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*Supplement of*

**Vertical profiles of submicron aerosol single scattering albedo over the Indian region immediately before monsoon onset and during its development: research from the SWAAMI field campaign**

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## Supplementary Material

TRACK	DATE	Phase	Region Covered
B956	11 <sup>th</sup> June	1	Jaipur
B957	12 <sup>th</sup> June	1	Bhubaneswar
B958	13 <sup>th</sup> June	1	Nagpur, Bengaluru
B959	21 <sup>st</sup> June	2	Arabian Sea
B960	22 <sup>nd</sup> June	2	Bay of Bengal
B961	23 <sup>rd</sup> June	2	Arabian Sea
B962	23 <sup>rd</sup> June	2	Arabian Sea
B963	25 <sup>th</sup> June	2	Arabian Sea
B964	26 <sup>th</sup> June	2	Arabian Sea
B965	26 <sup>th</sup> June	2	Arabian Sea
B966	27 <sup>th</sup> June	2	Bay of Bengal
B967	28 <sup>th</sup> June	2	Nagpur, Lucknow
B968	30 <sup>th</sup> June	2	Jaipur
B969	2 <sup>nd</sup> July	3	Jaipur
B970	3 <sup>rd</sup> July	3	Jaipur
B971	4 <sup>th</sup> July	3	Bhubaneswar
B972	5 <sup>th</sup> July	3	Jaipur
B973	6 <sup>th</sup> July	3	Jaipur
B974	7 <sup>th</sup> July	3	Ahmedabad
B975	9 <sup>th</sup> July	3	Bhubaneswar
B976	10 <sup>th</sup> July	3	Jaipur
B977	11 <sup>th</sup> July	3	Kachhla

**Table S1. Details of the aircraft measurements**

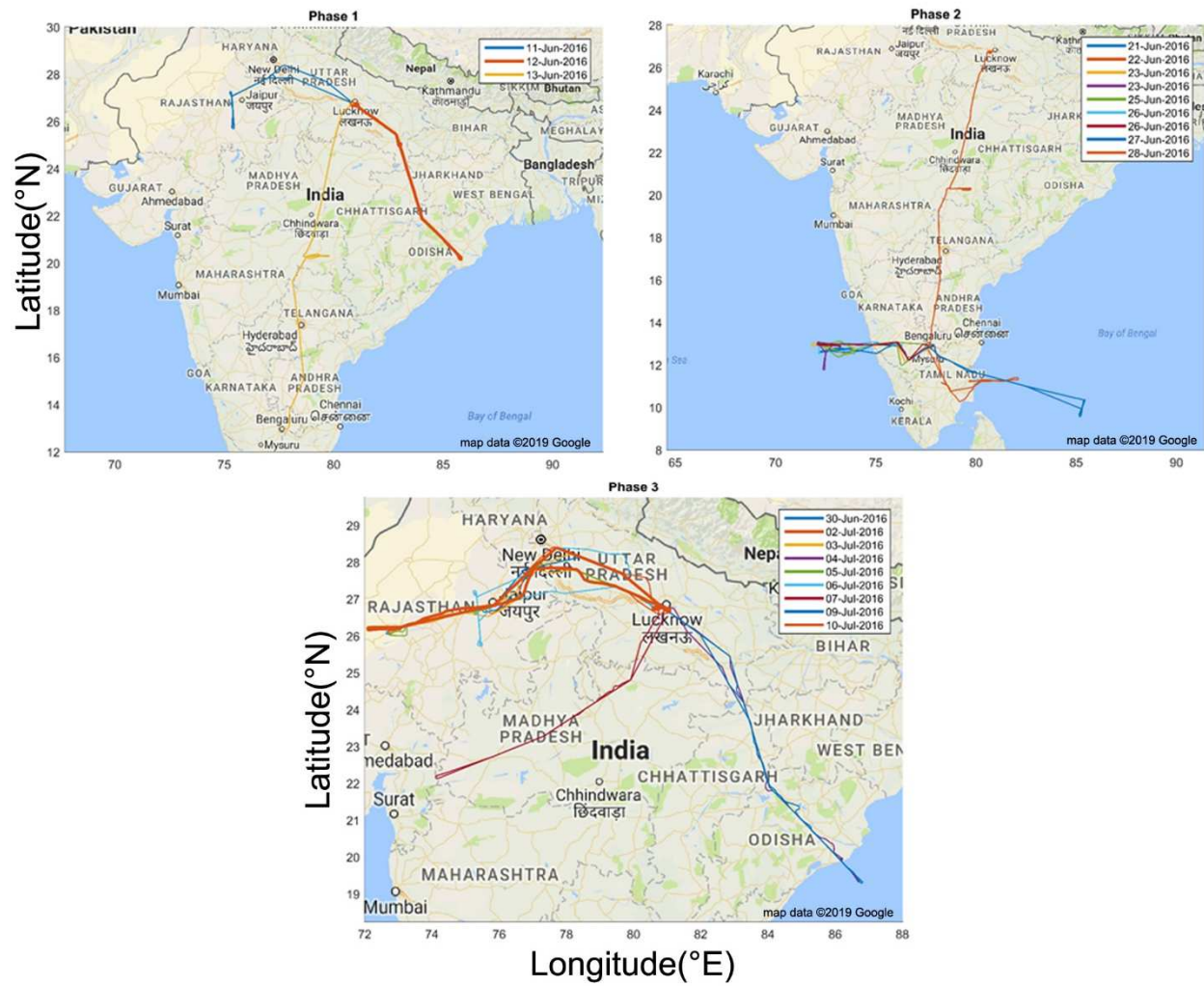


Figure S1. Detailed flight track during the three phases

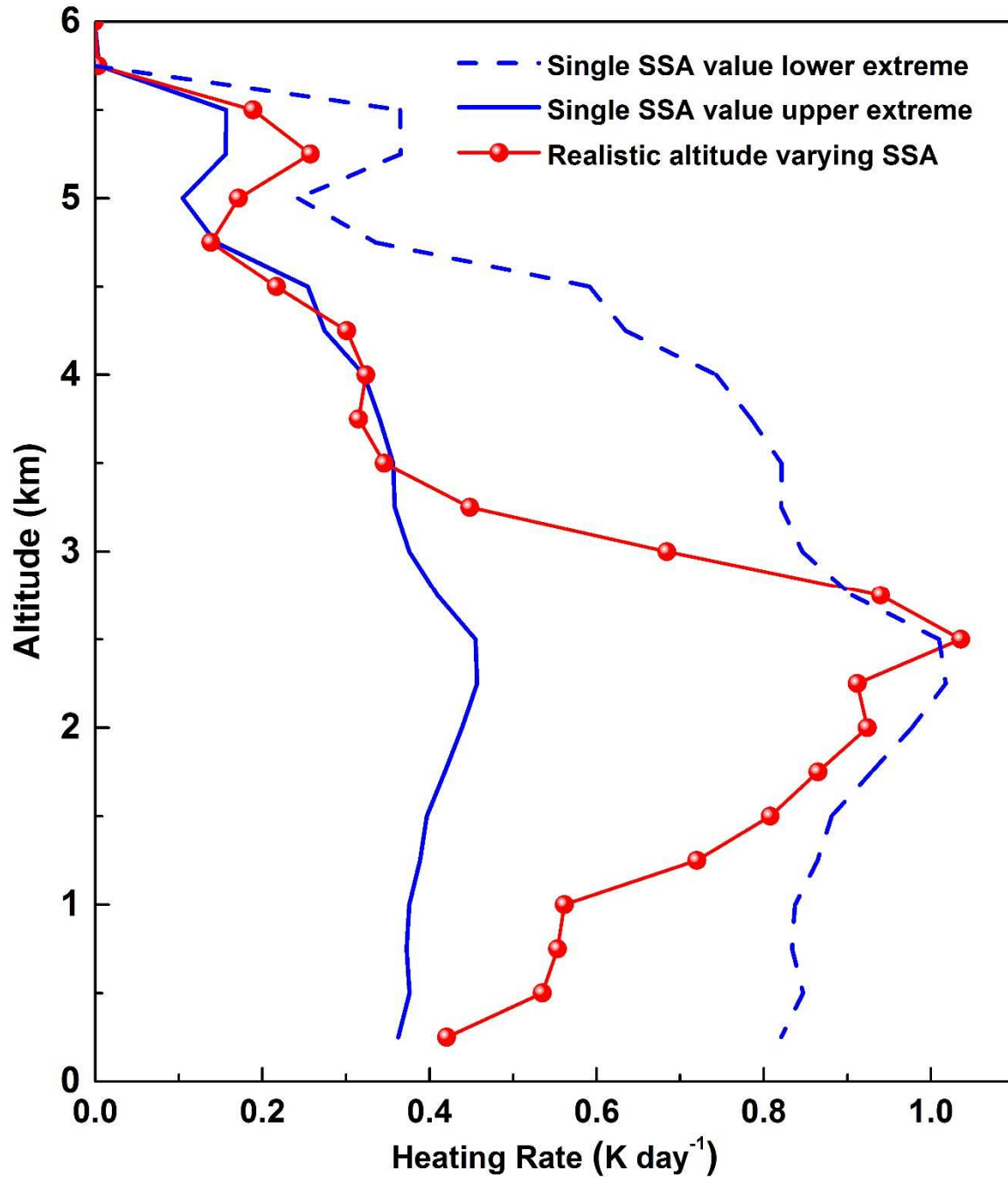


Figure S2. The realistic heating rate profile shown in Figure 9b has been reproduced here (red line). The SSA values in the profile vary between the two extreme values 0.95 and 0.87. To clearly demonstrate the effect of altitude resolved SSA on heating rate profiles, the heating rate profiles calculated for the same extinction profile, but with two single SSA values at the extremes (0.87 and 0.95) and also plotted. Though the position of the peak occurs around the same altitude, the peak heating rate as well as integrated heating rates differ significantly.