**Figure 3.1** - MSC-E mercury scheme

**Fig. 3.2** - MSC-E mercury chemistry scheme
Figure 3.3 - Gaseous mercury concentration in air 1998 [ng m$^{-3}$]

Figure 3.4 - Mercury concentration in precipitation 1998 [ng L$^{-1}$]

Figure 3.5 - Mercury total deposition flux 1998 [g km$^{-2}$ a$^{-1}$]
Figure 3.6 - Observed and calculated annual means of mercury concentrations in ambient air 1997 and 1998

Figure 3.7 - Observed and calculated annual means of mercury concentration in precipitation 1997 and 1998
Figure 3.8 – Integrated MAMCS framework developed for the Mediterranean region (Pirrone et al. 2000a)
Major chemical and physical processes considered in the chemical module of the MAMCS modeling system (Pirrone et al. 2000a)

**Figure 3.9** - Major chemical and physical processes considered in the chemical module of the MAMCS modeling system (Pirrone et al. 2000a)
Figure 3.10 – Conceptual scheme showing major major links between chemical and physical process modules and RAMS e/o SKIRON meteorological systems in the overall MAMCS architecture (Pirrone et al. 2000a; Hedgecock and Pirrone 2001).
Example of the MAMCS modeling framework results (Pirrone et al. 2000a).

Figure 3.11 – Example of the MAMCS modeling framework results (Pirrone et al. 2000a)
Horizontal plot of geopotential heights and total winds at 850mb on 25 July (a) and 31 July (b); Modelled ambient concentrations of Hg\(^0\) on July 22 (c) and July 25 (d); Hg\(^+\) on July 22 (e) and July 20 (f) and Hg\(^2+\) on July 28 (g) (Pirrone et al. 2000a).
Figure 3.11 – Example of the MAMCS modeling framework results (Pirrone et al. 2000a)
Horizontal plot of geopotential heights and total winds at 850mb on 25 July (a) and 31 July (b);
Modelled ambient concentrations of Hg⁰ on July 22 (c) and July 25 (d); Hg⁺ on July 22 (e) and July 20 (f) and Hg²⁺ on July 28 (g) (Pirrone et al. 2000a).
Figure 3.12 - Total deposition of Hg species for the Summer period (17 July - 3 Aug. 1999. a) Dry deposition of adsorbed Hg\(^{0}\) (pg/m\(^2\)), b) wet deposition of adsorbed Hg\(^{0}\) (pg/m\(^2\)), c) dry deposition of Hg\(^{II}\) (ng/m\(^2\)), d) wet deposition of Hg\(^{II}\) (ng/m\(^2\)), e) dry deposition of Hg\(^{P}\) (ng/m\(^2\)), and f) wet deposition of Hg\(^{P}\) (ng/m\(^2\)) (from the MAMCS systems based SKIRON/Eta meteorological model) (Pirrone et al. 2000a).
Figure 3.13 - Total annual deposition of Hg species: 

- a) Dry deposition of adsorbed Hg$^0$ (ng/m$^2$), 
- b) wet deposition of adsorbed Hg$^0$ (ng/m$^2$), 
- c) dry deposition of Hg$^{II}$ (ng/m$^2$), 
- d) wet deposition of Hg$^{II}$ (ng/m$^2$), 
- e) dry deposition of Hg$^{P}$ (ng/m$^2$), and 
- f) wet deposition of Hg$^{P}$ (ng/m$^2$) (from the MAMCS systems based on the SKIRON/Eta meteorological model) (see for details Pirrone et al. 2001a) (Pirrone et al. 2000a).
Figure 3.14 – Modelled vs. measured ambient concentrations of TGM, Hg^{II} and Hg^{P} at five MAMCS sites. (Pirrone et al. 2000a)