

UNIFIED MODEL DOCUMENTATION PAPER NO C3

LIST OF EXTERNAL FILES

by

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Model Version 4.5

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Modification Record		
Document version	Author	Description.....
17	Dave Robinson	Update from 3.1 to 4.5. Add Unit Numbers and Environment Variables for 104-149. Add separate list for Reconfiguration.

1. List of external files and Unit Numbers in the UM

The following is a list of the unit number allocations and environment variable names in a model run.

(R) indicates that the file is only used in the reconfiguration.

(4.n) indicates that this file was new in Version 4.n.

Logical Environment

Unit variable
No name

1	HKFILE	House keeping
2	PPXREF	Cross reference file for STASH to create PP headers.
3		Used for OASIS.
4	STASHCTL	Stash control file. Still used ??
5	NAMELIST	Namelist input.
6	OUTPUT	Run related printed output. Messages etc.
7	OUTPUT2	Printable physical diagnostic output file.
8	MCTL	Master control (preliminary job only).
9	ICTL	Interim control (preliminary job only).
10	PHIST	Permanent history file.
11	IHIST	Interim history file.
12	THIST	Temporary history file.
13	FTXX	Machineable version of this table
14	ERRFLAG	Error flag file
15	CACHE1	Assimilation cache I/O - for observations
16	CACHE2	Atmosphere cache I/O - for radiation increments
17	AOTRANS	Data swapping by the means program.
18	ASWAP	Atmosphere swapping file
19	OSWAP	Ocean swapping file
20	AINITIAL	Initial atmosphere dump (R)
21	ASTART	Atmosphere start dump (input).
22	ARESTART	Atmosphere re-start/instantaneous dump (output)
23	AOPSUM1	Partial sum dump. Period 1.
24	AOPSUM2	Partial sum dump. Period 2.
25	AOPSUM3	Partial sum dump. Period 3.
26	AOPSUM4	Partial sum dump. Period 4.
27	AOMEAN	Mean PP file.
28	ATMANL	Atmospheric analysis dump.
29	SSU	SSU Imported data/Upper air analyses (UARS)
(R)		
30	OZONE	Ozone.
31	SMCSNOWD	Soil moisture content and snow depth.
32	DSOILTMP	Deep soil temperatures.
33	SOILTYPE	Soil type dependent fields.
34	VEGTYPE	Vegetation type dependent fields (including Z ₀)
35	SSTIN	Sea surface temperatures.
36	SICEIN	Sea ice related fields.
37	PERTURB	Input perturbation file (R)
38	CURNTIN	Zonal and meridional sea surface currents
39	MASK	Land sea mask
40	OINITIAL	Initial ocean dump (R)
41	OSTART	Ocean start dump (input).
42	ORESTART	Ocean re-start/instantaneous dump (output).
43	AOPSTMP1	Partial sum temporary dump. Period 1.

44	AOPSTMP2	Partial sum temporary dump. Period 2.
45	AOPSTMP3	Partial sum temporary dump. Period 3.
46	AOPSTMP4	Partial sum temporary dump. Period 4.
47	OCNANL	Ocean analysis dump.
48	ATRACER	Tracer input file for atmosphere.
49	OTRACER	Tracer input file for ocean.
50	WFIN	Wind stress, wind mixing energy, surface pressure.
51	HFLUXIN	Solar heat flux, remaining heat flux.
52	PMEIN	Precipitation minus evaporation, river outflow, water type.
53	ICEFIN	Solar rad over ice, snowfall, sublimation.
54	AIRTMP	Reference surface temperature and salinity, climatological air temperature and ice depth.
55	Not used	
56	FLUXCORR	Flux correction to ocean.
57	SWSPECTD	Spectral data for SW radiation (4.0)
58	BAS_IND	Basin Indices File
59	SLABHCON	Heat convergence fields for the SLAB model
60	PP0	PP file 1
61	PP1	PP file 2
62	PP2	PP file 3
63	PP3	PP file 4
64	PP4	PP file 5
65	PP5	PP file 6
66	PP6	PP file 7
67	PP7	PP file 8
68	PP8	PP file 9
69	PP9	PP file 10

70-79 Observation files - Used in either AC or VAR
assimilation schemes.

70	OBS01	Observation file 1
71	OBS02	Observation file 2
72	OBS03	Observation file 3
73	OBS04	Observation file 4
74	OBS05	Observation file 5
75	OBS06	Observation file 6
76	OBS07	Observation file 7 / Ocean Observation file
77	OBS08	Observation file 8
78	OBS09	Observation file 9
79	OBS10	Observation file 10
80	LWSPECTD	Spectral data for LW Radiation (4.0)
81	WAVEOUT	Output for the wave model.
82	SURGEOUT	Output for the surge model.
83	MESOUT	Output for the mesoscale model.
84	STRATOUT	Output for the stratosphere model.
85	WFOUT	Wind stress, mixing energy out of atmosphere model for ocean model.
86	HFLUXOUT	Solar and remaining heat flux out of atmosphere model for ocean model
87	PMEOUT	Precip - evap out of atmosphere model for ocean model.

88	ICEFOUT	Snowfall, sublimation out of atmosphere model for ocean model.
89	MOSOUT	MOS output.
90	Not used	
	OLABCOUT	Pre 4.5, Output of ocean lateral boundary conditions
91	SSTOUT	Sea surface Temps out of ocean model for atmosphere model.
92	SICEOUT	Sea ice out of ocean model for atmosphere model.
93	CURNTOUT	Zonal and meridional currents out of ocean model for atmos model.
94	FLXCROUT	Flux correction output from ocean/slab model.
95	ALABCIN	Atmosphere Lateral BCs for limited area model.
96	OROG	Orography/lower BCs for the stratosphere model.
97	TRANSP	Input dump file for transplanting fields.
(R)		
98	OLABCIN	Ocean Lateral BCs for limited area model.
99	OCNDEPTH	Ocean depth.
100-103		
100	OLABCOU1	Output of ocean lateral boundary conditions, stream 1
101	OLABCOU2	Output of ocean lateral boundary conditions, stream 2
102	OLABCOU3	Output of ocean lateral boundary conditions, stream 3
103	OLABCOU4	Output of ocean lateral boundary conditions, stream 4
100-103		
		Pre 4.5 See 140-147.
100	ALABCOU1	Output of atmosphere lateral boundary conditions, stream 1
101	ALABCOU2	Output of atmosphere lateral boundary conditions, stream 2
102	ALABCOU3	Output of atmosphere lateral boundary conditions, stream 3
103	ALABCOU4	Output of atmosphere lateral boundary conditions, stream 4
104	Not used	
105	Not used	
106	Not used	
107	Not used	
108	ANLINCR	3DVAR analysis increment file (IAU file)
109	MURKFILE	Ancillary file for Murkiness Data.
110	SULPEMIS	Ancillary file for Sulphur Emissions.
111	USRANCIL	User single level ancillary file - Atmos
112	USRMULTI	User multi-level ancillary file - Atmos
113	OUSRANCL	User single-level ancillary file - Ocean
114	OUSRMULT	User multi-level ancillary file - Ocean
115	SO2NATEM	Ancillary file for Natural SO2 Emissions
(4.1)		
116	CHEMOXID	Ancillary file for Chemistry Oxidants (4.1)
117	AEROF CG	Ancillary file for Sulphate Aerosol Forcing (4.3)
118	CO2EMITS	Ancillary file for CO2 Emissions (4.5)

119 Not used

120-129 **CXnn files** - these contain model columns horizontally interpolated to observation locations in the 3DVAR.

120 CX01 CX File 1

121 CX02 CX File 2

122 CX03 CX File 3

123 CX04 CX File 4

124 CX05 CX File 5

125 CX06 CX File 6

126 CX07 CX File 7

127 CX08 CX File 8

128 CX09 CX File 9

129 CX10 CX File 10

130 WINITIAL Initial wave dump (4.1) **(R)**

131 WSTART Wave start dump (input) (4.1).

132 WRESTART Wave re-start/instantaneous dump (output) (4.1)

133 WAVEANL Wave analysis Dump (4.1)

134 WAVANCIN Wave Ancillary file (4.1)

135 FRACINIT Ancillary file for initial surface type fractions (4.4)

136 VEGINIT Ancillary file for initial vegetation state (4.4)

137 DISTURB Ancillary file for vegetation disturbance (4.4)

138 CACHED File to store model increments between model timesteps (4.4, was Unit 3 pre-4.4)

139 SOOTEMIS Ancillary file for Soot Emissions (4.5)

140 ALABCOU1 Output of atmosphere lateral boundary conditions, stream 1 (4.5)

141 ALABCOU2 Output of atmosphere lateral boundary conditions, stream 2 (4.5)

142 ALABCOU3 Output of atmosphere lateral boundary conditions, stream 3 (4.5)

143 ALABCOU4 Output of atmosphere lateral boundary conditions, stream 4 (4.5)

144 ALABCOU5 Output of atmosphere lateral boundary conditions, stream 5 (4.5)

145 ALABCOU6 Output of atmosphere lateral boundary conditions, stream 6 (4.5)

146 ALABCOU7 Output of atmosphere lateral boundary conditions, stream 7 (4.5)

147 ALABCOU8 Output of atmosphere lateral boundary conditions, stream 8 (4.5)

148 Not used

149 Not used

2. List Of External Files and Unit Numbers in the Reconfiguration

The following is a list of the unit number allocated and their environment variable names in the reconfiguration.

Logical Environment

<u>Unit</u>	<u>variable</u>	
<u>No</u>	<u>name</u>	
2		User Stashmaster file
18	AGRIB	Input file containing GRIB data
19	RECONTMP	Intermediate file to process grib code data
20	AINITIAL	Input atmosphere dump
21	ASTART	Output atmosphere dump
22		Stashmaster file
29	SSU	SSU imported data / Upper air analyses
(UARS)		
30	OZONE	Ozone.
31	SMCSNOWD	Soil moisture content and snow depth.
32	DSOILTMP	Deep soil temperatures.
33	SOILTYPE	Soil type dependent fields.
34	VEGTYPE	Vegetation type dependent fields (including Z ₀)
35	SSTIN	Sea surface temperatures.
36	SICEIN	Sea ice related fields.
37	PERTURB	Input ECWMF perturbation file
38	CURNTIN	Zonal and meridional sea surface currents
39	MASK	Land sea mask
40	OINITIAL	Input oceanic dump.
41	OSTART	Output oceanic dump.
48	ATRACER	Tracer input file for atmosphere.
49	OTRACER	Tracer input file for ocean.
59	SLABHCON	Heat convergence fields for the SLAB model
96	OROG	Orography/ lower BCs for the stratosphere
model		
97	TRANSP	Input dump file for transplant fields
109	MURKFILE	Ancillary file for Murkiness data
110	SULPEMIS	Ancillary file for Sulphur Emissions.
111	USRANCIL	User single level ancillary file - Atmos
112	USRMULTI	User multi-level ancillary file - Atmos
115	SO2NATEM	Ancillary file for Natural SO2 Emissions
(4.1)		
116	CHEMOXID	Ancillary file for Chemistry Oxidants (4.1)
117	AEROF CG	Ancillary file for Sulphate Aerosol Forcing
(4.3)		
118	CO2EMITS	Ancillary file for Surface CO2 Emissions
(4.5)		
135	FRACINIT	Ancillary file for initial surface type fractions (4.4)
136	VEGINIT	Ancillary file for initial vegetation state (4.4)
137	DISTURB	Ancillary file for vegetation disturbance
(4.4)		