Data Dictionary of PPR Project (2017.A6.094.17D)

Task 1 - To investigate the causes of O3 episodes and quantify the contributions of various factors to O3 episodes from 2005 to 2017 in Hong Kong

1. **File name: 2017.A6.094.17D_Empirical Data_Task 1 - Data File 1_O3 daily maximum**

Name	Description	Remark
YYYY	Year of the sample	Data type：Date
Month	Month of the sample	Data type：Date
YM	Year and month of the sample	Data type：Date
Date	Date of the sample	Data type：Date
Max O3	Daily maximum value of the hourly average ozone concentration in each day	Data type：Numeric Unit: ppbv

2. **File name: 2017.A6.094.17D_Empirical Data_Task 1 - Data File 1_O3 episodes distribution**

Name	Description	Remark
Year	Year of the sample	Data type: Numeric, Unit: year
Jan	January	Data type: Numeric, Unit: day
Feb	February	Data type: Numeric, Unit: day
Mar	March	Data type: Numeric, Unit: day
Apr	April	Data type: Numeric, Unit: day
May	May	Data type: Numeric, Unit: day
Jun	June	Data type: Numeric, Unit: day
Jul	July	Data type: Numeric, Unit: day
Aug	August	Data type: Numeric, Unit: day
Sep	September	Data type: Numeric, Unit: day
Oct	October	Data type: Numeric, Unit: day
Nov	November	Data type: Numeric, Unit: day
Dec	December	Data type: Numeric, Unit: day
sum	Total O3 episode days	Data type: Numeric, Unit: day

3. **File name: 2017.A6.094.17D_Empirical Data_Task 1 - Data File 1_O3_all**

Name	Description	Remark
Date & Time	Date and hour of the sample	Data type：Date
DATE	Date of the sample	Data type：Date
YYYY	Year of the sample	Data type：Date
MM	Month of the sample	Data type：Date

YM	Year and month of the sample	Data type：Date
DD	Day of the sample	Data type：Date
SEASON	Season of the sample	Data type：Text
HOUR	Hour of the sample	Data type：Numeric
O3 (ug/m^3)	Ozone pollutant level	Data type：Numeric Unit: ug/m^3
O3 (ppbv)	Ozone pollutant level	Data type：Numeric Unit: ppbv
STATION	Tung Chung station, 113.94°E, 22.29°N	Data type：Text Unit: --

4. File name: 2017.A6.094.17D_Empirical Data_Task 1 - Data File 1_O3episode weather

Name	Description	Remark
Date	Date of the sample	Data type：Date
MM	Month of the sample	Data type：Numeric
DD	Day of the sample	Data type：Numeric
YY	Year of the sample	Data type：Numeric
weather situation	Weather system description	Data type: Text
category	Weather category	Data type: Text CC: Synoptic pattern of small high pressure cell TS: Synoptic pattern of typhoon in South China Sea TW: Synoptic pattern of typhoon in the West Pacific Ocean T+T: Synoptic pattern of double typhoon CN: Synoptic pattern of continental anticyclone in northern China LT: Synoptic pattern of low pressure trough LF: Synoptic pattern of cold front T+C: Synoptic pattern of typhoon system coupling with continental anticyclone T+L: Synoptic pattern of typhoon system coupling with cold front

5. File name: 2017.A6.094.17D_Empirical Data_Task 1 - Data File 2_O3dm8a_meteo

Name	Description	Remark
year	Year of the sample	Data type：Numeric
month	Month of the sample	Data type：Numeric
day	Day of the sample	Data type：Numeric

date	Date of the sample	Data type：Date
site	Tung Chung (TC) station, a suburban sampling site in Hong Kong	Data type: Text
O38hmax	Daily maximum eight-hour average concentrations of ozone	Data type: Numeric Unit: ppbv
ssr	Surface solar radiation	Data type: Numeric Unit: J/m^2
t	Daily maximum 2-m temperature	Data type: Numeric Unit: ^oC
rh	Daily minimum relative humidity	Data type: Numeric Unit: %
u	10-m U wind component	Data type: Numeric Unit: m/s
v	10-m V wind component	Data type: Numeric Unit: m/s

6. File name: 2017.A6.094.17D_Empirical Data_Task 1 - Data File 3_meteo_adjust

Name	Description	Remark
date	Date of the sample	Data type：Date
year	Year of the sample	Data type：Numeric
month	Month of the sample	Data type：Numeric
day	Day of the sample	Data type：Numeric
season	Season of the sample	Data type：Text
DMA8	Daily maximum eight-hour average concentrations of ozone	Data type: Numeric Unit: ppbv
adjust	Meteorological-adjusted O3, which meteorological factors affecting O3 variations were removed	Data type: Numeric Unit: ppbv
meteo_effect	The values using daily maximum eight-hour average O3 subtracting meteorological-adjusted O3	Data type: Numeric Unit: ppbv
DMA8_LT	Long-term component of DMA8 O3 (extracted by KZ filter using multiple linear regression model)	Data type: Numeric Unit: ppbv
adjust_LT	Long-term component of meteorological-adjusted O3	Data type: Numeric Unit: ppbv
meteo_effect_LT	The value using 'DMA8_LT' subtracting 'adjust_LT'	Data type: Numeric Unit: ppbv
ssr effect_LT	Surface solar radiation factor affecting long-term component of DMA8 O3	Data type: Numeric Unit: ppbv
temp_effect_LT	Daily maximum 2-m temperature factor affecting long-term component of DMA8 O3	Data type: Numeric Unit: ppbv

rh effect_LT	Daily minimum relative humidity affecting long-term component of DMA8 O3	Data type: Numeric Unit: ppbv
u_effect_LT	10-m U wind factor affecting long-term component of DMA8 O3	Data type: Numeric Unit: ppbv
v_effect_LT	10-m V wind factor affecting long-term component of DMA8 O3	Data type: Numeric Unit: ppbv
ssr effect	Surface solar radiation factor affecting DMA8 O3	Data type: Numeric Unit: ppbv
temp_effct	Daily maximum 2-m temperature factor affecting DMA8 O3	Data type: Numeric Unit: ppbv
rh effect	Daily minimum relative humidity affecting DMA8 O3	Data type: Numeric Unit: ppbv
u_effect	10-m U wind factor affecting DMA8 O3	Data type: Numeric Unit: ppbv
v_effect	10-m V wind factor affecting DMA8 O3	Data type: Numeric Unit: ppbv
N	Number of the sample	Data type: Numeric

Task 2 - To determine temporal trends of locally-produced and regionally-transported O3, and to study local O3 formation mechanisms

7. **File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 1_DMA8 O3 11 sites daily**

Name	Description	Remark
date	Date of the sample	Data type： Date
Epi/NE	O3 episodes with hourly O3 concentration over 100 ppbv in a day / Non-O3 episodes with all hourly O3 concentrations less than 100 ppbv in a day	Data type: Text
DMA8 O3 (TC)	DMA8 O3 concentration at Tung Chung, as one of the air quality air monitoring station (AQMS) station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (ST)	DMA8 O3 concentration at Sha Tin, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (YL)	DMA8 O3 concentration at Yuen Long, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (TP)	DMA8 O3 concentration at Tai Po, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (TM)	DMA8 O3 concentration at Tap Mun, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (ET)	DMA8 O3 concentration at Eastern, as one of AQMS station in HK	Data type: Numeric Unit: ppbv

DMA8 O3 (TW)	DMA8 O3 concentration at Tsuen Wan, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (KC)	DMA8 O3 concentration at Kwai Chung, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (SSP)	DMA8 O3 concentration at Sham Shui Po, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (CW)	DMA8 O3 concentration at Central Western, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (KT)	DMA8 O3 concentration at Kwun Tong, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
Min DMA8 O3	Minimum values of DMA8 O3 in each day	Data type: Numeric Unit: ppbv

8. **File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 1_DMA8 O3 11 sites monthly**

Name	Description	Remark
date	Date of the sample	Data type：Date
DMA8 O3 (TC)	DMA8 O3 concentration at Tung Chung, as one of the air quality air monitoring station (AQMS) station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (ST)	DMA8 O3 concentration at Sha Tin, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (YL)	DMA8 O3 concentration at Yuen Long, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (TP)	DMA8 O3 concentration at Tai Po, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (TM)	DMA8 O3 concentration at Tap Mun, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (ET)	DMA8 O3 concentration at Eastern, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (TW)	DMA8 O3 concentration at Tsuen Wan, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (KC)	DMA8 O3 concentration at Kwai Chung, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (SSP)	DMA8 O3 concentration at Sham Shui Po, as one of AQMS station in HK	Data type: Numeric Unit: ppbv

DMA8 O3 (CW)	DMA8 O3 concentration at Central Western, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
DMA8 O3 (KT)	DMA8 O3 concentration at Kwun Tong, as one of AQMS station in HK	Data type: Numeric Unit: ppbv
Min DMA8 O3	Minimum values of DMA8 O3 in each day	Data type: Numeric Unit: ppbv

9. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 2_CB05input

Name	Description	Remark
date	Date of the sample	Data type：Date
hour	Hour of the sample	Date type: Hour
Temp	Temperature	Data type: Numeric Unit: ^{o}C
RH	Relative humidity	Data type: Numeric Unit: %
PRES	Sea level pressure	Data type: Numeric Unit: hPa
O3	Ozone pollutant level (for CB05 model operation)	Data type: Numeric Unit: ppmv
NO	Nitric oxide (for CB05 model operation)	Data type: Numeric Unit: ppmv
NO2	Nitrogen dioxide (for CB05 model operation)	Data type: Numeric Unit: ppmv
SO2	Sulfur dioxide (for CB05 model operation)	Data type: Numeric Unit: ppmv
CO	Carbon monoxide (for CB05 model operation)	Data type: Numeric Unit: ppmv
LC3H8	Mixing ratio of C3H8 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LC3H6	Mixing ratio of C3H6 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LIC4H10	Mixing ratio of IC4H10 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LNC4H10	Mixing ratio of NC4H10 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LTBUT2ENE	Mixing ratio of 1-BUTENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LCBUT2ENE	Mixing ratio of TRANS-2-BUTENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LIC5H12	Mixing ratio of IC5H12 (for CB05 model operation)	Data type: Numeric Unit: ppmv

LNC5H12	Mixing ratio of NC5H12 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LC4H6	Mixing ratio of C4H6 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LC5H8	Mixing ratio of C5H8 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LM2PE	Mixing ratio of 2-METHYLPENTAN (for CB05 model operation)	Data type: Numeric Unit: ppmv
LNC6H14	Mixing ratio of NC6H14 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LNC7H16	Mixing ratio of NC7H16 (for CB05 model operation)	Data type: Numeric Unit: ppmv
LBENZENE	Mixing ratio of BENZENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LTOLUENE	Mixing ratio of TOLUENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LEBENZ	Mixing ratio of ETHYLBENZENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LMXYL	Mixing ratio of M-/P-XYLENEs (for CB05 model operation)	Data type: Numeric Unit: ppmv
LOXYL	Mixing ratio of O-XYLENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LTM135B	Mixing ratio of 1,3,5-TRIMETHYLBENZENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LTM124B	Mixing ratio of 1,2,4-TRIMETHYLBENZENE (for CB05 model operation)	Data type: Numeric Unit: ppmv
LTM123B	Mixing ratio of 1,2,3-TRIMETHYLBENZENE (for CB05 model operation)	Data type: Numeric Unit: ppmv

10. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 2_CB05output

Name	Description	Remark
date	Date of the sample	Data type：Date
hour	Hour of the sample	Date type: Hour
NO	Nitric oxide (for CB05 output data)	Data type: Numeric Unit: ppmv
NO2	Nitrogen dioxide (for CB05 output data)	Data type: Numeric Unit: ppmv
OH	CB05 simulated OH radicals (CB05 output data)	Data type: Numeric Unit: ppmv
HO2	CB05 simulated HO2 radicals (CB05 output data)	Data type: Numeric Unit: ppmv

O3	CB05 simulated O3 (CB05 output data)	Data type: Numeric Unit: ppmv
PAN	CB05 simulated peroxyacyl nitrates (CB05 output data)	Data type: Numeric Unit: ppmv
HNO3	CB05 simulated HNO3 (CB05 output data)	Data type: Numeric Unit: ppmv
H2O2	CB05 simulated H2O2 (CB05 output data)	Data type: Numeric Unit: ppmv
SO2	CB05 simulated SO2 (CB05 output data)	Data type: Numeric Unit: ppmv
RO2	CB05 simulated RO2 radicals (CB05 output data)	Data type: Numeric Unit: ppmv

11. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 2_linearO3

Name	Description	Remark
DATE	Date of the sample	Data type：Date
MONTH	Month of the sample	Data type：Numeric
Observed DMA8 O3 (TC)	Observed DMA8 O3 at TC station	Data type: Numeric Unit: ppbv
Regional DMA8 O3 (Min DMA8 O3)	The lowest O3 concentration across the monitoring sites in Hong Kong	Data type: Numeric Unit: ppbv
Local DMA8 O3 (observed - regional)	The values using 'Observed DMA8 O3 (TC)' subtracting 'Regional DMA8 O3 (Min DMA8 O3)'	Data type: Numeric Unit: ppbv

12. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 2_local-regionO3

Name	Description	Remark
DATE	Date of the sample	Data type：Date
Observed DMA8 O3 (TC)	Observed DMA8 O3 at TC station	Data type: Numeric Unit: ppbv
Local DMA8 O3 (CB05 simulated O3)	Locally-produced DMA8 O3 at TC station simulated by CB05 model	Data type: Numeric Unit: ppbv
Regional DMA8 O3 (observed - local)	The values using 'Observed DMA8 O3 (TC)' subtracting 'Local DMA8 O3 (CB05 simulated O3)'	Data type: Numeric Unit: ppbv

13. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 3_trace gases TVOC

Name	Description	Remark
DATE	Date of the sample	Data type：Date
HOUR	Hour of the sample	Data type：Time
MONTH	Month of the sample	Data type：Numeric
SEASON	Season of the sample	Data type：Text
CO	Carbon monoxide pollutant level (for trace gas seasonal trend calculation)	Data type: Numeric Unit: ppbv
NO2	Nitric oxide pollutant level (for trace gas seasonal trend calculation)	Data type: Numeric Unit: ppbv
NO	Nitrogen dioxide pollutant level (for trace gas seasonal trend calculation)	Data type: Numeric Unit: ppbv
TVOC	Total volatile organic compounds level (for their seasonal trend calculation)	Data type: Numeric Unit: ppbv

14. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 4_RIRvalue_trace gases

Name	Description	Remark
DATE	Year of the sample	Data type: Date Unit: --
YY	Year of the sample	Data type: Date Unit: --
MM	Month of the sample	Data type: Date Unit: --
DD	Day of the sample	Data type: Date Unit: --
HH	Hour of the sample	Data type: Time Unit: h
YYMM	Year and month of the sample	Data type: Date Unit: --
Epi/NE	O3 episodes with hourly O3 concentration over 100 ppbv in a day / Non-O3 episodes with all hourly O3 concentrations less than 100 ppbv in a day	Data type: Text
SEASON	Season of the sample	Data type: Text Unit: --
AVOC	VOCs originated from anthropogenic activities	Data type: Numeric (RIR value) Unit: --

BVOC	VOCs originated from biogenic emissions	Data type: Numeric (RIR value) Unit: --
CO	Carbon monoxide pollutant	Data type: Numeric (RIR value) Unit: --
NOx	Nitric oxide and nitrogen dioxide pollutants	Data type: Numeric (RIR value) Unit: --

15. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 5_RIRvalue_VOC

Name	Description	Remark
DATE	Date of the sample	Data type：Date
MONTH	Month of the sample	Data type：Numeric
Benzene	Mixing ratio of benzene	Data type: Numeric (RIR value) Unit: --
Ethene	Mixing ratio of ethene	Data type: Numeric (RIR value) Unit: --
Ethyl-benzene	Mixing ratio of ethyl-benzene	Data type: Numeric (RIR value) Unit: --
Butane	Mixing ratio of butane	Data type: Numeric (RIR value) Unit: --
Nhexane	Mixing ratio of n-hexane	Data type: Numeric (RIR value) Unit: --
Toluene	Mixing ratio of toluene	Data type: Numeric (RIR value) Unit: --
Xylene	Mixing ratio of xylene	Data type: Numeric (RIR value) Unit: --
Butene	Mixing ratio of butene	Data type: Numeric (RIR value) Unit: --
Ethane	Mixing ratio of ethane	Data type: Numeric (RIR value) Unit: --
Ethyne	Mixing ratio of ethyne	Data type: Numeric (RIR value) Unit: --

Pentane	Mixing ratio of pentane	Data type: Numeric (RIR value) Unit: --
Propane	Mixing ratio of propane	Data type: Numeric (RIR value) Unit: --
Propene	Mixing ratio of propene	Data type: Numeric (RIR value) Unit: --

16. File name: 2017.A6.094.17D_Empirical Data_Task 2 - Data File 6_RIRvlaue_tranition rgime

Name	Description	Remark
DATE	Year of the sample	Data type: Date Unit: --
YY	Year of the sample	Data type: Date Unit: --
MM	Month of the sample	Data type: Date Unit: --
DD	Day of the sample	Data type: Date Unit: --
HH	Hour of the sample	Data type: Time Unit: h
YYMM	Year and month of the sample	Data type: Date Unit: --
Epi/NE	O3 episodes with hourly O3 concentration over 100 ppbv in a day / Non-O3 episodes with all hourly O3 concentrations less than 100 ppbv in a day	Data type: Text
AVOC	VOCs originated from anthropogenic activities (selected O3 episodes controlled by transitional regime)	Data type: Numeric (RIR value) Unit: --
BVOC	VOCs originated from biogenic emissions (selected O3 episodes controlled by transitional regime)	Data type: Numeric (RIR value) Unit: --
CO	Carbon monoxide pollutant (selected O3 episodes controlled by transitional regime)	Data type: Numeric (RIR value) Unit: --
NOx	Nitric oxide and nitrogen dioxide pollutants (selected O3 episodes controlled by transitional regime)	Data type: Numeric (RIR value) Unit: --

Task 3 - To evaluate the effectiveness of previous and on-going air pollution control measures in Hong Kong

17. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_data process

Name	Description	Data type	Unit
Year	Year of the sample	Numeric	--
Month	Month of the sample	Numeric	--
Ethene	Mixing ratio of ethene	Numeric	ppbv
Propene	Mixing ratio of propene	Numeric	ppbv
Ethyne	Mixing ratio of ethyne	Numeric	ppbv
NMHCs	Mixing ratio of non-methane hydrocarbons	Numeric	ppbv
NO2	Mixing ratio of NO2 (at MK station)	Numeric	ppbv
NO	Mixing ratio of NO (at MK station)	Numeric	ppbv
NOx	Mixing ratio of NO+NO2 (at MK station)	Numeric	ppbv
Ethene (confidence)	95% confidence interval of ethene	Numeric	ppbv
Propene (confidence)	95% confidence interval of propene	Numeric	ppbv
Ethyne (confidence)	95% confidence interval of ethyne	Numeric	ppbv
NMHCs (confidence)	95% confidence interval of non-methane hydrocarbons	Numeric	ppbv
NO2 (confidence)	95% confidence interval of NO2 (at MK station)	Numeric	ppbv
NO (confidence)	95% confidence interval of NO (at MK station)	Numeric	ppbv
NOx (confidence)	95% confidence interval of NO+NO2 (at MK station)	Numeric	ppbv

18. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_MCM input cut NOx & VOC

Name	Description	Data type	Unit
Date	Date of the sample	Numeric	--
Year	Year of the sample	Numeric	--

mm	Month of the sample	Numeric	--
dd	Day of the sample	Numeric	--
LTEMP	Temperature (for MCM model operation)	Numeric	K
LH2O	Humidity (number of H2O molecules; for MCM model operation)	Numeric	molecules
LO3	Mixing ratio of O3 (for MCM model operation)	Numeric	ppbv
LCO	Mixing ratio of CO (for MCM model operation)	Numeric	ppbv
LNO	Mixing ratio of NO (for MCM model operation)	Numeric	ppbv
LNO2	Mixing ratio of NO2 (for MCM model operation)	Numeric	ppbv
LSO2	Mixing ratio of SO2 (for MCM model operation)	Numeric	ppbv
LC2H6	Mixing ratio of C2H6 (for MCM model operation)	Numeric	pptv
LC2H4	Mixing ratio of C2H4 (for MCM model operation)	Numeric	pptv
LC2H2	Mixing ratio of C2H2 (for MCM model operation)	Numeric	pptv
LC3H8	Mixing ratio of C3H8 (for MCM model operation)	Numeric	pptv
LC3H6	Mixing ratio of C3H6 (for MCM model operation)	Numeric	pptv
LIC4H10	Mixing ratio of IC4H10 (for MCM model operation)	Numeric	pptv
LNC4H10	Mixing ratio of NC4H10 (for MCM model operation)	Numeric	pptv
LBUT1ENE	Mixing ratio of 1-BUTENE (for MCM model operation)	Numeric	pptv
LTBUT2ENE	Mixing ratio of TRANS-2-BUTENE (for MCM model operation)	Numeric	pptv
LCBUT2ENE	Mixing ratio of CIS-2-BUTENE (for MCM model operation)	Numeric	pptv
LIC5H12	Mixing ratio of IC5H12 (for MCM model operation)	Numeric	pptv
LNC5H12	Mixing ratio of NC5H12 (for MCM model operation)	Numeric	pptv
LC4H6	Mixing ratio of C4H6 (for MCM model operation)	Numeric	pptv

LPENT1ENE	Mixing ratio of 1-PENTENE (for MCM model operation)	Numeric	pptv
LC5H8	Mixing ratio of C5H8 (for MCM model operation)	Numeric	pptv
LM2PE	Mixing ratio of 2-METHYLPENTAN (for MCM model operation)	Numeric	pptv
LNC6H14	Mixing ratio of NC6H14 (for MCM model operation)	Numeric	pptv
LNC7H16	Mixing ratio of NC7H16 (for MCM model operation)	Numeric	pptv
LNC8H18	Mixing ratio of NC8H18 (for MCM model operation)	Numeric	pptv
LBENZENE	Mixing ratio of BENZENE (for MCM model operation)	Numeric	pptv
LTOLUENE	Mixing ratio of TOLUENE (for MCM model operation)	Numeric	pptv
LEBENZ	Mixing ratio of ETHYLBENZENE (for MCM model operation)	Numeric	pptv
LMXYL	Mixing ratio of M-/P-XYLENEs (for MCM model operation)	Numeric	pptv
LOXYL	Mixing ratio of O-XYLENE (for MCM model operation)	Numeric	pptv
LTM135B	Mixing ratio of 1,3,5-TRIMETHYLBENZENE (for MCM model operation)	Numeric	pptv
LTM124B	Mixing ratio of 1,2,4-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv
LTM123B	Mixing ratio of 1,2,3-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv

19. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_MCM input cut NOx

Name	Description	Data type	Unit
Date	Date of the sample	Numeric	--
Year	Year of the sample	Numeric	--
mm	Month of the sample	Numeric	--
dd	Day of the sample	Numeric	--
LTEMP	Temperature (for MCM model operation)	Numeric	K

LH2O	Humidity (number of H2O molecules; for MCM model operation)	Numeric	molecules
LO3	Mixing ratio of O3 (for MCM model operation)	Numeric	ppbv
LCO	Mixing ratio of CO (for MCM model operation)	Numeric	ppbv
LNO	Mixing ratio of NO (for MCM model operation)	Numeric	ppbv
LNO2	Mixing ratio of NO2 (for MCM model operation)	Numeric	ppbv
LSO2	Mixing ratio of SO2 (for MCM model operation)	Numeric	ppbv
LC2H6	Mixing ratio of C2H6 (for MCM model operation)	Numeric	pptv
LC2H4	Mixing ratio of C2H4 (for MCM model operation)	Numeric	pptv
LC2H2	Mixing ratio of C2H2 (for MCM model operation)	Numeric	pptv
LC3H8	Mixing ratio of C3H8 (for MCM model operation)	Numeric	pptv
LC3H6	Mixing ratio of C3H6 (for MCM model operation)	Numeric	pptv
LIC4H10	Mixing ratio of IC4H10 (for MCM model operation)	Numeric	pptv
LNC4H10	Mixing ratio of NC4H10 (for MCM model operation)	Numeric	pptv
LBUT1ENE	Mixing ratio of 1-BUTENE (for MCM model operation)	Numeric	pptv
LTBUT2ENE	Mixing ratio of TRANS-2-BUTENE (for MCM model operation)	Numeric	pptv
LCBUT2ENE	Mixing ratio of CIS-2-BUTENE (for MCM model operation)	Numeric	pptv
LIC5H12	Mixing ratio of IC5H12 (for MCM model operation)	Numeric	pptv
LNC5H12	Mixing ratio of NC5H12 (for MCM model operation)	Numeric	pptv
LC4H6	Mixing ratio of C4H6 (for MCM model operation)	Numeric	pptv
LPENT1ENE	Mixing ratio of 1-PENTENE (for MCM model operation)	Numeric	pptv
LC5H8	Mixing ratio of C5H8 (for MCM model operation)	Numeric	pptv

LM2PE	Mixing ratio of 2-METHYLPENTAN (for MCM model operation)	Numeric	pptv
LNC6H14	Mixing ratio of NC6H14 (for MCM model operation)	Numeric	pptv
LNC7H16	Mixing ratio of NC7H16 (for MCM model operation)	Numeric	pptv
LNC8H18	Mixing ratio of NC8H18 (for MCM model operation)	Numeric	pptv
LBENZENE	Mixing ratio of BENZENE (for MCM model operation)	Numeric	pptv
LTOLUENE	Mixing ratio of TOLUENE (for MCM model operation)	Numeric	pptv
LEBENZ	Mixing ratio of ETHYLBENZENE (for MCM model operation)	Numeric	pptv
LMXYL	Mixing ratio of M-/P-XYLENEs (for MCM model operation)	Numeric	pptv
LOXYL	Mixing ratio of O-XYLENE (for MCM model operation)	Numeric	pptv
LTM135B	Mixing ratio of 1,3,5-TRIMETHYLBENZENE (for MCM model operation)	Numeric	pptv
LTM124B	Mixing ratio of 1,2,4-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv
LTM123B	Mixing ratio of 1,2,3-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv

20. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_MCM input cut VOC

Name	Description	Data type	Unit
Date	Date of the sample	Numeric	--
Year	Year of the sample	Numeric	--
mm	Month of the sample	Numeric	--
dd	Day of the sample	Numeric	--
LTEMP	Temperature (for MCM model operation)	Numeric	K
LH2O	Humidity (number of H2O molecules; for MCM model operation)	Numeric	molecules

LO3	Mixing ratio of O3 (for MCM model operation)	Numeric	ppbv
LCO	Mixing ratio of CO (for MCM model operation)	Numeric	ppbv
LNO	Mixing ratio of NO (for MCM model operation)	Numeric	ppbv
LNO2	Mixing ratio of NO2 (for MCM model operation)	Numeric	ppbv
LSO2	Mixing ratio of SO2 (for MCM model operation)	Numeric	ppbv
LC2H6	Mixing ratio of C2H6 (for MCM model operation)	Numeric	pptv
LC2H4	Mixing ratio of C2H4 (for MCM model operation)	Numeric	pptv
LC2H2	Mixing ratio of C2H2 (for MCM model operation)	Numeric	pptv
LC3H8	Mixing ratio of C3H8 (for MCM model operation)	Numeric	pptv
LC3H6	Mixing ratio of C3H6 (for MCM model operation)	Numeric	pptv
LIC4H10	Mixing ratio of IC4H10 (for MCM model operation)	Numeric	pptv
LNC4H10	Mixing ratio of NC4H10 (for MCM model operation)	Numeric	pptv
LBUT1ENE	Mixing ratio of 1-BUTENE (for MCM model operation)	Numeric	pptv
LTBUT2ENE	Mixing ratio of TRANS-2-BUTENE (for MCM model operation)	Numeric	pptv
LCBUT2ENE	Mixing ratio of CIS-2-BUTENE (for MCM model operation)	Numeric	pptv
LIC5H12	Mixing ratio of IC5H12 (for MCM model operation)	Numeric	pptv
LNC5H12	Mixing ratio of NC5H12 (for MCM model operation)	Numeric	pptv
LC4H6	Mixing ratio of C4H6 (for MCM model operation)	Numeric	pptv
LPENT1ENE	Mixing ratio of 1-PENTENE (for MCM model operation)	Numeric	pptv
LC5H8	Mixing ratio of C5H8 (for MCM model operation)	Numeric	pptv
LM2PE	Mixing ratio of 2-METHYLPENTAN (for MCM model operation)	Numeric	pptv

LNC6H14	Mixing ratio of NC6H14 (for MCM model operation)	Numeric	pptv
LNC7H16	Mixing ratio of NC7H16 (for MCM model operation)	Numeric	pptv
LNC8H18	Mixing ratio of NC8H18 (for MCM model operation)	Numeric	pptv
LBENZENE	Mixing ratio of BENZENE (for MCM model operation)	Numeric	pptv
LTOLUENE	Mixing ratio of TOLUENE (for MCM model operation)	Numeric	pptv
LEBENZ	Mixing ratio of ETHYLBENZENE (for MCM model operation)	Numeric	pptv
LMXYL	Mixing ratio of M-/P-XYLENEs (for MCM model operation)	Numeric	pptv
LOXYL	Mixing ratio of O-XYLENE (for MCM model operation)	Numeric	pptv
LTM135B	Mixing ratio of 1,3,5-TRIMETHYLBENZENE (for MCM model operation)	Numeric	pptv
LTM124B	Mixing ratio of 1,2,4-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv
LTM123B	Mixing ratio of 1,2,3-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv

21. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_MCM input original

Name	Description	Data type	Unit
Date	Date of the sample	Numeric	--
Year	Year of the sample	Numeric	--
mm	Month of the sample	Numeric	--
dd	Day of the sample	Numeric	--
LTEMP	Temperature (for MCM model operation)	Numeric	K
LH2O	Humidity (number of H2O molecules; for MCM model operation)	Numeric	molecules
LO3	Mixing ratio of O3 (for MCM model operation)	Numeric	ppbv
LCO	Mixing ratio of CO (for MCM model operation)	Numeric	ppbv

LNO	Mixing ratio of NO (for MCM model operation)	Numeric	ppbv
LNO2	Mixing ratio of NO2 (for MCM model operation)	Numeric	ppbv
LSO2	Mixing ratio of SO2 (for MCM model operation)	Numeric	ppbv
LC2H6	Mixing ratio of C2H6 (for MCM model operation)	Numeric	pptv
LC2H4	Mixing ratio of C2H4 (for MCM model operation)	Numeric	pptv
LC2H2	Mixing ratio of C2H2 (for MCM model operation)	Numeric	pptv
LC3H8	Mixing ratio of C3H8 (for MCM model operation)	Numeric	pptv
LC3H6	Mixing ratio of C3H6 (for MCM model operation)	Numeric	pptv
LIC4H10	Mixing ratio of IC4H10 (for MCM model operation)	Numeric	pptv
LNC4H10	Mixing ratio of NC4H10 (for MCM model operation)	Numeric	pptv
LBUT1ENE	Mixing ratio of 1-BUTENE (for MCM model operation)	Numeric	pptv
LTBUT2ENE	Mixing ratio of TRANS-2-BUTENE (for MCM model operation)	Numeric	pptv
LCBUT2ENE	Mixing ratio of CIS-2-BUTENE (for MCM model operation)	Numeric	pptv
LIC5H12	Mixing ratio of IC5H12 (for MCM model operation)	Numeric	pptv
LNC5H12	Mixing ratio of NC5H12 (for MCM model operation)	Numeric	pptv
LC4H6	Mixing ratio of C4H6 (for MCM model operation)	Numeric	pptv
LPENT1ENE	Mixing ratio of 1-PENTENE (for MCM model operation)	Numeric	pptv
LC5H8	Mixing ratio of C5H8 (for MCM model operation)	Numeric	pptv
LM2PE	Mixing ratio of 2-METHYLPENTAN (for MCM model operation)	Numeric	pptv
LNC6H14	Mixing ratio of NC6H14 (for MCM model operation)	Numeric	pptv
LNC7H16	Mixing ratio of NC7H16 (for MCM model operation)	Numeric	pptv

LNC8H18	Mixing ratio of NC8H18 (for MCM model operation)	Numeric	pptv
LBENZENE	Mixing ratio of BENZENE (for MCM model operation)	Numeric	pptv
LTOLUENE	Mixing ratio of TOLUENE (for MCM model operation)	Numeric	pptv
LEBENZ	Mixing ratio of ETHYLBENZENE (for MCM model operation)	Numeric	pptv
LMXYL	Mixing ratio of M-/P-XYLENEs (for MCM model operation)	Numeric	pptv
LOXYL	Mixing ratio of O-XYLENE (for MCM model operation)	Numeric	pptv
LTM135B	Mixing ratio of 1,3,5-TRIMETHYLBENZENE (for MCM model operation)	Numeric	pptv
LTM124B	Mixing ratio of 1,2,4-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv
LTM123B	Mixing ratio of 1,2,3-TRIMETHYLBENZENE (for MCM model operation)	numeric	pptv

22. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_MCM output

Name	Description	Data type	Unit
Date	Date of the sample	Numeric	--
LHOUR	Hour (for MCM model operation)	Numeric	--
MRO3	Simulated O3 concentrations	Numeric	ppbv
NOx	Simulated NOx concentrations	Numeric	ppbv
VOCs	Simulated VOCs concentrations	Numeric	ppbv
VOCs NOx	Simulated NOx concentrations under cutting of VOCs	Numeric	ppbv
NOx_	Impact of NOx on O3 concentrations	Numeric	ppbv
VOCs_	Impact of VOCs on O3 concentrations	Numeric	ppbv
NOx VOCs	Impact of NOx on O3 concentrations under cutting of VOCs	Numeric	ppbv

23. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_MK data

Name	Description	Data type	Unit
yyyy	Year of the sample	Numeric	--
mm	Month of the sample	Numeric	--
dd	Day of the sample	Numeric	--
hh	Hour of the sample	Numeric	--
Ethane + Ethene	Mixing ratio of ethane+ethene	Numeric	ppbv
Ethene	Mixing ratio of ethene	Numeric	ppbv
Ethane	Mixing ratio of ethane	Numeric	ppbv
Propane	Mixing ratio of propane	Numeric	ppbv
Propene	Mixing ratio of propene	Numeric	ppbv
Ethyne	Mixing ratio of ethyne	Numeric	ppbv
2-Methylpropane (i-Butane)	Mixing ratio of 2-methylpropane (i-Butane)	Numeric	ppbv
n-Butane	Mixing ratio of n-butane	Numeric	ppbv
trans-2-Butene	Mixing ratio of trans-2-butene	Numeric	ppbv
1-Butene	Mixing ratio of 1-butene	Numeric	ppbv
cis-2-Butene	Mixing ratio of cis-2-butene	Numeric	ppbv
2-Methylbutane (i-Pentane)	Mixing ratio of 2-methylbutane (i-pentane)	Numeric	ppbv
n-Pentane	Mixing ratio of n-pentane	Numeric	ppbv
1,3-Butadiene	Mixing ratio of 1,3-butadiene	Numeric	ppbv
trans-2-Pentene	Mixing ratio of trans-2-pentene	Numeric	ppbv
1-Pentene	Mixing ratio of 1-pentene	Numeric	ppbv
2-Methylpentane (i-hexane)	Mixing ratio of 2-methylpentane (i-hexane)	Numeric	ppbv
2-Methyl-1,3-butadiene (Isoprene)	Mixing ratio of 2-methyl-1,3-butadiene (isoprene)	Numeric	ppbv
n-Hexane	Mixing ratio of n-Hexane	Numeric	ppbv
Benzene	Mixing ratio of benzene	Numeric	ppbv
2,2,4-Trimethylpentane (i-Octane)	Mixing ratio of 2,2,4-trimethylpentane (i-octane)	Numeric	ppbv
n-Heptane	Mixing ratio of n-heptane	Numeric	ppbv
Toluene	Mixing ratio of toluene	Numeric	ppbv
n-Octane	Mixing ratio of n-octane	Numeric	ppbv
Ethylbenzene	Mixing ratio of ethylbenzene	Numeric	ppbv
m-Xylene + p-Xylene	Mixing ratio of m-xylene+p-xylene	Numeric	ppbv
o-Xylene	Mixing ratio of o-xylene	Numeric	ppbv
1,3,5-Trimethylbenzene	Mixing ratio of 1,3,5-trimethylbenzene	Numeric	ppbv

1,2,4-Trimethylbenzene	Mixing ratio of 1,2,4-trimethylbenzene	Numeric	ppbv
1,2,3-Trimethylbenzene	Mixing ratio of 1,2,3-Trimethylbenzene	Numeric	ppbv
NMHCs	Mixing ratio of non-methane hydrocarbons	Numeric	ppbv
NO2	Mixing ratio of NO2 (at MK station)	Numeric	µg/m3
O3	Mixing ratio of O3 (at MK station)	Numeric	µg/m3
SO2	Mixing ratio of SO2 (at MK station)	Numeric	µg/m3
NO	Mixing ratio of NO (at MK station)	Numeric	µg/m3
NOx	Mixing ratio of NO+NO2 (at MK station)	Numeric	µg/m3
CO	Mixing ratio of CO (at MK station)	Numeric	µg/m3
Ox	Mixing ratio of O3+NO2 (at MK station)	Numeric	µg/m3
NO2NO2	Mixing ratio of NO2 (at MK station)	Numeric	ppbv
O3O3	Mixing ratio of O3 (at MK station)	Numeric	ppbv
SO2SO2	Mixing ratio of SO2 (at MK station)	Numeric	ppbv
NONO	Mixing ratio of NO (at MK station)	Numeric	ppbv
NOxNOx	Mixing ratio of NO+NO2 (at MK station)	Numeric	ppbv
COCO	Mixing ratio of CO (at MK station)	Numeric	ppmv
FSP	Particulate matters with aerodynamic diameter less than or equal to 2.5 micrometers (at MK station)	Numeric	µg/m3
RSP	Particulate matters with aerodynamic diameter less than or equal to 10 micrometers (at MK station)	Numeric	µg/m3

24. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_PMFresults

Name	Description	Data type	Unit

Factor profile (conc. of species) from Constrained Run (Convergent Run)	Factor contributions (concentration) to each specie	Numeric	--
Species1	O3 precursor species	Text	--
Gasoline_conc.	Air pollutants concentrations emitted from gasoline vehicle	Numeric	ppbv
LPG_conc.	Air pollutants concentrations emitted from LPG vehicle	Numeric	ppbv
BVOC_conc.	Air pollutants concentrations emitted from biogenic sources	Numeric	ppbv
Aged_conc.	Air pollutants concentrations originated from aged air masses	Numeric	ppbv
Solvent_conc.	Air pollutants concentrations emitted from solvent usage	Numeric	ppbv
Diesel_conc.	Air pollutants concentrations emitted from diesel vehicle	Numeric	ppbv
Factor Profiles (% of species sum) from Constrained Run (Convergent Run)	Factor contributions (%) to each specie	Numeric	--
Species2	O3 precursor species	Text	--
Gasoline_%	Air pollutants concentrations emitted from gasoline vehicle	Numeric	%
LPG_%	Air pollutants concentrations emitted from LPG vehicle	Numeric	%
BVOC_%	Air pollutants concentrations emitted from biogenic sources	Numeric	%
Aged_%	Air pollutants concentrations originated from aged air masses	Numeric	%
Solvent_%	Air pollutants concentrations emitted from solvent usage	Numeric	%
Diesel_%	Air pollutants concentrations emitted from diesel vehicle	Numeric	%
Factor Contributions (avg = 1) from Constrained Run (Convergent Run)	Factor contributions to each sample	Numeric	--
n	Number of the sample	Text	--

Gasoline	PMF-resolved gasoline vehicular emissions factor	Numeric	ppbv
LPG	PMF-resolved LPG vehicular emissions factor	Numeric	ppbv
BVOC	PMF-resolved biogenic emissions factor	Numeric	ppbv
Aged	PMF-resolved aged air masses factor	Numeric	ppbv
Solvent	PMF-resolved solvent emissions factor	Numeric	ppbv
Diesel	PMF-resolved diesel vehicular emissions factor	Numeric	ppbv

25. File name: 2017.A6.094.17D_Empirical Data_Task 3 - Data File_source contribution

Name	Description	Data type	Unit
yyyy	Year of the sample	Numeric	--
mm	Month of the sample	Numeric	--
dd	Day of the sample	Numeric	--
hh	Hour of the sample	Numeric	--
Factor 6	Total air pollutants concentrations from all the sources	Numeric	ppmv
diesel-NOx	PMF-resolved NOx concentrations contributed by diesel	Numeric	ppmv
diesel-NO	PMF-resolved NO concentrations contributed by diesel	Numeric	ppmv
diesel-NO2	PMF-resolved NO2 concentrations contributed by diesel	Numeric	ppmv

Task 4 - To propose specific control measures to reduce the occurrence of high O3 days and establish an emergent scheme to respond to abrupt heavy smog events in Hong Kong

26. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 1-_latitude

Name	Description	Data type	Unit
number	Data grid number	Numeric	--

latitude	Latitudes of the PRD region in the model calculated domain	Numeric	º

27. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 1-_longitude

Name	Description	Data type	Unit
number	Data grid number	Numeric	--
longitude	Longitudes of the PRD region in the model calculated domain	Numeric	º

28. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 1_msl

Name	Description	Data type	Unit
time	Time step running the WRF-Chem model	Numeric	h
latitude/longitude	Grid number of latitude and longitude	Numeric	--
1	Grid cell at longitude of 105°E	Numeric	Pa
2	Grid cell at longitude of 105.25°E	Numeric	Pa
3	Grid cell at longitude of 105.5°E	Numeric	Pa
4	Grid cell at longitude of 105.75°E	Numeric	Pa
5	Grid cell at longitude of 106°E	Numeric	Pa
6	Grid cell at longitude of 106.25°E	Numeric	Pa
7	Grid cell at longitude of 106.5°E	Numeric	Pa
8	Grid cell at longitude of 106.75°E	Numeric	Pa
9	Grid cell at longitude of 107°E	Numeric	Pa
10	Grid cell at longitude of 107.25°E	Numeric	Pa
11	Grid cell at longitude of 107.5°E	Numeric	Pa
12	Grid cell at longitude of 107.75°E	Numeric	Pa
13	Grid cell at longitude of 108°E	Numeric	Pa
14	Grid cell at longitude of 108.25°E	Numeric	Pa
15	Grid cell at longitude of 108.5°E	Numeric	Pa
16	Grid cell at longitude of 108.75°E	Numeric	Pa
17	Grid cell at longitude of 109°E	Numeric	Pa
18	Grid cell at longitude of 109.25°E	Numeric	Pa
19	Grid cell at longitude of 109.5°E	Numeric	Pa
20	Grid cell at longitude of 109.75°E	Numeric	Pa
21	Grid cell at longitude of 110°E	Numeric	Pa
22	Grid cell at longitude of 110.25°E	Numeric	Pa
23	Grid cell at longitude of 110.5°E	Numeric	Pa
24	Grid cell at longitude of 110.75°E	Numeric	Pa
25	Grid cell at longitude of 111°E	Numeric	Pa
26	Grid cell at longitude of 111.25°E	Numeric	Pa
27	Grid cell at longitude of 111.5°E	Numeric	Pa

28	Grid cell at longitude of 111.75°E	Numeric	Pa
29	Grid cell at longitude of 112°E	Numeric	Pa
30	Grid cell at longitude of 112.25°E	Numeric	Pa
31	Grid cell at longitude of 112.5°E	Numeric	Pa
32	Grid cell at longitude of 112.75°E	Numeric	Pa
33	Grid cell at longitude of 113°E	Numeric	Pa
34	Grid cell at longitude of 113.25°E	Numeric	Pa
35	Grid cell at longitude of 113.5°E	Numeric	Pa
36	Grid cell at longitude of 113.75°E	Numeric	Pa
37	Grid cell at longitude of 114°E	Numeric	Pa
38	Grid cell at longitude of 114.25°E	Numeric	Pa
39	Grid cell at longitude of 114.5°E	Numeric	Pa
40	Grid cell at longitude of 114.75°E	Numeric	Pa
41	Grid cell at longitude of 115°E	Numeric	Pa
42	Grid cell at longitude of 115.25°E	Numeric	Pa
43	Grid cell at longitude of 115.5°E	Numeric	Pa
44	Grid cell at longitude of 115.75°E	Numeric	Pa
45	Grid cell at longitude of 116°E	Numeric	Pa
46	Grid cell at longitude of 116.25°E	Numeric	Pa
47	Grid cell at longitude of 116.5°E	Numeric	Pa
48	Grid cell at longitude of 116.75°E	Numeric	Pa
49	Grid cell at longitude of 117°E	Numeric	Pa
50	Grid cell at longitude of 117.25°E	Numeric	Pa
51	Grid cell at longitude of 117.5°E	Numeric	Pa
52	Grid cell at longitude of 117.75°E	Numeric	Pa
53	Grid cell at longitude of 118°E	Numeric	Pa
54	Grid cell at longitude of 118.25°E	Numeric	Pa
55	Grid cell at longitude of 118.5°E	Numeric	Pa
56	Grid cell at longitude of 118.75°E	Numeric	Pa
57	Grid cell at longitude of 119°E	Numeric	Pa
58	Grid cell at longitude of 119.25°E	Numeric	Pa
59	Grid cell at longitude of 119.5°E	Numeric	Pa
60	Grid cell at longitude of 119.75°E	Numeric	Pa
61	Grid cell at longitude of 120°E	Numeric	Pa
62	Grid cell at longitude of 120.25°E	Numeric	Pa
63	Grid cell at longitude of 120.5°E	Numeric	Pa
64	Grid cell at longitude of 120.75°E	Numeric	Pa
65	Grid cell at longitude of 121°E	Numeric	Pa
66	Grid cell at longitude of 121.25°E	Numeric	Pa
67	Grid cell at longitude of 121.5°E	Numeric	Pa
68	Grid cell at longitude of 121.75°E	Numeric	Pa
69	Grid cell at longitude of 122°E	Numeric	Pa
70	Grid cell at longitude of 122.25°E	Numeric	Pa
71	Grid cell at longitude of 122.5°E	Numeric	Pa

72	Grid cell at longitude of 122.75°E	Numeric	Pa
73	Grid cell at longitude of 123°E	Numeric	Pa
74	Grid cell at longitude of 123.25°E	Numeric	Pa
75	Grid cell at longitude of 123.5°E	Numeric	Pa
76	Grid cell at longitude of 123.75°E	Numeric	Pa
77	Grid cell at longitude of 124°E	Numeric	Pa
78	Grid cell at longitude of 124.25°E	Numeric	Pa
79	Grid cell at longitude of 124.5°E	Numeric	Pa
80	Grid cell at longitude of 124.75°E	Numeric	Pa
81	Grid cell at longitude of 125°E	Numeric	Pa
82	Grid cell at longitude of 125.25°E	Numeric	Pa
83	Grid cell at longitude of 125.5°E	Numeric	Pa
84	Grid cell at longitude of 125.75°E	Numeric	Pa
85	Grid cell at longitude of 126°E	Numeric	Pa
86	Grid cell at longitude of 126.25°E	Numeric	Pa
87	Grid cell at longitude of 126.5°E	Numeric	Pa
88	Grid cell at longitude of 126.75°E	Numeric	Pa
89	Grid cell at longitude of 127°E	Numeric	Pa
90	Grid cell at longitude of 127.25°E	Numeric	Pa
91	Grid cell at longitude of 127.5°E	Numeric	Pa
92	Grid cell at longitude of 127.75°E	Numeric	Pa
93	Grid cell at longitude of 128°E	Numeric	Pa
94	Grid cell at longitude of 128.25°E	Numeric	Pa
95	Grid cell at longitude of 128.5°E	Numeric	Pa
96	Grid cell at longitude of 128.75°E	Numeric	Pa
97	Grid cell at longitude of 129°E	Numeric	Pa
98	Grid cell at longitude of 129.25°E	Numeric	Pa
99	Grid cell at longitude of 129.5°E	Numeric	Pa
100	Grid cell at longitude of 129.75°E	Numeric	Pa
101	Grid cell at longitude of 130°E	Numeric	Pa
102	Grid cell at longitude of 130.25°E	Numeric	Pa
103	Grid cell at longitude of 130.5°E	Numeric	Pa
104	Grid cell at longitude of 130.75°E	Numeric	Pa
105	Grid cell at longitude of 131°E	Numeric	Pa
106	Grid cell at longitude of 131.25°E	Numeric	Pa
107	Grid cell at longitude of 131.5°E	Numeric	Pa
108	Grid cell at longitude of 131.75°E	Numeric	Pa
109	Grid cell at longitude of 132°E	Numeric	Pa
110	Grid cell at longitude of 132.25°E	Numeric	Pa
111	Grid cell at longitude of 132.5°E	Numeric	Pa
112	Grid cell at longitude of 132.75°E	Numeric	Pa
113	Grid cell at longitude of 133°E	Numeric	Pa
114	Grid cell at longitude of 133.25°E	Numeric	Pa
115	Grid cell at longitude of 133.5°E	Numeric	Pa

116	Grid cell at longitude of 133.75°E	Numeric	Pa
117	Grid cell at longitude of 134°E	Numeric	Pa
118	Grid cell at longitude of 134.25°E	Numeric	Pa
119	Grid cell at longitude of 134.5°E	Numeric	Pa
120	Grid cell at longitude of 134.75°E	Numeric	Pa
121	Grid cell at longitude of 135°E	Numeric	Pa

29. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 1_t2m

Name	Description	Data type	Unit
time	Time step running the WRF-Chem model	Numeric	h
latitude/longitude	Grid number of latitude and longitude	Numeric	--
1	Grid cell at longitude of 105°E	Numeric	K
2	Grid cell at longitude of 105.25°E	Numeric	K
3	Grid cell at longitude of 105.5°E	Numeric	K
4	Grid cell at longitude of 105.75°E	Numeric	K
5	Grid cell at longitude of 106°E	Numeric	K
6	Grid cell at longitude of 106.25°E	Numeric	K
7	Grid cell at longitude of 106.5°E	Numeric	K
8	Grid cell at longitude of 106.75°E	Numeric	K
9	Grid cell at longitude of 107°E	Numeric	K
10	Grid cell at longitude of 107.25°E	Numeric	K
11	Grid cell at longitude of 107.5°E	Numeric	K
12	Grid cell at longitude of 107.75°E	Numeric	K
13	Grid cell at longitude of 108°E	Numeric	K
14	Grid cell at longitude of 108.25°E	Numeric	K
15	Grid cell at longitude of 108.5°E	Numeric	K
16	Grid cell at longitude of 108.75°E	Numeric	K
17	Grid cell at longitude of 109°E	Numeric	K
18	Grid cell at longitude of 109.25°E	Numeric	K
19	Grid cell at longitude of 109.5°E	Numeric	K
20	Grid cell at longitude of 109.75°E	Numeric	K
21	Grid cell at longitude of 110°E	Numeric	K
22	Grid cell at longitude of 110.25°E	Numeric	K
23	Grid cell at longitude of 110.5°E	Numeric	K
24	Grid cell at longitude of 110.75°E	Numeric	K
25	Grid cell at longitude of 111°E	Numeric	K
26	Grid cell at longitude of 111.25°E	Numeric	K
27	Grid cell at longitude of 111.5°E	Numeric	K
28	Grid cell at longitude of 111.75°E	Numeric	K
29	Grid cell at longitude of 112°E	Numeric	K
30	Grid cell at longitude of 112.25°E	Numeric	K
31	Grid cell at longitude of 112.5°E	Numeric	K

32	Grid cell at longitude of 112.75°E	Numeric	K
33	Grid cell at longitude of 113°E	Numeric	K
34	Grid cell at longitude of 113.25°E	Numeric	K
35	Grid cell at longitude of 113.5°E	Numeric	K
36	Grid cell at longitude of 113.75°E	Numeric	K
37	Grid cell at longitude of 114°E	Numeric	K
38	Grid cell at longitude of 114.25°E	Numeric	K
39	Grid cell at longitude of 114.5°E	Numeric	K
40	Grid cell at longitude of 114.75°E	Numeric	K
41	Grid cell at longitude of 115°E	Numeric	K
42	Grid cell at longitude of 115.25°E	Numeric	K
43	Grid cell at longitude of 115.5°E	Numeric	K
44	Grid cell at longitude of 115.75°E	Numeric	K
45	Grid cell at longitude of 116°E	Numeric	K
46	Grid cell at longitude of 116.25°E	Numeric	K
47	Grid cell at longitude of 116.5°E	Numeric	K
48	Grid cell at longitude of 116.75°E	Numeric	K
49	Grid cell at longitude of 117°E	Numeric	K
50	Grid cell at longitude of 117.25°E	Numeric	K
51	Grid cell at longitude of 117.5°E	Numeric	K
52	Grid cell at longitude of 117.75°E	Numeric	K
53	Grid cell at longitude of 118°E	Numeric	K
54	Grid cell at longitude of 118.25°E	Numeric	K
55	Grid cell at longitude of 118.5°E	Numeric	K
56	Grid cell at longitude of 118.75°E	Numeric	K
57	Grid cell at longitude of 119°E	Numeric	K
58	Grid cell at longitude of 119.25°E	Numeric	K
59	Grid cell at longitude of 119.5°E	Numeric	K
60	Grid cell at longitude of 119.75°E	Numeric	K
61	Grid cell at longitude of 120°E	Numeric	K
62	Grid cell at longitude of 120.25°E	Numeric	K
63	Grid cell at longitude of 120.5°E	Numeric	K
64	Grid cell at longitude of 120.75°E	Numeric	K
65	Grid cell at longitude of 121°E	Numeric	K
66	Grid cell at longitude of 121.25°E	Numeric	K
67	Grid cell at longitude of 121.5°E	Numeric	K
68	Grid cell at longitude of 121.75°E	Numeric	K
69	Grid cell at longitude of 122°E	Numeric	K
70	Grid cell at longitude of 122.25°E	Numeric	K
71	Grid cell at longitude of 122.5°E	Numeric	K
72	Grid cell at longitude of 122.75°E	Numeric	K
73	Grid cell at longitude of 123°E	Numeric	K
74	Grid cell at longitude of 123.25°E	Numeric	K
75	Grid cell at longitude of 123.5°E	Numeric	K

76	Grid cell at longitude of 123.75°E	Numeric	K
77	Grid cell at longitude of 124°E	Numeric	K
78	Grid cell at longitude of 124.25°E	Numeric	K
79	Grid cell at longitude of 124.5°E	Numeric	K
80	Grid cell at longitude of 124.75°E	Numeric	K
81	Grid cell at longitude of 125°E	Numeric	K
82	Grid cell at longitude of 125.25°E	Numeric	K
83	Grid cell at longitude of 125.5°E	Numeric	K
84	Grid cell at longitude of 125.75°E	Numeric	K
85	Grid cell at longitude of 126°E	Numeric	K
86	Grid cell at longitude of 126.25°E	Numeric	K
87	Grid cell at longitude of 126.5°E	Numeric	K
88	Grid cell at longitude of 126.75°E	Numeric	K
89	Grid cell at longitude of 127°E	Numeric	K
90	Grid cell at longitude of 127.25°E	Numeric	K
91	Grid cell at longitude of 127.5°E	Numeric	K
92	Grid cell at longitude of 127.75°E	Numeric	K
93	Grid cell at longitude of 128°E	Numeric	K
94	Grid cell at longitude of 128.25°E	Numeric	K
95	Grid cell at longitude of 128.5°E	Numeric	K
96	Grid cell at longitude of 128.75°E	Numeric	K
97	Grid cell at longitude of 129°E	Numeric	K
98	Grid cell at longitude of 129.25°E	Numeric	K
99	Grid cell at longitude of 129.5°E	Numeric	K
100	Grid cell at longitude of 129.75°E	Numeric	K
101	Grid cell at longitude of 130°E	Numeric	K
102	Grid cell at longitude of 130.25°E	Numeric	K
103	Grid cell at longitude of 130.5°E	Numeric	K
104	Grid cell at longitude of 130.75°E	Numeric	K
105	Grid cell at longitude of 131°E	Numeric	K
106	Grid cell at longitude of 131.25°E	Numeric	K
107	Grid cell at longitude of 131.5°E	Numeric	K
108	Grid cell at longitude of 131.75°E	Numeric	K
109	Grid cell at longitude of 132°E	Numeric	K
110	Grid cell at longitude of 132.25°E	Numeric	K
111	Grid cell at longitude of 132.5°E	Numeric	K
112	Grid cell at longitude of 132.75°E	Numeric	K
113	Grid cell at longitude of 133°E	Numeric	K
114	Grid cell at longitude of 133.25°E	Numeric	K
115	Grid cell at longitude of 133.5°E	Numeric	K
116	Grid cell at longitude of 133.75°E	Numeric	K
117	Grid cell at longitude of 134°E	Numeric	K
118	Grid cell at longitude of 134.25°E	Numeric	K
119	Grid cell at longitude of 134.5°E	Numeric	K

120	Grid cell at longitude of 134.75°E	Numeric	K
121	Grid cell at longitude of 135°E	Numeric	K

30. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 1_time

Name	Description	Data type	Unit
Number	Data grid number	Numeric	--
time	Time step running the WRF-Chem model	Numeric	h

31. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 1_u10

Name	Description	Data type	Unit
time	Time step running the WRF-Chem model	Numeric	h
latitude/longitude	Grid number of latitude and longitude	Numeric	--
1	Grid cell at longitude of 105°E	Numeric	m/s
2	Grid cell at longitude of 105.25°E	Numeric	m/s
3	Grid cell at longitude of 105.5°E	Numeric	m/s
4	Grid cell at longitude of 105.75°E	Numeric	m/s
5	Grid cell at longitude of 106°E	Numeric	m/s
6	Grid cell at longitude of 106.25°E	Numeric	m/s
7	Grid cell at longitude of 106.5°E	Numeric	m/s
8	Grid cell at longitude of 106.75°E	Numeric	m/s
9	Grid cell at longitude of 107°E	Numeric	m/s
10	Grid cell at longitude of 107.25°E	Numeric	m/s
11	Grid cell at longitude of 107.5°E	Numeric	m/s
12	Grid cell at longitude of 107.75°E	Numeric	m/s
13	Grid cell at longitude of 108°E	Numeric	m/s
14	Grid cell at longitude of 108.25°E	Numeric	m/s
15	Grid cell at longitude of 108.5°E	Numeric	m/s
16	Grid cell at longitude of 108.75°E	Numeric	m/s
17	Grid cell at longitude of 109°E	Numeric	m/s
18	Grid cell at longitude of 109.25°E	Numeric	m/s
19	Grid cell at longitude of 109.5°E	Numeric	m/s
20	Grid cell at longitude of 109.75°E	Numeric	m/s
21	Grid cell at longitude of 110°E	Numeric	m/s
22	Grid cell at longitude of 110.25°E	Numeric	m/s
23	Grid cell at longitude of 110.5°E	Numeric	m/s
24	Grid cell at longitude of 110.75°E	Numeric	m/s
25	Grid cell at longitude of 111°E	Numeric	m/s
26	Grid cell at longitude of 111.25°E	Numeric	m/s
27	Grid cell at longitude of 111.5°E	Numeric	m/s

28	Grid cell at longitude of 111.75°E	Numeric	m/s
29	Grid cell at longitude of 112°E	Numeric	m/s
30	Grid cell at longitude of 112.25°E	Numeric	m/s
31	Grid cell at longitude of 112.5°E	Numeric	m/s
32	Grid cell at longitude of 112.75°E	Numeric	m/s
33	Grid cell at longitude of 113°E	Numeric	m/s
34	Grid cell at longitude of 113.25°E	Numeric	m/s
35	Grid cell at longitude of 113.5°E	Numeric	m/s
36	Grid cell at longitude of 113.75°E	Numeric	m/s
37	Grid cell at longitude of 114°E	Numeric	m/s
38	Grid cell at longitude of 114.25°E	Numeric	m/s
39	Grid cell at longitude of 114.5°E	Numeric	m/s
40	Grid cell at longitude of 114.75°E	Numeric	m/s
41	Grid cell at longitude of 115°E	Numeric	m/s
42	Grid cell at longitude of 115.25°E	Numeric	m/s
43	Grid cell at longitude of 115.5°E	Numeric	m/s
44	Grid cell at longitude of 115.75°E	Numeric	m/s
45	Grid cell at longitude of 116°E	Numeric	m/s
46	Grid cell at longitude of 116.25°E	Numeric	m/s
47	Grid cell at longitude of 116.5°E	Numeric	m/s
48	Grid cell at longitude of 116.75°E	Numeric	m/s
49	Grid cell at longitude of 117°E	Numeric	m/s
50	Grid cell at longitude of 117.25°E	Numeric	m/s
51	Grid cell at longitude of 117.5°E	Numeric	m/s
52	Grid cell at longitude of 117.75°E	Numeric	m/s
53	Grid cell at longitude of 118°E	Numeric	m/s
54	Grid cell at longitude of 118.25°E	Numeric	m/s
55	Grid cell at longitude of 118.5°E	Numeric	m/s
56	Grid cell at longitude of 118.75°E	Numeric	m/s
57	Grid cell at longitude of 119°E	Numeric	m/s
58	Grid cell at longitude of 119.25°E	Numeric	m/s
59	Grid cell at longitude of 119.5°E	Numeric	m/s
60	Grid cell at longitude of 119.75°E	Numeric	m/s
61	Grid cell at longitude of 120°E	Numeric	m/s
62	Grid cell at longitude of 120.25°E	Numeric	m/s
63	Grid cell at longitude of 120.5°E	Numeric	m/s
64	Grid cell at longitude of 120.75°E	Numeric	m/s
65	Grid cell at longitude of 121°E	Numeric	m/s
66	Grid cell at longitude of 121.25°E	Numeric	m/s
67	Grid cell at longitude of 121.5°E	Numeric	m/s
68	Grid cell at longitude of 121.75°E	Numeric	m/s
69	Grid cell at longitude of 122°E	Numeric	m/s
70	Grid cell at longitude of 122.25°E	Numeric	m/s
71	Grid cell at longitude of 122.5°E	Numeric	m/s

72	Grid cell at longitude of 122.75°E	Numeric	m/s
73	Grid cell at longitude of 123°E	Numeric	m/s
74	Grid cell at longitude of 123.25°E	Numeric	m/s
75	Grid cell at longitude of 123.5°E	Numeric	m/s
76	Grid cell at longitude of 123.75°E	Numeric	m/s
77	Grid cell at longitude of 124°E	Numeric	m/s
78	Grid cell at longitude of 124.25°E	Numeric	m/s
79	Grid cell at longitude of 124.5°E	Numeric	m/s
80	Grid cell at longitude of 124.75°E	Numeric	m/s
81	Grid cell at longitude of 125°E	Numeric	m/s
82	Grid cell at longitude of 125.25°E	Numeric	m/s
83	Grid cell at longitude of 125.5°E	Numeric	m/s
84	Grid cell at longitude of 125.75°E	Numeric	m/s
85	Grid cell at longitude of 126°E	Numeric	m/s
86	Grid cell at longitude of 126.25°E	Numeric	m/s
87	Grid cell at longitude of 126.5°E	Numeric	m/s
88	Grid cell at longitude of 126.75°E	Numeric	m/s
89	Grid cell at longitude of 127°E	Numeric	m/s
90	Grid cell at longitude of 127.25°E	Numeric	m/s
91	Grid cell at longitude of 127.5°E	Numeric	m/s
92	Grid cell at longitude of 127.75°E	Numeric	m/s
93	Grid cell at longitude of 128°E	Numeric	m/s
94	Grid cell at longitude of 128.25°E	Numeric	m/s
95	Grid cell at longitude of 128.5°E	Numeric	m/s
96	Grid cell at longitude of 128.75°E	Numeric	m/s
97	Grid cell at longitude of 129°E	Numeric	m/s
98	Grid cell at longitude of 129.25°E	Numeric	m/s
99	Grid cell at longitude of 129.5°E	Numeric	m/s
100	Grid cell at longitude of 129.75°E	Numeric	m/s
101	Grid cell at longitude of 130°E	Numeric	m/s
102	Grid cell at longitude of 130.25°E	Numeric	m/s
103	Grid cell at longitude of 130.5°E	Numeric	m/s
104	Grid cell at longitude of 130.75°E	Numeric	m/s
105	Grid cell at longitude of 131°E	Numeric	m/s
106	Grid cell at longitude of 131.25°E	Numeric	m/s
107	Grid cell at longitude of 131.5°E	Numeric	m/s
108	Grid cell at longitude of 131.75°E	Numeric	m/s
109	Grid cell at longitude of 132°E	Numeric	m/s
110	Grid cell at longitude of 132.25°E	Numeric	m/s
111	Grid cell at longitude of 132.5°E	Numeric	m/s
112	Grid cell at longitude of 132.75°E	Numeric	m/s
113	Grid cell at longitude of 133°E	Numeric	m/s
114	Grid cell at longitude of 133.25°E	Numeric	m/s
115	Grid cell at longitude of 133.5°E	Numeric	m/s

116	Grid cell at longitude of 133.75°E	Numeric	m/s
117	Grid cell at longitude of 134°E	Numeric	m/s
118	Grid cell at longitude of 134.25°E	Numeric	m/s
119	Grid cell at longitude of 134.5°E	Numeric	m/s
120	Grid cell at longitude of 134.75°E	Numeric	m/s
121	Grid cell at longitude of 135°E	Numeric	m/s

32. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 1_v10

Name	Description	Data type	Unit
time	Time step running the WRF-Chem model	Numeric	h
latitude/longitude	Grid number of latitude and longitude	Numeric	--
1	Grid cell at longitude of 105°E	Numeric	m/s
2	Grid cell at longitude of 105.25°E	Numeric	m/s
3	Grid cell at longitude of 105.5°E	Numeric	m/s
4	Grid cell at longitude of 105.75°E	Numeric	m/s
5	Grid cell at longitude of 106°E	Numeric	m/s
6	Grid cell at longitude of 106.25°E	Numeric	m/s
7	Grid cell at longitude of 106.5°E	Numeric	m/s
8	Grid cell at longitude of 106.75°E	Numeric	m/s
9	Grid cell at longitude of 107°E	Numeric	m/s
10	Grid cell at longitude of 107.25°E	Numeric	m/s
11	Grid cell at longitude of 107.5°E	Numeric	m/s
12	Grid cell at longitude of 107.75°E	Numeric	m/s
13	Grid cell at longitude of 108°E	Numeric	m/s
14	Grid cell at longitude of 108.25°E	Numeric	m/s
15	Grid cell at longitude of 108.5°E	Numeric	m/s
16	Grid cell at longitude of 108.75°E	Numeric	m/s
17	Grid cell at longitude of 109°E	Numeric	m/s
18	Grid cell at longitude of 109.25°E	Numeric	m/s
19	Grid cell at longitude of 109.5°E	Numeric	m/s
20	Grid cell at longitude of 109.75°E	Numeric	m/s
21	Grid cell at longitude of 110°E	Numeric	m/s
22	Grid cell at longitude of 110.25°E	Numeric	m/s
23	Grid cell at longitude of 110.5°E	Numeric	m/s
24	Grid cell at longitude of 110.75°E	Numeric	m/s
25	Grid cell at longitude of 111°E	Numeric	m/s
26	Grid cell at longitude of 111.25°E	Numeric	m/s
27	Grid cell at longitude of 111.5°E	Numeric	m/s
28	Grid cell at longitude of 111.75°E	Numeric	m/s
29	Grid cell at longitude of 112°E	Numeric	m/s
30	Grid cell at longitude of 112.25°E	Numeric	m/s
31	Grid cell at longitude of 112.5°E	Numeric	m/s

32	Grid cell at longitude of 112.75°E	Numeric	m/s
33	Grid cell at longitude of 113°E	Numeric	m/s
34	Grid cell at longitude of 113.25°E	Numeric	m/s
35	Grid cell at longitude of 113.5°E	Numeric	m/s
36	Grid cell at longitude of 113.75°E	Numeric	m/s
37	Grid cell at longitude of 114°E	Numeric	m/s
38	Grid cell at longitude of 114.25°E	Numeric	m/s
39	Grid cell at longitude of 114.5°E	Numeric	m/s
40	Grid cell at longitude of 114.75°E	Numeric	m/s
41	Grid cell at longitude of 115°E	Numeric	m/s
42	Grid cell at longitude of 115.25°E	Numeric	m/s
43	Grid cell at longitude of 115.5°E	Numeric	m/s
44	Grid cell at longitude of 115.75°E	Numeric	m/s
45	Grid cell at longitude of 116°E	Numeric	m/s
46	Grid cell at longitude of 116.25°E	Numeric	m/s
47	Grid cell at longitude of 116.5°E	Numeric	m/s
48	Grid cell at longitude of 116.75°E	Numeric	m/s
49	Grid cell at longitude of 117°E	Numeric	m/s
50	Grid cell at longitude of 117.25°E	Numeric	m/s
51	Grid cell at longitude of 117.5°E	Numeric	m/s
52	Grid cell at longitude of 117.75°E	Numeric	m/s
53	Grid cell at longitude of 118°E	Numeric	m/s
54	Grid cell at longitude of 118.25°E	Numeric	m/s
55	Grid cell at longitude of 118.5°E	Numeric	m/s
56	Grid cell at longitude of 118.75°E	Numeric	m/s
57	Grid cell at longitude of 119°E	Numeric	m/s
58	Grid cell at longitude of 119.25°E	Numeric	m/s
59	Grid cell at longitude of 119.5°E	Numeric	m/s
60	Grid cell at longitude of 119.75°E	Numeric	m/s
61	Grid cell at longitude of 120°E	Numeric	m/s
62	Grid cell at longitude of 120.25°E	Numeric	m/s
63	Grid cell at longitude of 120.5°E	Numeric	m/s
64	Grid cell at longitude of 120.75°E	Numeric	m/s
65	Grid cell at longitude of 121°E	Numeric	m/s
66	Grid cell at longitude of 121.25°E	Numeric	m/s
67	Grid cell at longitude of 121.5°E	Numeric	m/s
68	Grid cell at longitude of 121.75°E	Numeric	m/s
69	Grid cell at longitude of 122°E	Numeric	m/s
70	Grid cell at longitude of 122.25°E	Numeric	m/s
71	Grid cell at longitude of 122.5°E	Numeric	m/s
72	Grid cell at longitude of 122.75°E	Numeric	m/s
73	Grid cell at longitude of 123°E	Numeric	m/s
74	Grid cell at longitude of 123.25°E	Numeric	m/s
75	Grid cell at longitude of 123.5°E	Numeric	m/s

76	Grid cell at longitude of 123.75°E	Numeric	m/s
77	Grid cell at longitude of 124°E	Numeric	m/s
78	Grid cell at longitude of 124.25°E	Numeric	m/s
79	Grid cell at longitude of 124.5°E	Numeric	m/s
80	Grid cell at longitude of 124.75°E	Numeric	m/s
81	Grid cell at longitude of 125°E	Numeric	m/s
82	Grid cell at longitude of 125.25°E	Numeric	m/s
83	Grid cell at longitude of 125.5°E	Numeric	m/s
84	Grid cell at longitude of 125.75°E	Numeric	m/s
85	Grid cell at longitude of 126°E	Numeric	m/s
86	Grid cell at longitude of 126.25°E	Numeric	m/s
87	Grid cell at longitude of 126.5°E	Numeric	m/s
88	Grid cell at longitude of 126.75°E	Numeric	m/s
89	Grid cell at longitude of 127°E	Numeric	m/s
90	Grid cell at longitude of 127.25°E	Numeric	m/s
91	Grid cell at longitude of 127.5°E	Numeric	m/s
92	Grid cell at longitude of 127.75°E	Numeric	m/s
93	Grid cell at longitude of 128°E	Numeric	m/s
94	Grid cell at longitude of 128.25°E	Numeric	m/s
95	Grid cell at longitude of 128.5°E	Numeric	m/s
96	Grid cell at longitude of 128.75°E	Numeric	m/s
97	Grid cell at longitude of 129°E	Numeric	m/s
98	Grid cell at longitude of 129.25°E	Numeric	m/s
99	Grid cell at longitude of 129.5°E	Numeric	m/s
100	Grid cell at longitude of 129.75°E	Numeric	m/s
101	Grid cell at longitude of 130°E	Numeric	m/s
102	Grid cell at longitude of 130.25°E	Numeric	m/s
103	Grid cell at longitude of 130.5°E	Numeric	m/s
104	Grid cell at longitude of 130.75°E	Numeric	m/s
105	Grid cell at longitude of 131°E	Numeric	m/s
106	Grid cell at longitude of 131.25°E	Numeric	m/s
107	Grid cell at longitude of 131.5°E	Numeric	m/s
108	Grid cell at longitude of 131.75°E	Numeric	m/s
109	Grid cell at longitude of 132°E	Numeric	m/s
110	Grid cell at longitude of 132.25°E	Numeric	m/s
111	Grid cell at longitude of 132.5°E	Numeric	m/s
112	Grid cell at longitude of 132.75°E	Numeric	m/s
113	Grid cell at longitude of 133°E	Numeric	m/s
114	Grid cell at longitude of 133.25°E	Numeric	m/s
115	Grid cell at longitude of 133.5°E	Numeric	m/s
116	Grid cell at longitude of 133.75°E	Numeric	m/s
117	Grid cell at longitude of 134°E	Numeric	m/s
118	Grid cell at longitude of 134.25°E	Numeric	m/s
119	Grid cell at longitude of 134.5°E	Numeric	m/s

120	Grid cell at longitude of 134.75°E	Numeric	m/s
121	Grid cell at longitude of 135°E	Numeric	m/s

33. File name: 2017.A6.094.17D_Empirical Data_Task 4 - Data File 2

Name	Description	Data type	Unit
Mon	Month of WRF-Chem model results	Date	--
Day	Day of WRF-Chem model results	Date	--
Year	Year of WRF-Chem model results	Date	--
Hour	Hour of WRF-Chem model results	Time	h
base	O3-simuation scenario without cutting down the anthropogenic emissions of VOCs and NO_x in PRD region	Numeric (O3 concentrations)	ppbv
cutting 10%	O3-simuation scenario by cutting down the anthropogenic emissions of VOCs and NOx in PRD region at 10%	Numeric (O3 concentrations)	ppbv
cutting 30%	O3-simuation scenario by cutting down the anthropogenic emissions of VOCs and NO_x in PRD region at 30%	Numeric (O3 concentrations)	ppbv
cutting 50%	O3-simuation scenario by cutting down the anthropogenic emissions of VOCs and NO_x in PRD region at 50%	Numeric (O3 concentrations)	ppbv
cutting 70%	O3-simuation scenario by cutting down the anthropogenic emissions of VOCs and NO_x in PRD region at 70%	Numeric (O3 concentrations)	ppbv