Supplemental information to the article entitled

Photochemical age of air pollutants and oxidation products in transboundary air observed on Fukue Island, Nagasaki, Japan

Satoshi Irei,[1†] Akinori Takami,[1] Yasuhiro Sadanaga,[2] Susumu Nozoe,[1] Seiichiro Yonemura,[3] Yoko Yokouchi,[1] and Hiroshi Bandow[2]

[1]National Institute for Environmental Studies, 16-2 Onogawa, Tsukuba, Ibaraki 305-8506, Japan
[2]Department of Applied Chemistry, Graduate School of Engineering, Osaka Prefecture University, 1-1 Gakuencho, Naka-ku, Sakai, Osaka 599-8531, Japan
[3]National Institute for Agro-Environmental Sciences, 3-1-3 Kannondai, Tsukuba, Irabaki 305-8604, Japan.
[†]Present address: Department of Biology, Chemistry, and Marine Science, University of the Ryukyus, 1 Senbaru, Nishihara, Okinawa 903-0213, Japan

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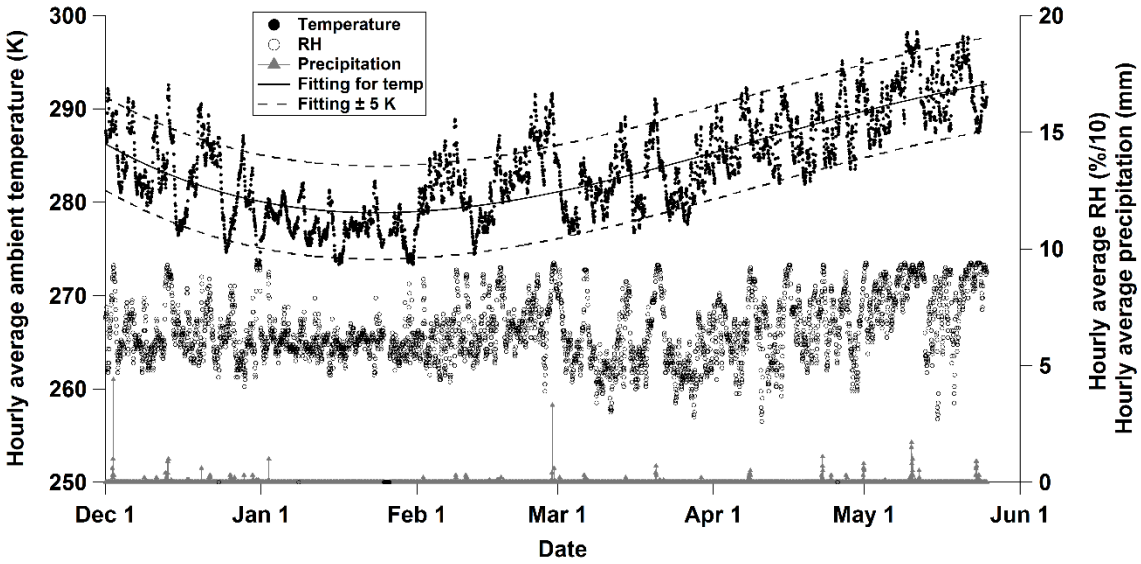

Figure S1. Time-series plots of hourly average ambient temperature, relative humidity (RH), and precipitation during the field study.

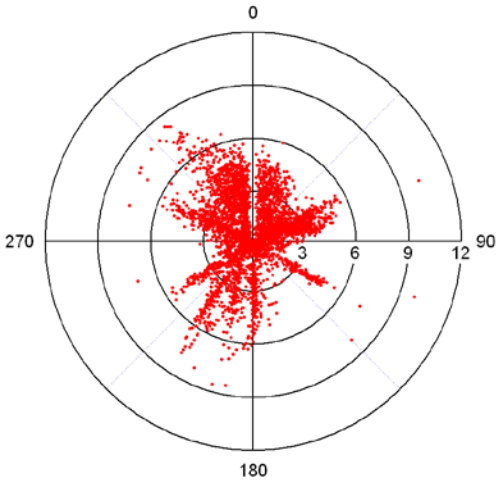

Figure S2. Polar plot of the dependence of hourly average wind speed (m s^{-1}) on wind direction (degrees) observed at the Fukue monitoring station (north = 0 degrees, east = 90 degrees).

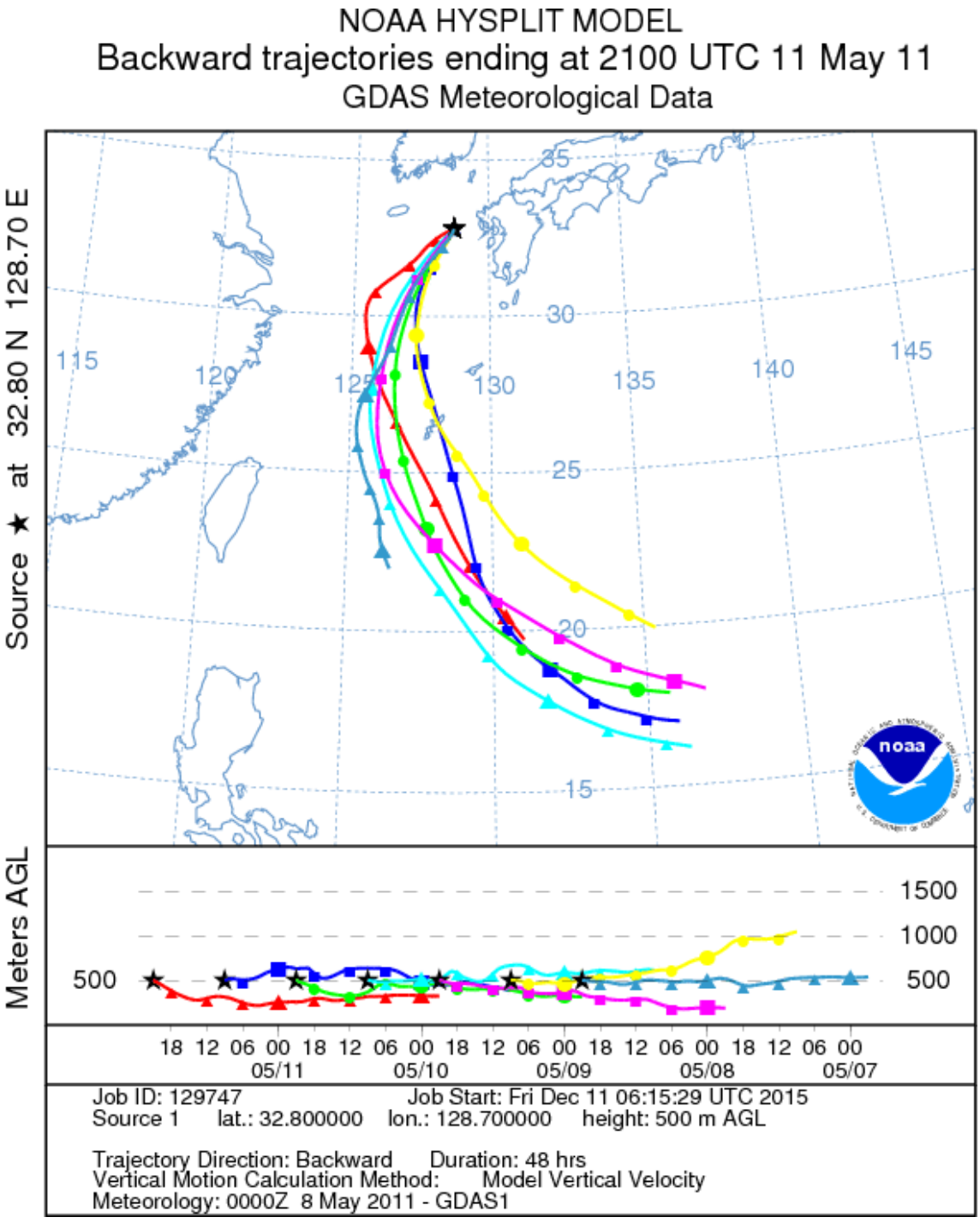

Figure S3. Back trajectories of air masses arriving at Fukue during the low mixing ratio episode of ozone (May 9 to 11).

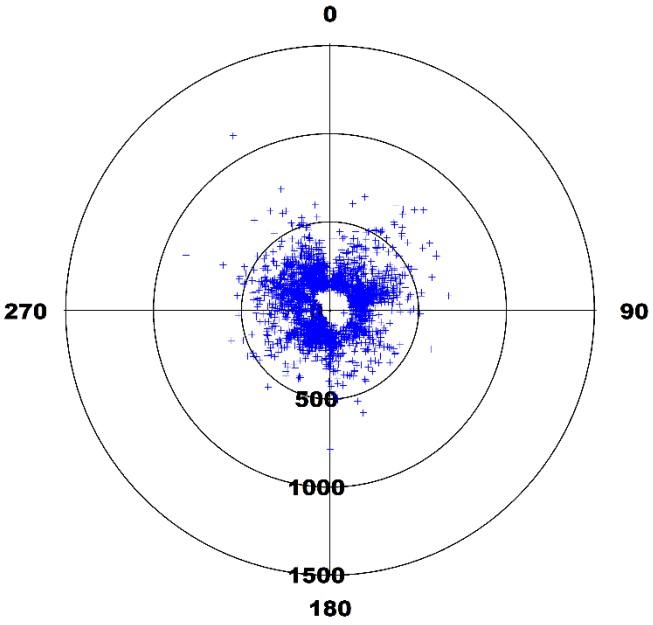

Figure S4. Wind-sector dependence (north = 0 degrees, east = 90 degrees) of CO mixing ratio (the radial axis in ppbv).

Table S1. Observations of chemical species concentration rise during the seven primary emission episodes indicated by CO mixing ratio[a]

	episode 1	episode 2	episode 3	episode 4	episode 5	episode 6	episode 7
beginning	12/21 18:00	2/1 1:00	3/28 20:00	4/15 5:00	4/24 6:00	5/1 4:00	5/12 9:00
end	12/24 7:00	2/11 10:00	4/2 13:00	4/17 1:00	4/25 16:00	5/6 4:00	5/19 17:00
particulate SO_4		n/a[b]	✓	✓		✓	✓
particulate Org		n/a[b]	✓	✓		✓	
particulate NO_3	✓	n/a[b]	✓			✓	

particulate NH_4	✓	n/a[b]	✓			✓	✓
NO_x	✓					✓	✓
NO_y	✓	✓	✓	✓		✓	✓
O_3	✓	✓	✓			***a***	✓
ethylene	✓	✓	✓	✓		✓	✓
benzene	✓	✓	✓	✓	✓	✓	✓
toluene	✓		✓	✓	✓	✓	✓

[a]A check mark indicates observation of remarkably high concentration. [b]n/a indicates no data available during the episode.

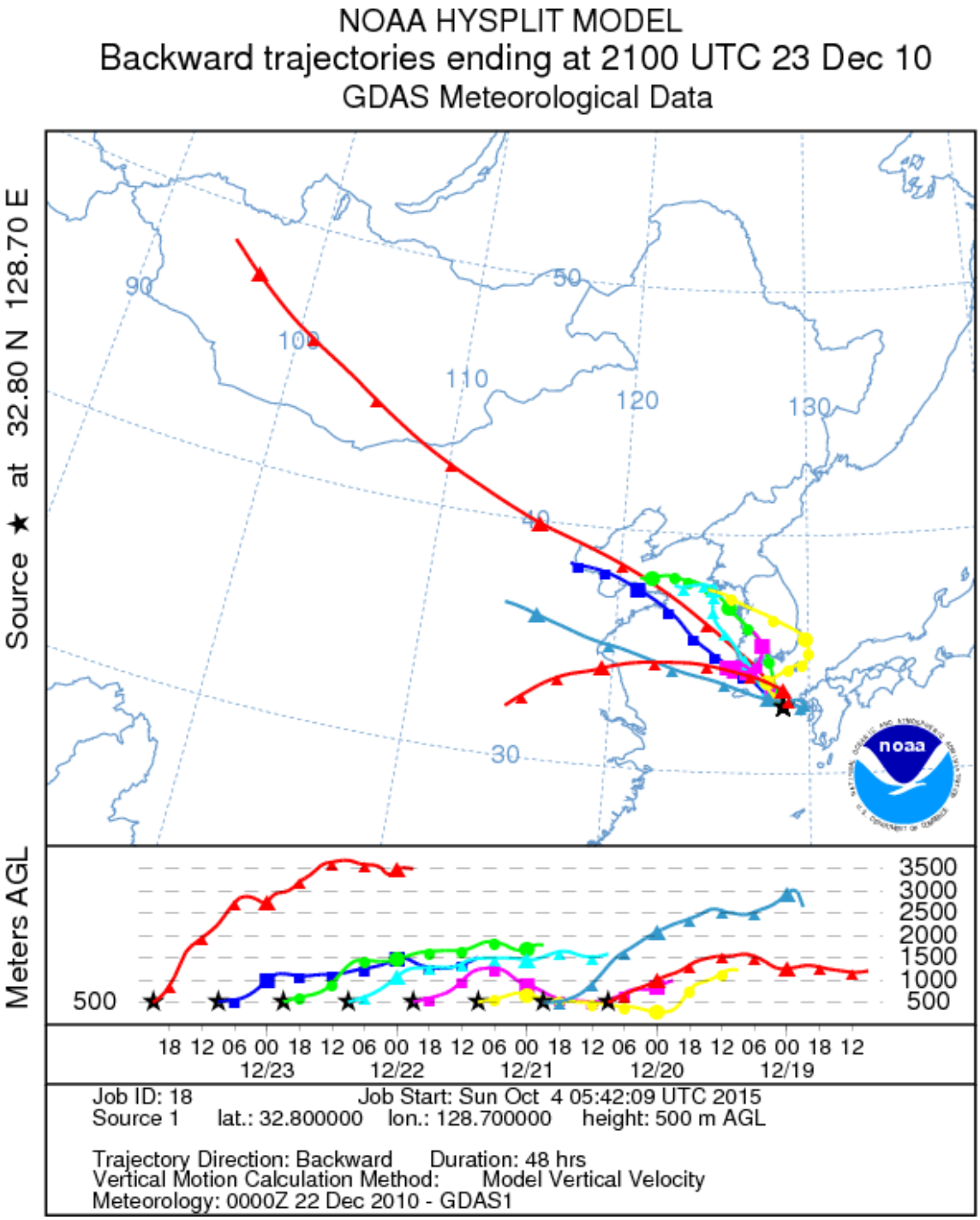

Figure S5. Back trajectories of air masses during the high concentration episode 1.

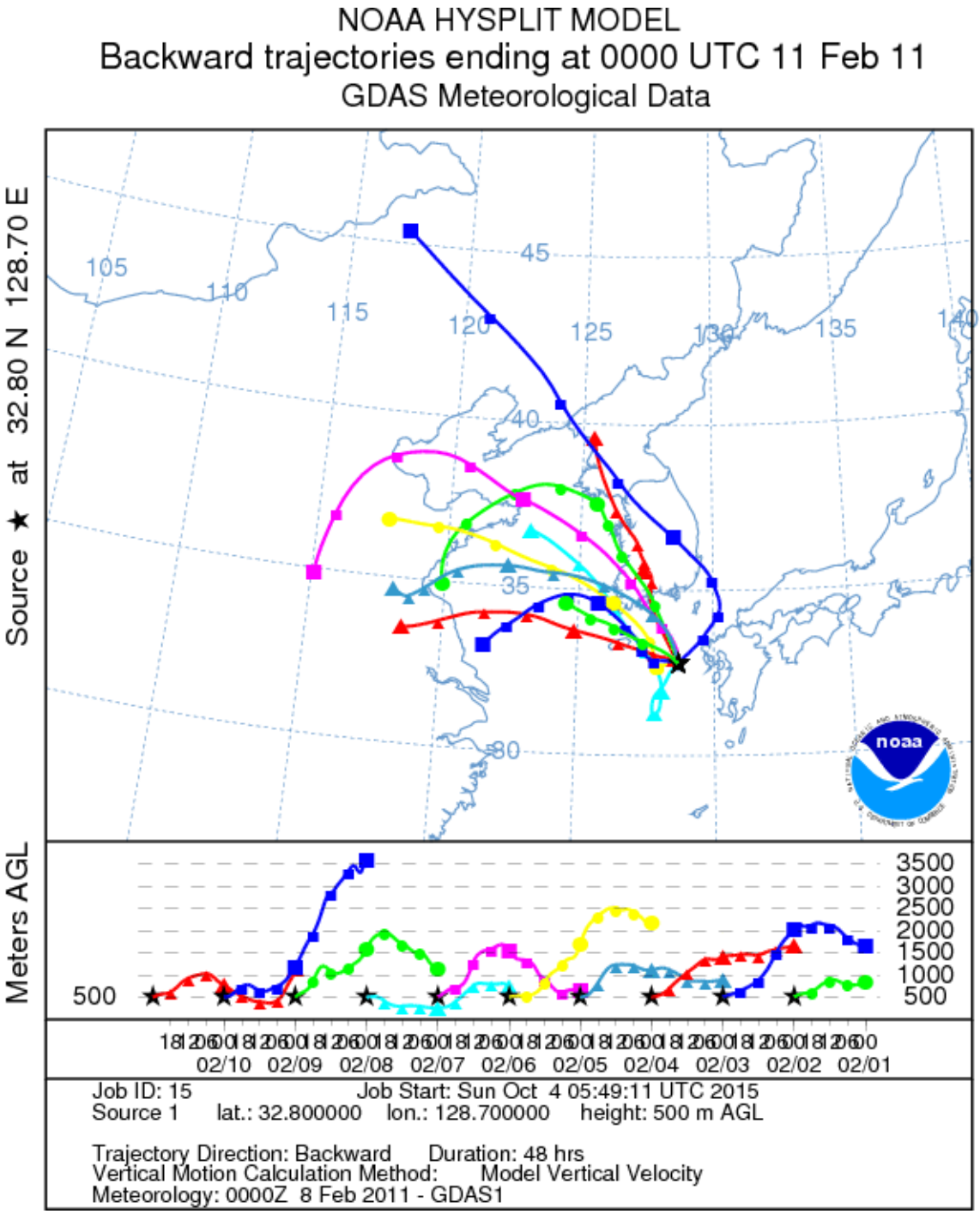

Figure S6. Back trajectories of air masses during the high concentration episode 2.

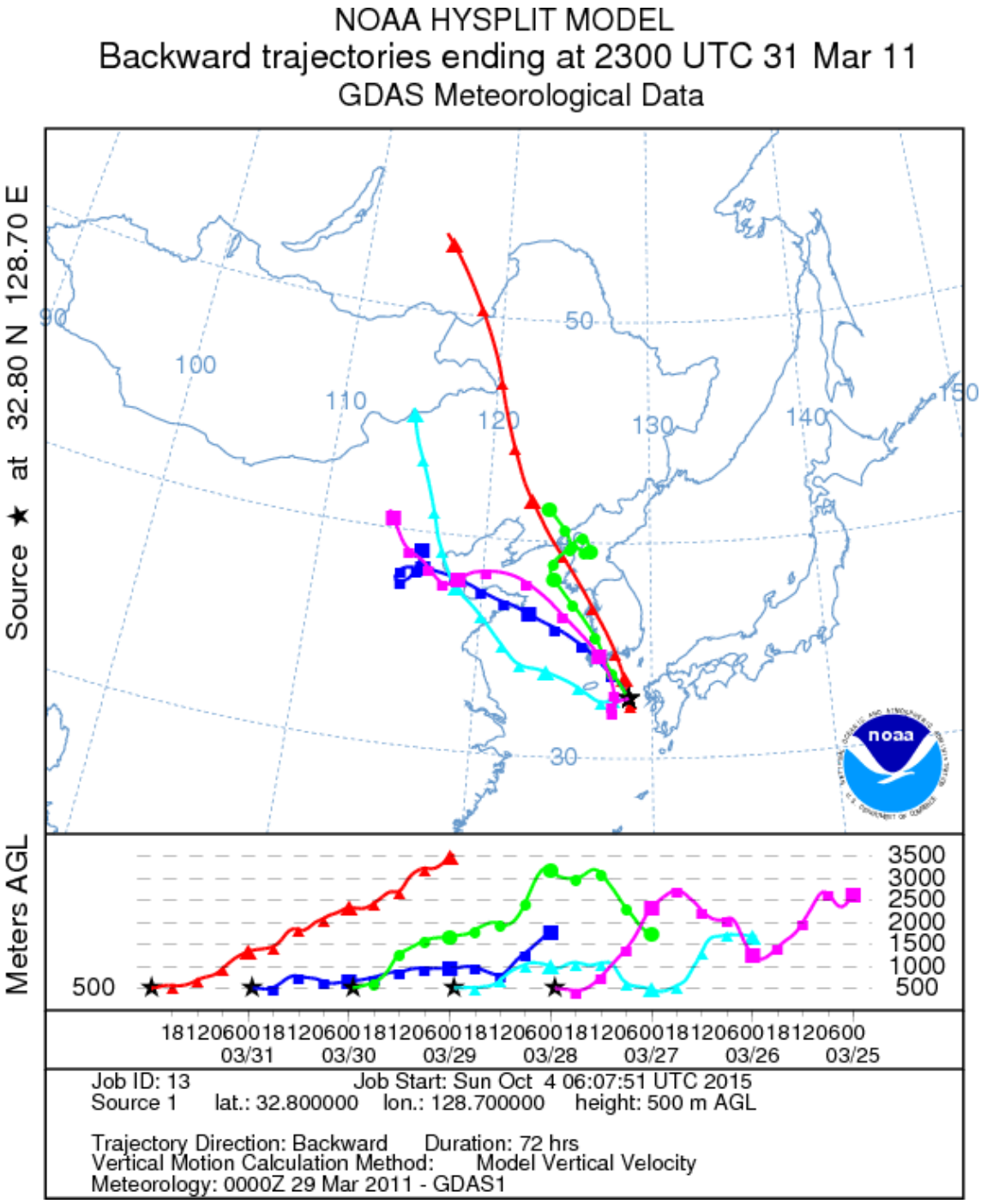

Figure S7. Back trajectories of air masses during the high concentration episode 3.

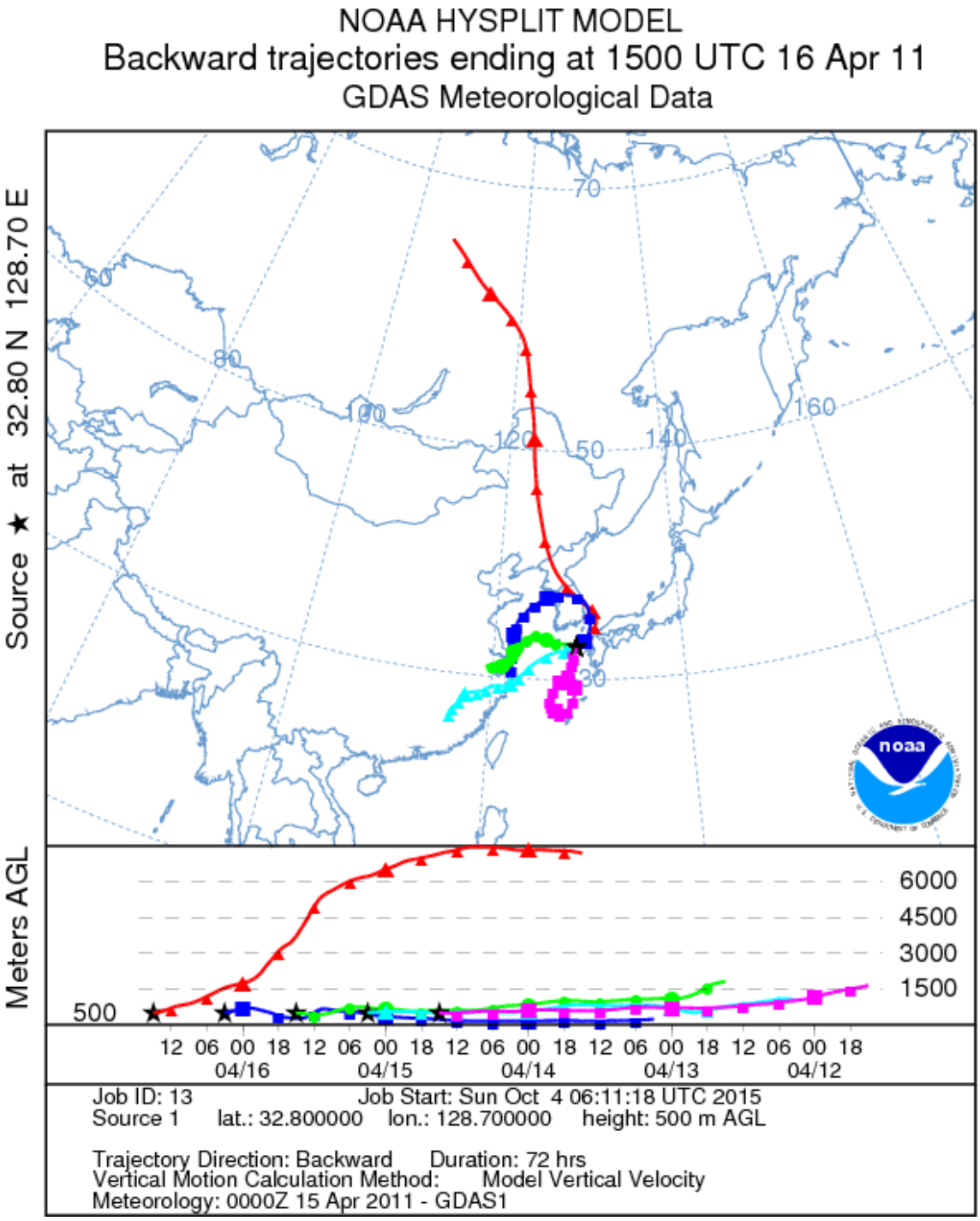

Figure S8. Back trajectories of air masses during the high concentration episode 4.

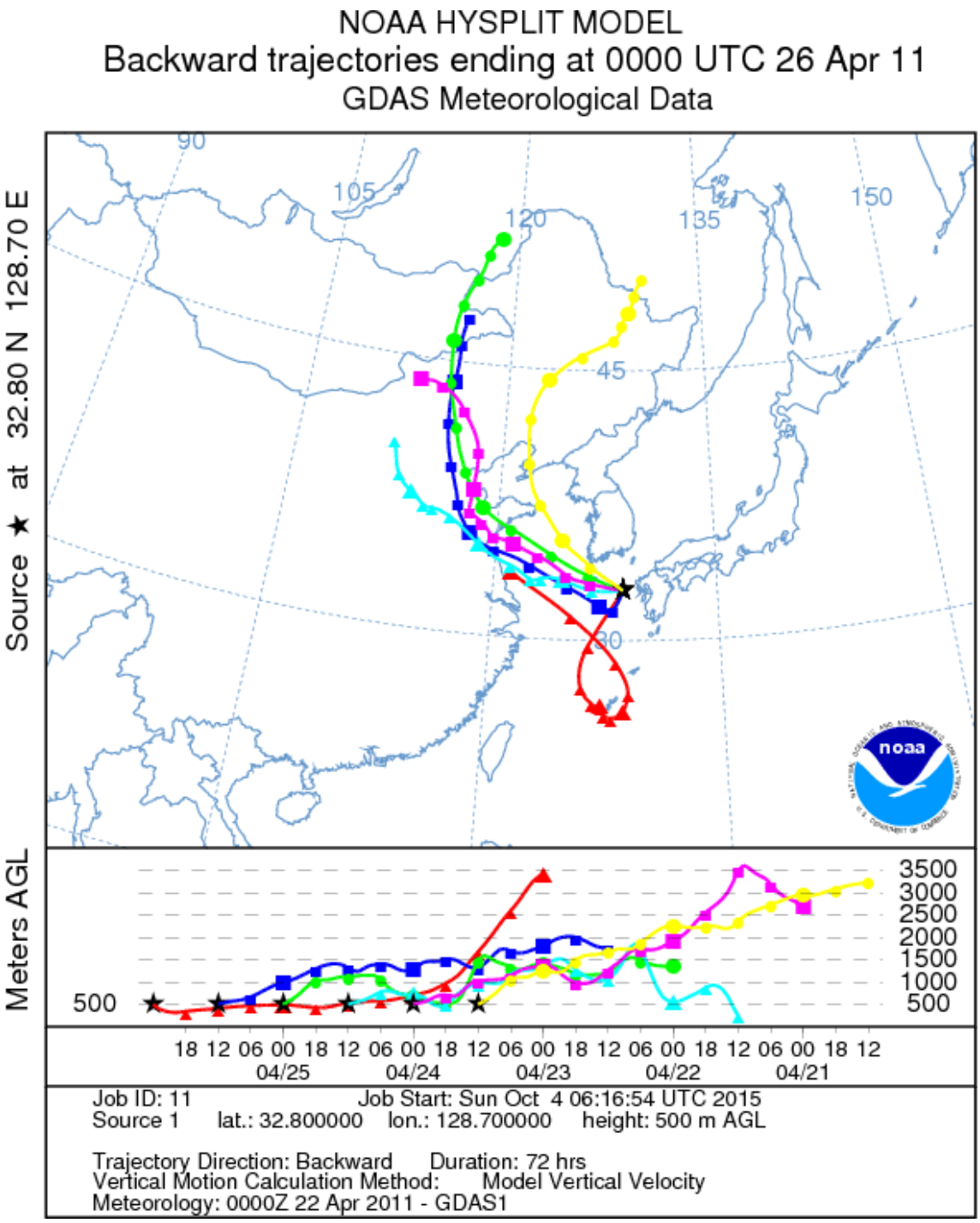

Figure S9. Back trajectories of air masses during the high concentration episode 5.

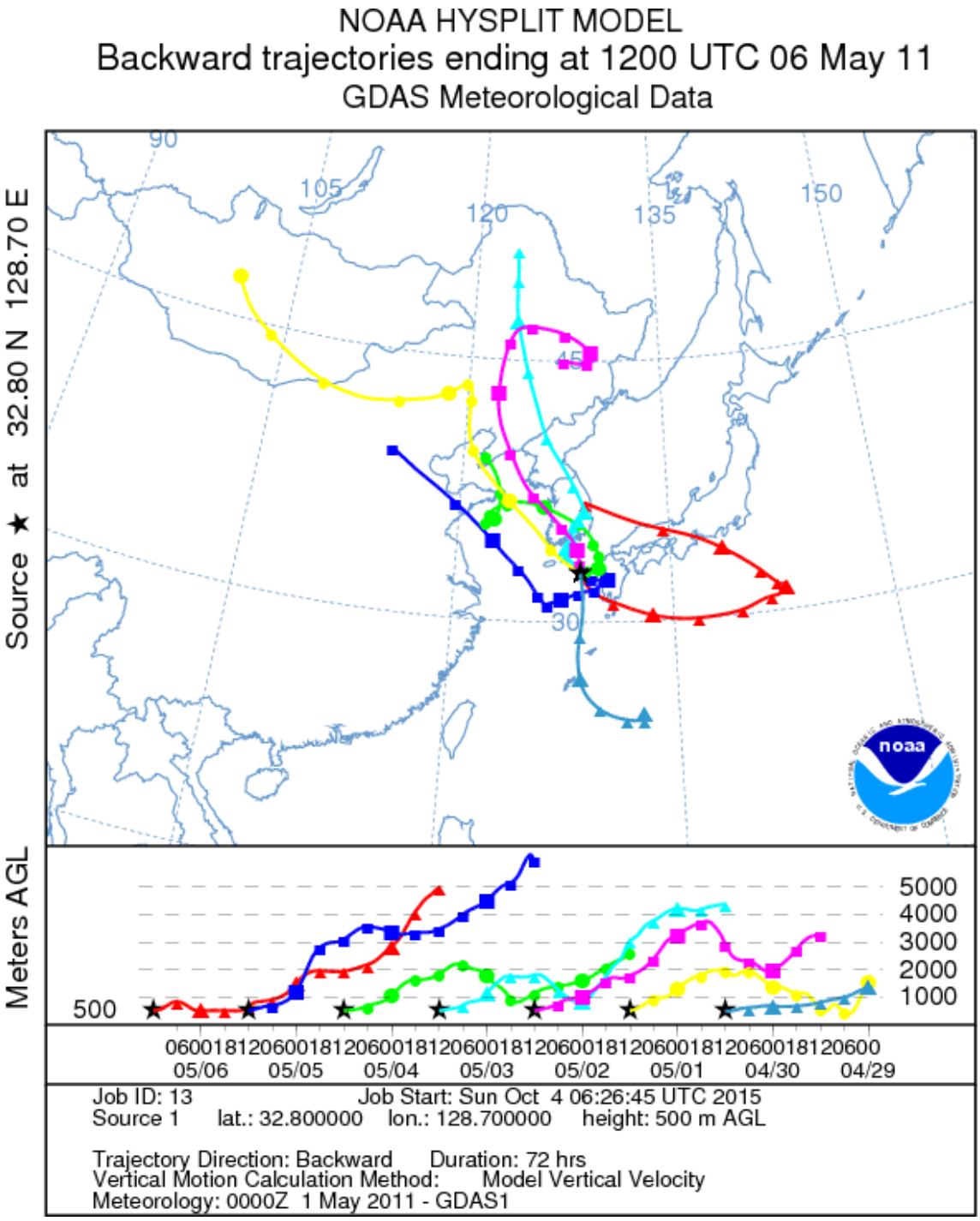

Figure S10. Back trajectories of air masses during the high concentration episode 6.

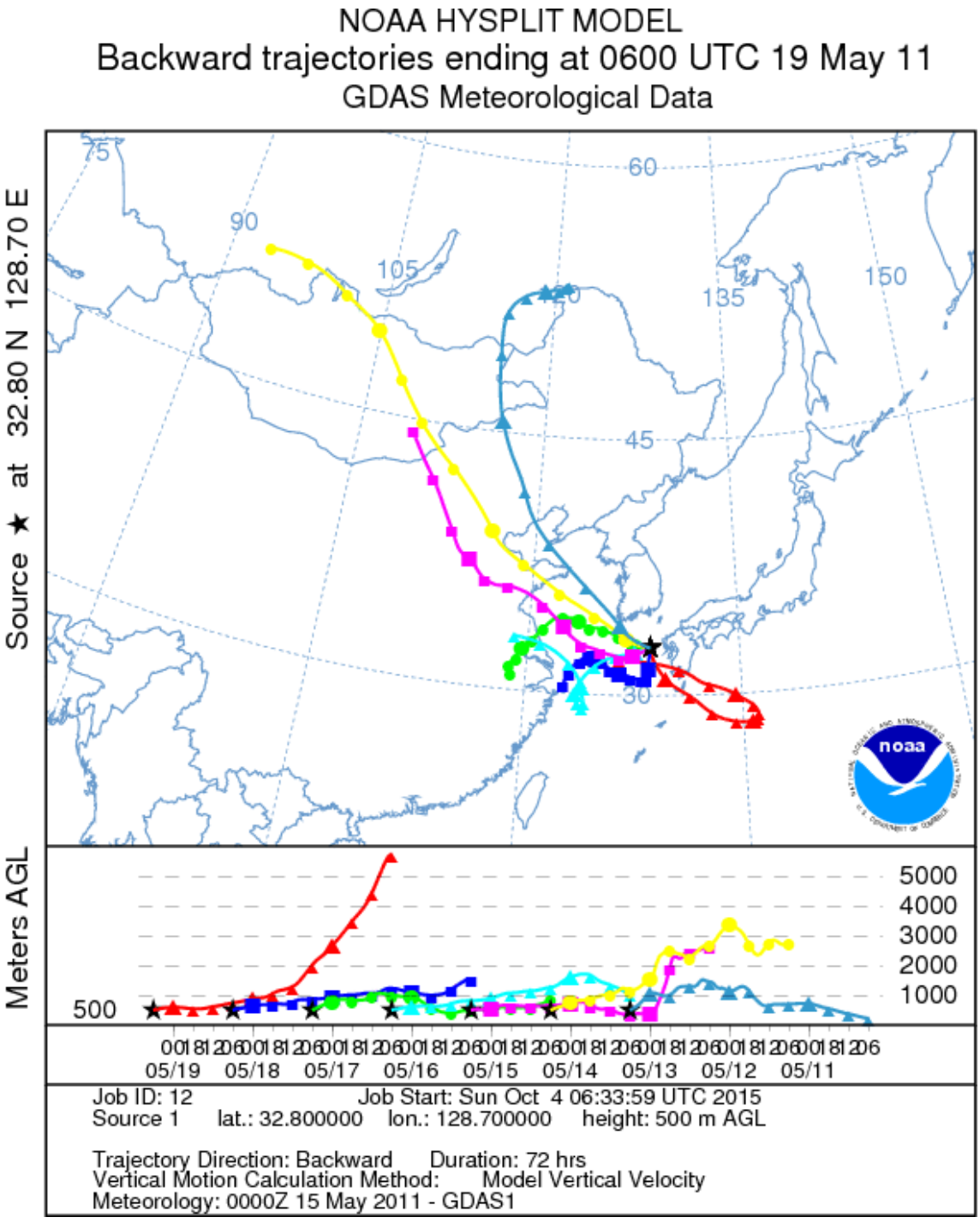

Figure S11. Back trajectories of air masses during the high concentration episode 7.

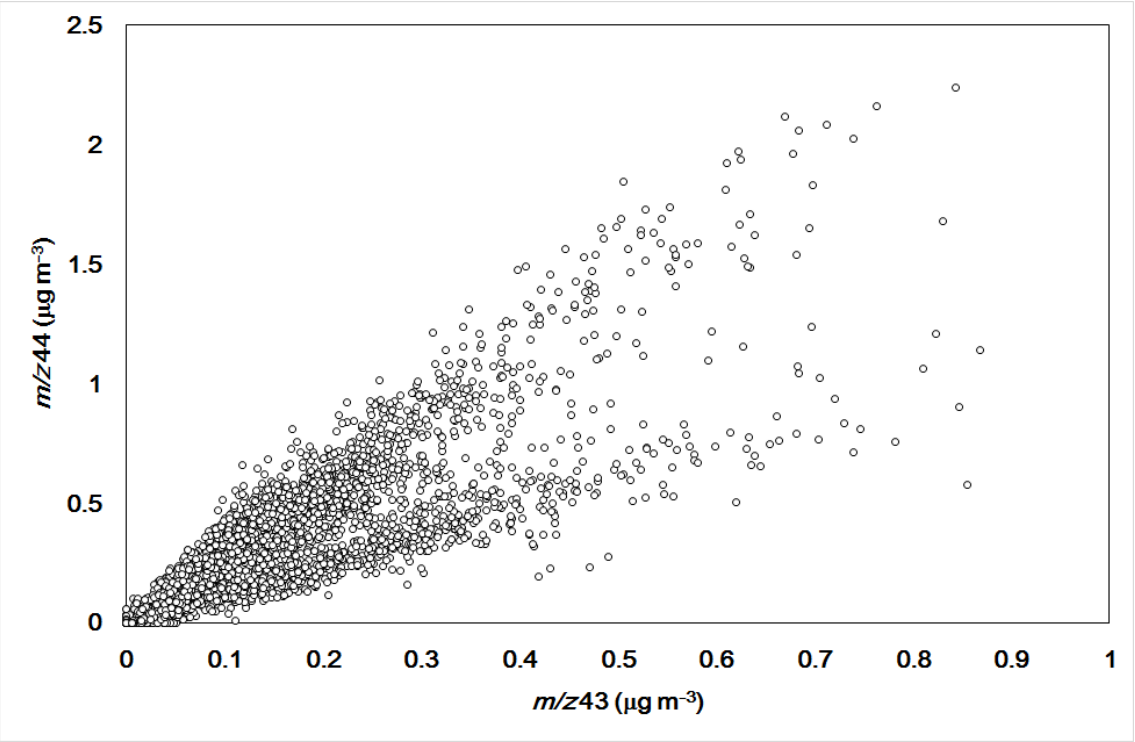

Figure S12. Scatter plot of m/z 44 in organic mass spectra as function of m/z 43 in organic mass spectra.