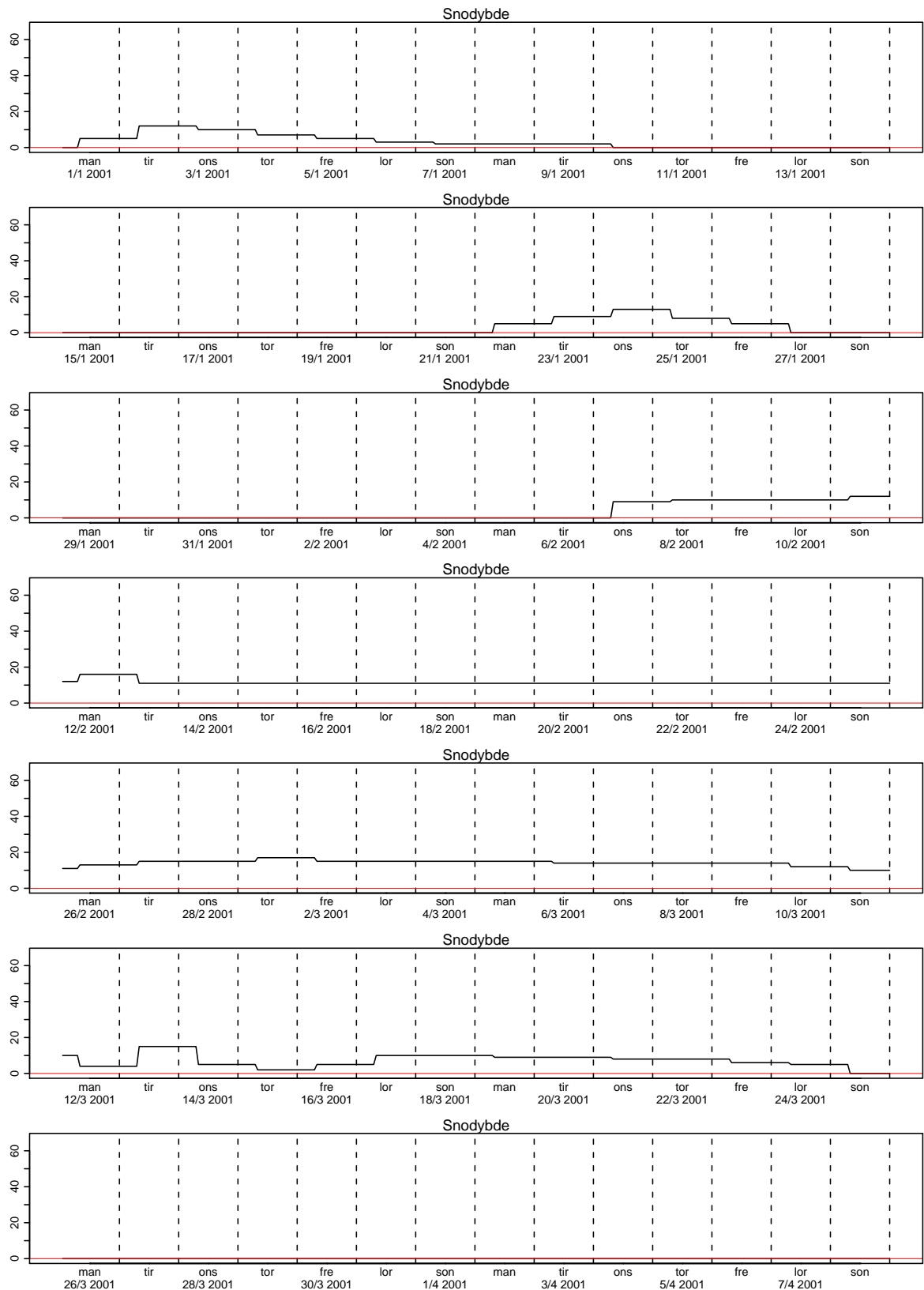
Figur 3.122. Temperatur 2-25 meter



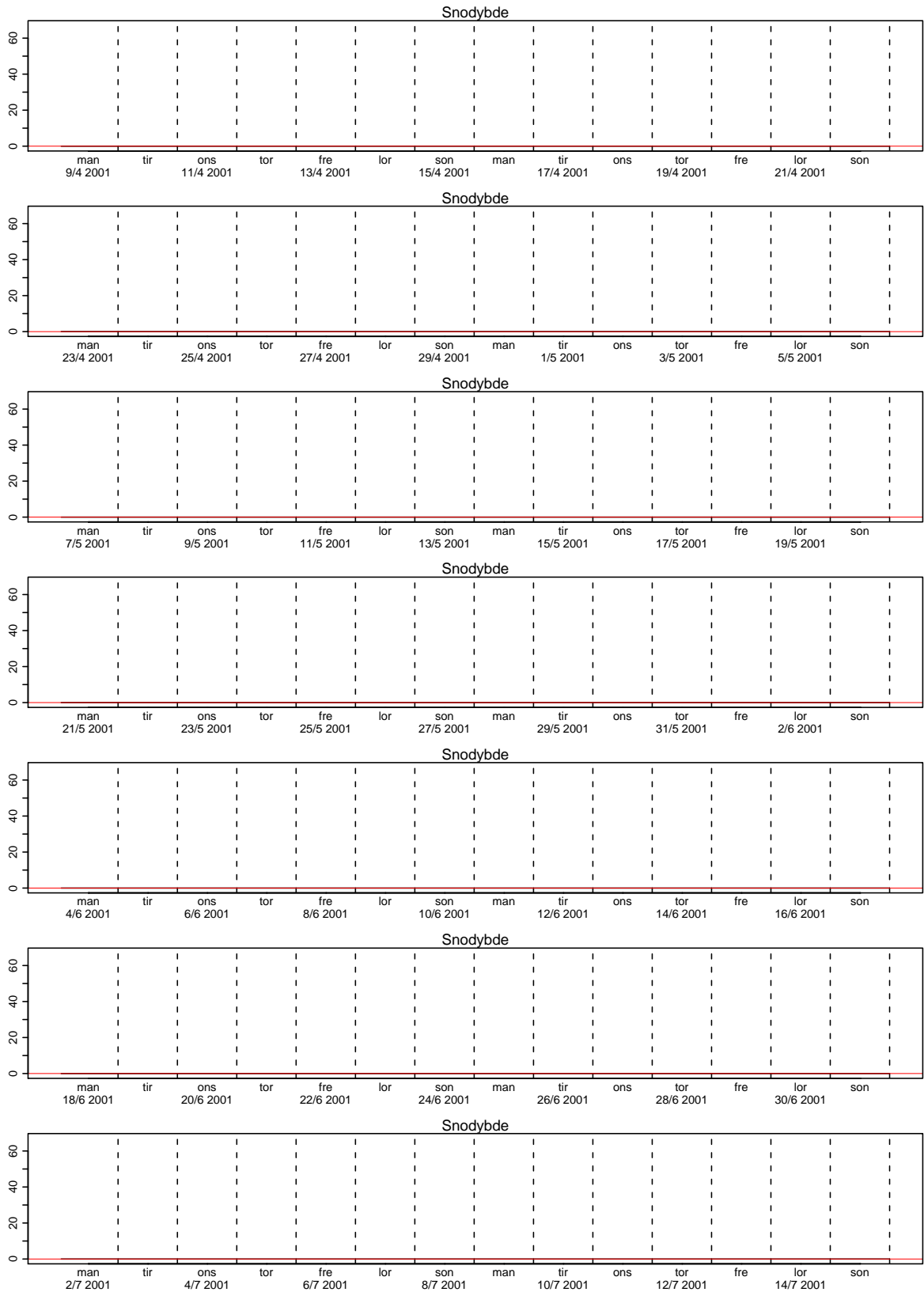
Figur 3.123. Temperatur 2-25 meter



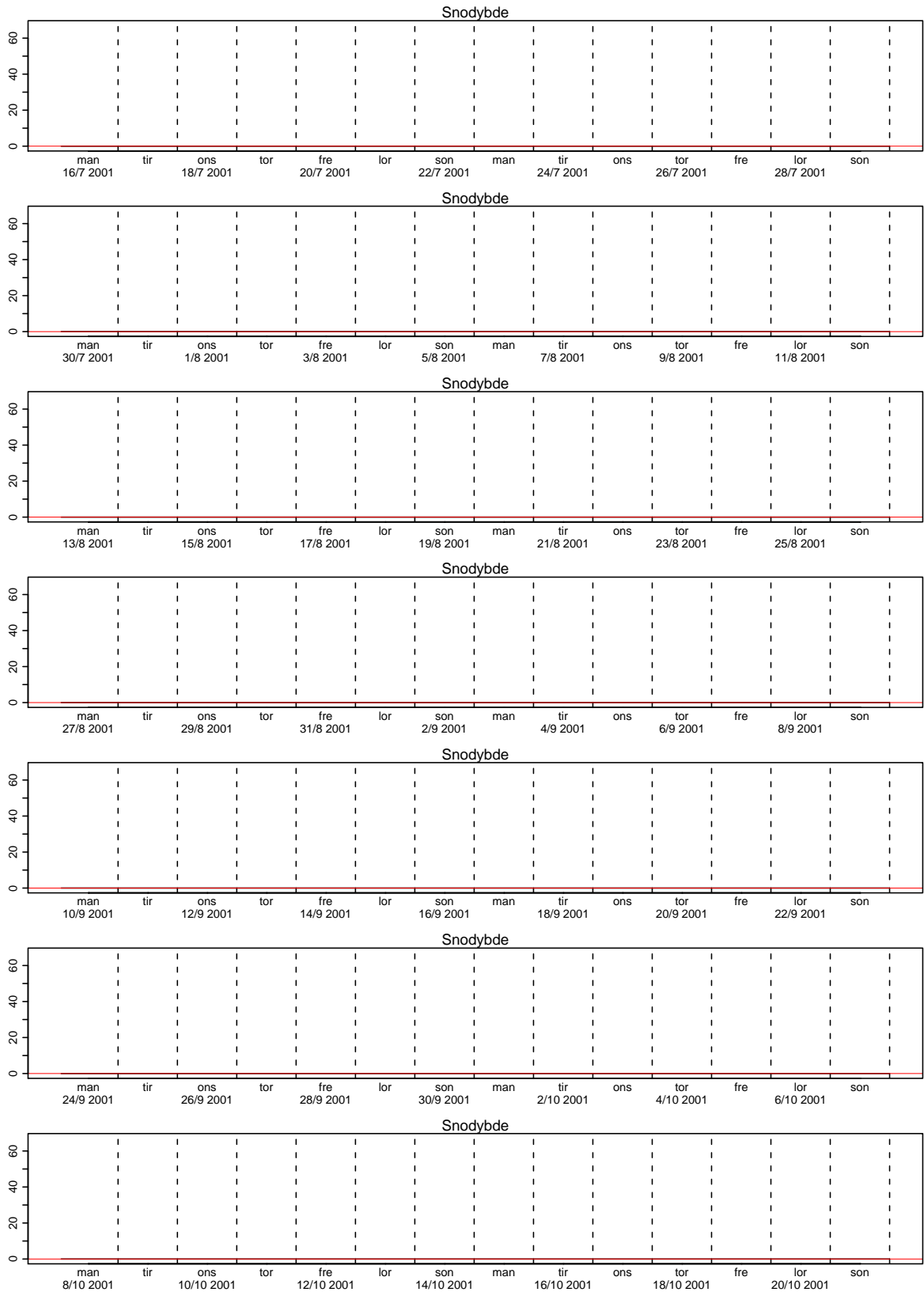
Figur 3.124. Temperatur 2-25 meter



Figur 3.125. Snødybde

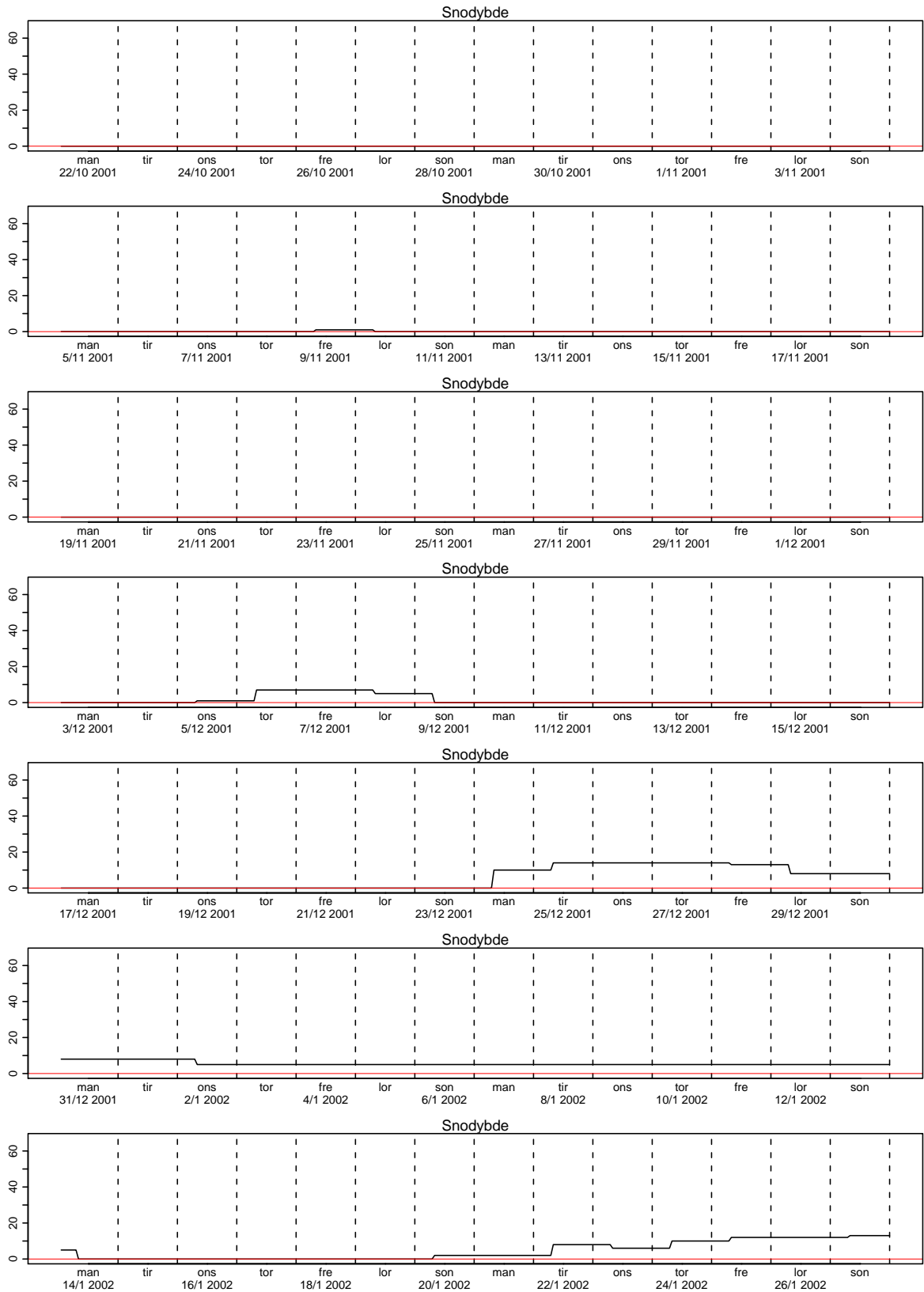


Figur 3.126. Snødybde

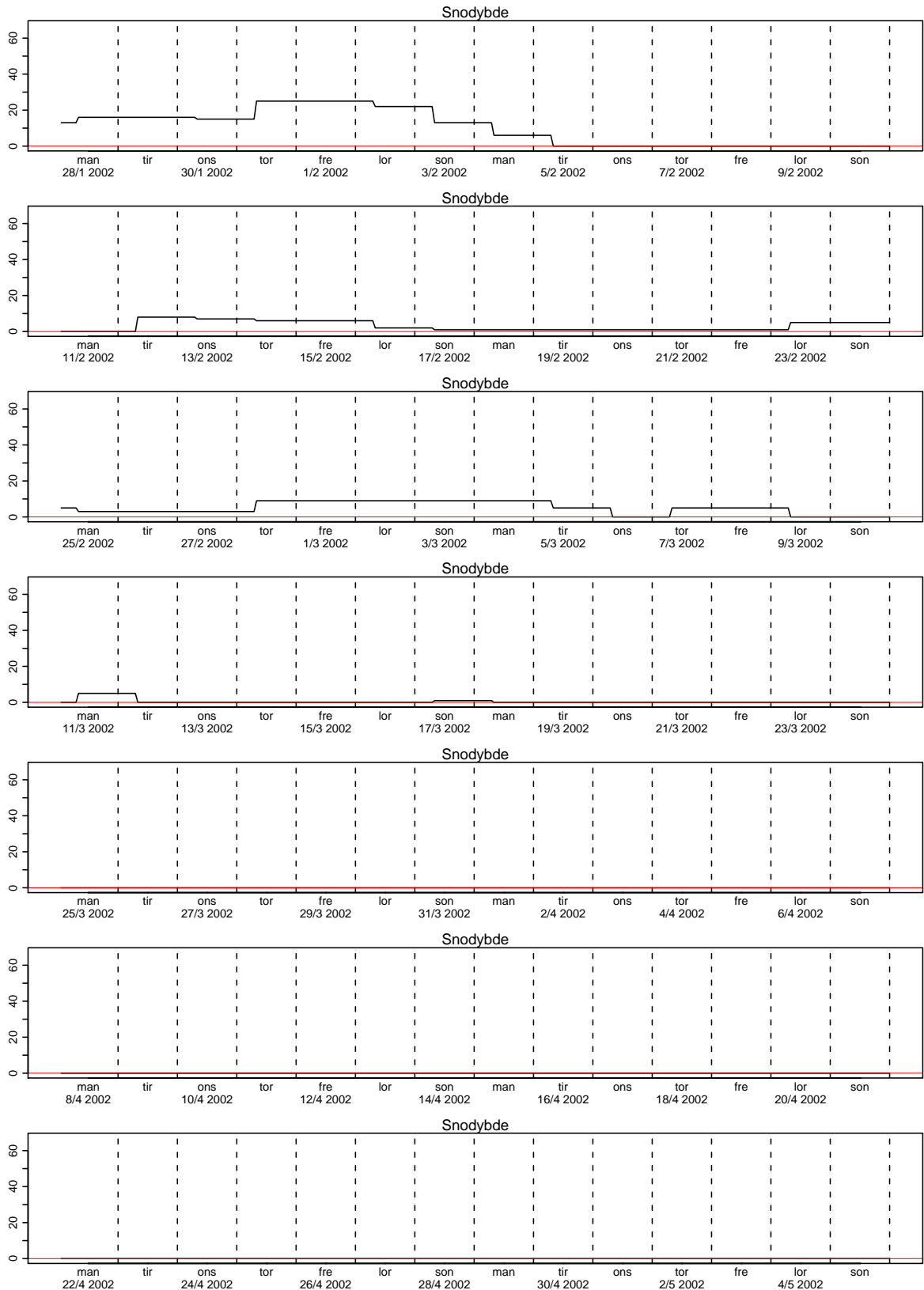


Figur 3.127. Snødybde

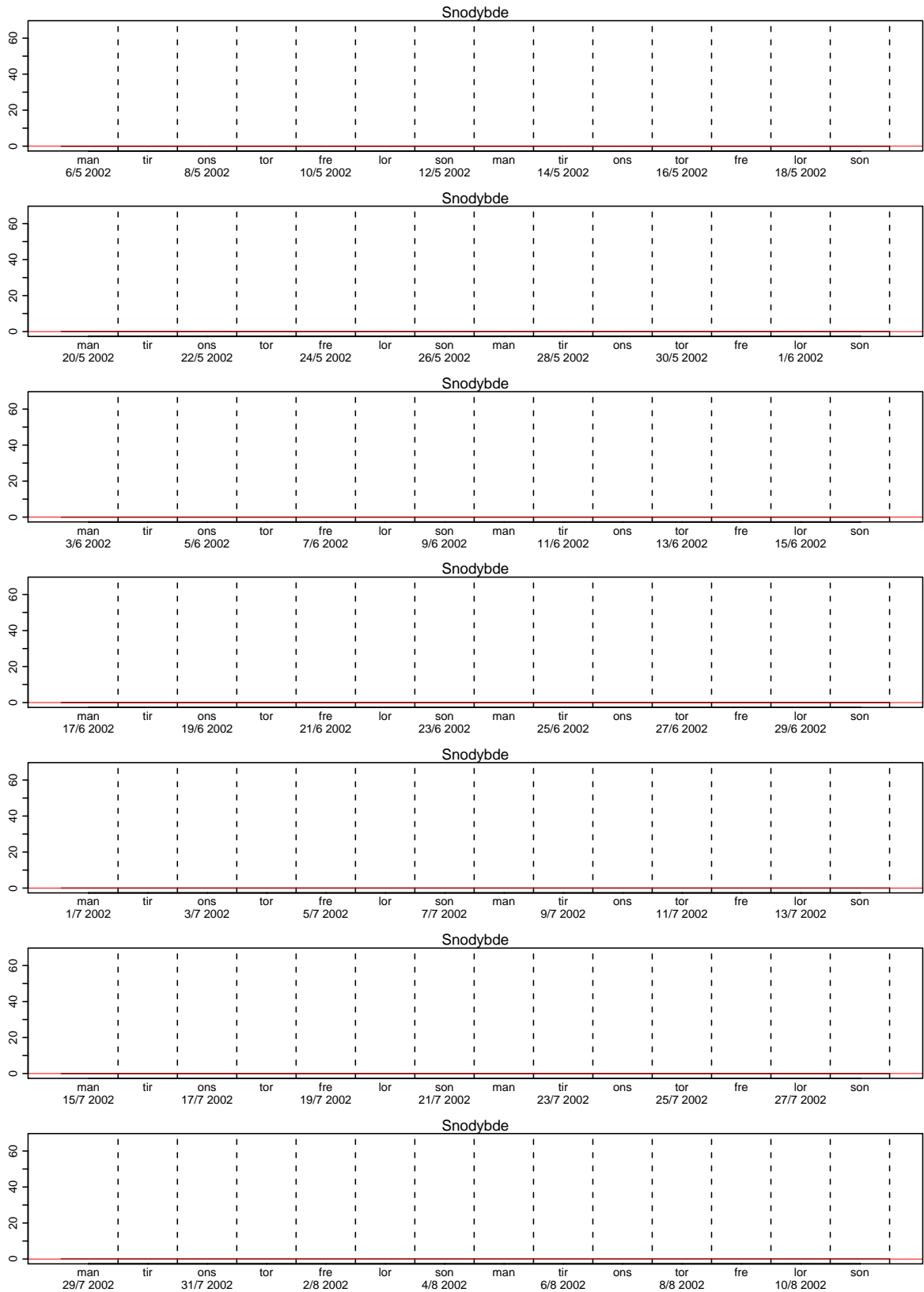




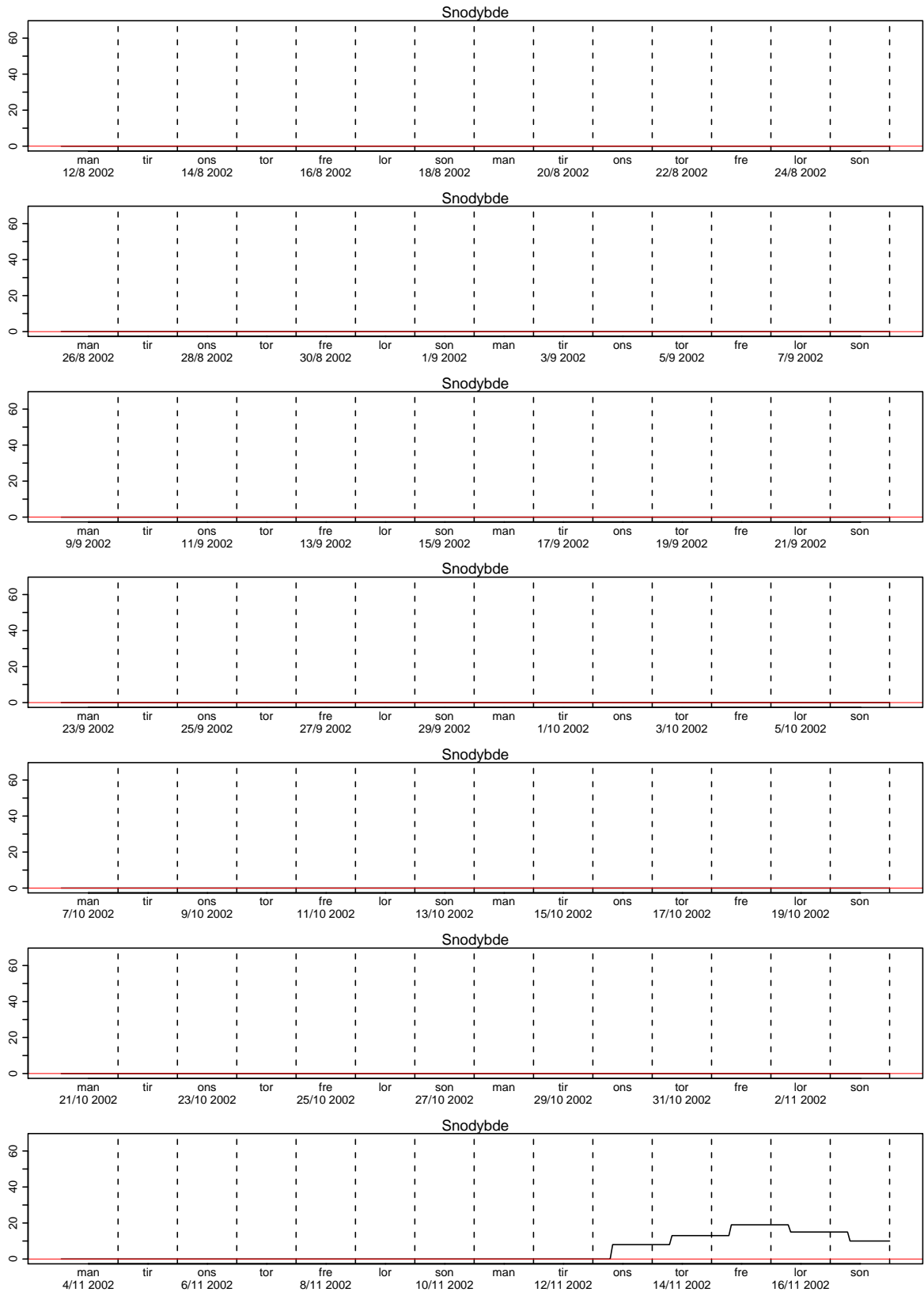
Figur 3.128. Snødybde



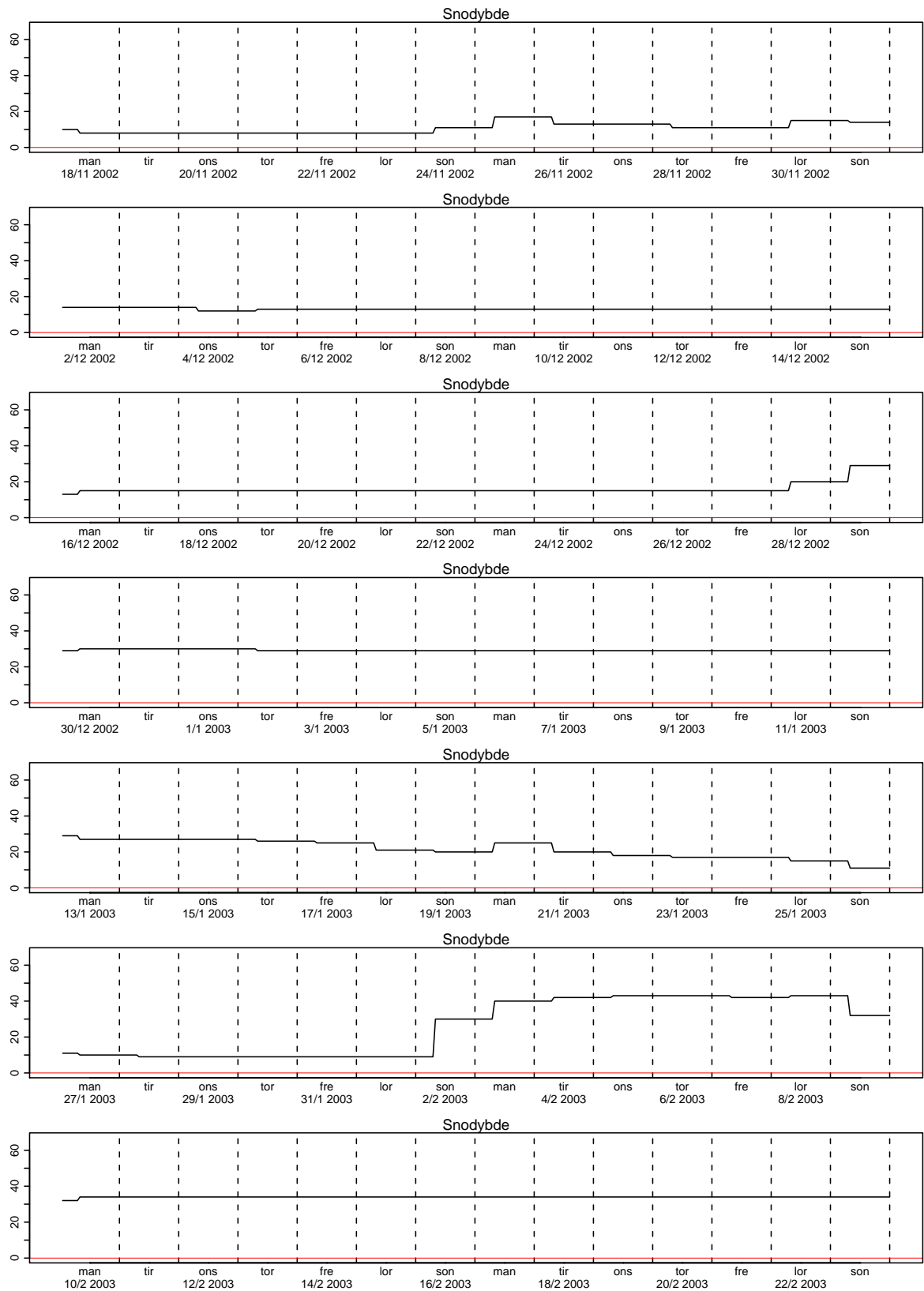
Figur 3.129. Snødybde



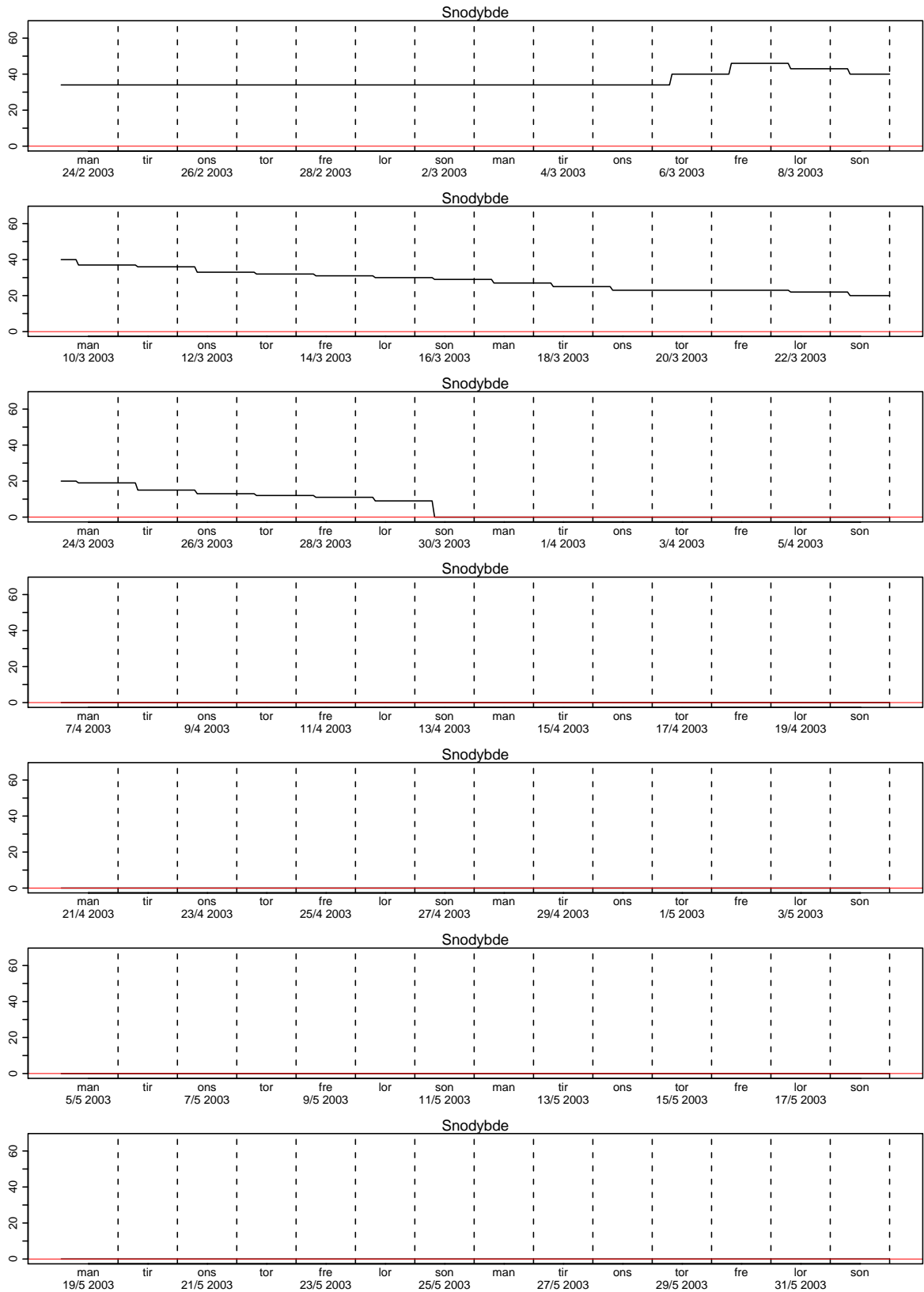
Figur 3.130. Snødybde



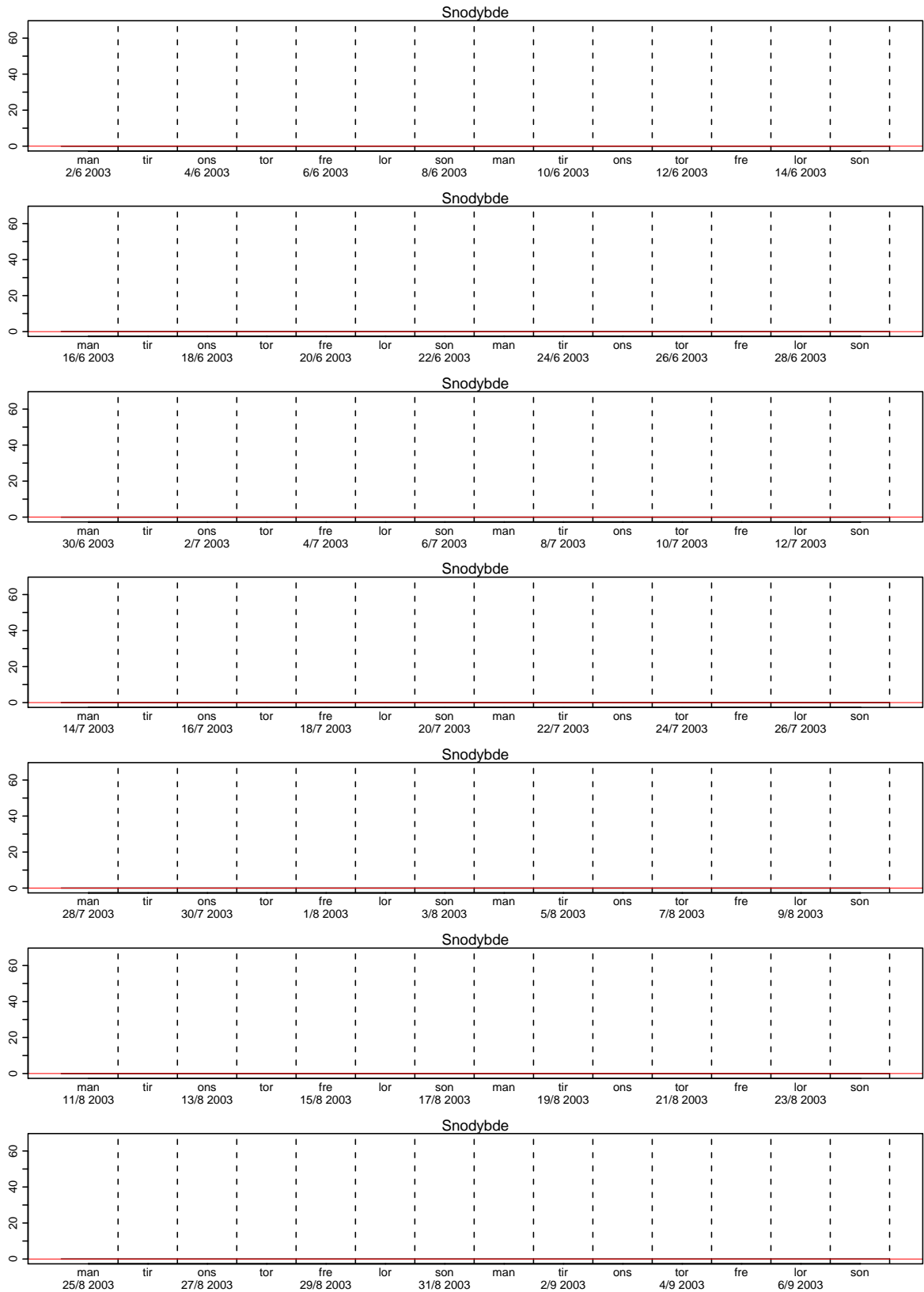
Figur 3.131. Snødybde



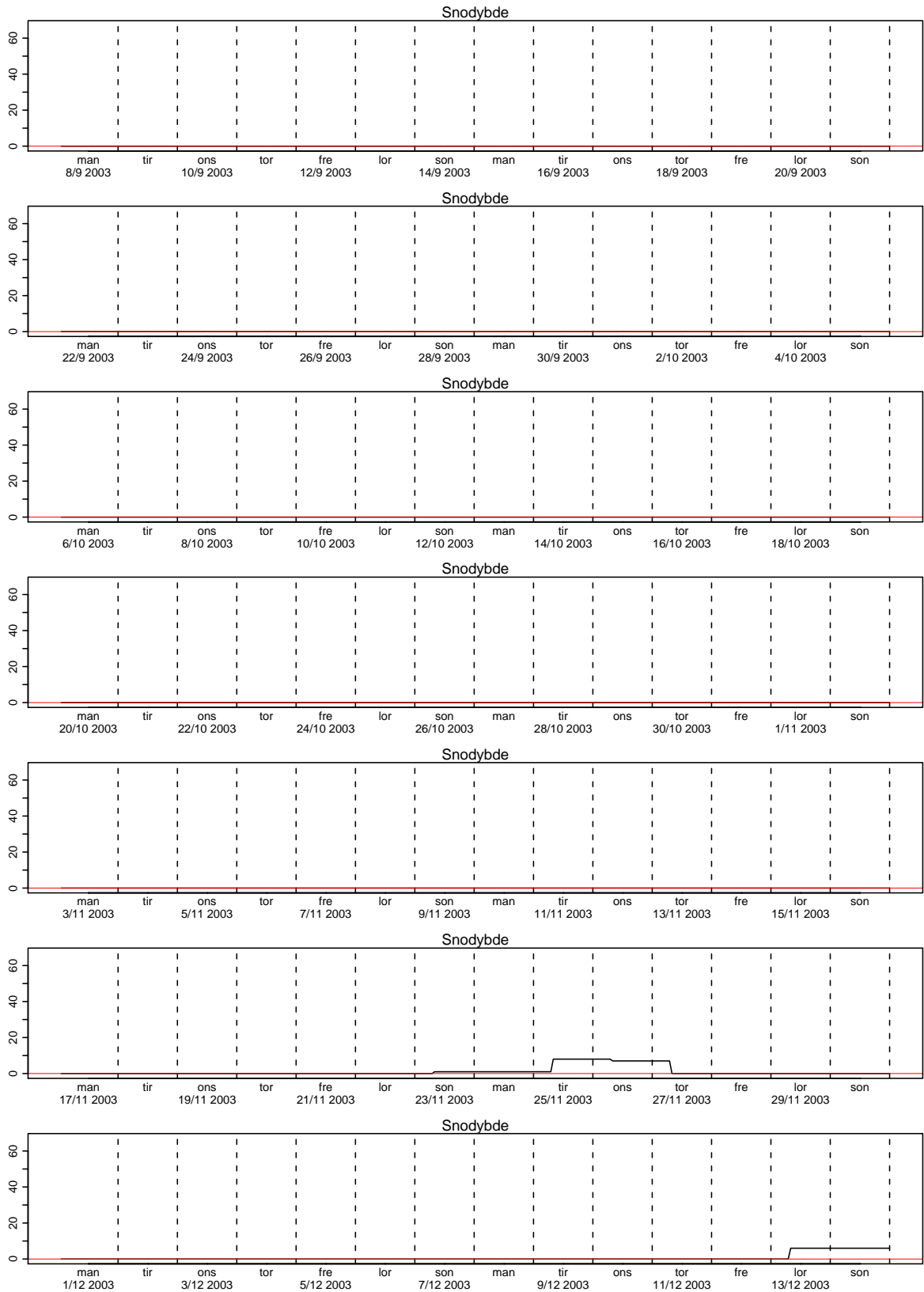
Figur 3.132. Snødybde



Figur 3.133. Snødybde

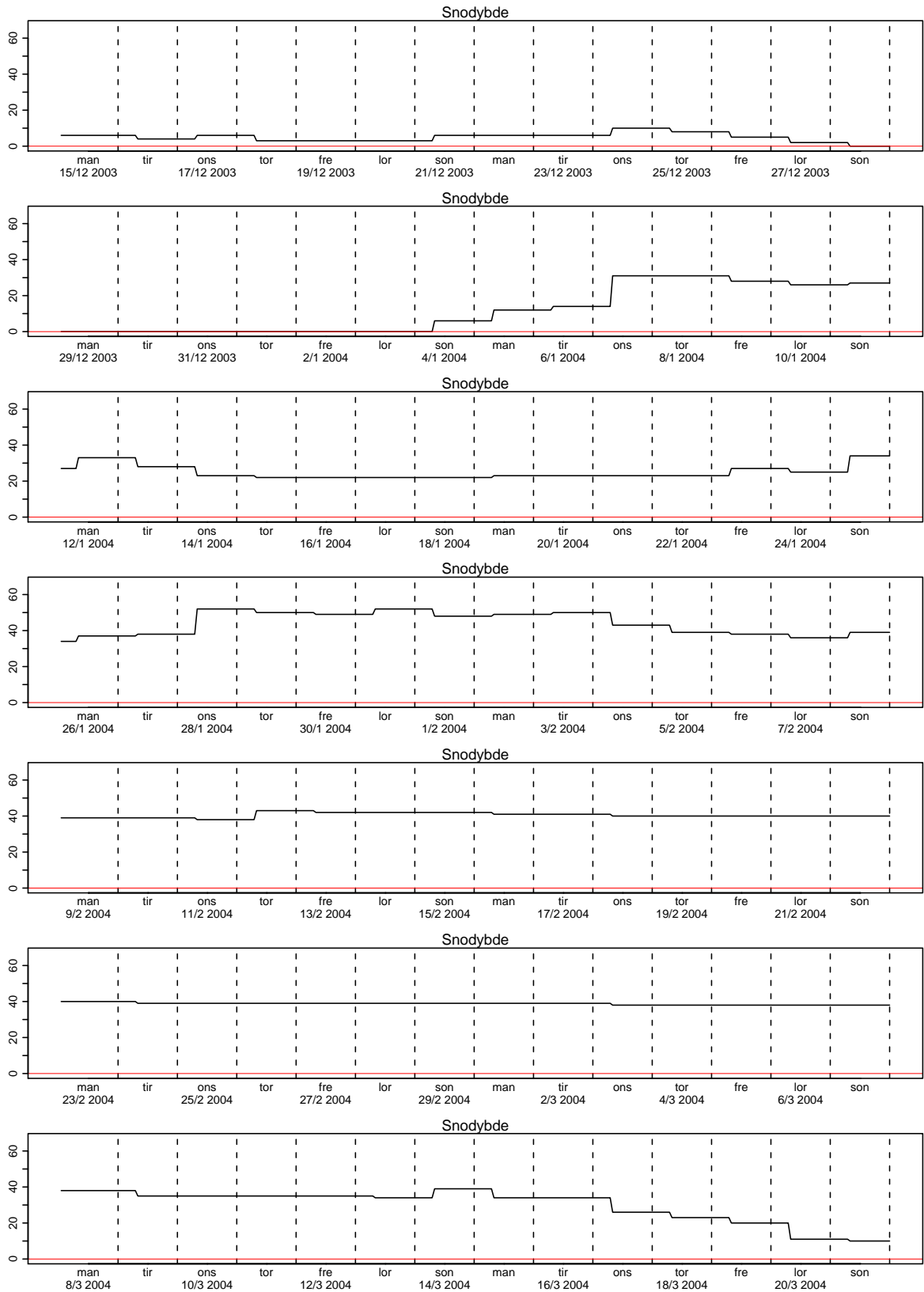


Figur 3.134. Snødybde

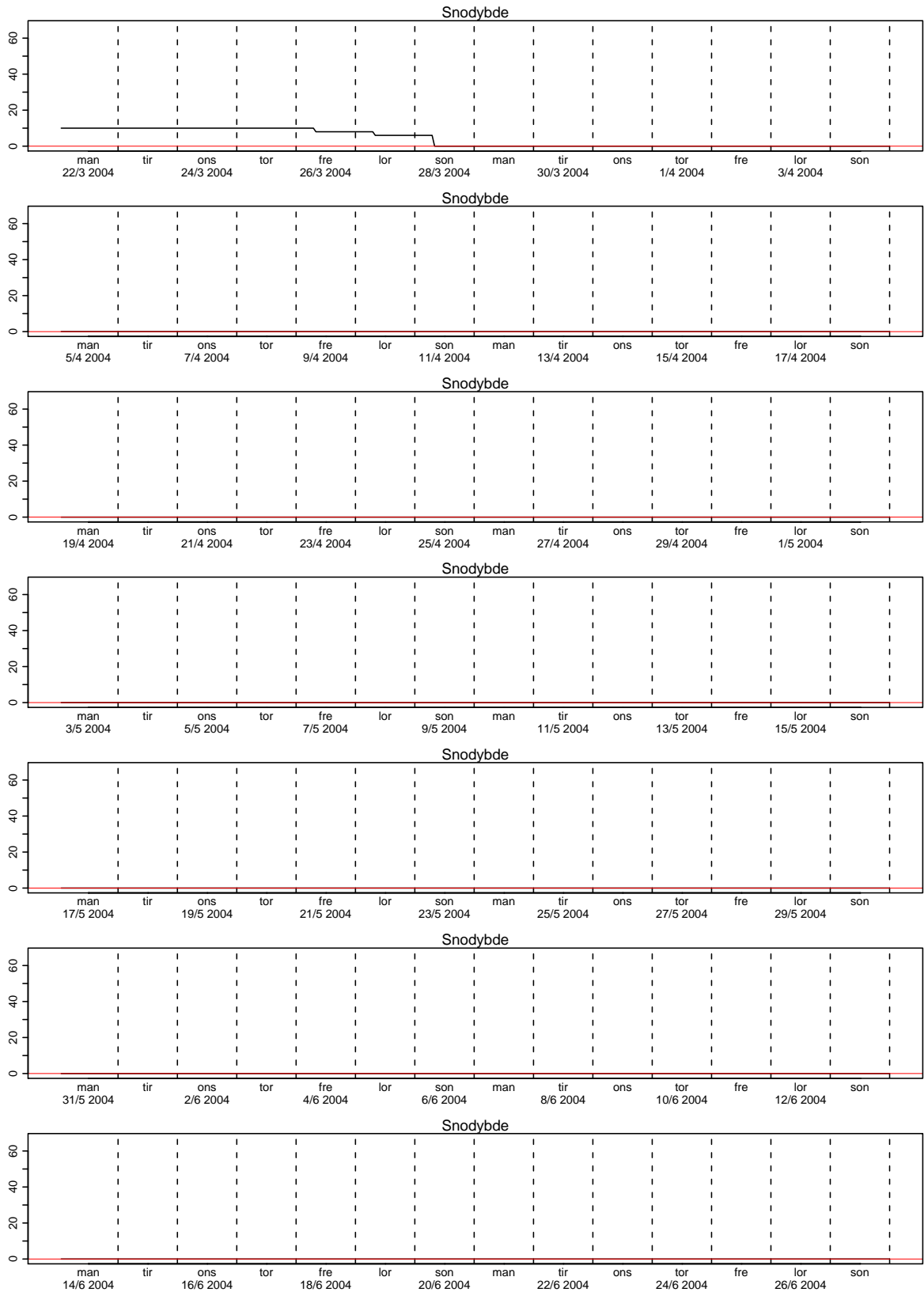


Figur 3.135. Snødybde

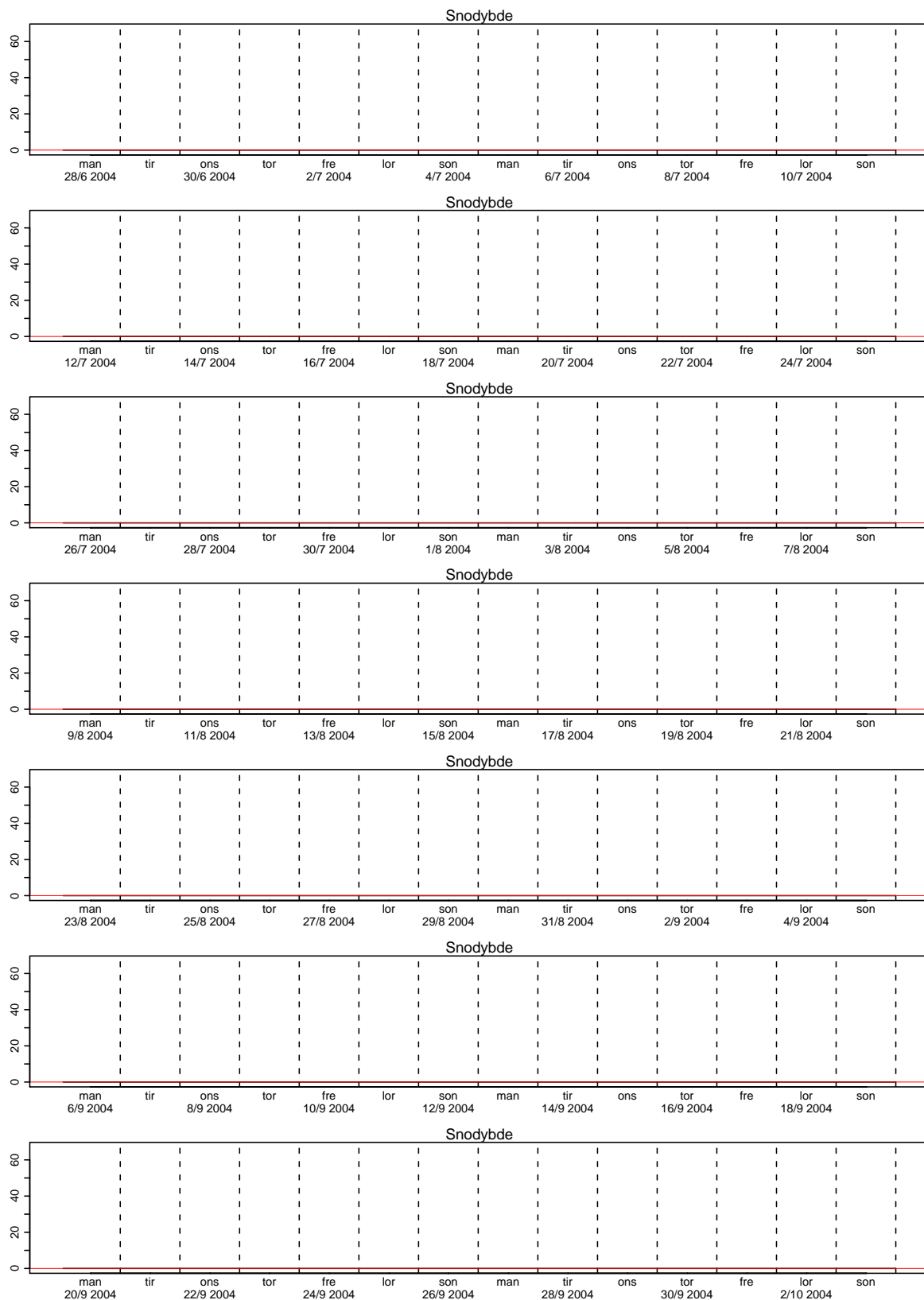




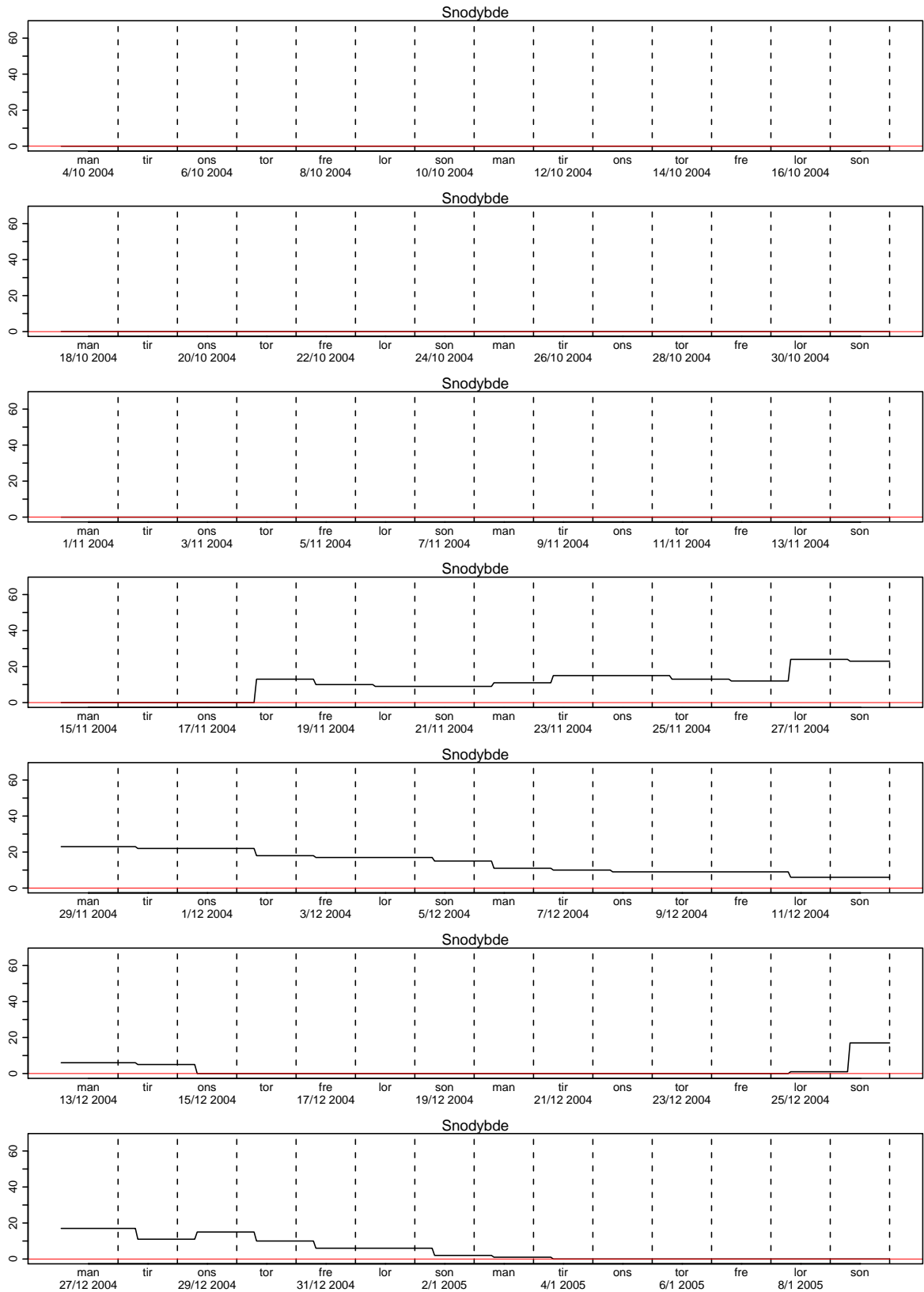
Figur 3.136. Snødybde



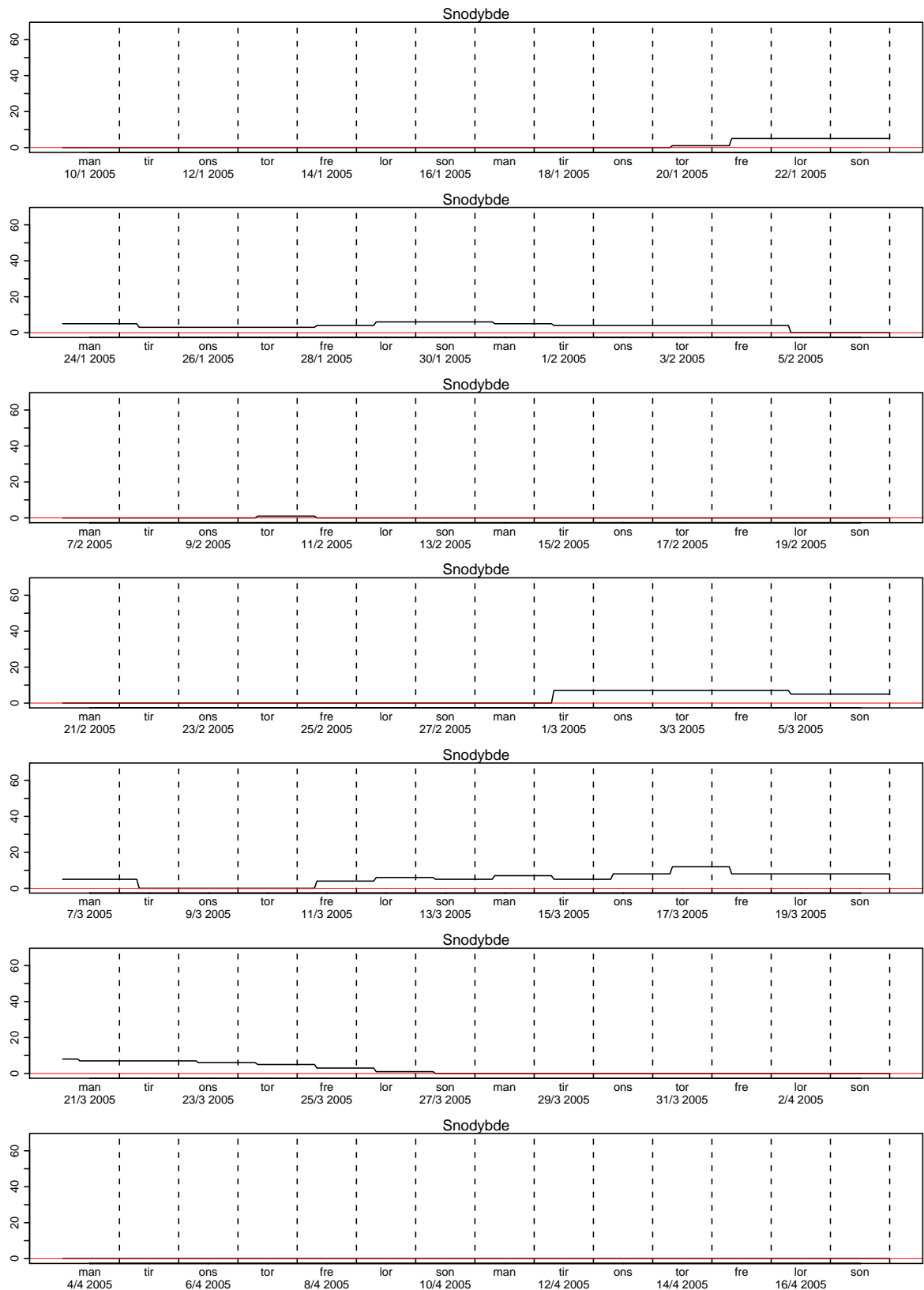
Figur 3.137. Snødybde



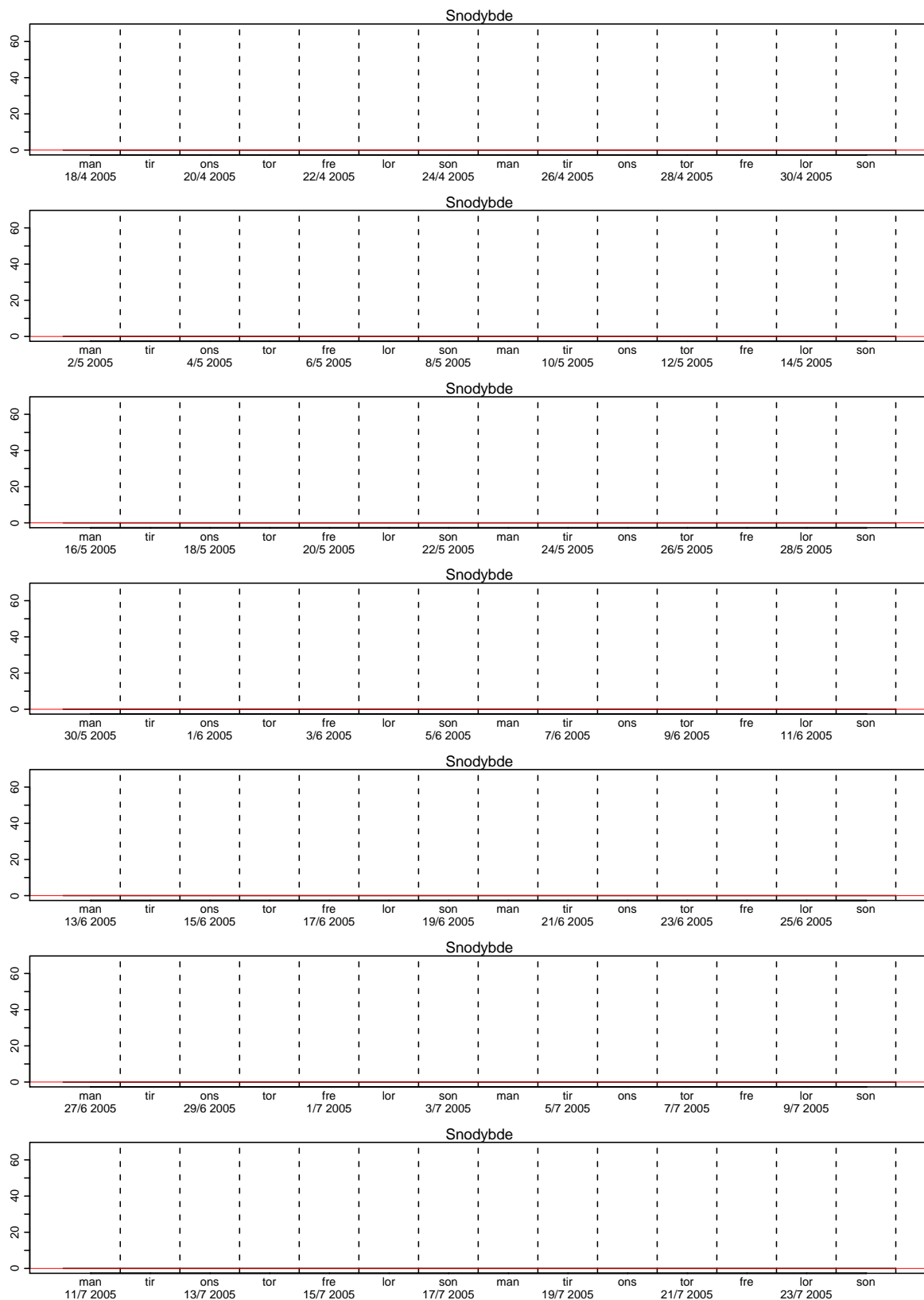
Figur 3.138. Snødybde



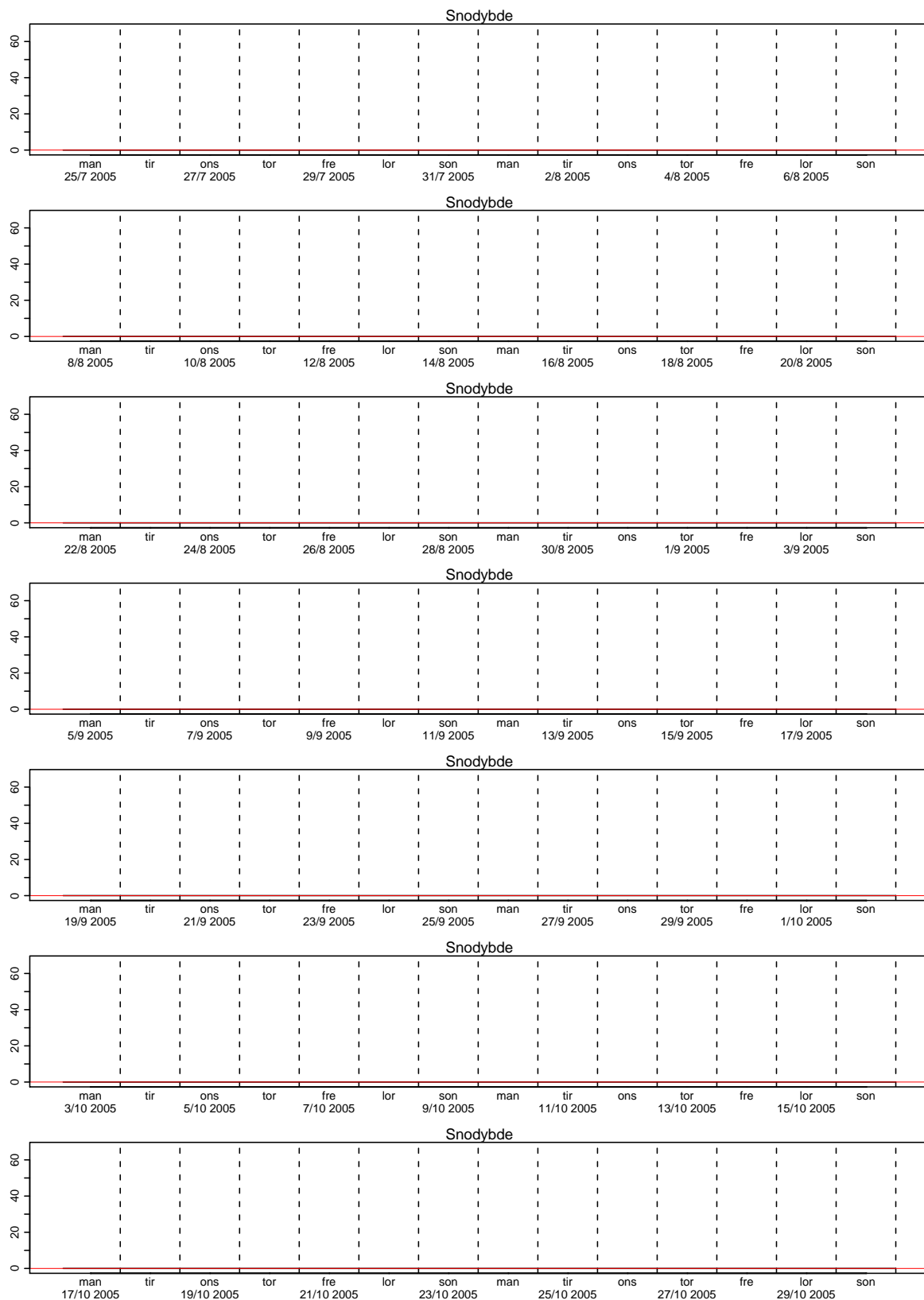
Figur 3.139. Snødybde



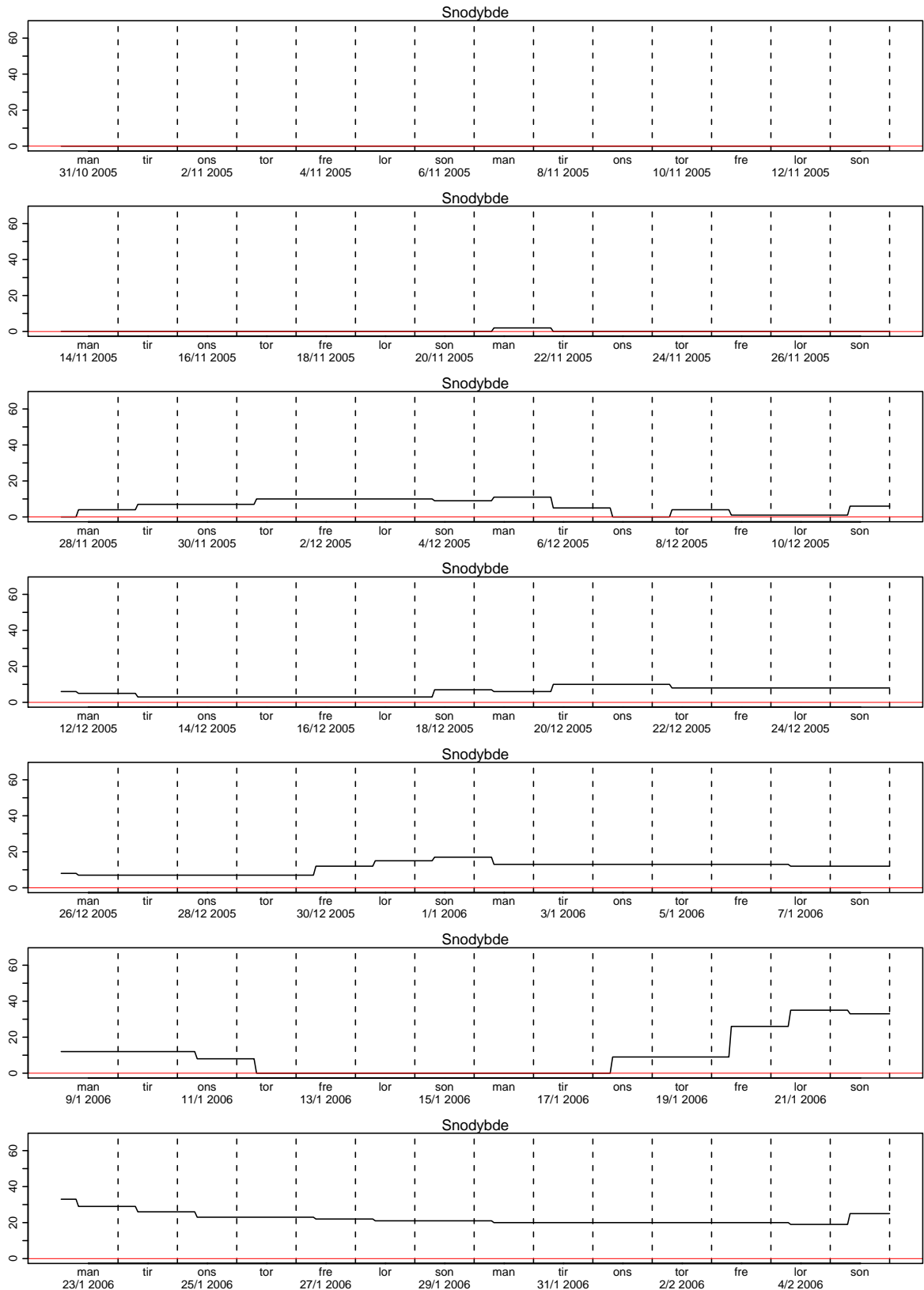
Figur 3.140. Snødybde



Figur 3.141. Snødybde

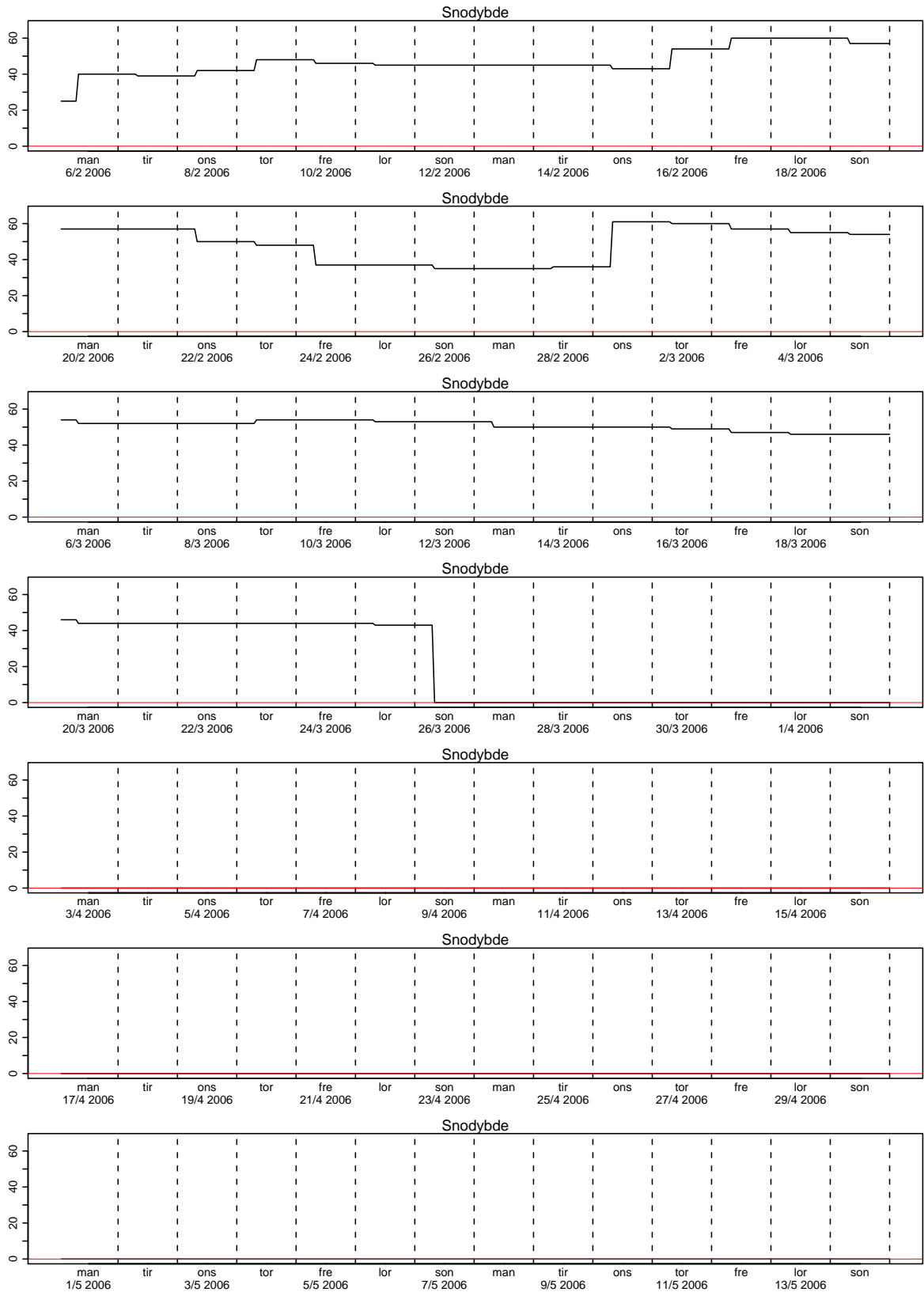


Figur 3.142. Snødybde

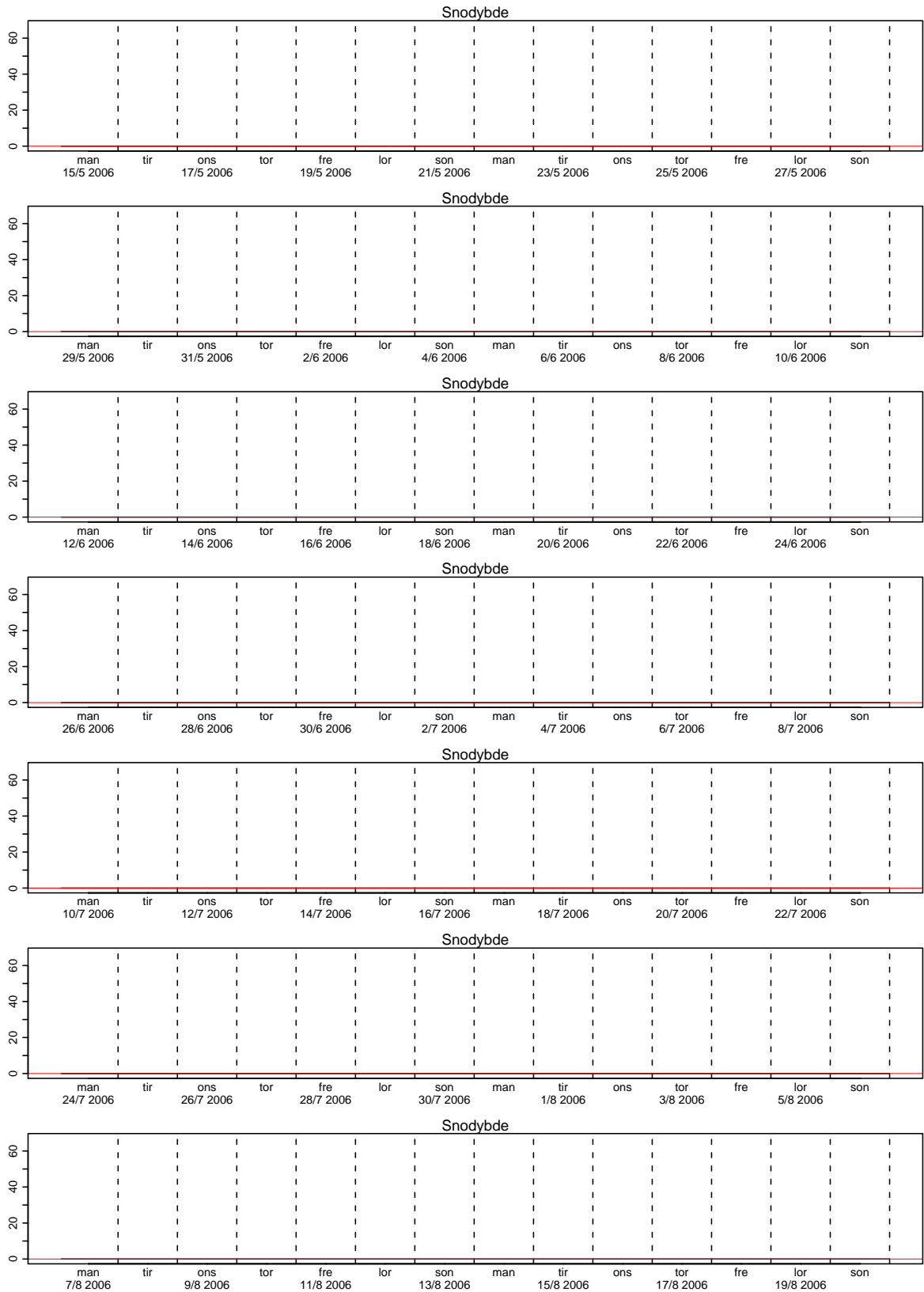


Figur 3.143. Snødybde

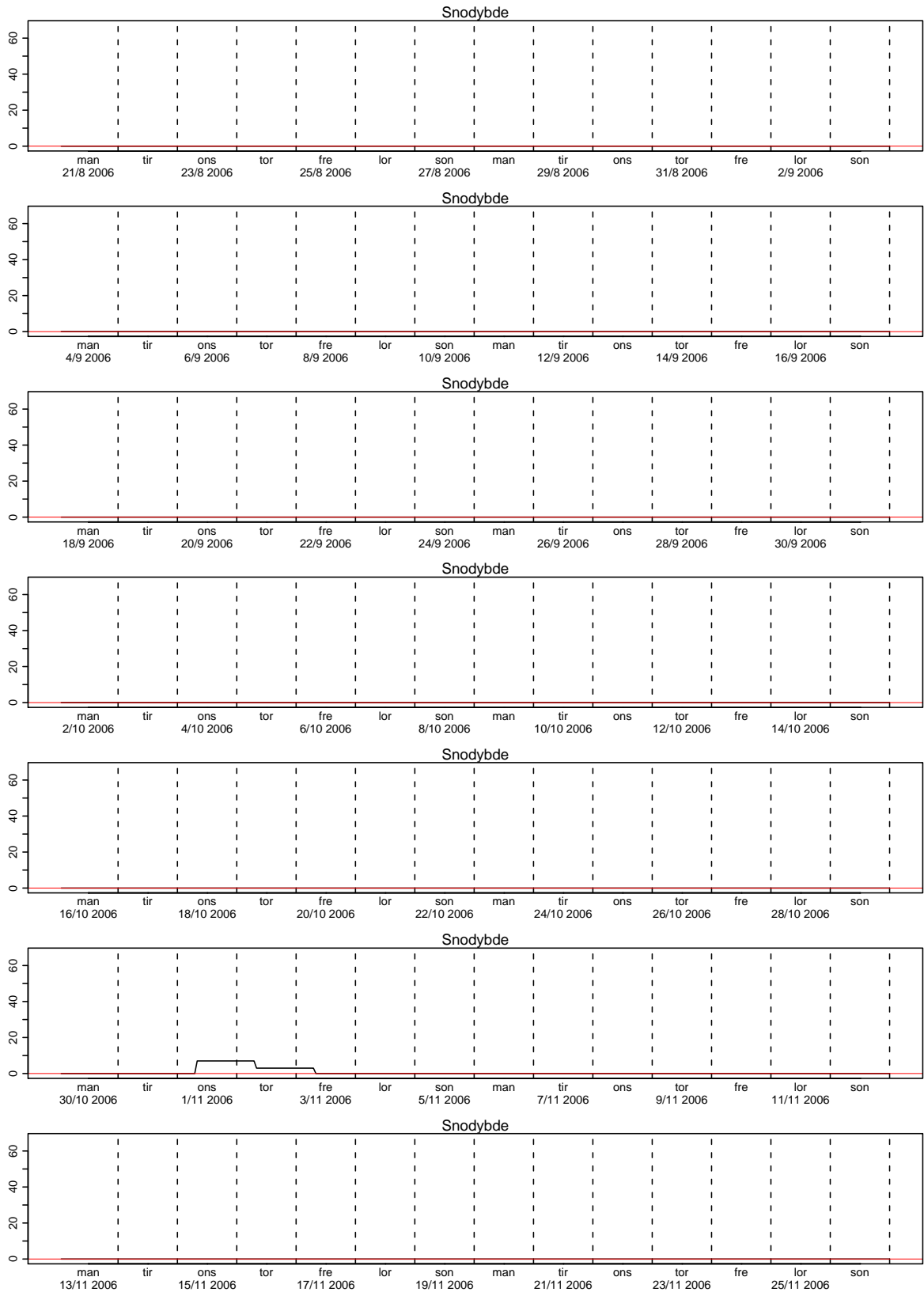




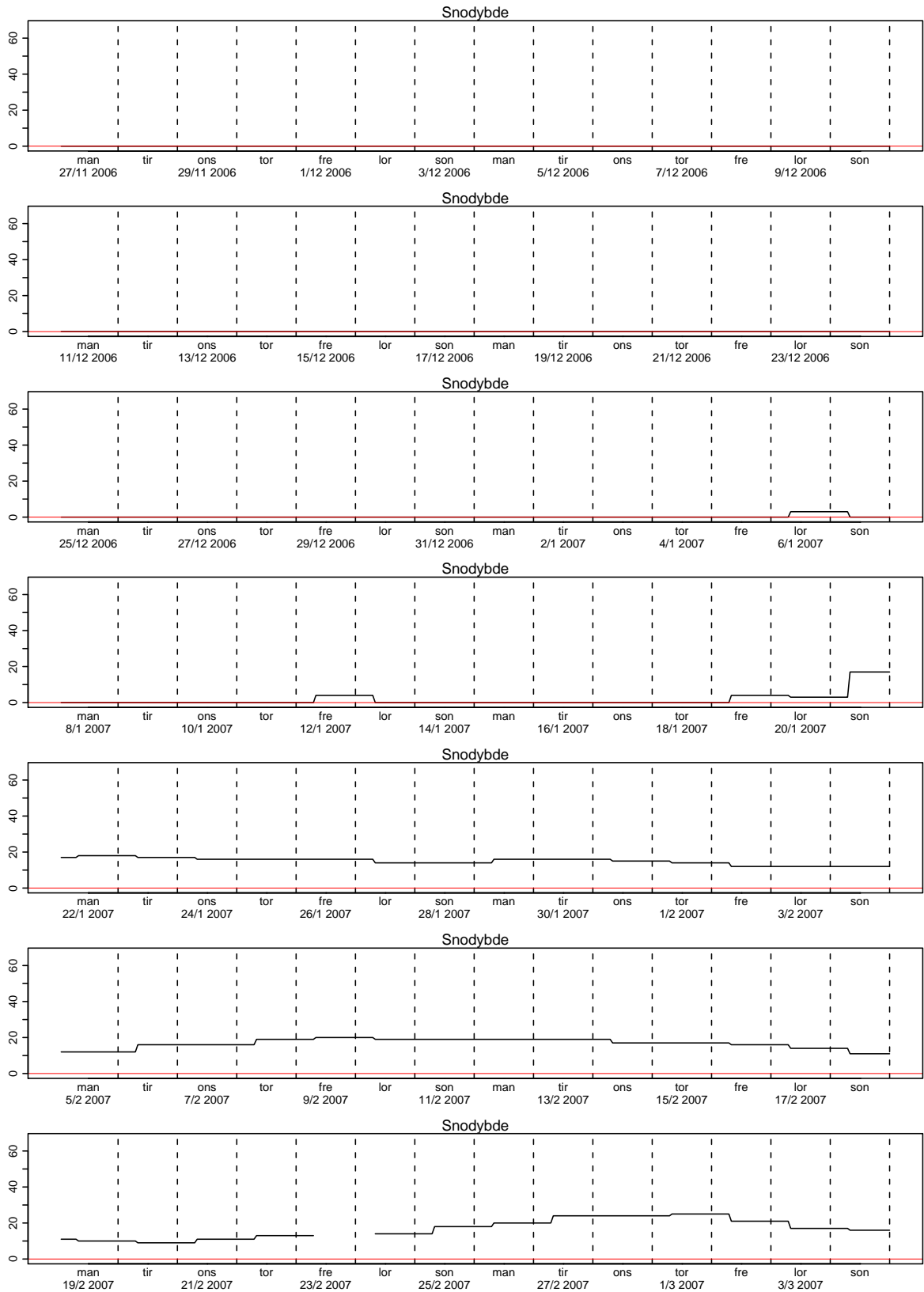
Figur 3.144. Snødybde



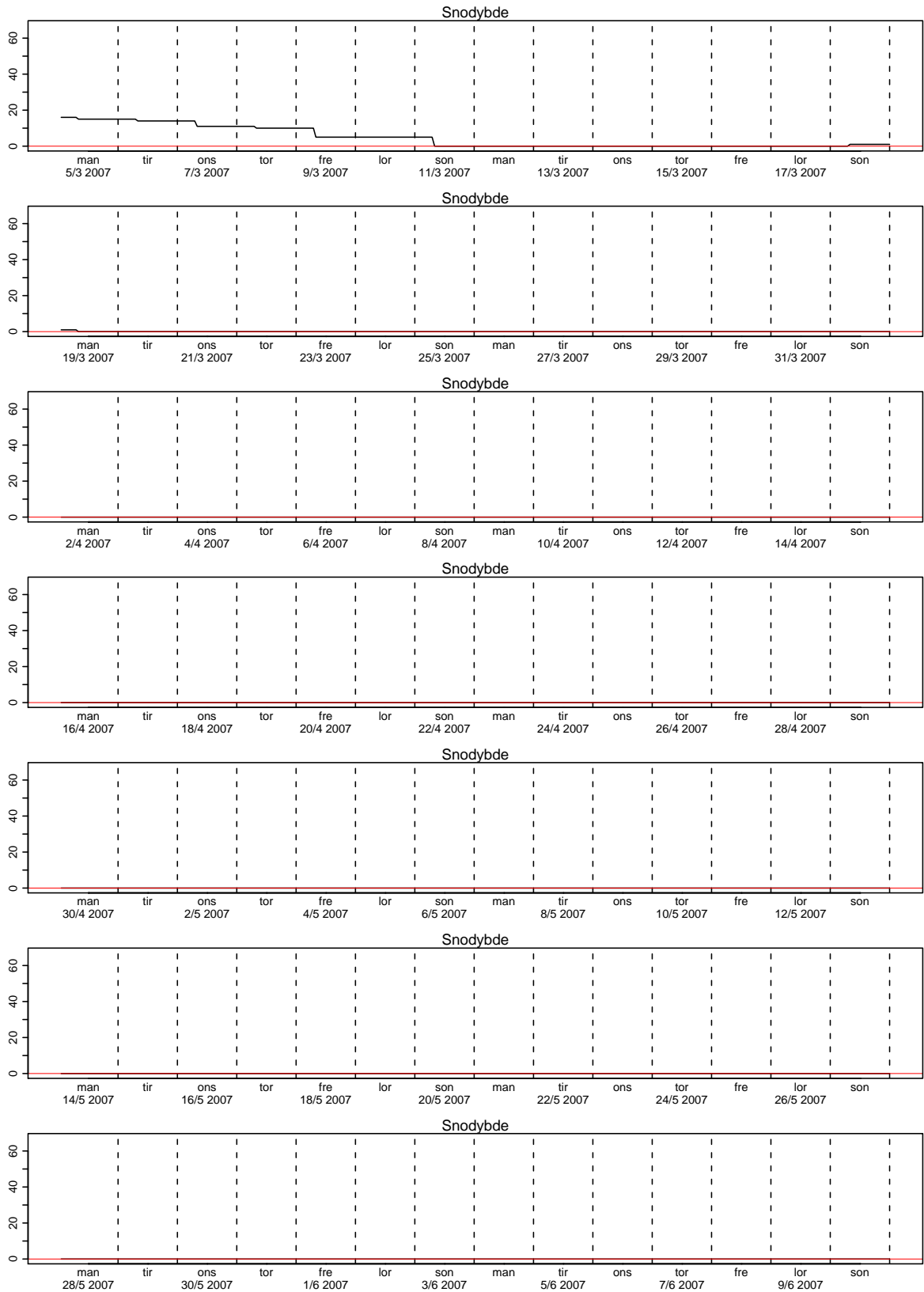
Figur 3.145. Snødybde



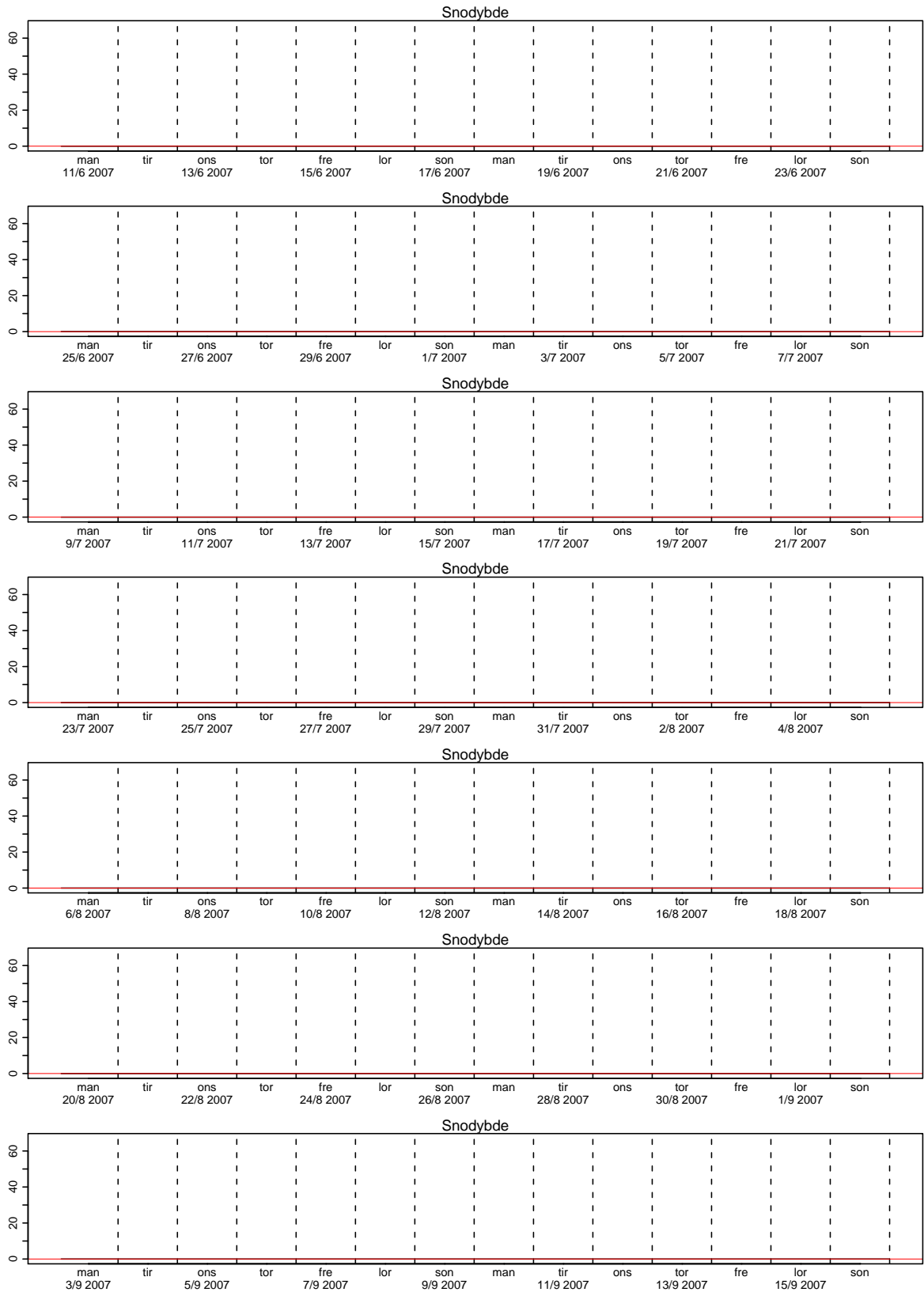
Figur 3.146. Snødybde



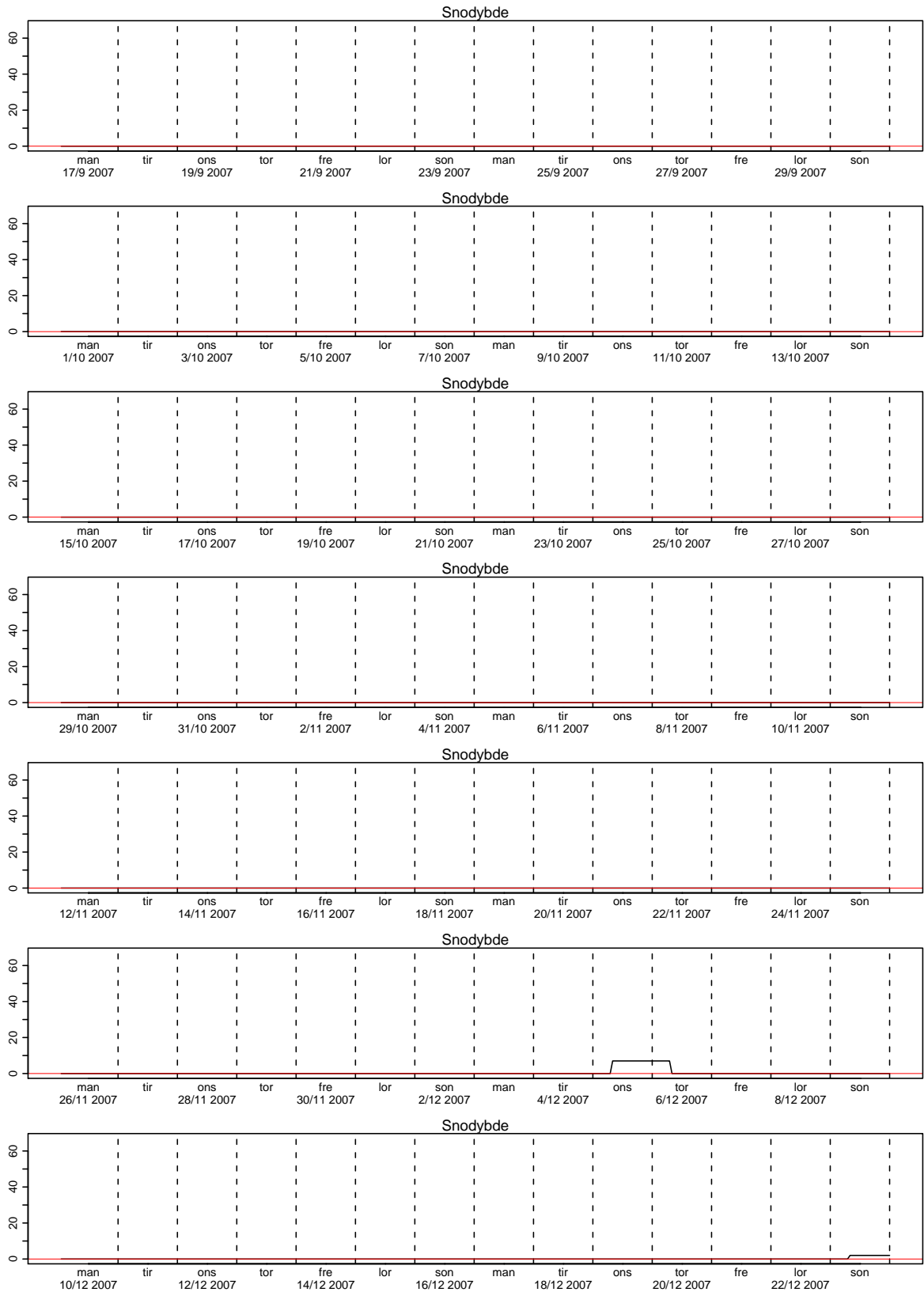
Figur 3.147. Snødybde



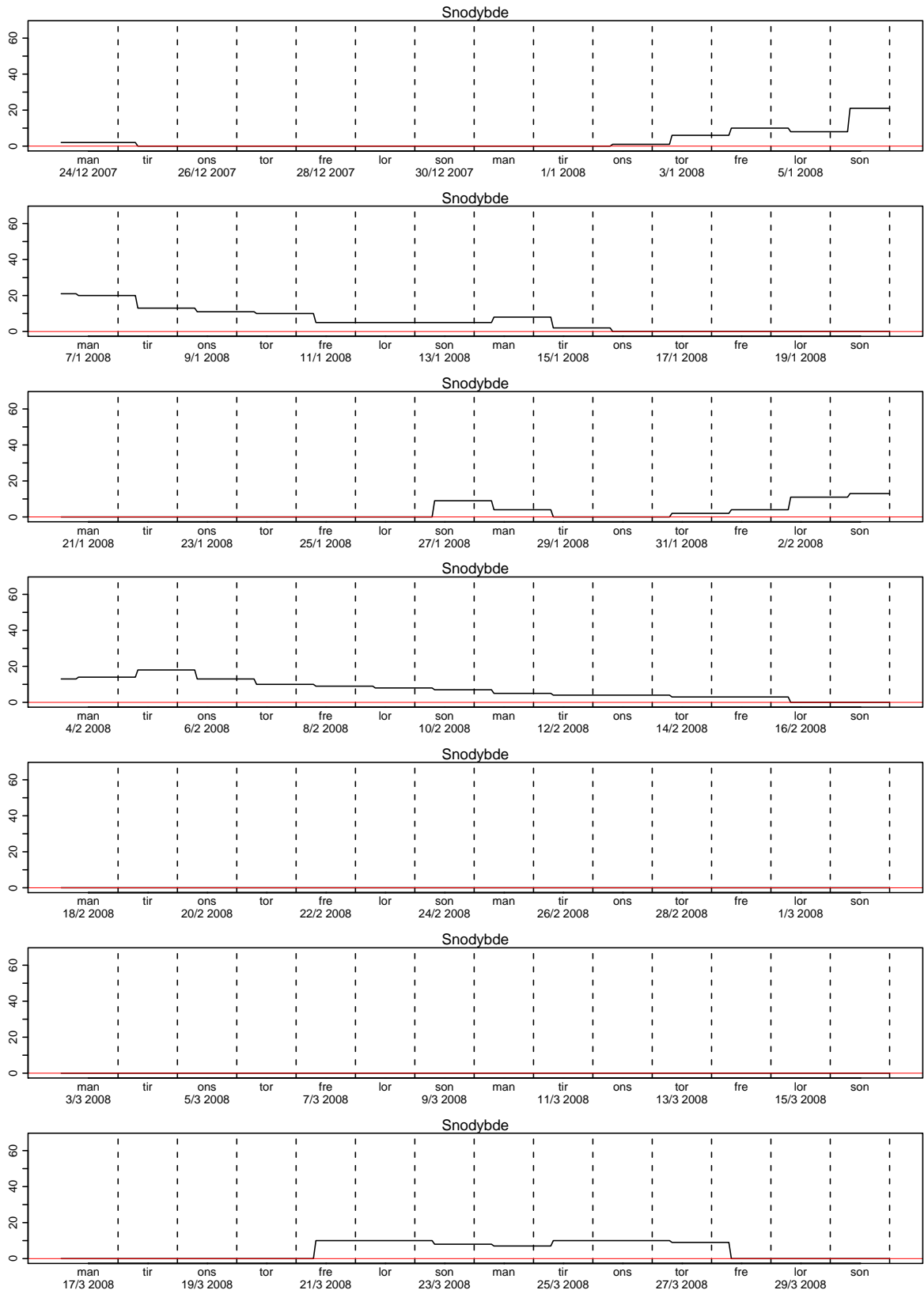
Figur 3.148. Snødybde



Figur 3.149. Snødybde

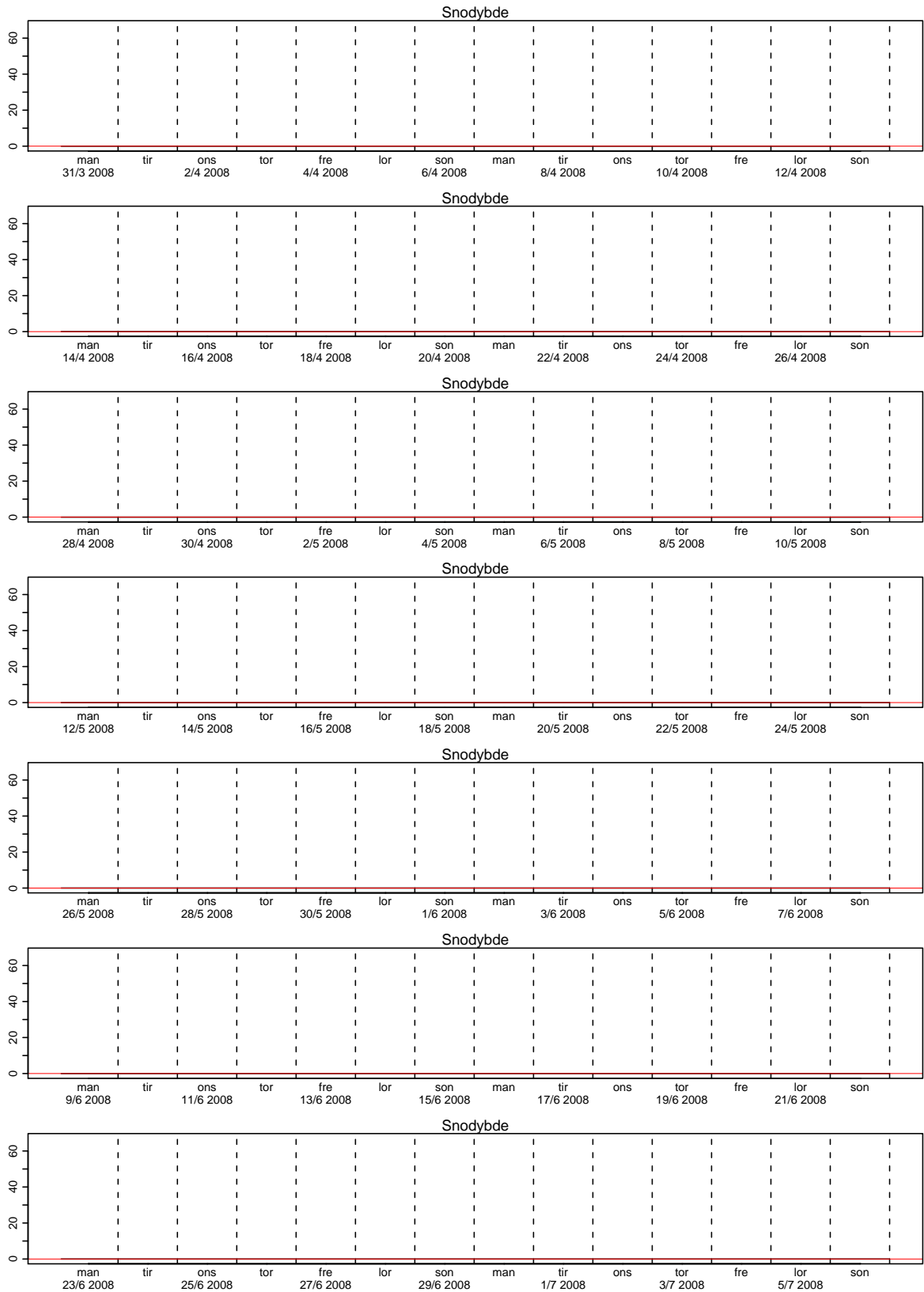


Figur 3.150. Snødybde

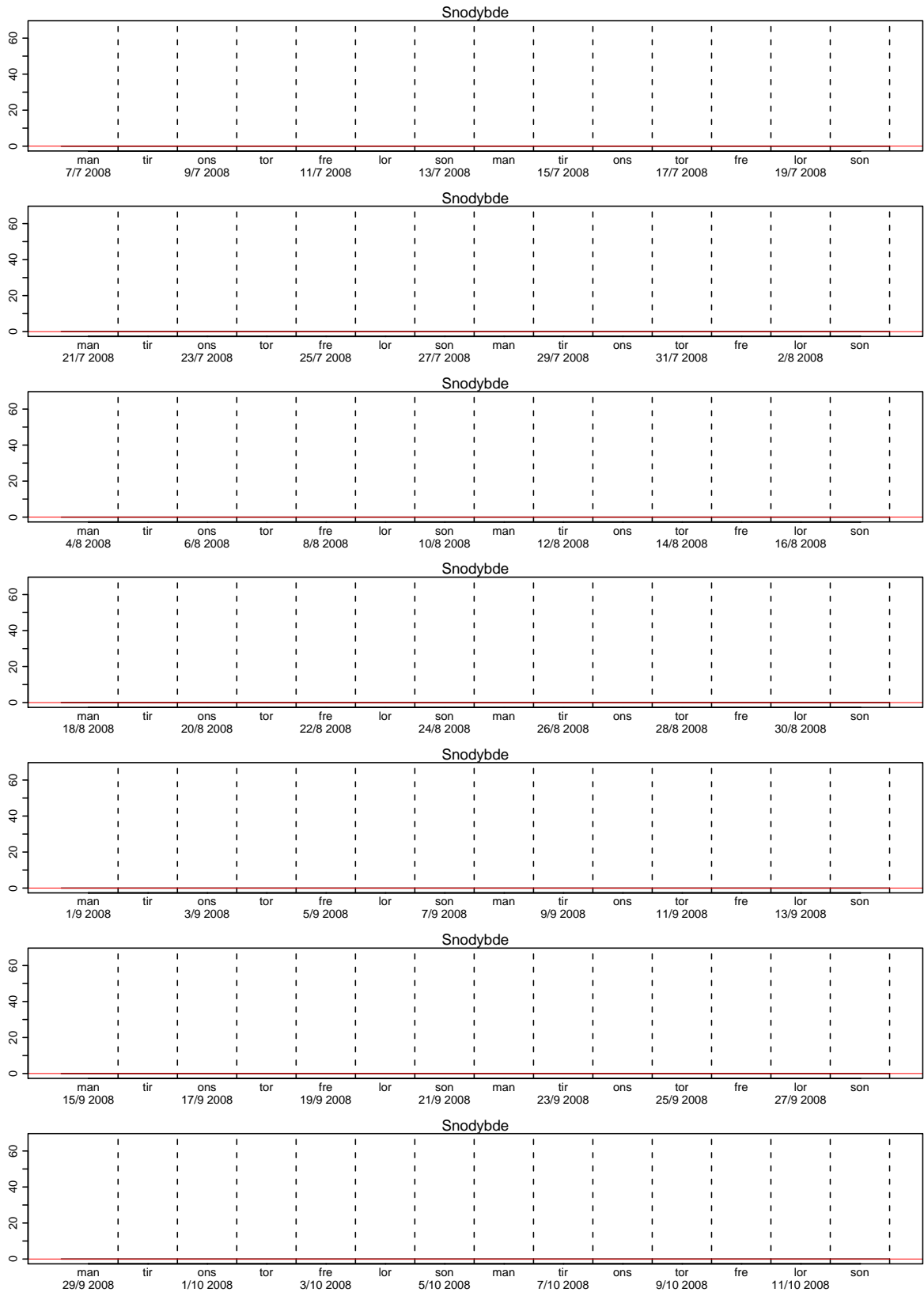


Figur 3.151. Snødybde

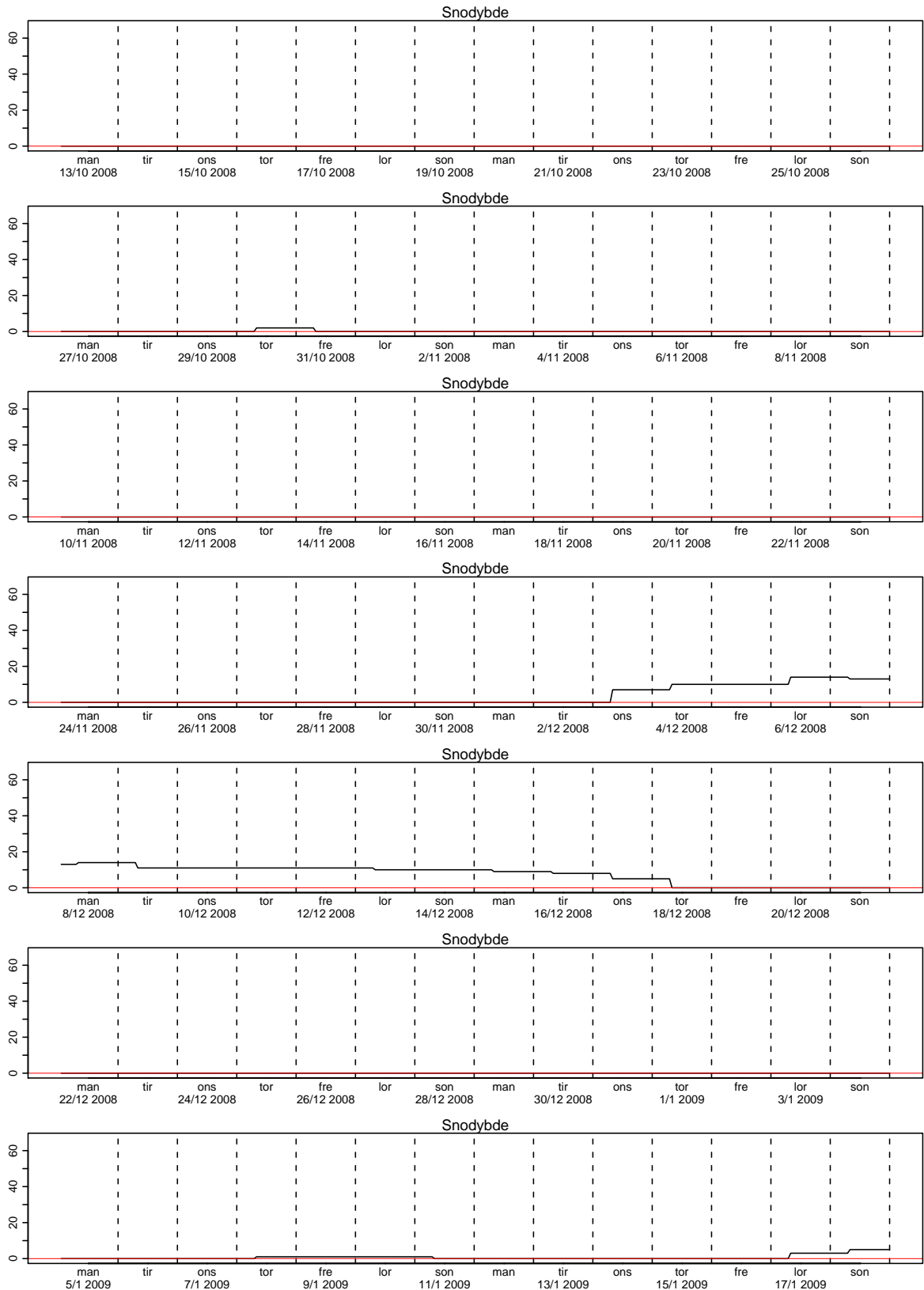




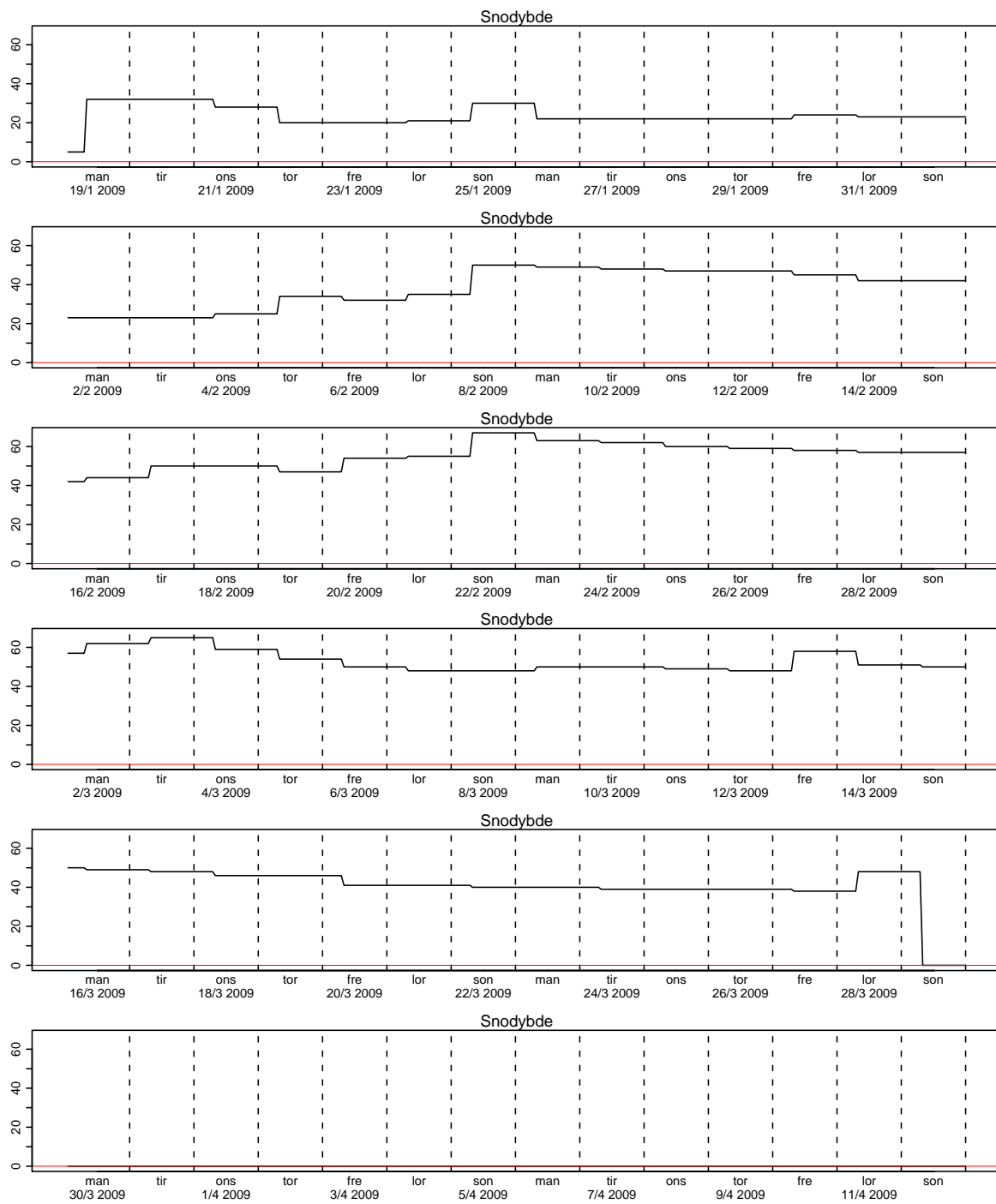
Figur 3.152. Snødybde



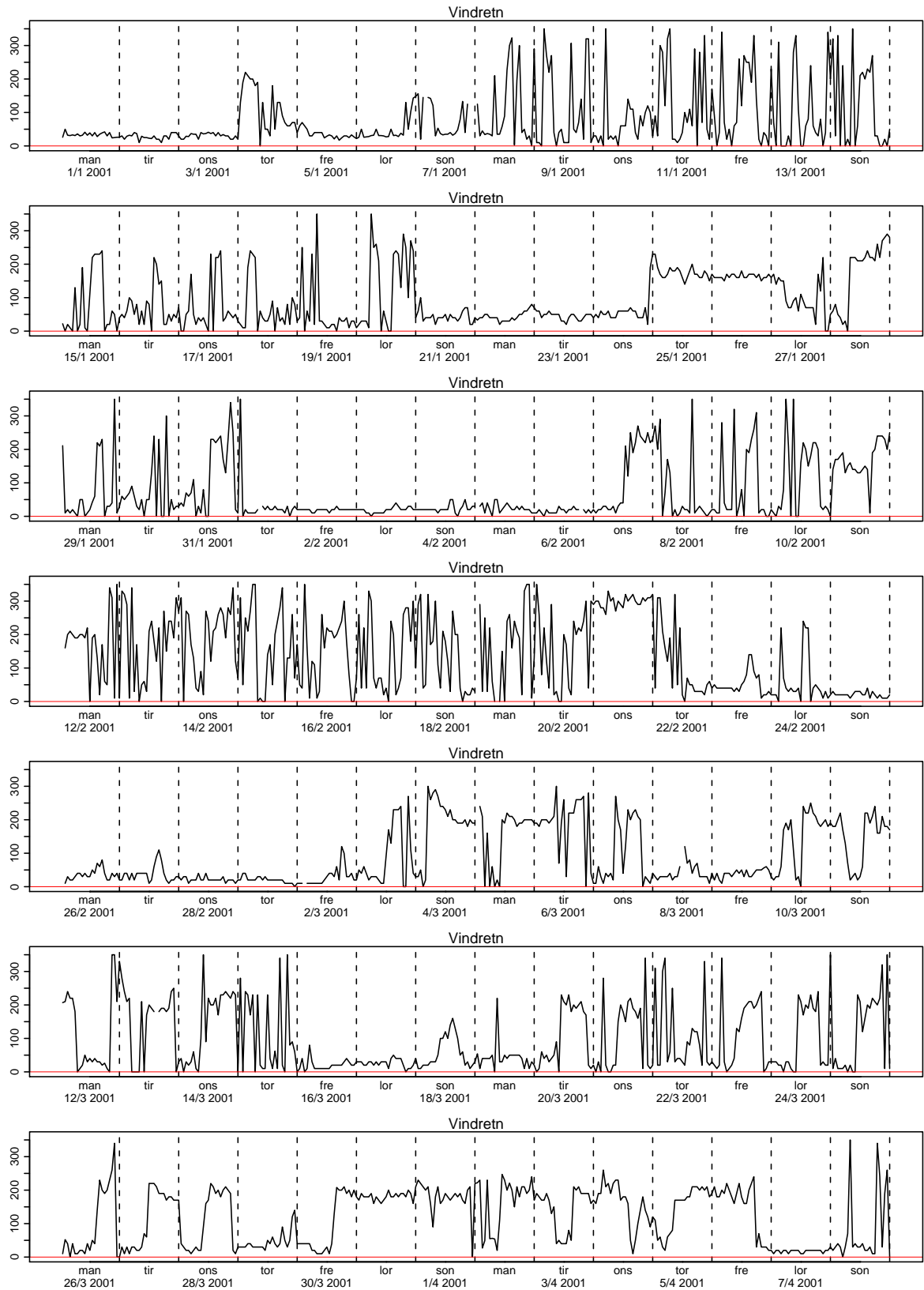
Figur 3.153. Snødybde



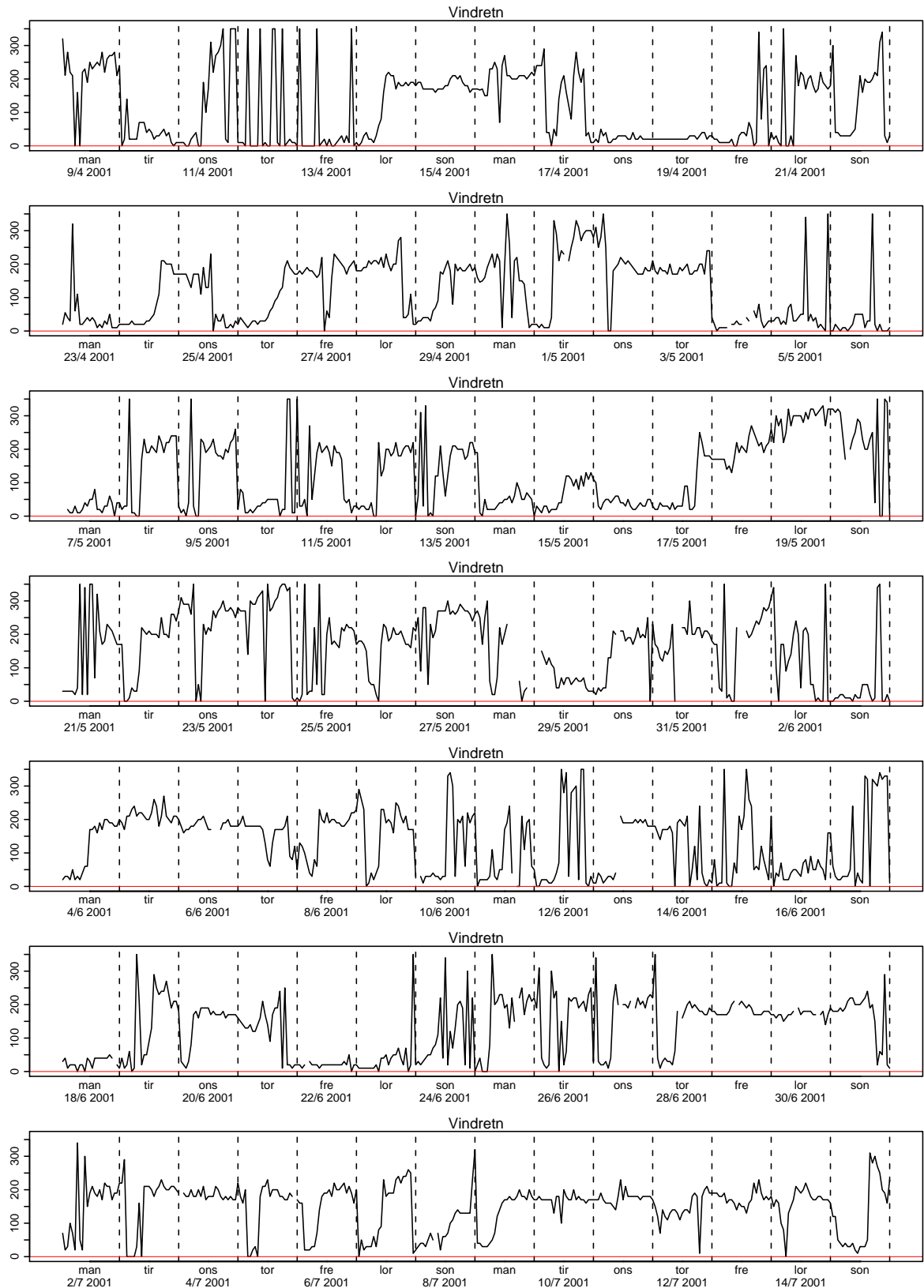
Figur 3.154. Snødybde



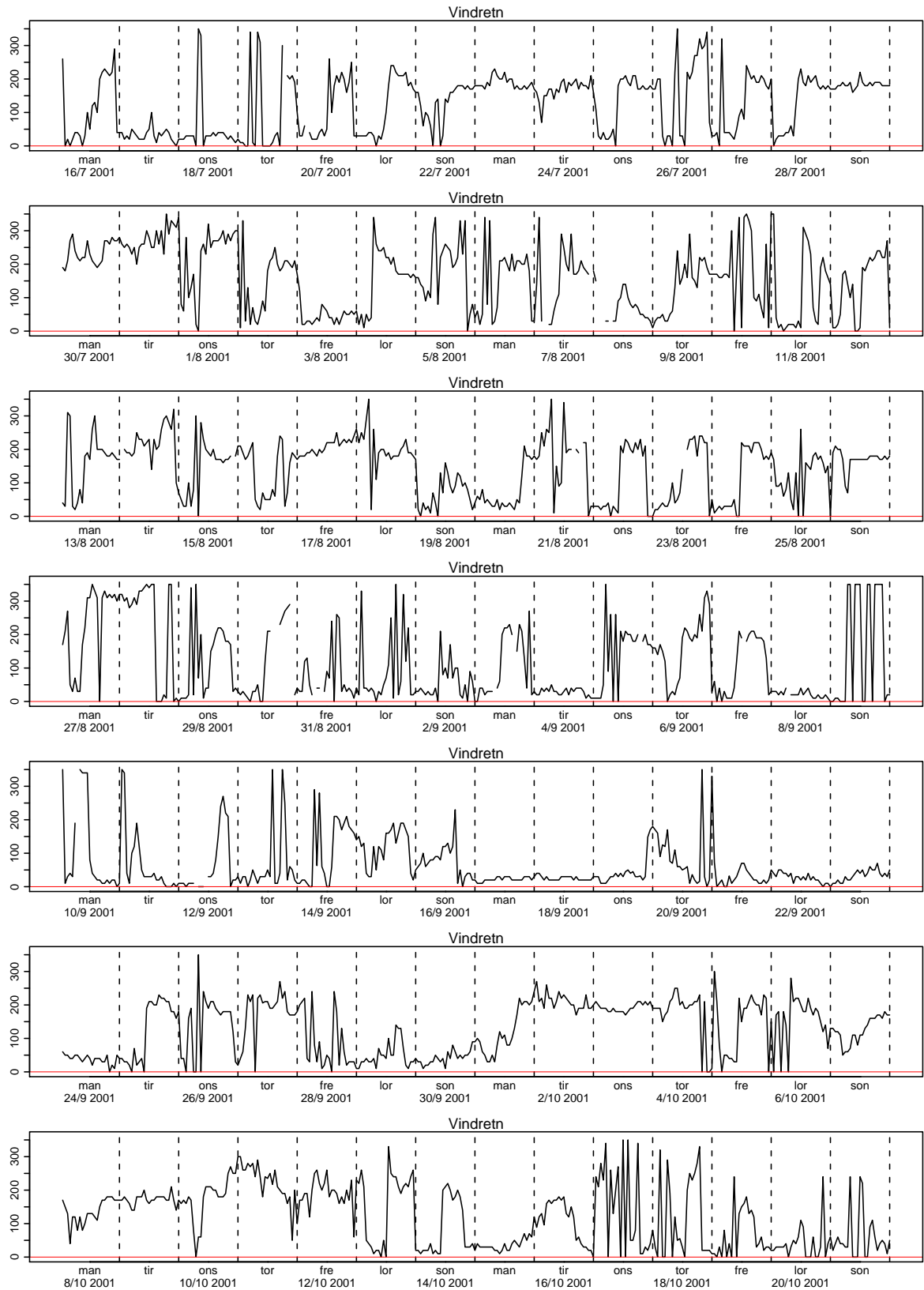
Figur 3.155. Snødybde



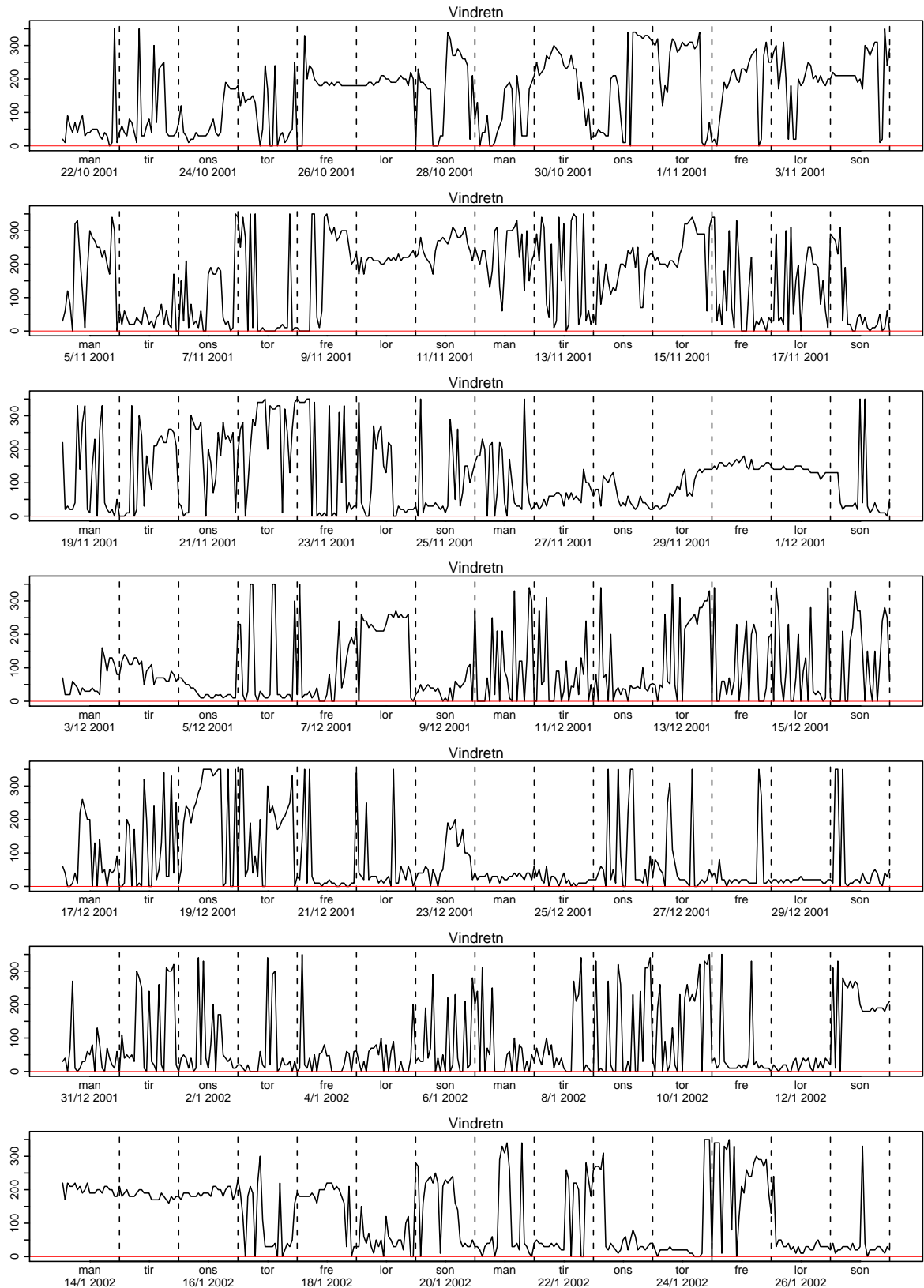
Figur 3.156. Vindretning



Figur 3.157. Vindretning

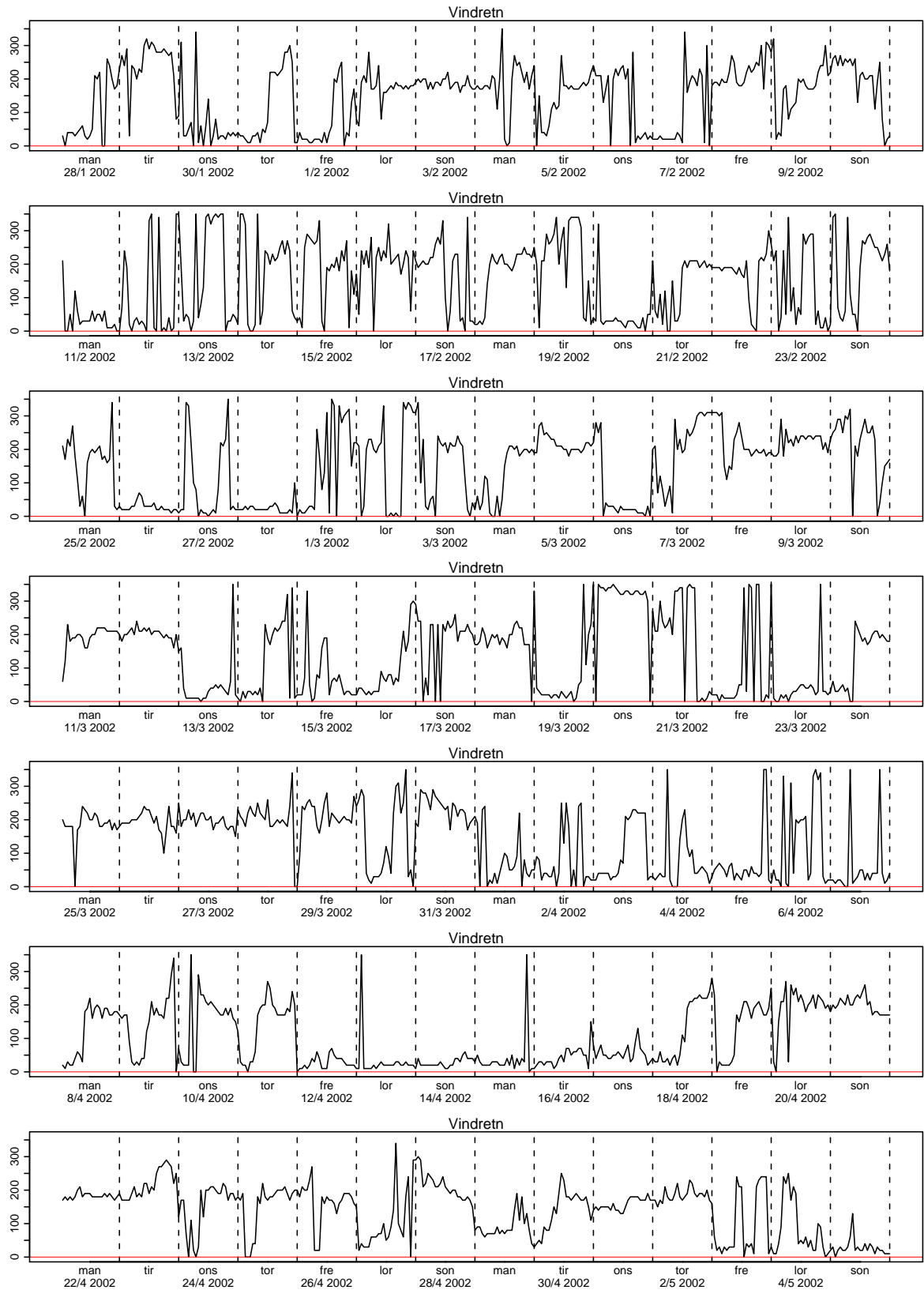


Figur 3.158. Vindretning

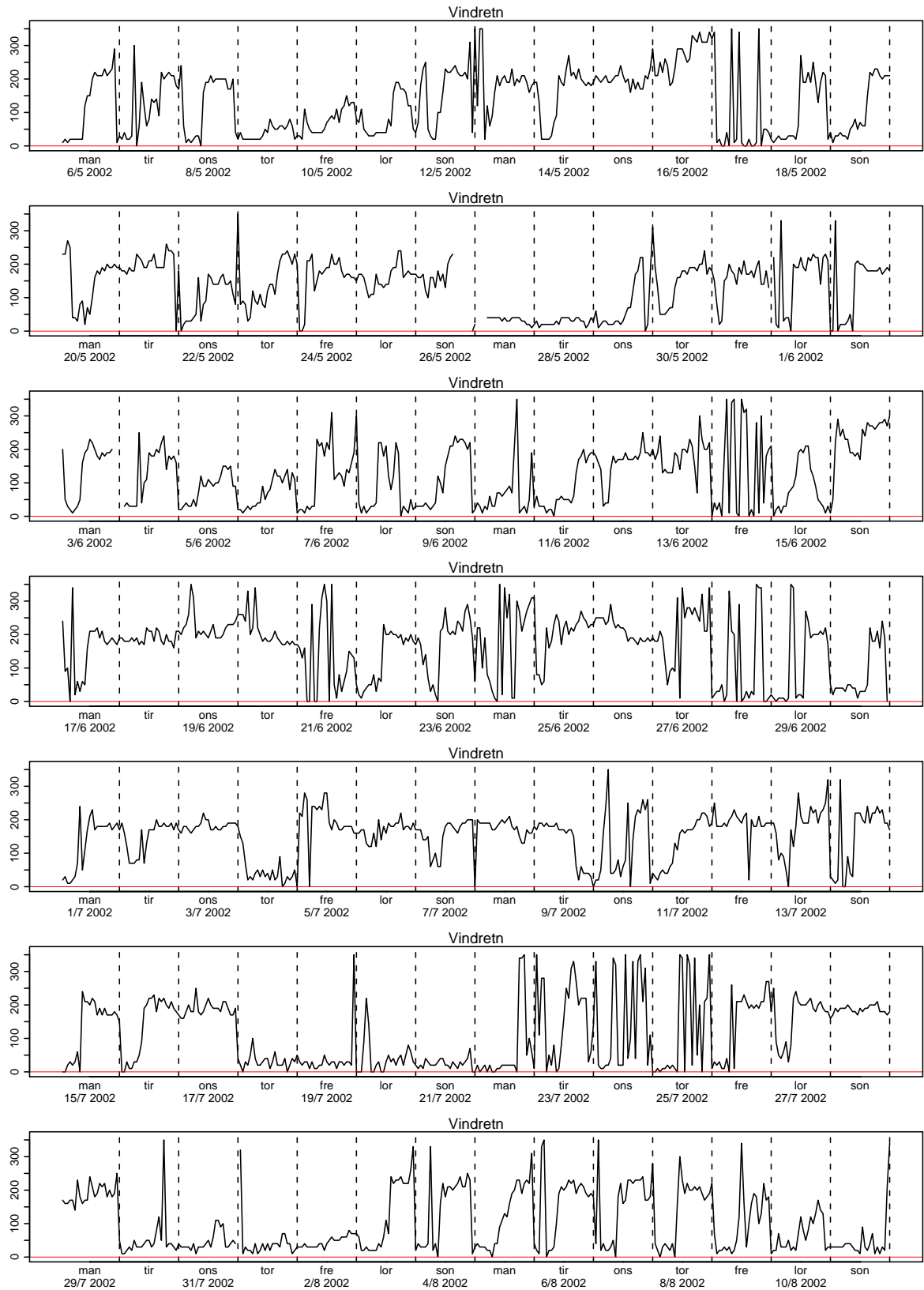


Figur 3.159. Vindretning

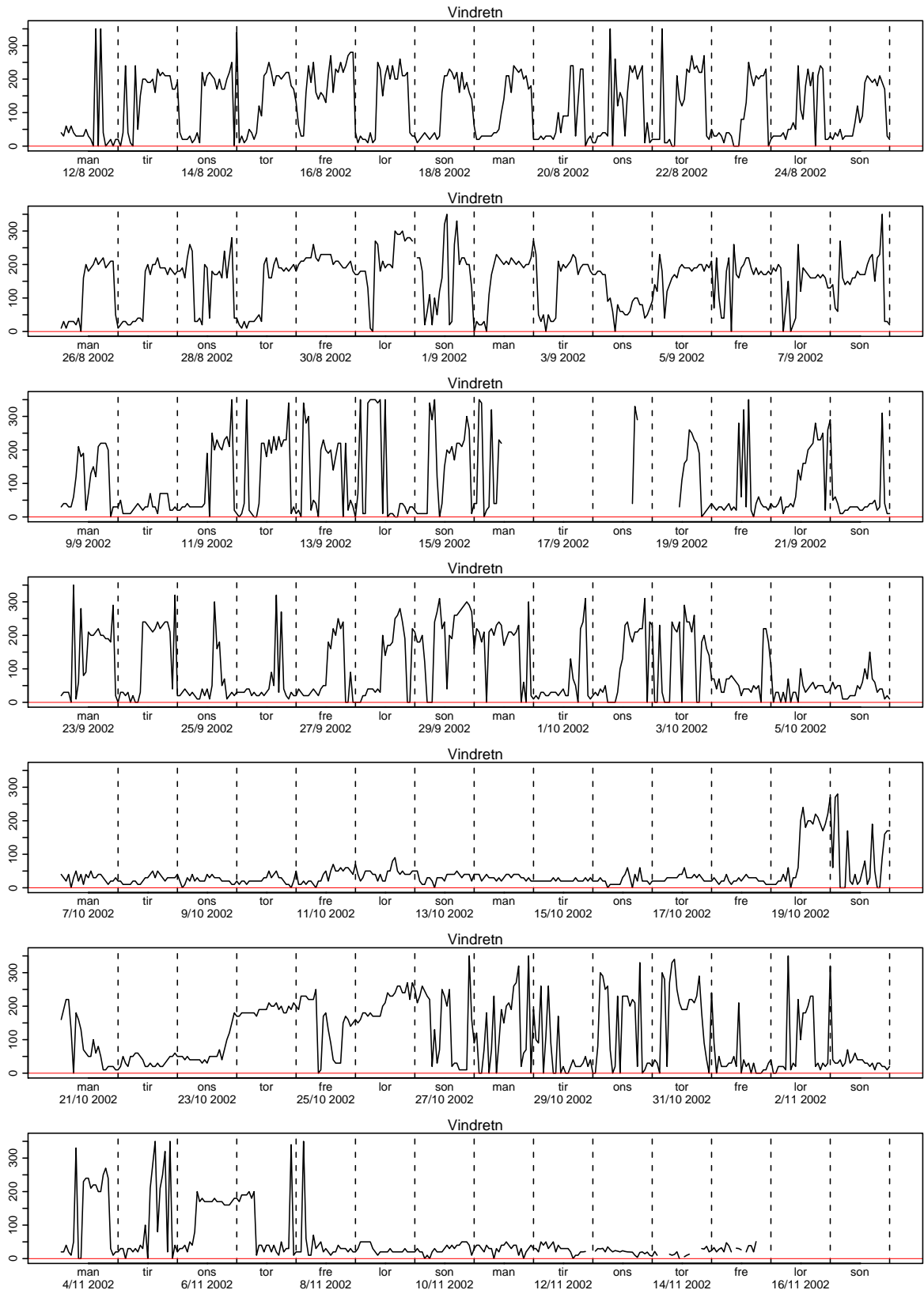




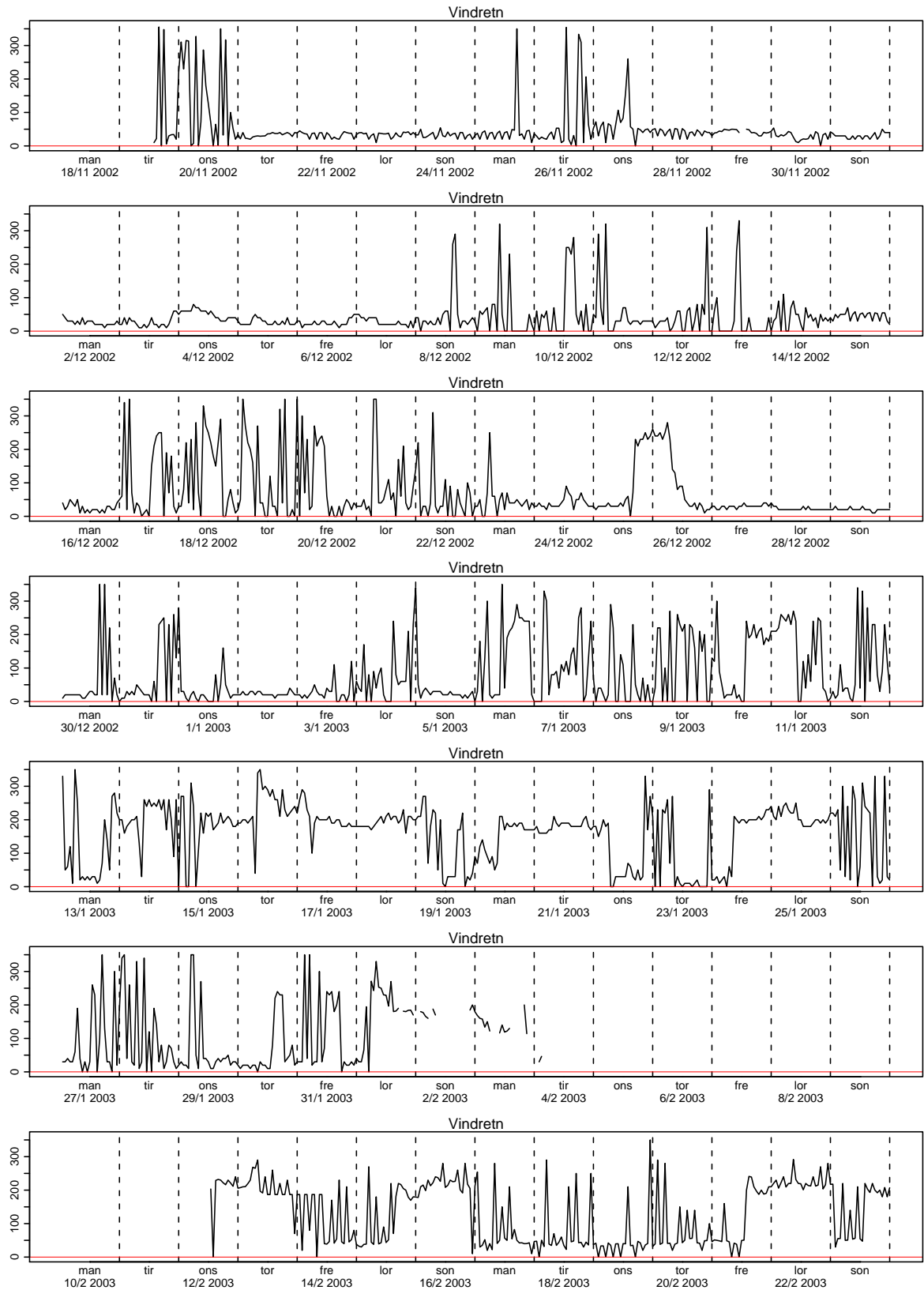
Figur 3.160. Vindretning



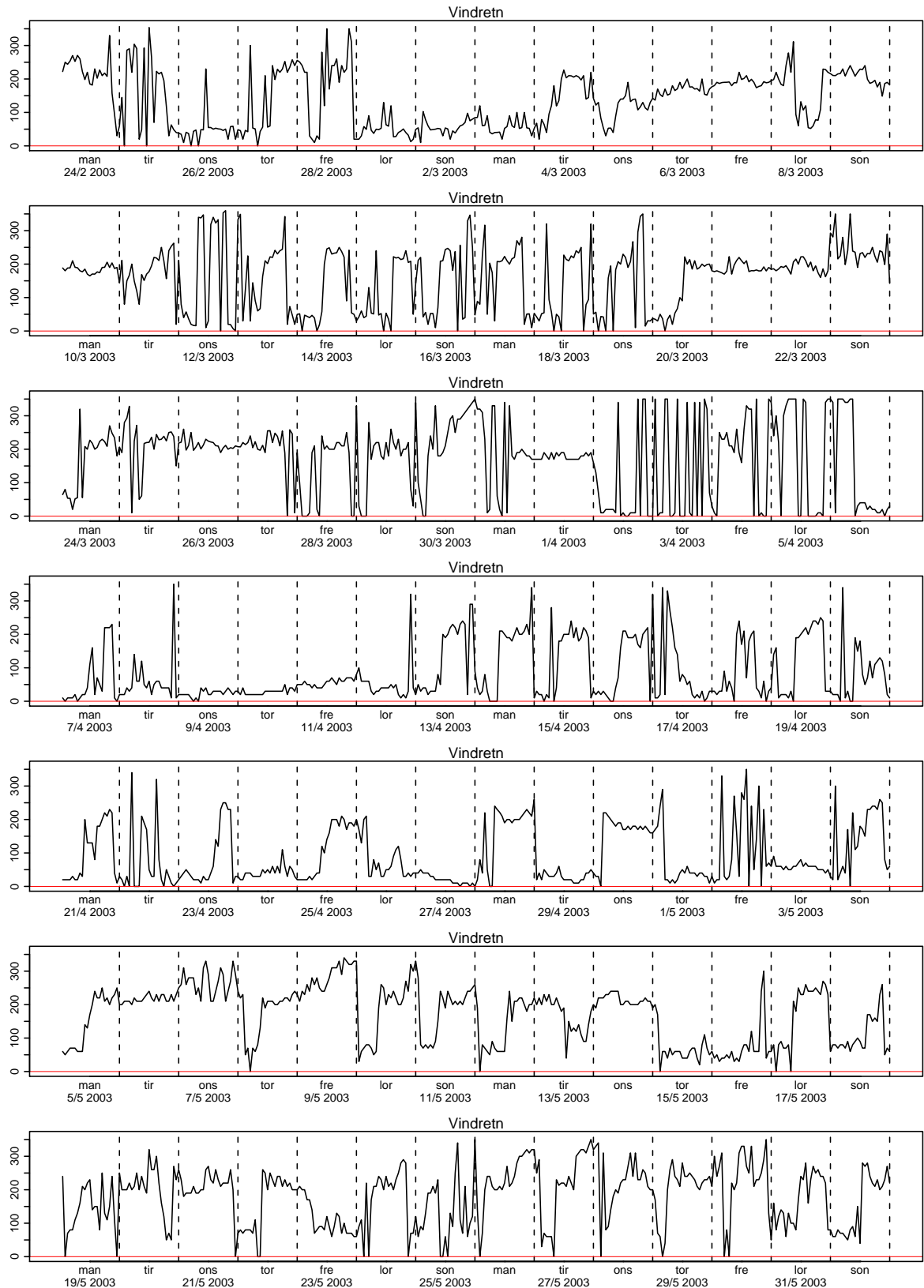
Figur 3.161. Vindretning



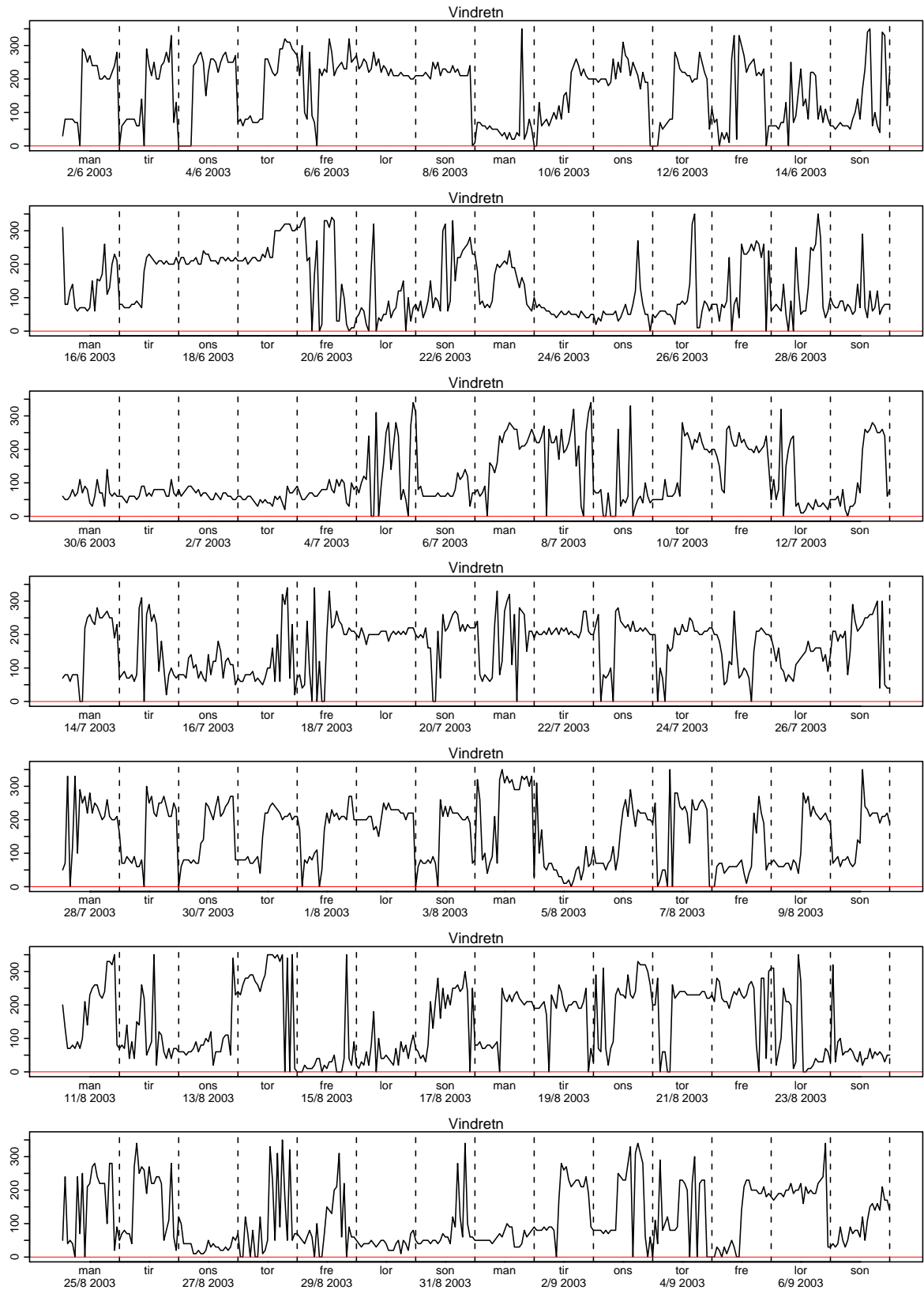
Figur 3.162. Vindretning



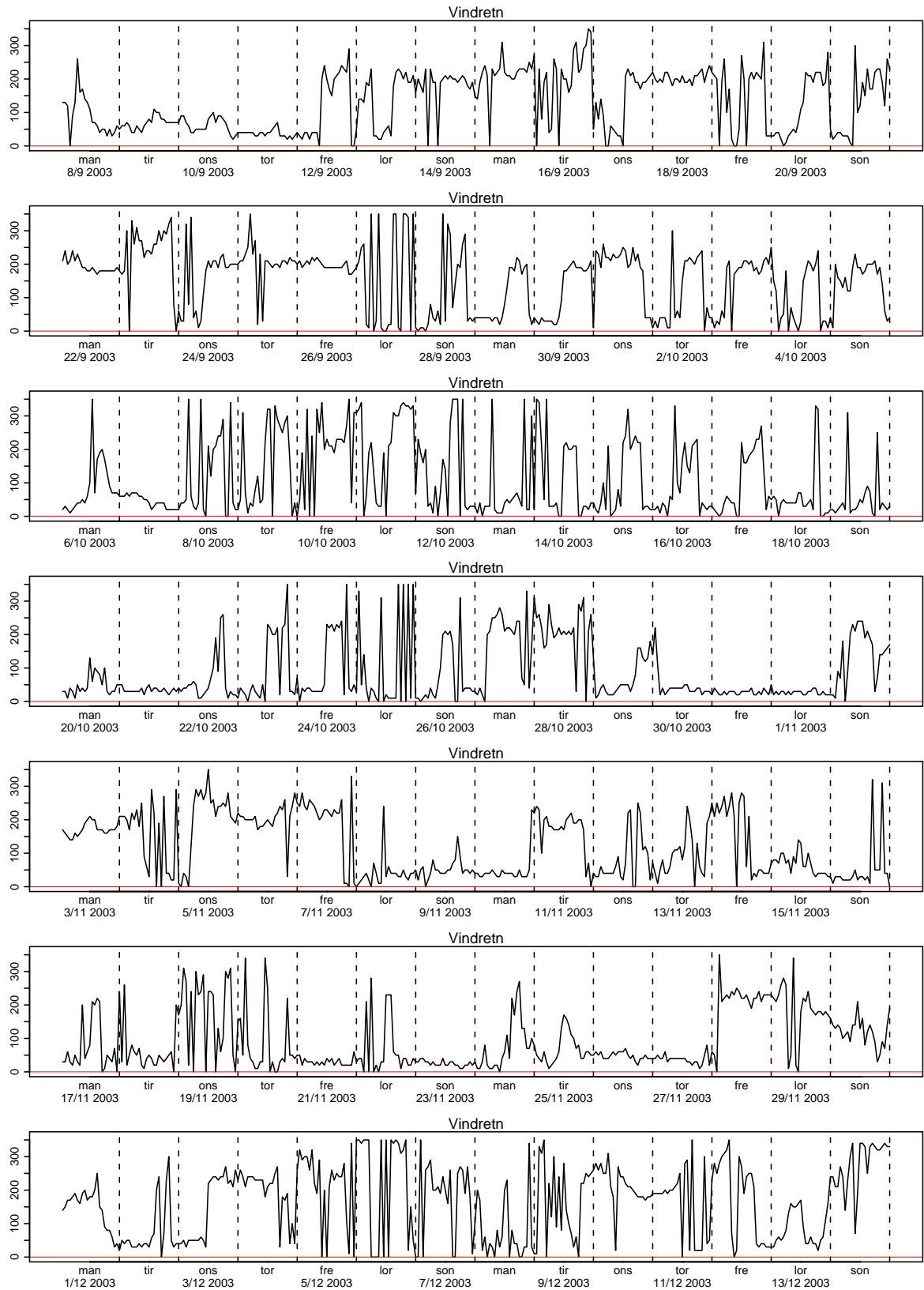
Figur 3.163. Vindretning



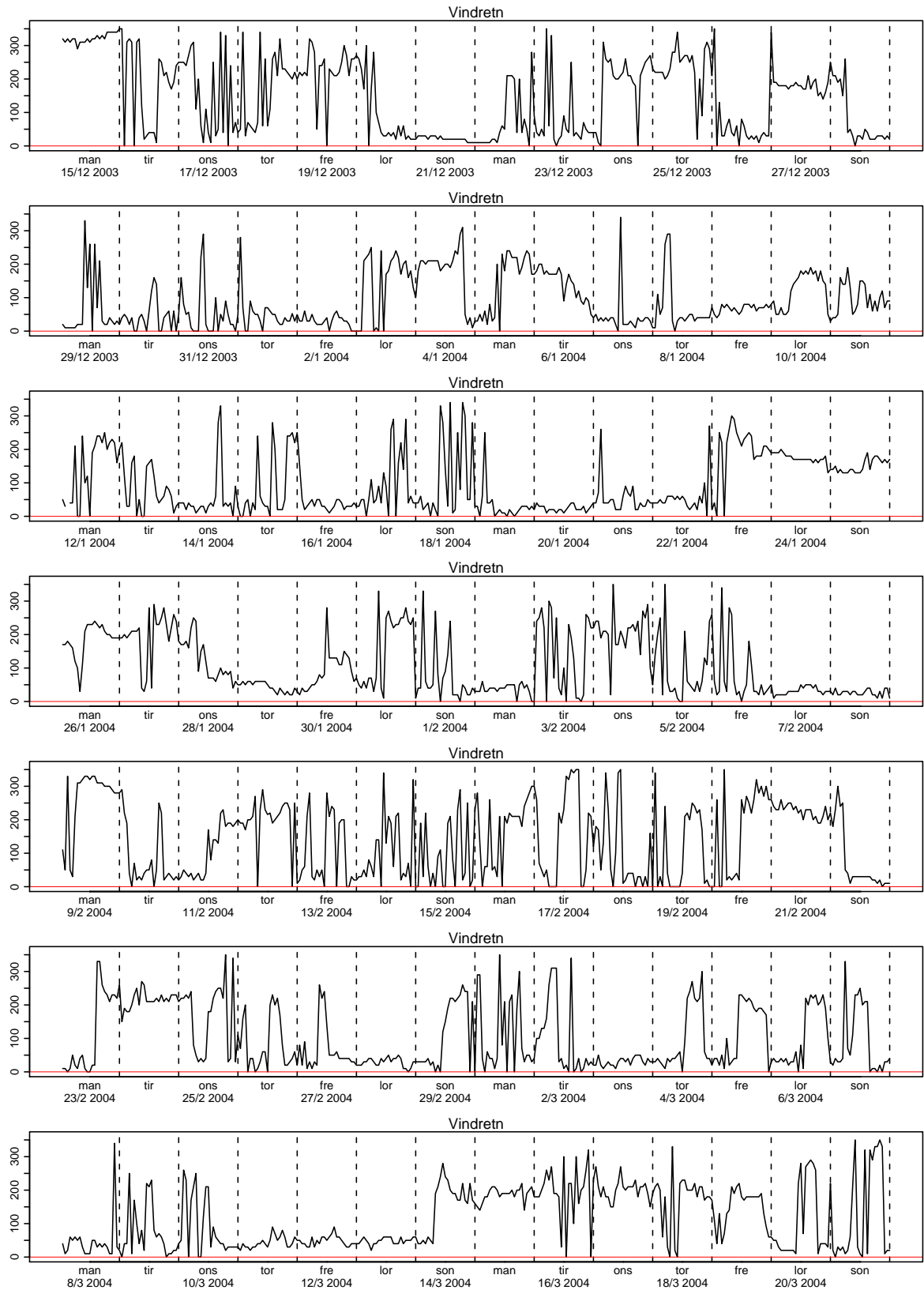
Figur 3.164. Vindretning



Figur 3.165. Vindretning

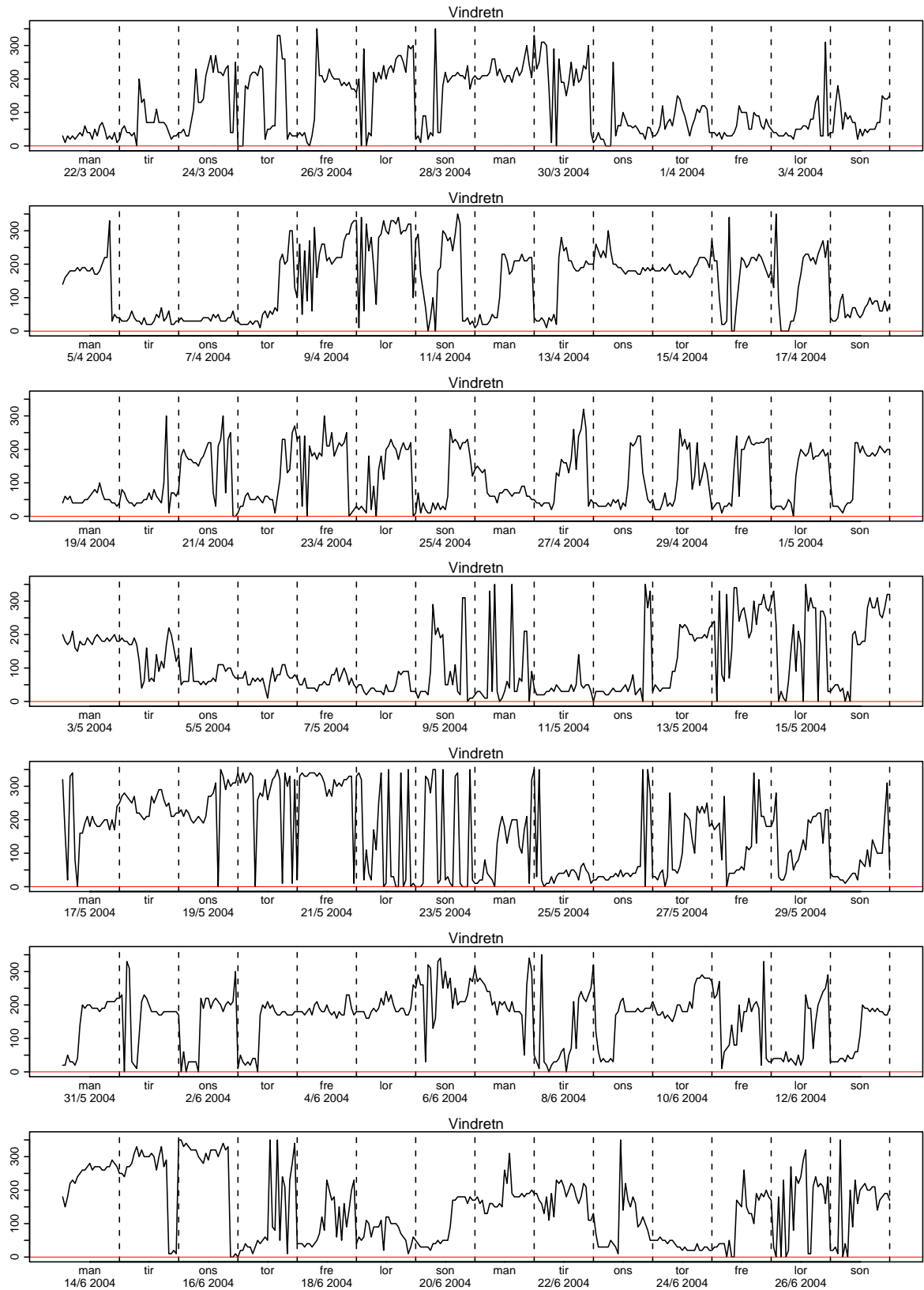


Figur 3.166. Vindretning

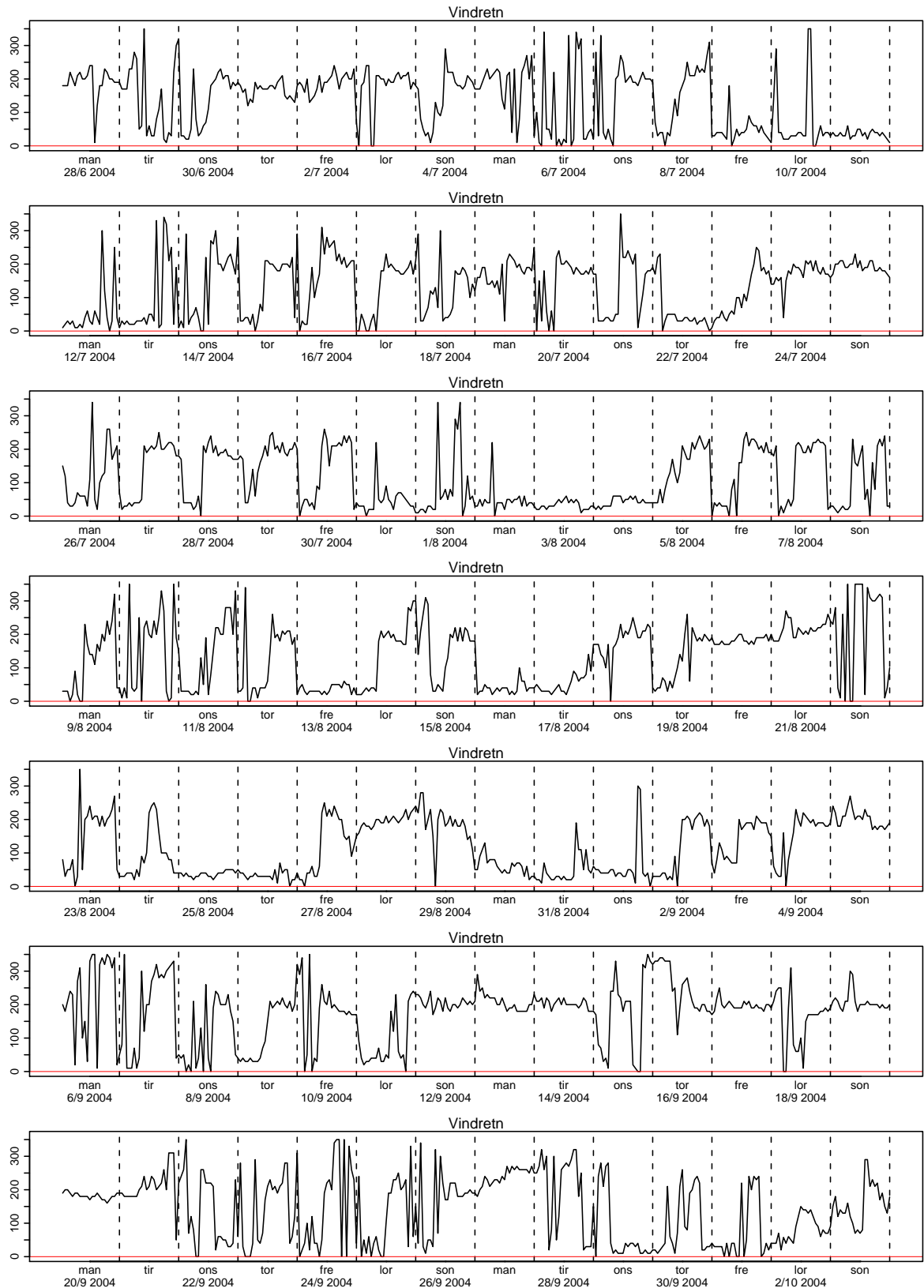


Figur 3.167. Vindretning

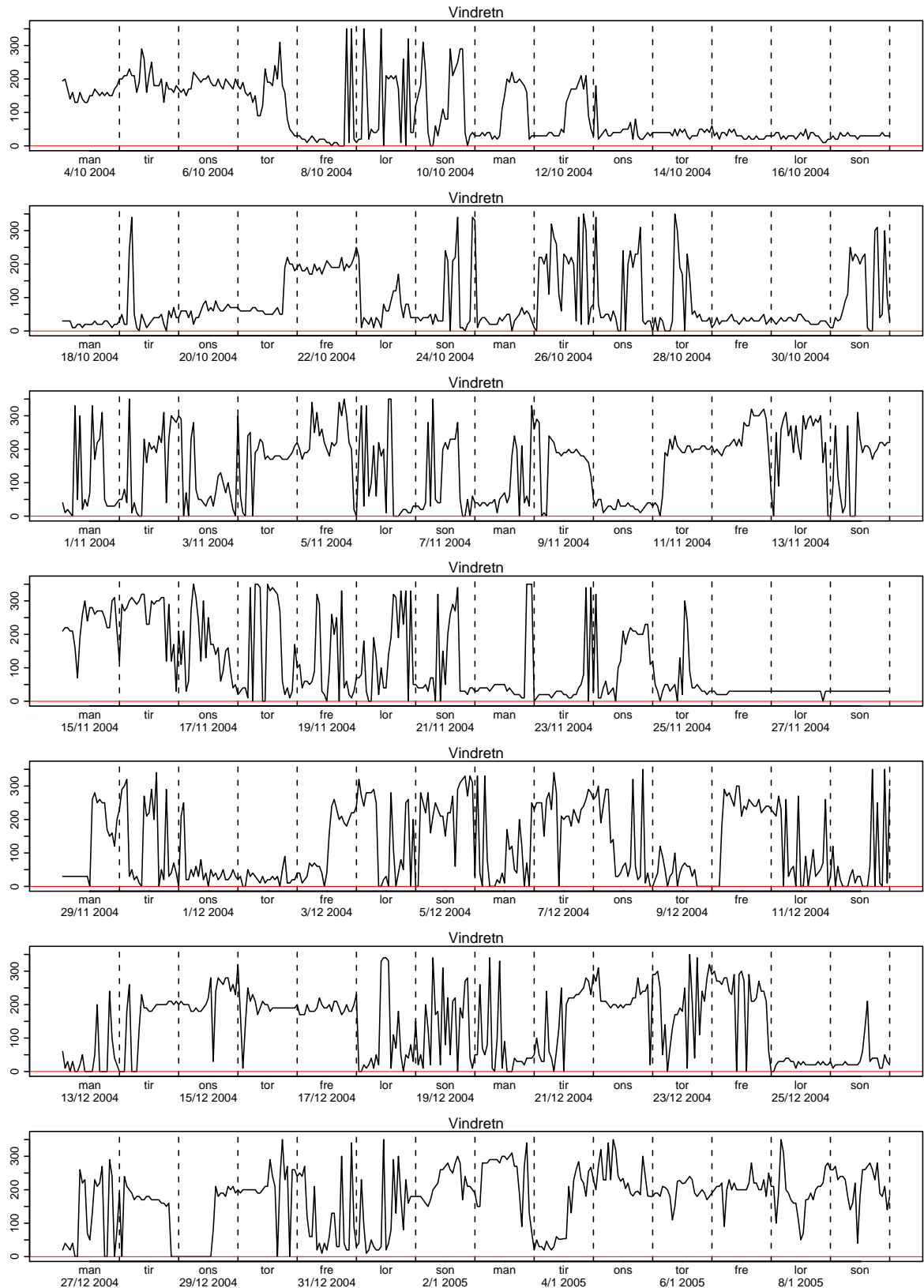




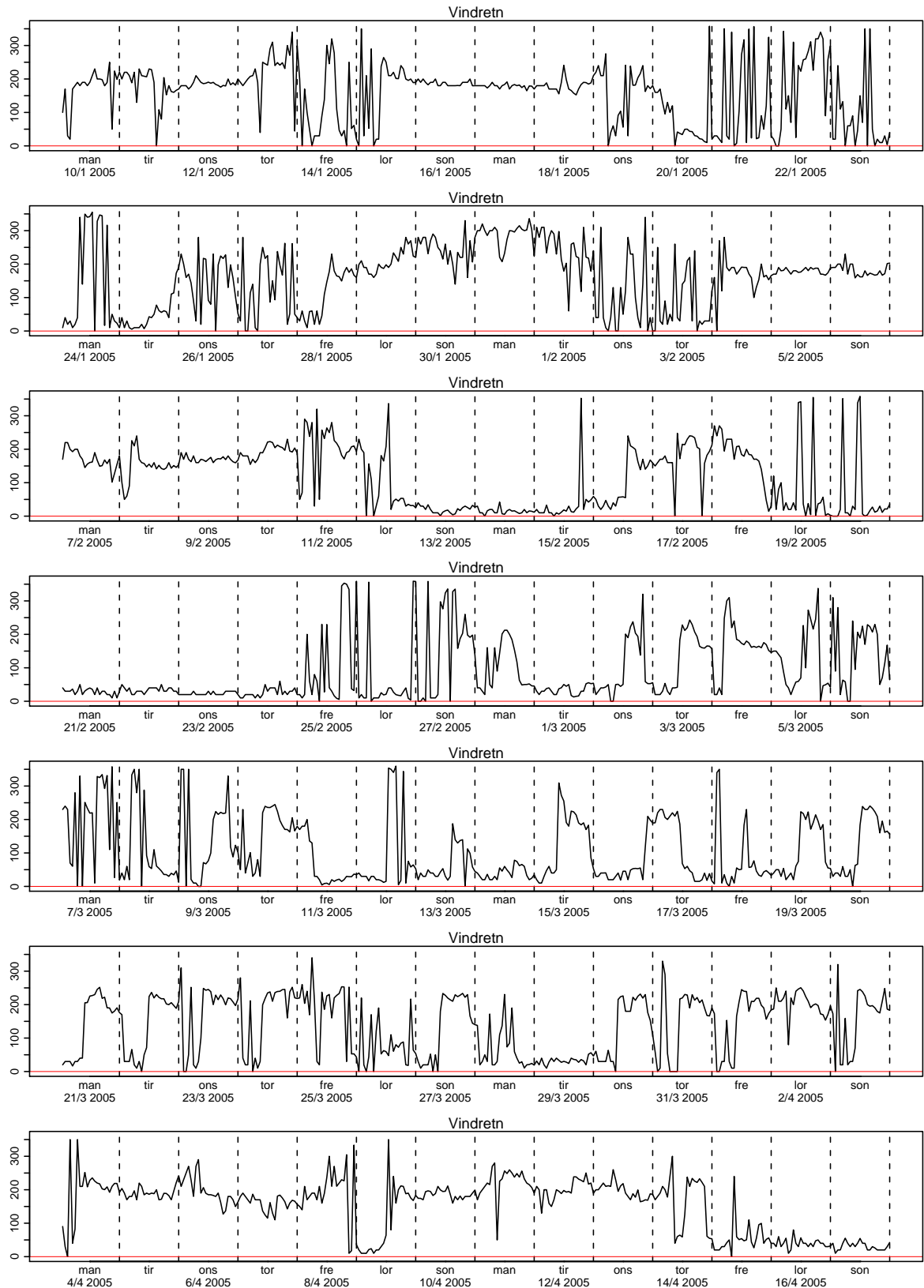
Figur 3.168. Vindretning



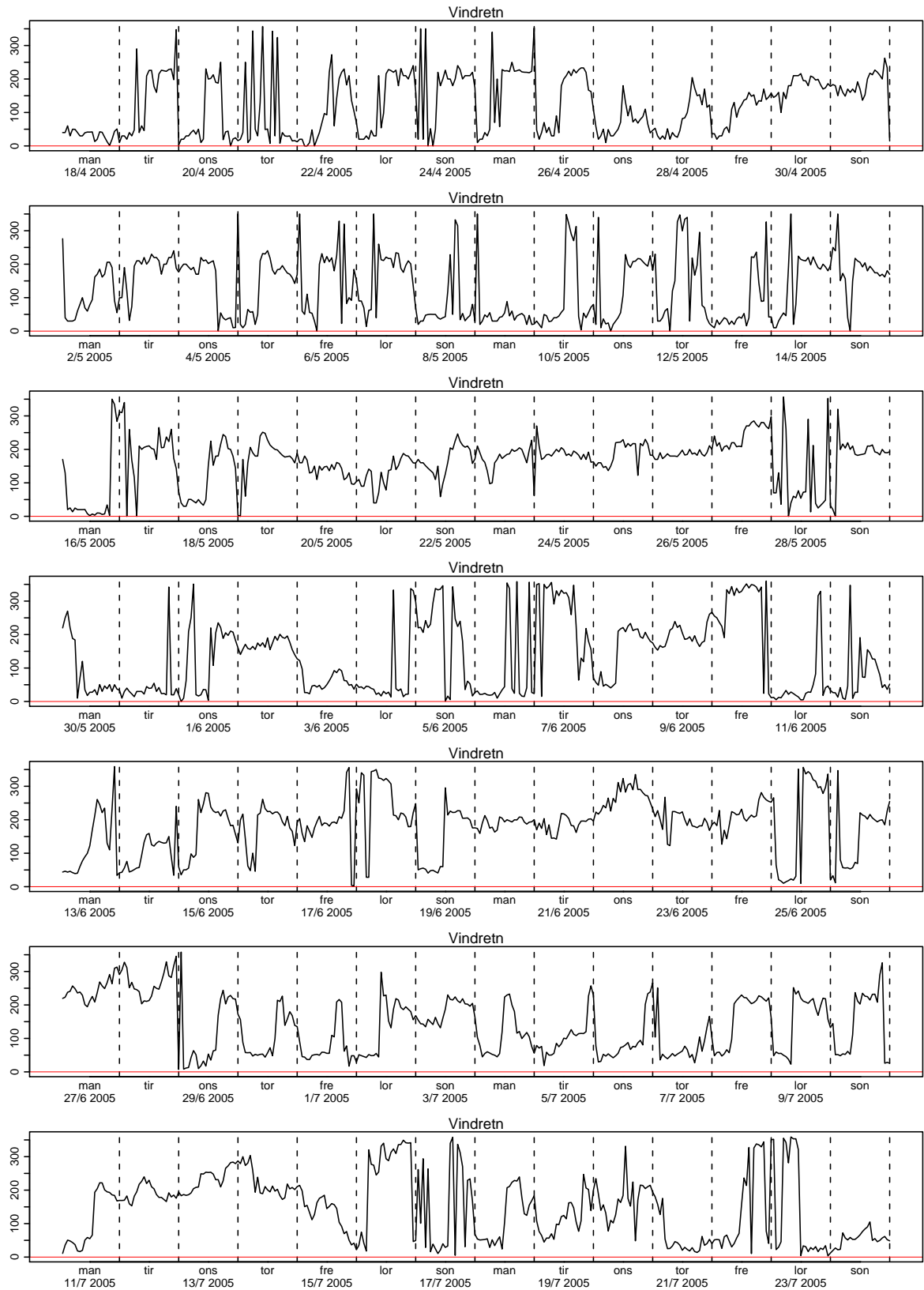
Figur 3.169. Vindretning



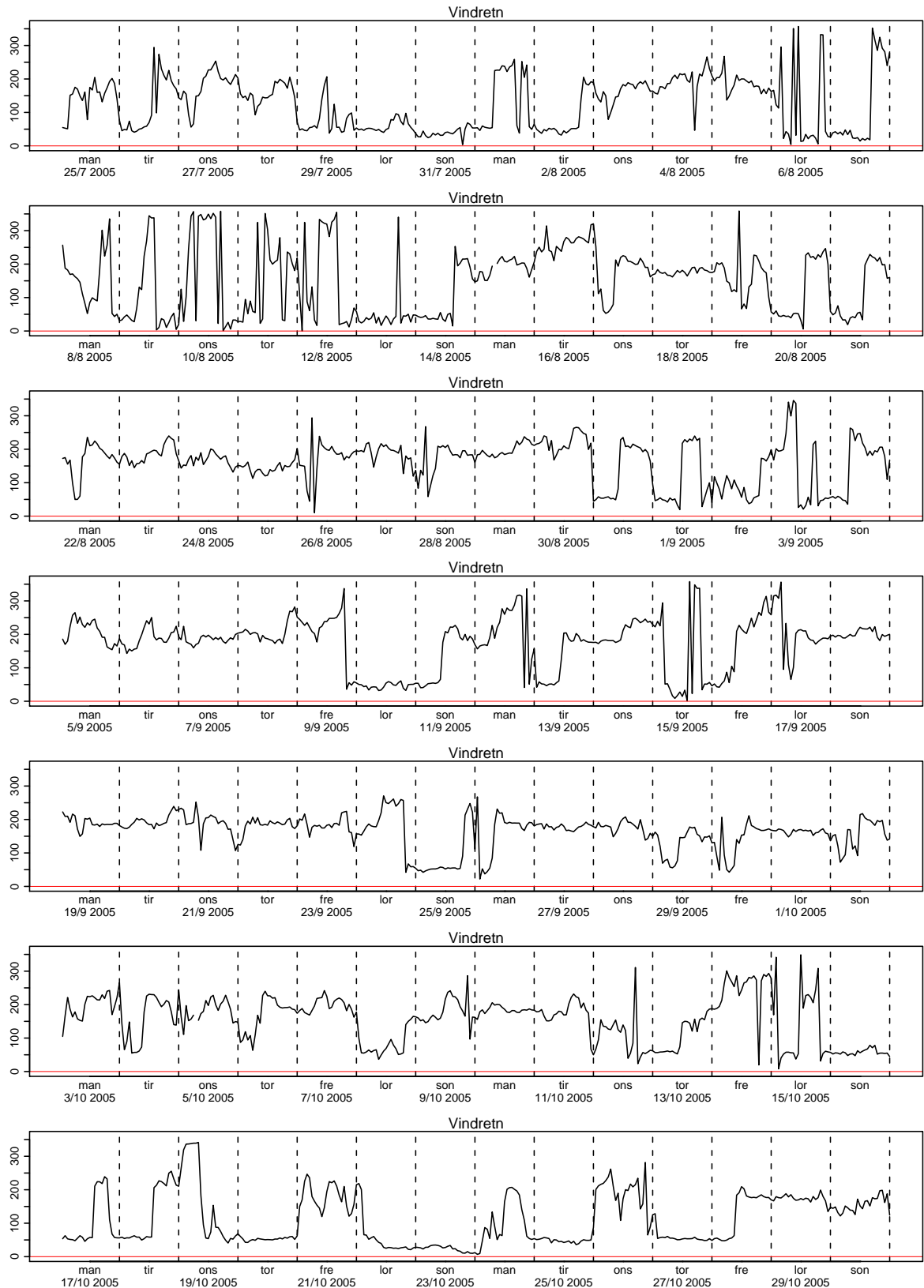
Figur 3.170. Vindretning



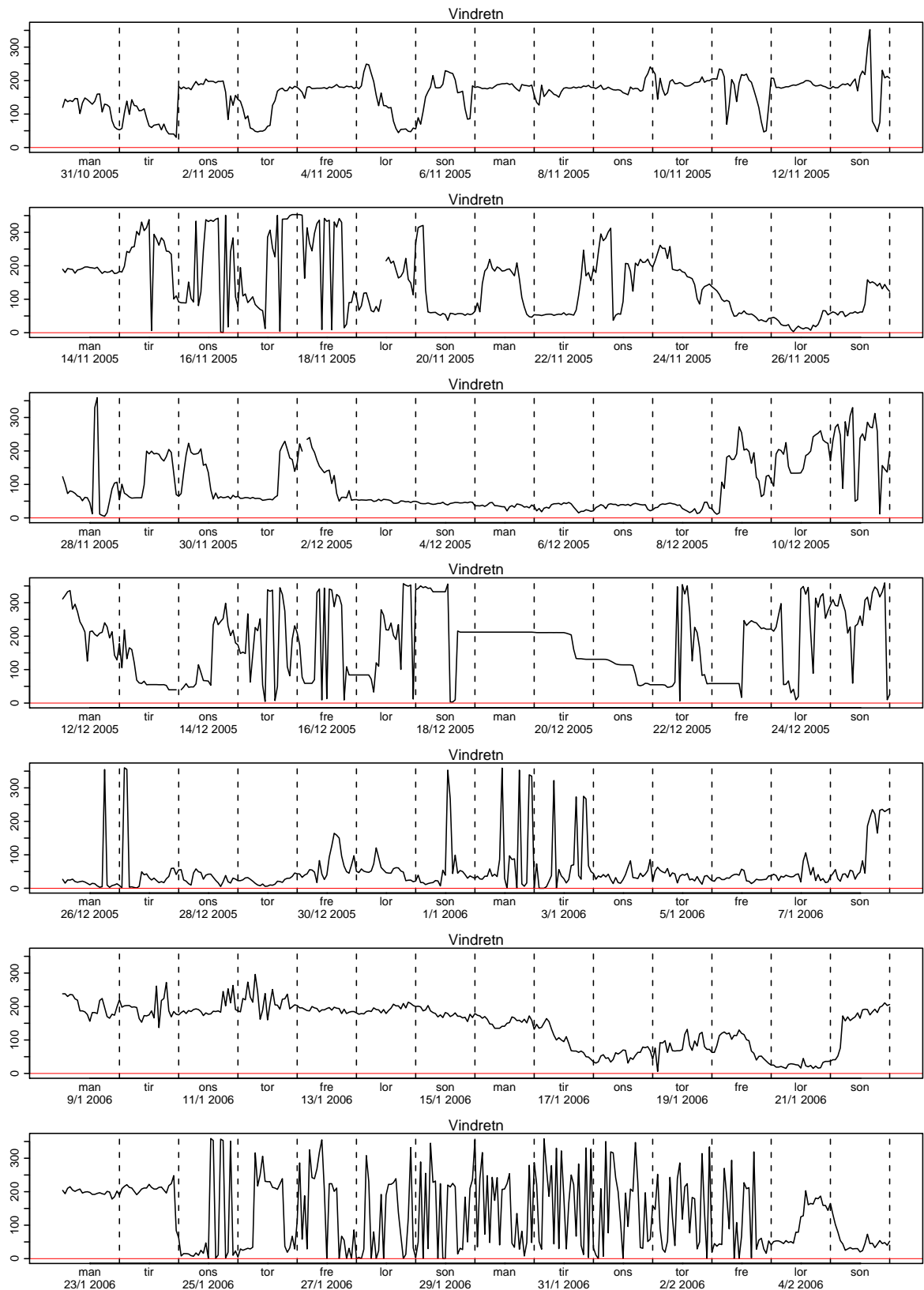
Figur 3.171. Vindretning



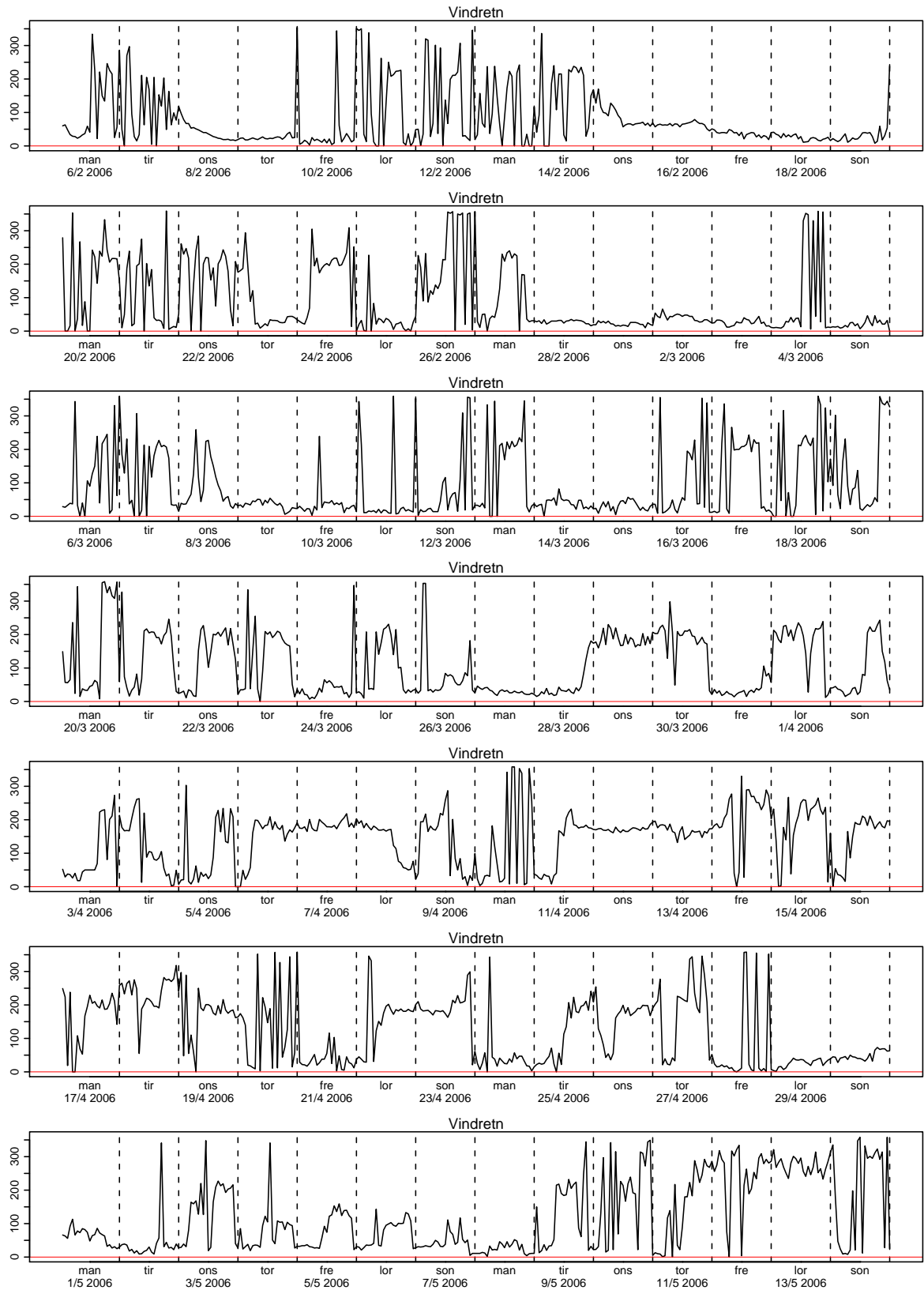
Figur 3.172. Vindretning



Figur 3.173. Vindretning

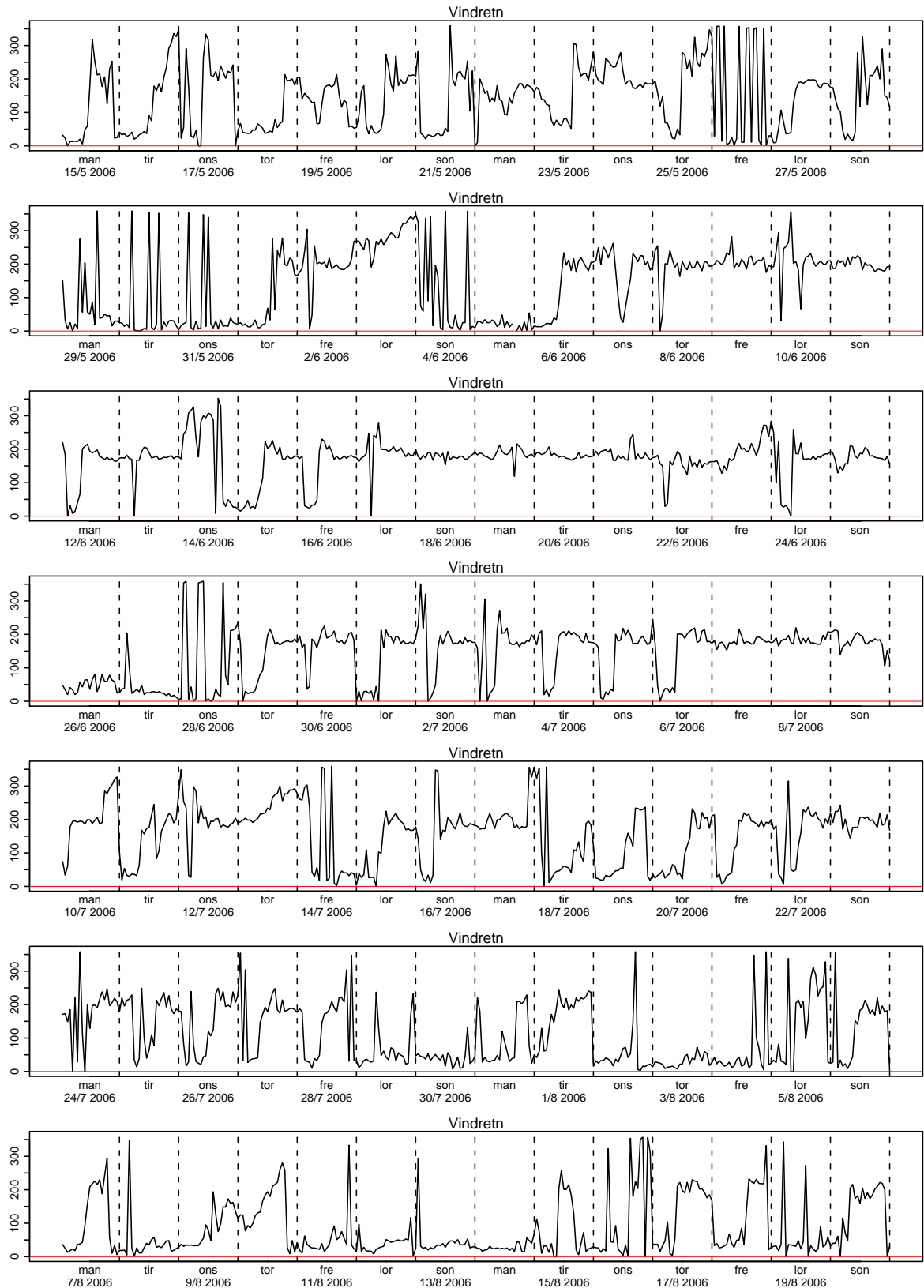


Figur 3.174. Vindretning

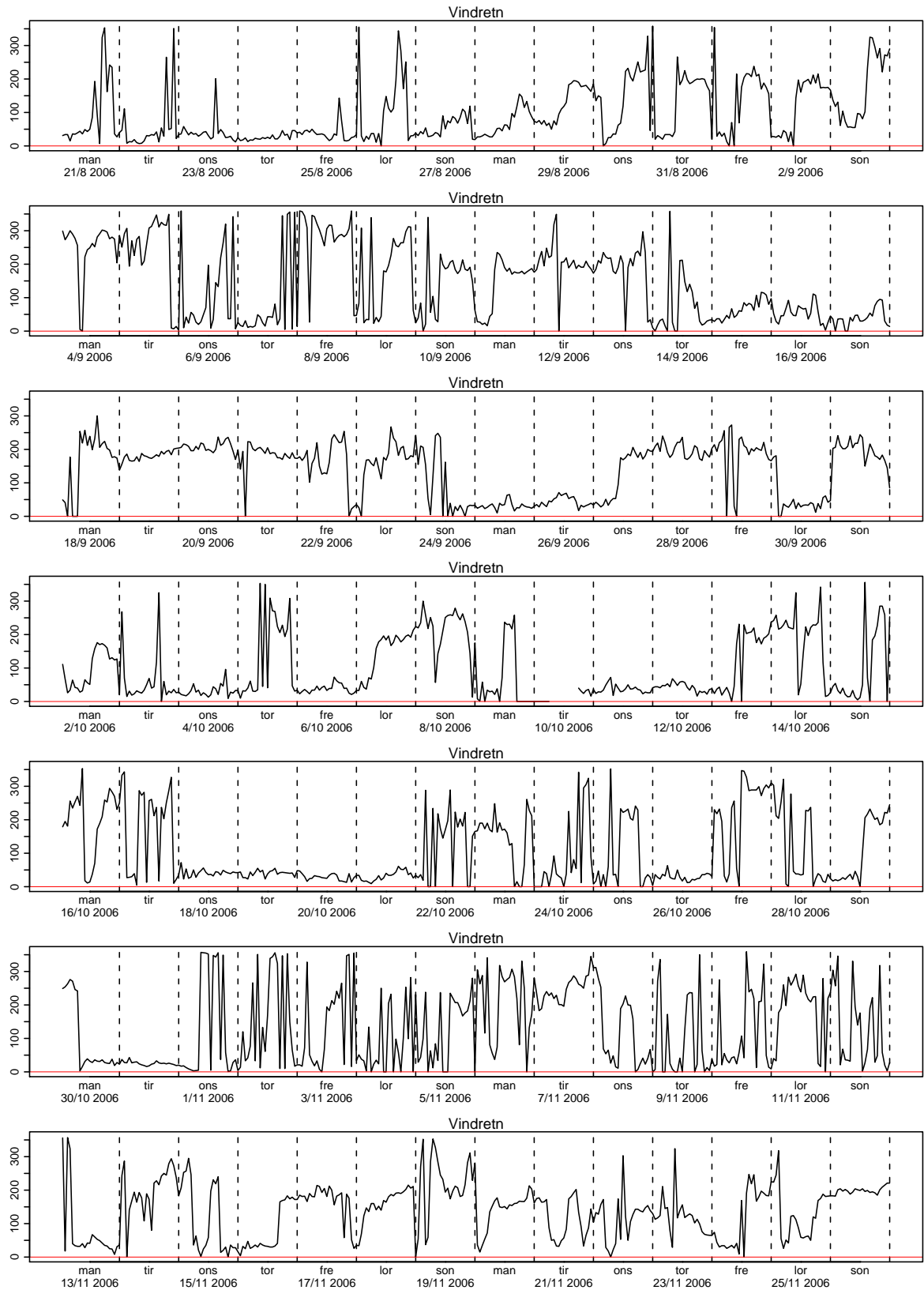


Figur 3.175. Vindretning

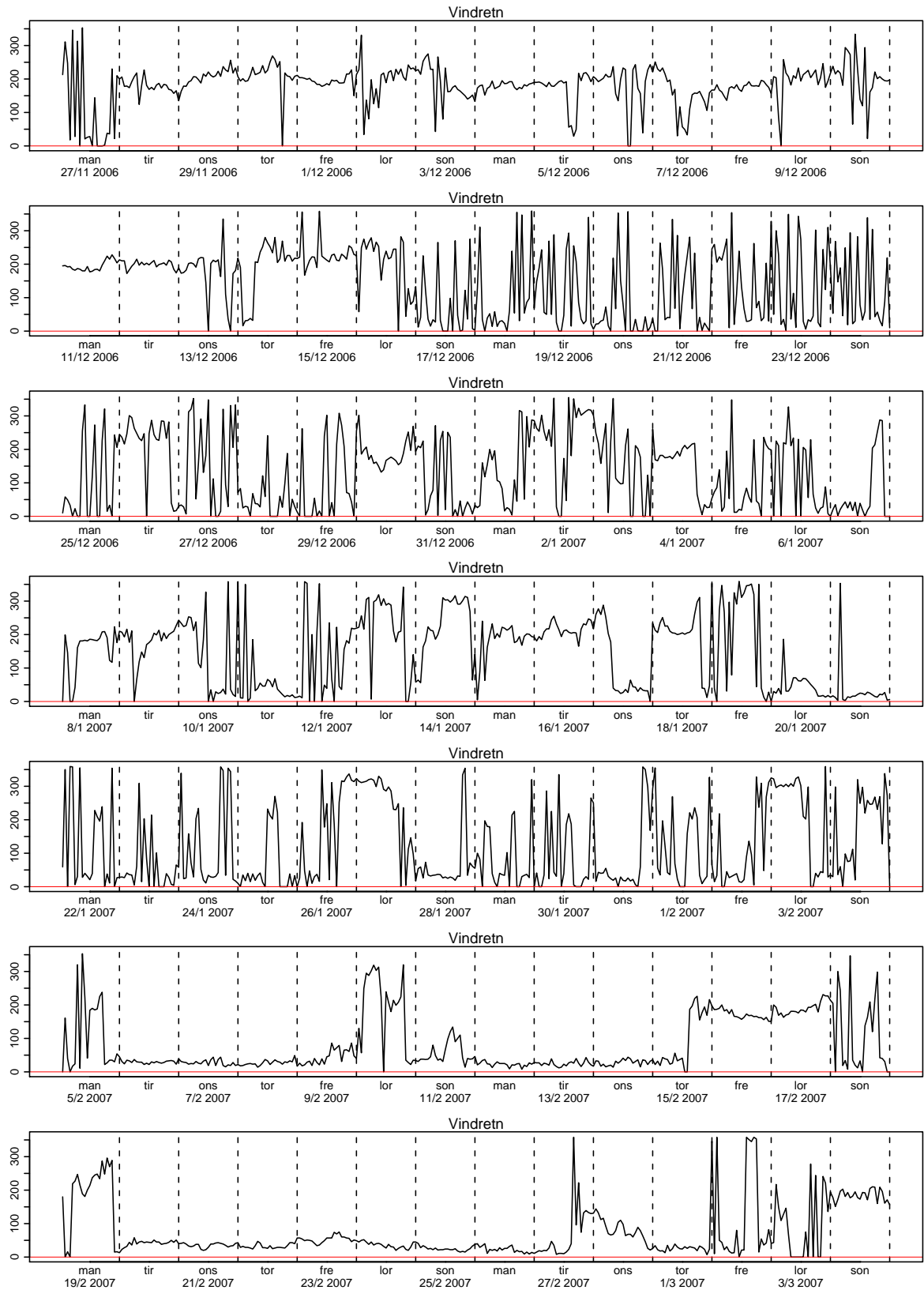




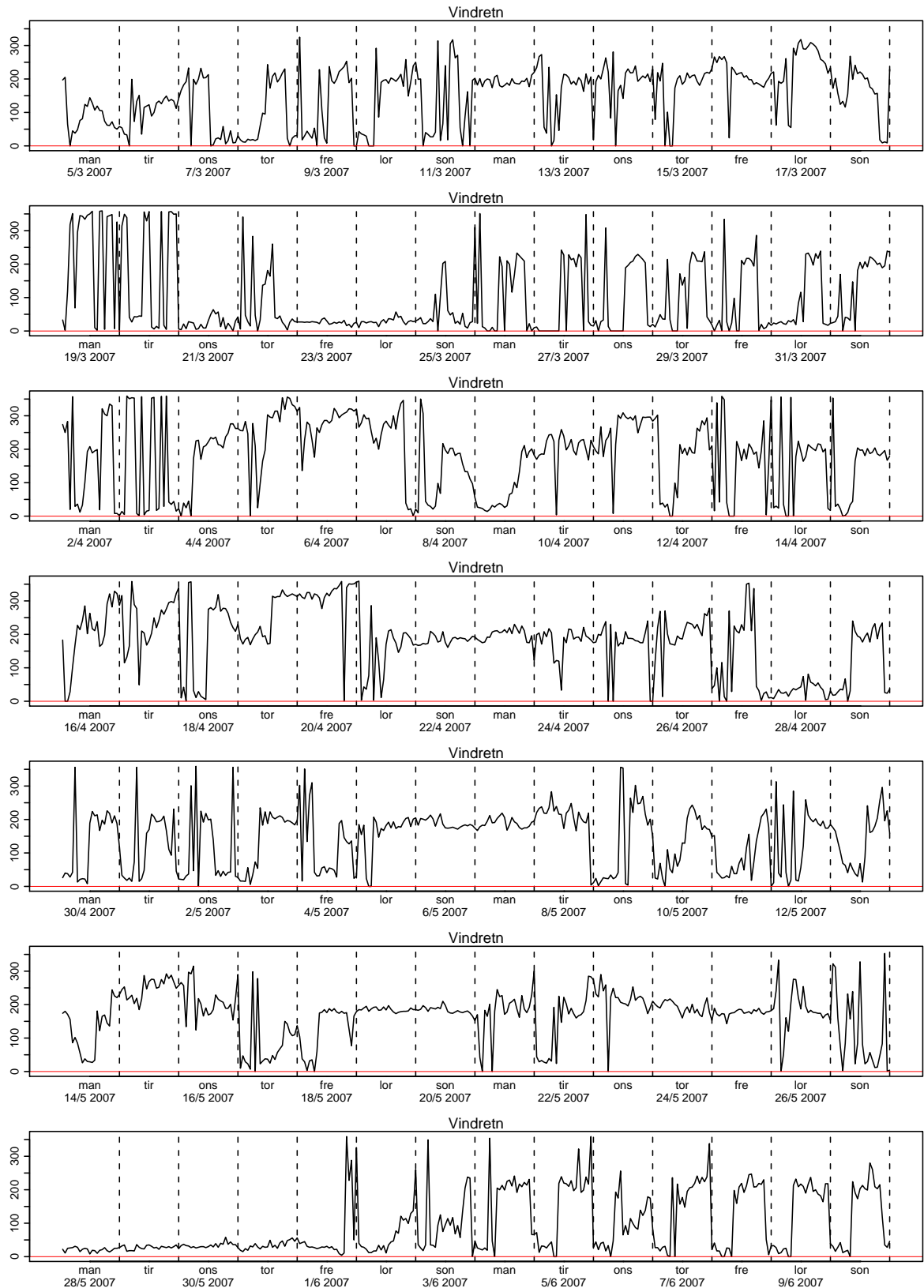
Figur 3.176. Vindretning



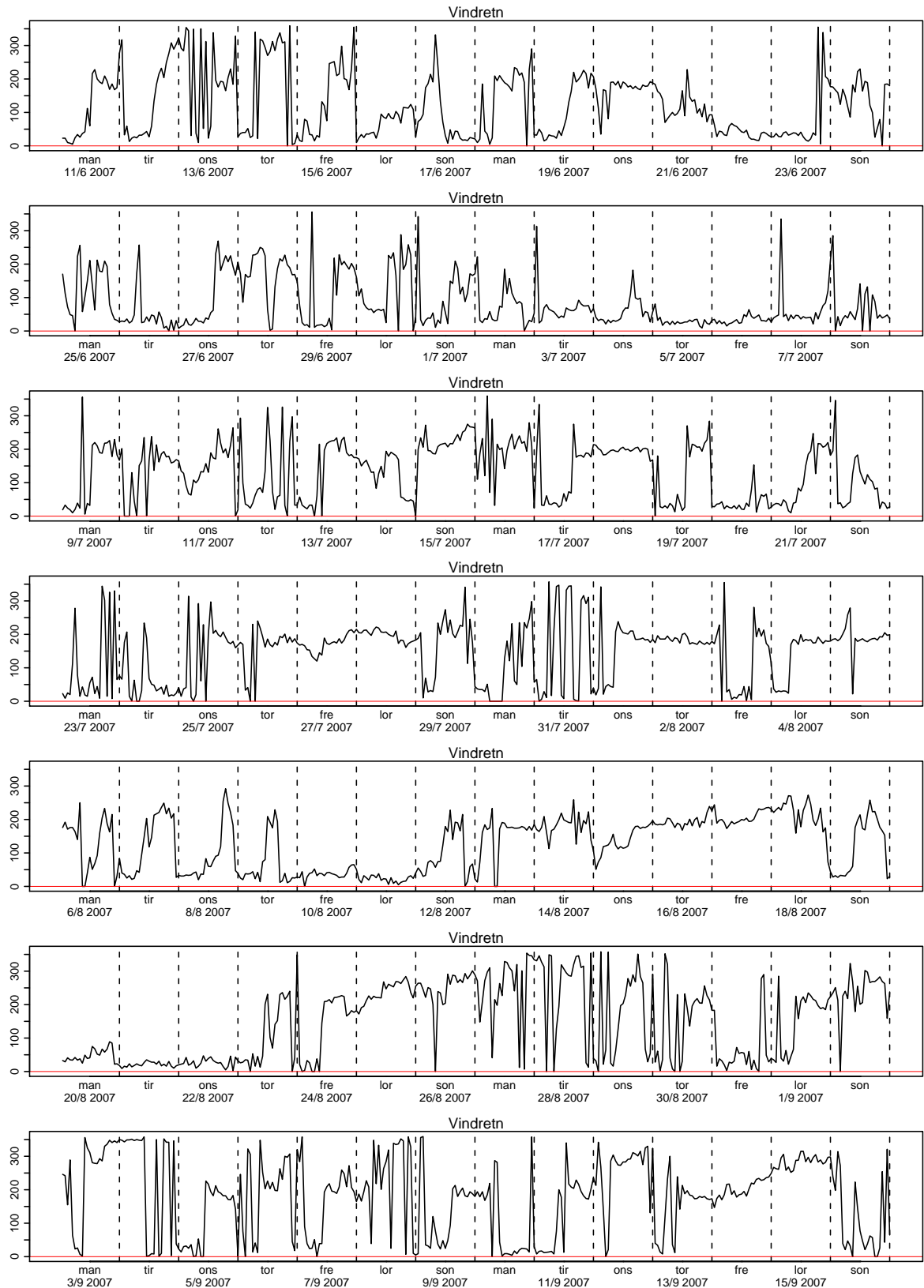
Figur 3.177. Vindretning



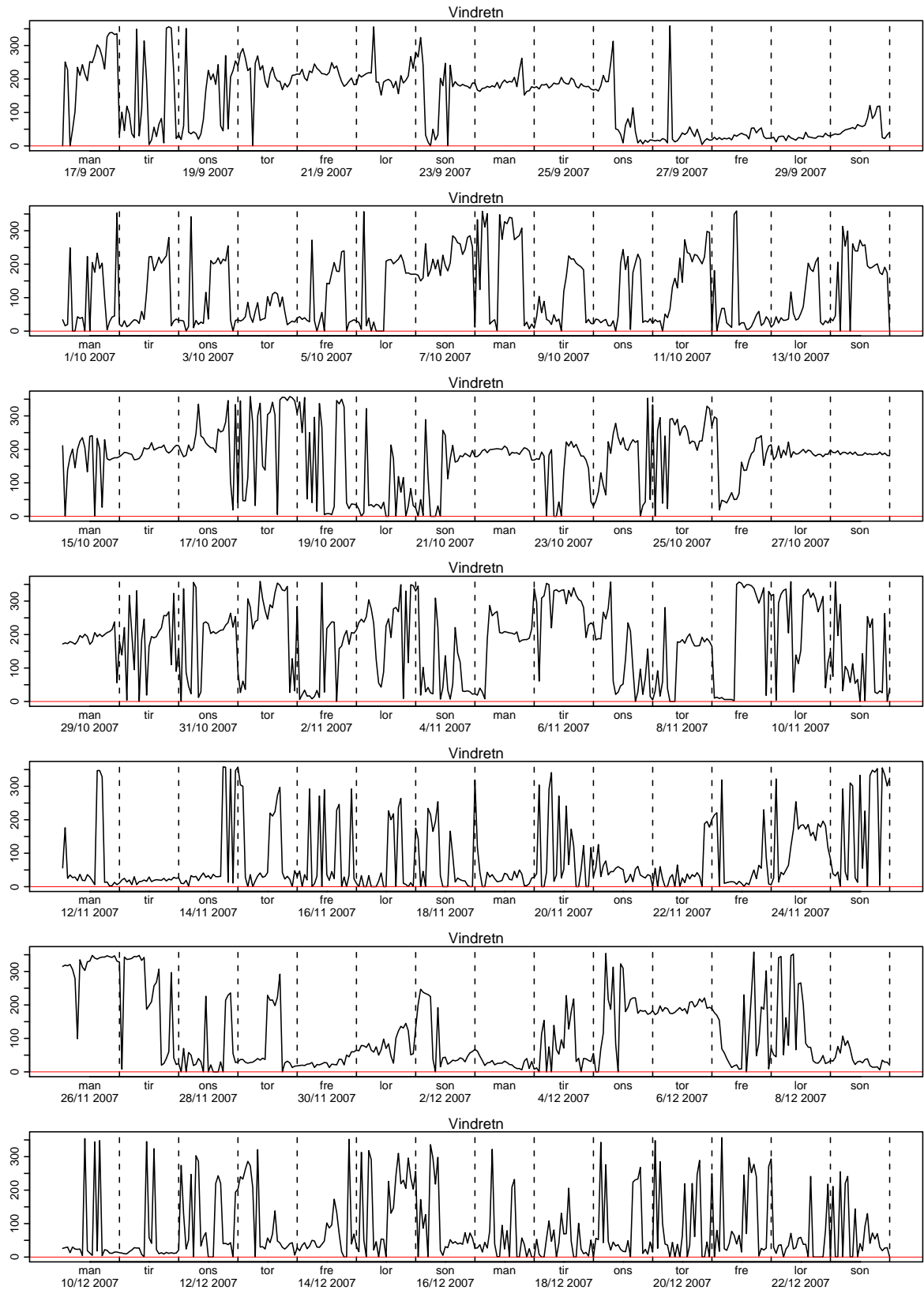
Figur 3.178. Vindretning



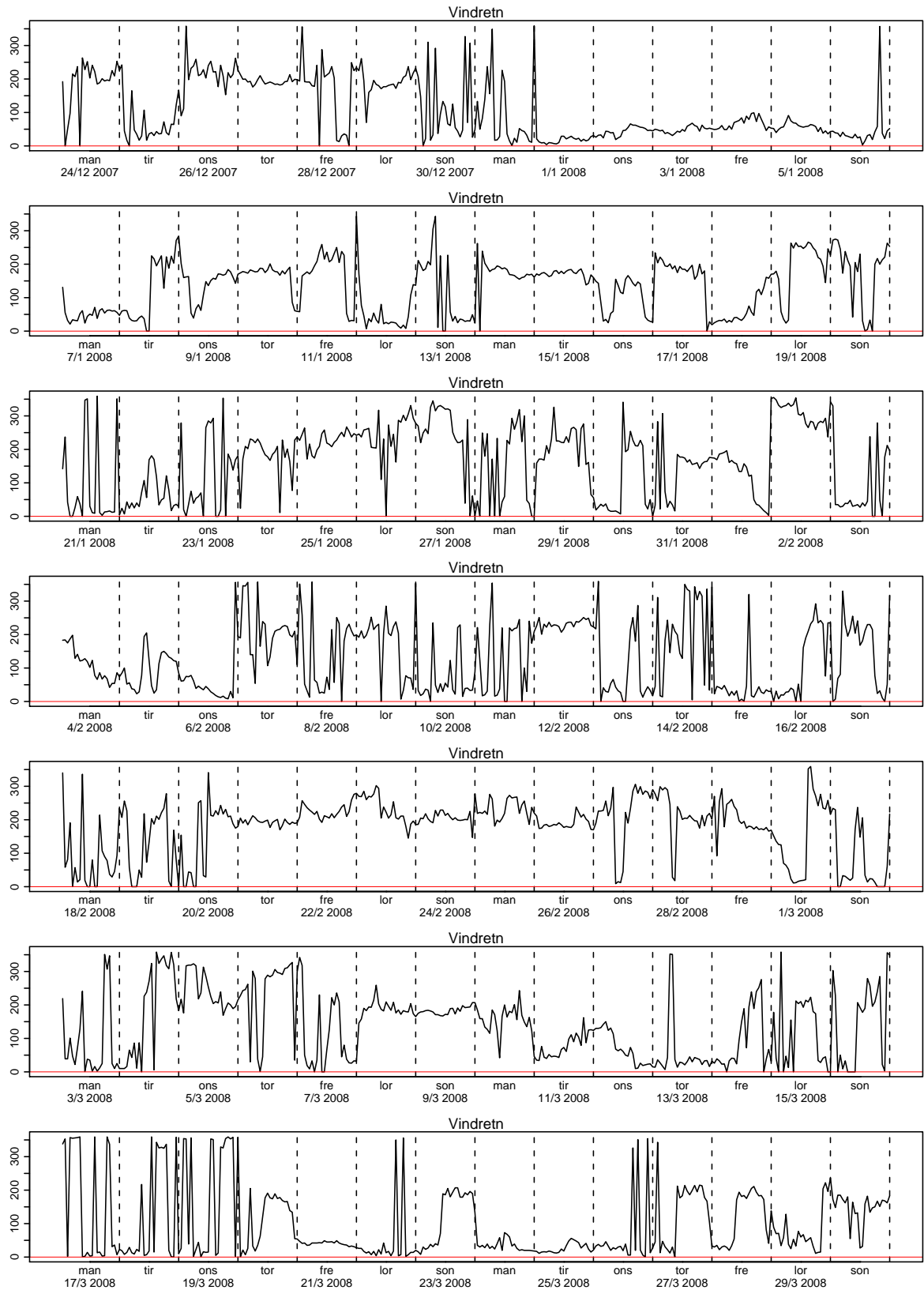
Figur 3.179. Vindretning



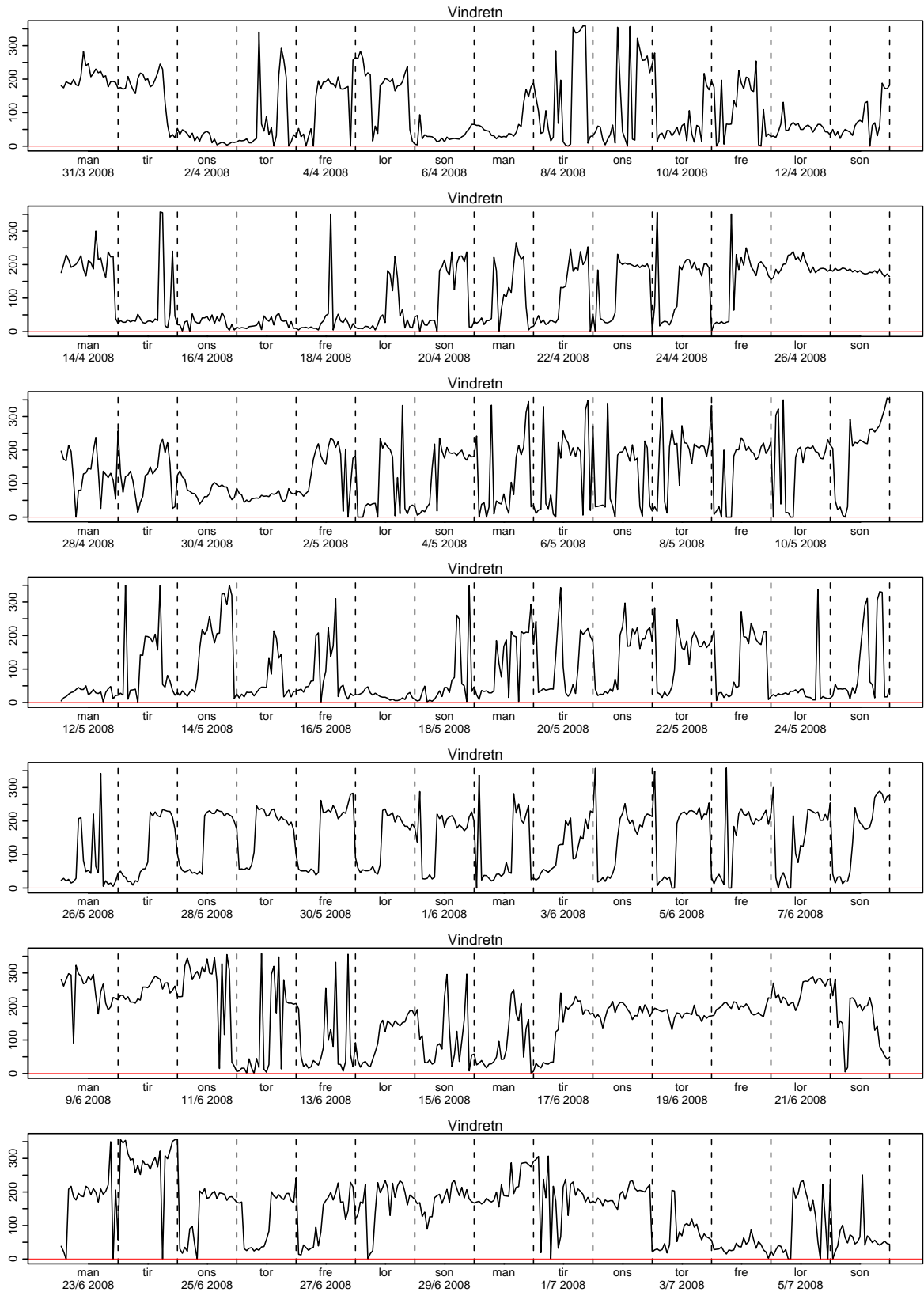
Figur 3.180. Vindretning



Figur 3.181. Vindretning

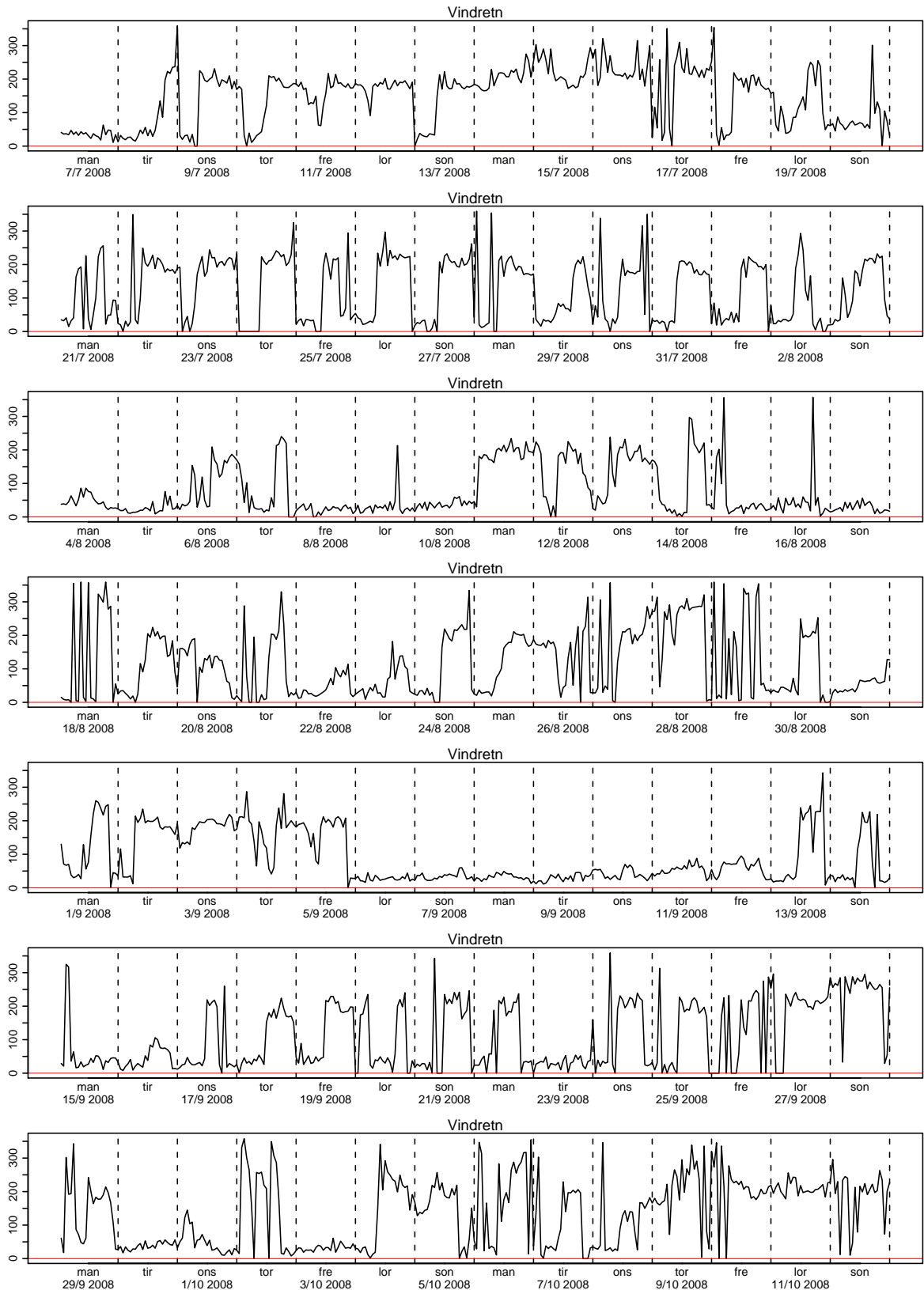


Figur 3.182. Vindretning

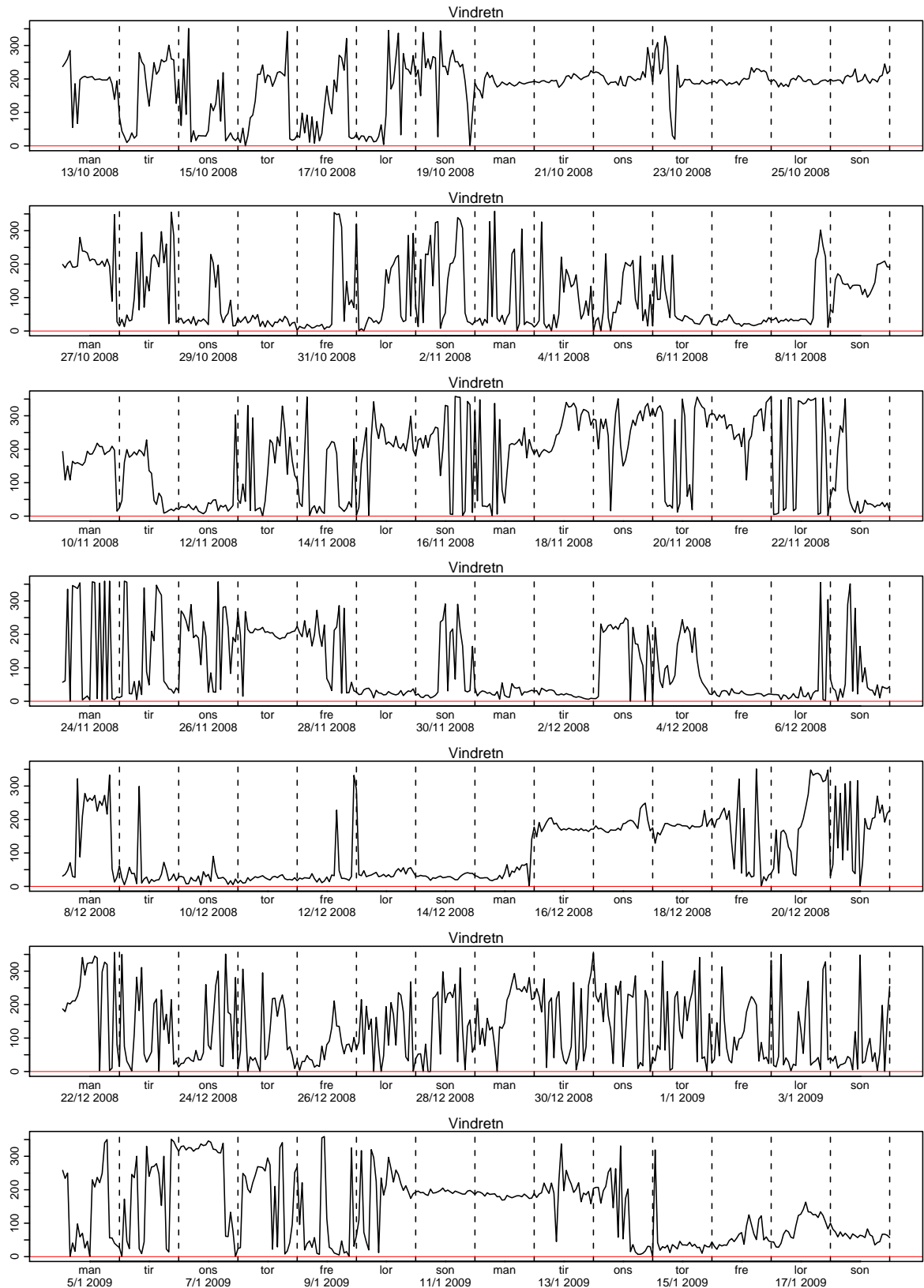


Figur 3.183. Vindretning

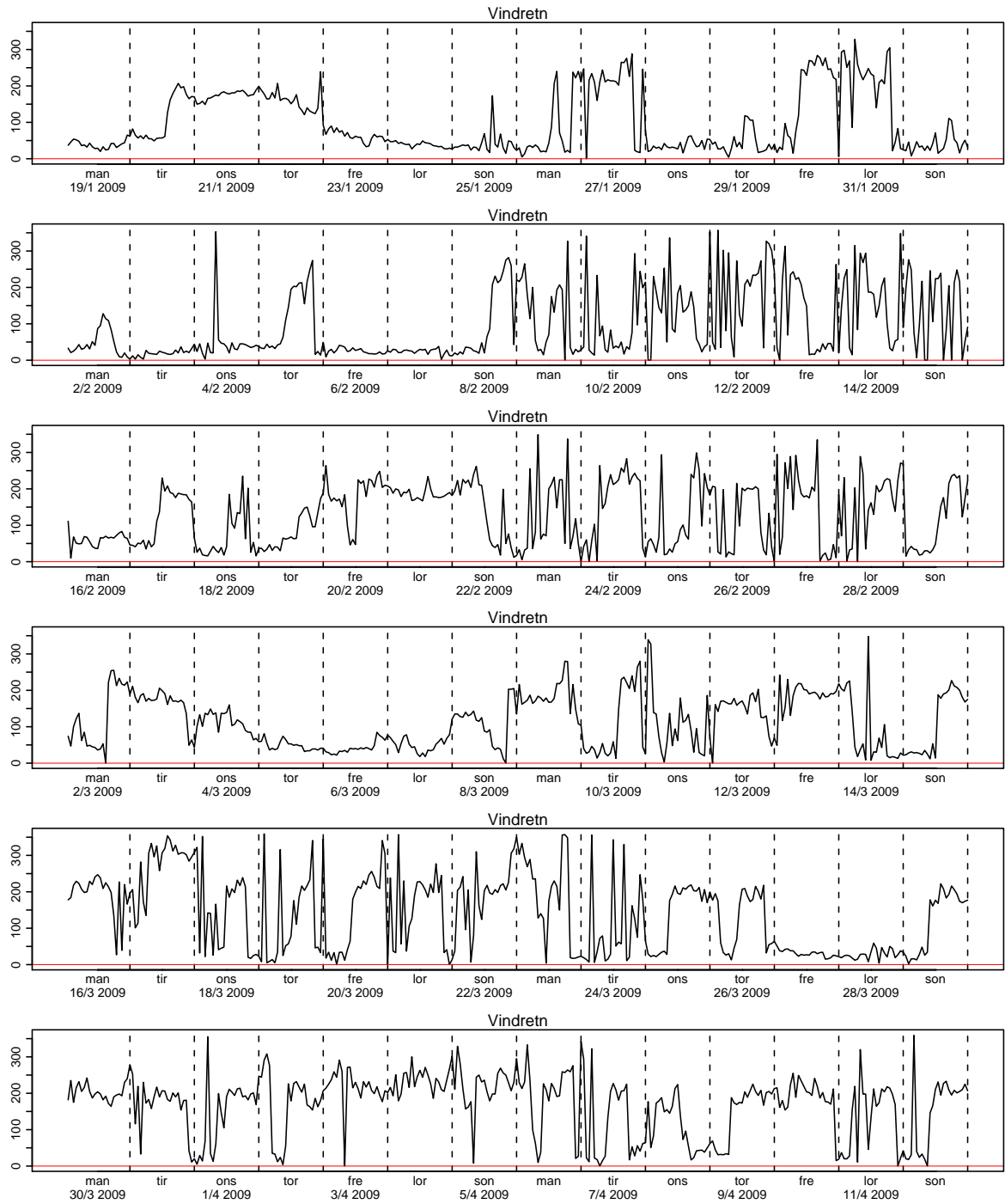




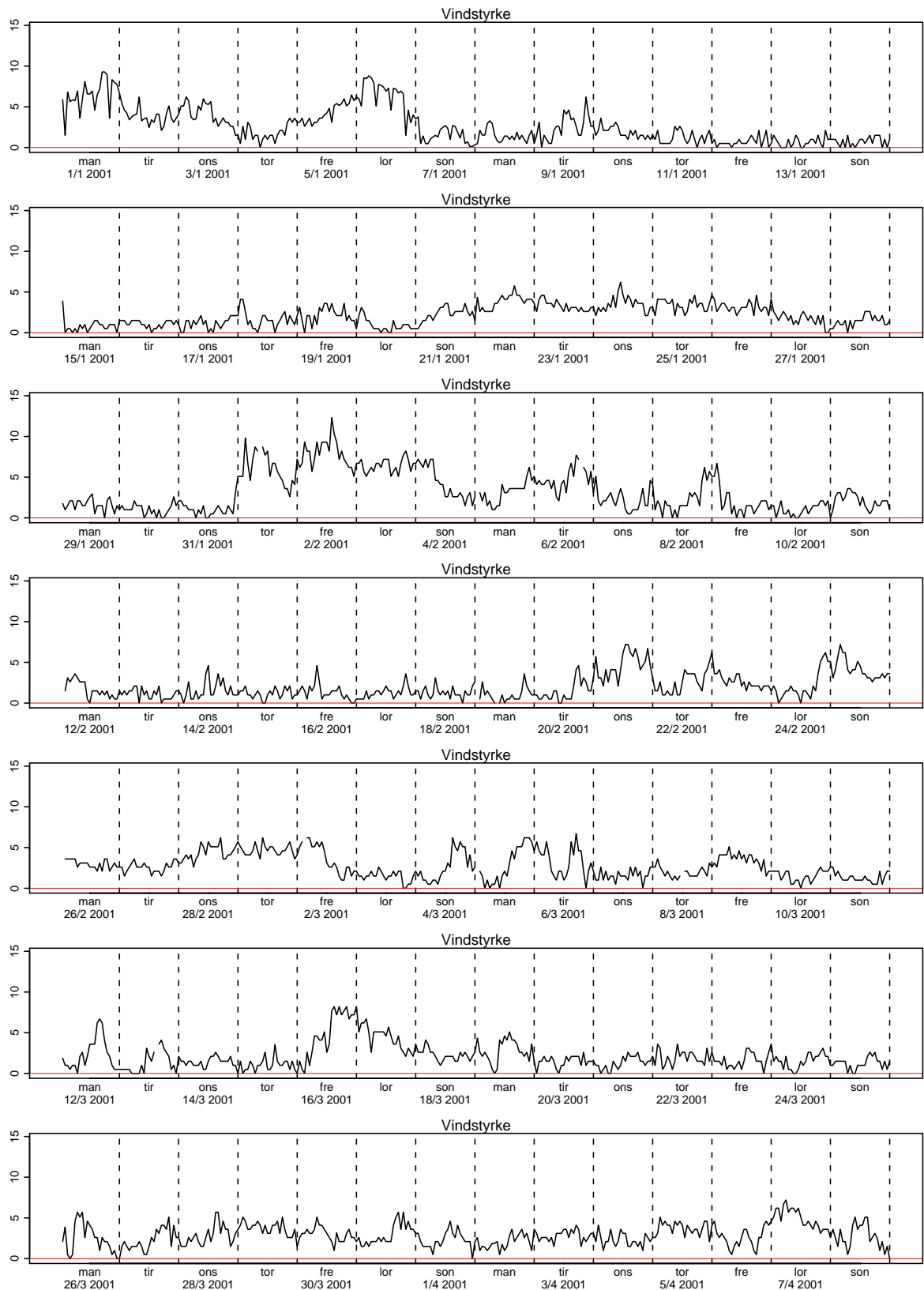
Figur 3.184. Vindretning



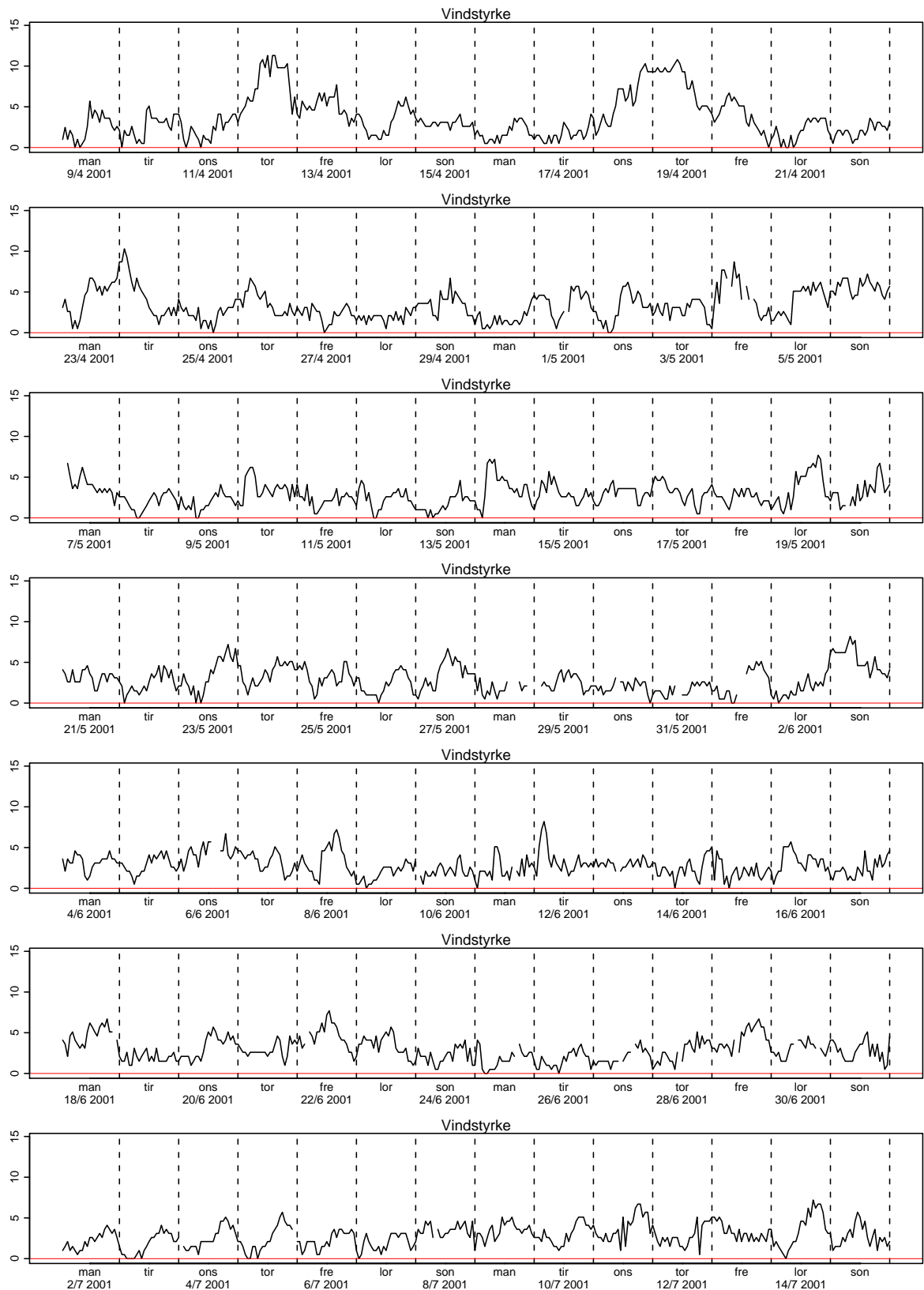
Figur 3.185. Vindretning



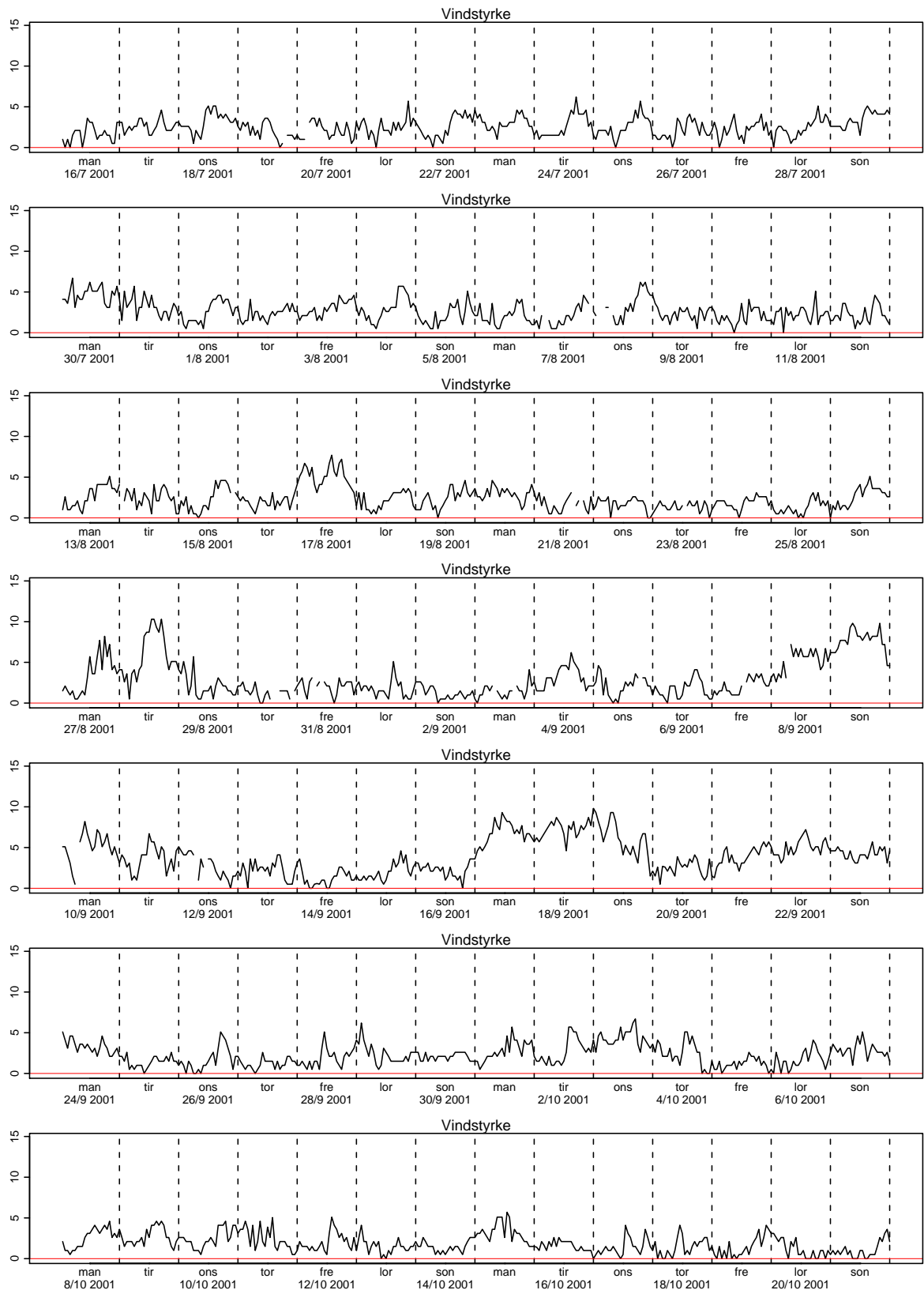
Figur 3.186. Vindretning



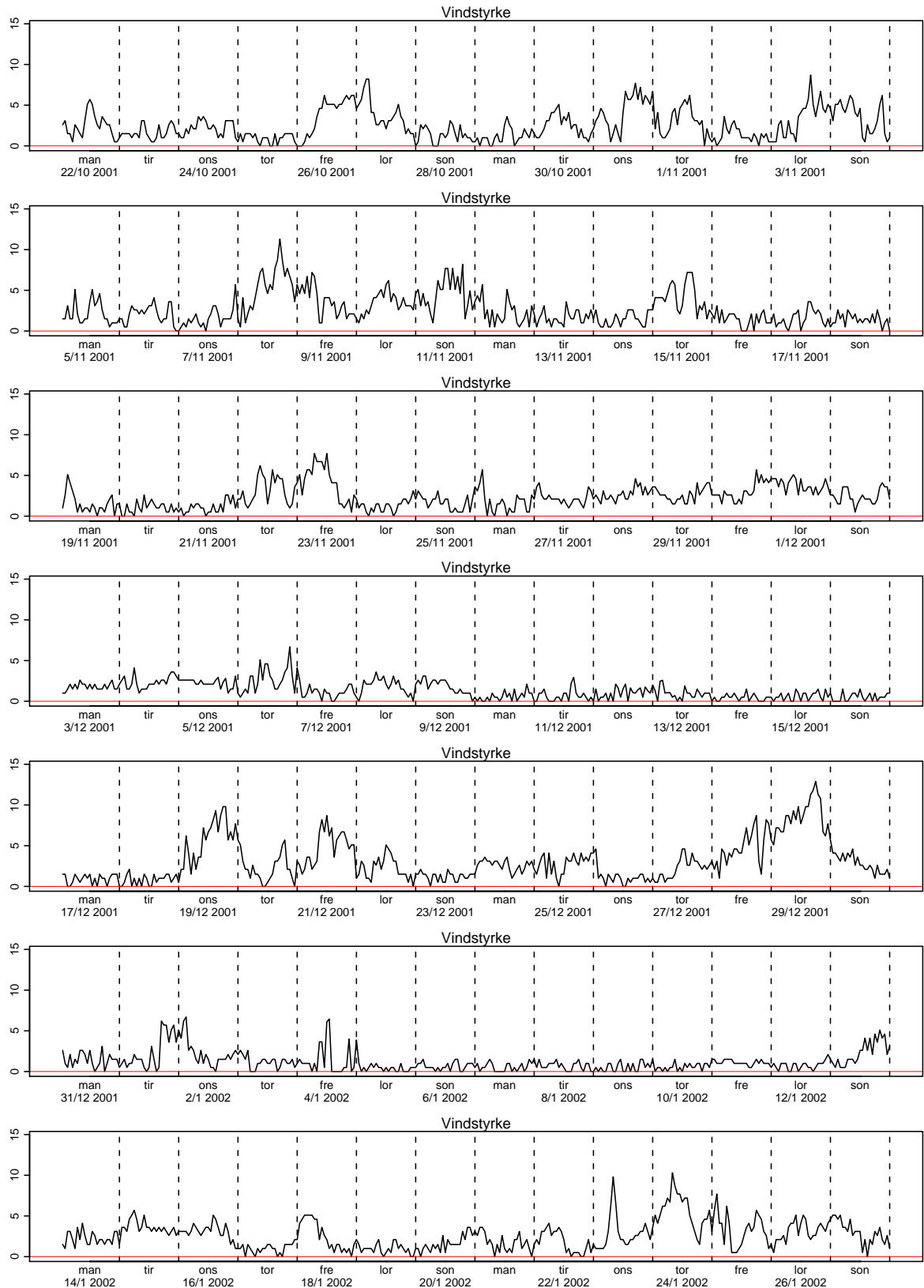
Figur 3.187. Vindstyrke



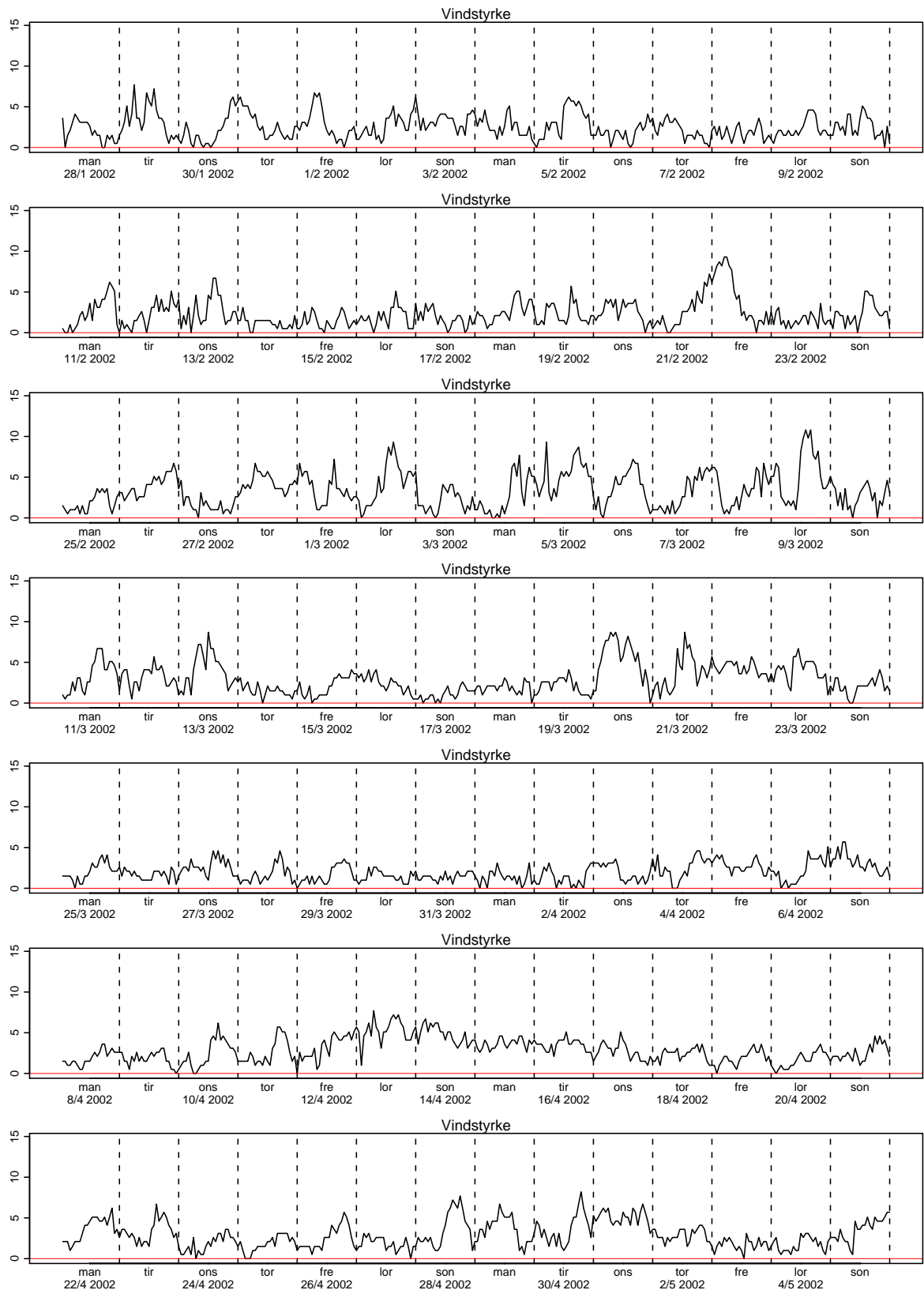
Figur 3.188. Vindstyrke



Figur 3.189. Vindstyrke

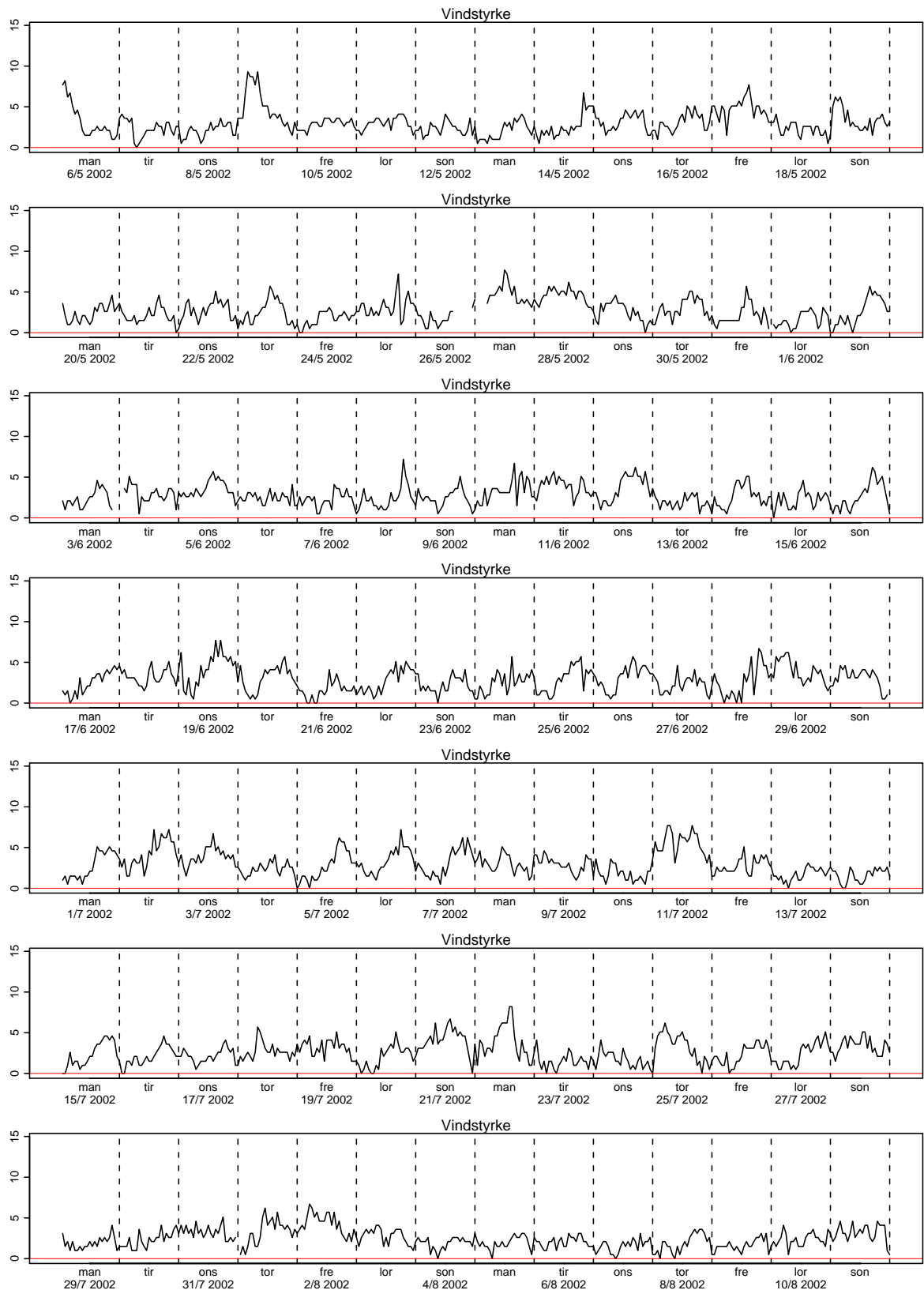


Figur 3.190. Vindstyrke

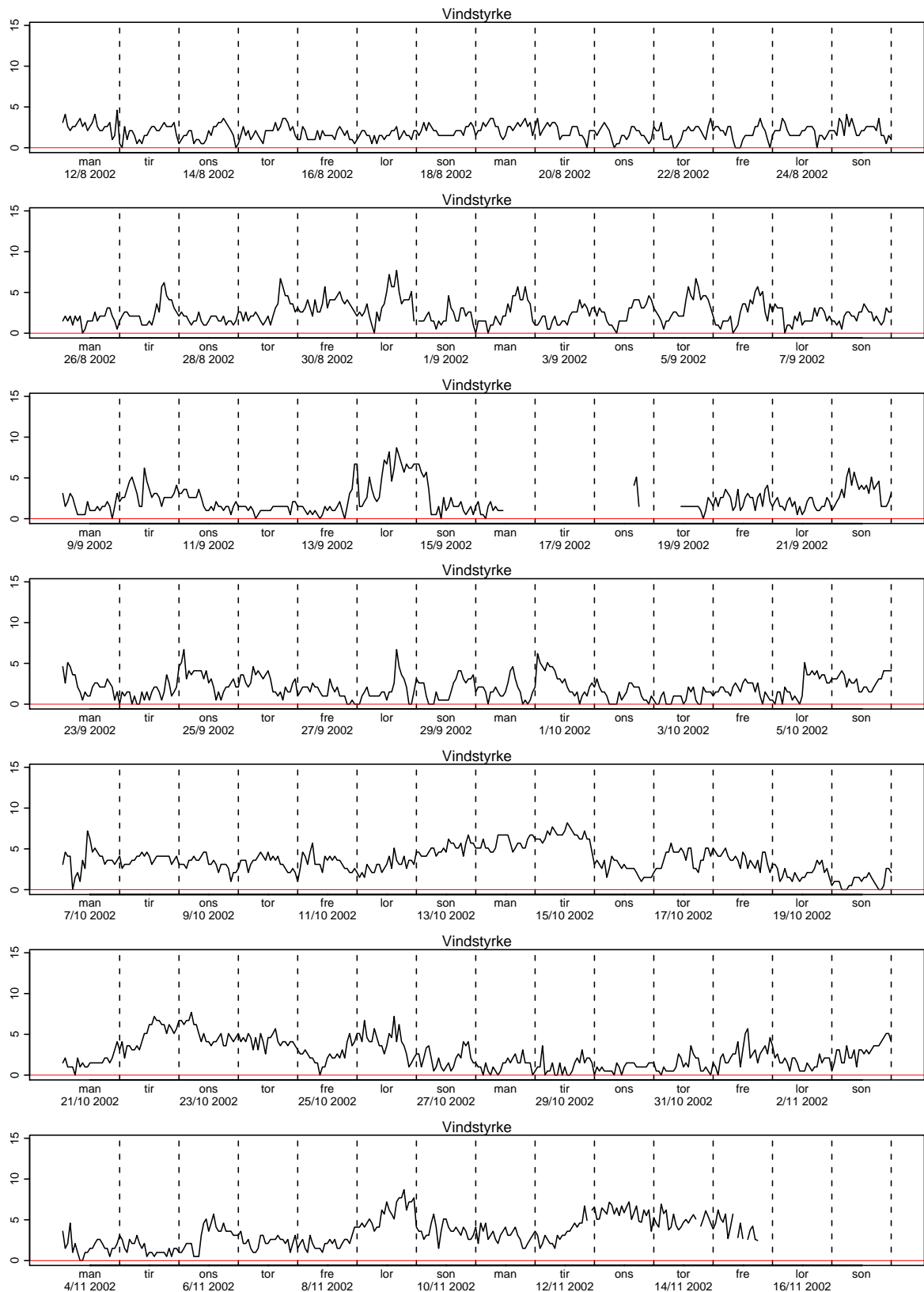


Figur 3.191. Vindstyrke

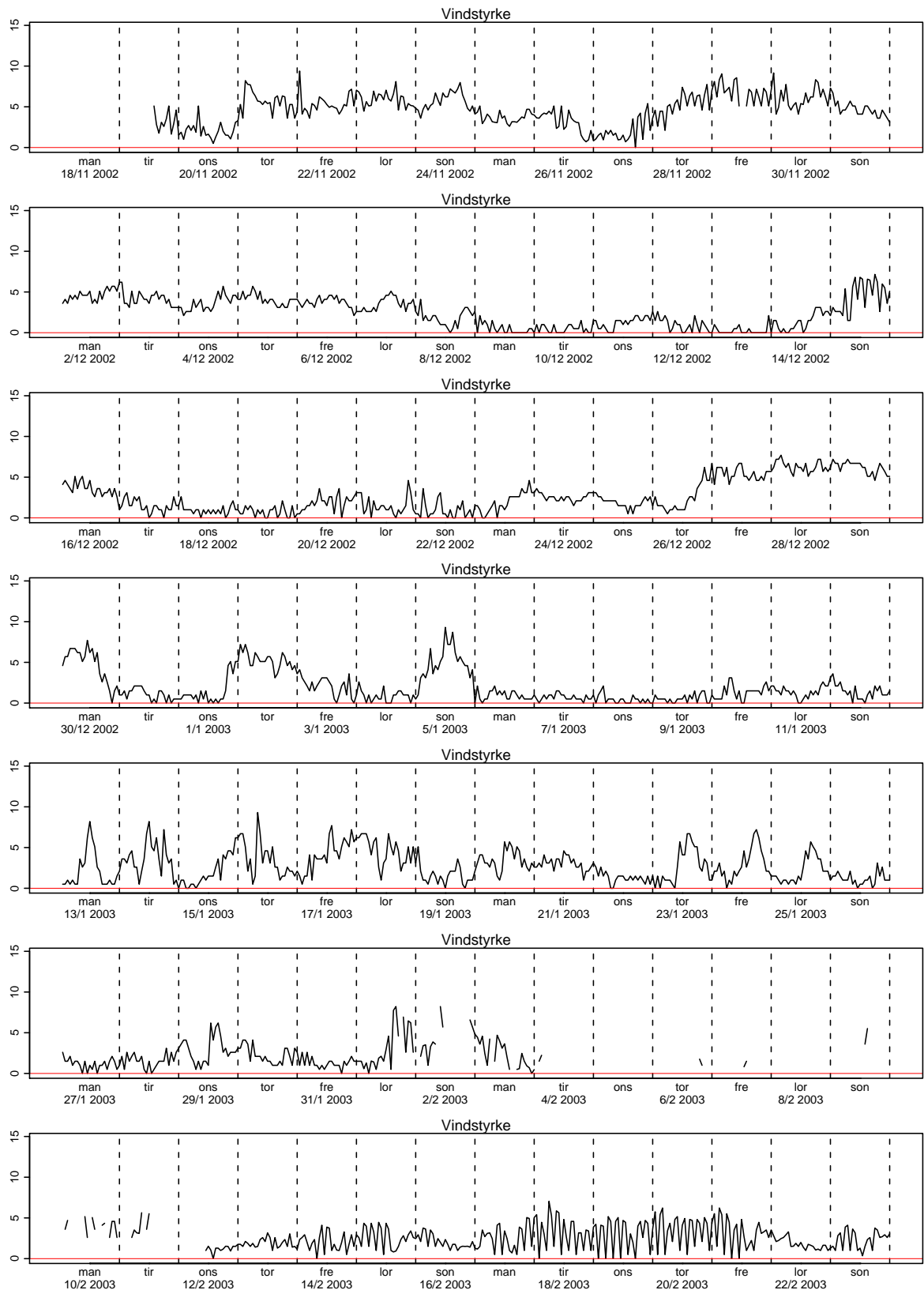




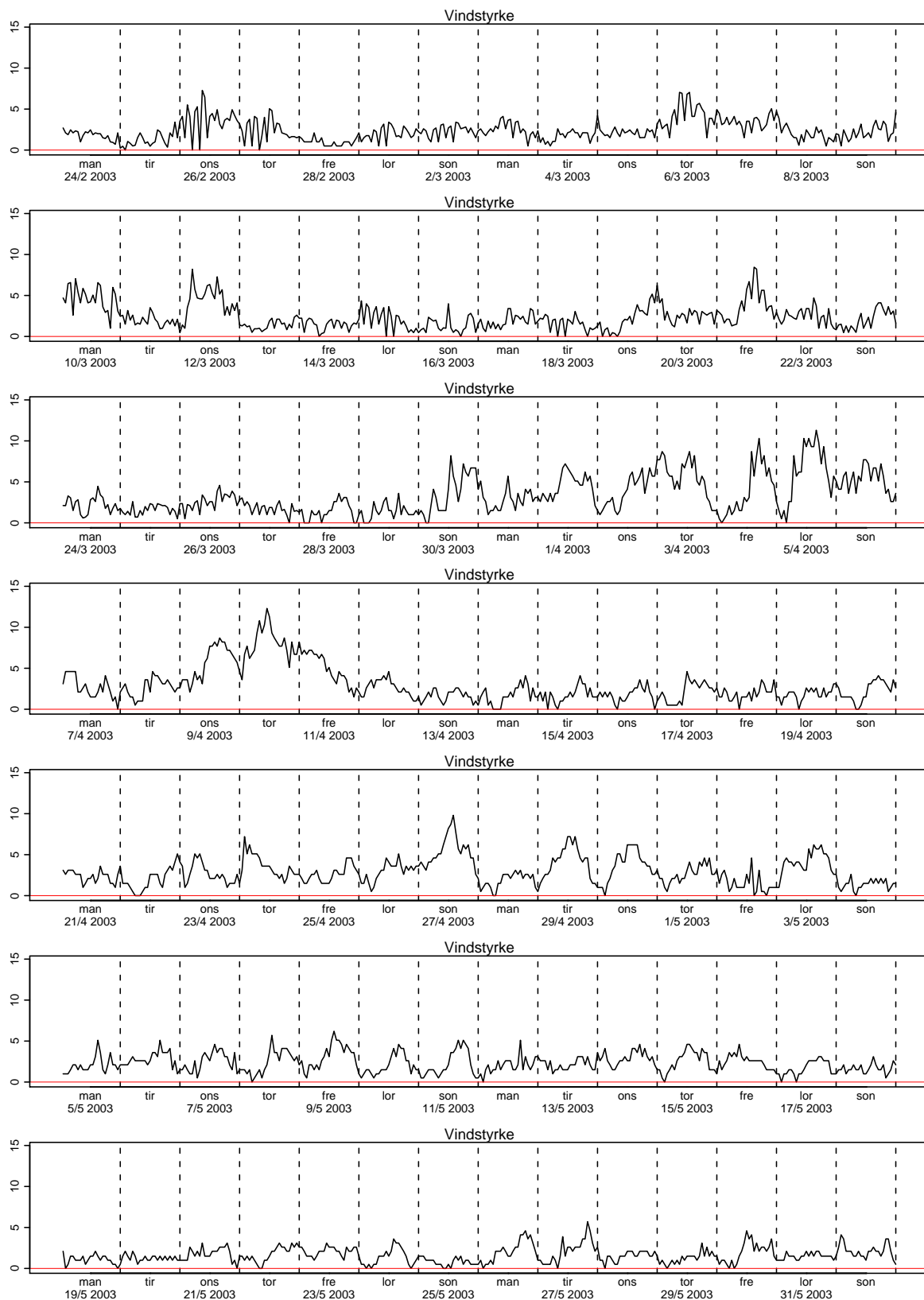
Figur 3.192. Vindstyrke



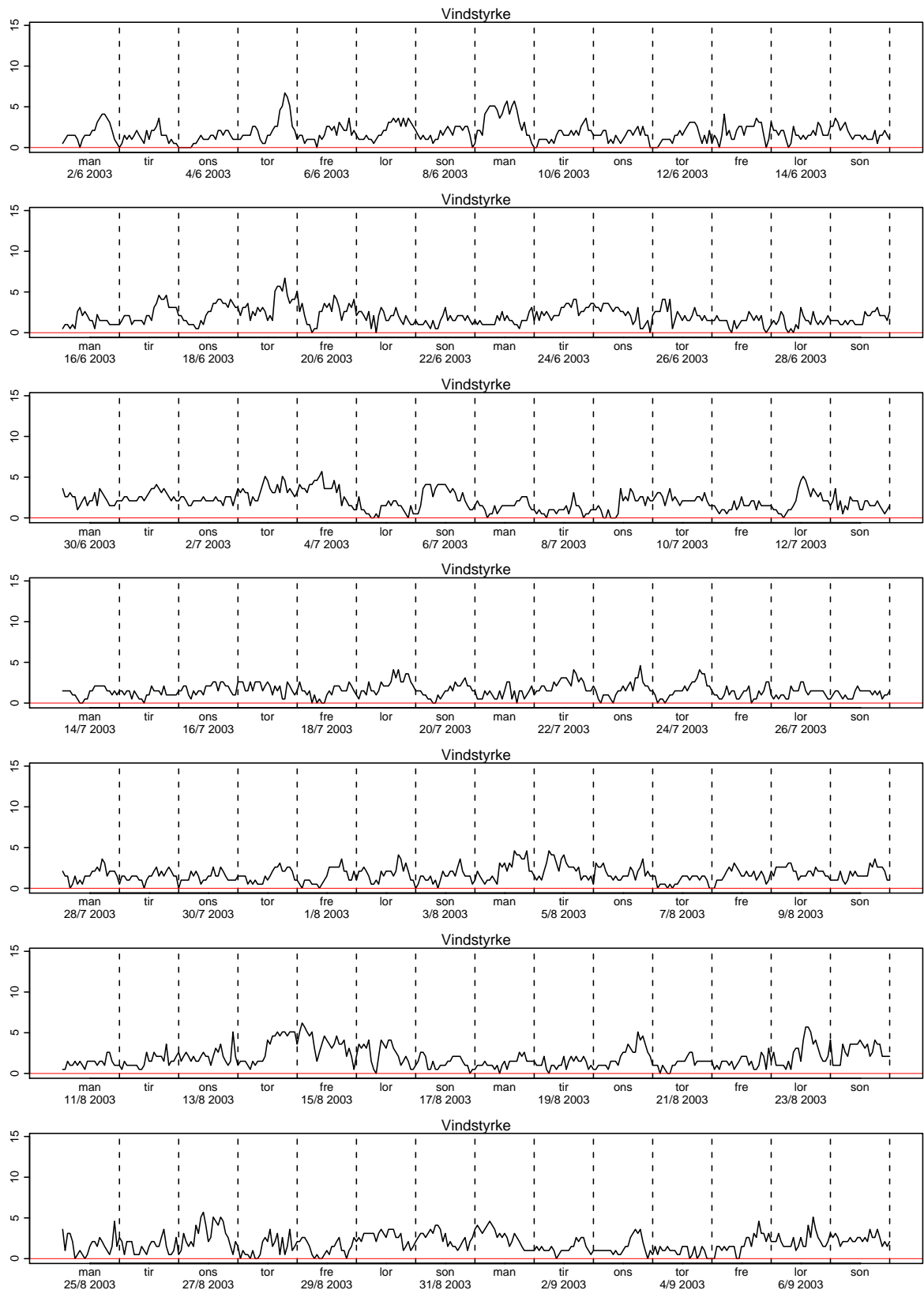
Figur 3.193. Vindstyrke



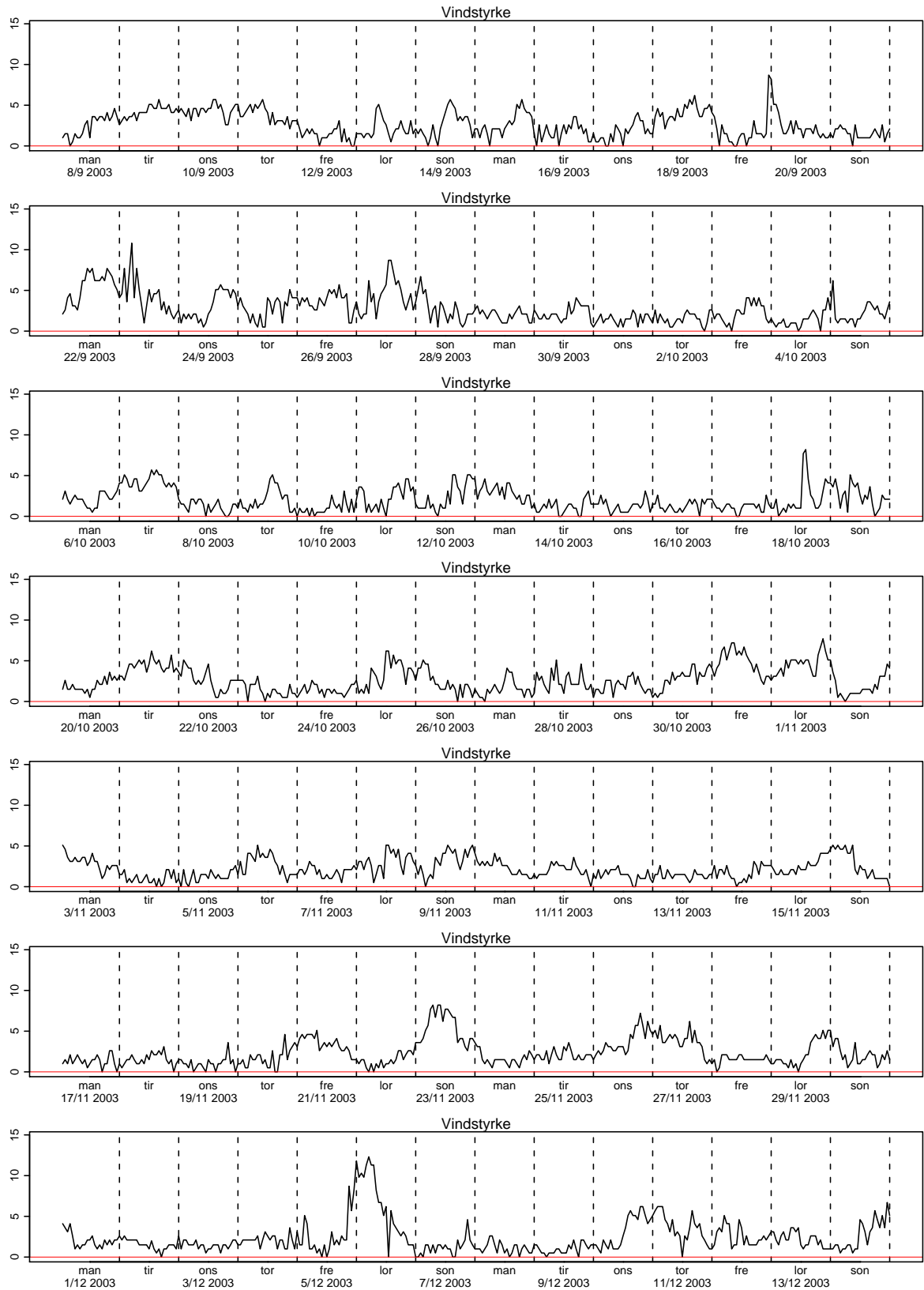
Figur 3.194. Vindstyrke



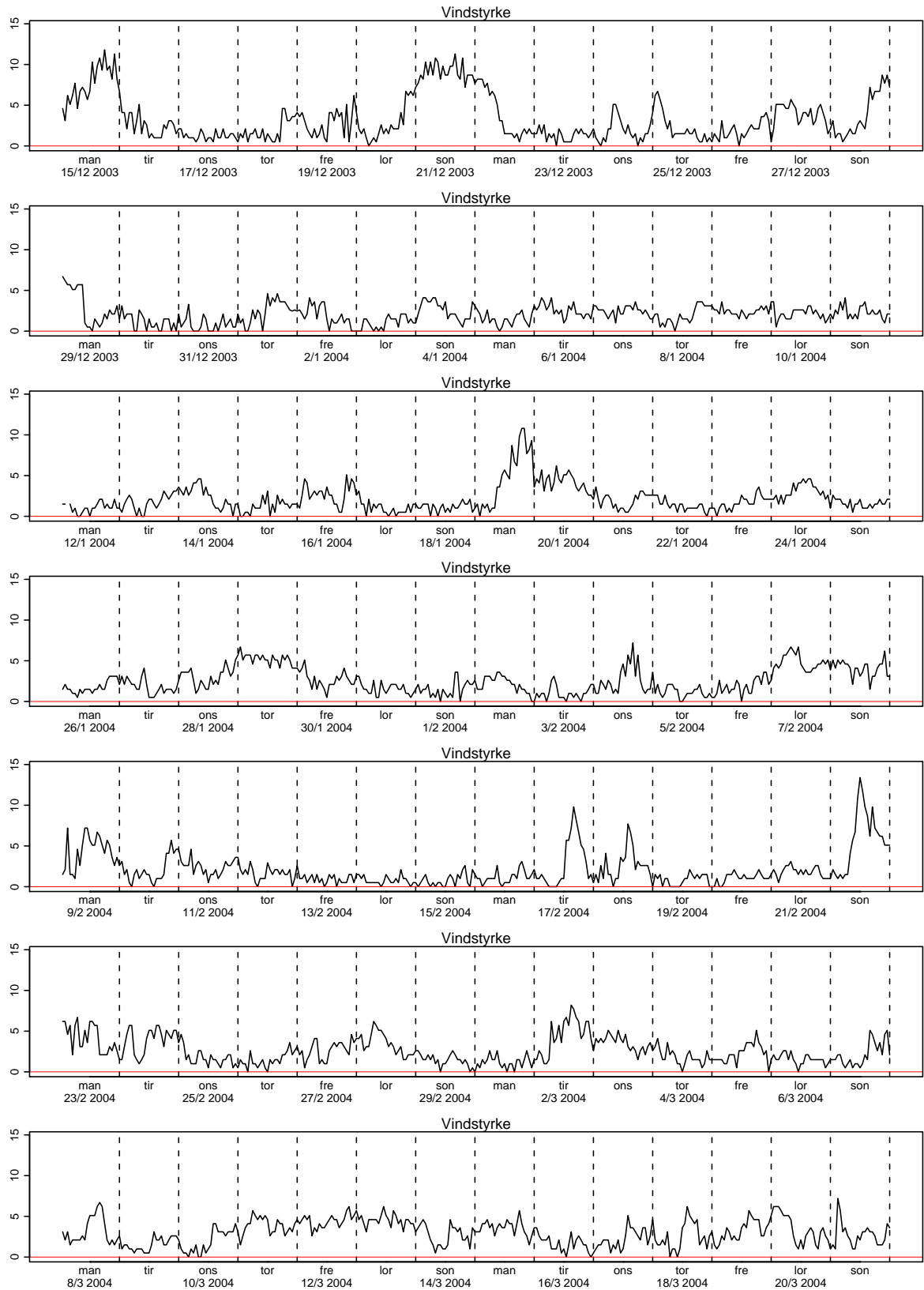
Figur 3.195. Vindstyrke



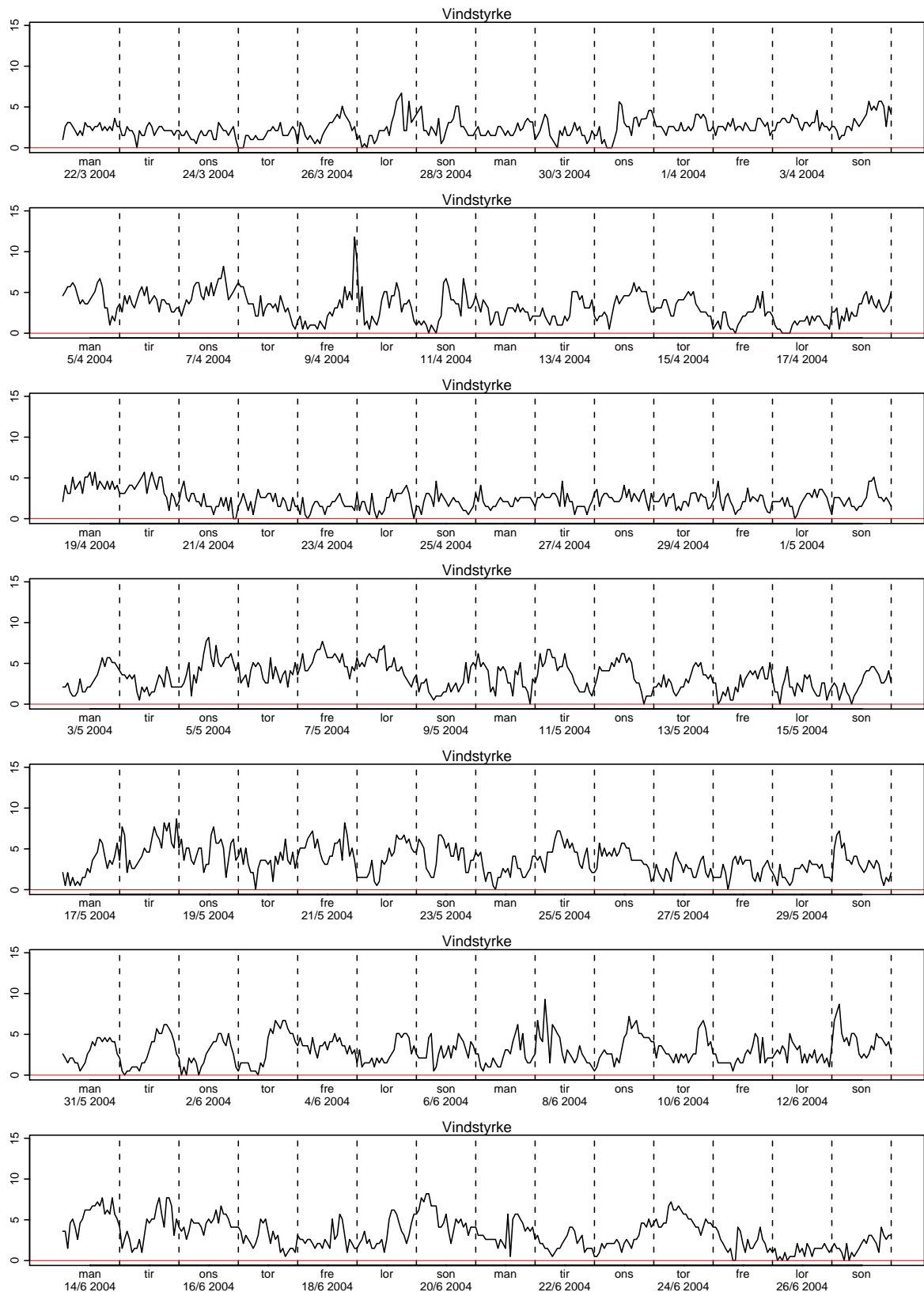
Figur 3.196. Vindstyrke



Figur 3.197. Vindstyrke

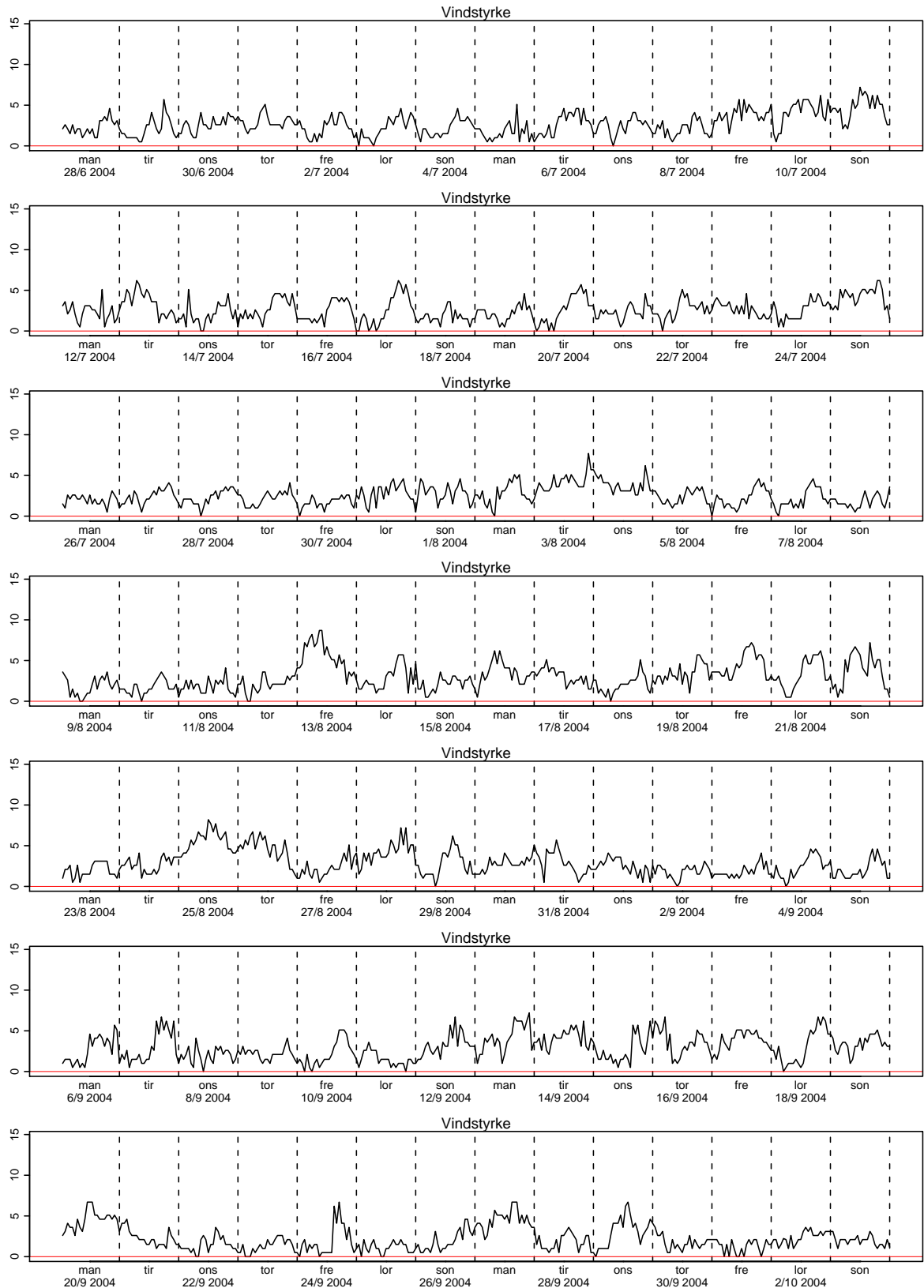


Figur 3.198. Vindstyrke

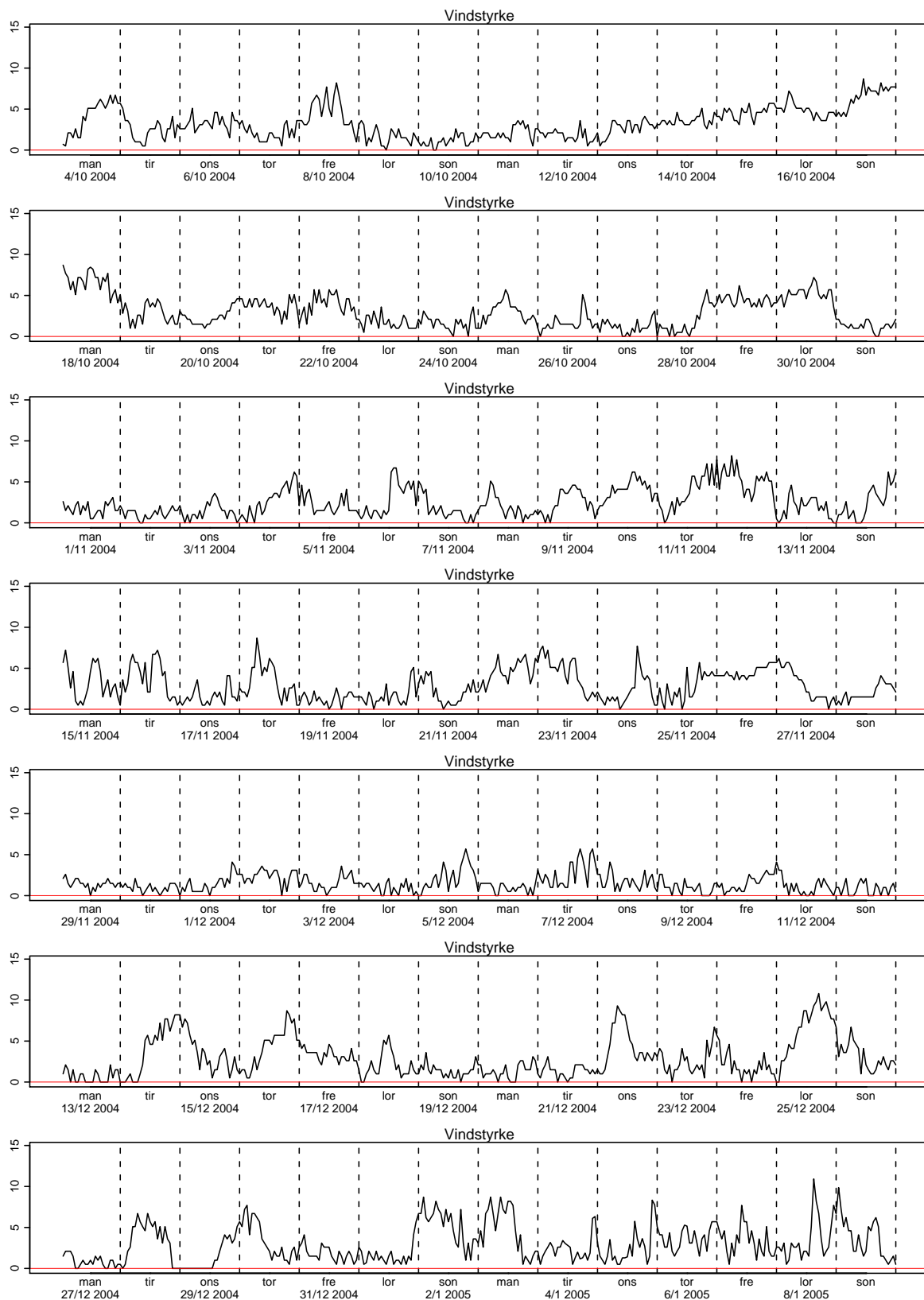


Figur 3.199. Vindstyrke

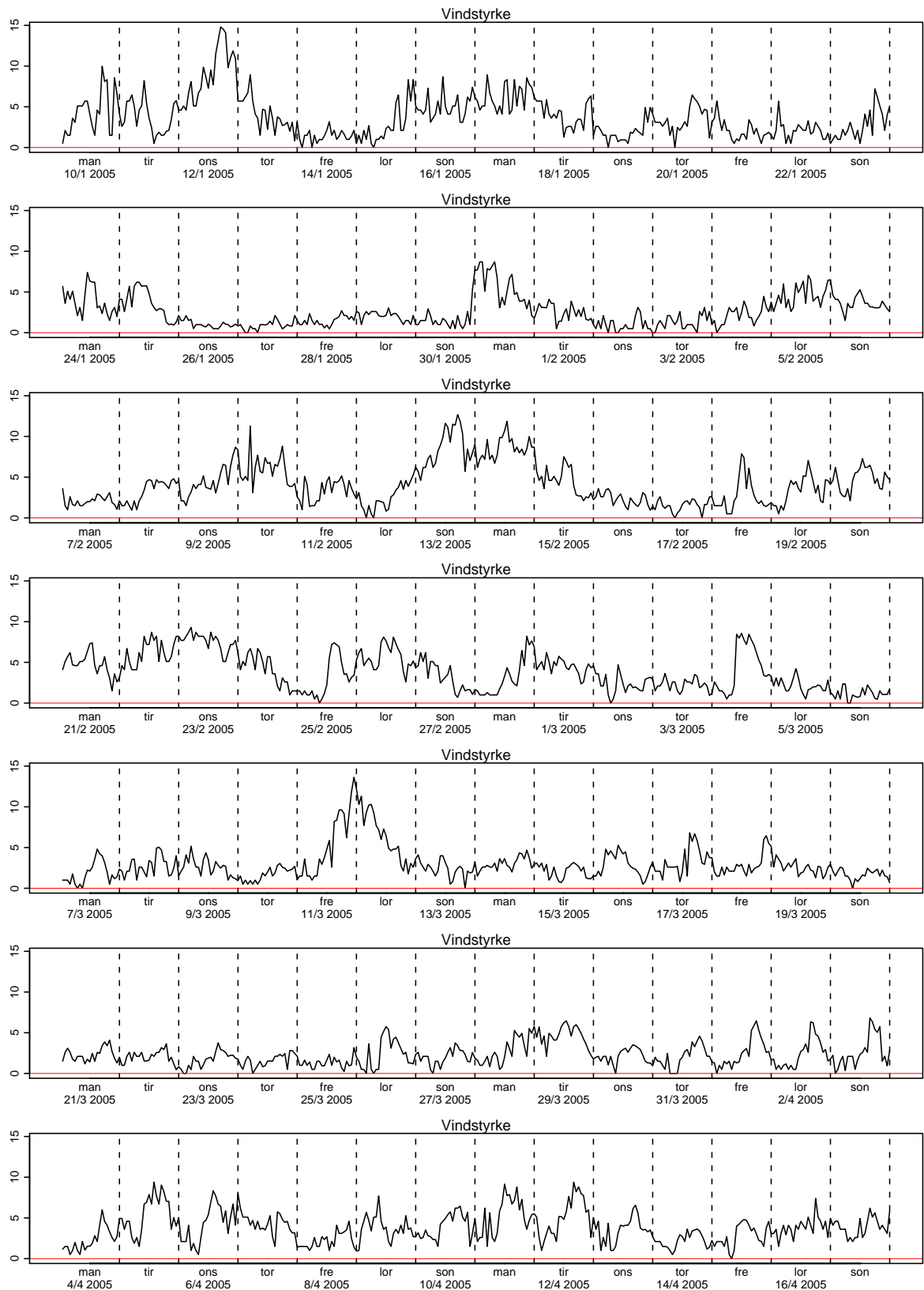




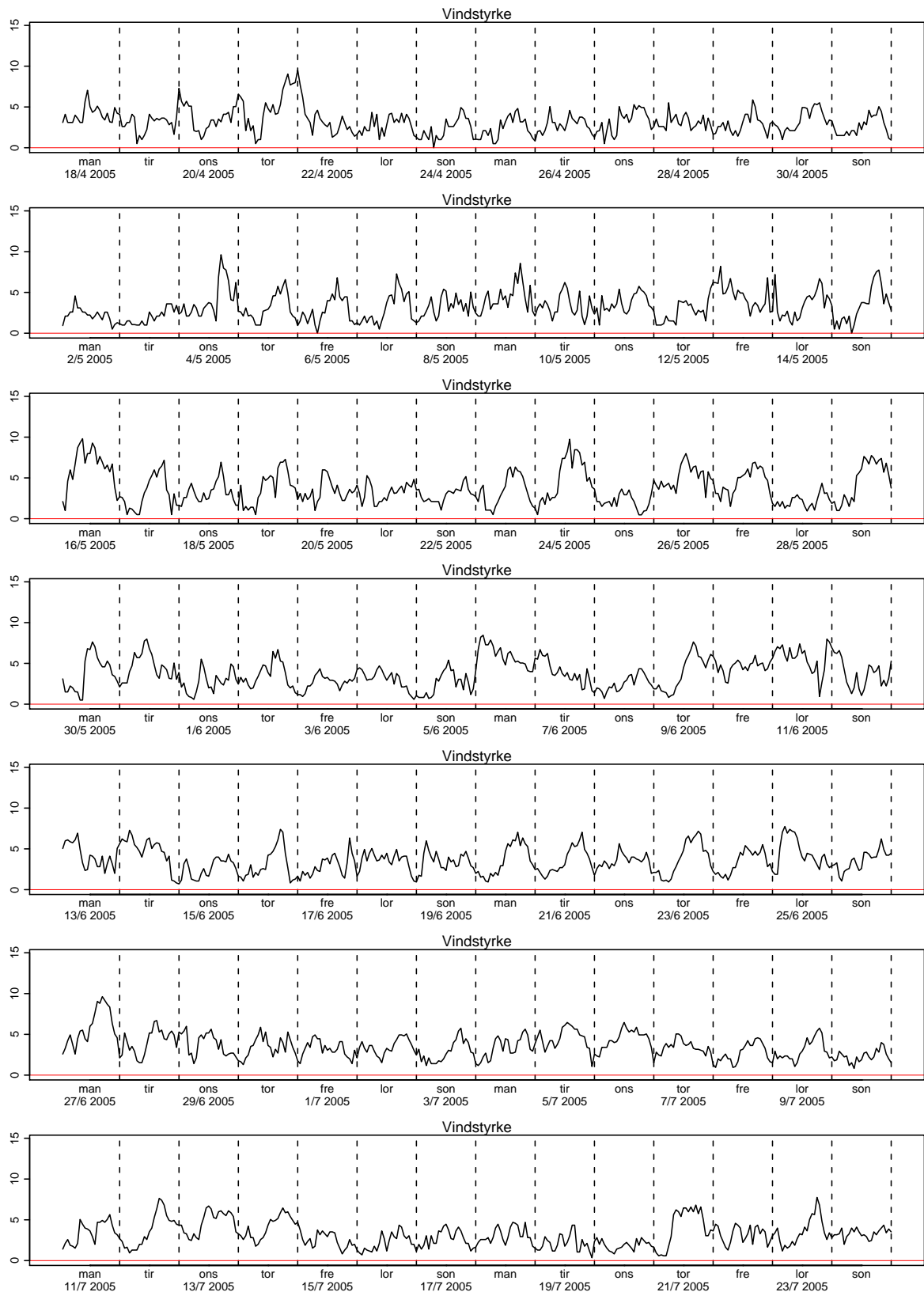
Figur 3.200. Vindstyrke



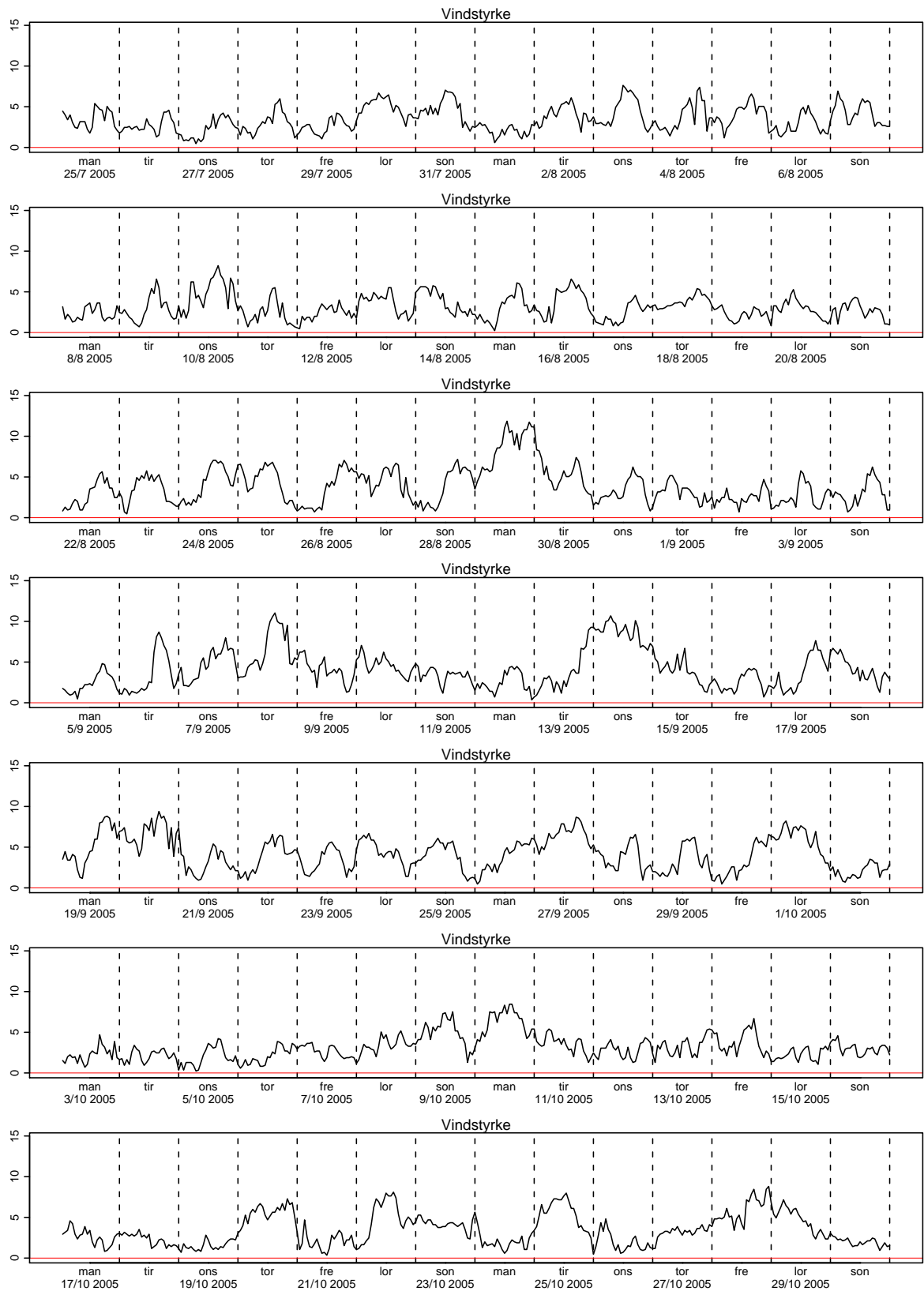
Figur 3.201. Vindstyrke



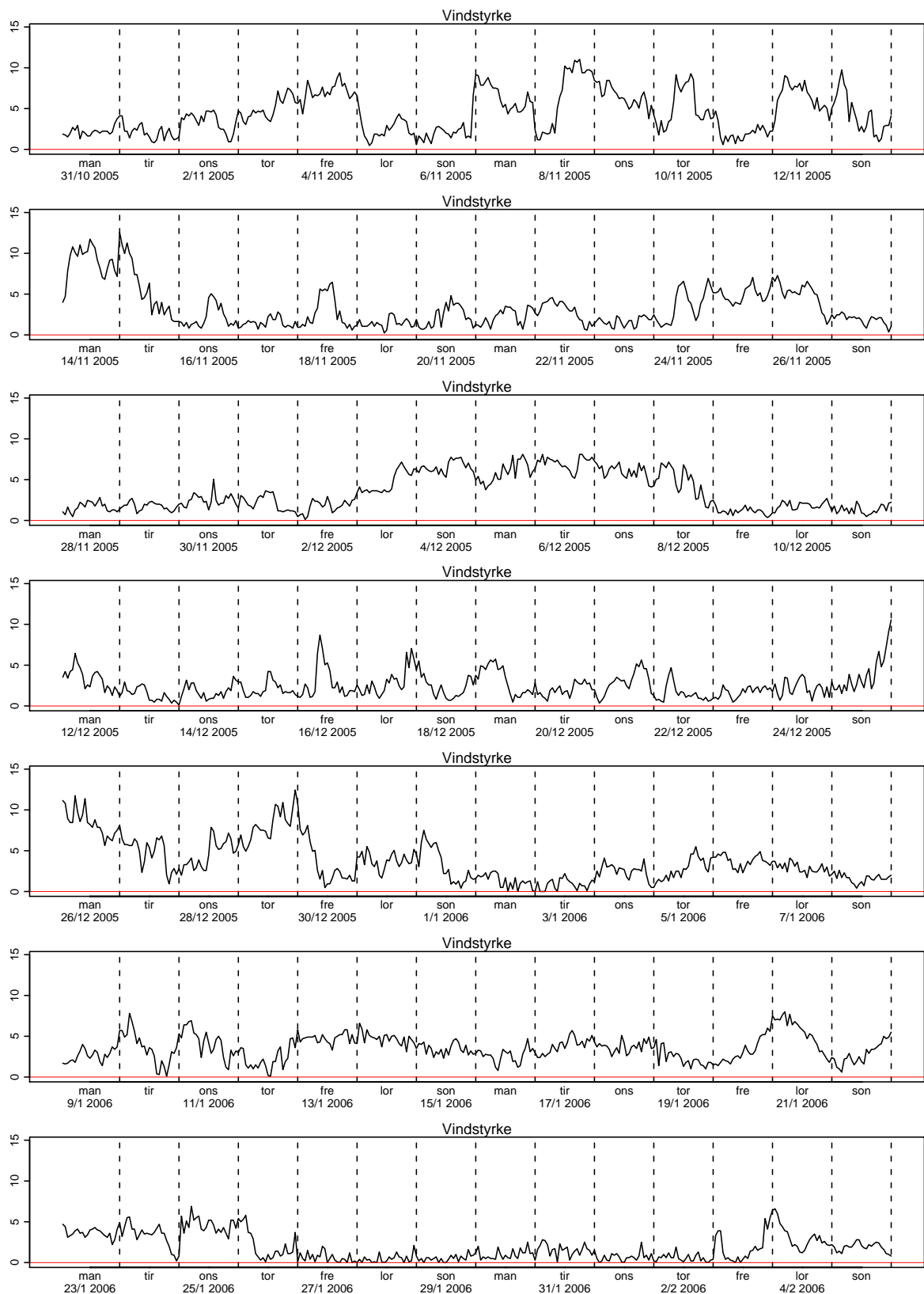
Figur 3.202. Vindstyrke



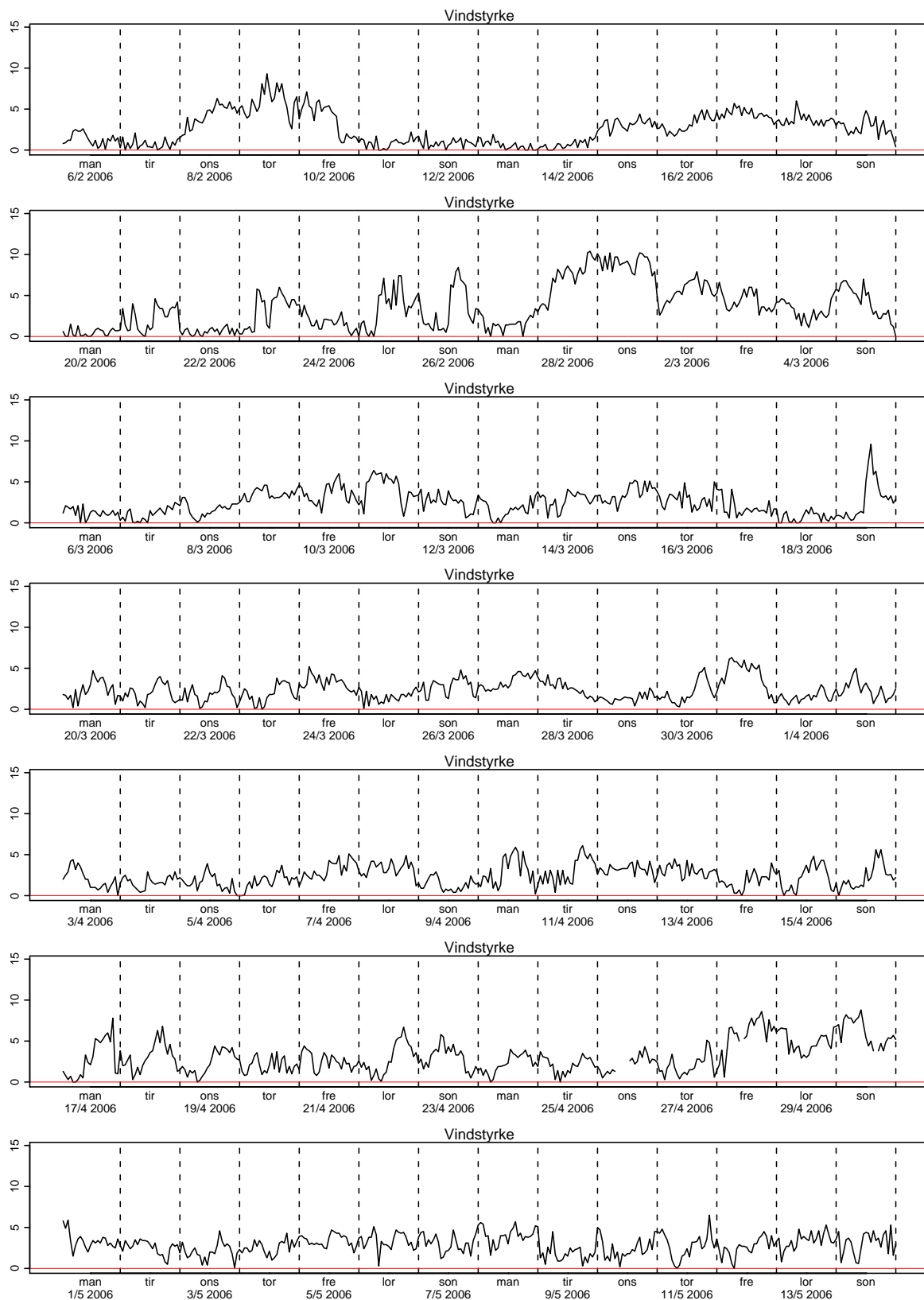
Figur 3.203. Vindstyrke



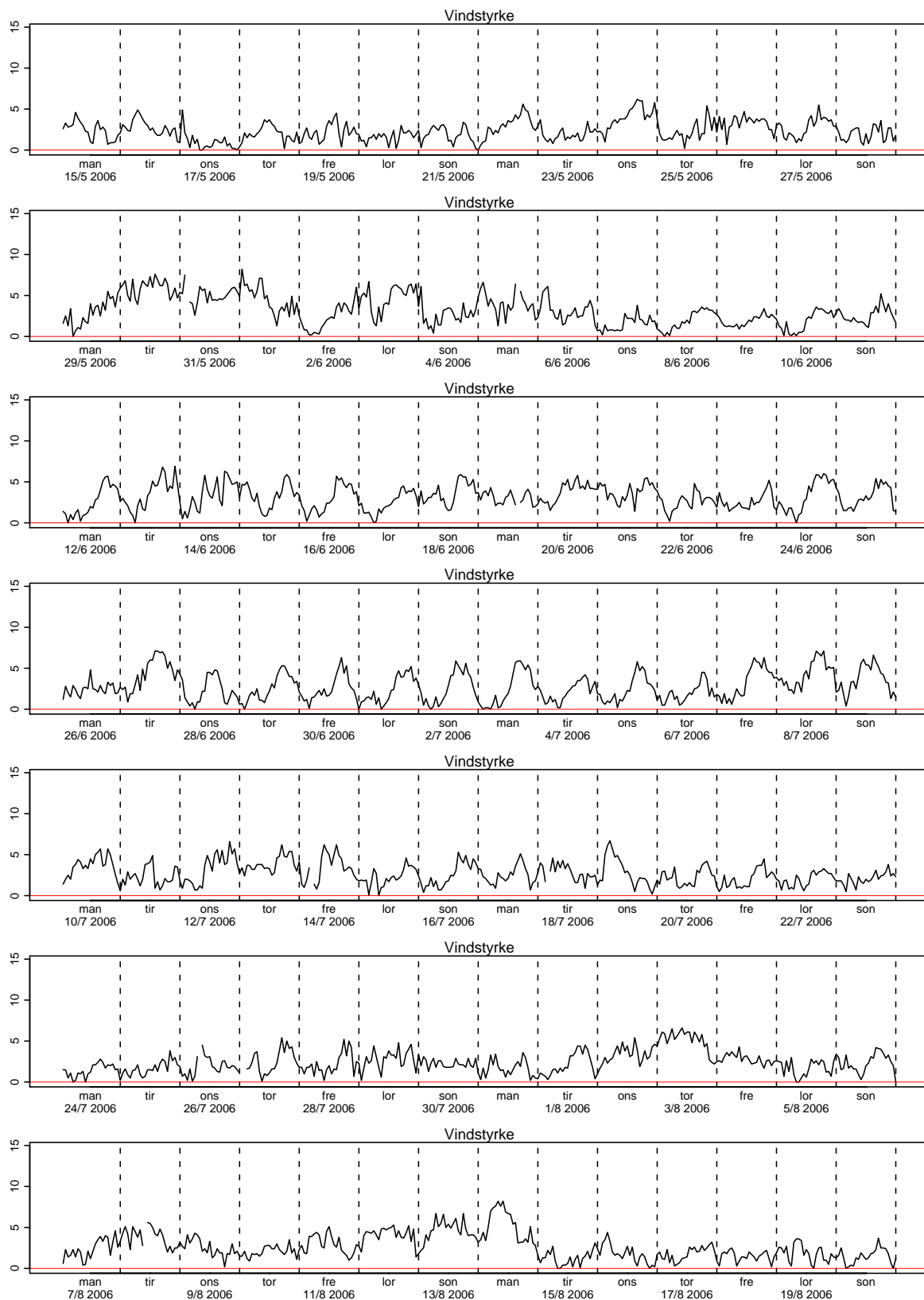
Figur 3.204. Vindstyrke



Figur 3.205. Vindstyrke

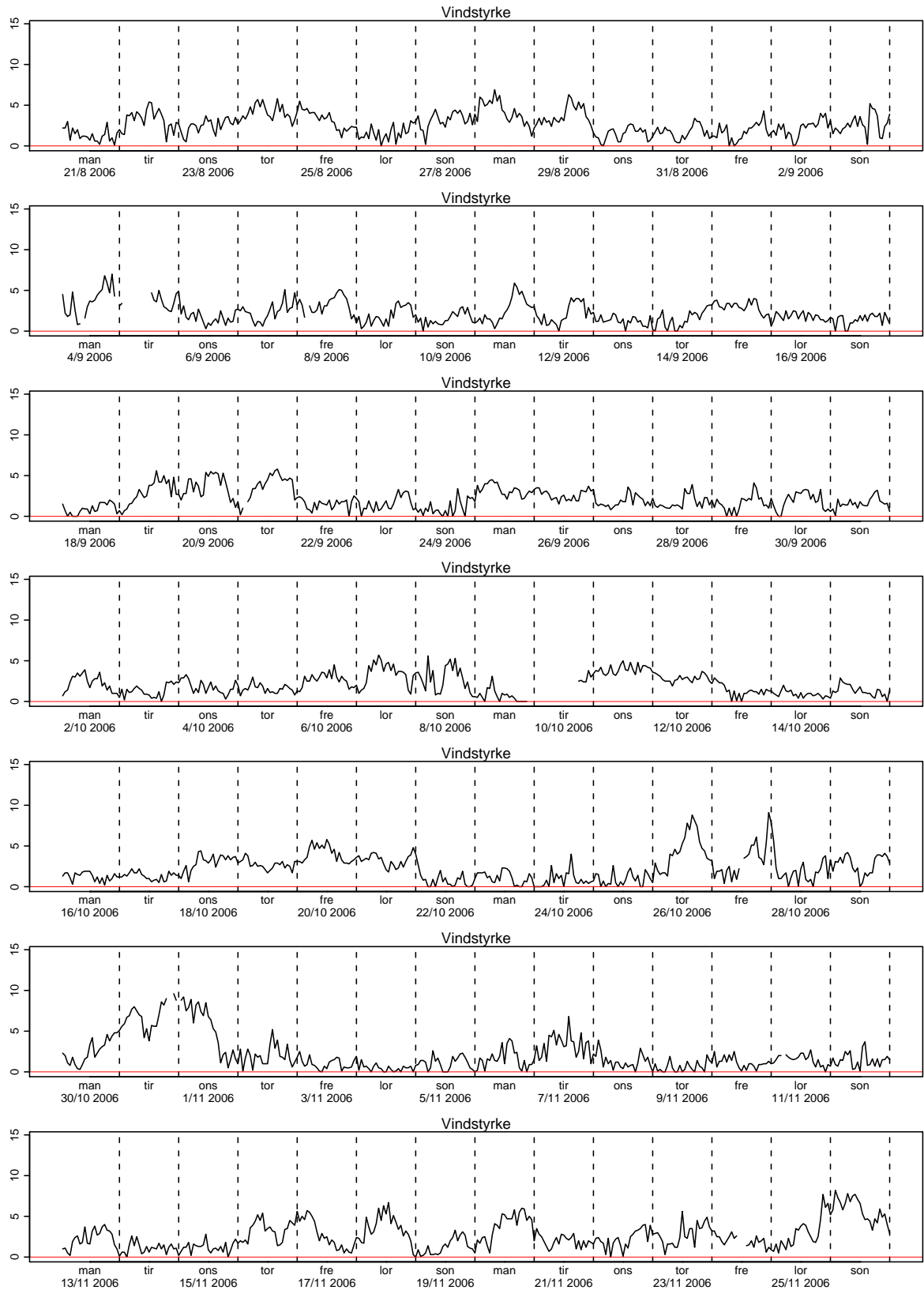


Figur 3.206. Vindstyrke

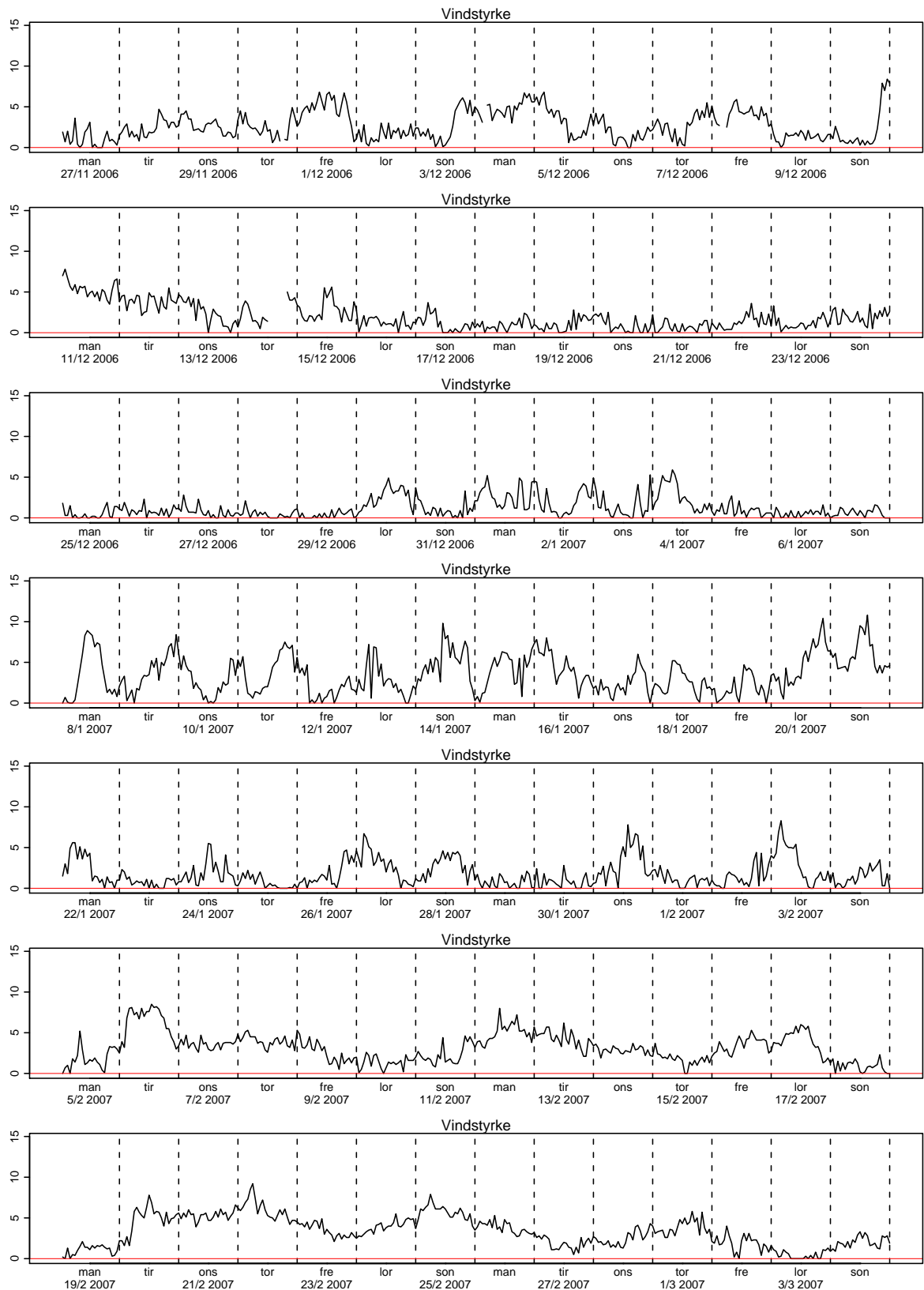


Figur 3.207. Vindstyrke

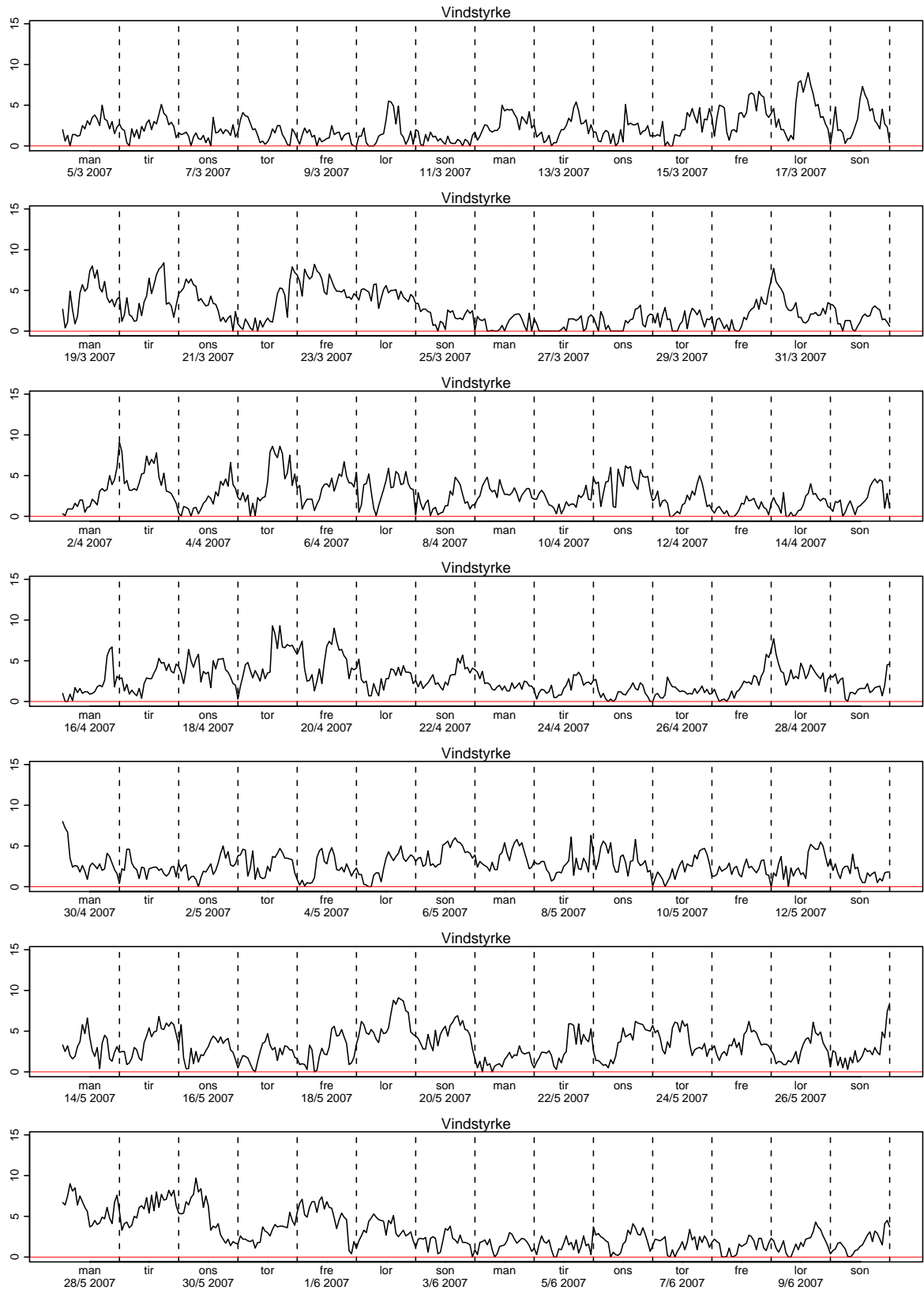




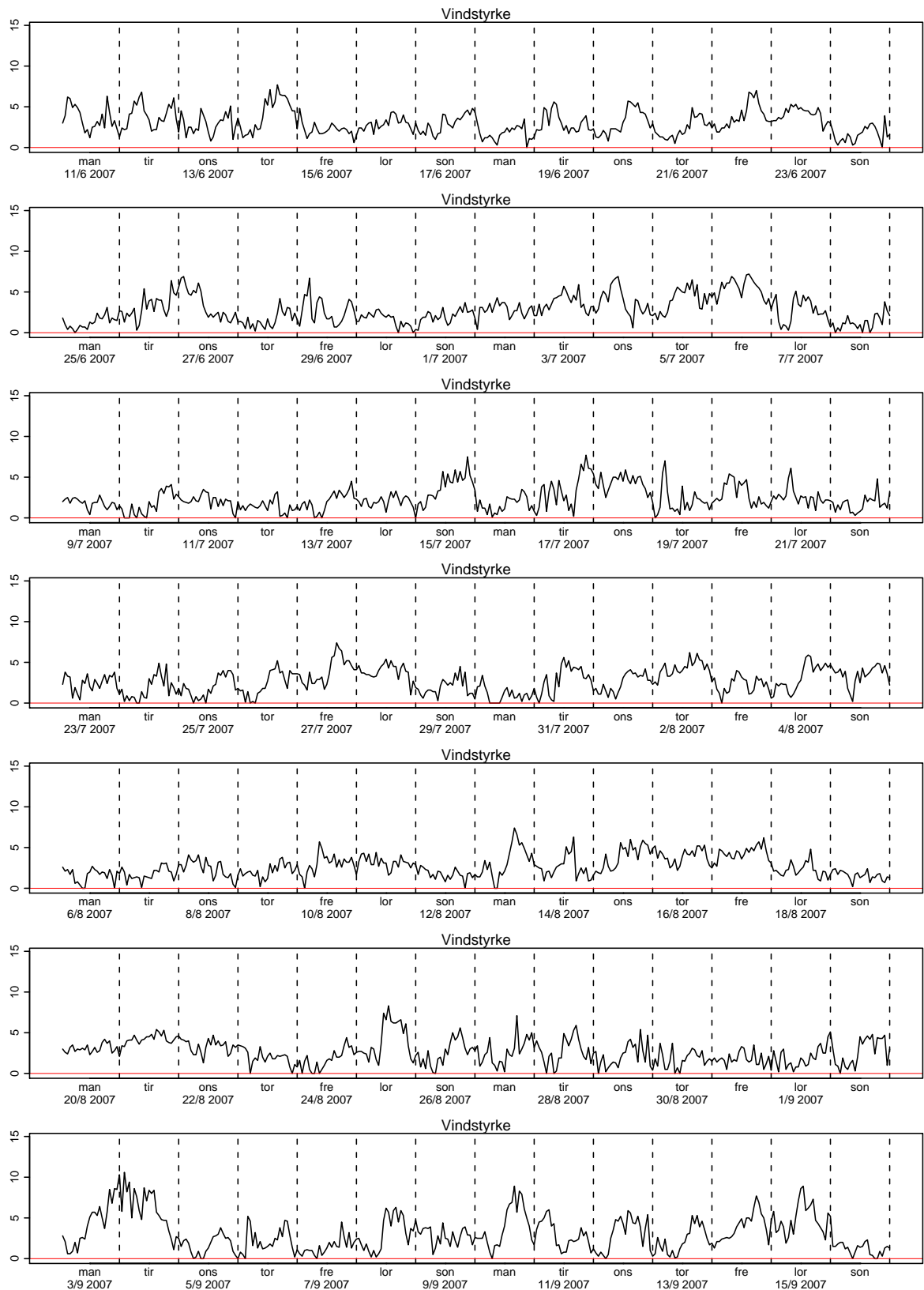
Figur 3.208. Vindstyrke



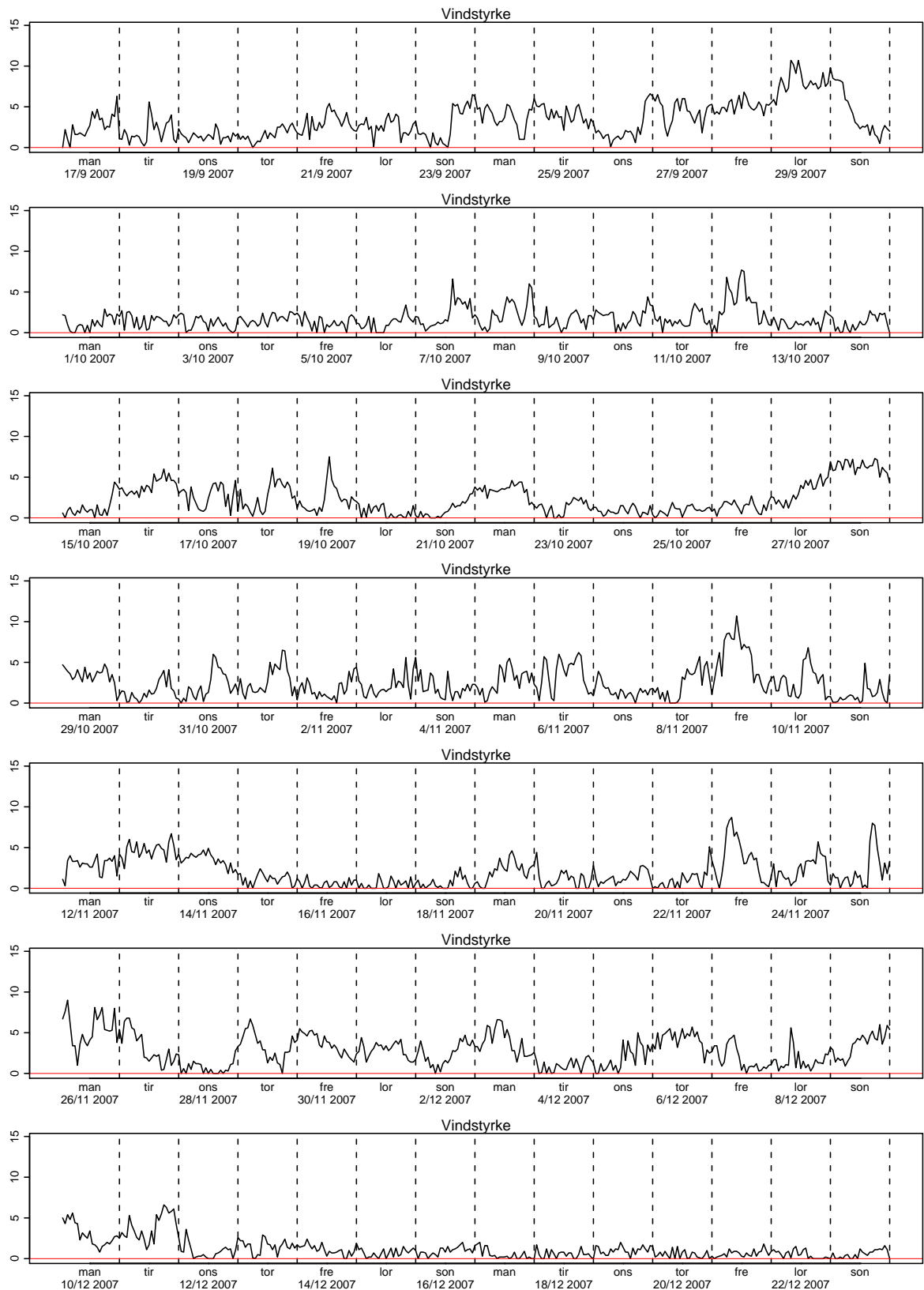
Figur 3.209. Vindstyrke



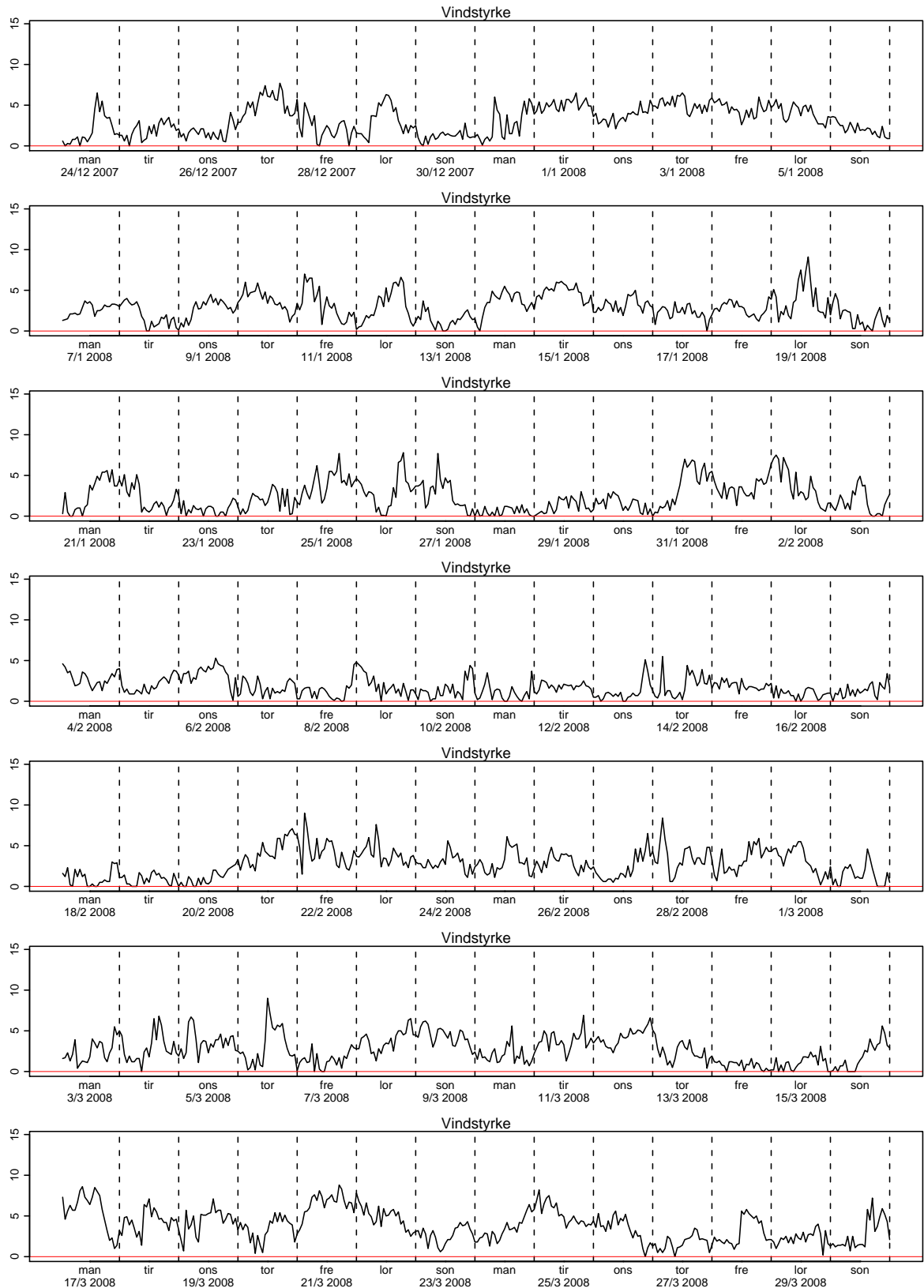
Figur 3.210. Vindstyrke



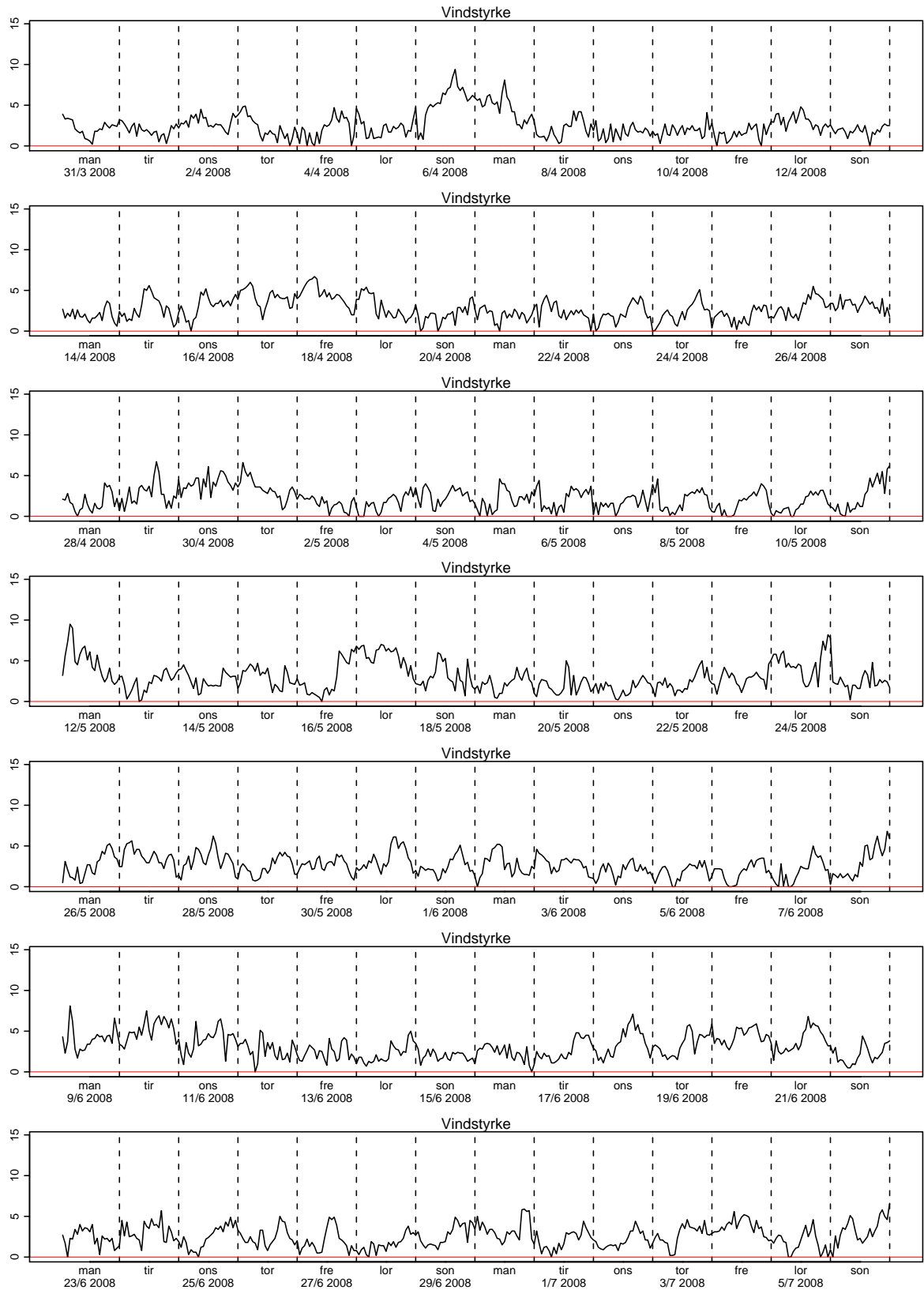
Figur 3.211. Vindstyrke



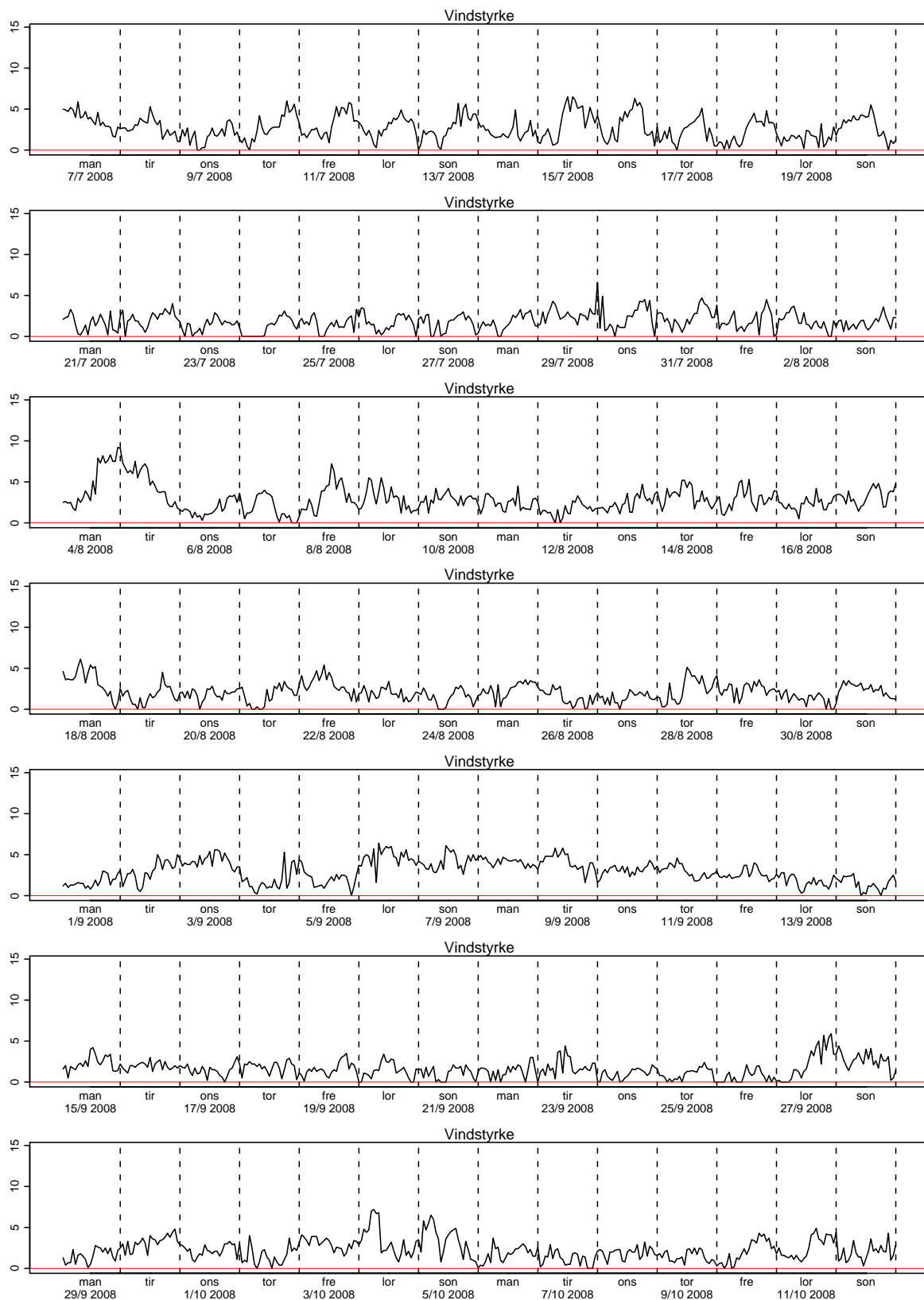
Figur 3.212. Vindstyrke



Figur 3.213. Vindstyrke

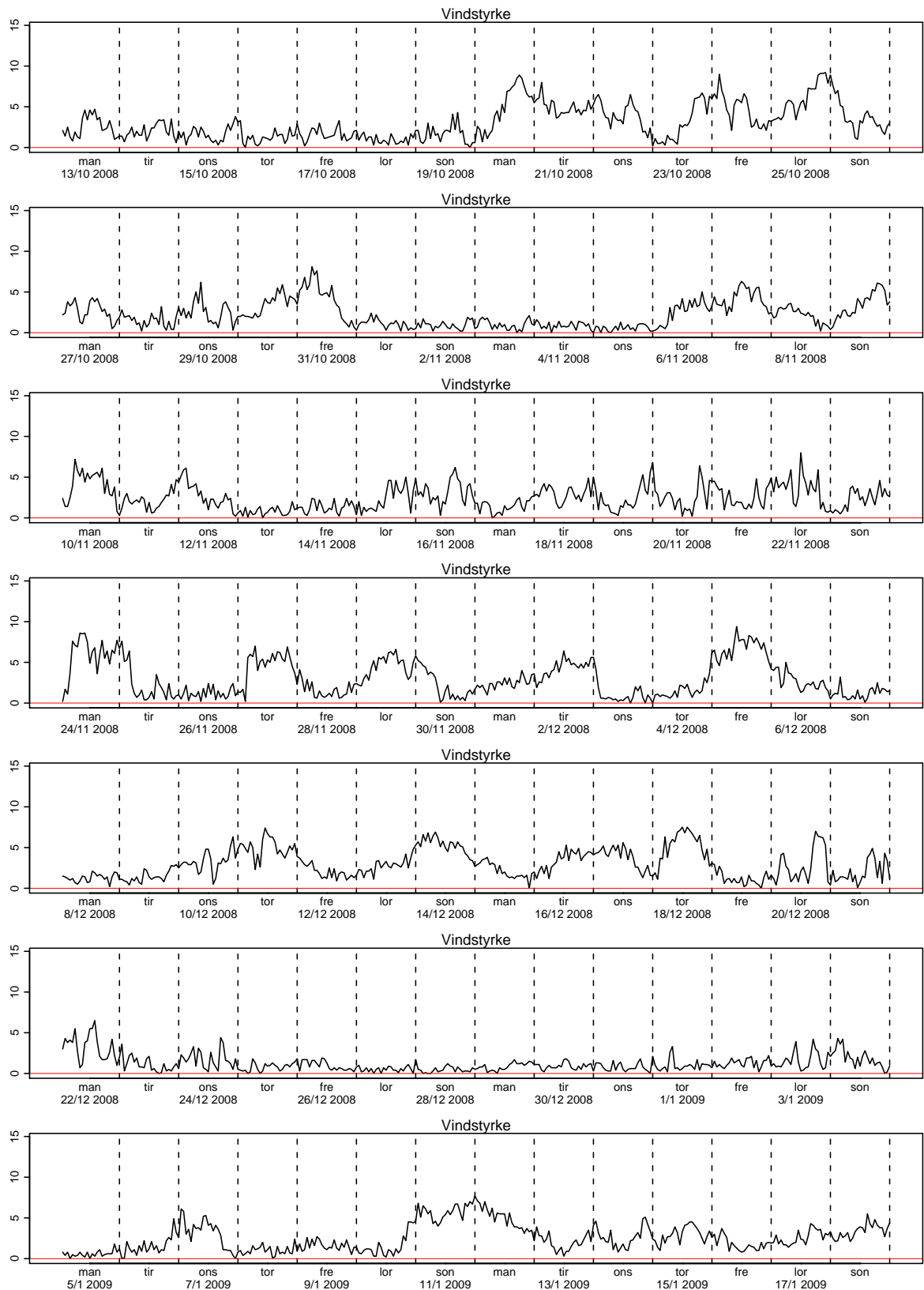


Figur 3.214. Vindstyrke

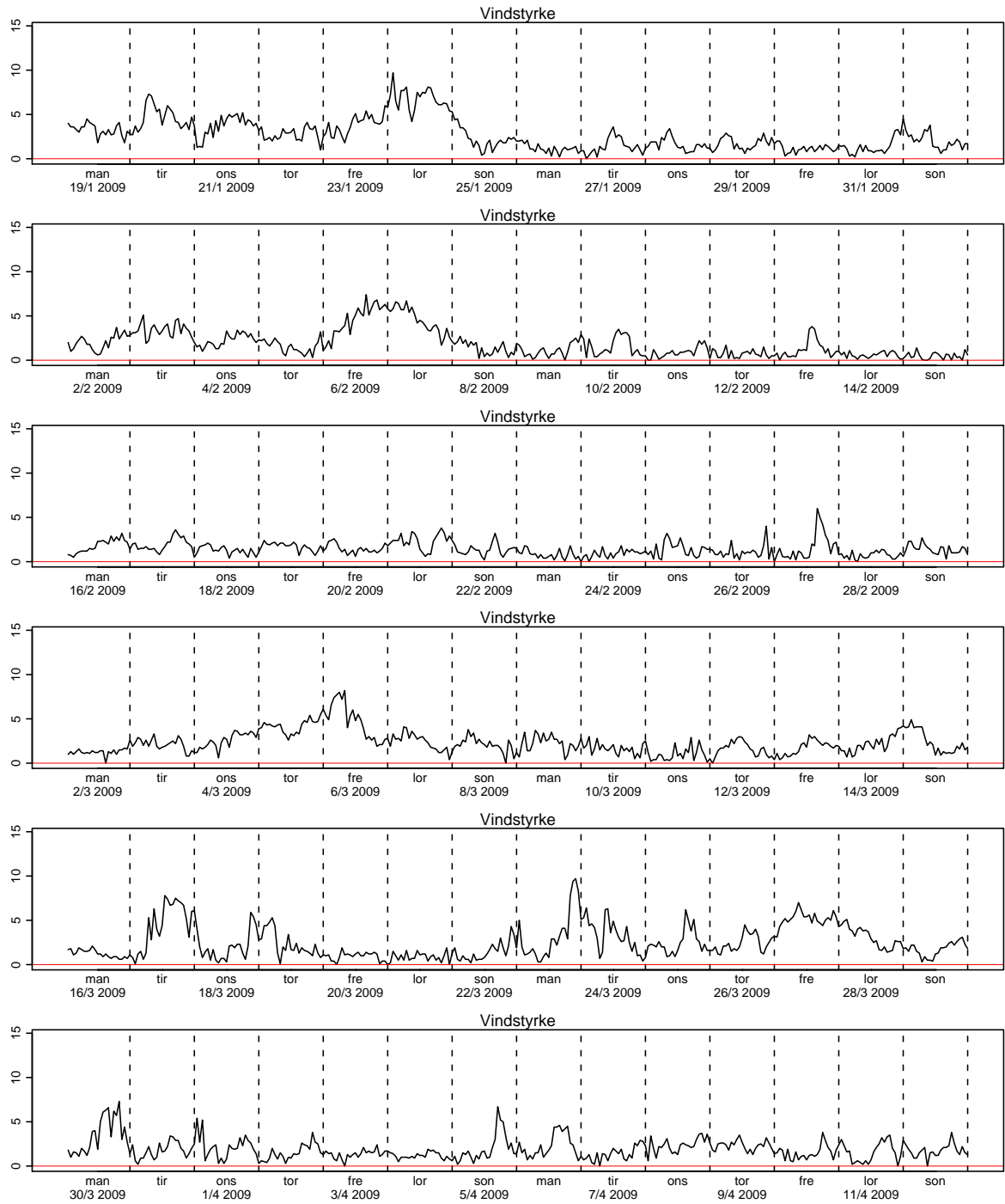


Figur 3.215. Vindstyrke





Figur 3.216. Vindstyrke



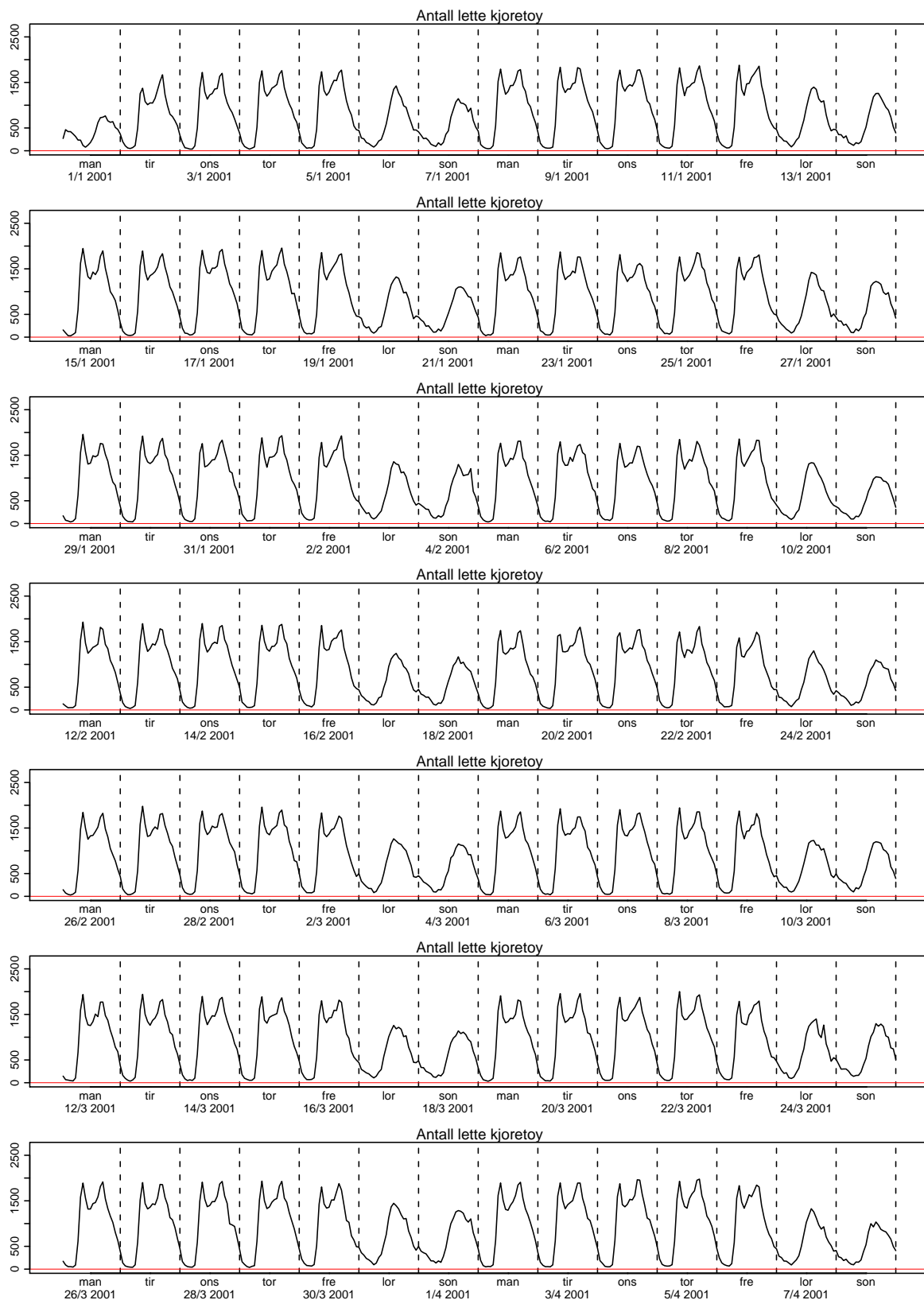
Figur 3.217. Vindstyrke

## 4 Trafikkdata

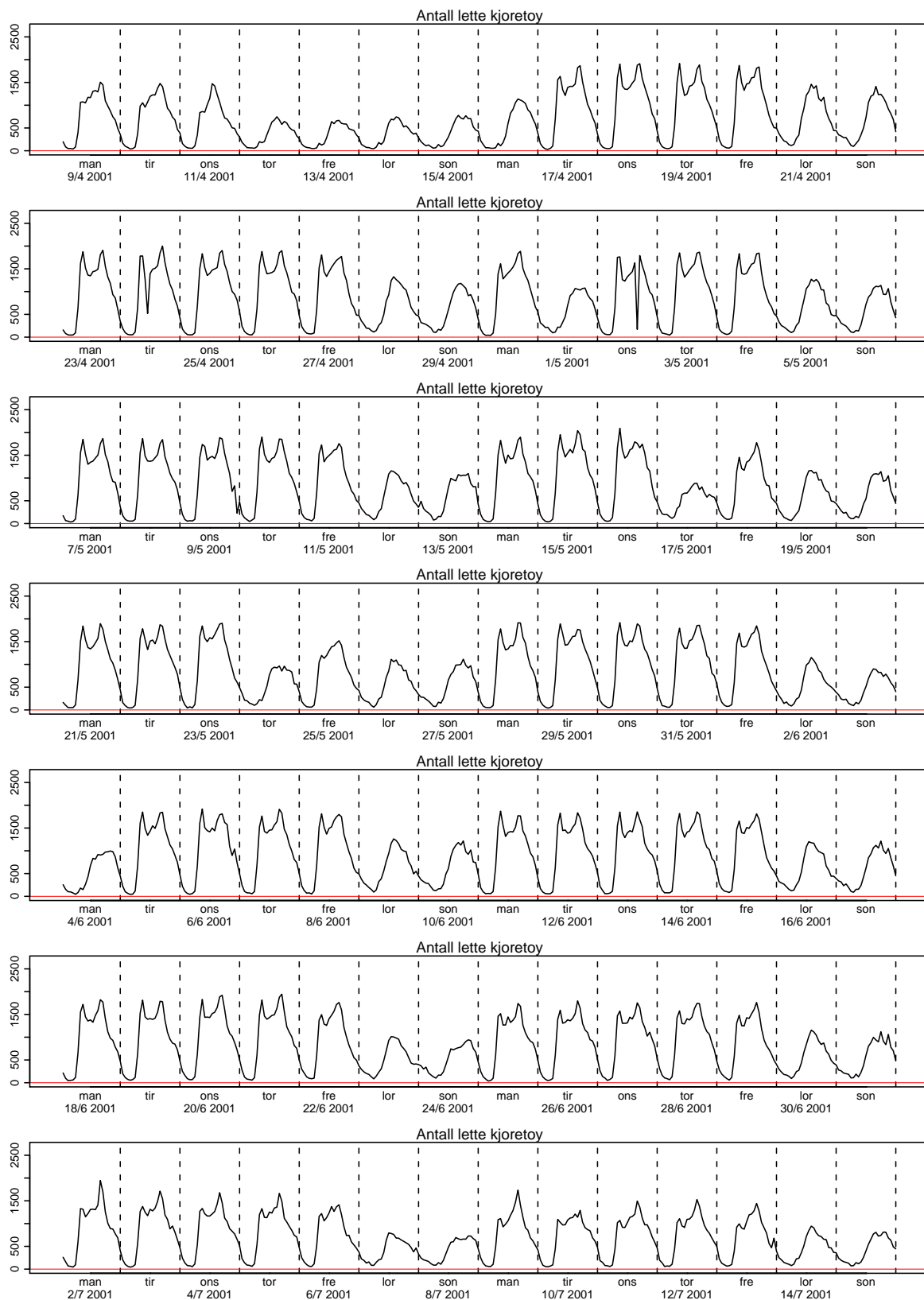
Trafikkdataene er målt på timesoppløsning fra automatiske målestasjoner ved Vøyenbru på Kirkeveien og er delt opp i antall lette og tunge kjøretøy, samt gjennomsnittshastigheten (per time) for totaltrafikken. Trafikkvolum er summen over fire felt (det vil si to kjøreretninger). Tilsvarende er hastigheten gjennomsnittet av fire felt.

Endringer gjort for å kvalitetssikre trafikkdataene er som følgende:

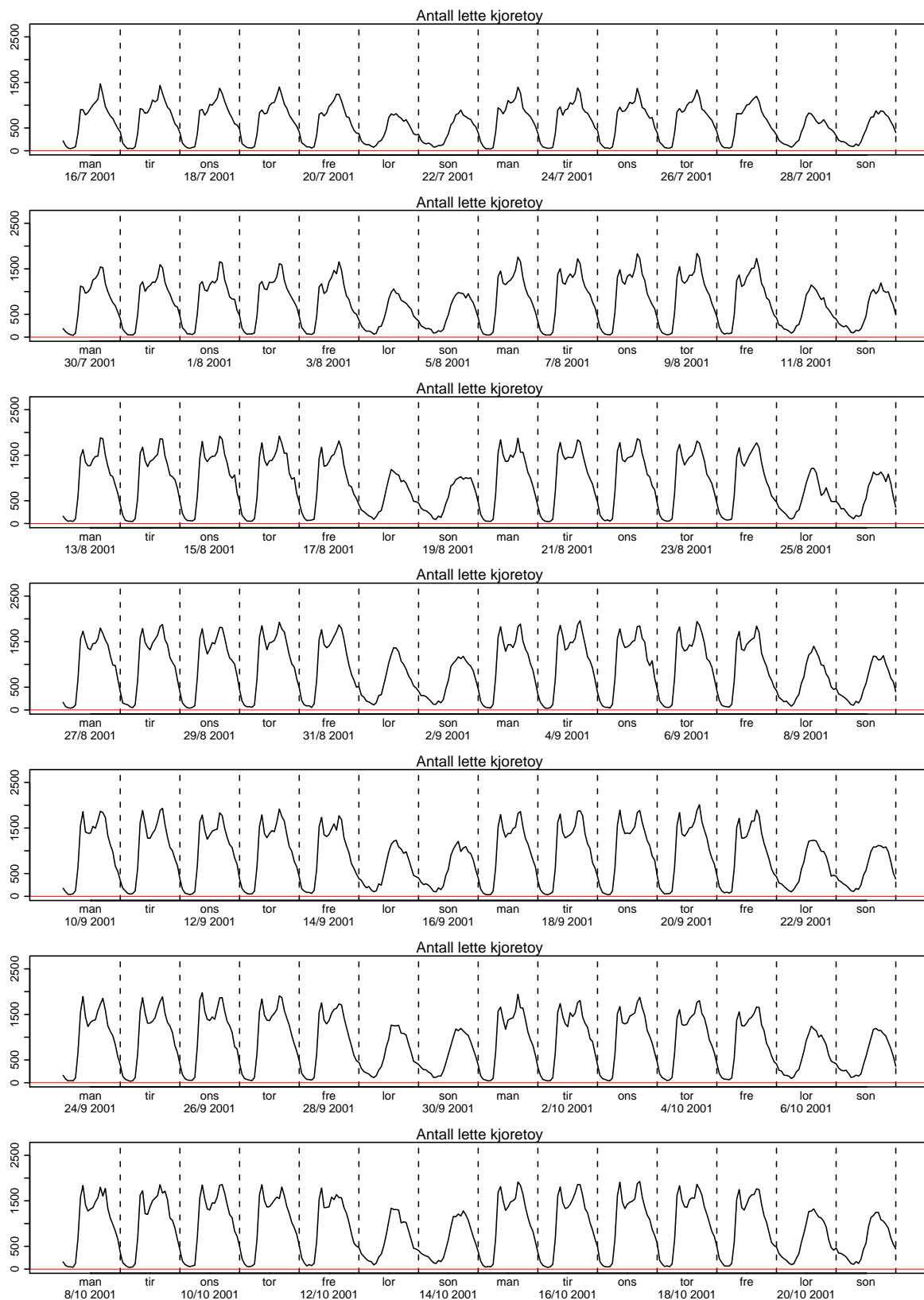
- Tidspunkt for trafikkmålingene er ofte feilregistrert med en time som skyldes overgang mellom sommertid og vintertid. Tidspunktene er korrigert etter beste skjønn ut i fra studie av døgnmønstrene i dataene.
- Noen svært urimelige verdier er fjernet fra datasettet.
- Ved manglende data har vi fylt ut med beregnede verdier, så langt det lar seg gjøre, basert på basiskurvemetoden (Haug og Aldrin, 2006).



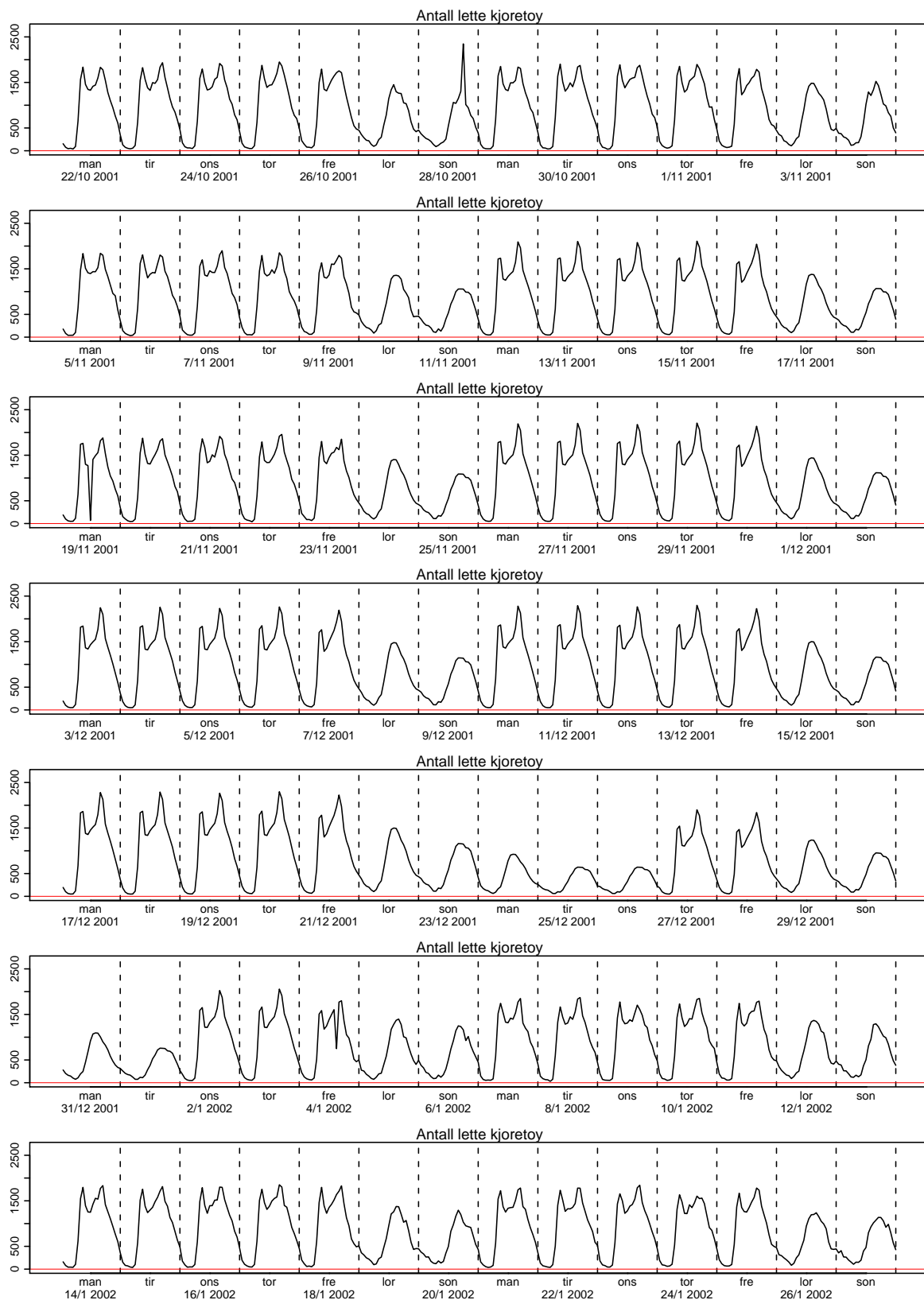
Figur 4.1. Antall lette kjøretøy.



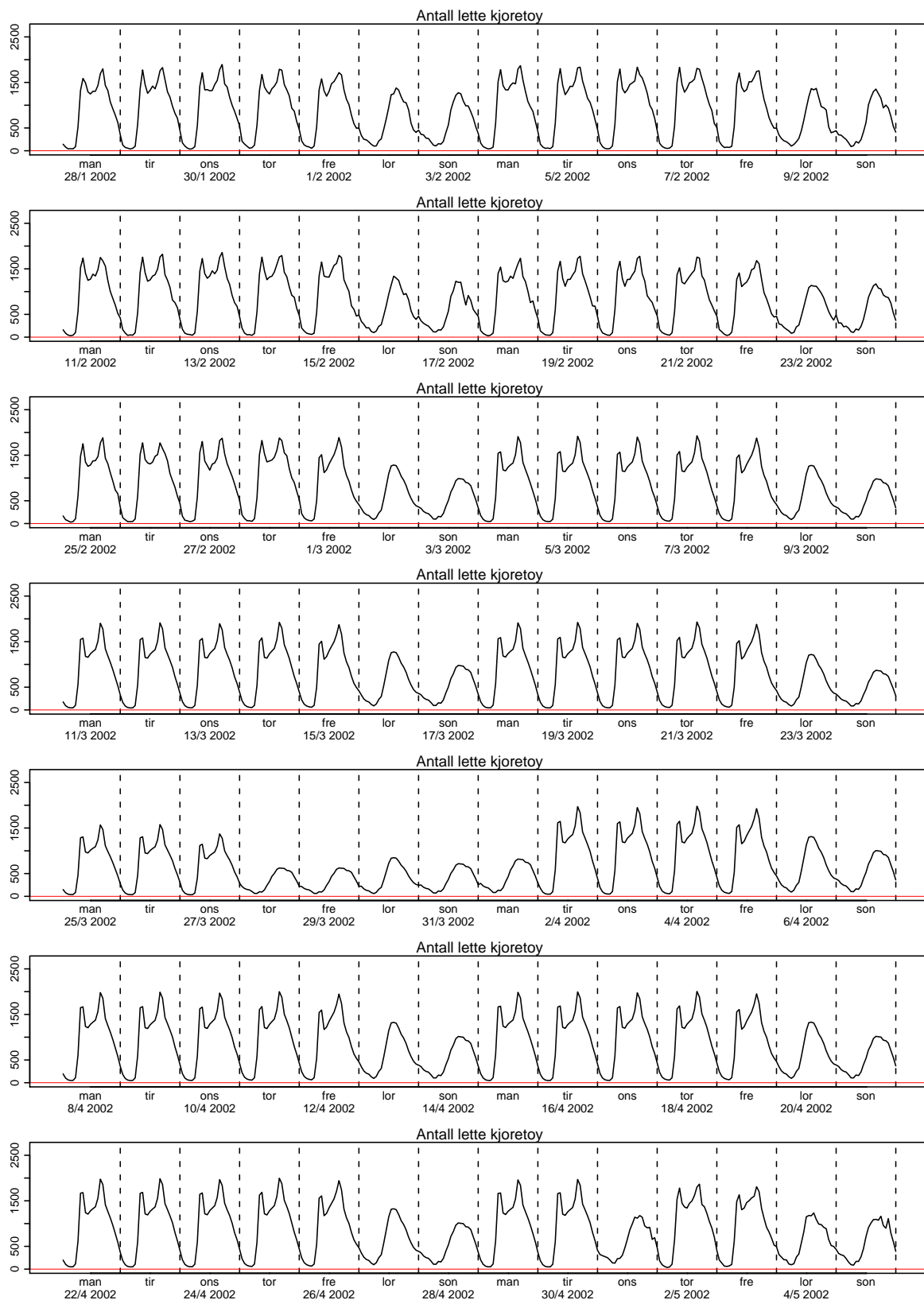
Figur 4.2. Antall lette kjøretøy.



Figur 4.3. Antall lette kjøretøy.

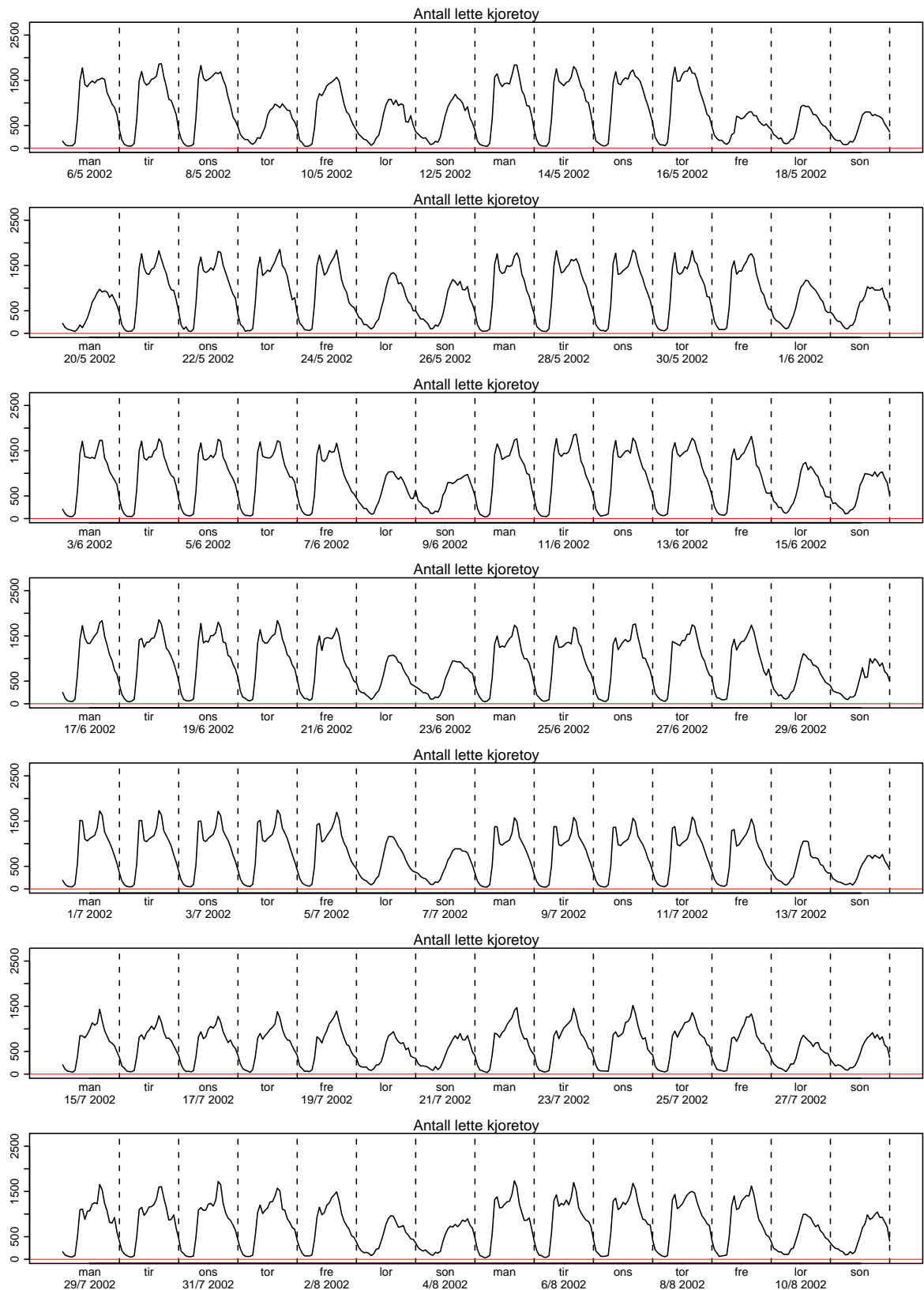


Figur 4.4. Antall lette kjøretøy.

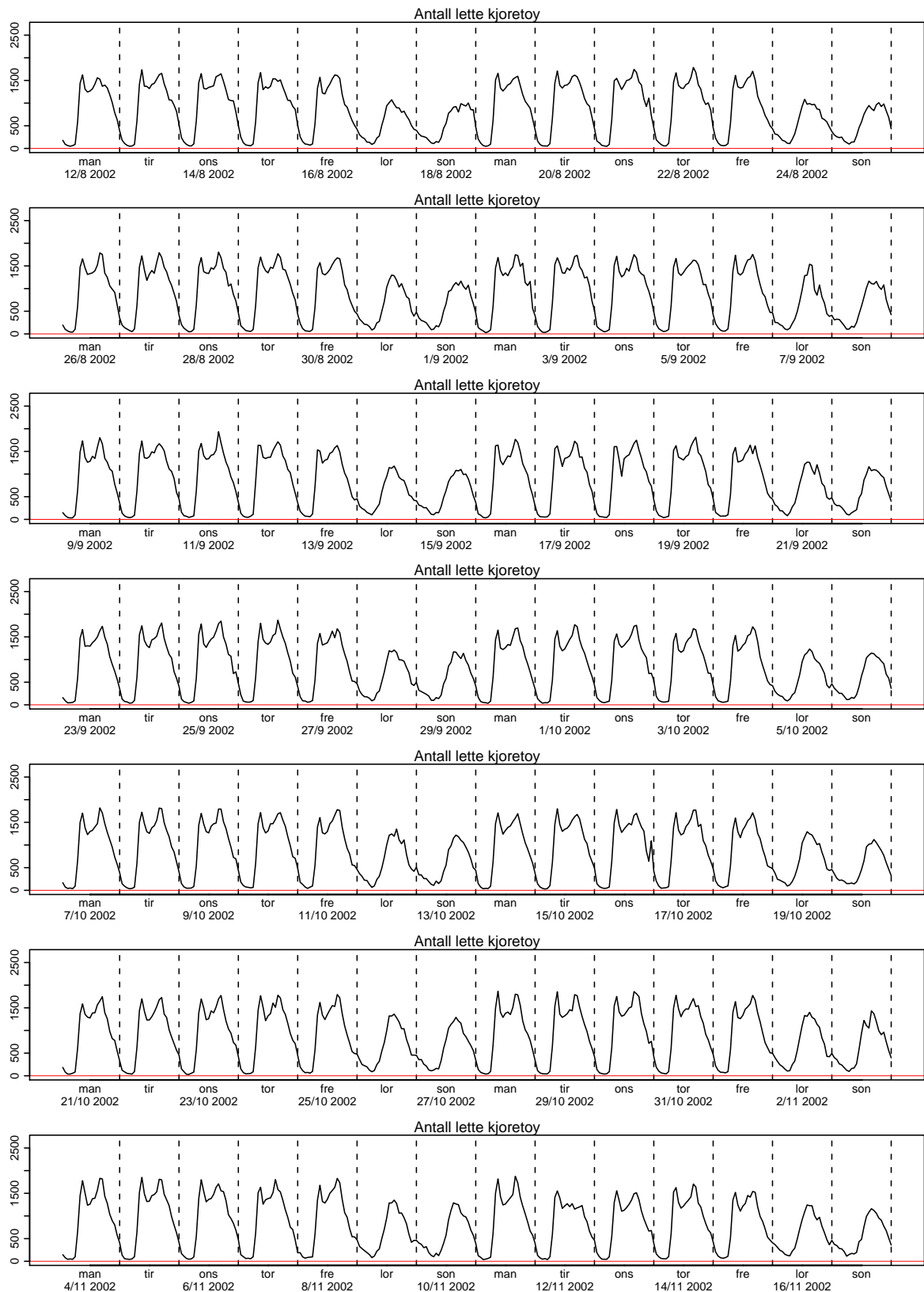


Figur 4.5. Antall lette kjøretøy.

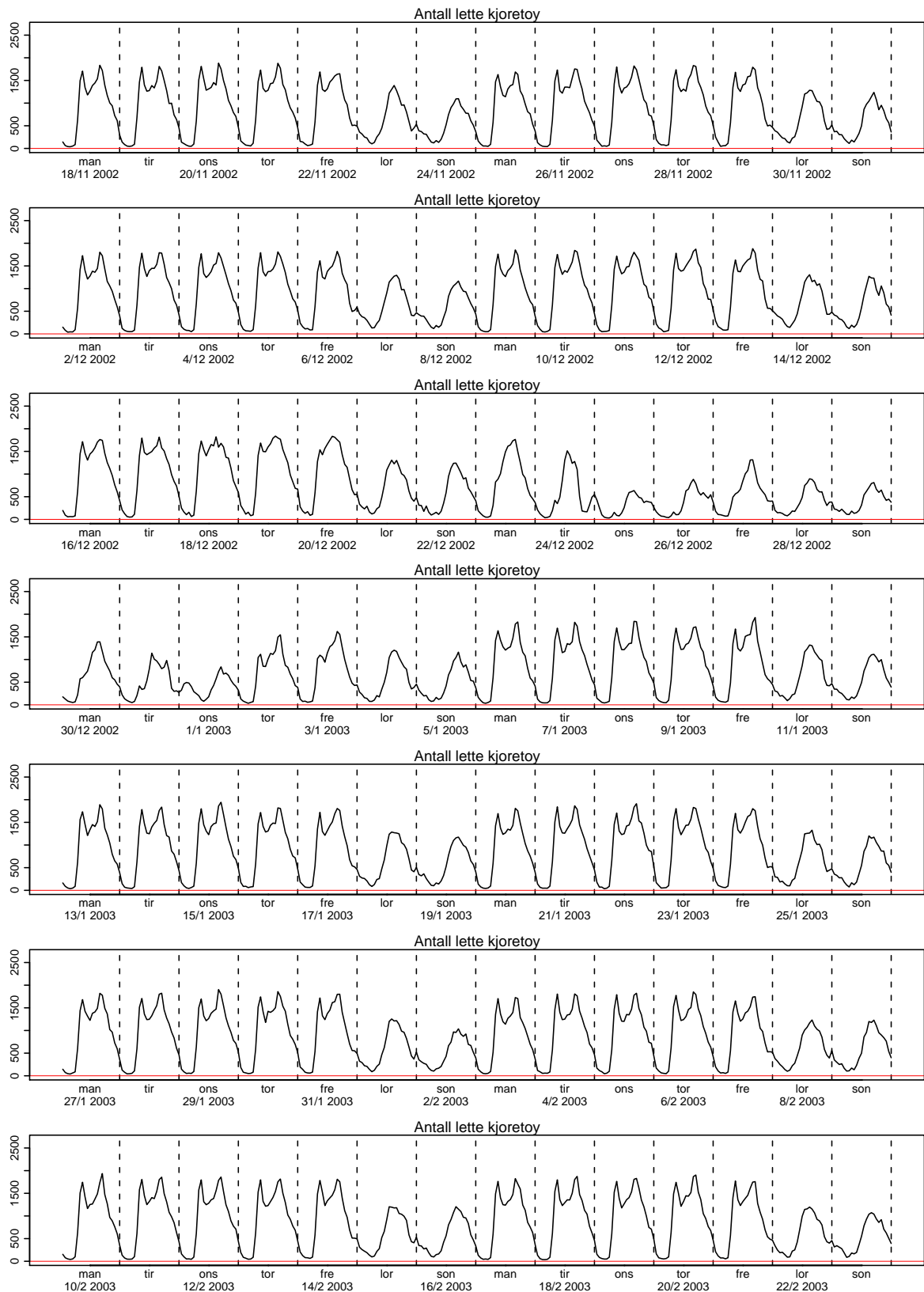




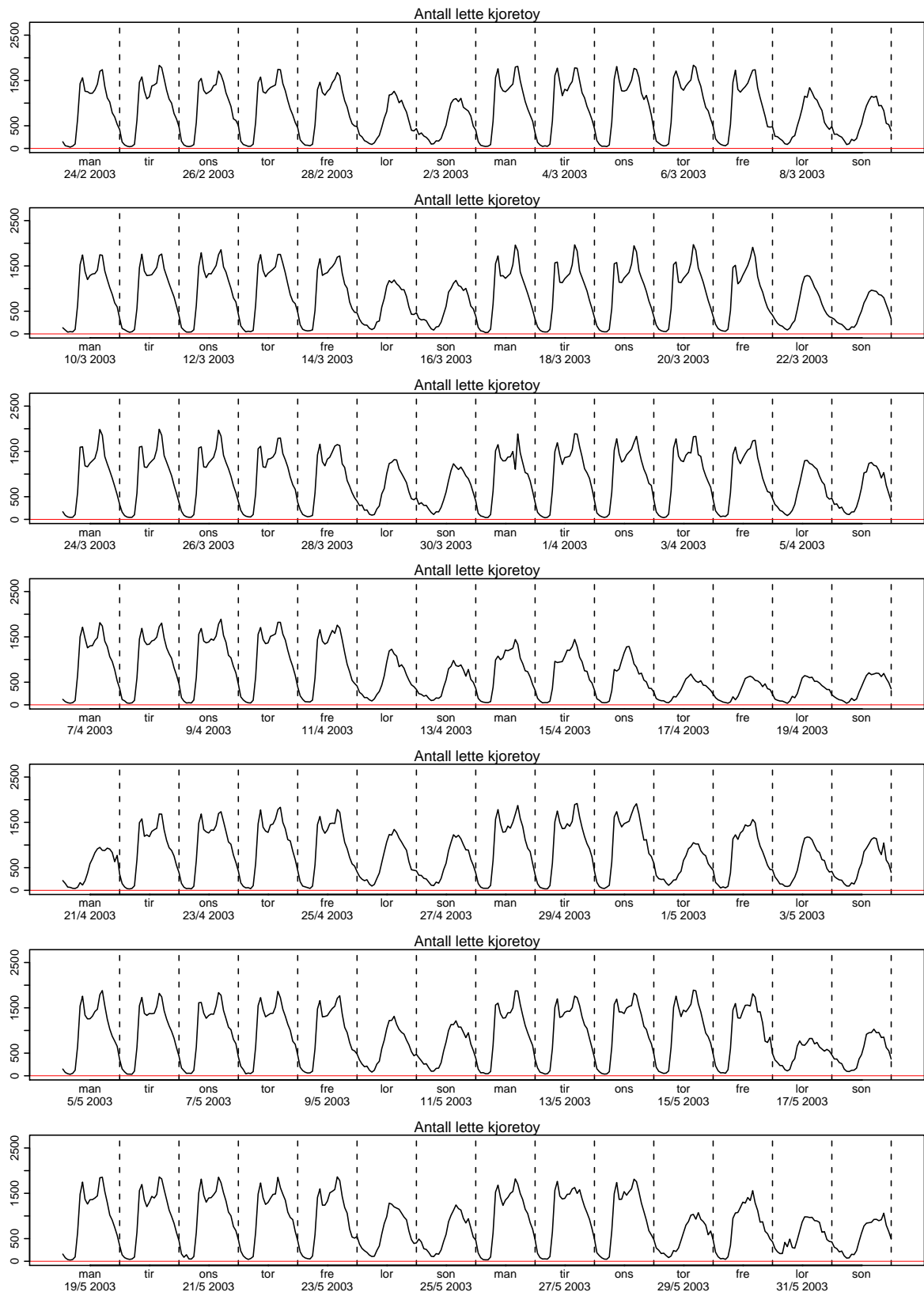
Figur 4.6. Antall lette kjøretøy.



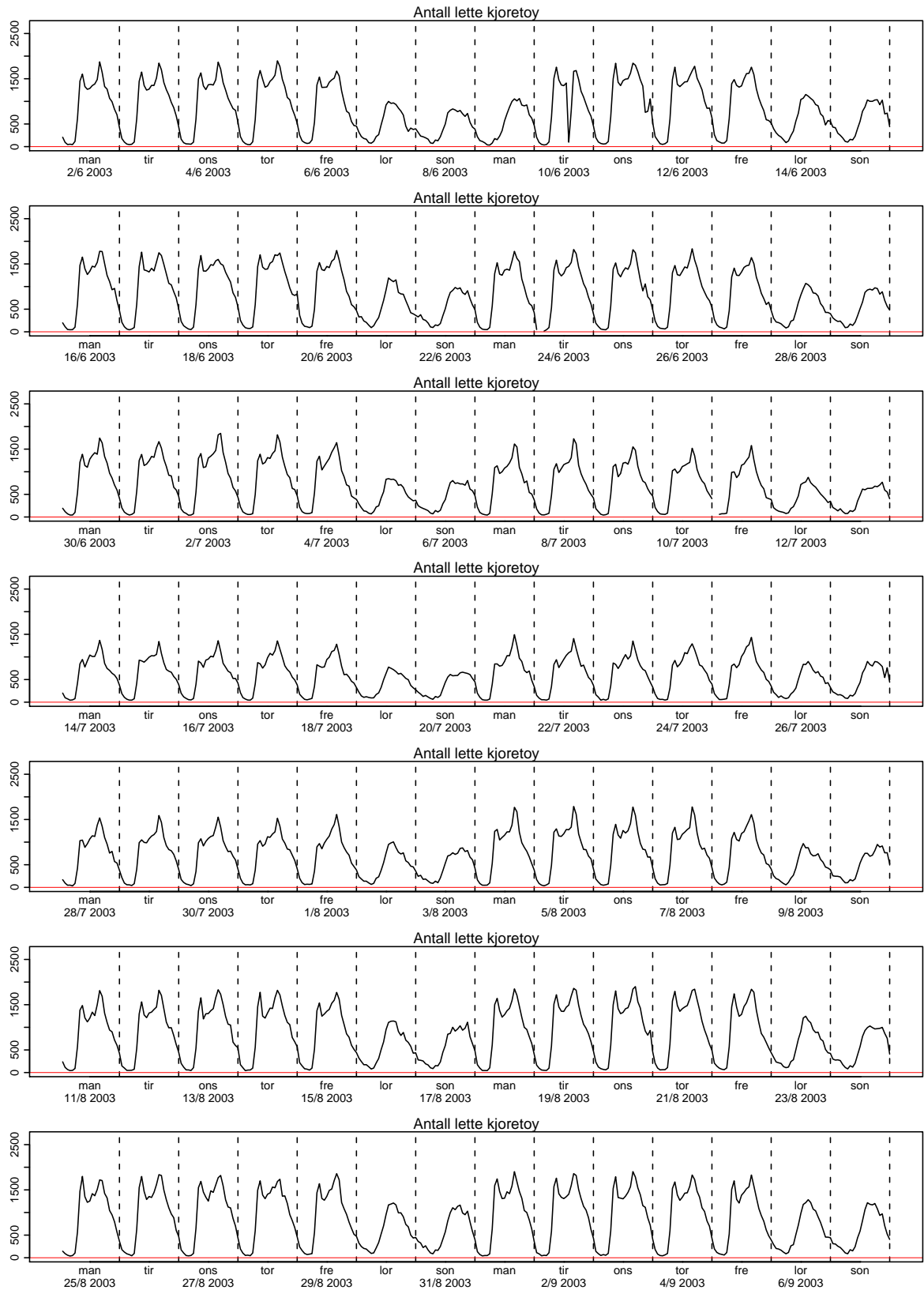
Figur 4.7. Antall lette kjøretøy.



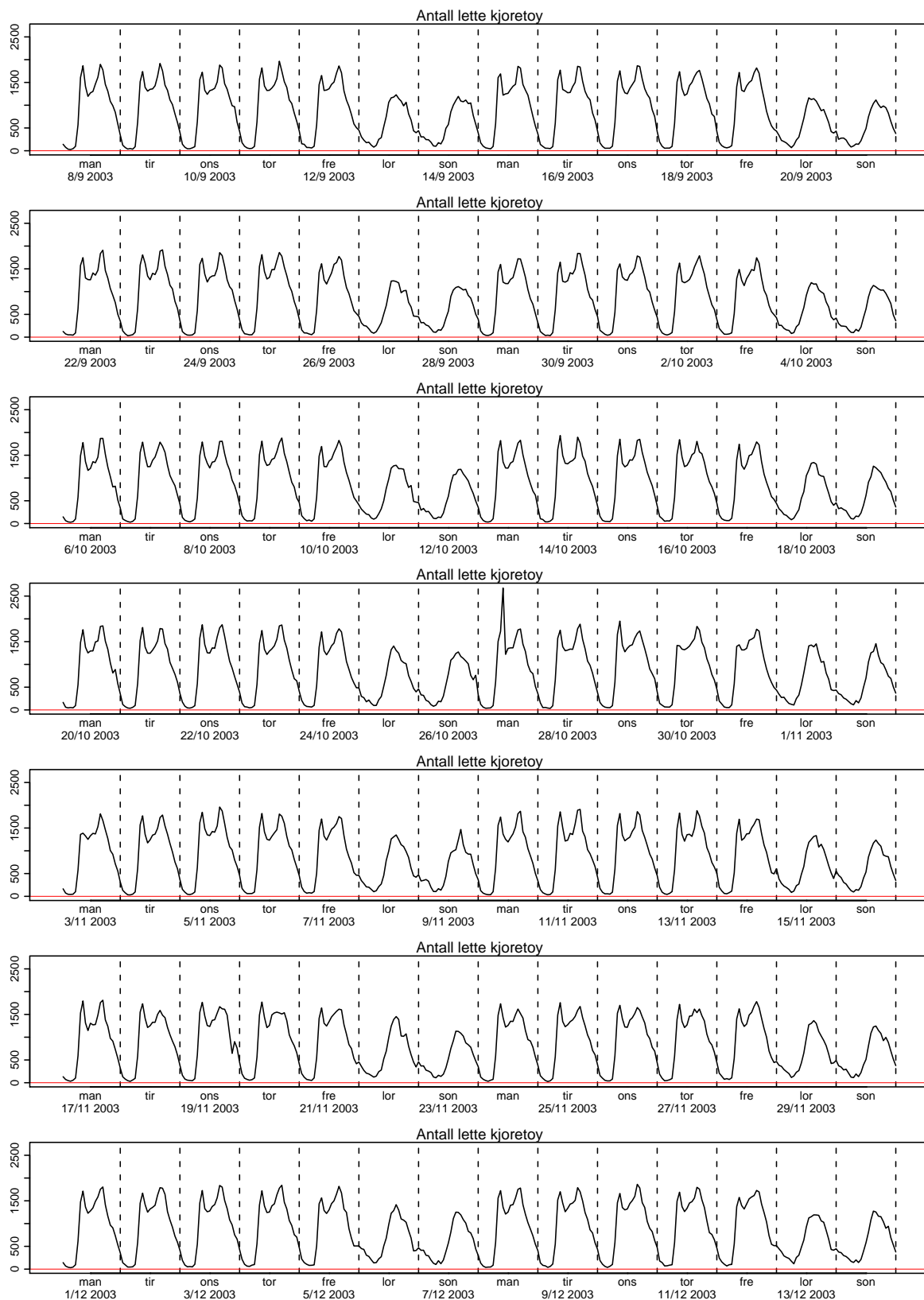
Figur 4.8. Antall lette kjøretøy.



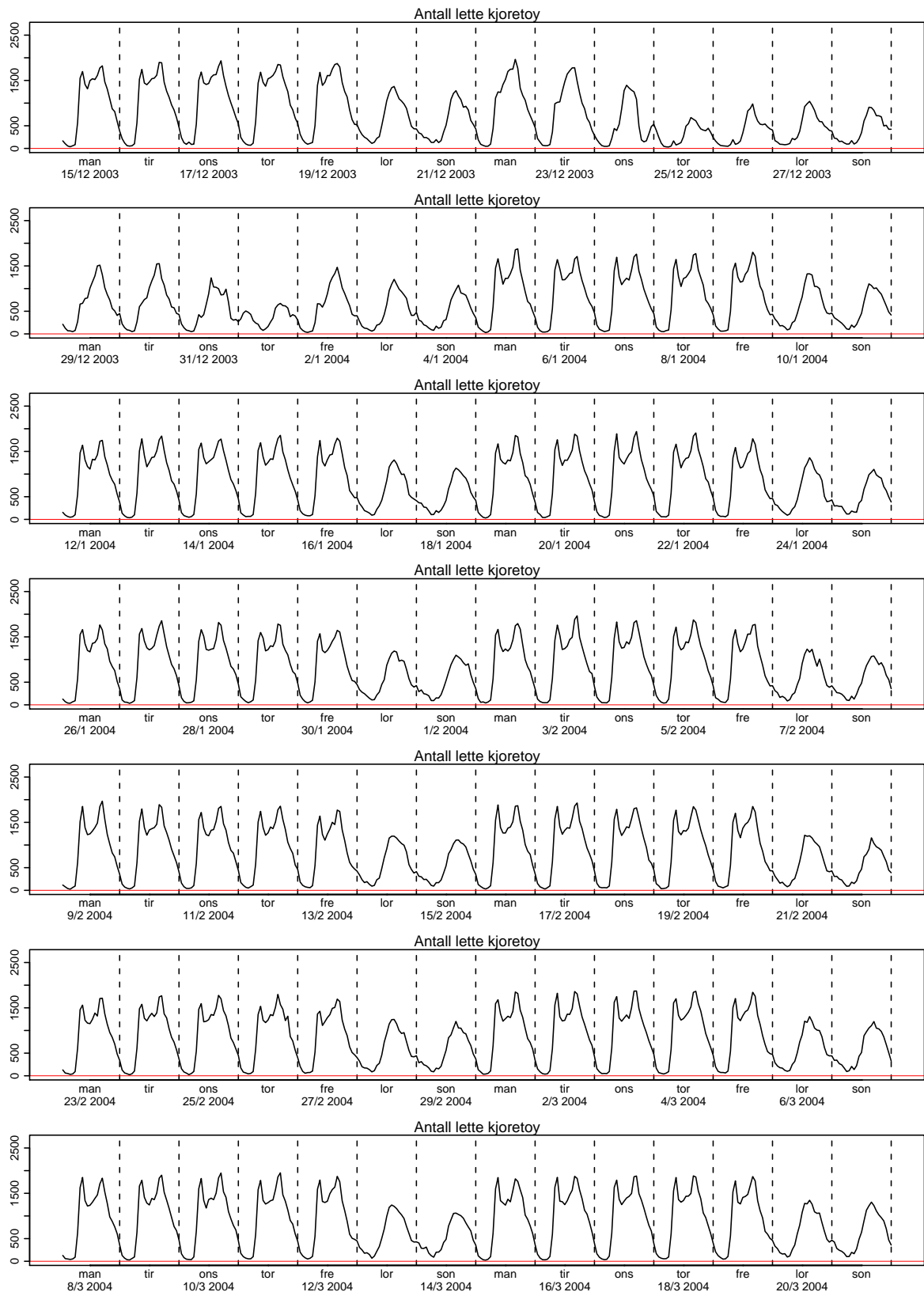
Figur 4.9. Antall lette kjøretøy.



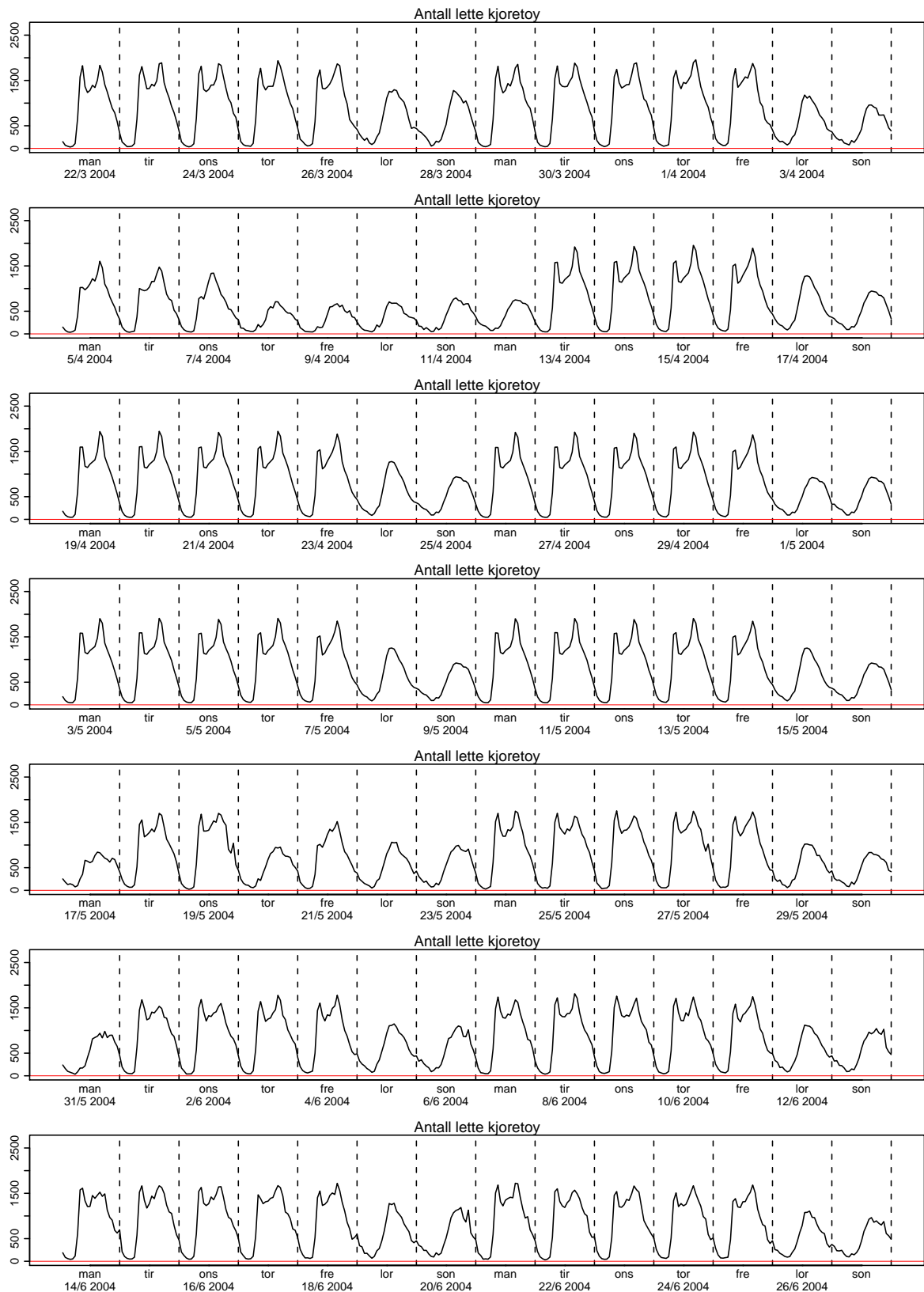
Figur 4.10. Antall lette kjøretøy.



Figur 4.11. Antall lette kjøretøy.

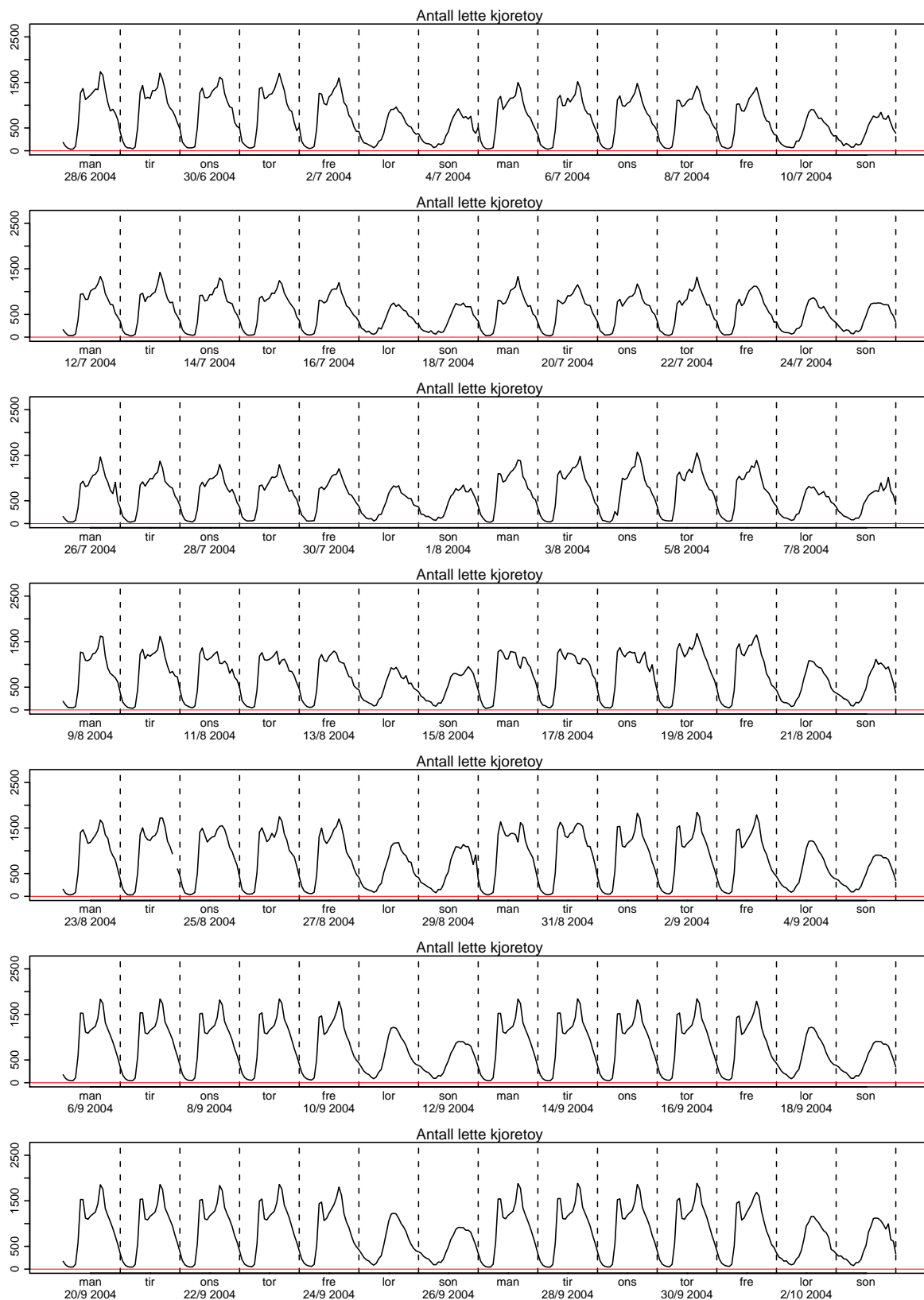


Figur 4.12. Antall lette kjøretøy.

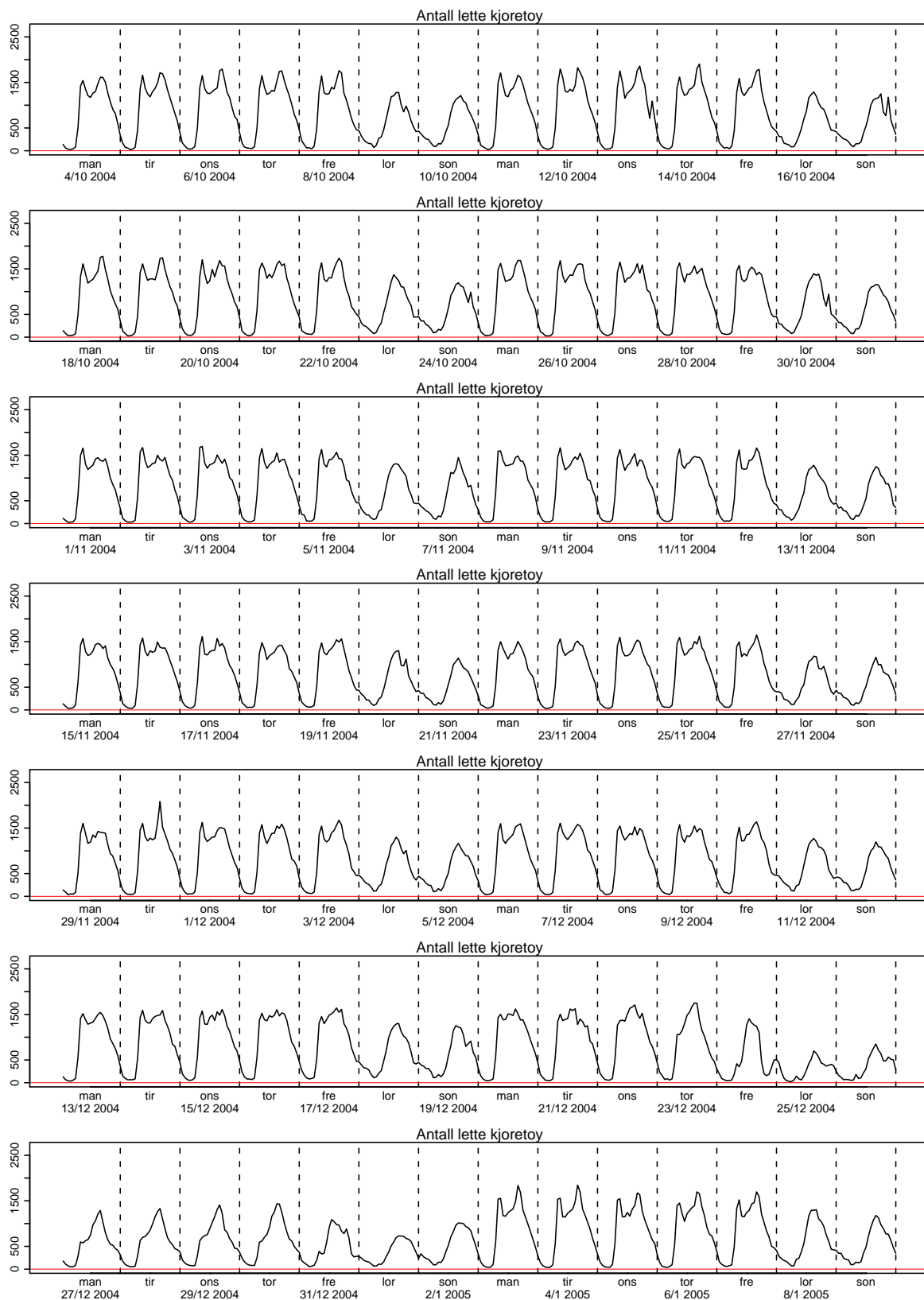


Figur 4.13. Antall lette kjøretøy.

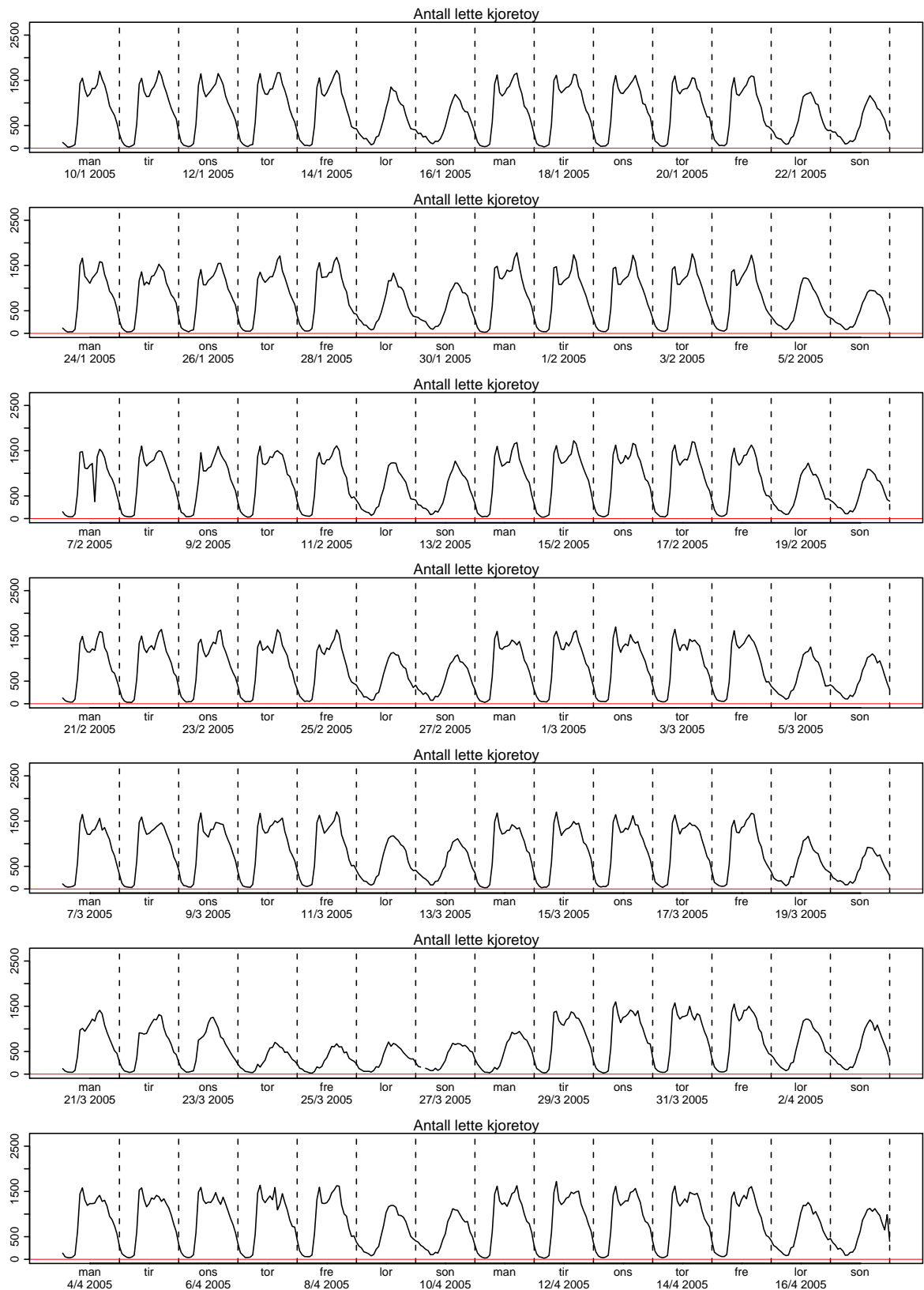




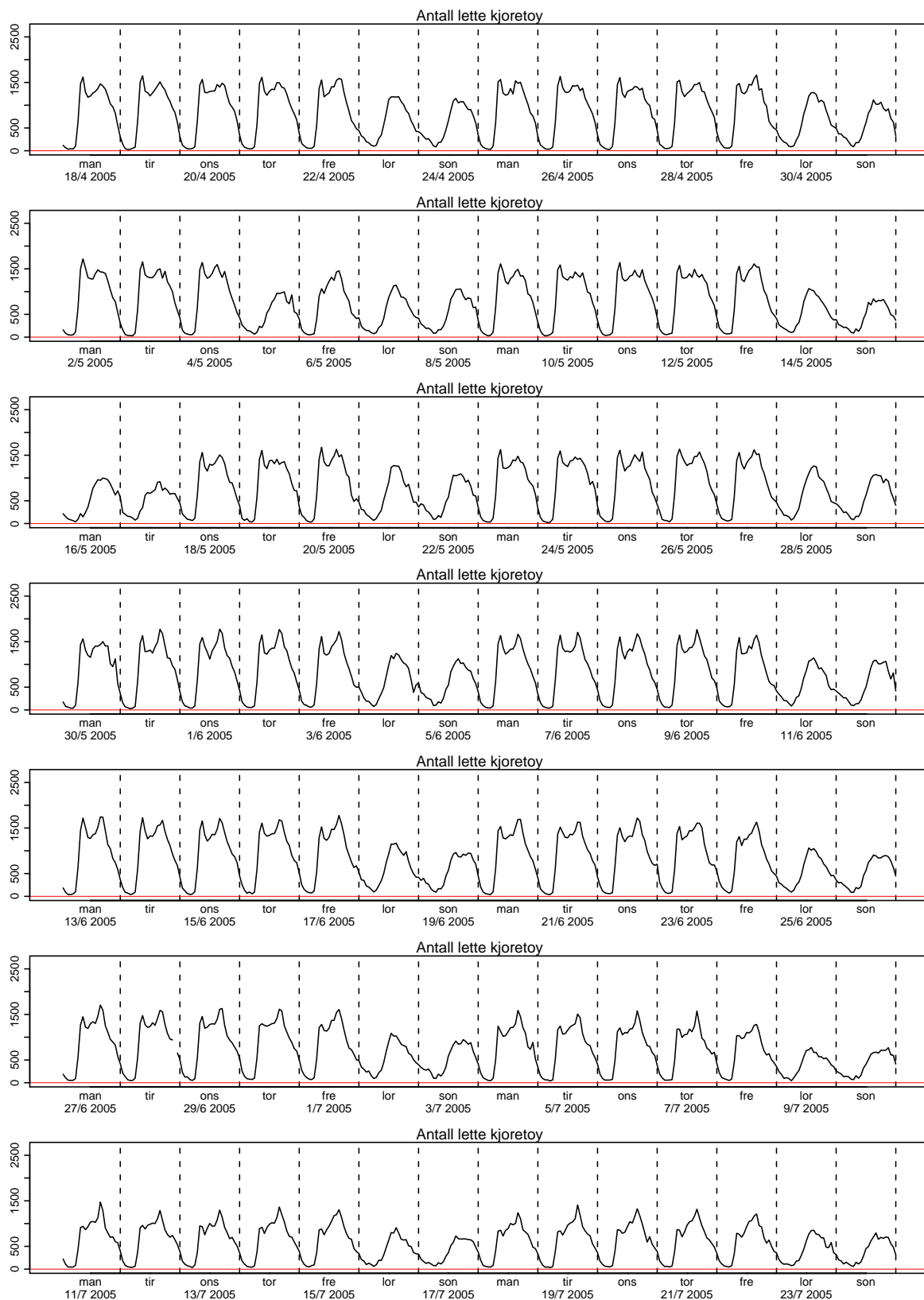
Figur 4.14. Antall lette kjøretøy.



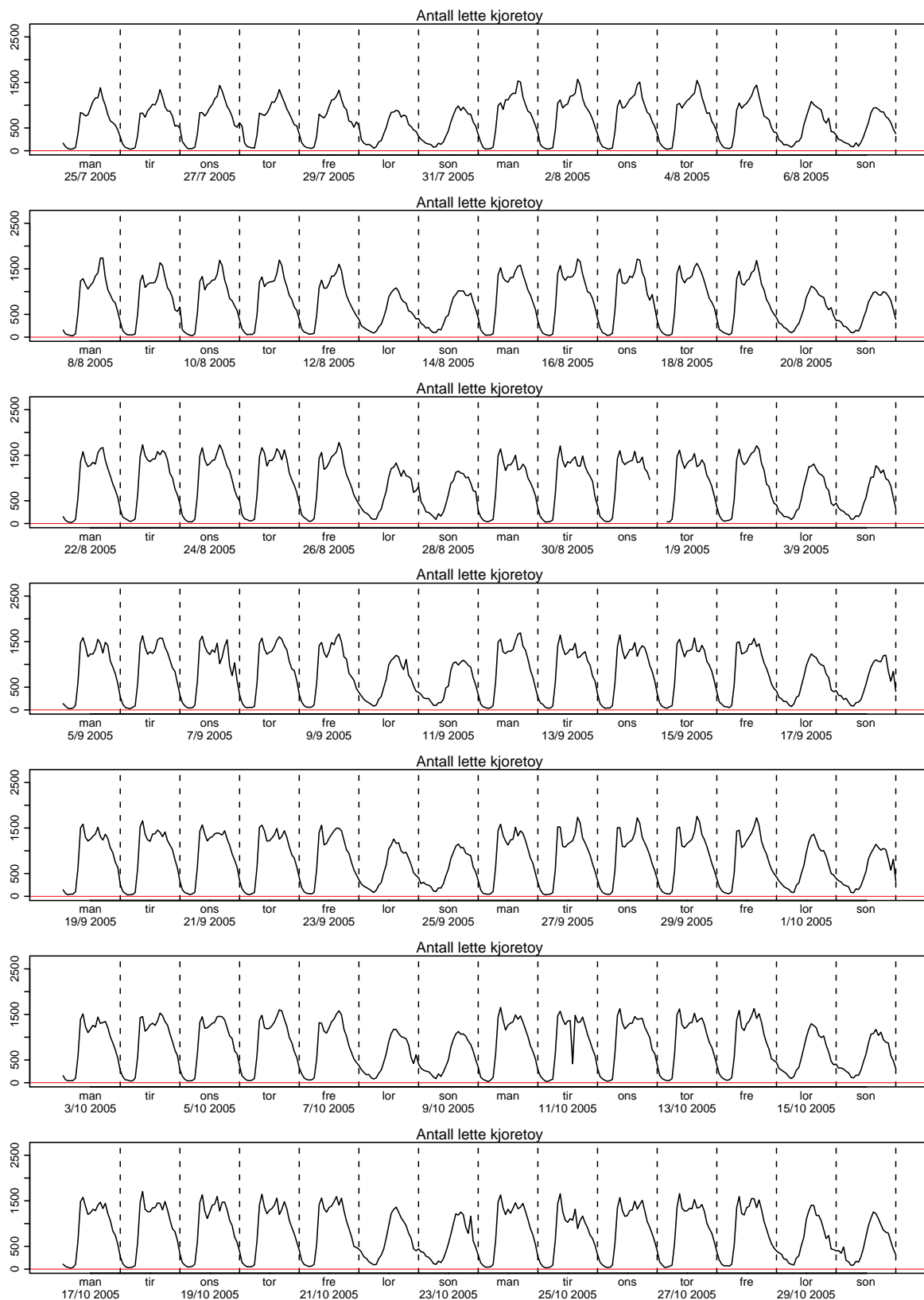
Figur 4.15. Antall lette kjøretøy.



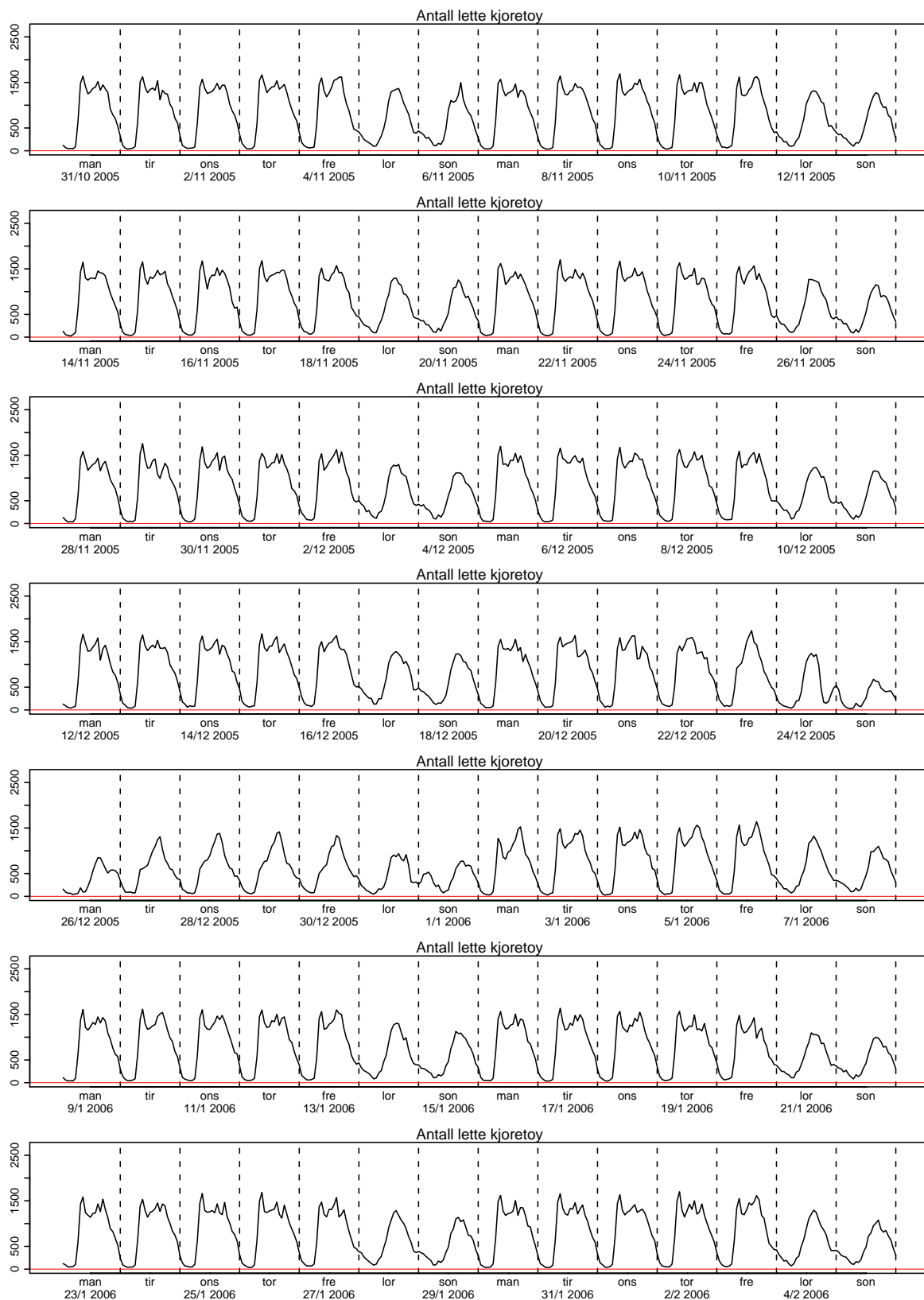
Figur 4.16. Antall lette kjøretøy.



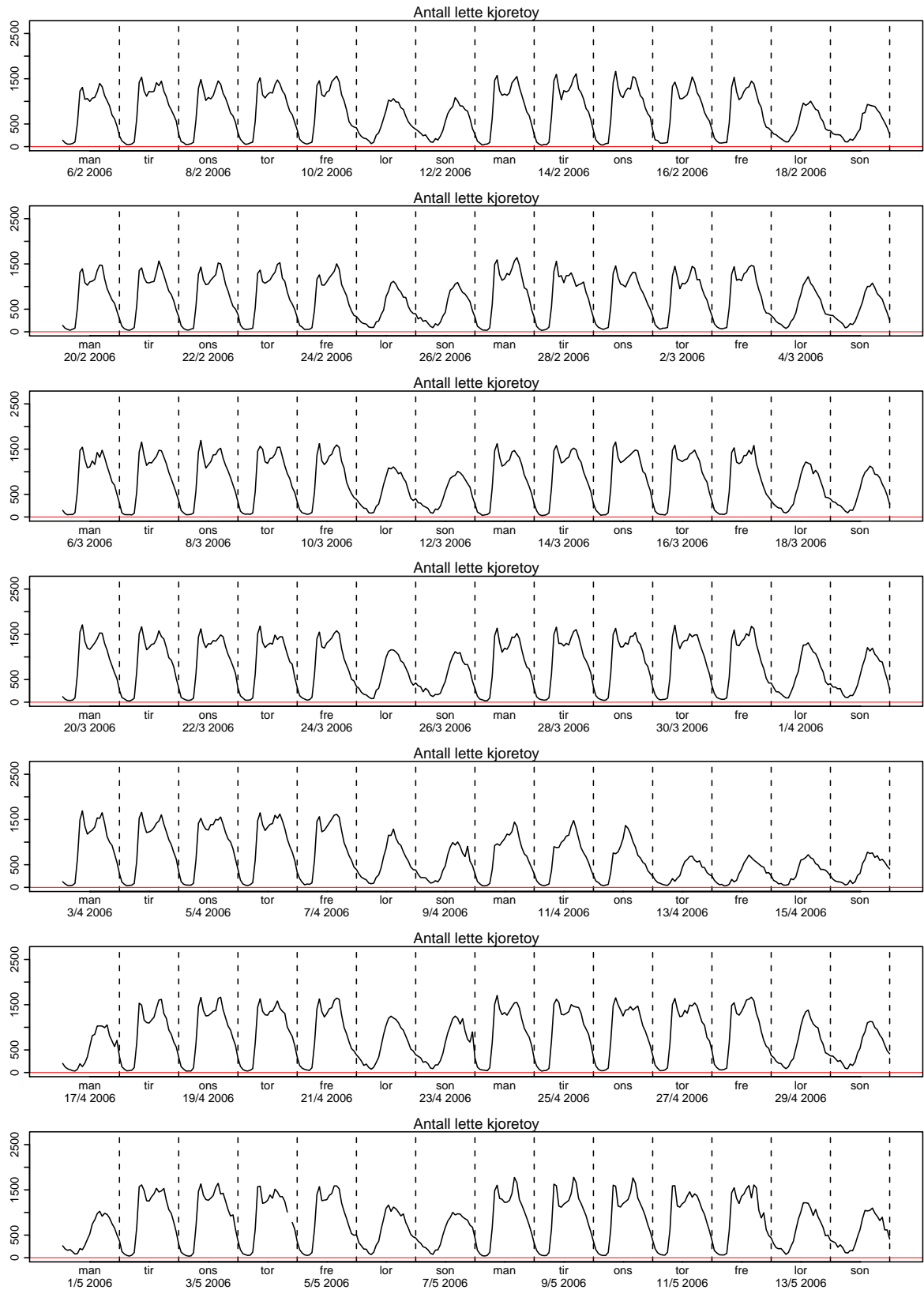
Figur 4.17. Antall lette kjøretøy.



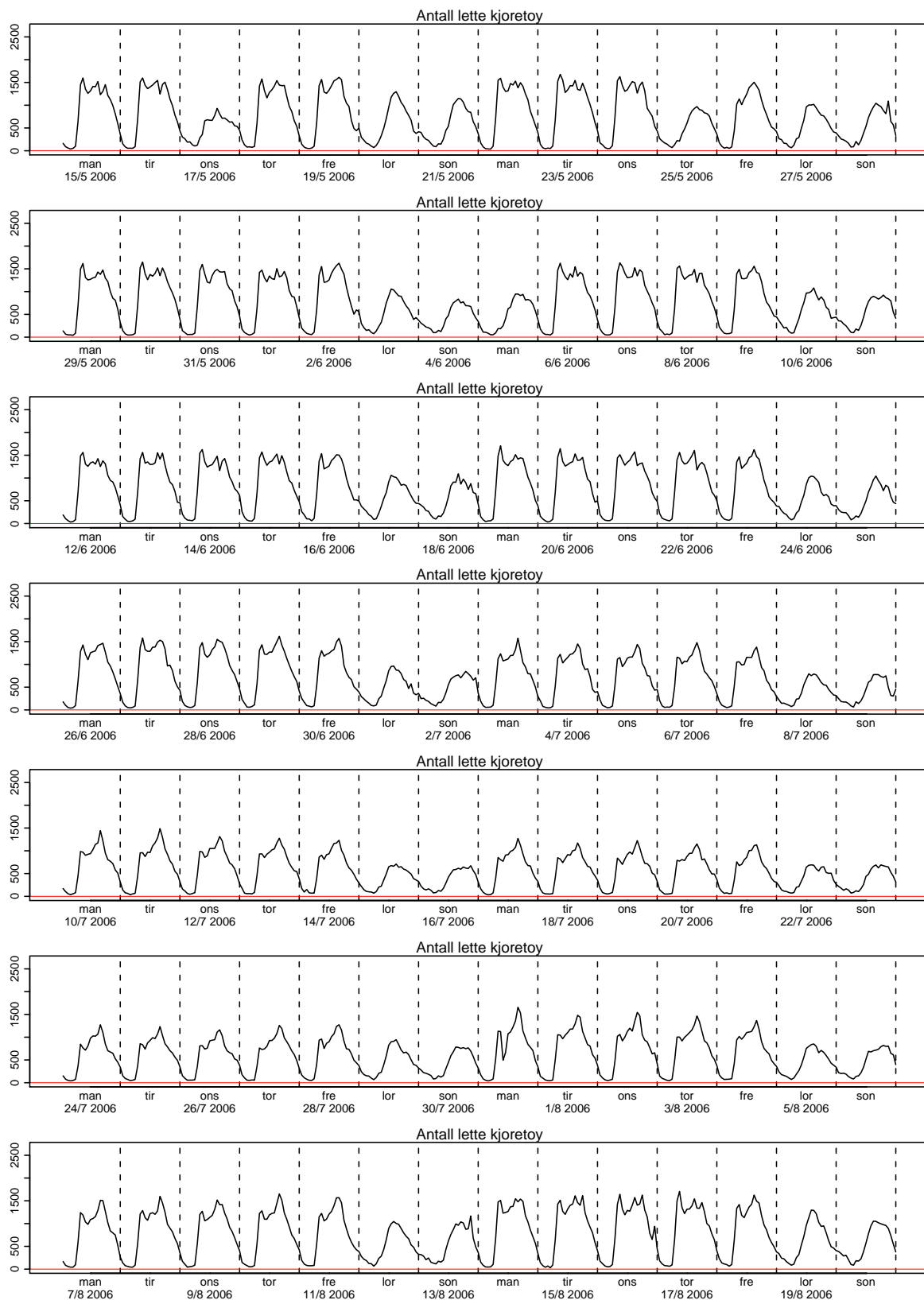
Figur 4.18. Antall lette kjøretøy.



Figur 4.19. Antall lette kjøretøy.

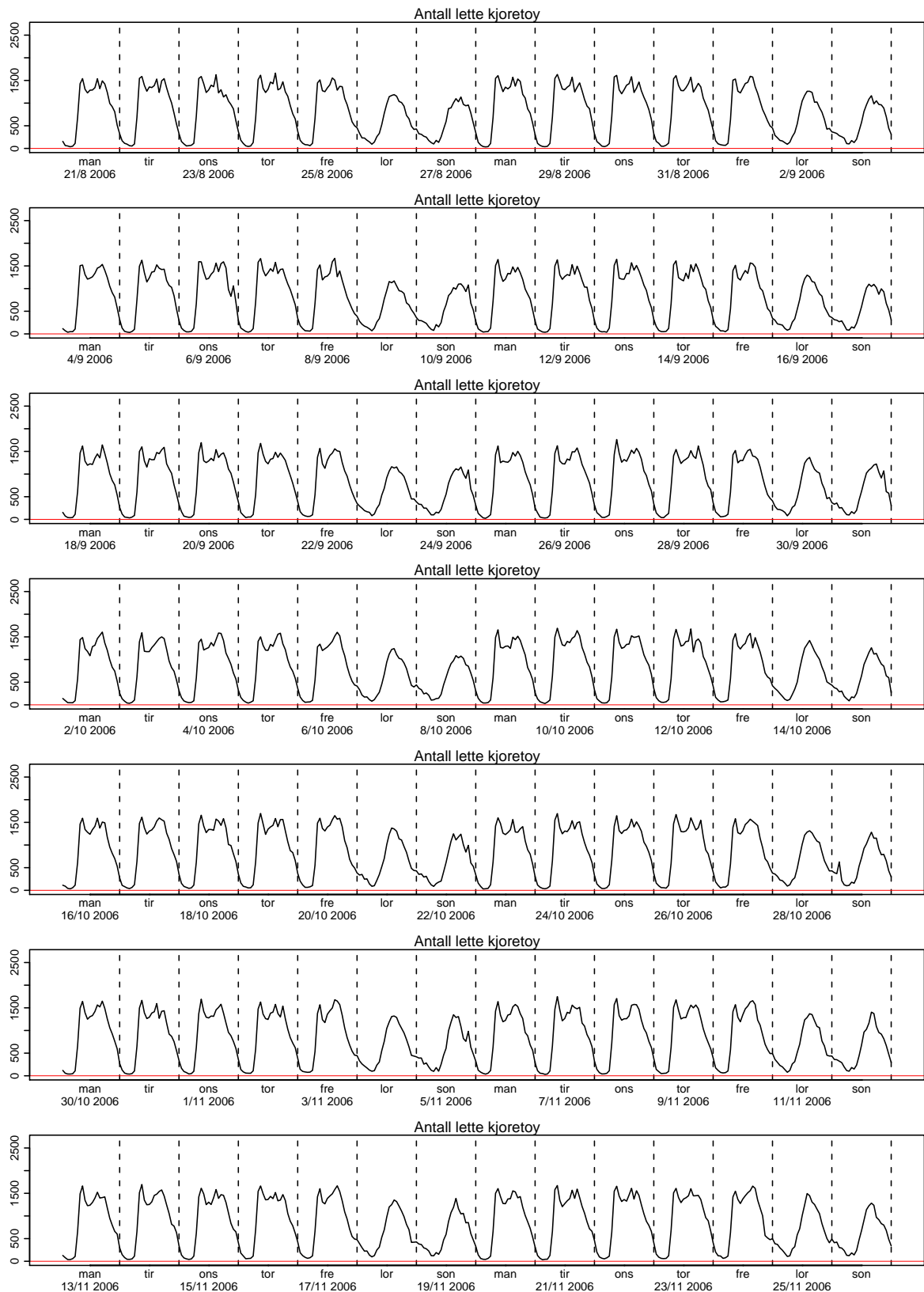


Figur 4.20. Antall lette kjøretøy.

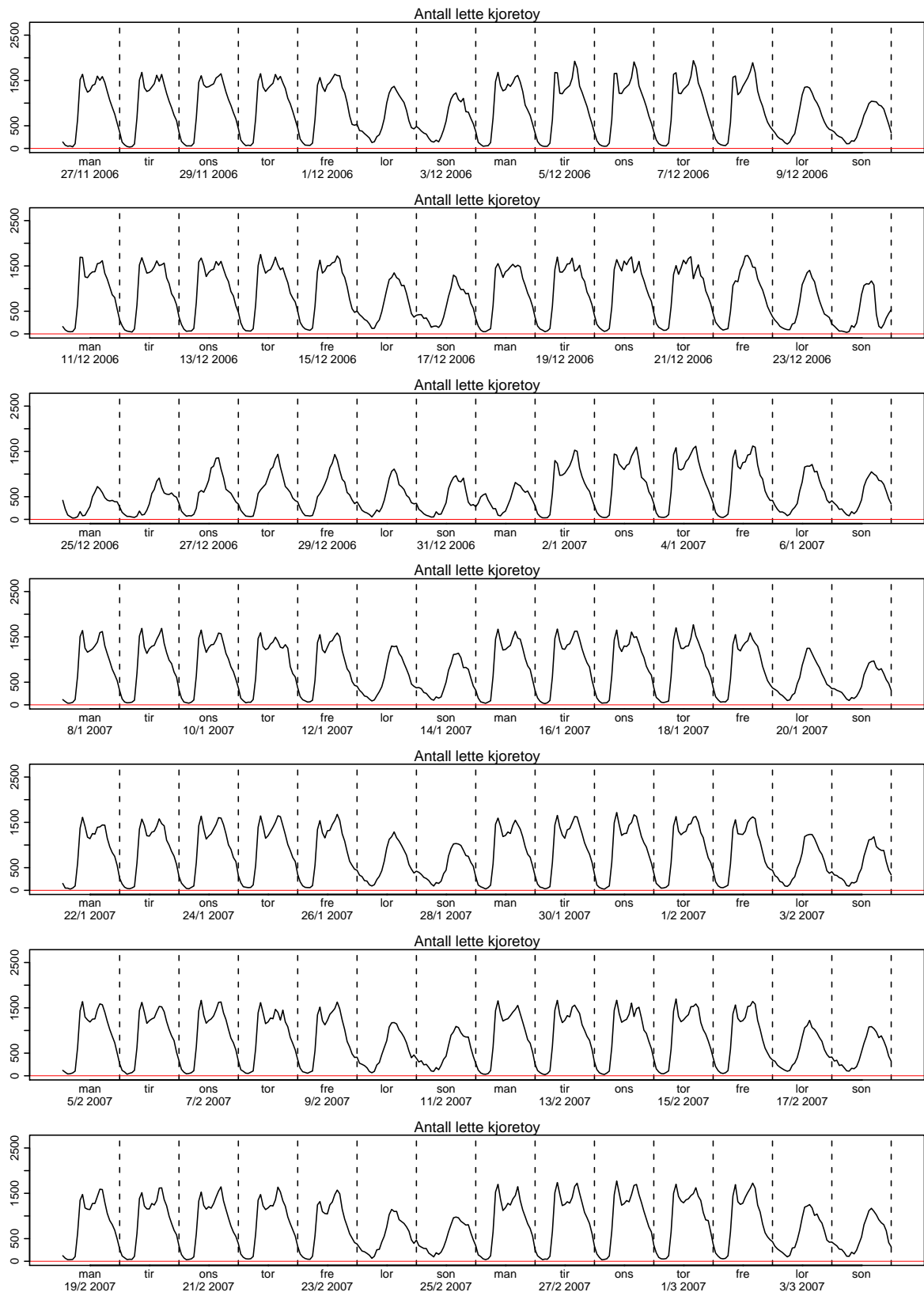


Figur 4.21. Antall lette kjøretøy.

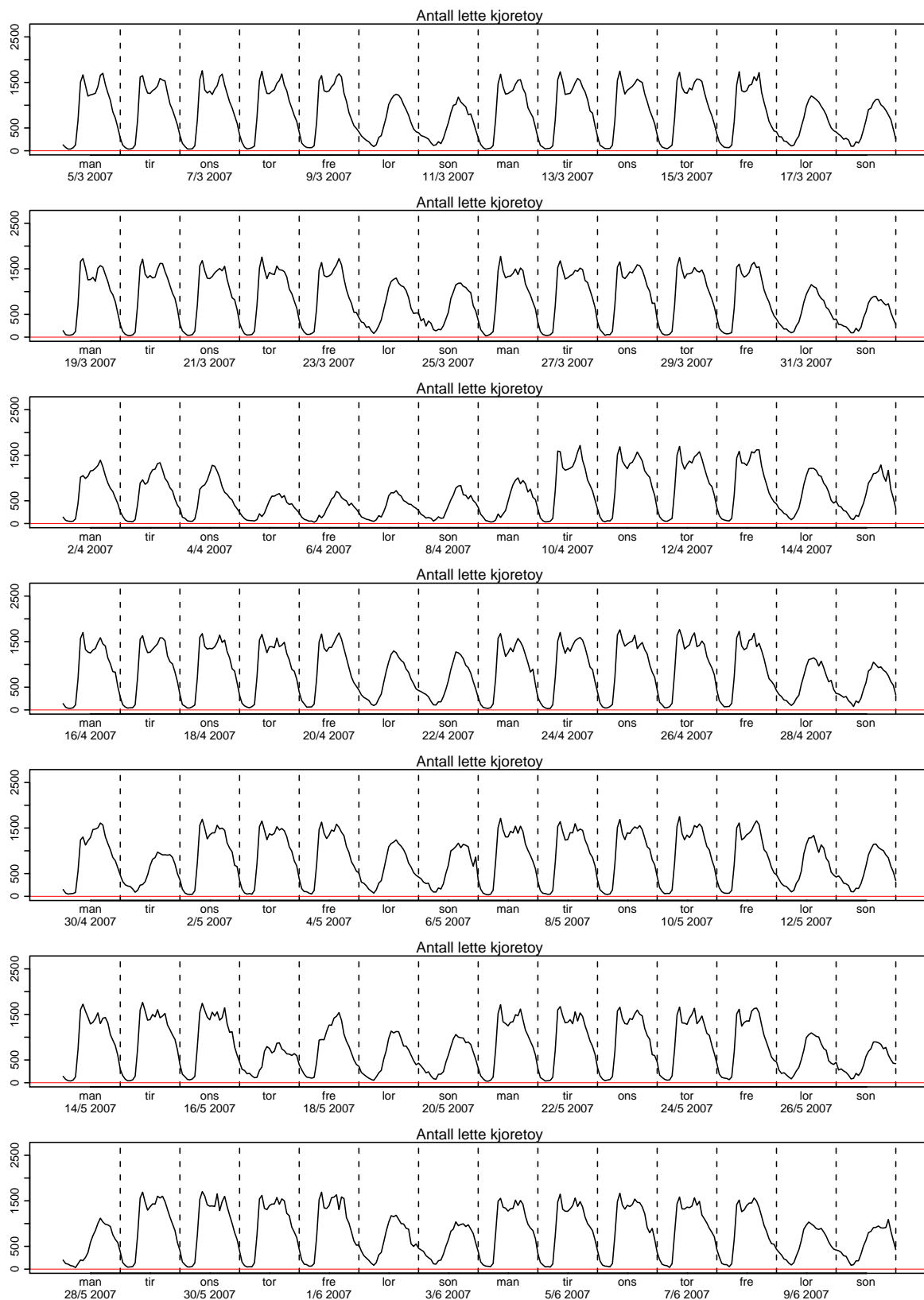




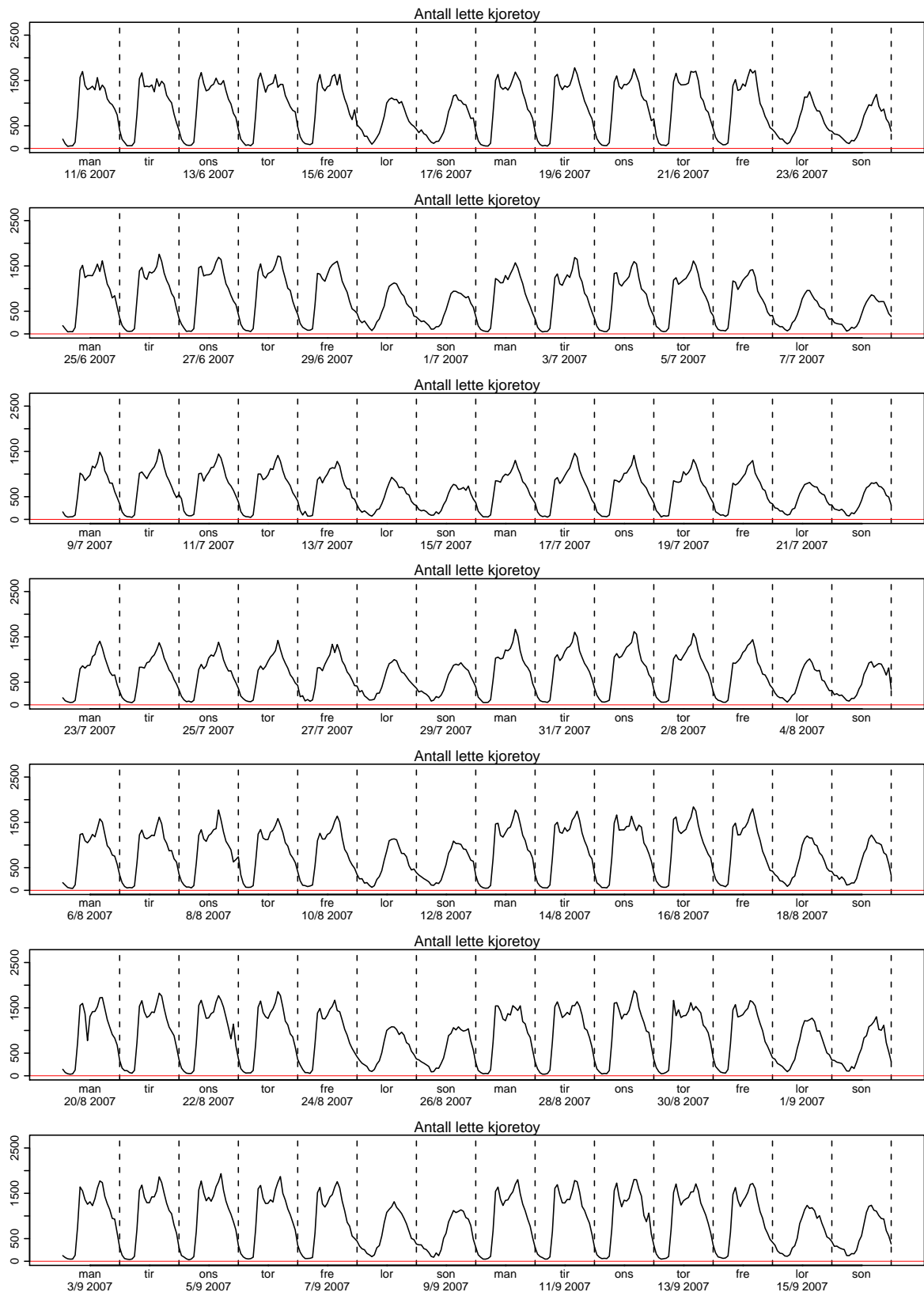
Figur 4.22. Antall lette kjøretøy.



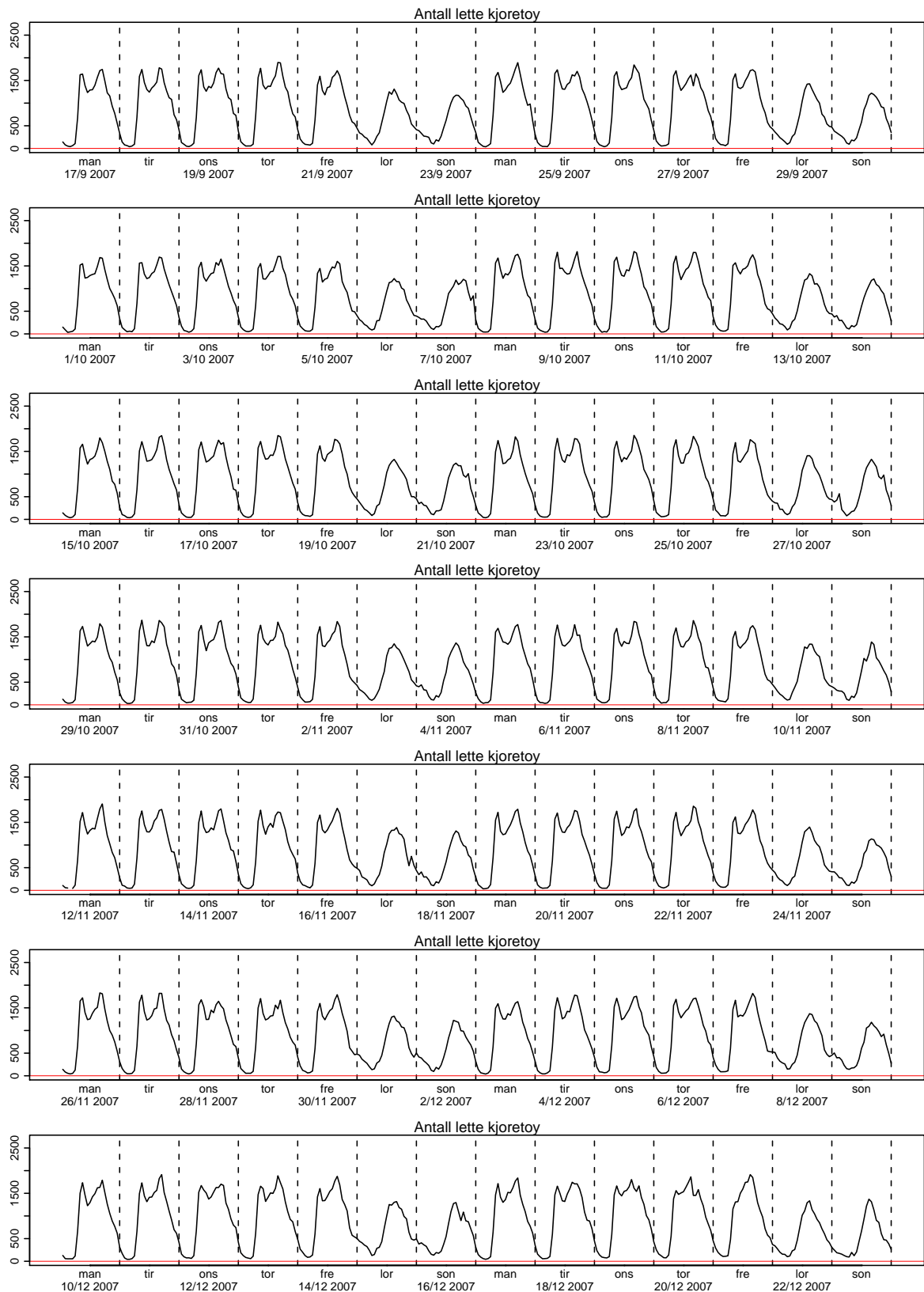
Figur 4.23. Antall lette kjøretøy.



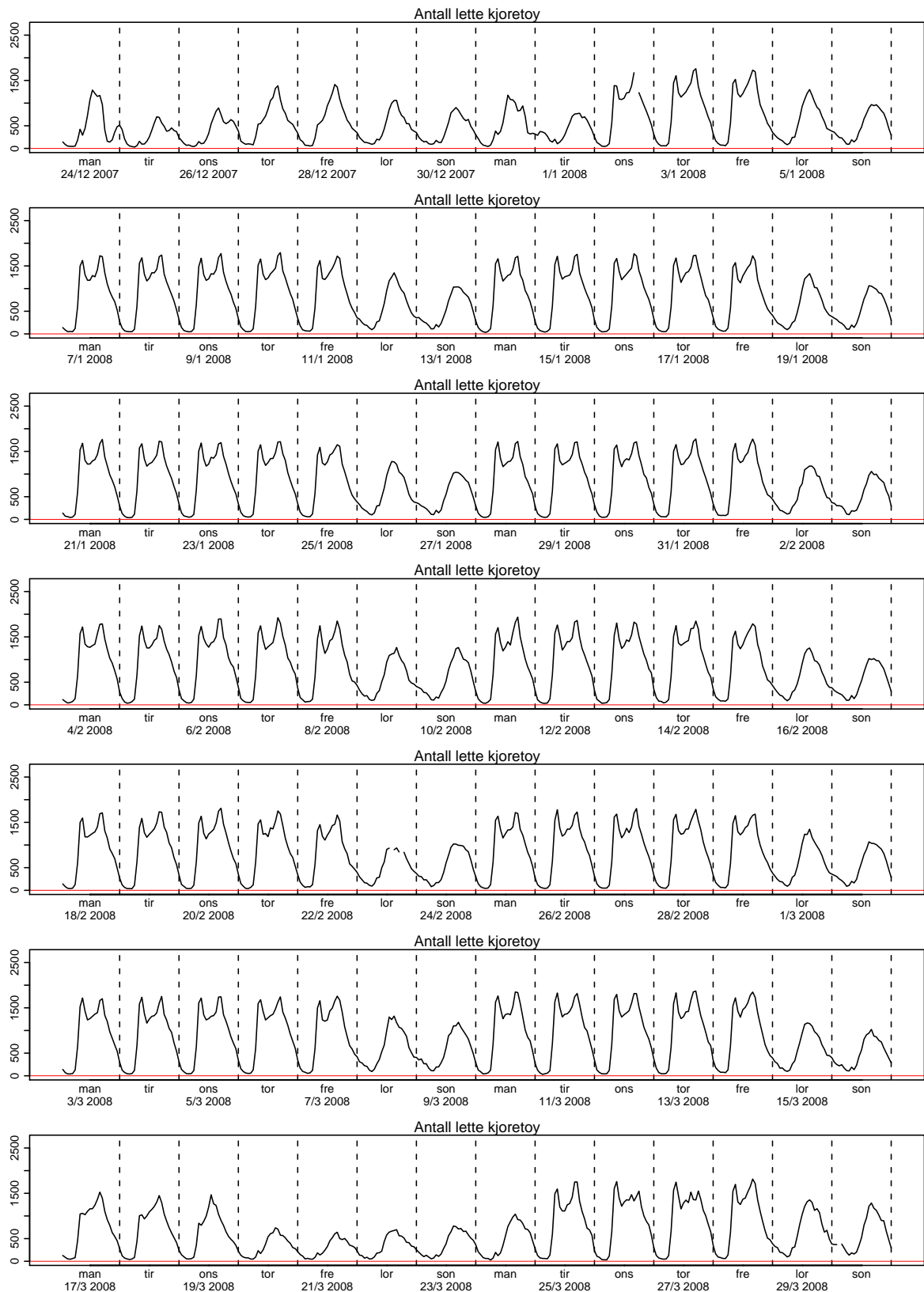
Figur 4.24. Antall lette kjøretøy.



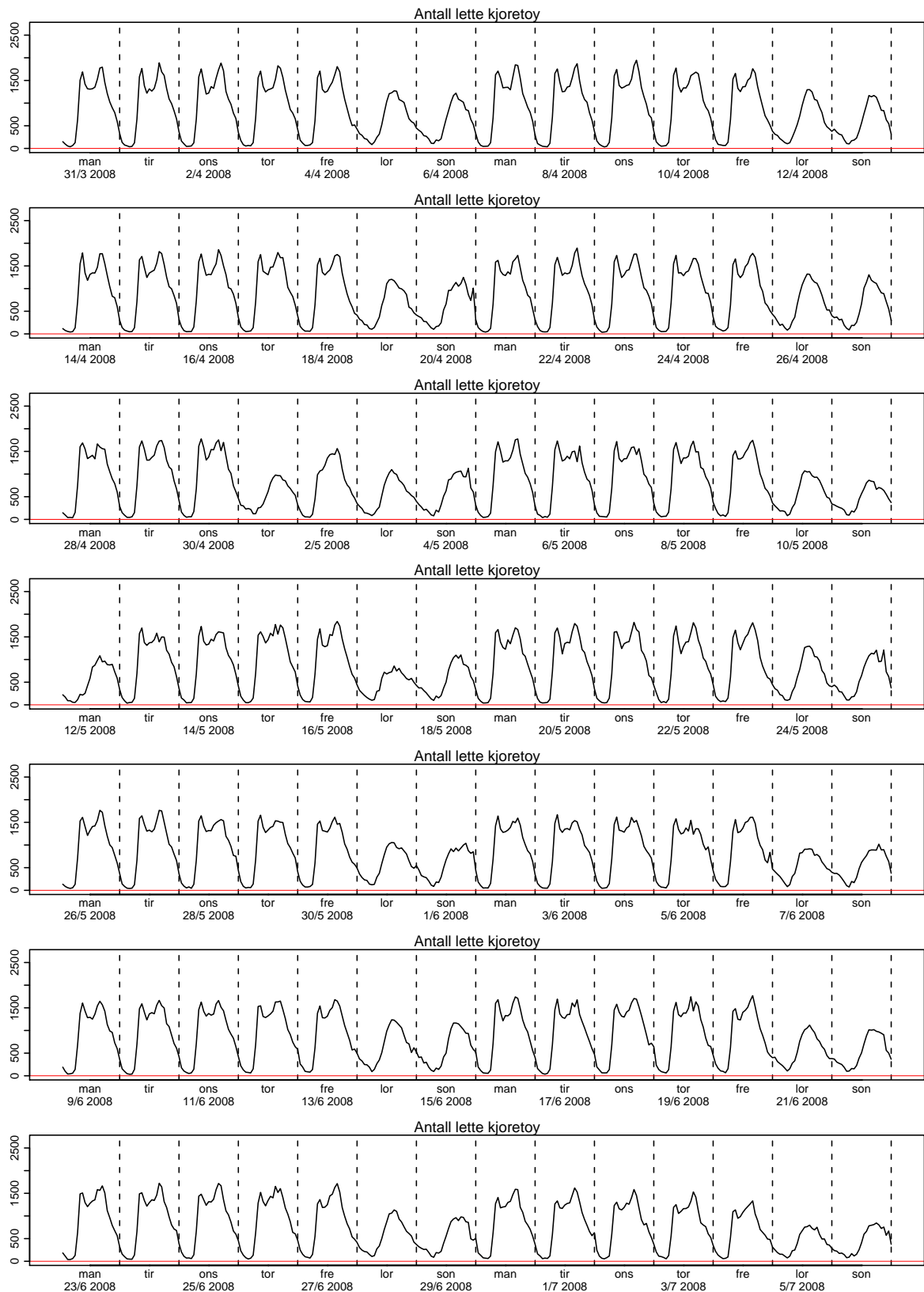
Figur 4.25. Antall lette kjøretøy.



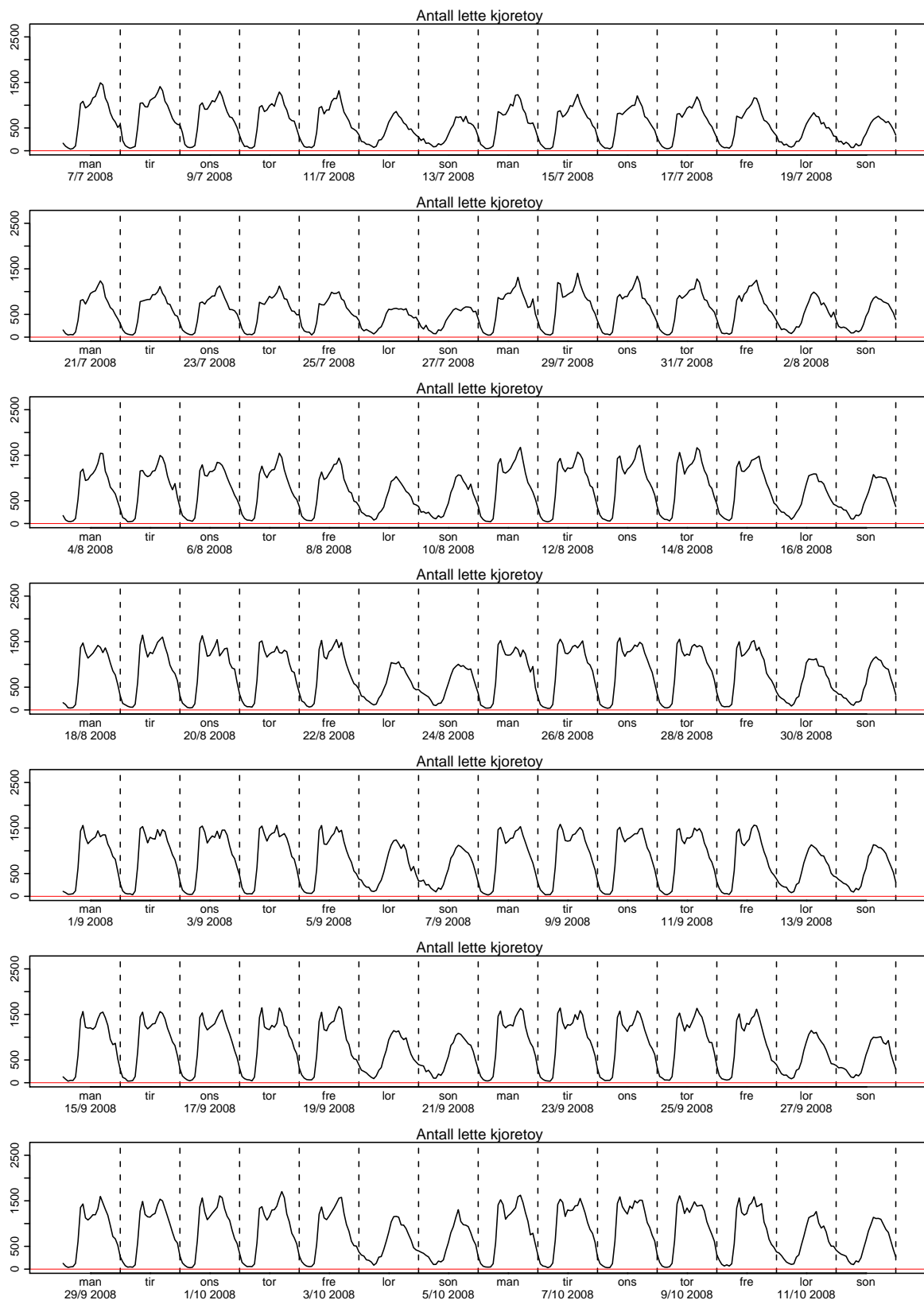
Figur 4.26. Antall lette kjøretøy.



Figur 4.27. Antall lette kjøretøy.

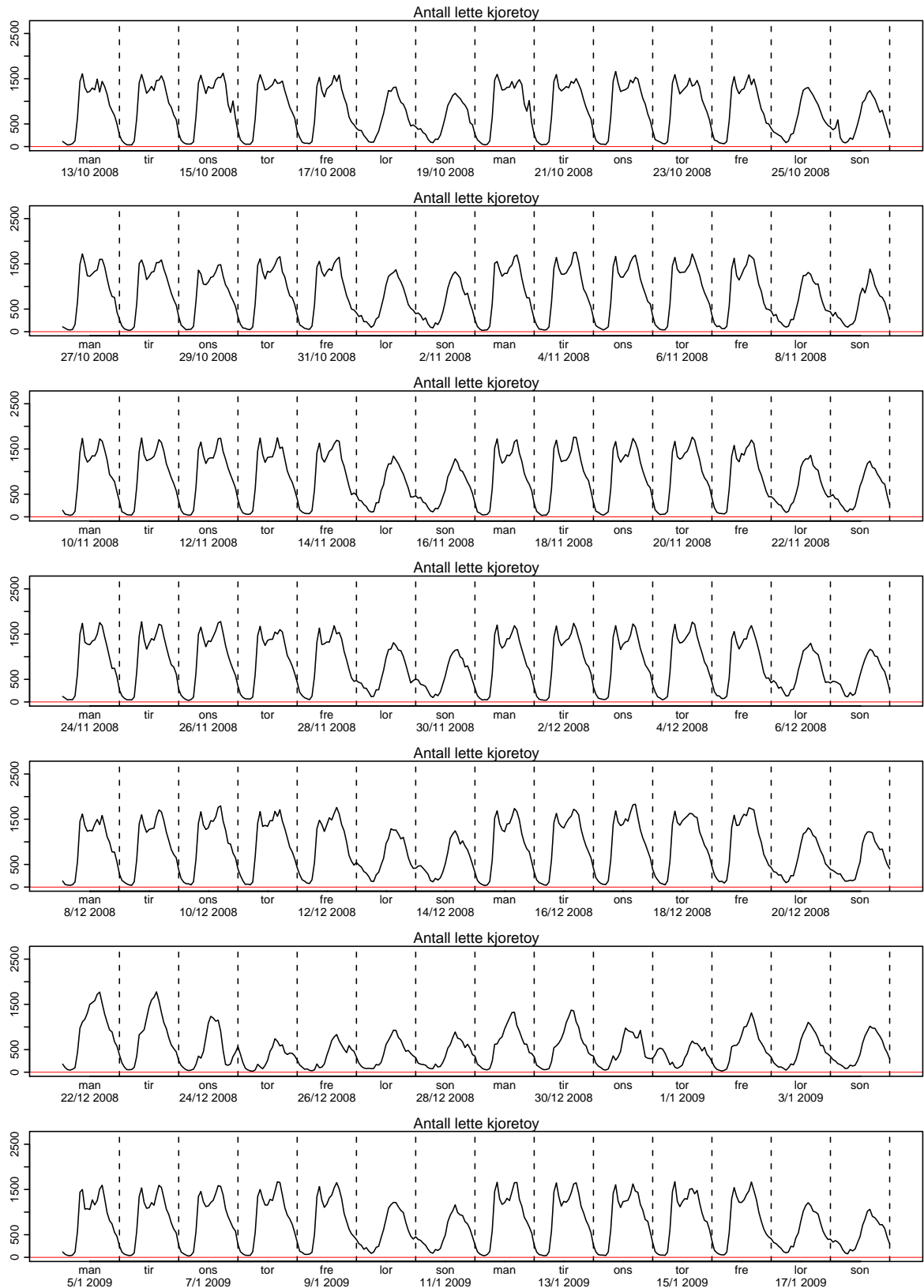


Figur 4.28. Antall lette kjøretøy.

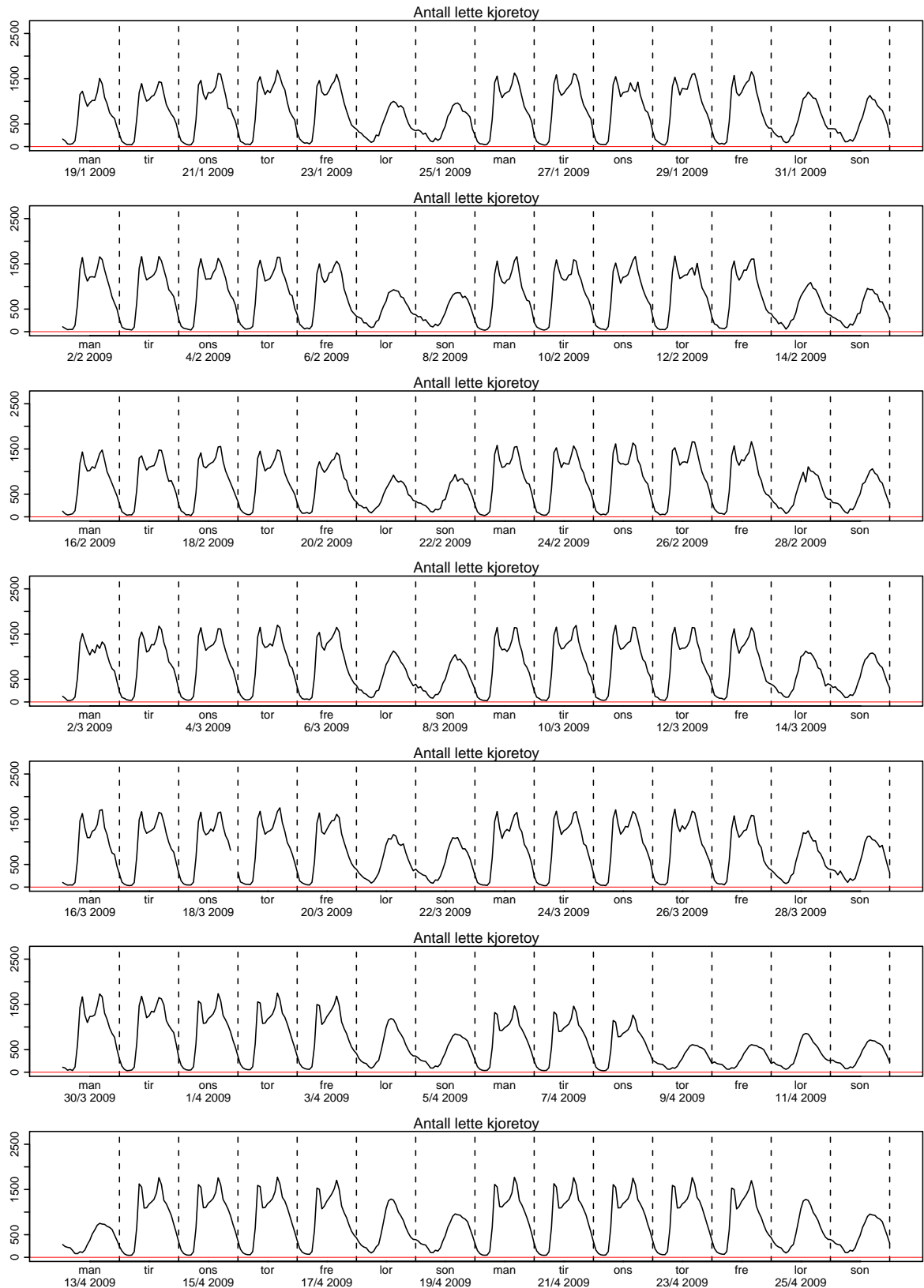


Figur 4.29. Antall lette kjøretøy.

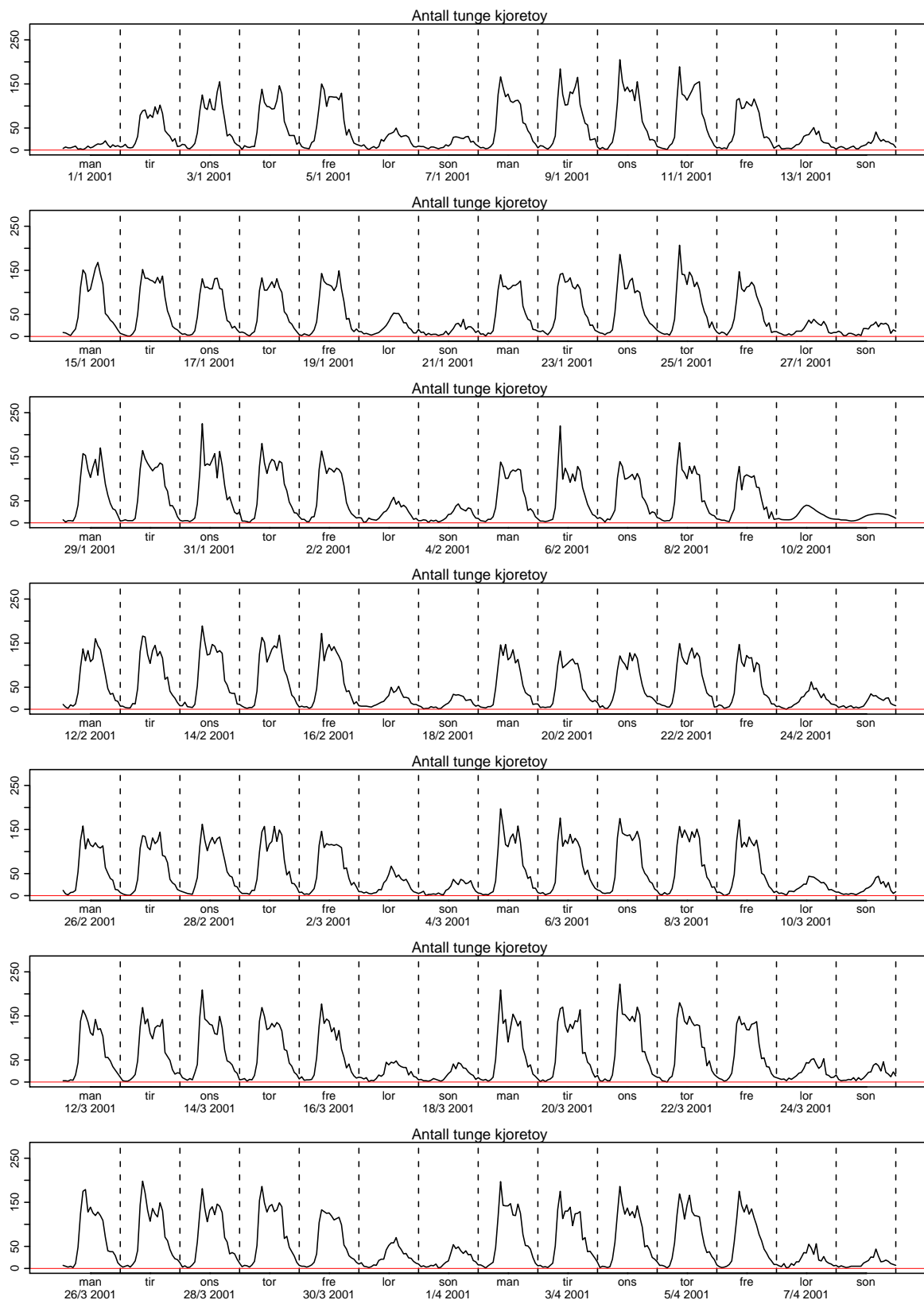




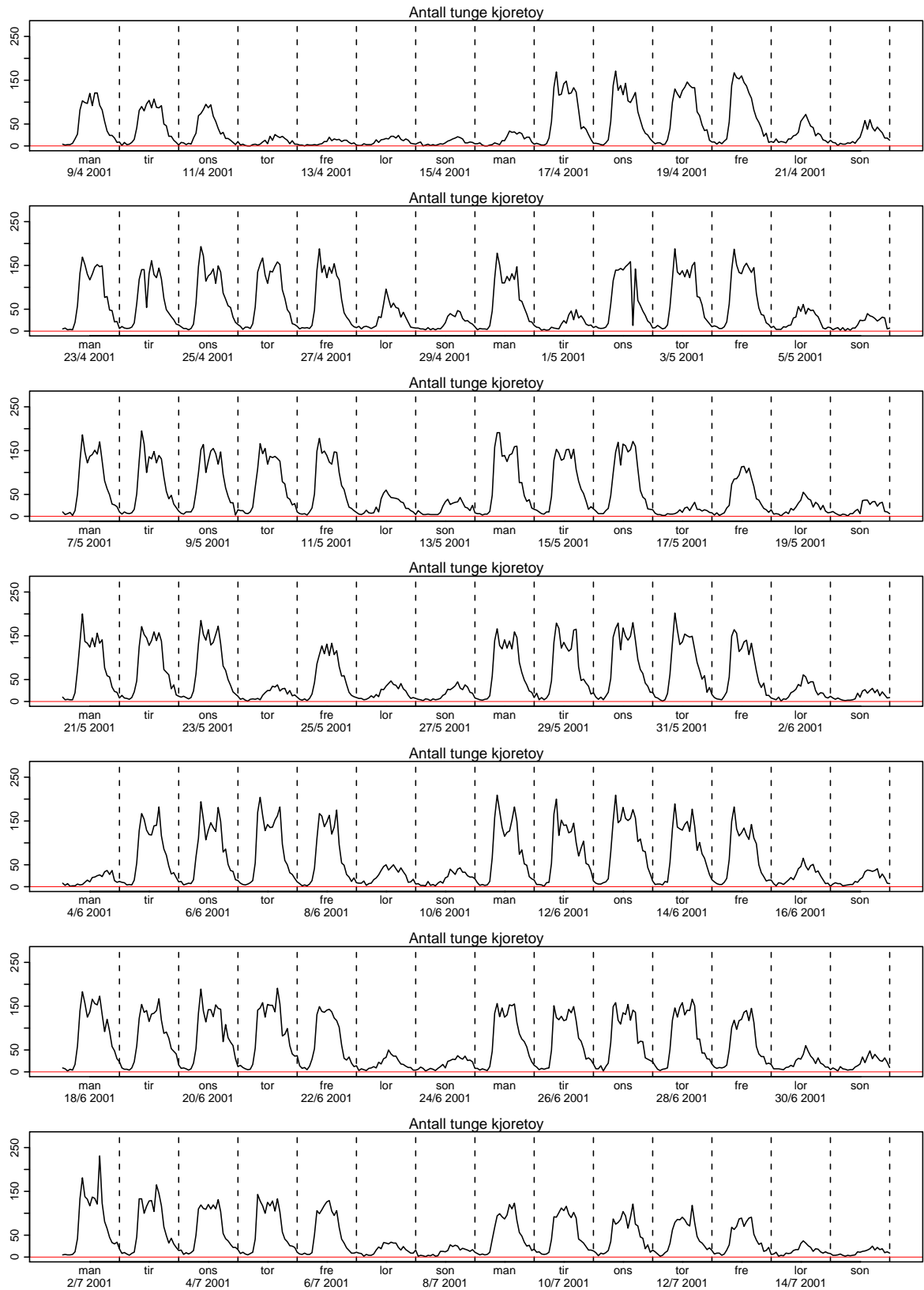
Figur 4.30. Antall lette kjøretøy.



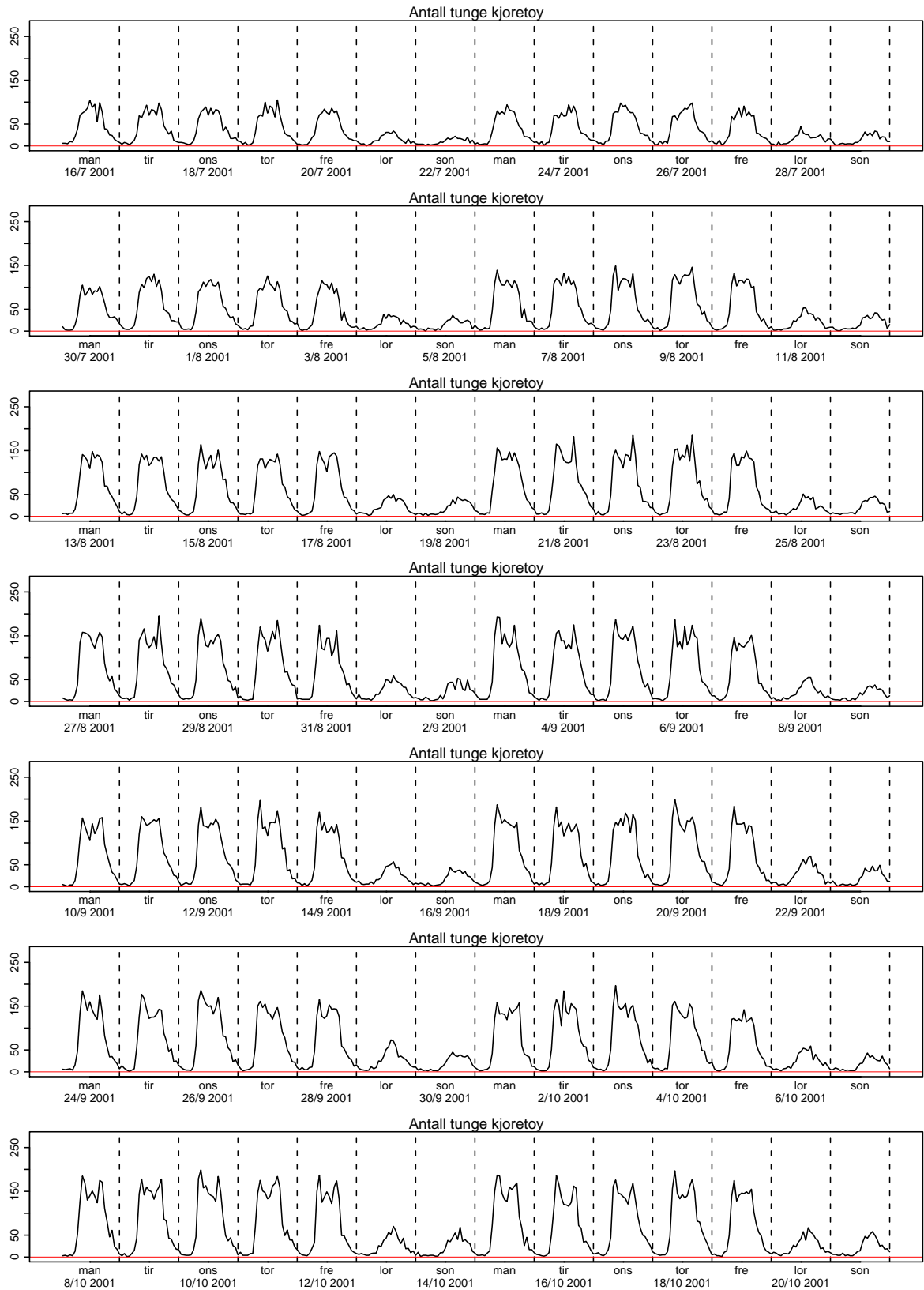
Figur 4.31. Antall lette kjøretøy.



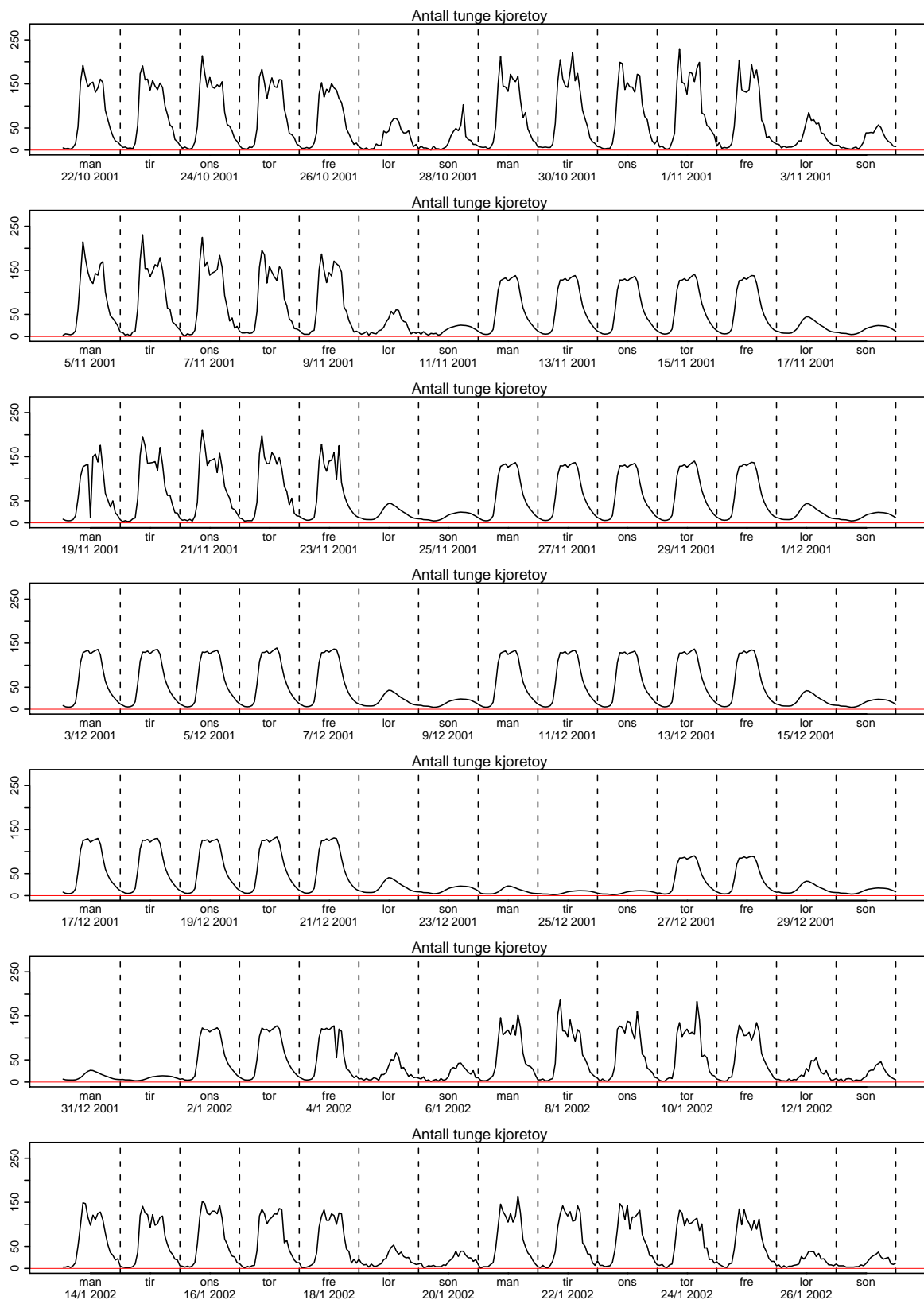
Figur 4.32. Antall tunge kjøretøy.



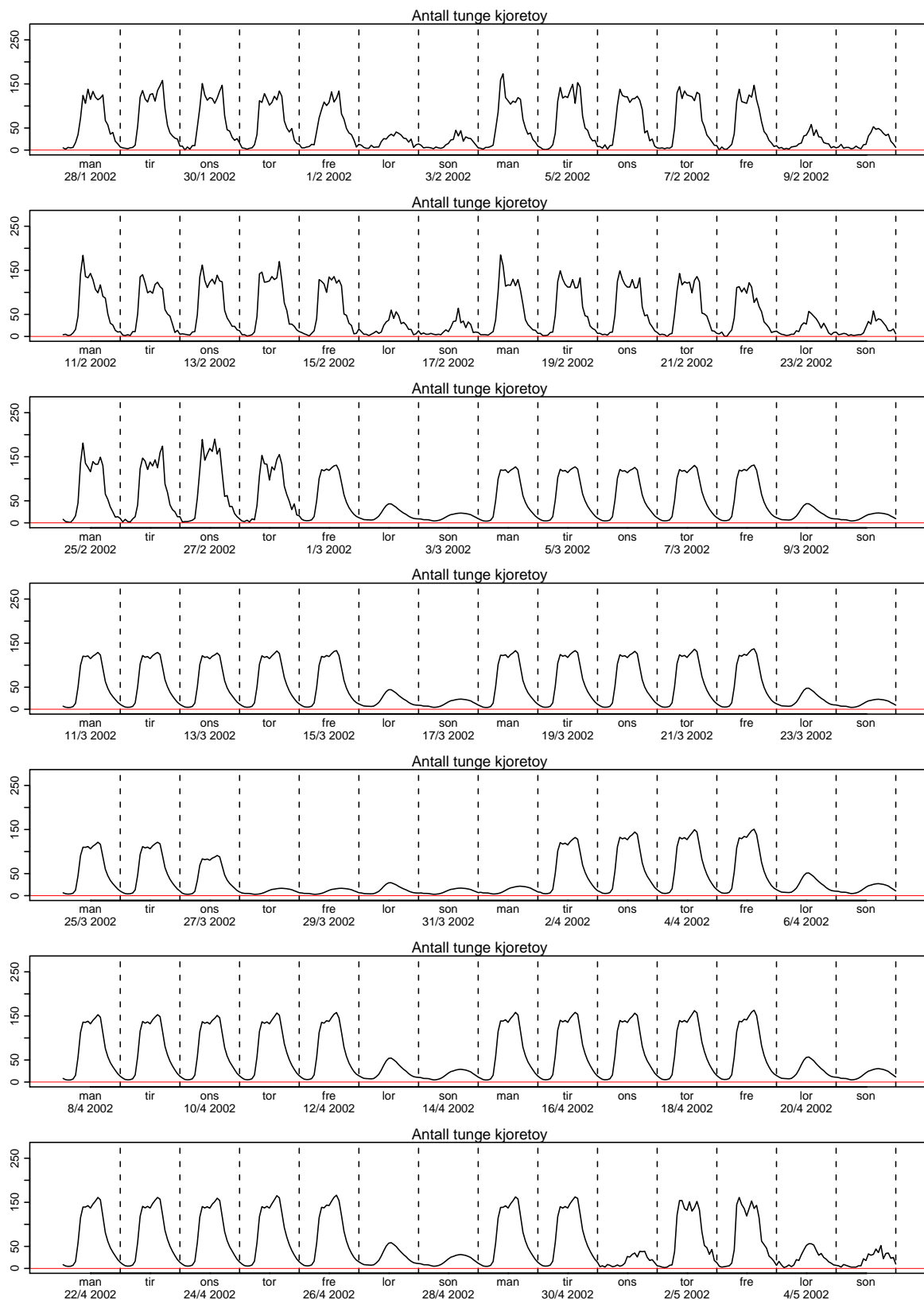
Figur 4.33. Antall tunge kjøretøy.



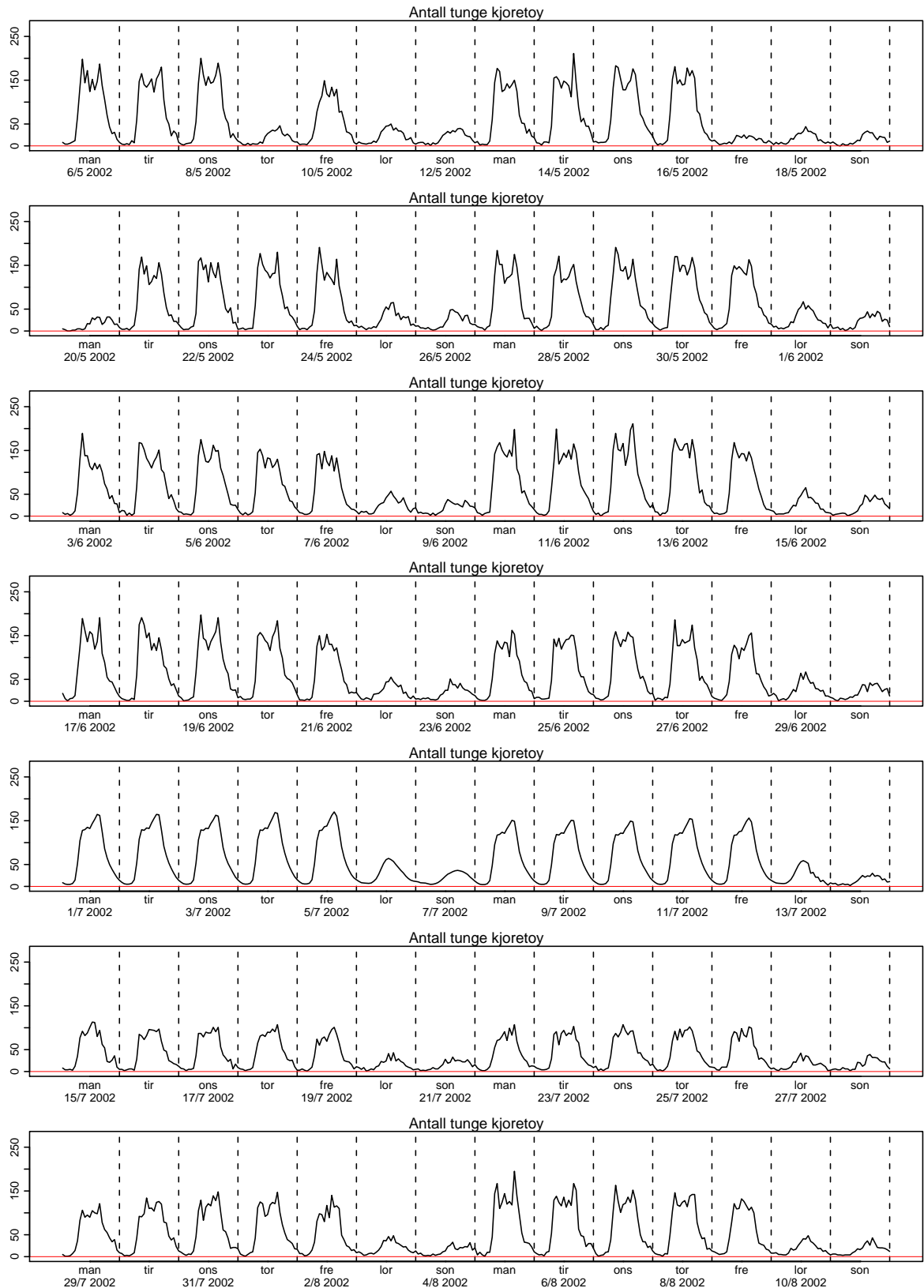
Figur 4.34. Antall tunge kjøretøy.



Figur 4.35. Antall tunge kjøretøy.

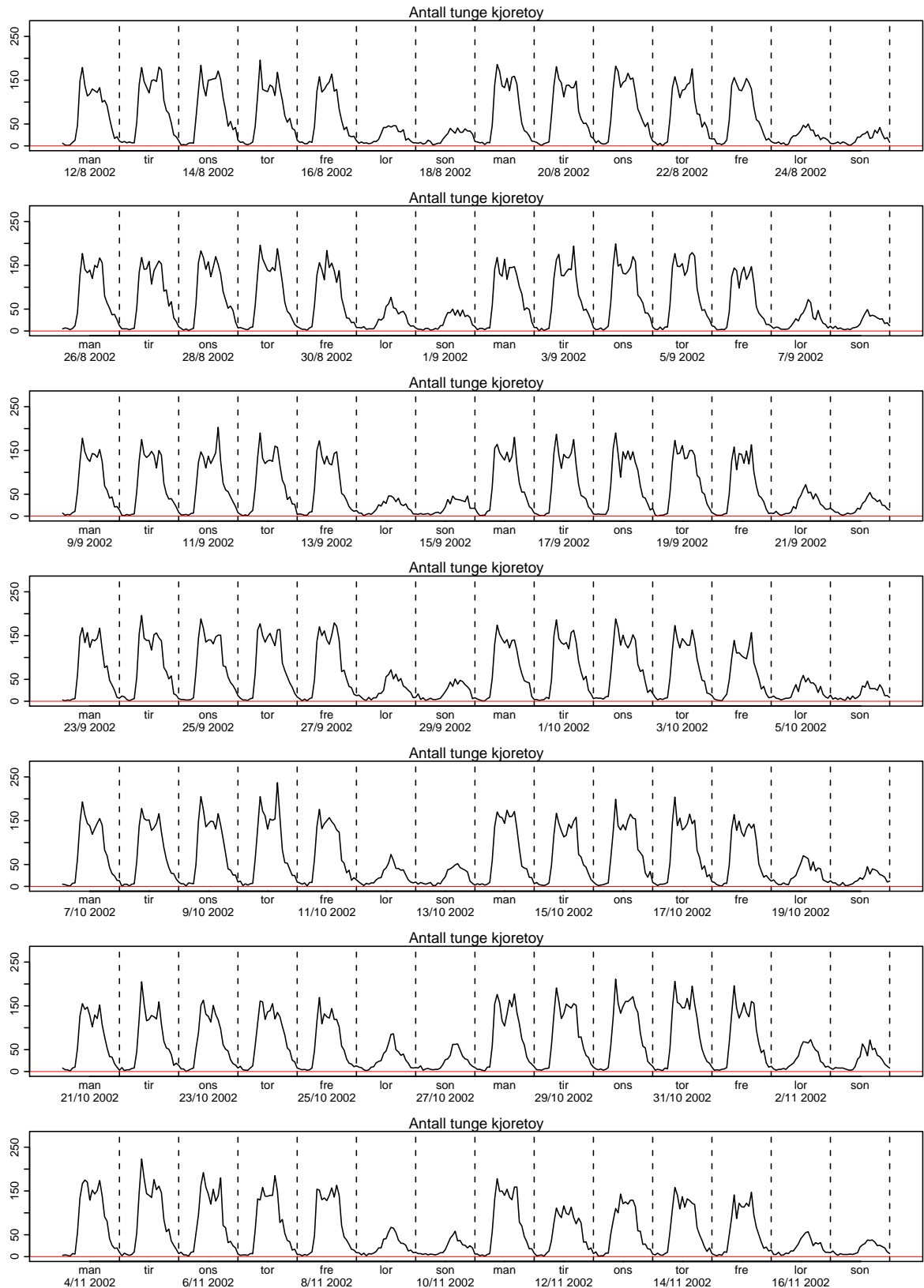


Figur 4.36. Antall tunge kjøretøy.

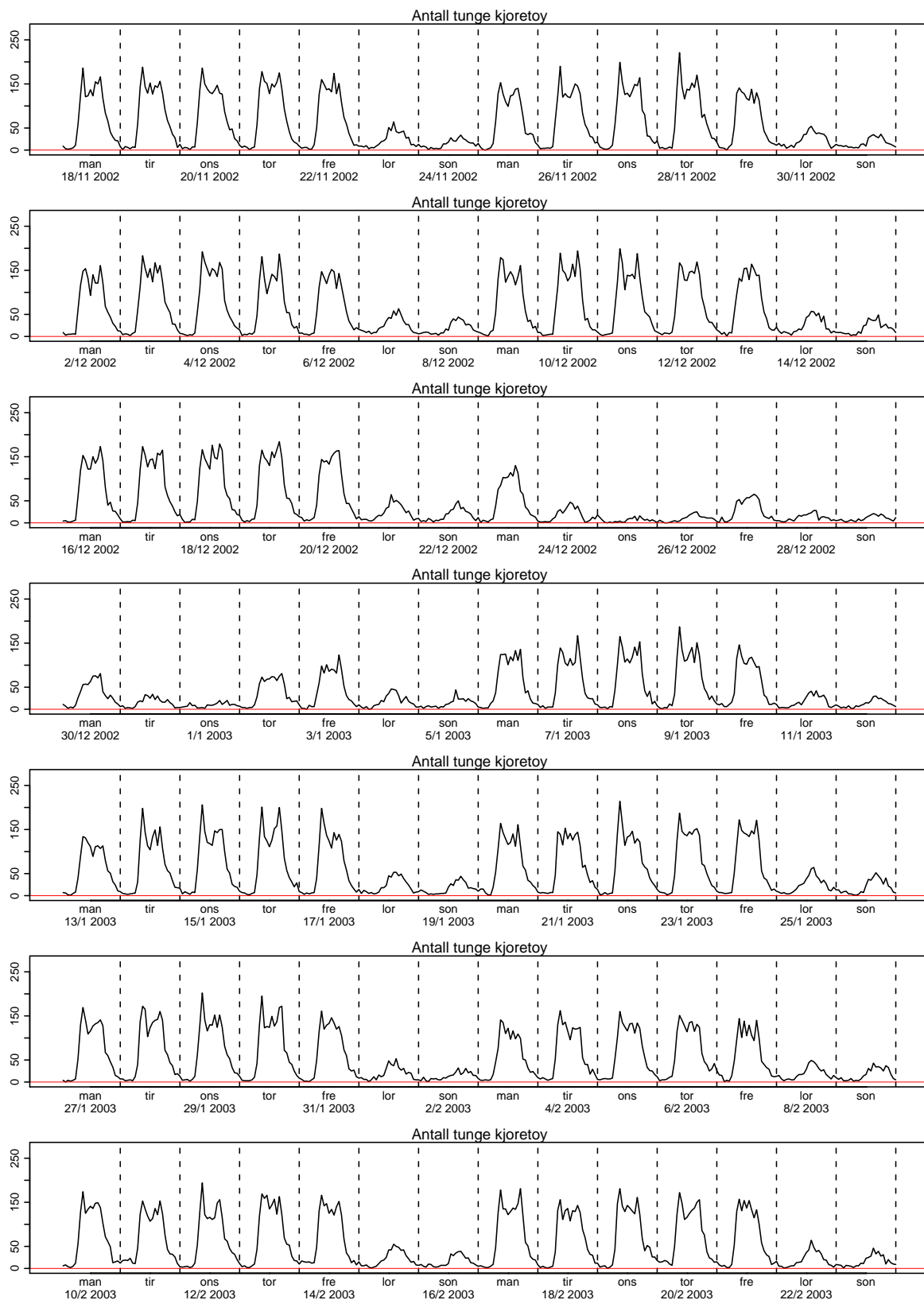


Figur 4.37. Antall tunge kjøretøy.

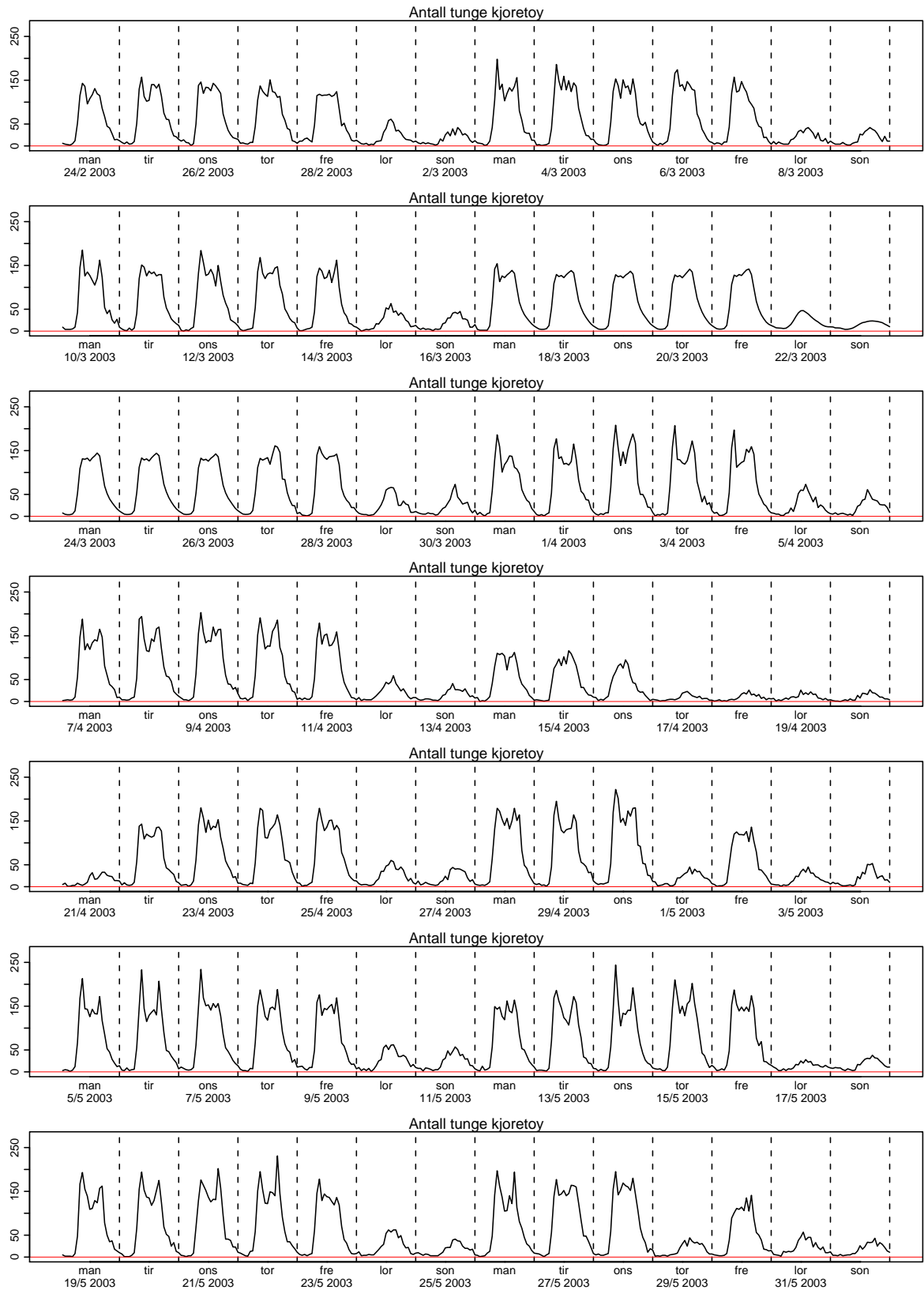




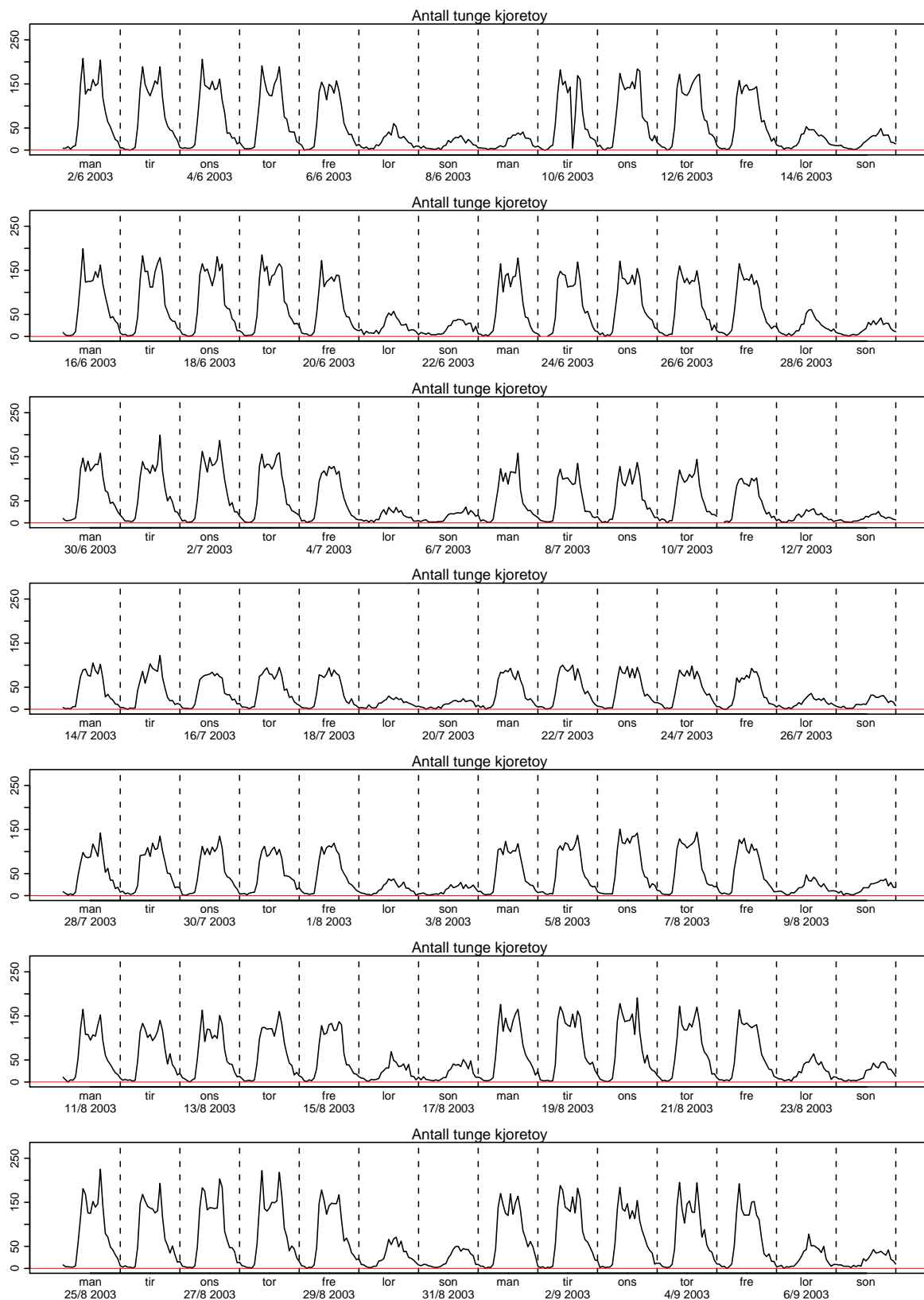
Figur 4.38. Antall tunge kjøretøy.



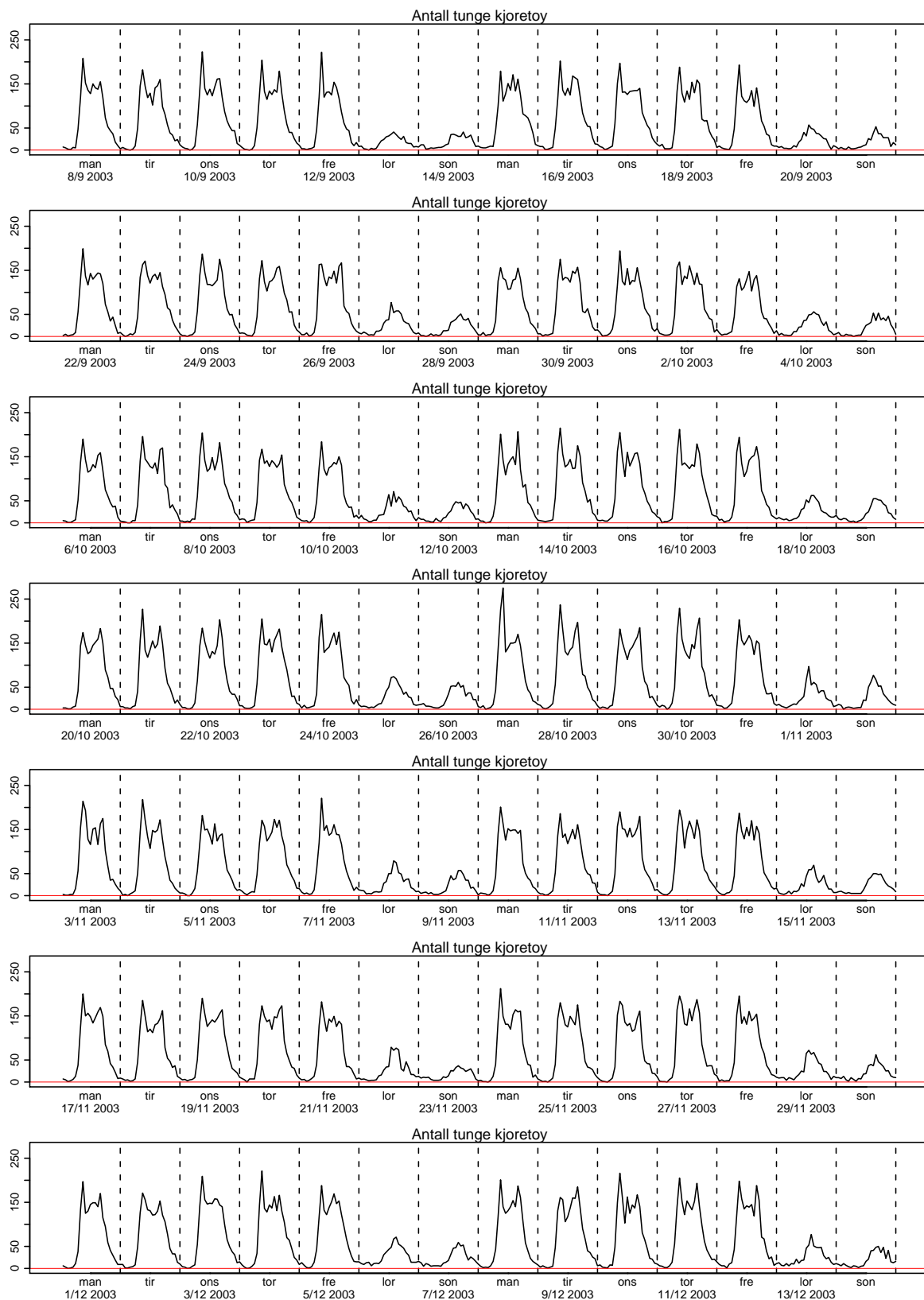
Figur 4.39. Antall tunge kjøretøy.



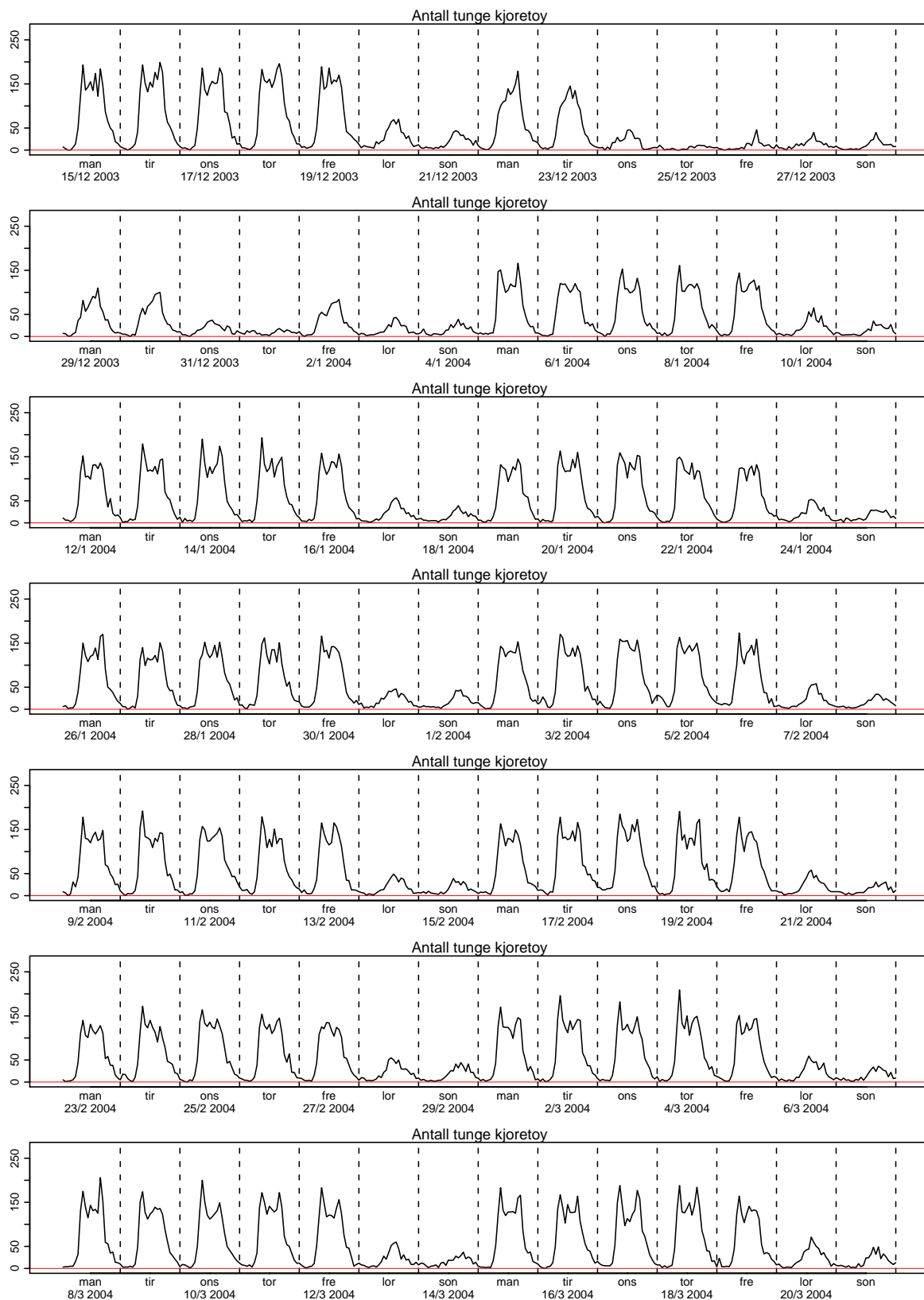
Figur 4.40. Antall tunge kjøretøy.



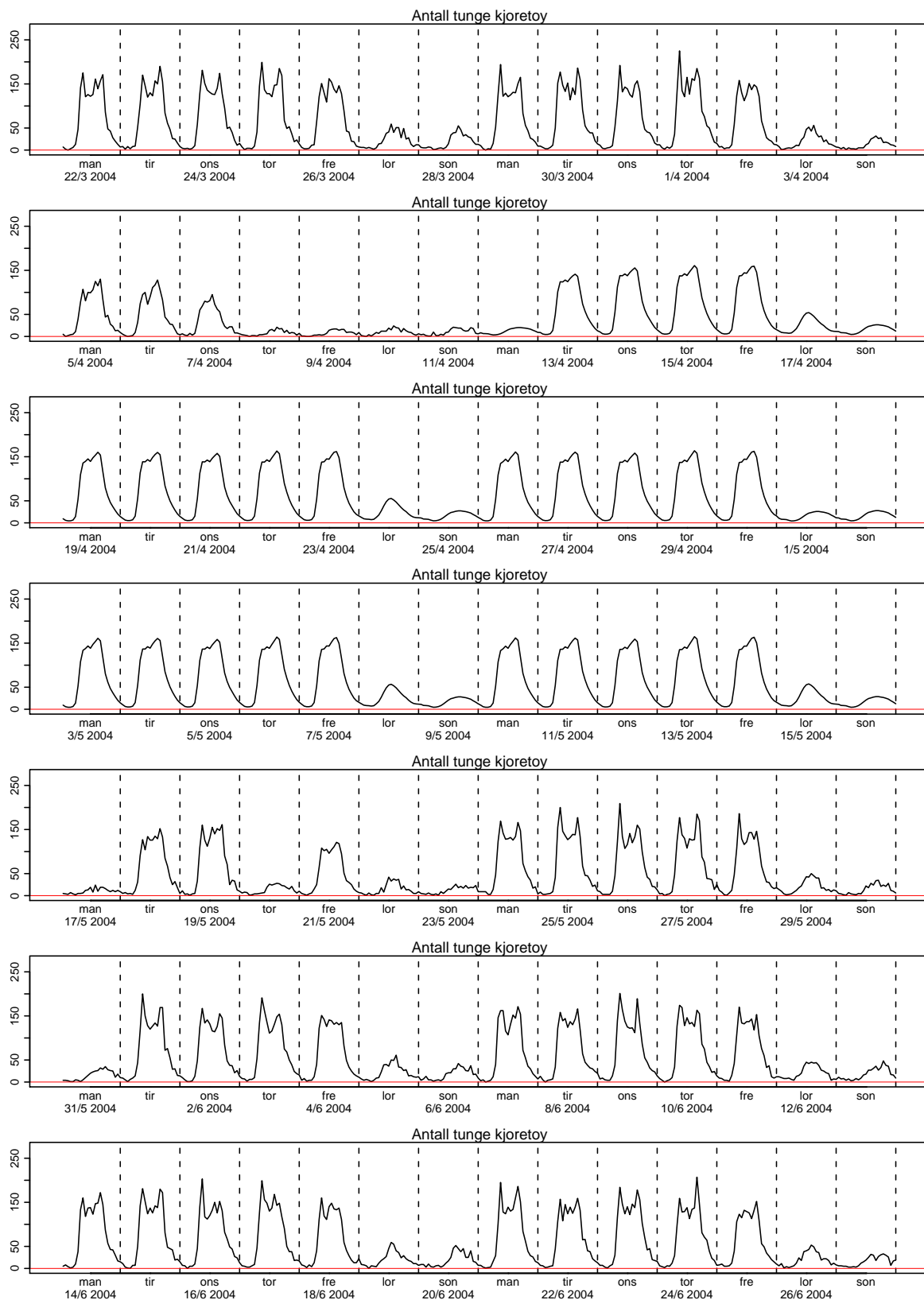
Figur 4.41. Antall tunge kjøretøy.



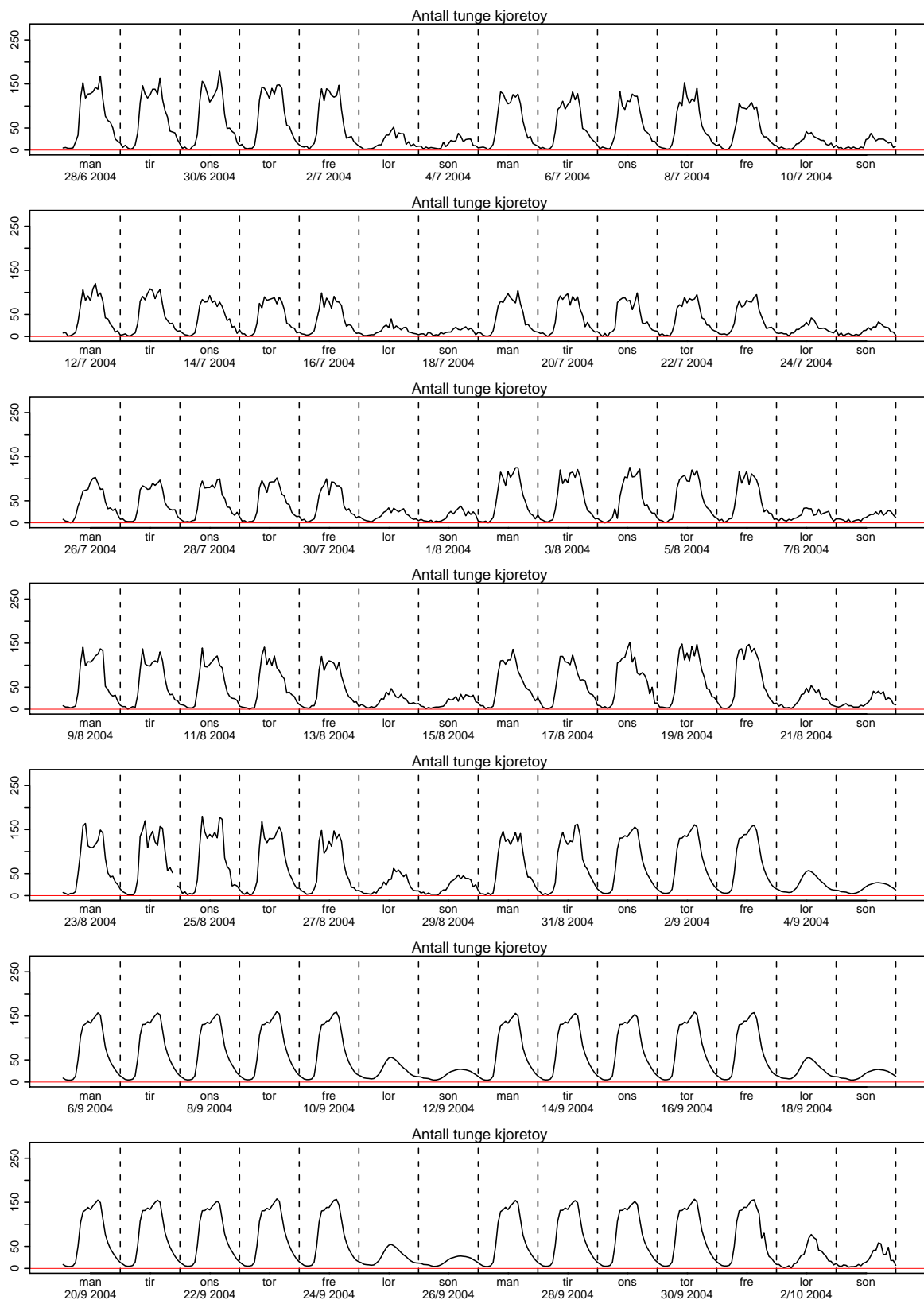
Figur 4.42. Antall tunge kjøretøy.



Figur 4.43. Antall tunge kjøretøy.

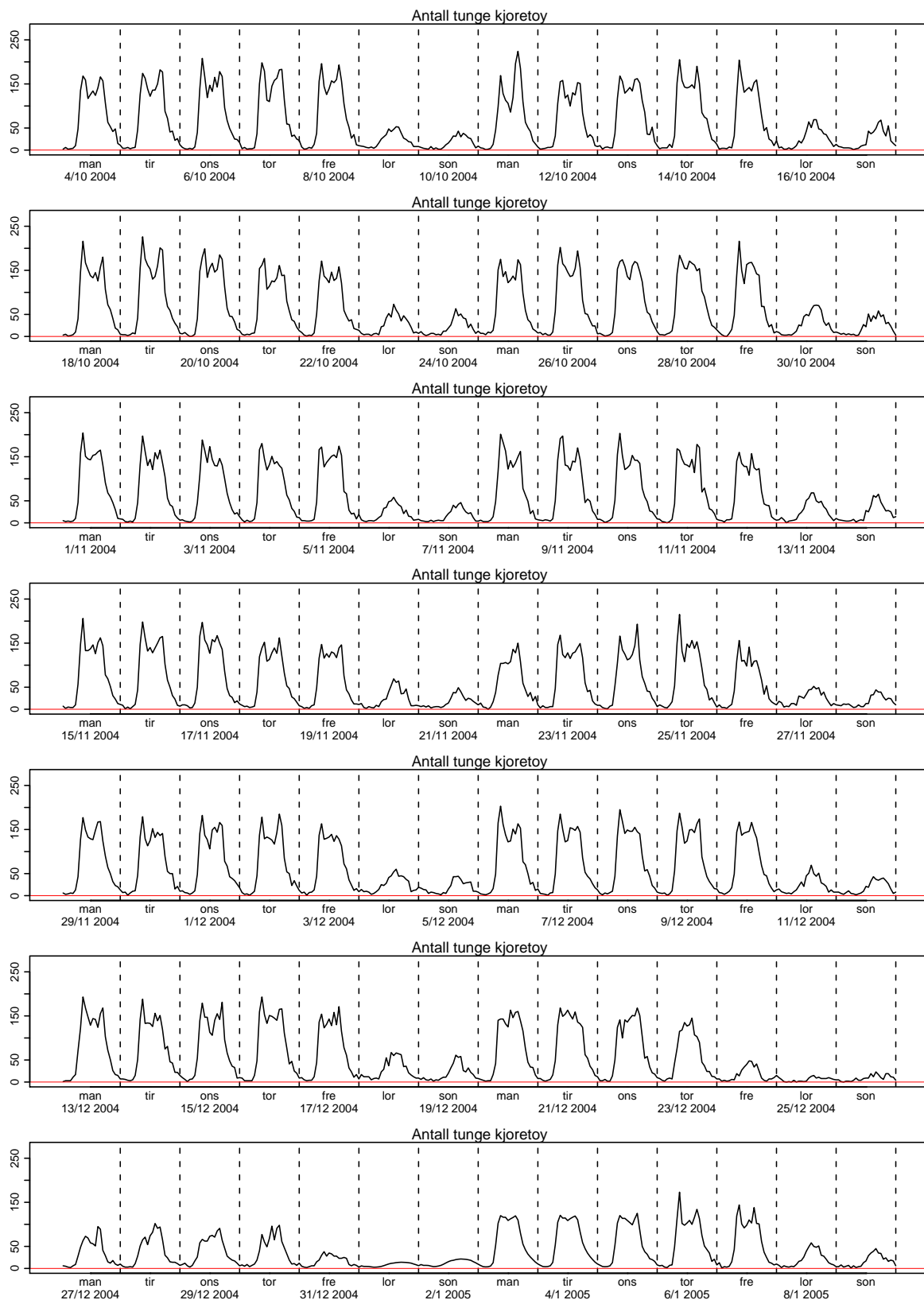


Figur 4.44. Antall tunge kjøretøy.

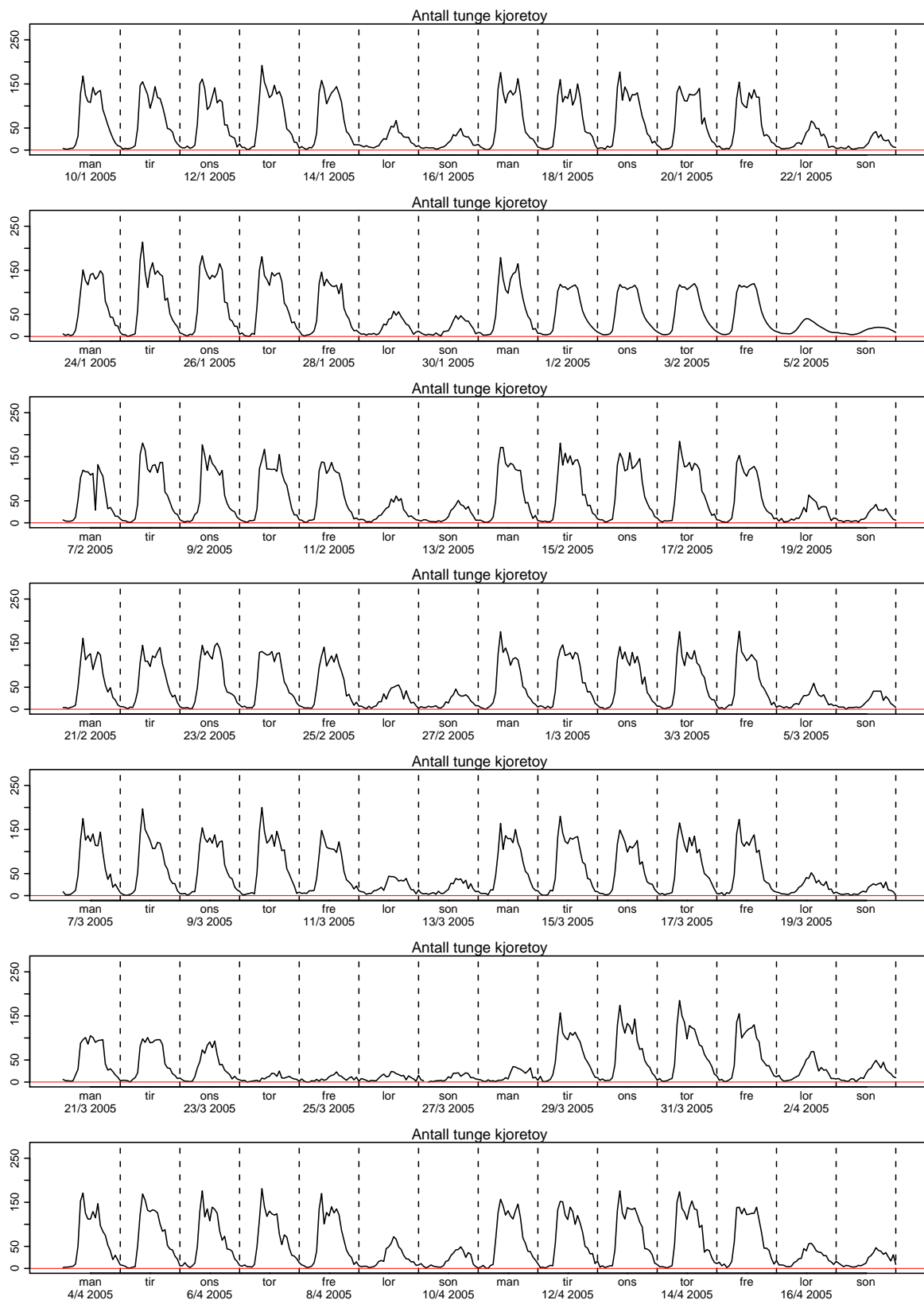


Figur 4.45. Antall tunge kjøretøy.

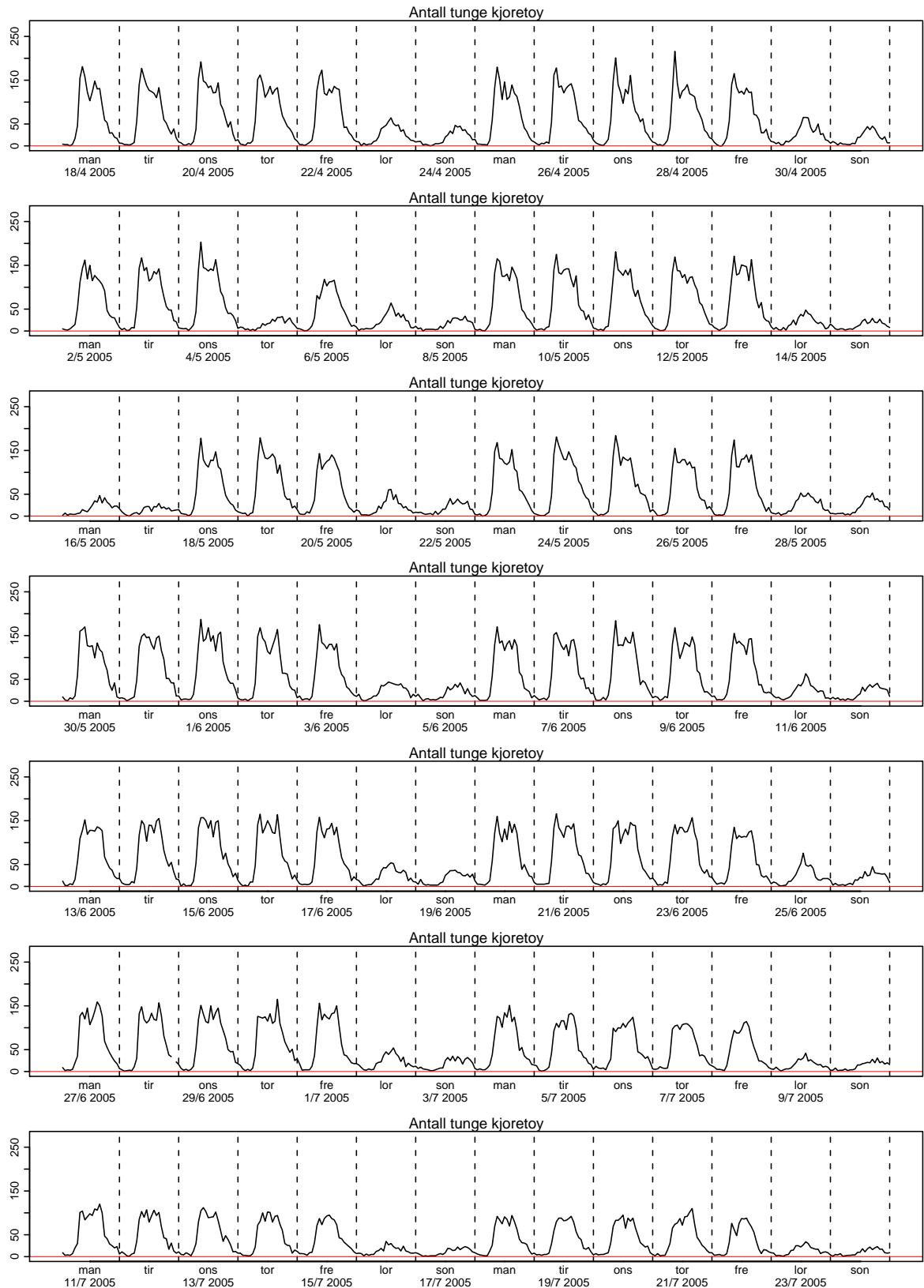




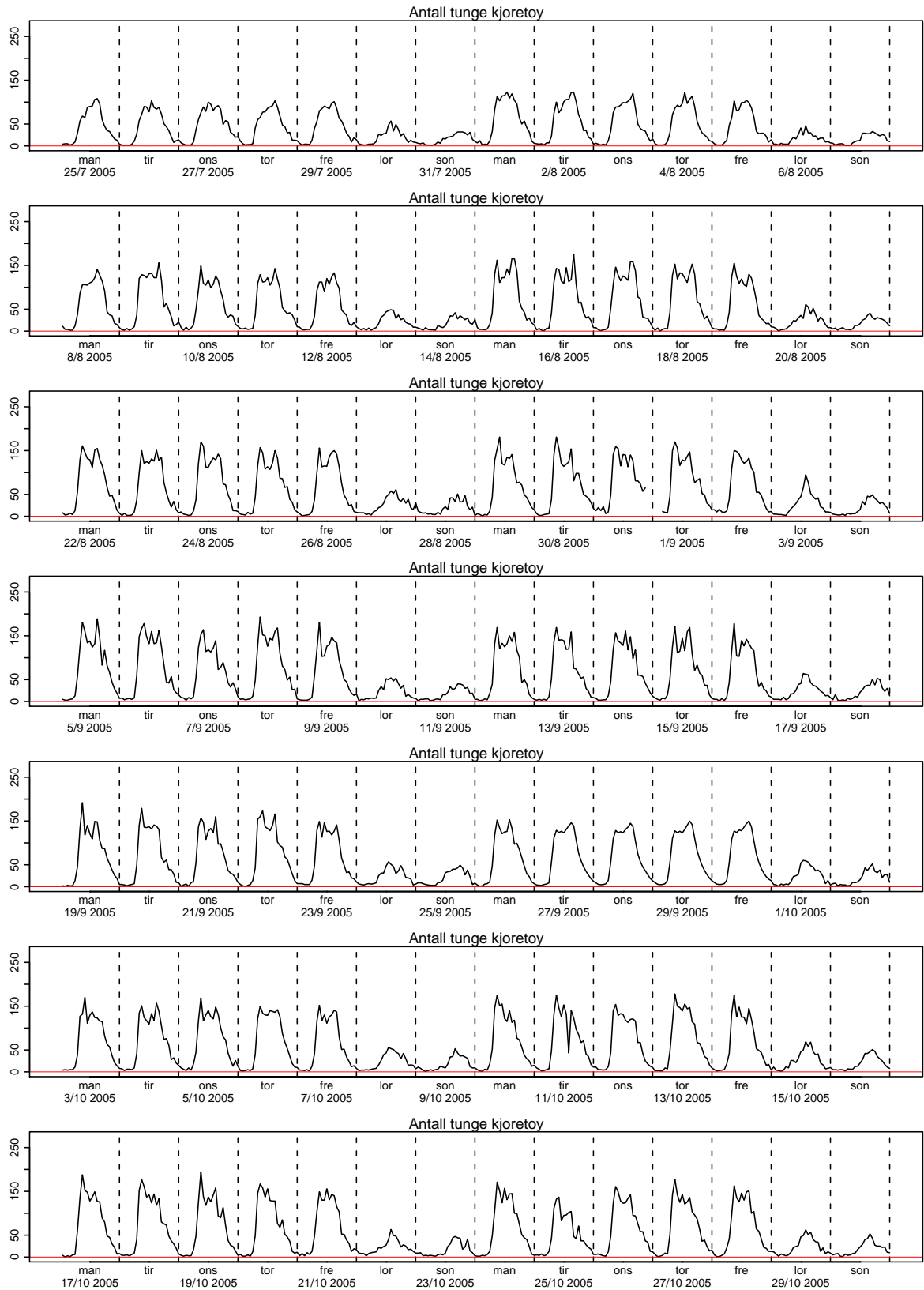
Figur 4.46. Antall tunge kjøretøy.



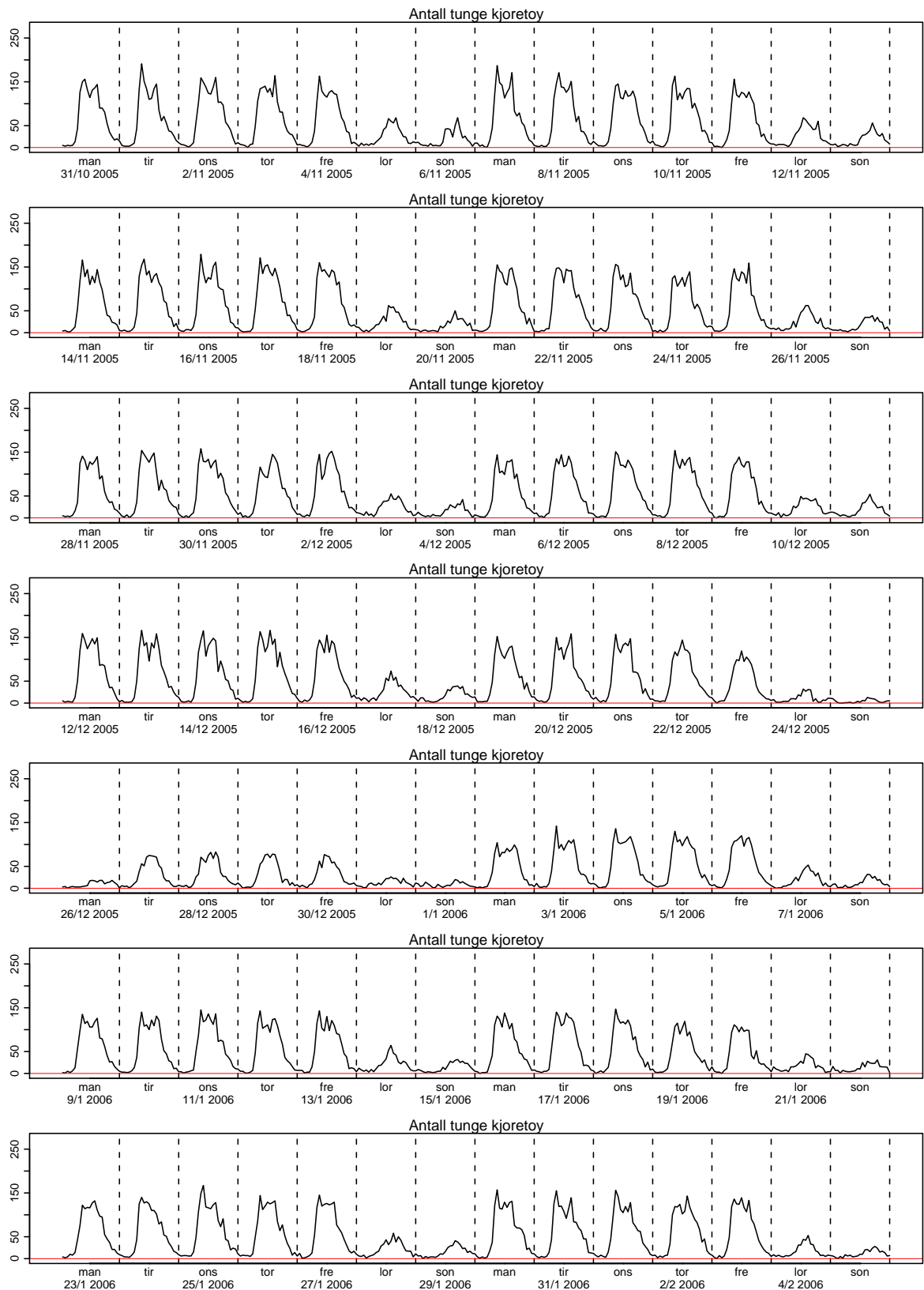
Figur 4.47. Antall tunge kjøretøy.



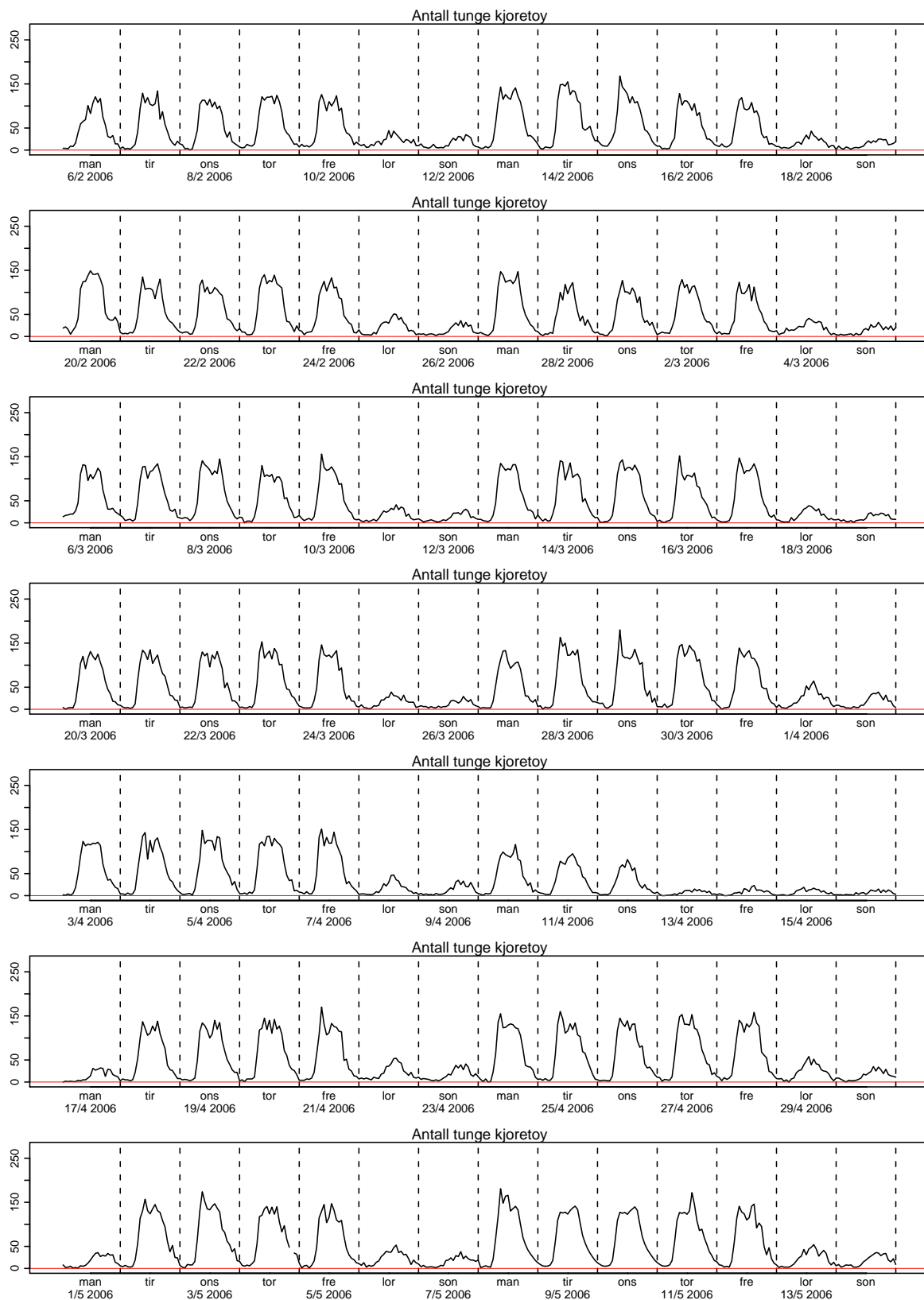
Figur 4.48. Antall tunge kjøretøy.



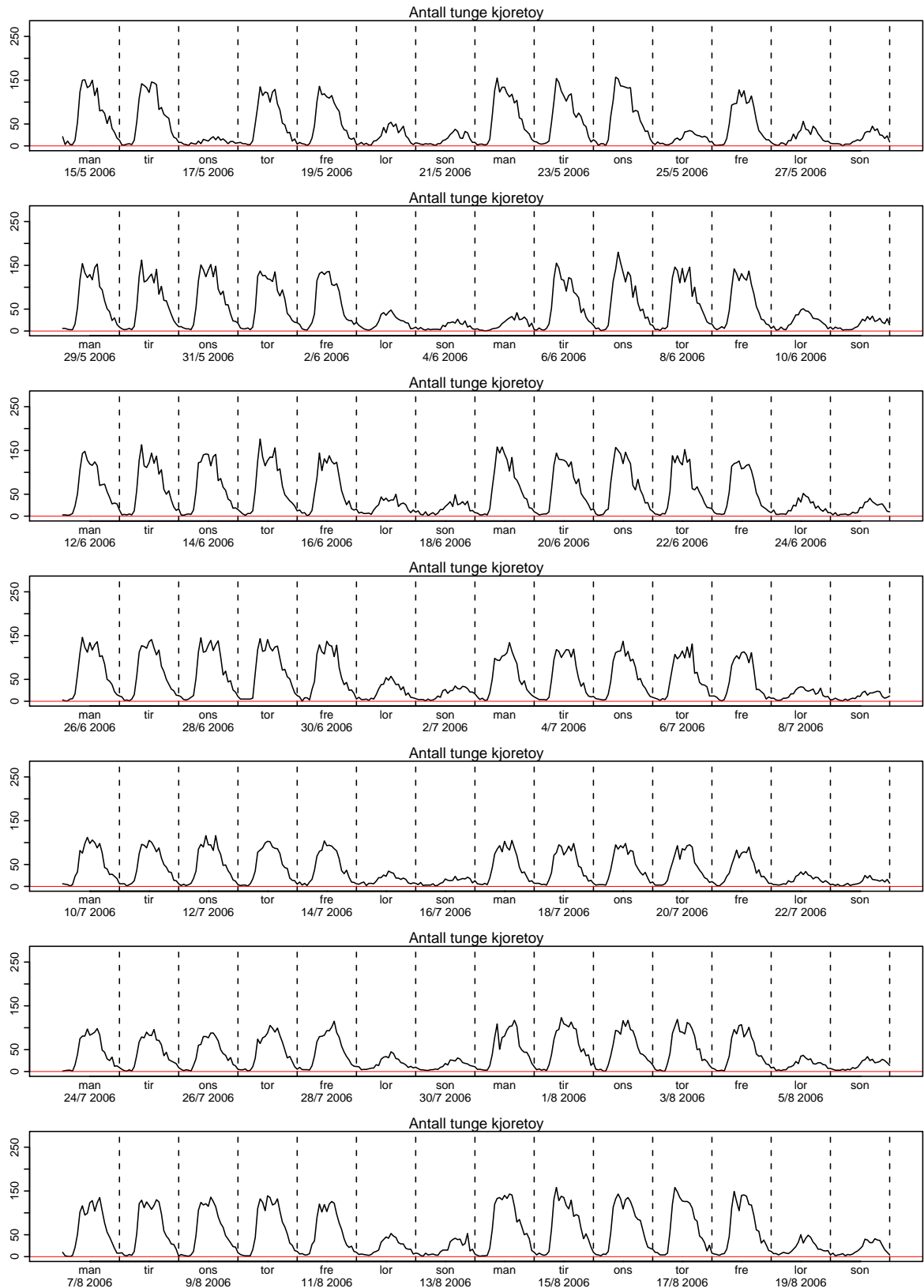
Figur 4.49. Antall tunge kjøretøy.



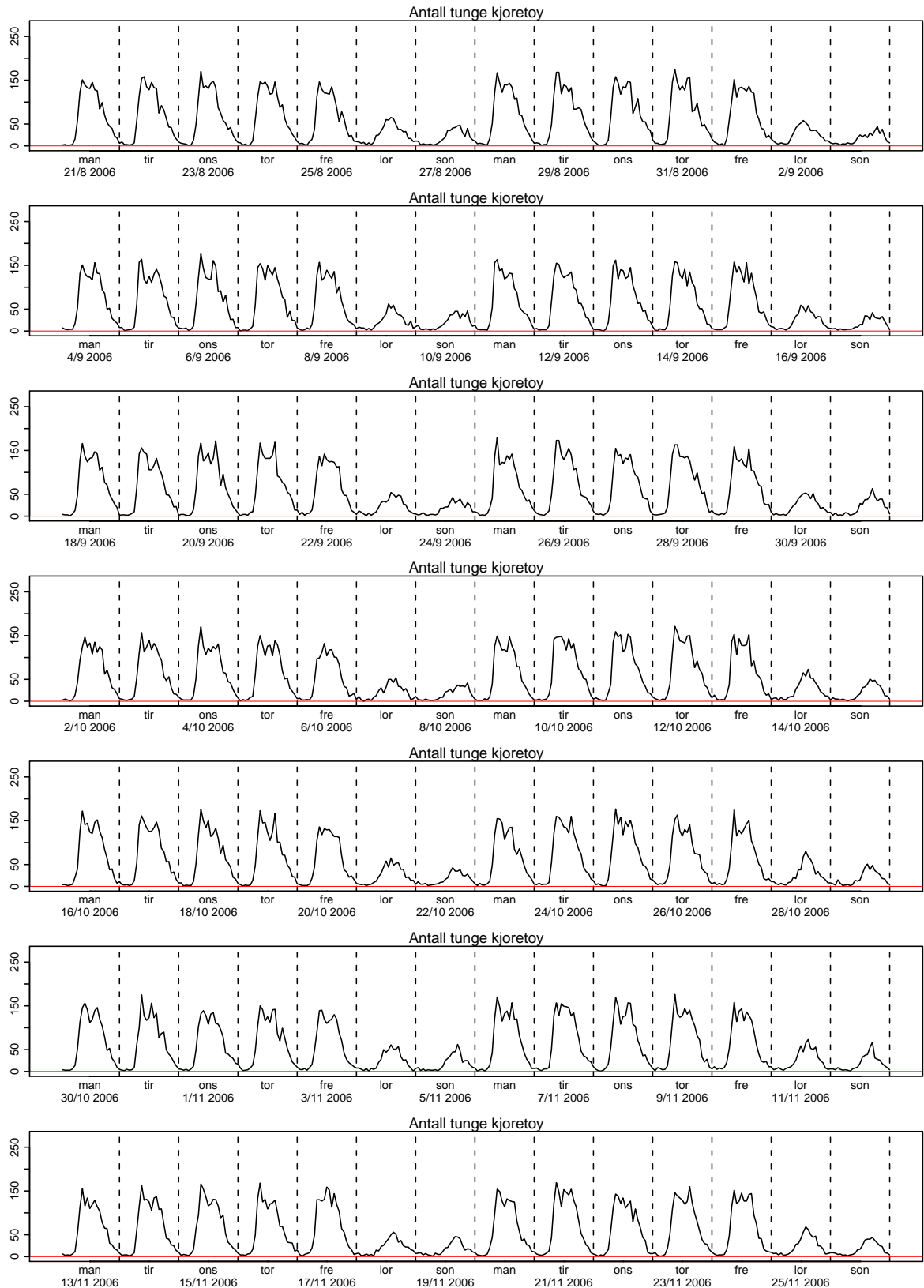
Figur 4.50. Antall tunge kjøretøy.



Figur 4.51. Antall tunge kjøretøy.

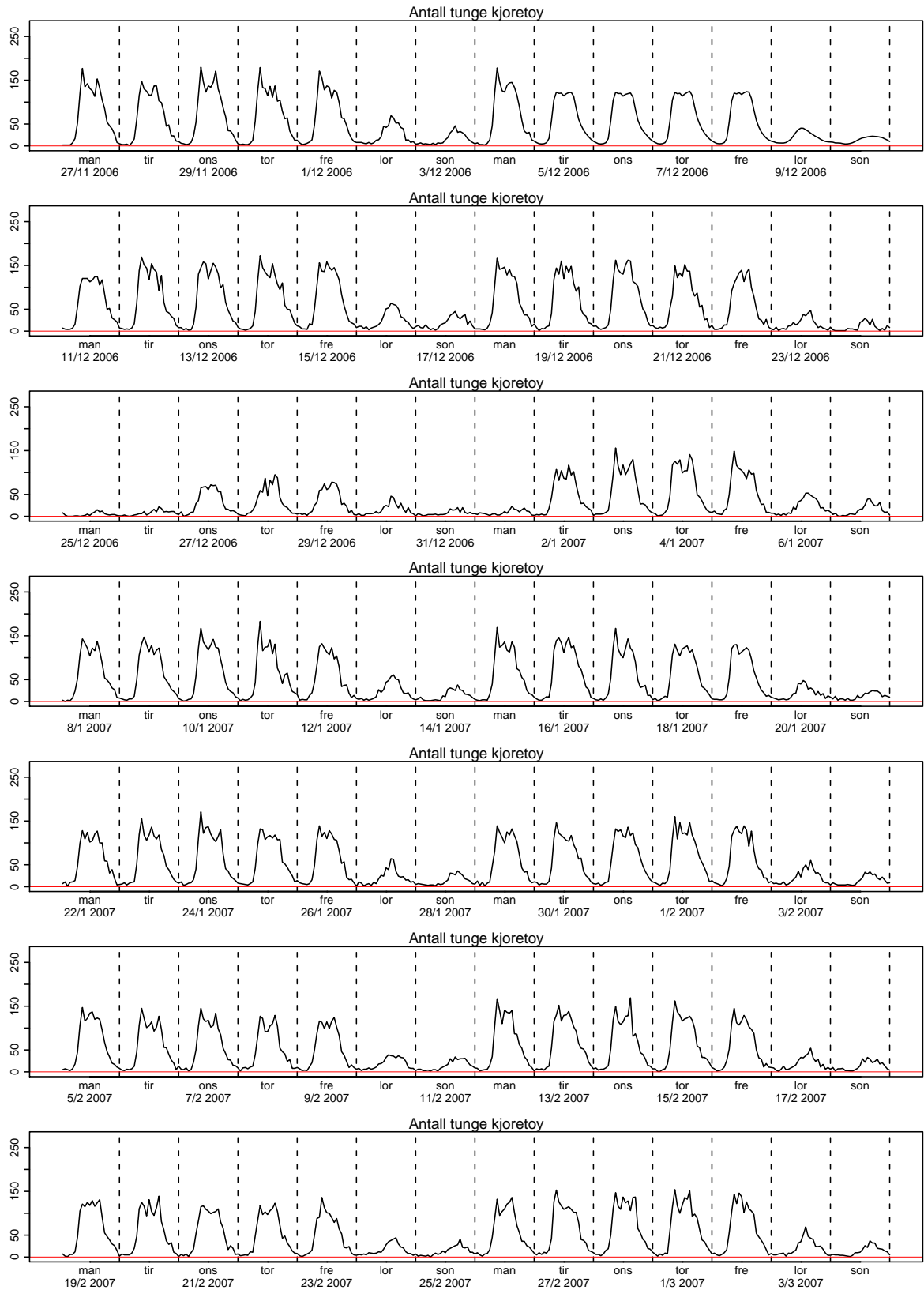


Figur 4.52. Antall tunge kjøretøy.

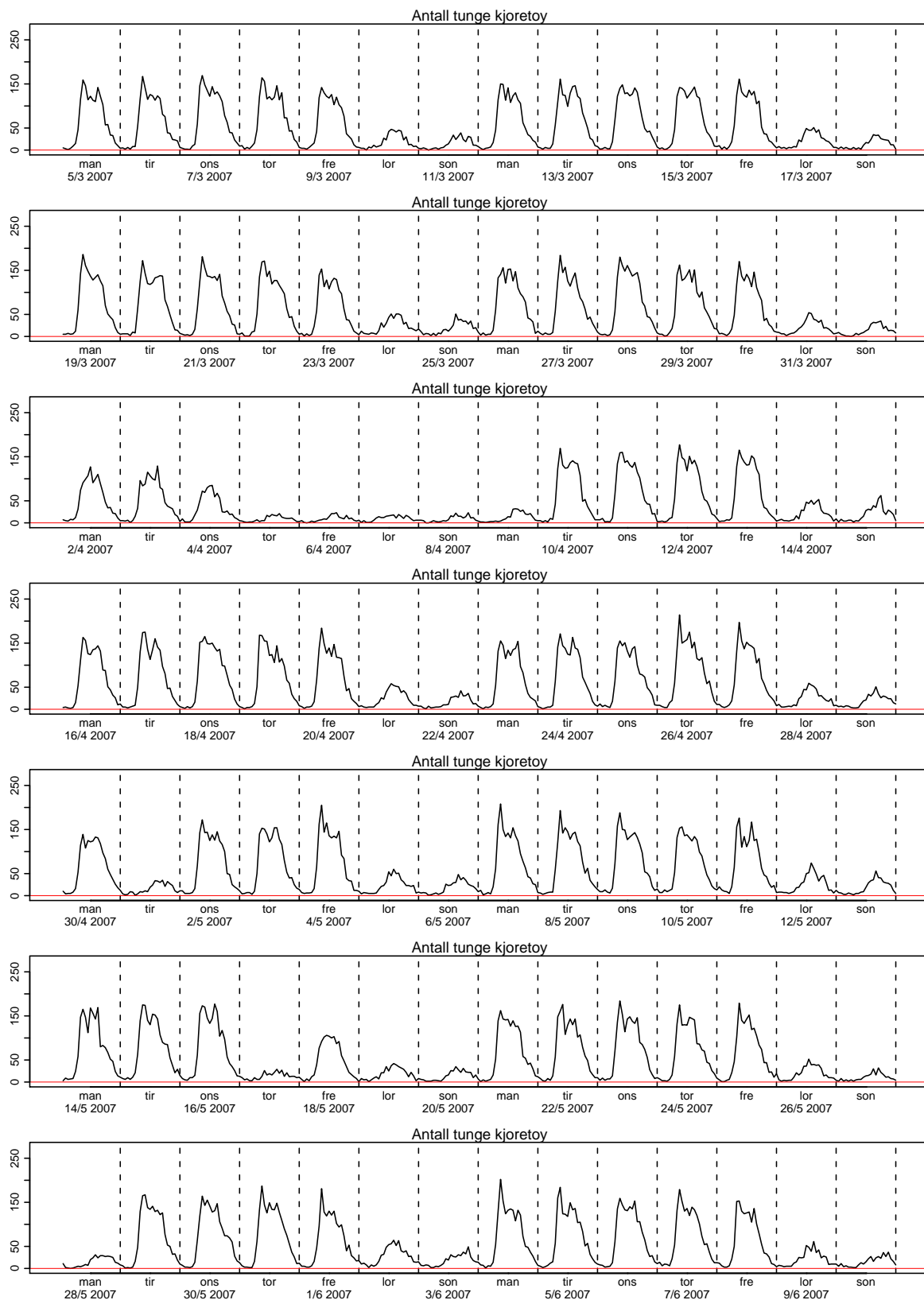


Figur 4.53. Antall tunge kjøretøy.

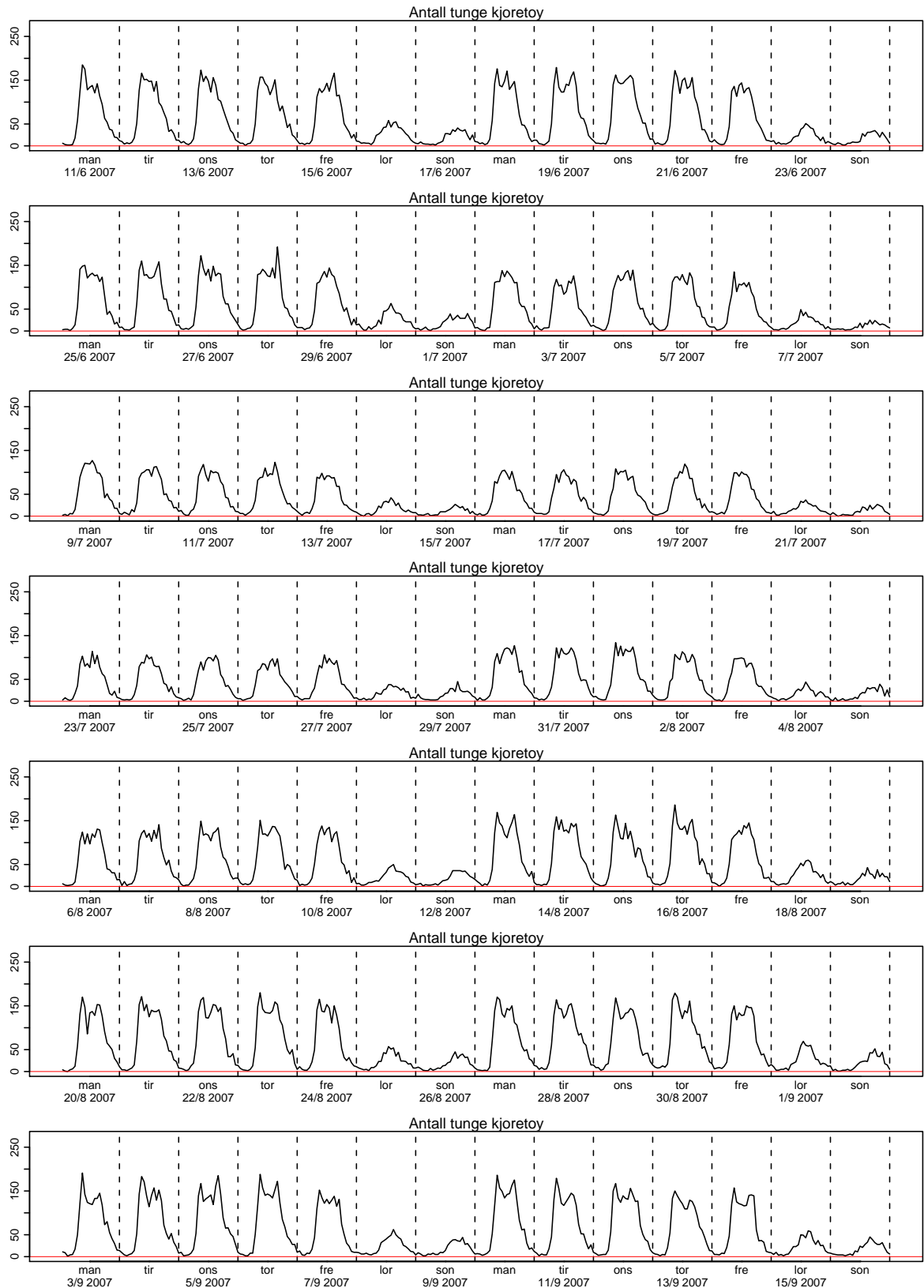




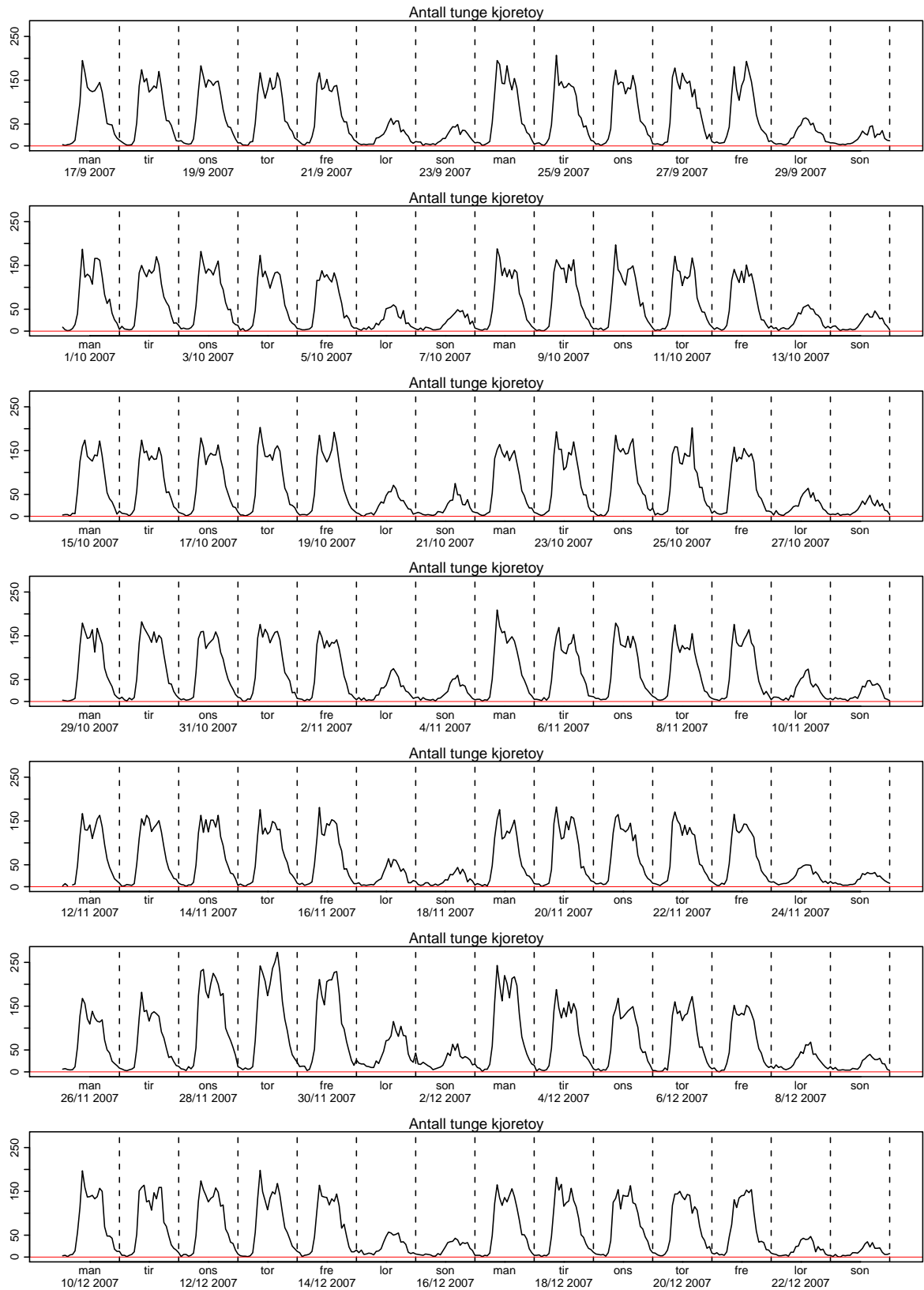
Figur 4.54. Antall tunge kjøretøy.



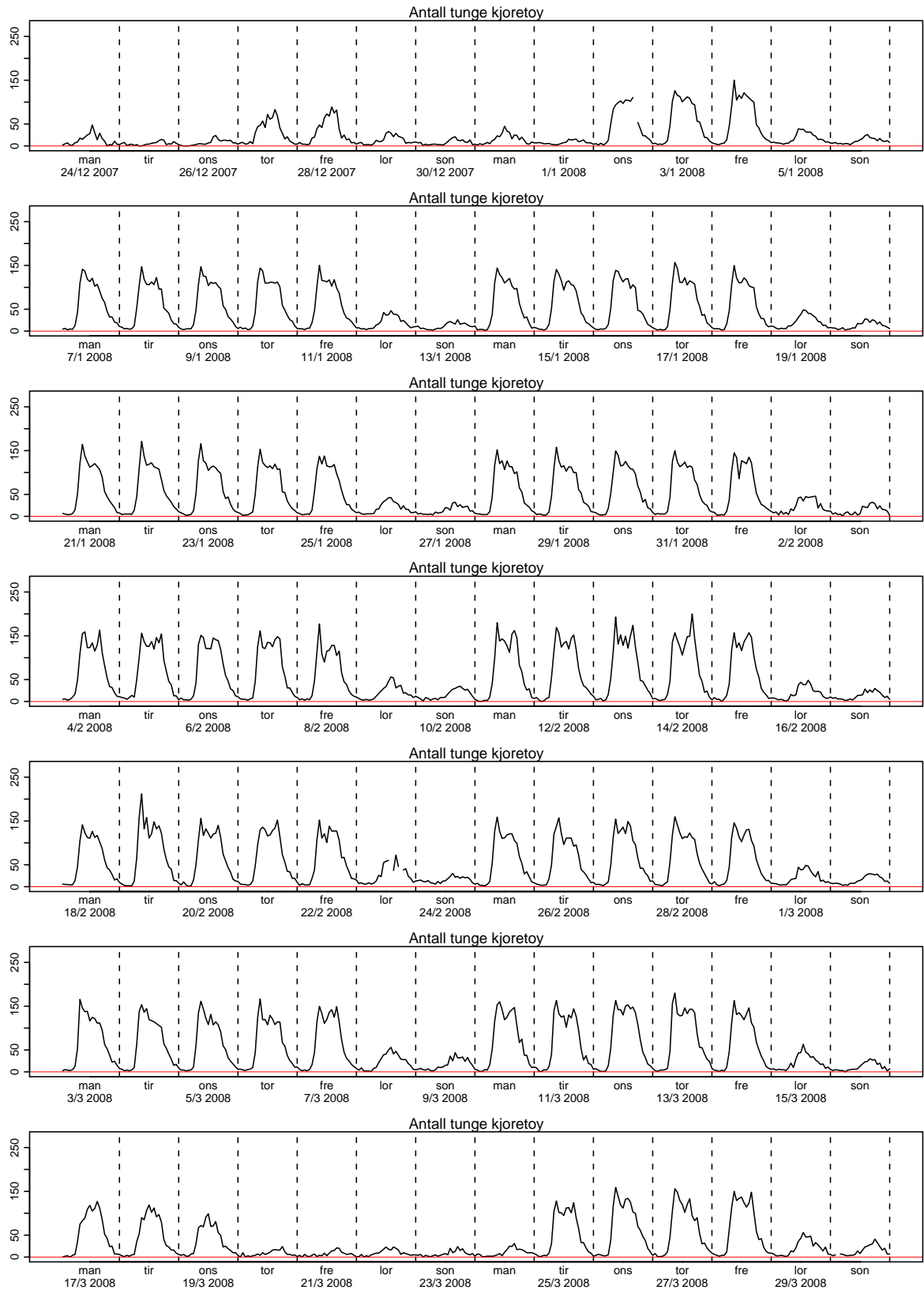
Figur 4.55. Antall tunge kjøretøy.



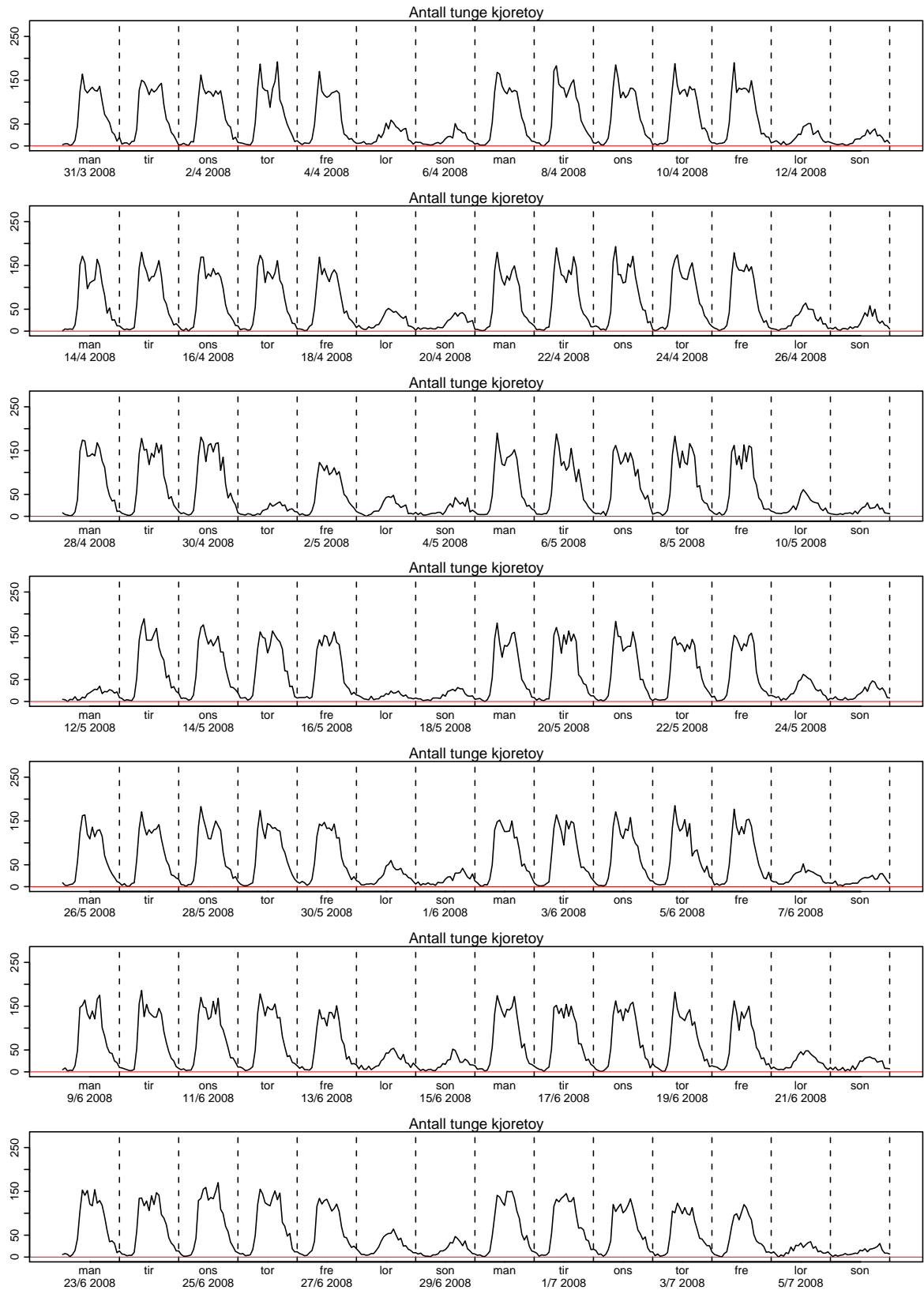
Figur 4.56. Antall tunge kjøretøy.



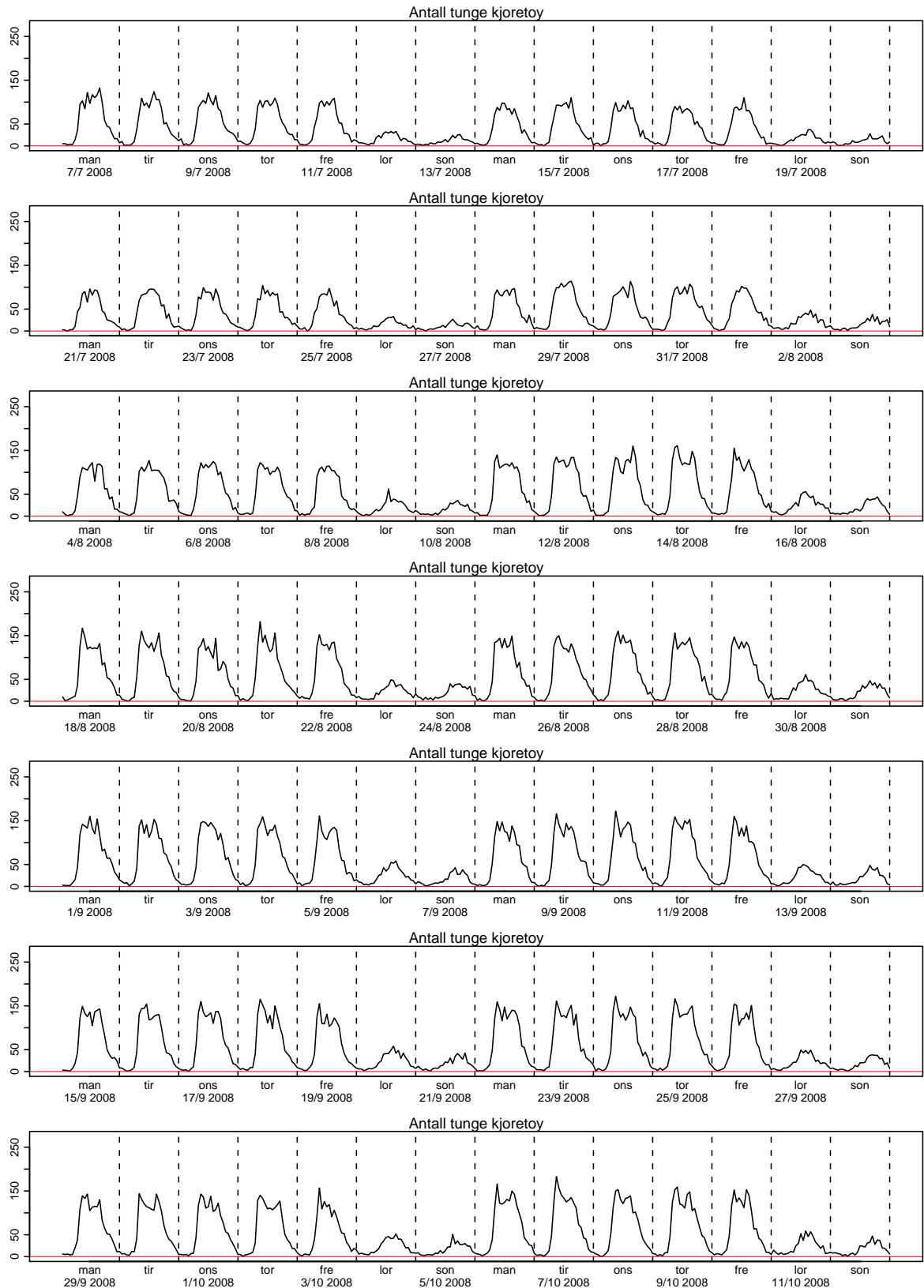
Figur 4.57. Antall tunge kjøretøy.



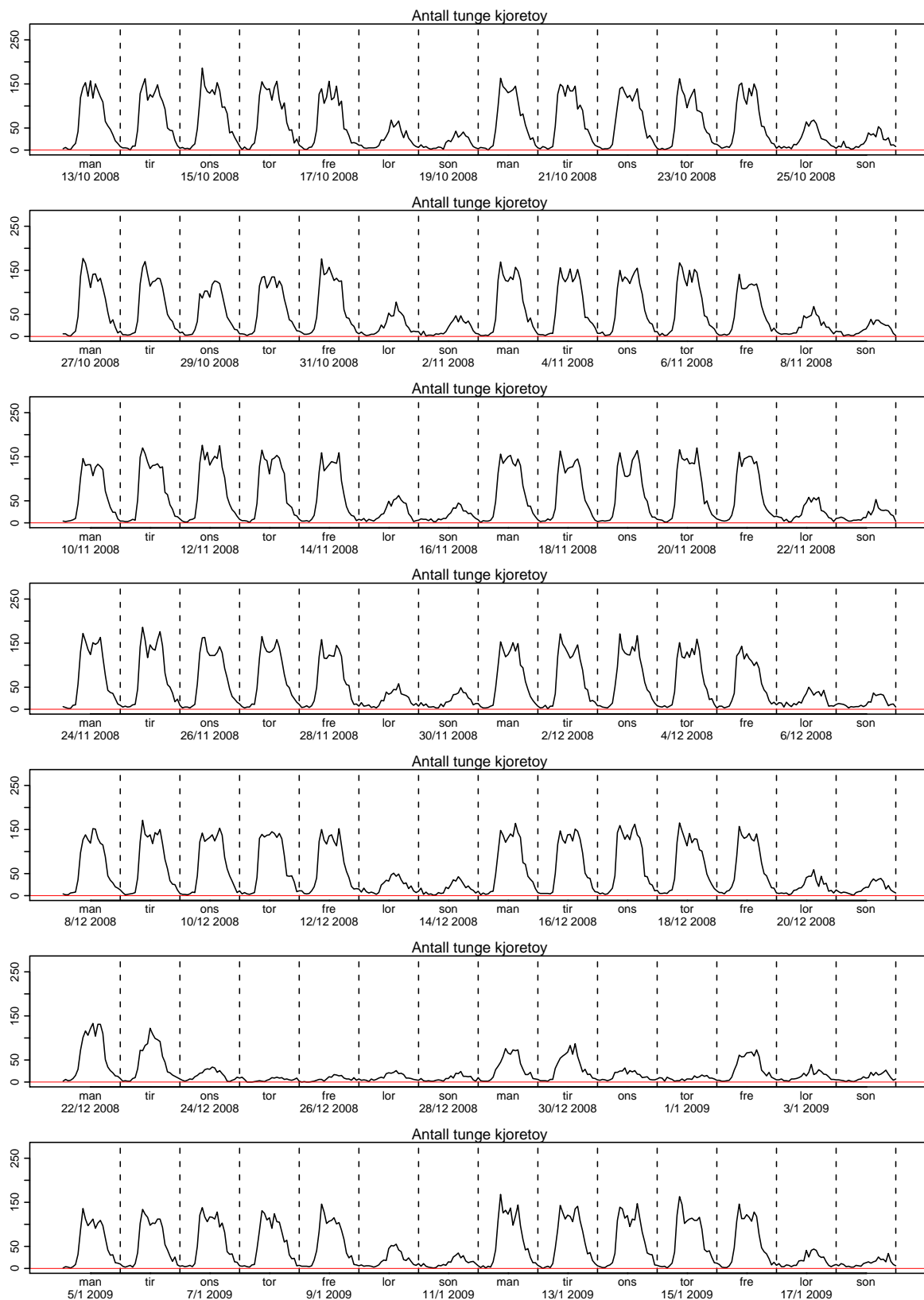
Figur 4.58. Antall tunge kjøretøy.



Figur 4.59. Antall tunge kjøretøy.

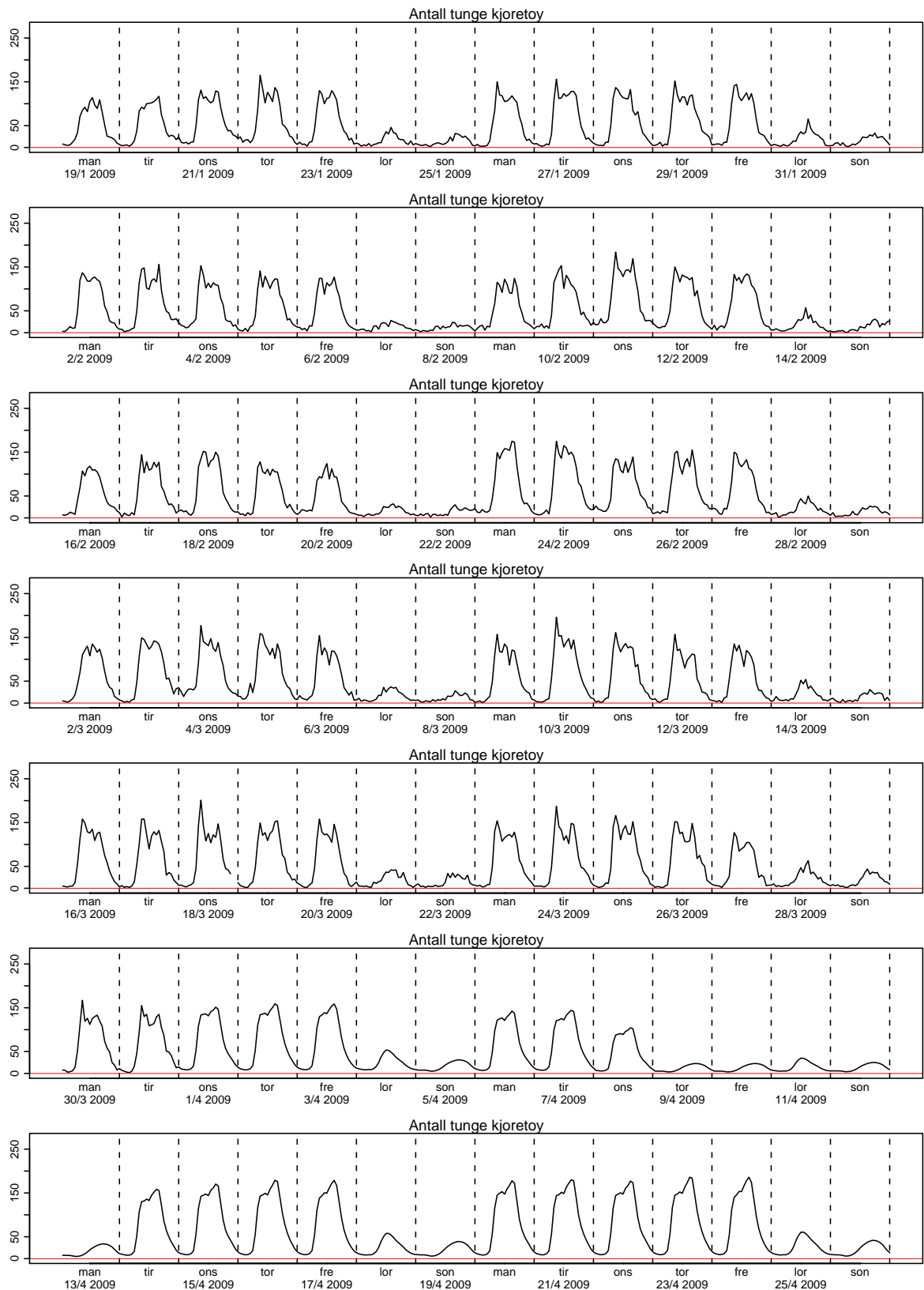


Figur 4.60. Antall tunge kjøretøy.

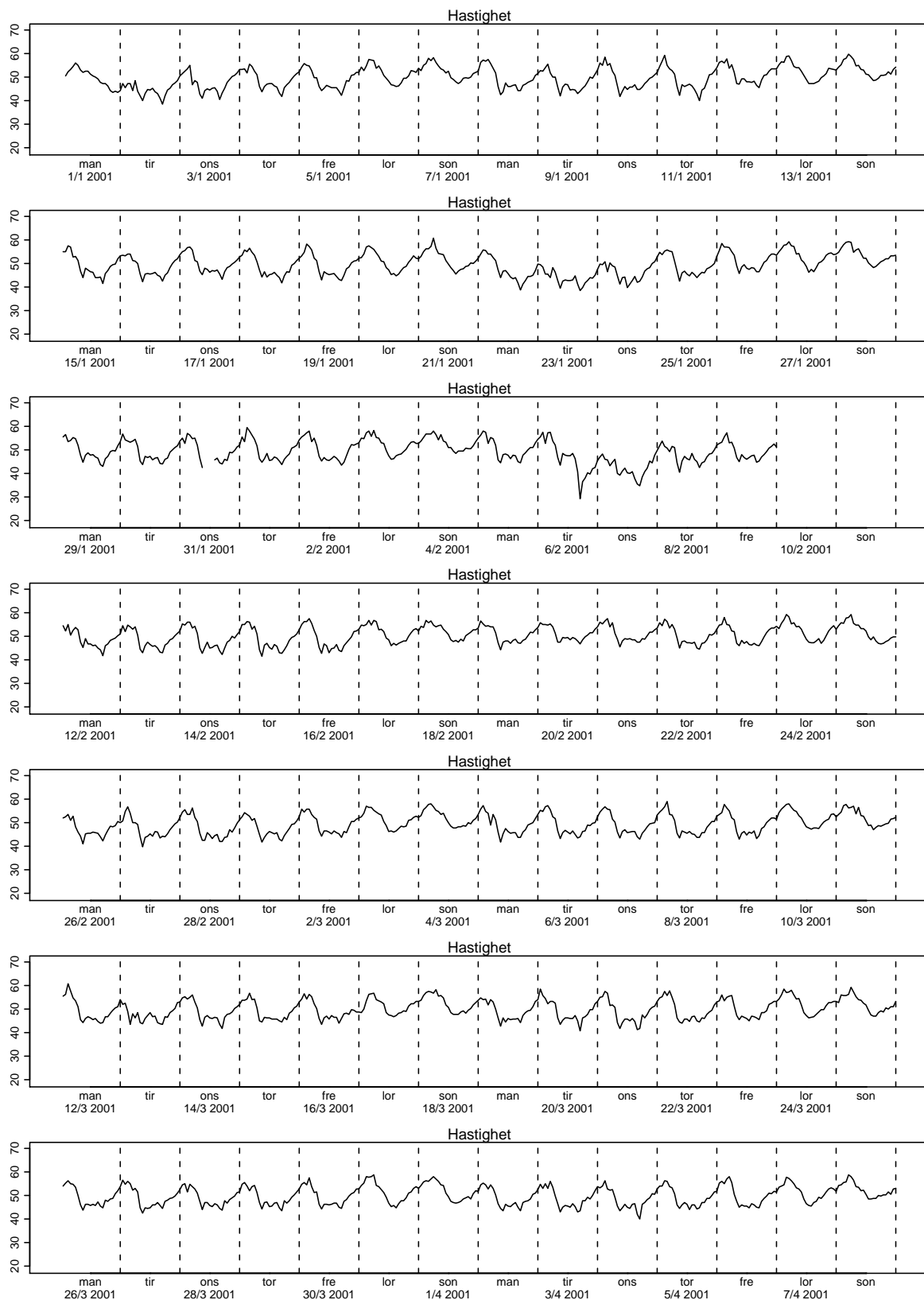


Figur 4.61. Antall tunge kjøretøy.

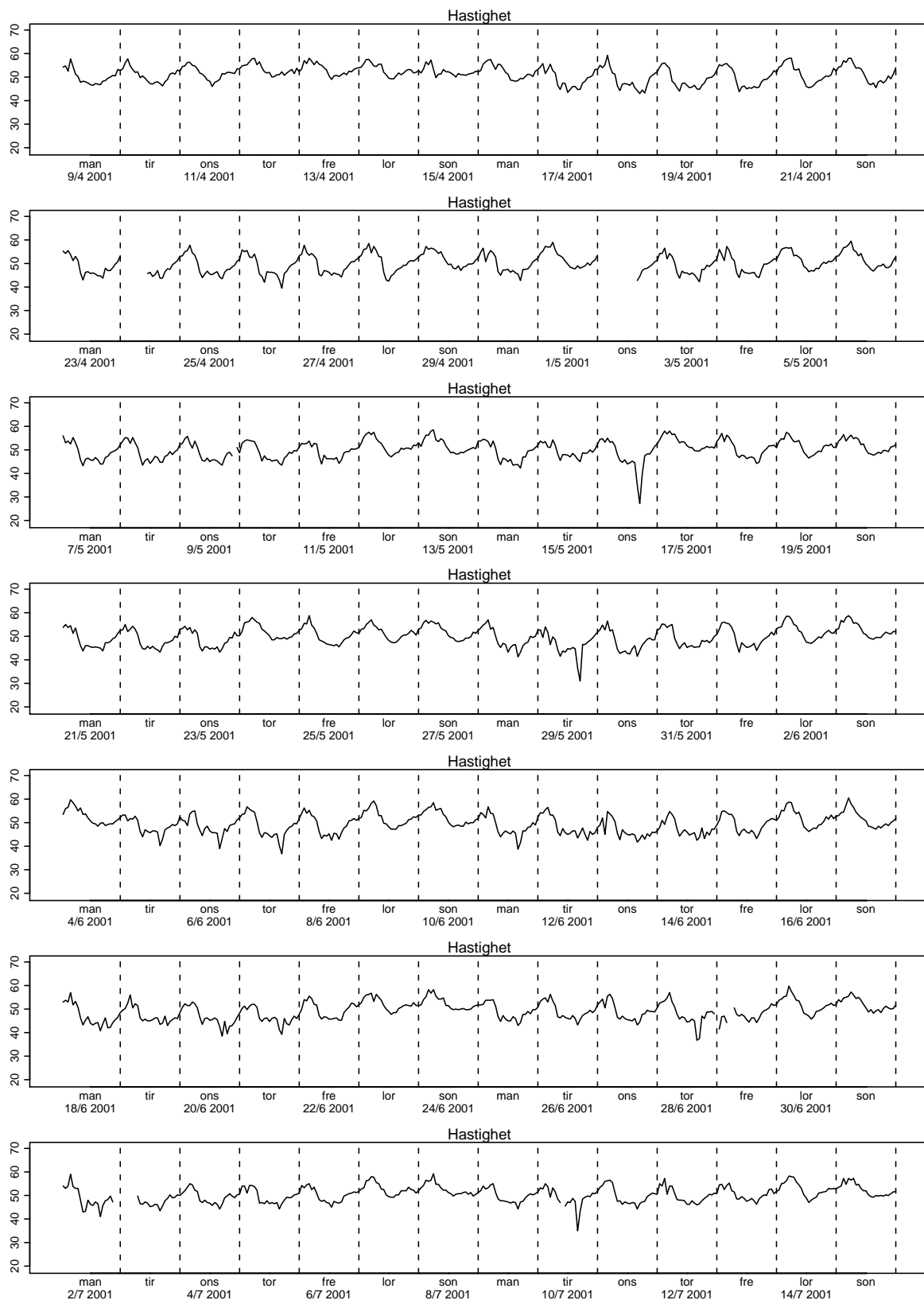




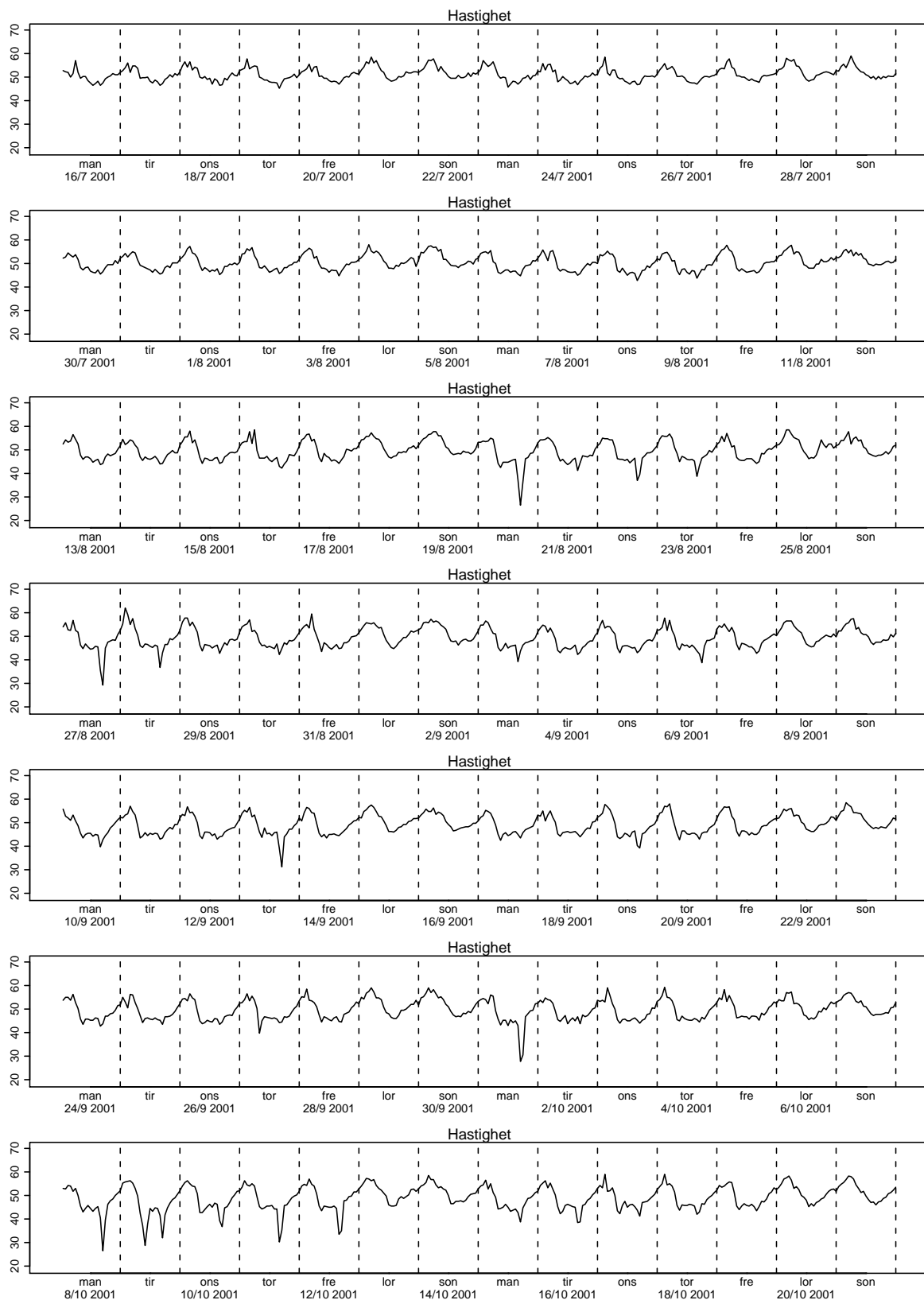
Figur 4.62. Antall tunge kjøretøy.



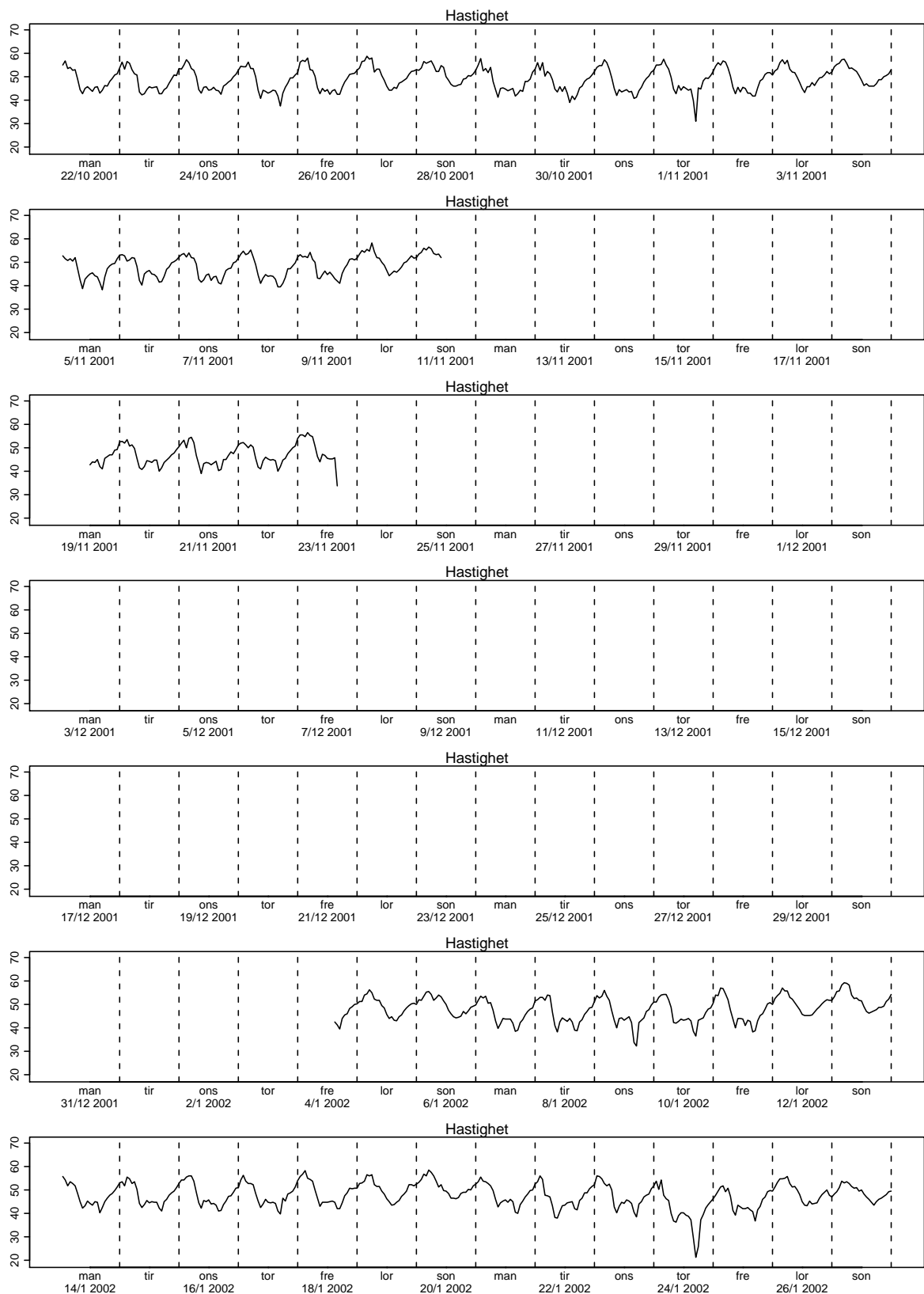
Figur 4.63. Gjennomsnittshastighet.



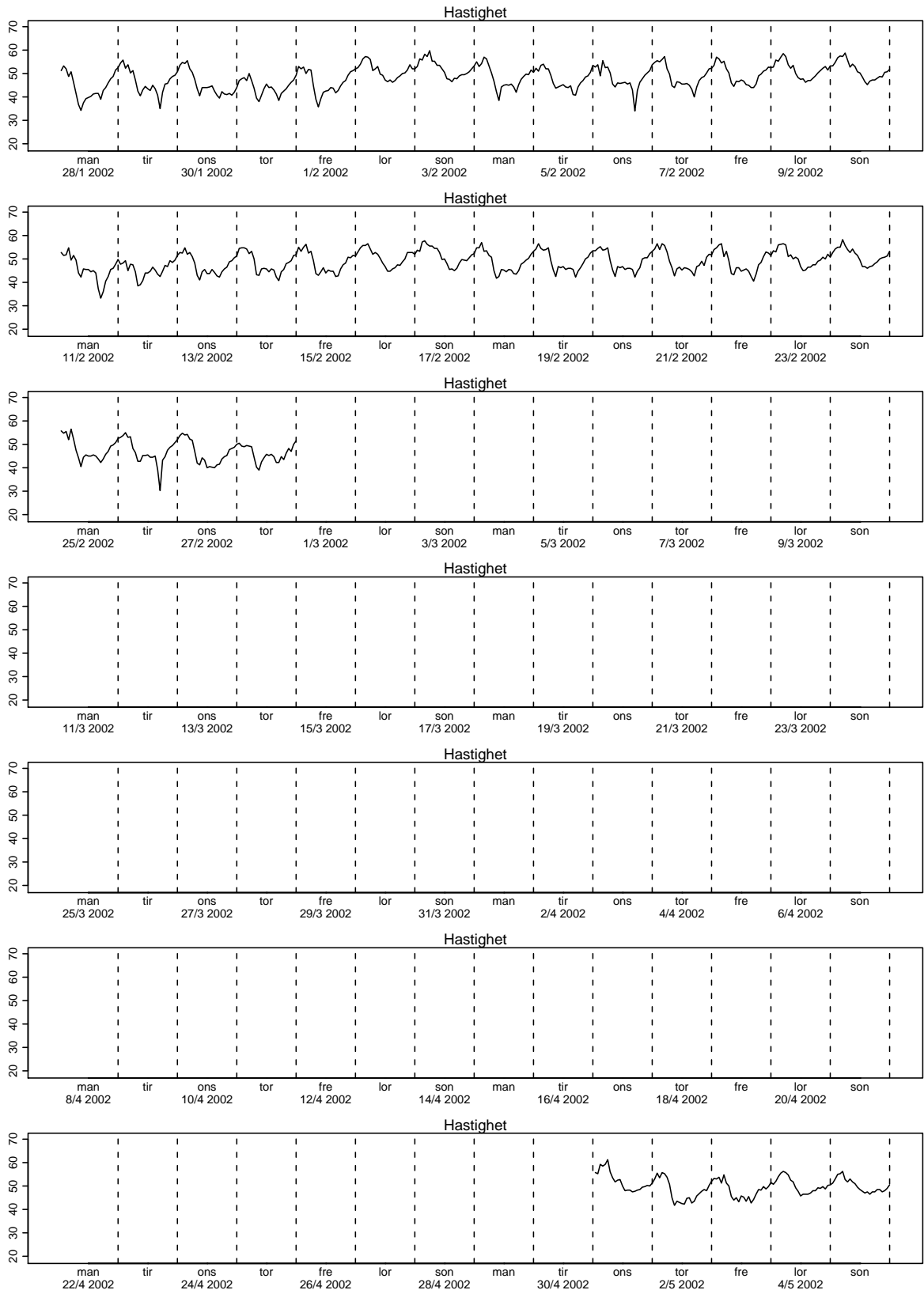
Figur 4.64. Gjennomsnittshastighet.



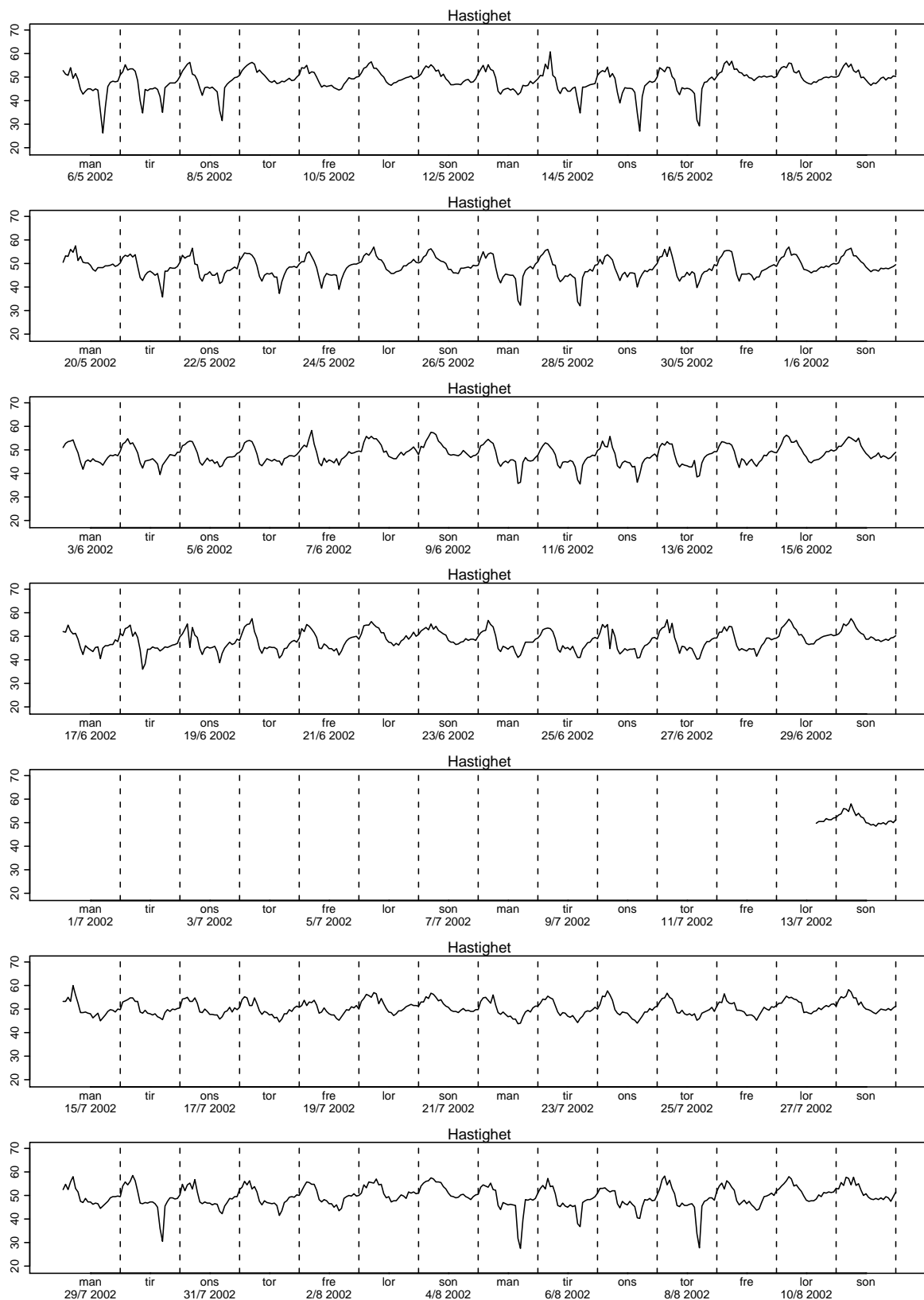
Figur 4.65. Gjennomsnittshastighet.



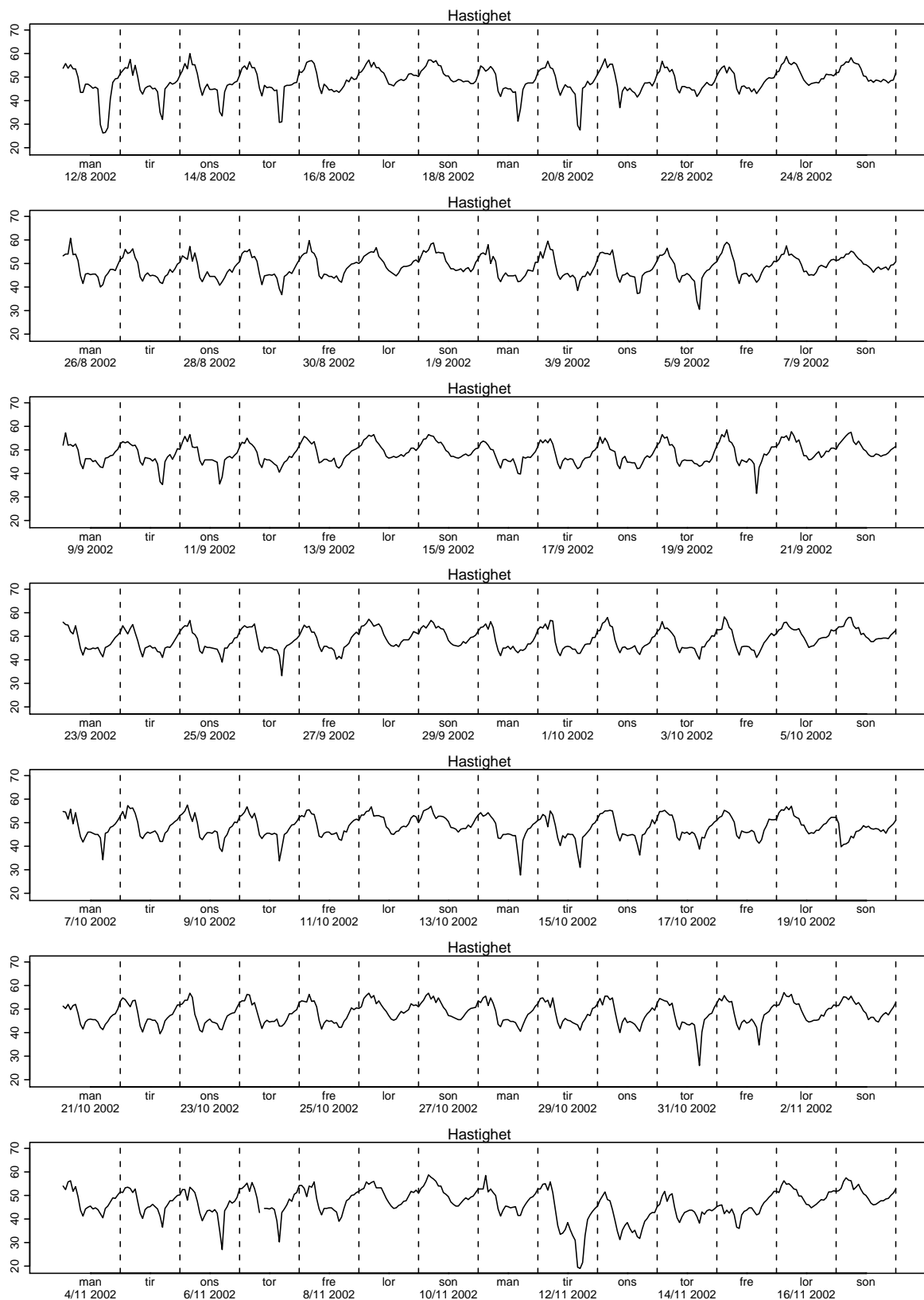
Figur 4.66. Gjennomsnittshastighet.



Figur 4.67. Gjennomsnittshastighet.

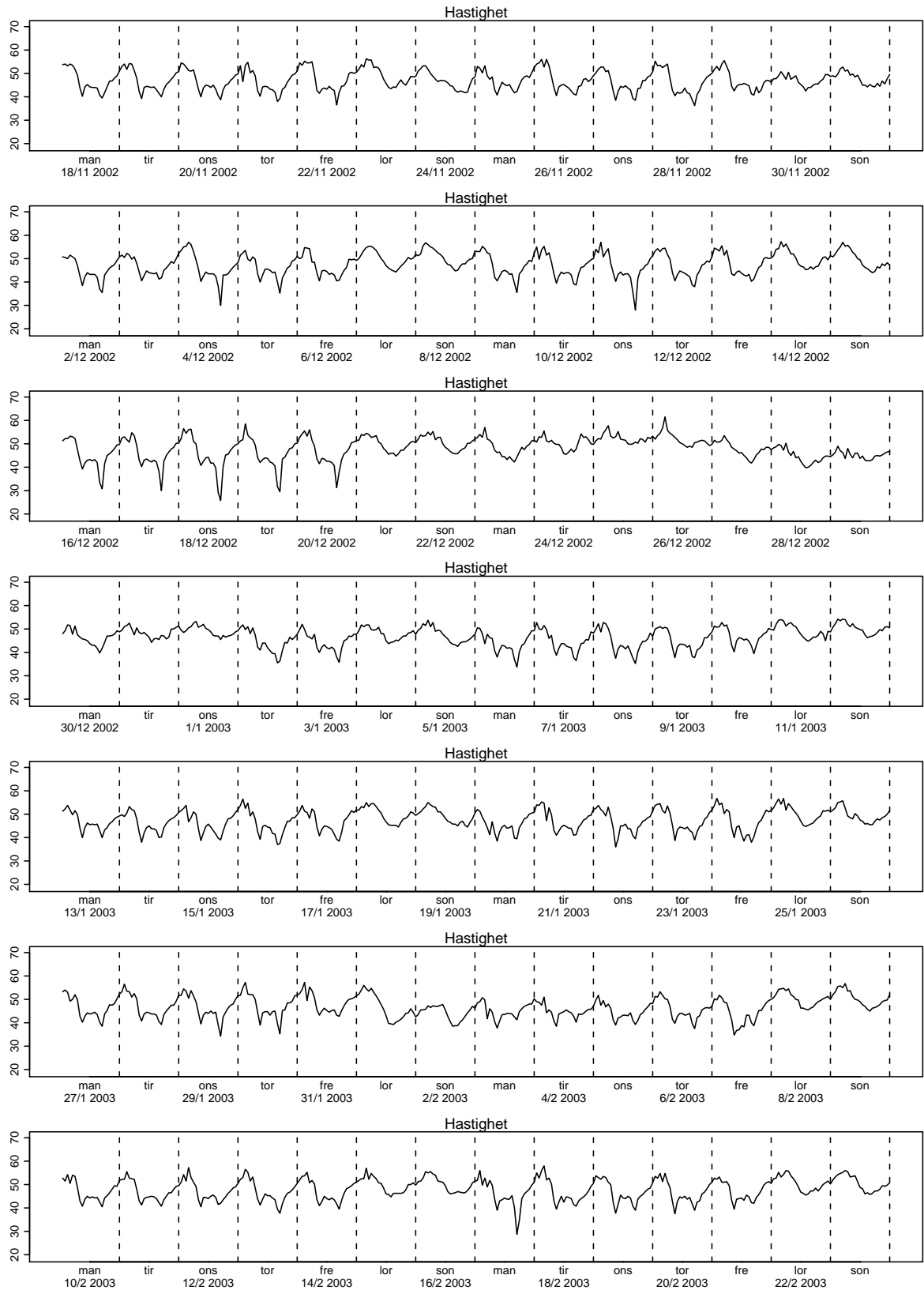


Figur 4.68. Gjennomsnittshastighet.

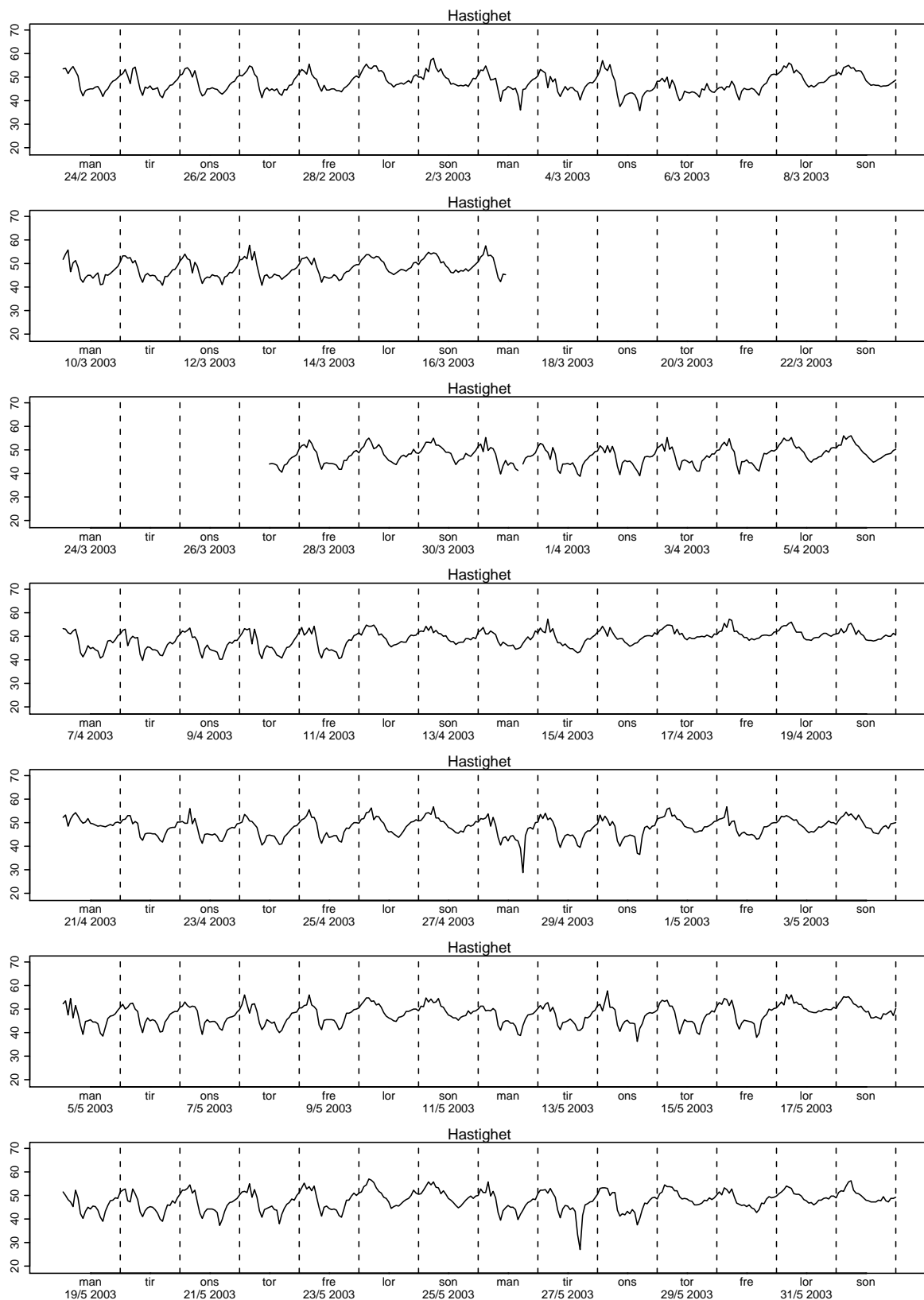


Figur 4.69. Gjennomsnittshastighet.

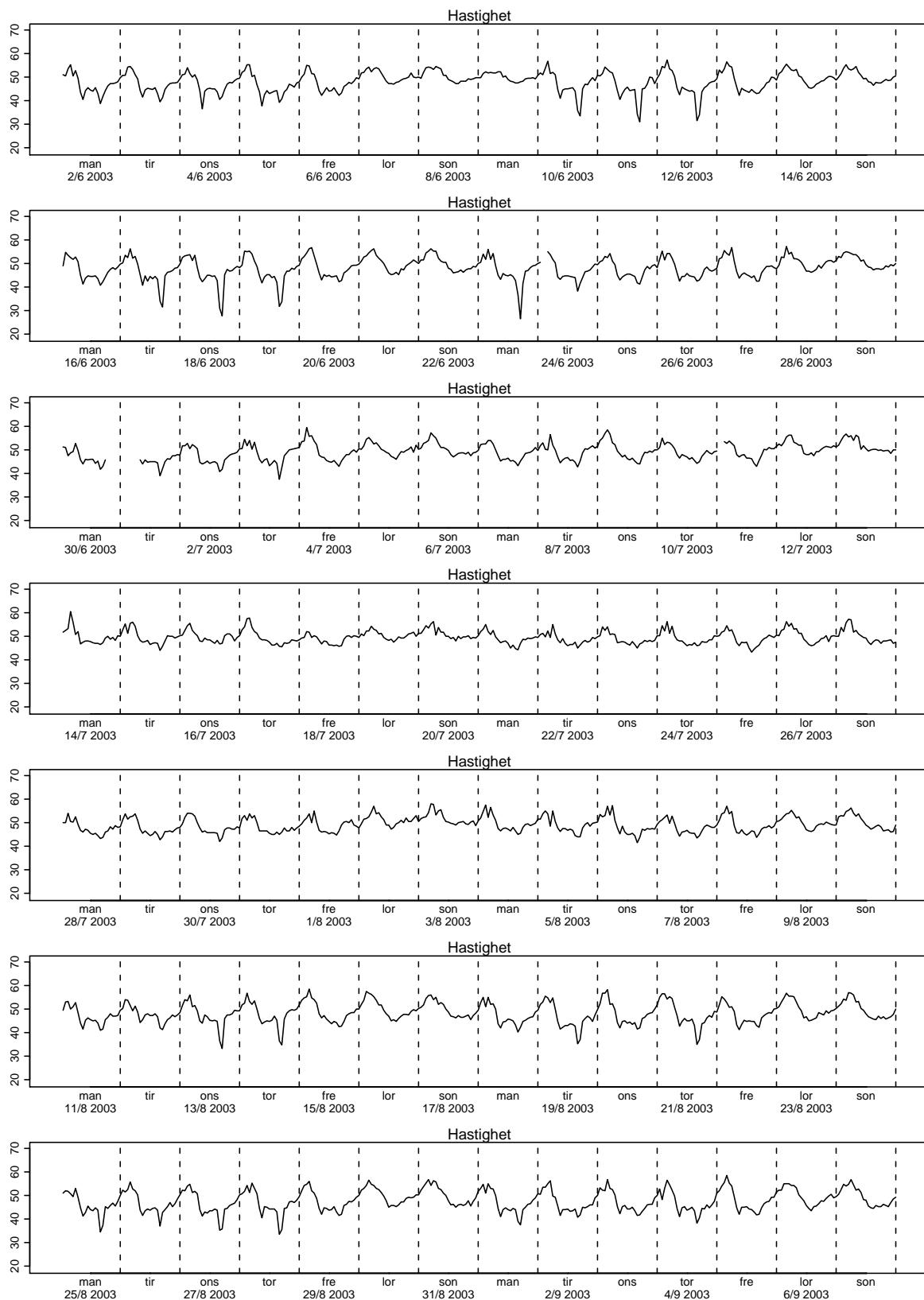




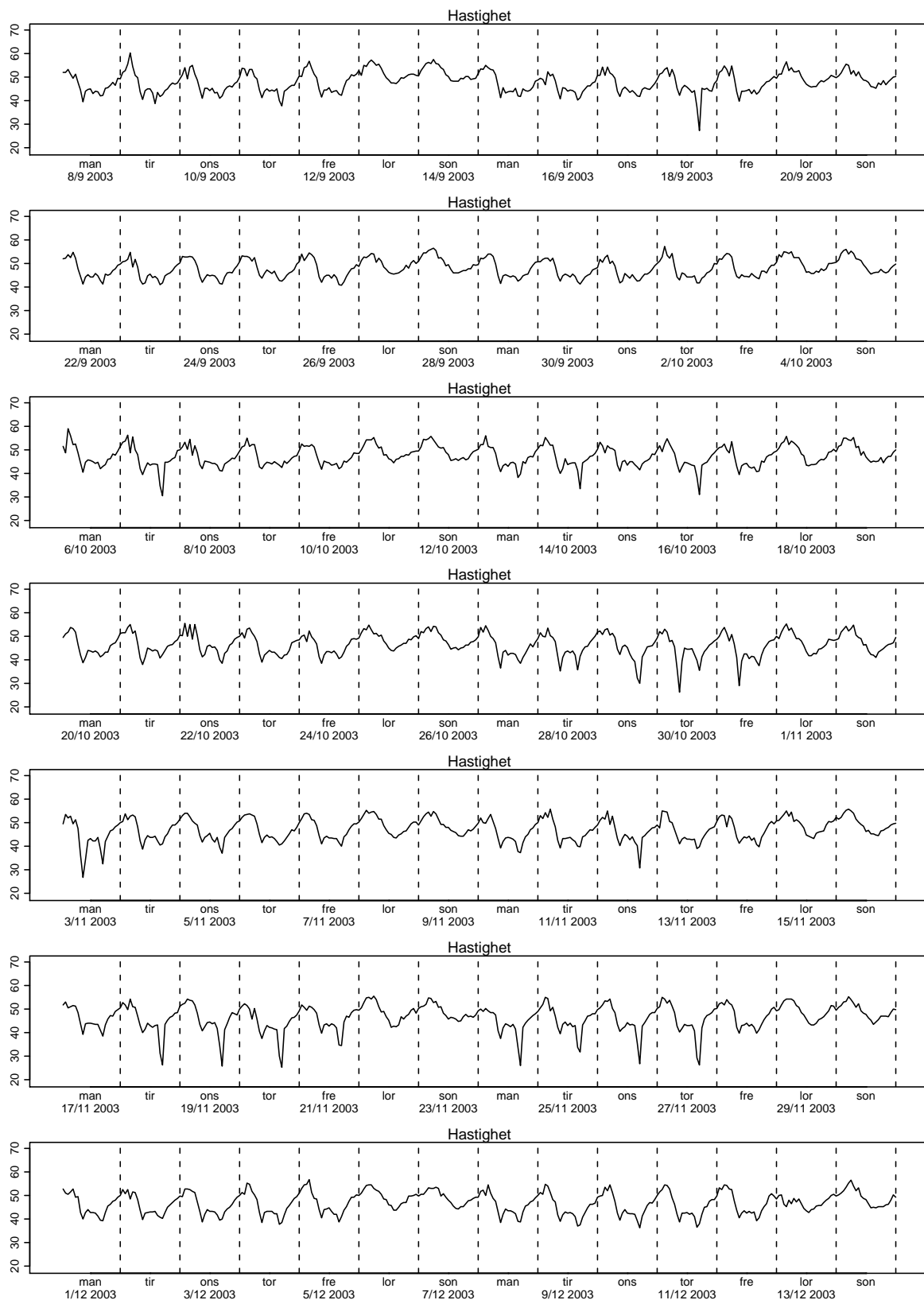
Figur 4.70. Gjennomsnittshastighet.



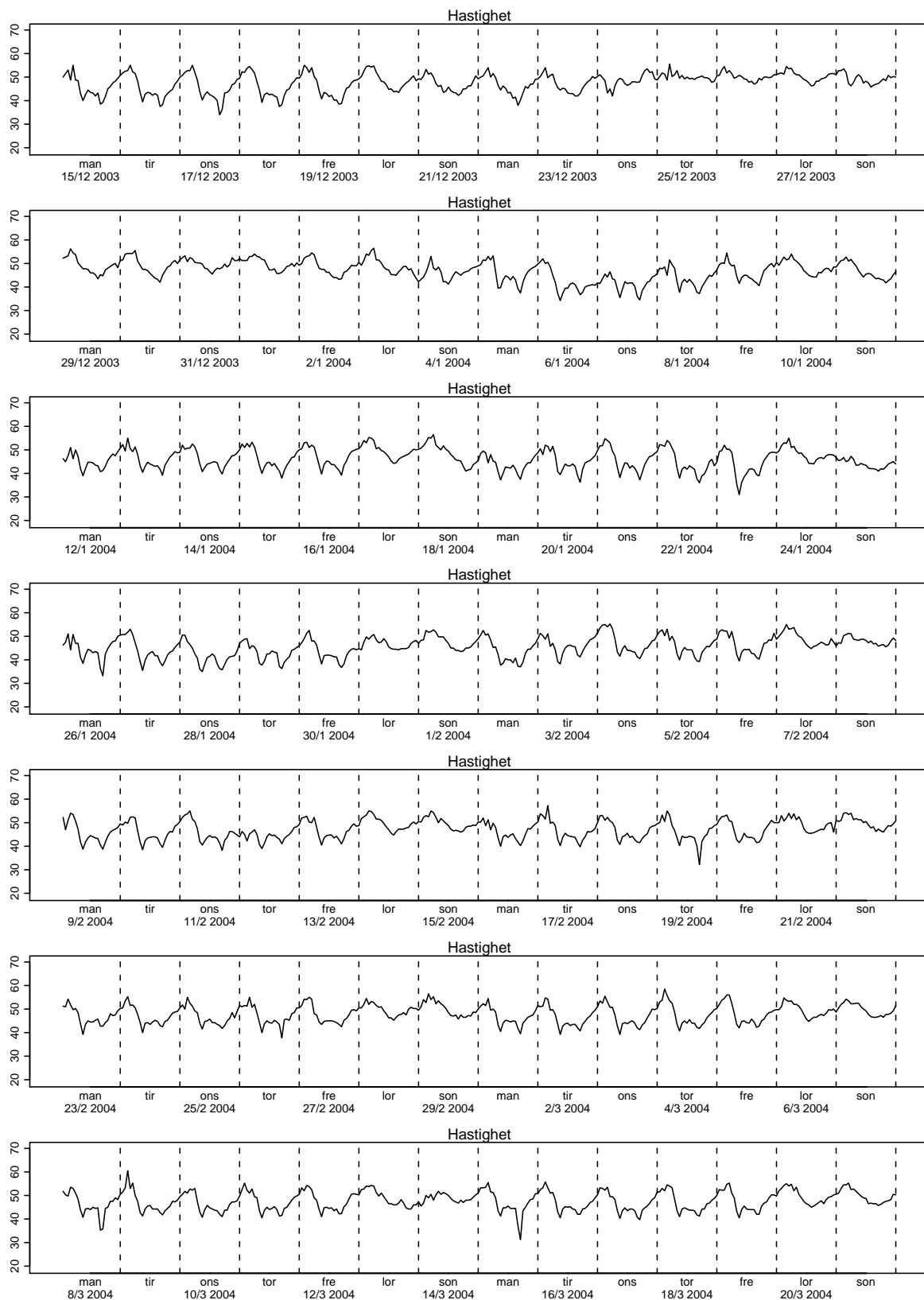
Figur 4.71. Gjennomsnittshastighet.



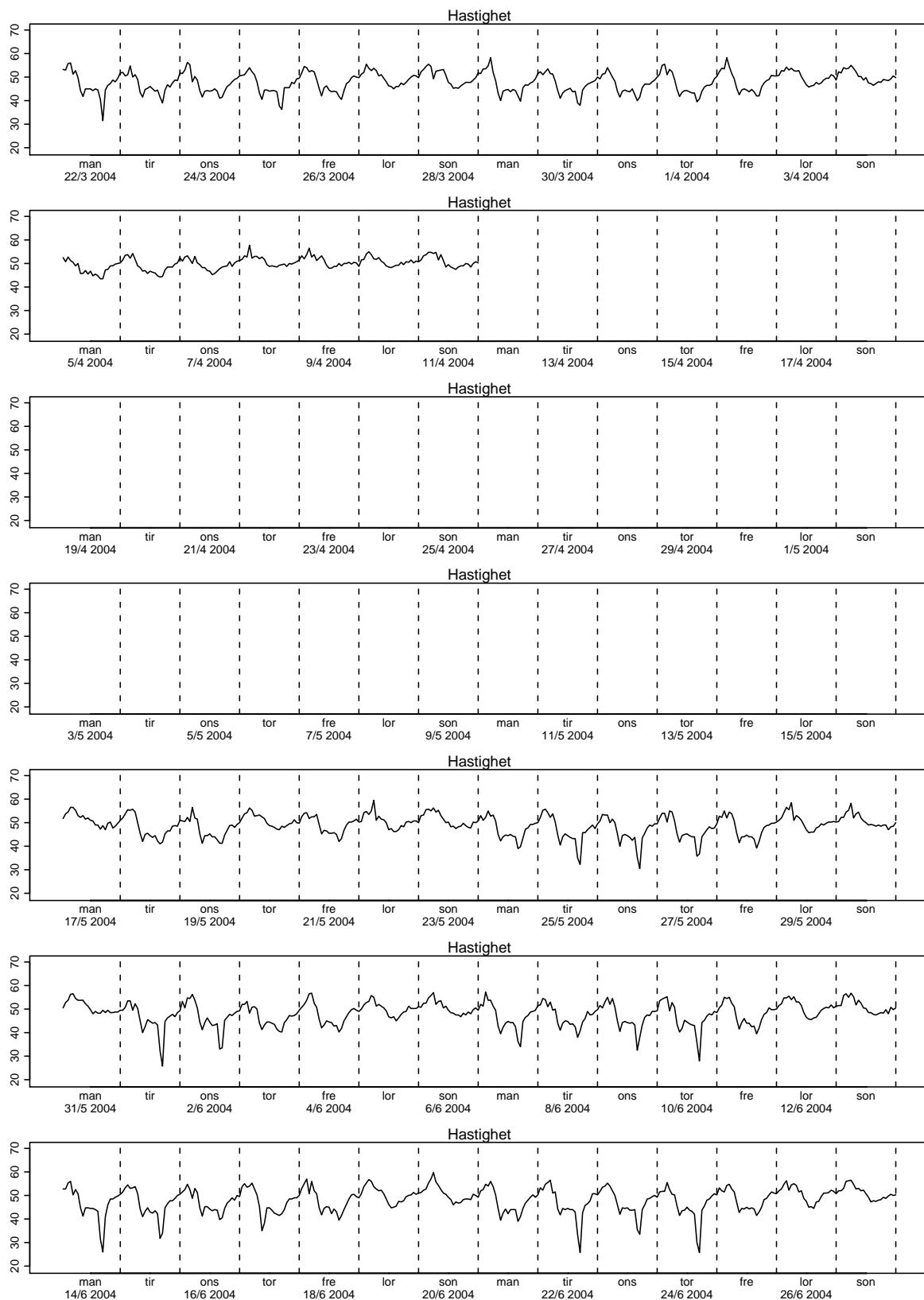
Figur 4.72. Gjennomsnittshastighet.



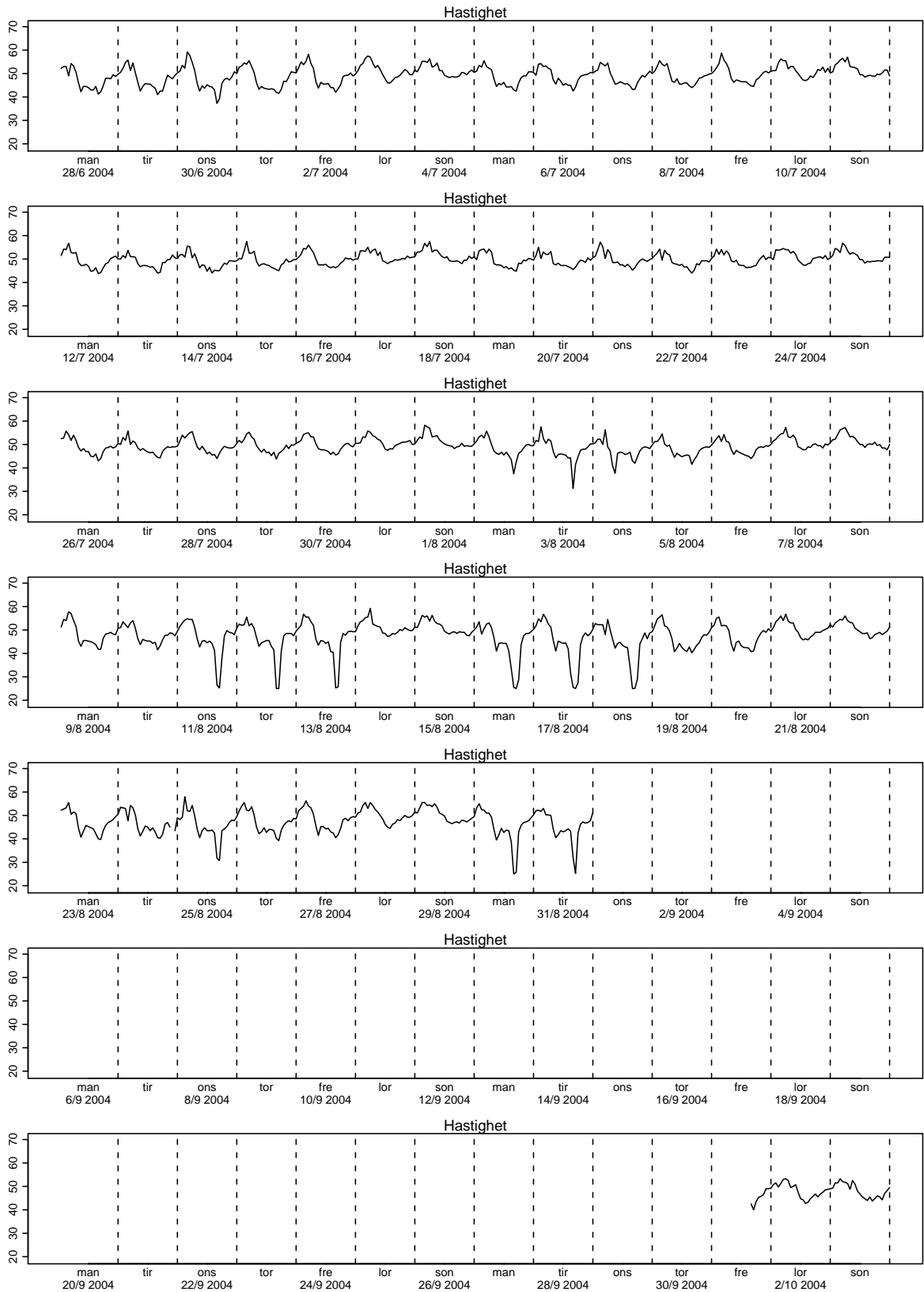
Figur 4.73. Gjennomsnittshastighet.



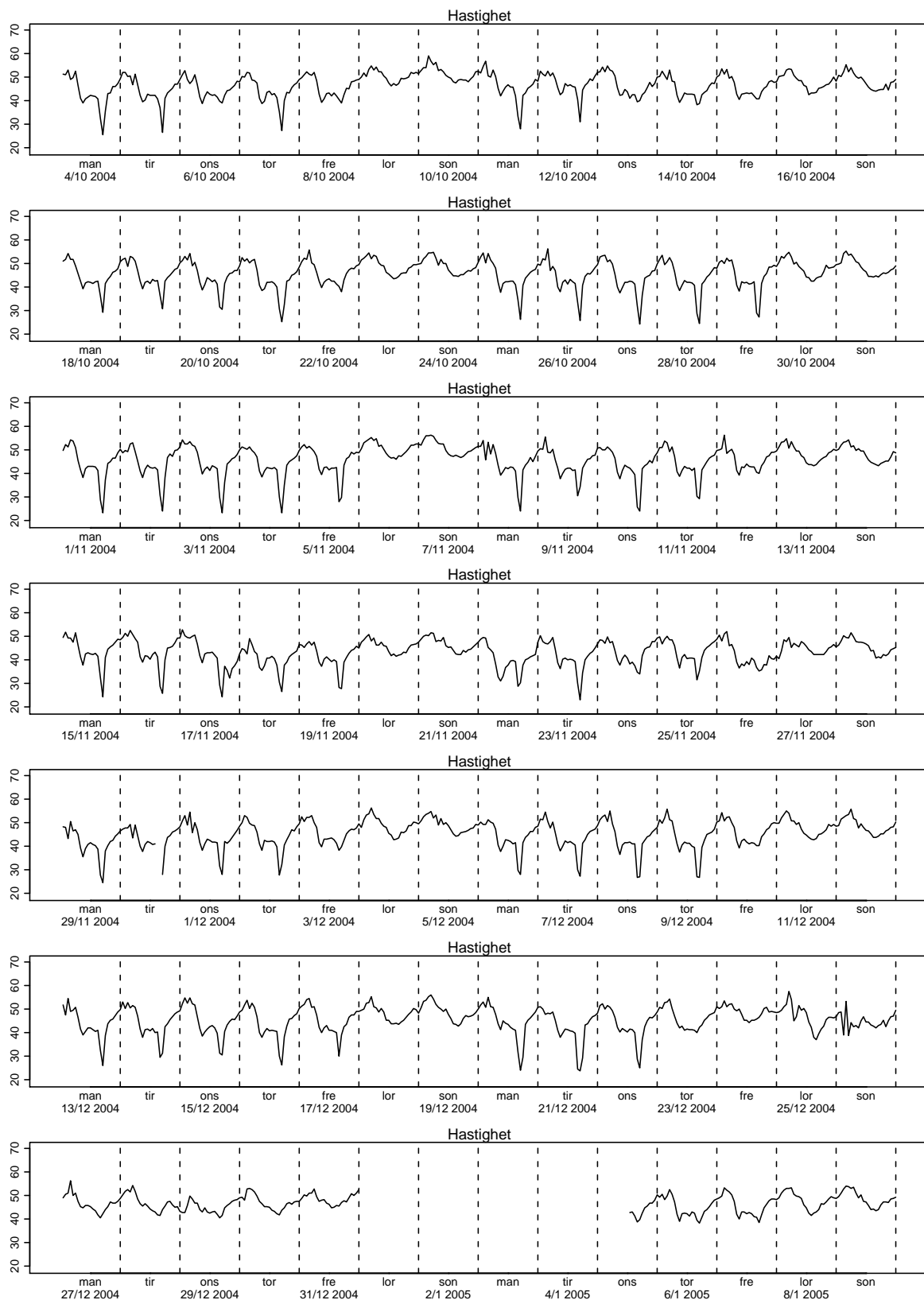
Figur 4.74. Gjennomsnittshastighet.



Figur 4.75. Gjennomsnittshastighet.

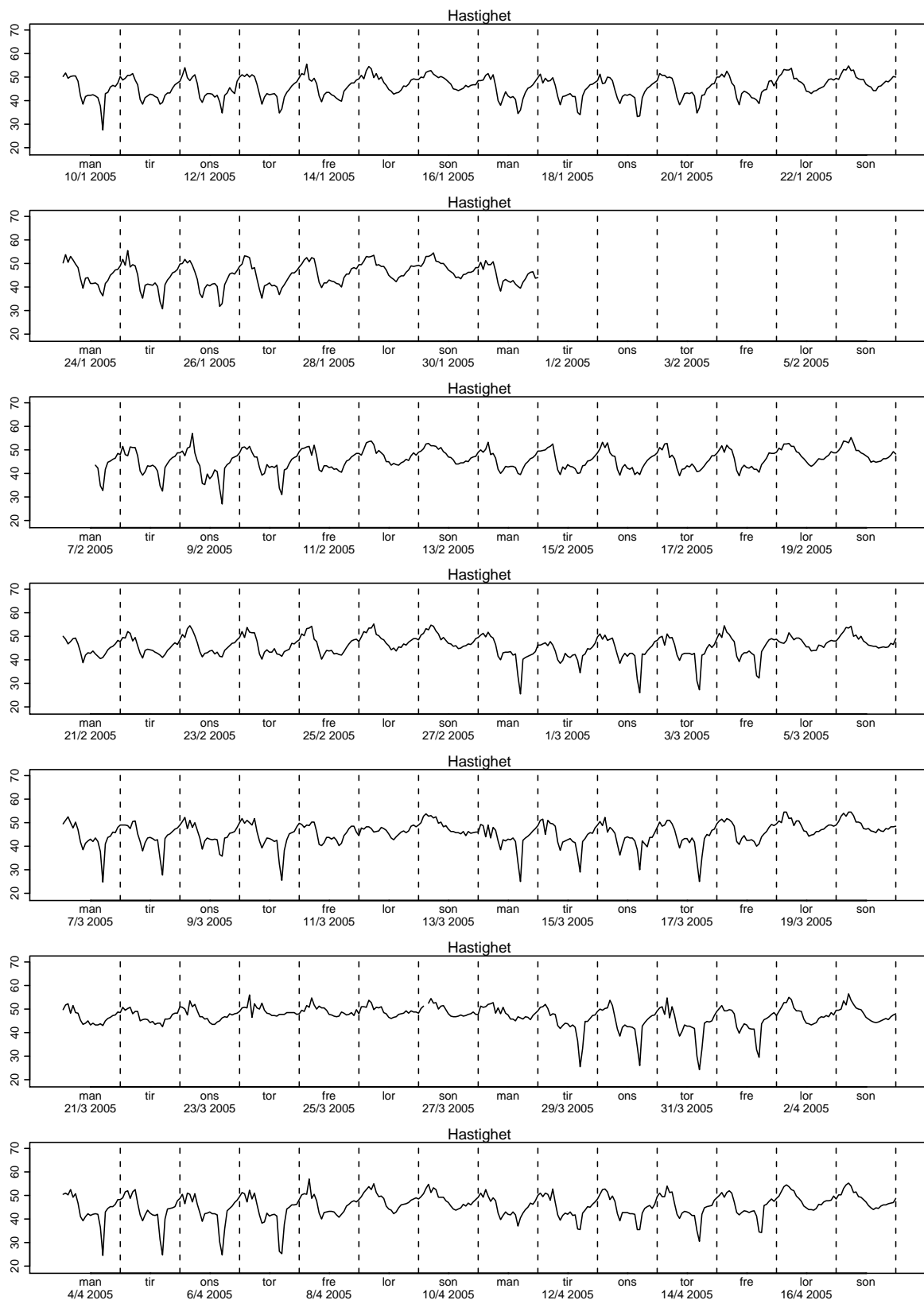


Figur 4.76. Gjennomsnittshastighet.

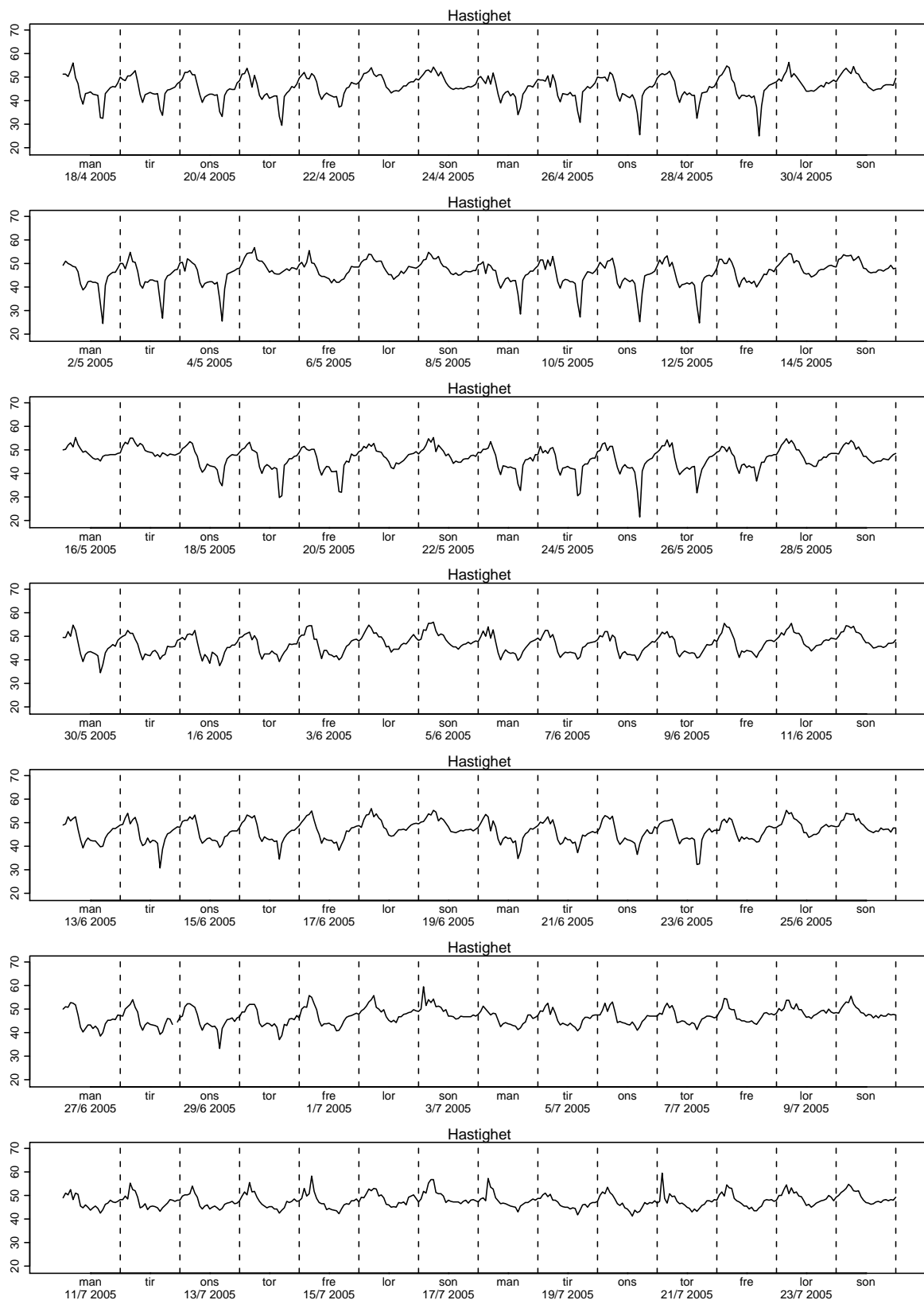


Figur 4.77. Gjennomsnittshastighet.

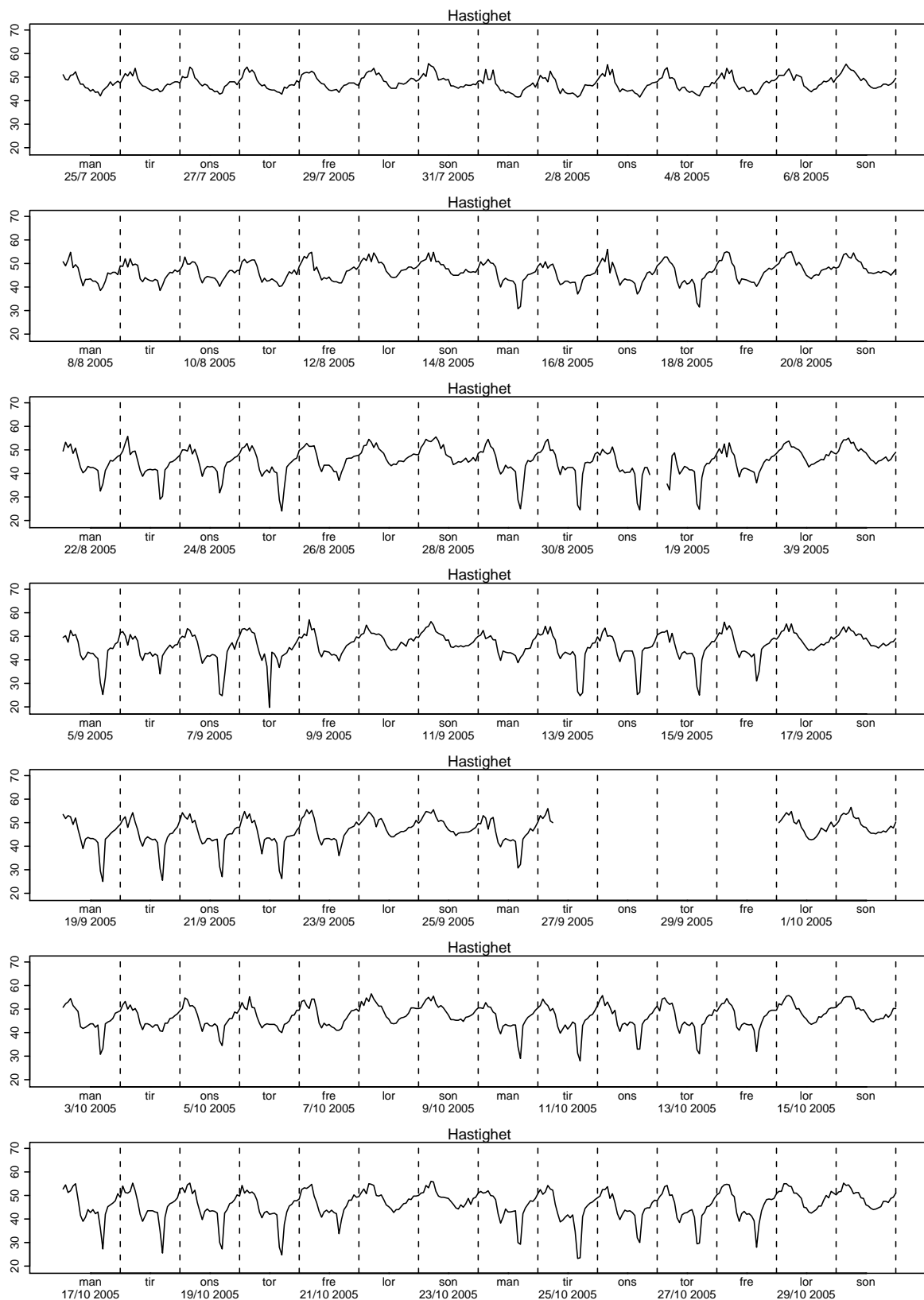




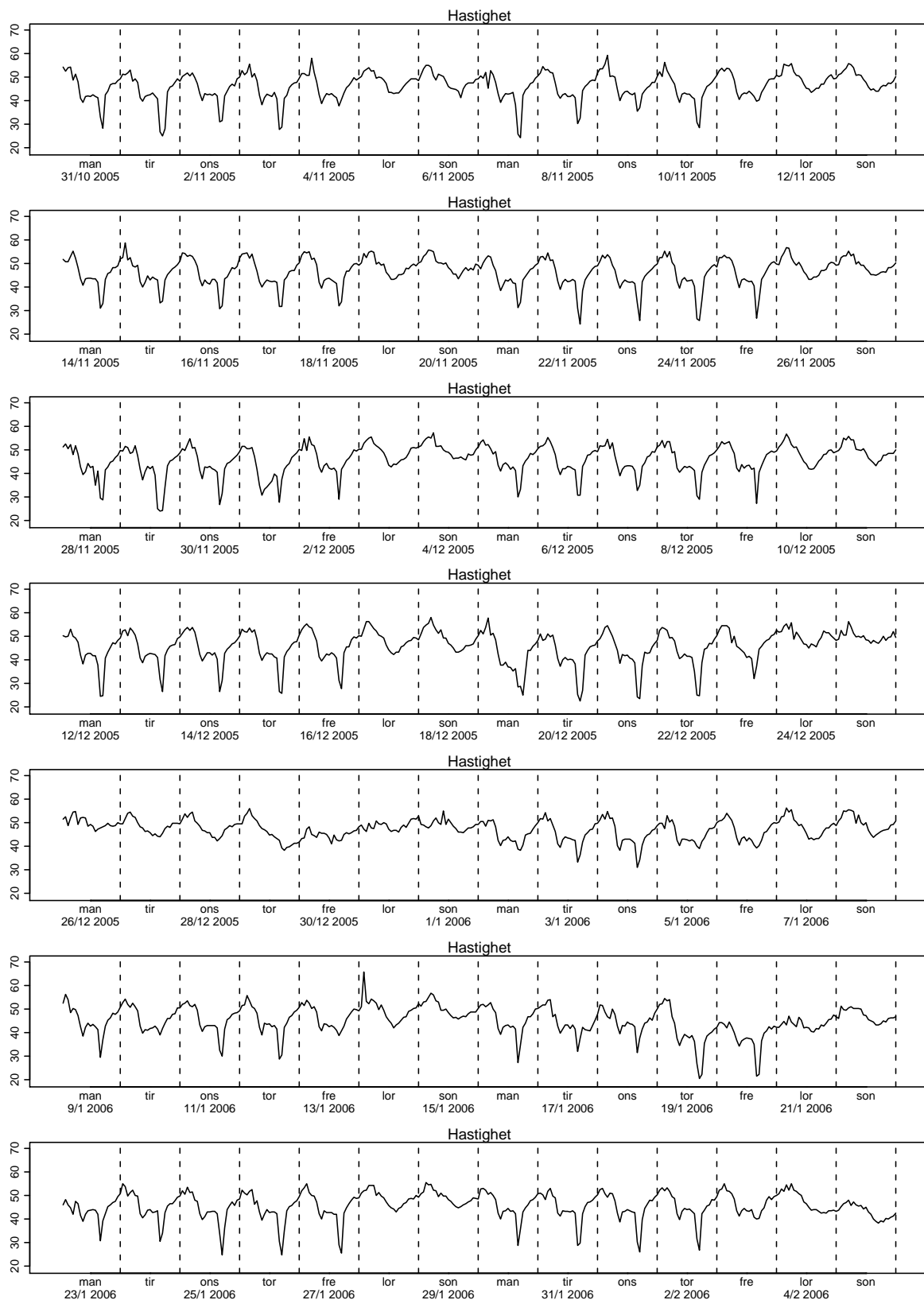
Figur 4.78. Gjennomsnittshastighet.



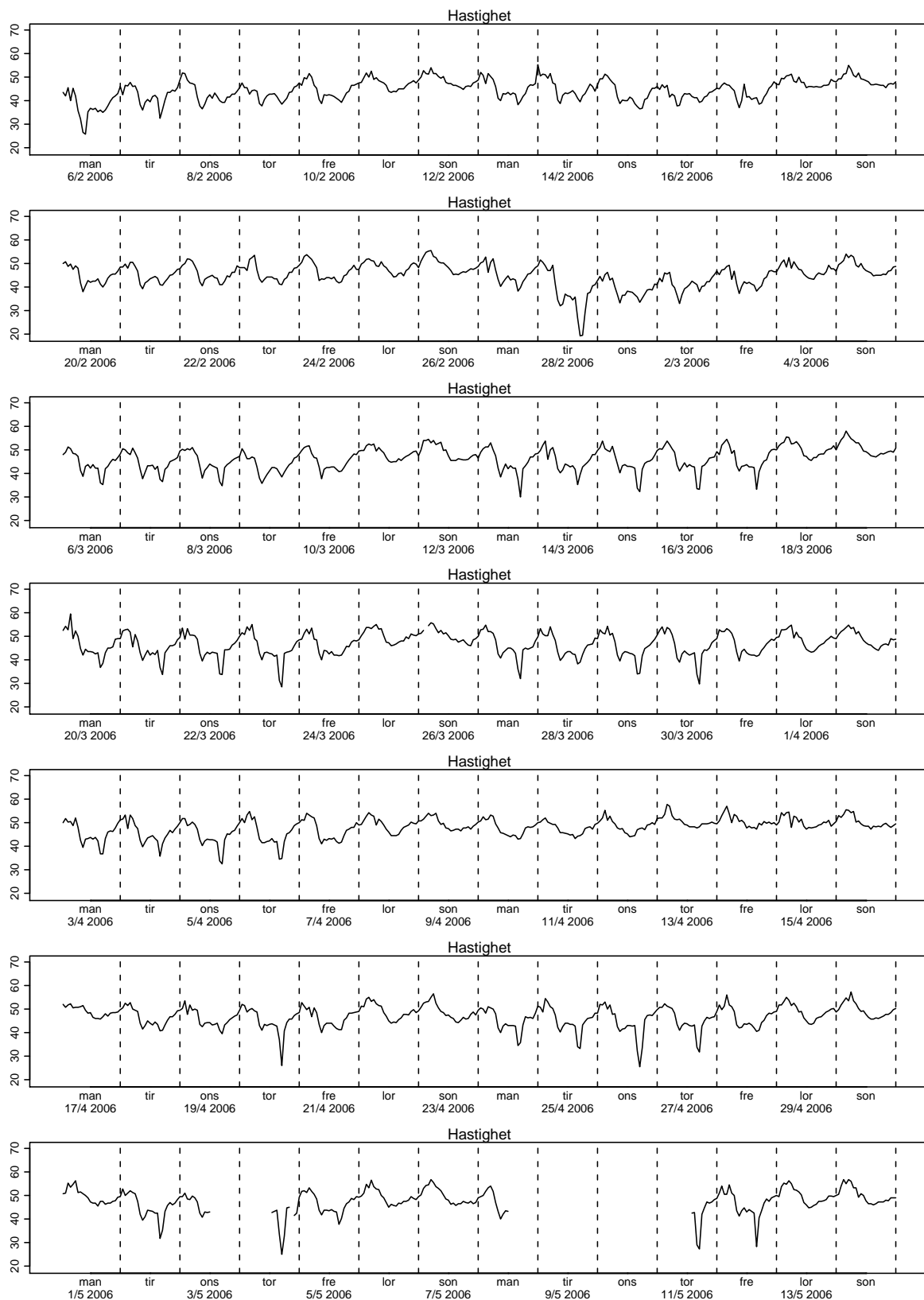
Figur 4.79. Gjennomsnittshastighet.



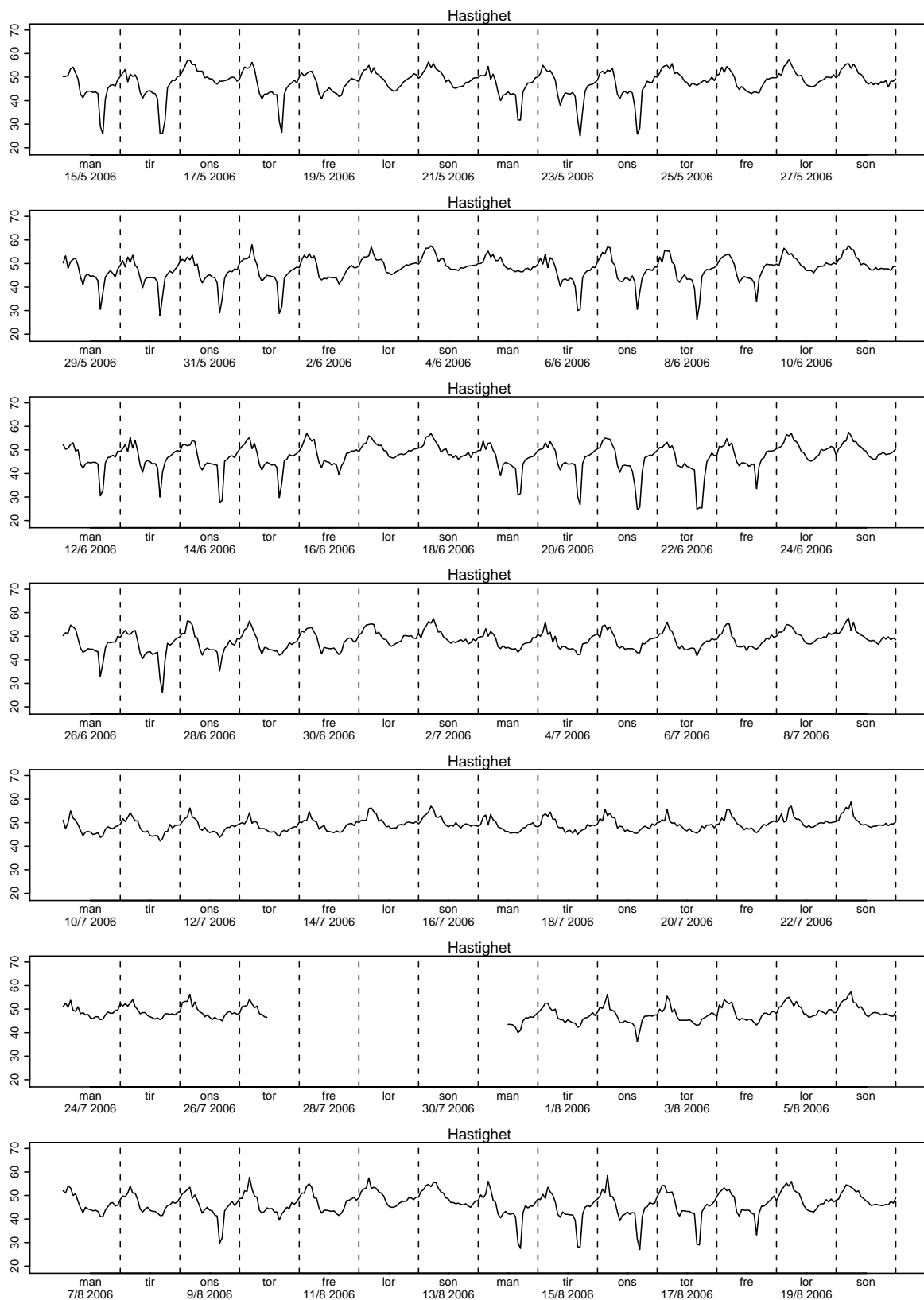
Figur 4.80. Gjennomsnittshastighet.



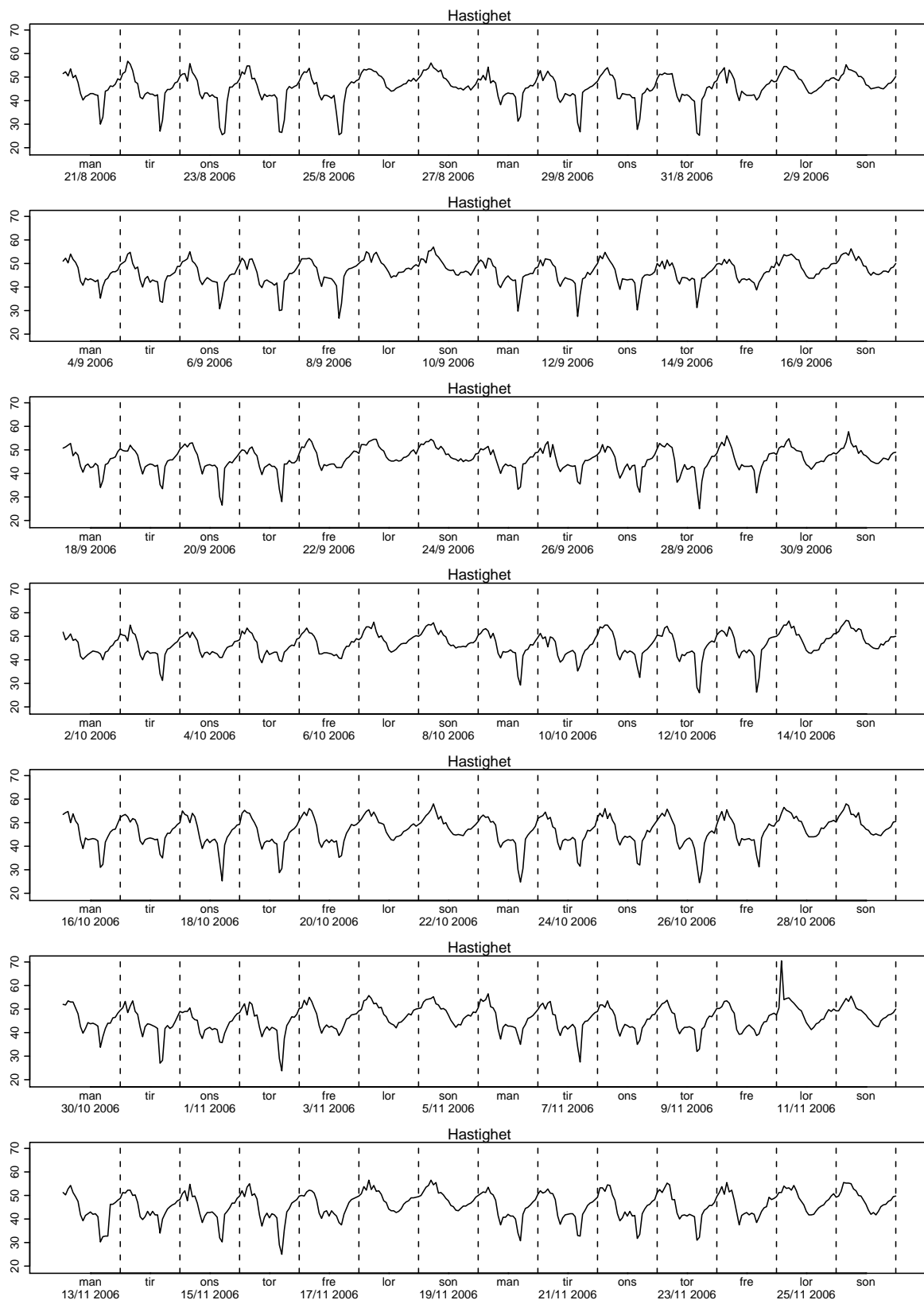
Figur 4.81. Gjennomsnittshastighet.



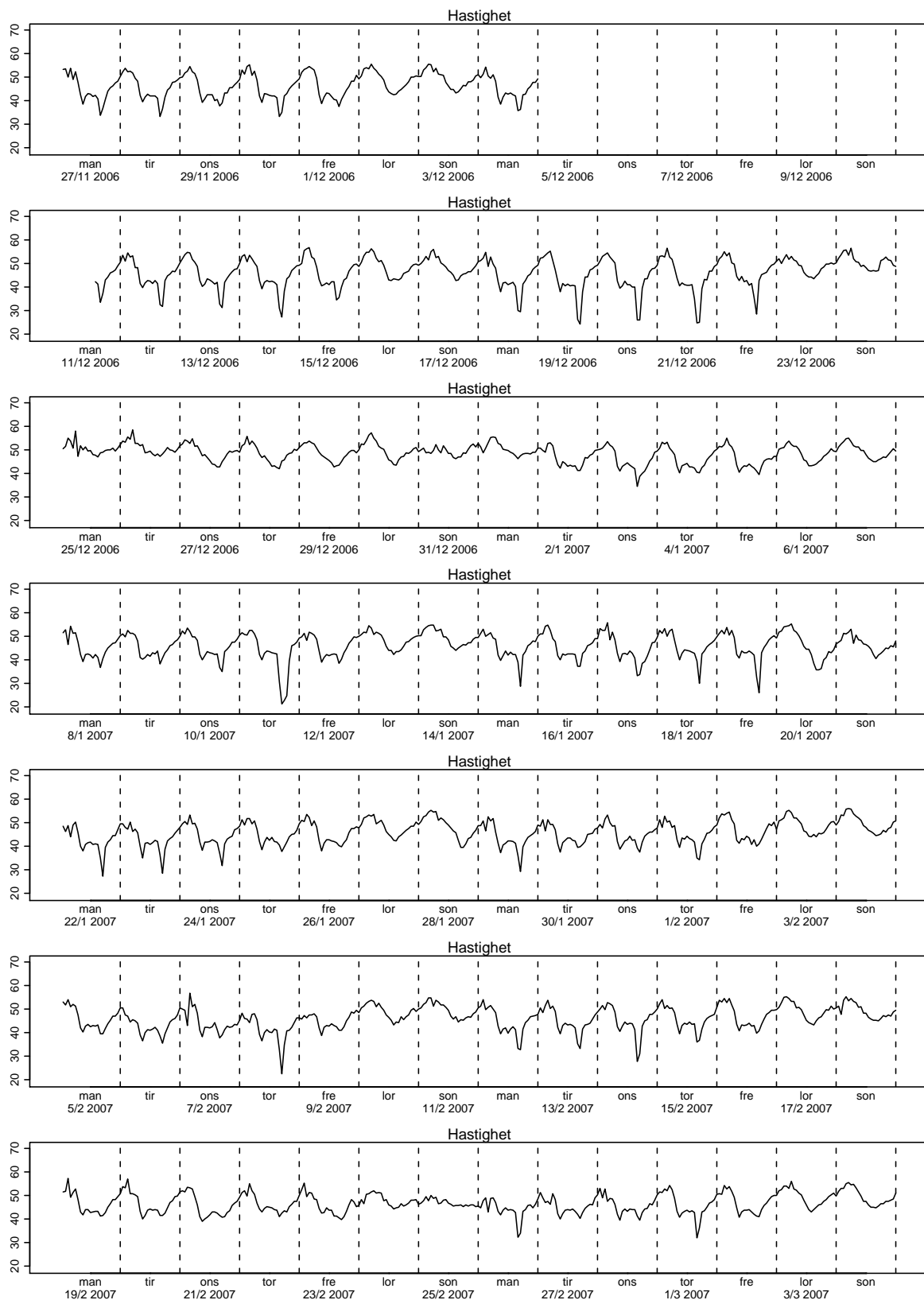
Figur 4.82. Gjennomsnittshastighet.



Figur 4.83. Gjennomsnittshastighet.

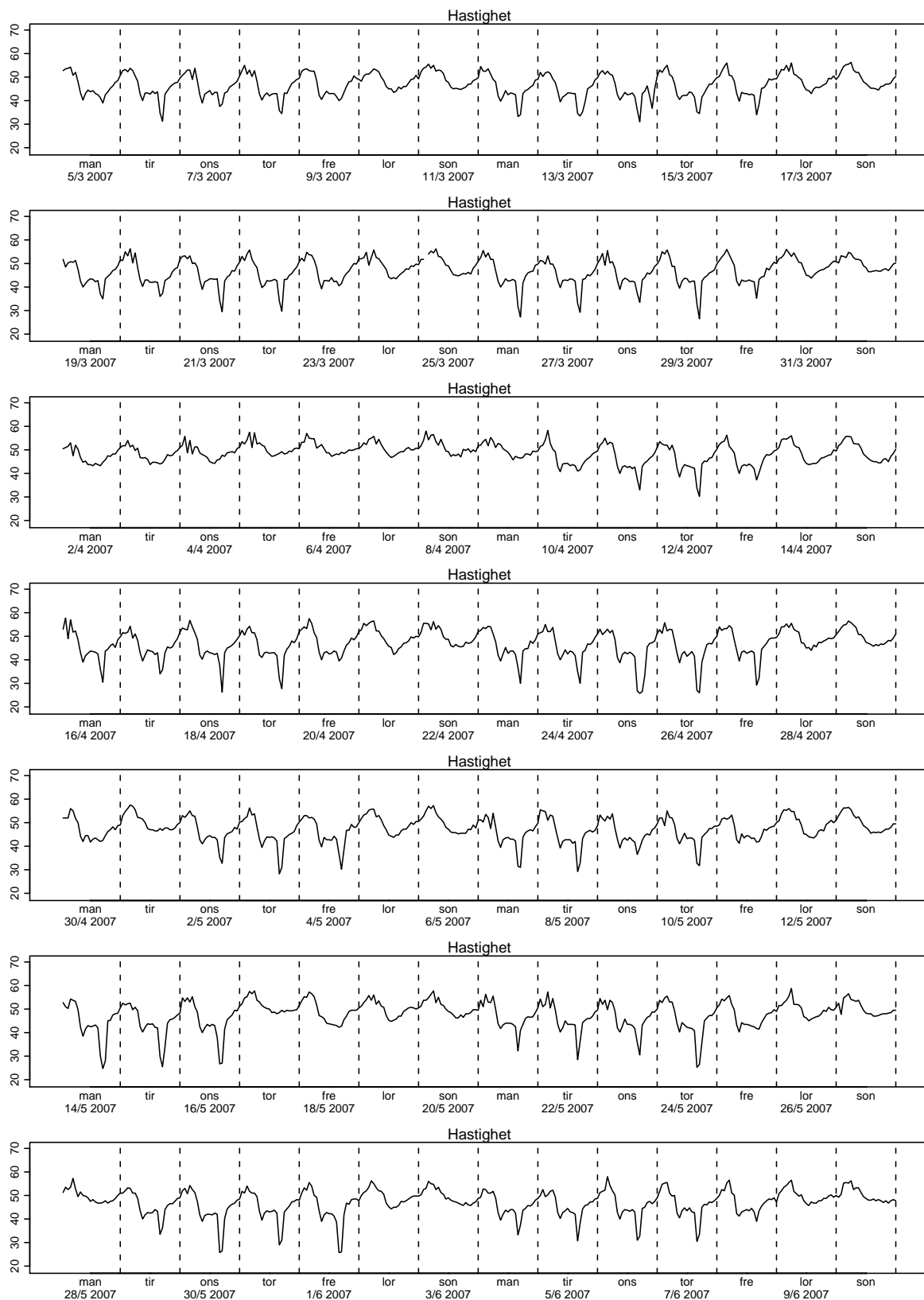


Figur 4.84. Gjennomsnittshastighet.

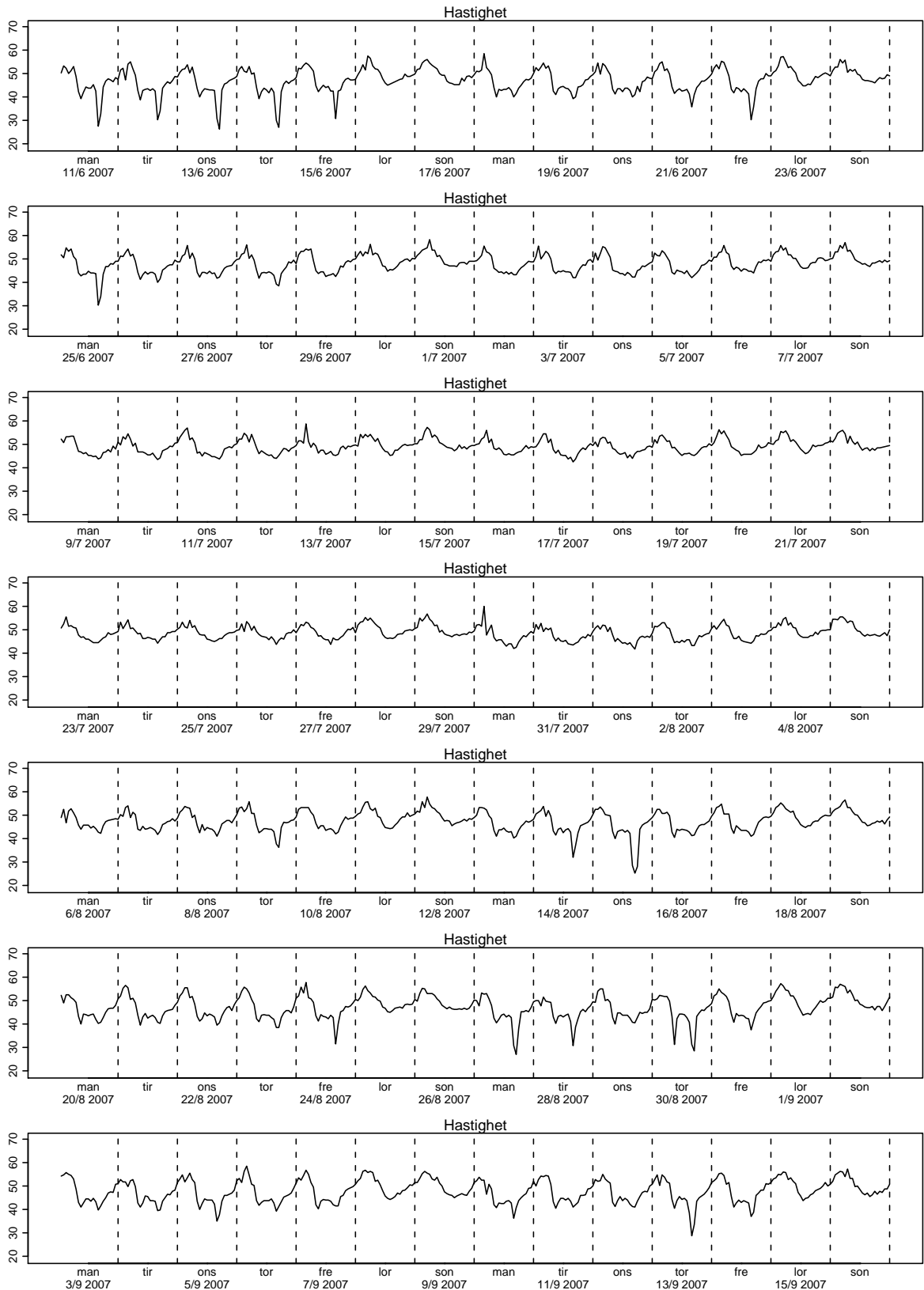


Figur 4.85. Gjennomsnittshastighet.

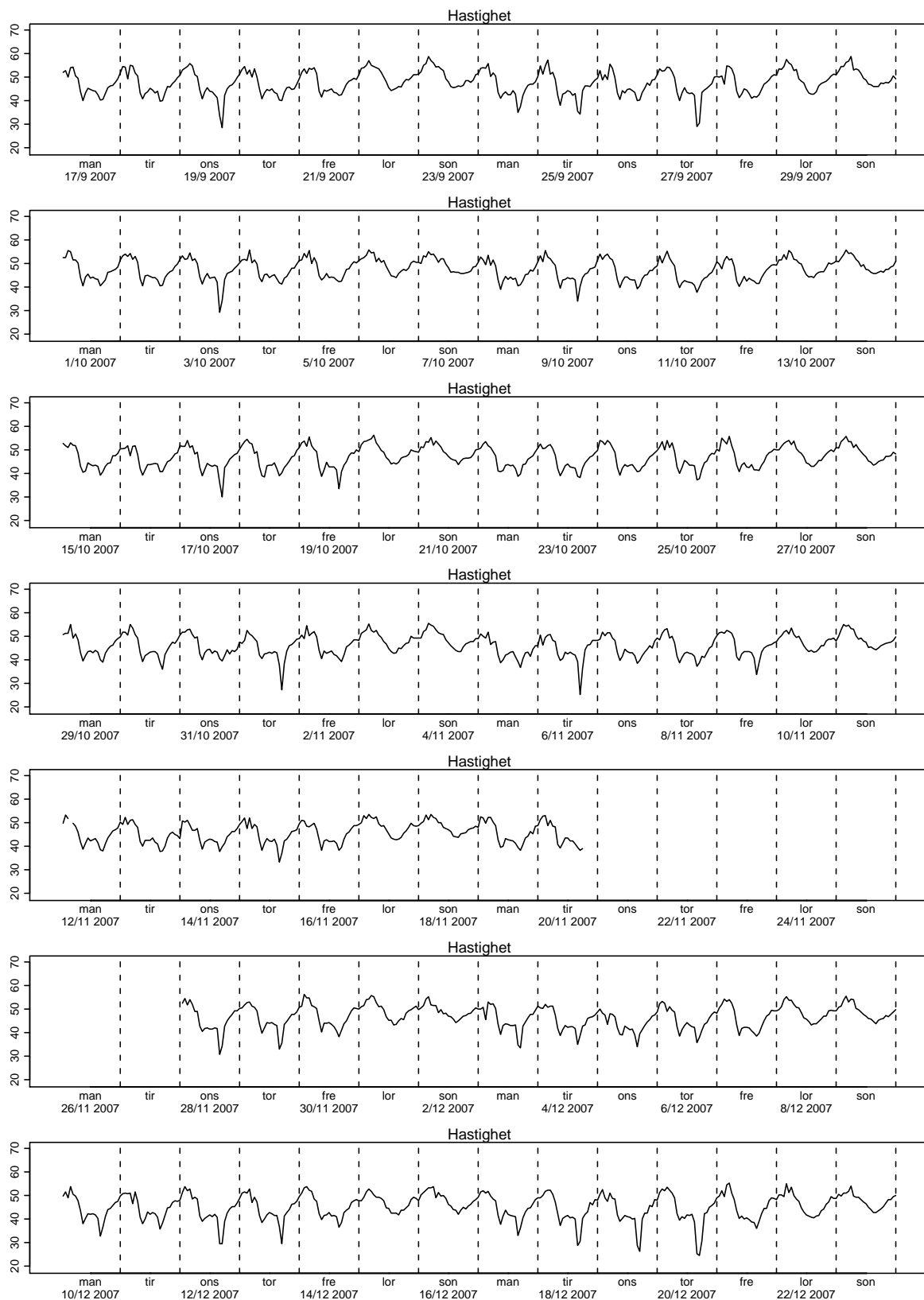




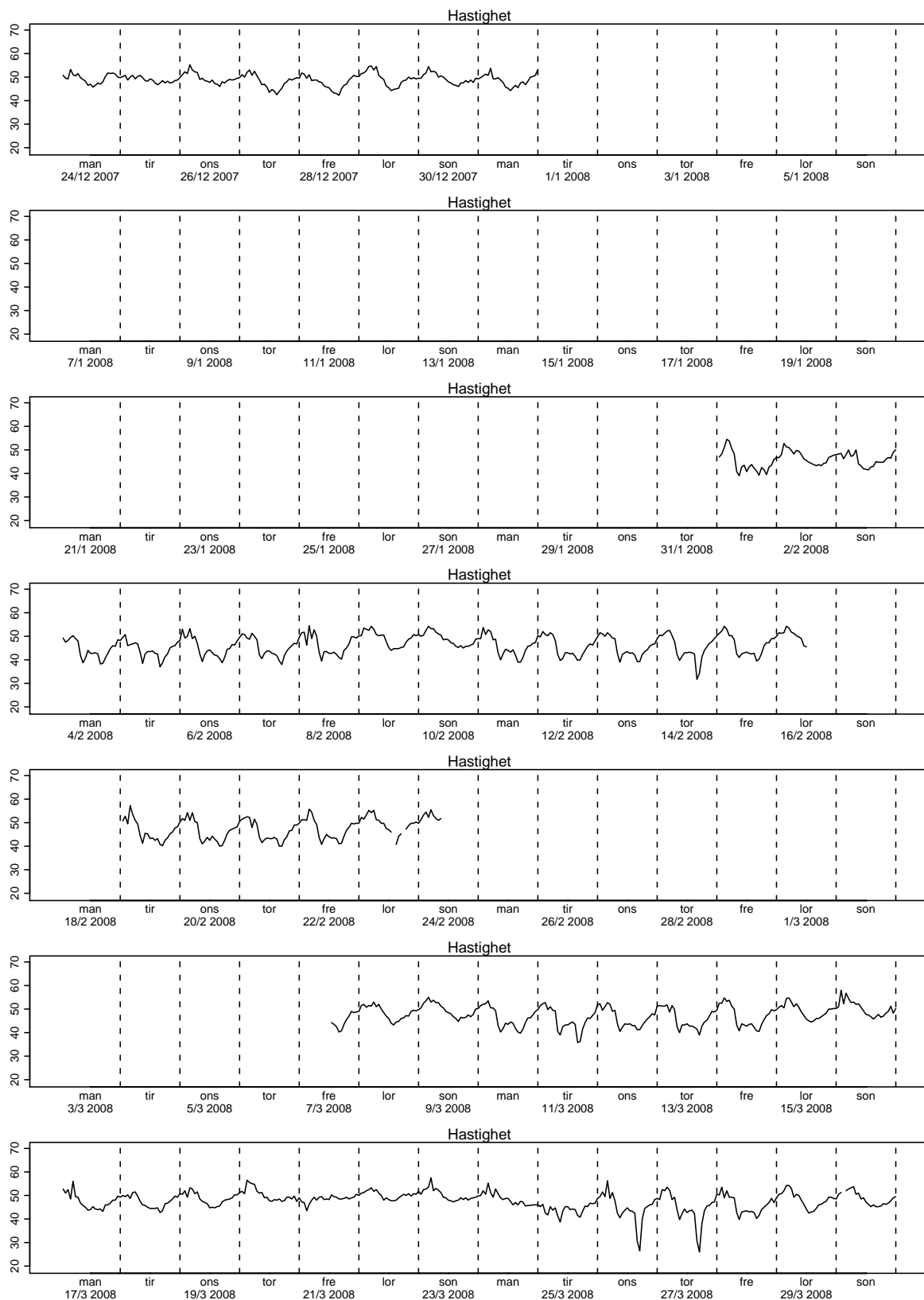
Figur 4.86. Gjennomsnittshastighet.



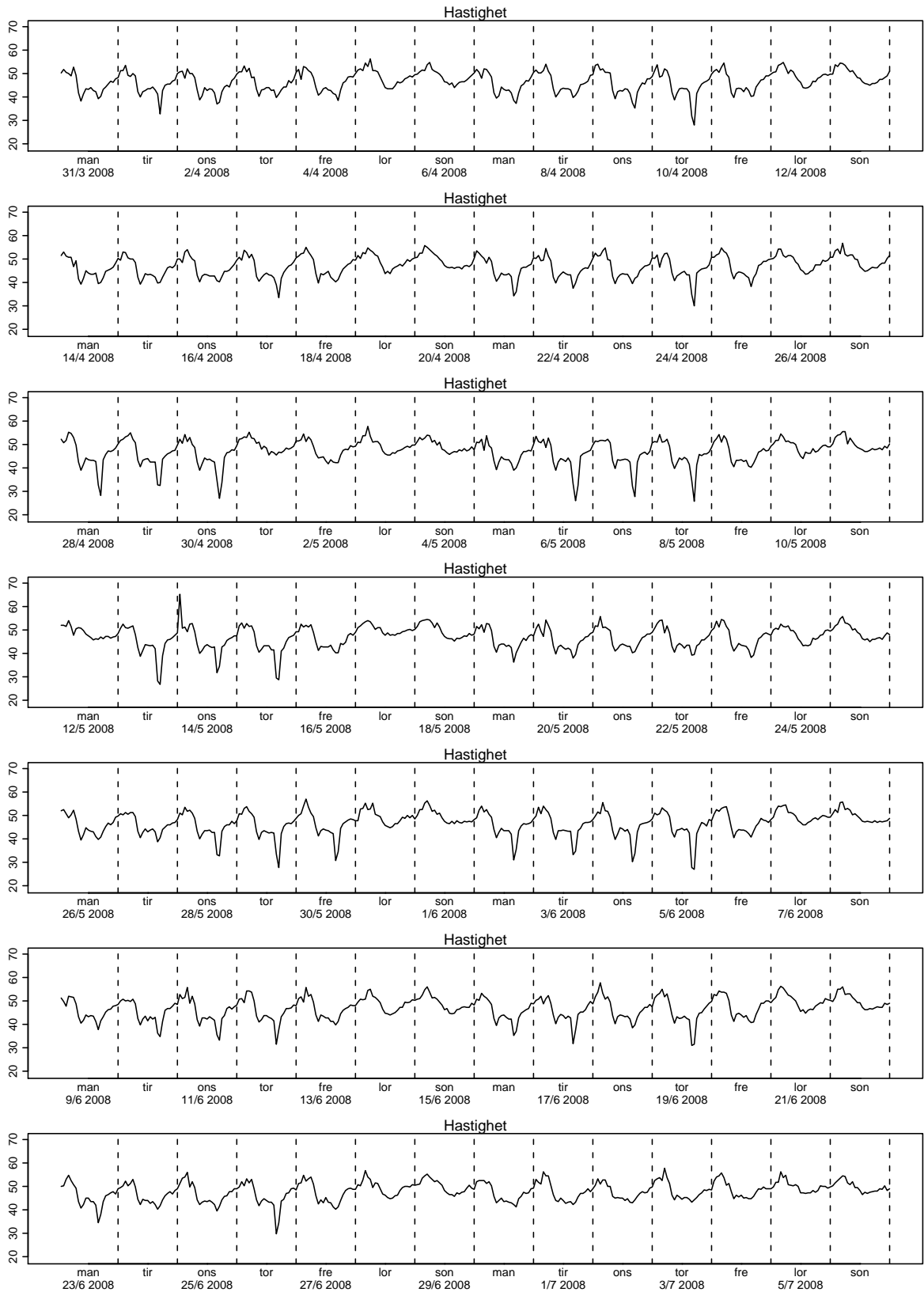
Figur 4.87. Gjennomsnittshastighet.



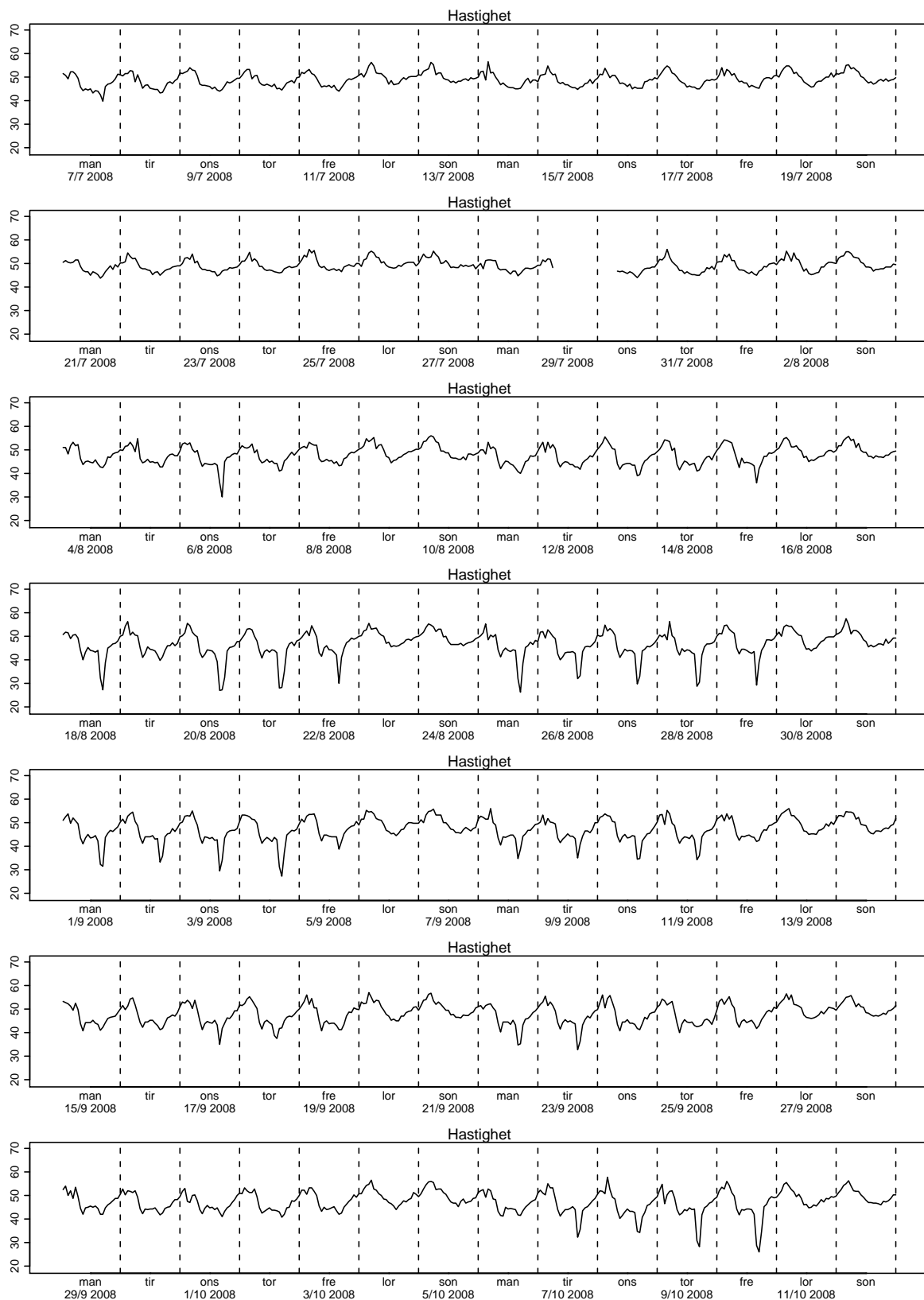
Figur 4.88. Gjennomsnittshastighet.



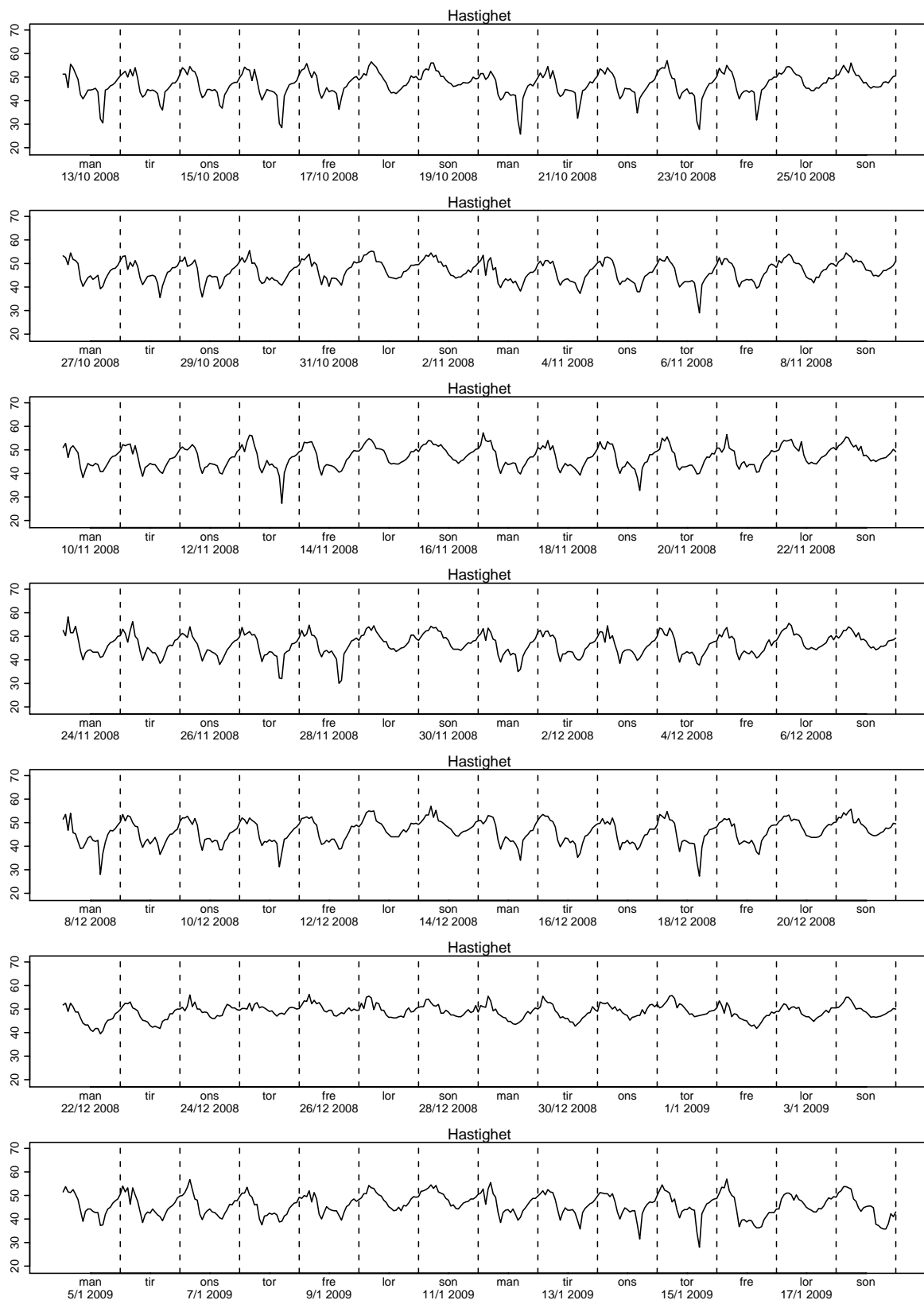
Figur 4.89. Gjennomsnittshastighet.



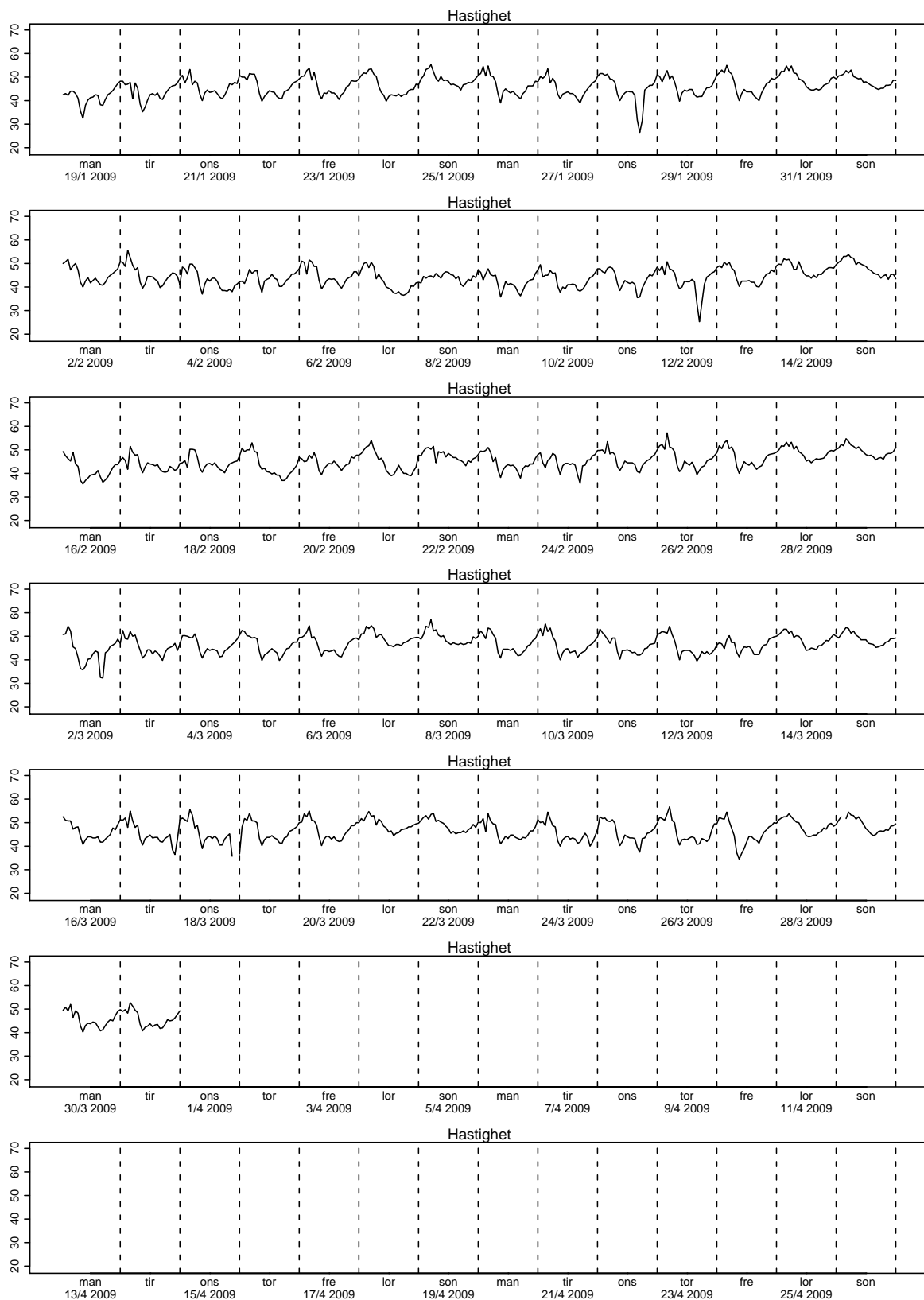
Figur 4.90. Gjennomsnittshastighet.



Figur 4.91. Gjennomsnittshastighet.



Figur 4.92. Gjennomsnittshastighet.



Figur 4.93. Gjennomsnittshastighet.



# Referanser

Haug, O. og Aldrin, M. (2006). Programvare for trafikkberegninger basert på basiskurvemetoden. Versjon pr. 16 november 2006. Teknisk rapport, Norsk Regnesentral.