Fig. 9. Observed 2-hr averaged AOT for Toyama (asterisks), Osaka (diamonds) and Shirahama (plusses). Consecutive Toyama data are connected with lines to bring out the sudden AOT changes, likely due to cloud contamination.

Fig. 10. AOT over Europe and Northern Africa on July 13, 2005 (9h – 14h GMT). Top panel shows the standard SPRINTARS simulation, central panel shows MODIS Aqua observations and bottom panel shows SPRINTARS assimilation.
Fig. 11. AOT over Northern America on July 14, 2005 (16\textsuperscript{h} – 22\textsuperscript{h} GMT). Top panel shows the standard SPRINTARS simulation, central panel shows MODIS Aqua observations and bottom panel shows SPRINTARS assimilation.

Fig. 12. AOT over Europe on July 26, 2005 (9\textsuperscript{h} – 14\textsuperscript{h} GMT). Top panel shows the standard SPRINTARS simulation, central panel shows MODIS Aqua observations and bottom panel shows SPRINTARS assimilation.