



Supplement of

Bayesian aerosol retrieval algorithm for MODIS AOD retrieval over land

Antti Lipponen et al.

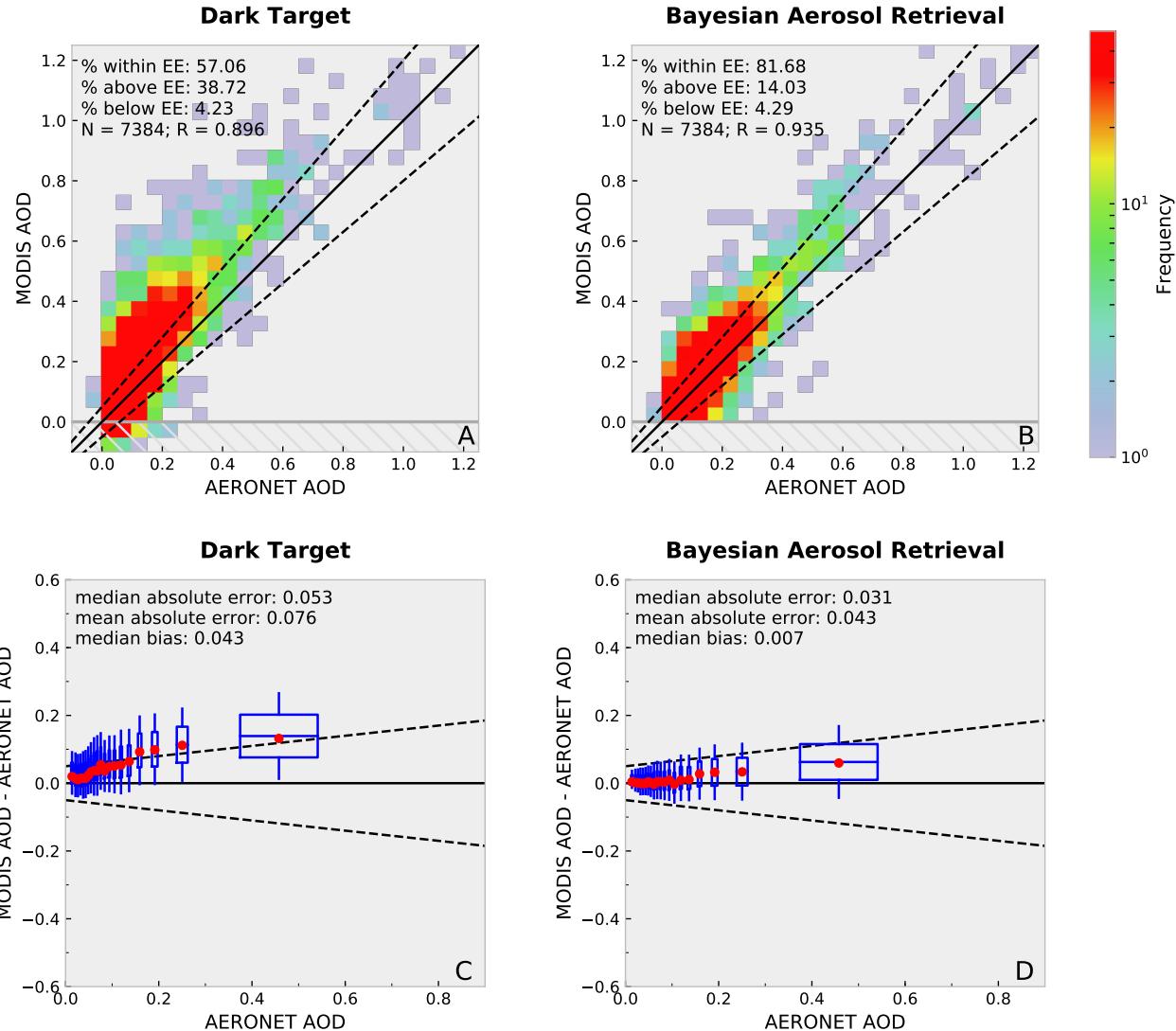
Correspondence to: Antti Lipponen (antti.lipponen@fmi.fi)

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1 AOD retrieval results: Dark Target vs. Bayesian Aerosol Retrieval

1.1 East North America

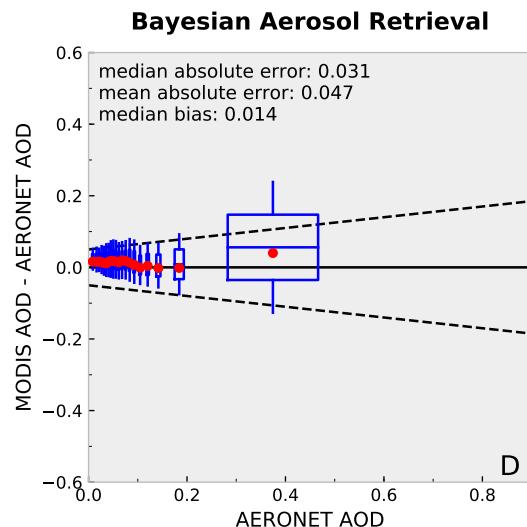
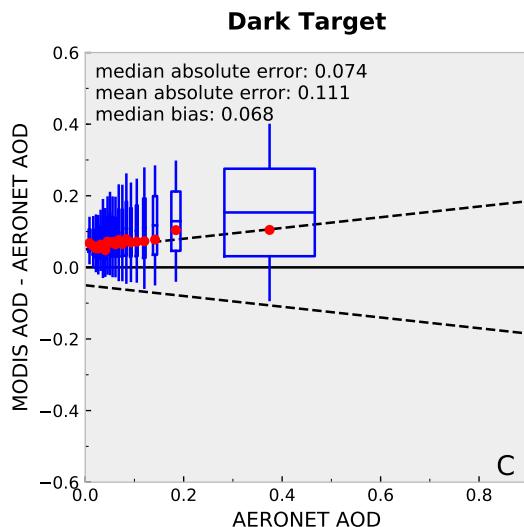
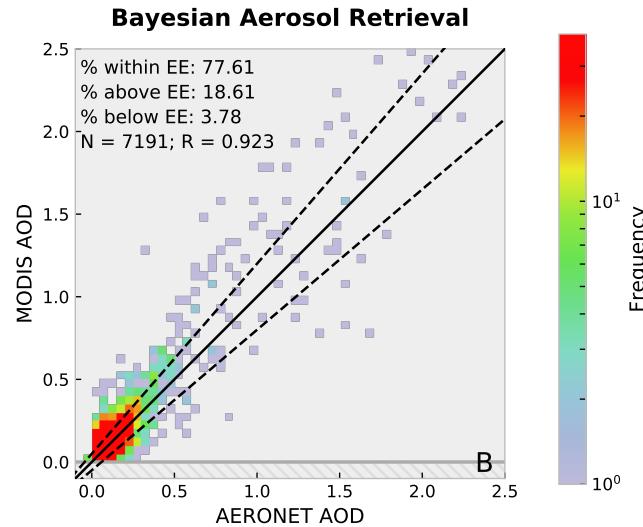
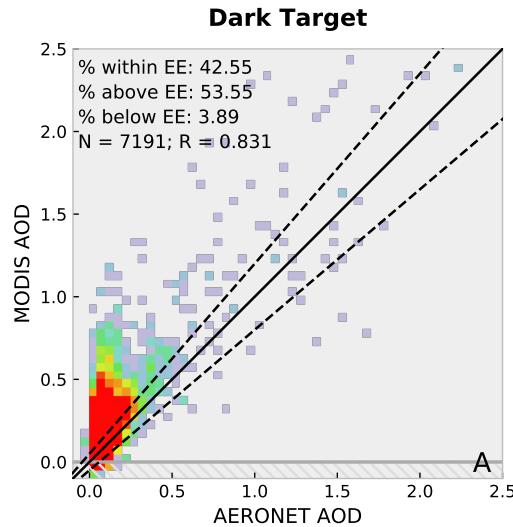
ENA



All pixels used for retrieval

1.2 West North America

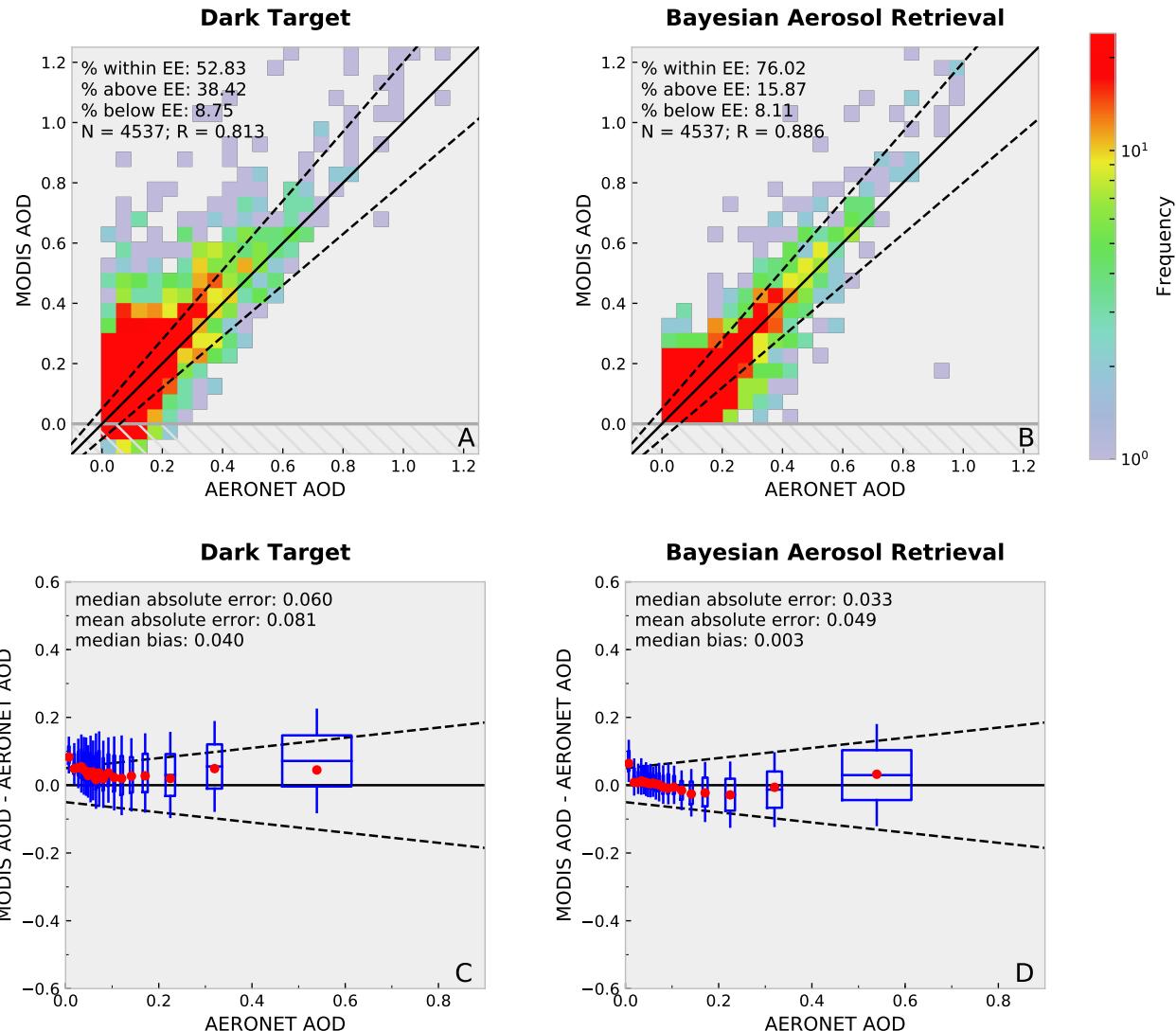
WNA



All pixels used for retrieval

1.3 Central and South America

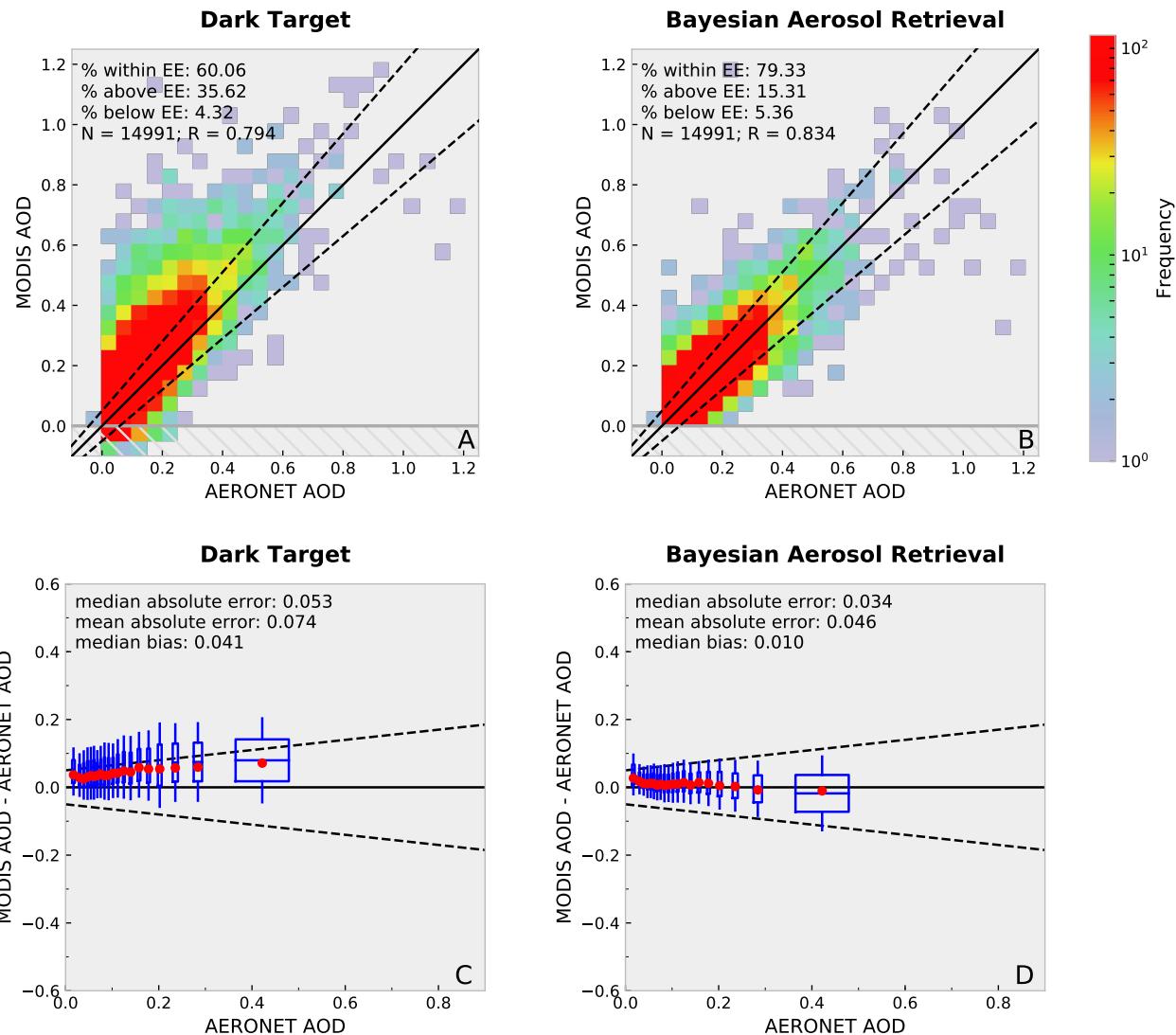
CSA



All pixels used for retrieval

1.4 Europe

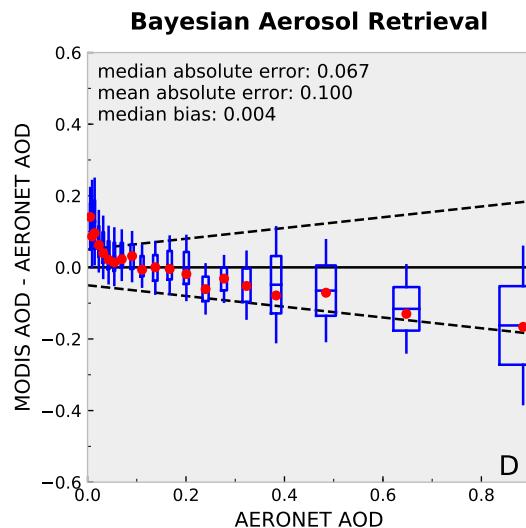
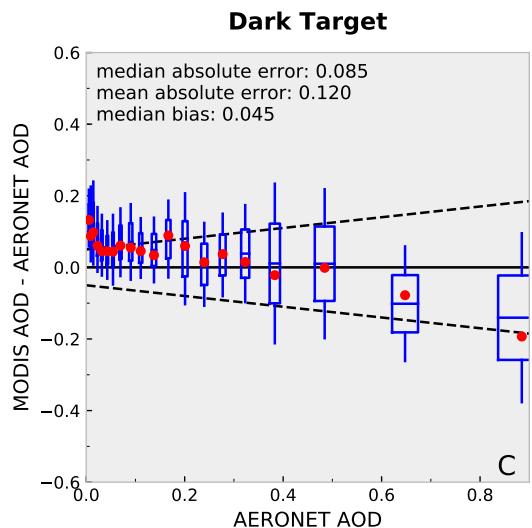
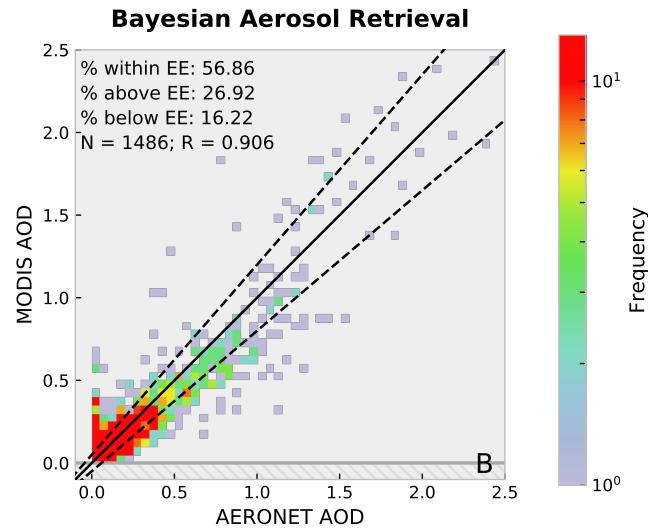
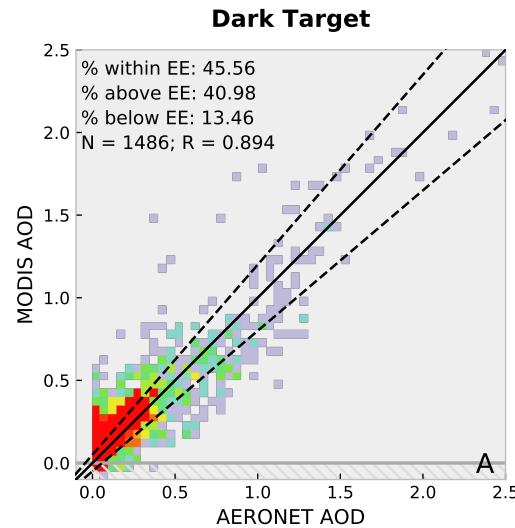
EUR



All pixels used for retrieval

1.5 North Africa and Middle East

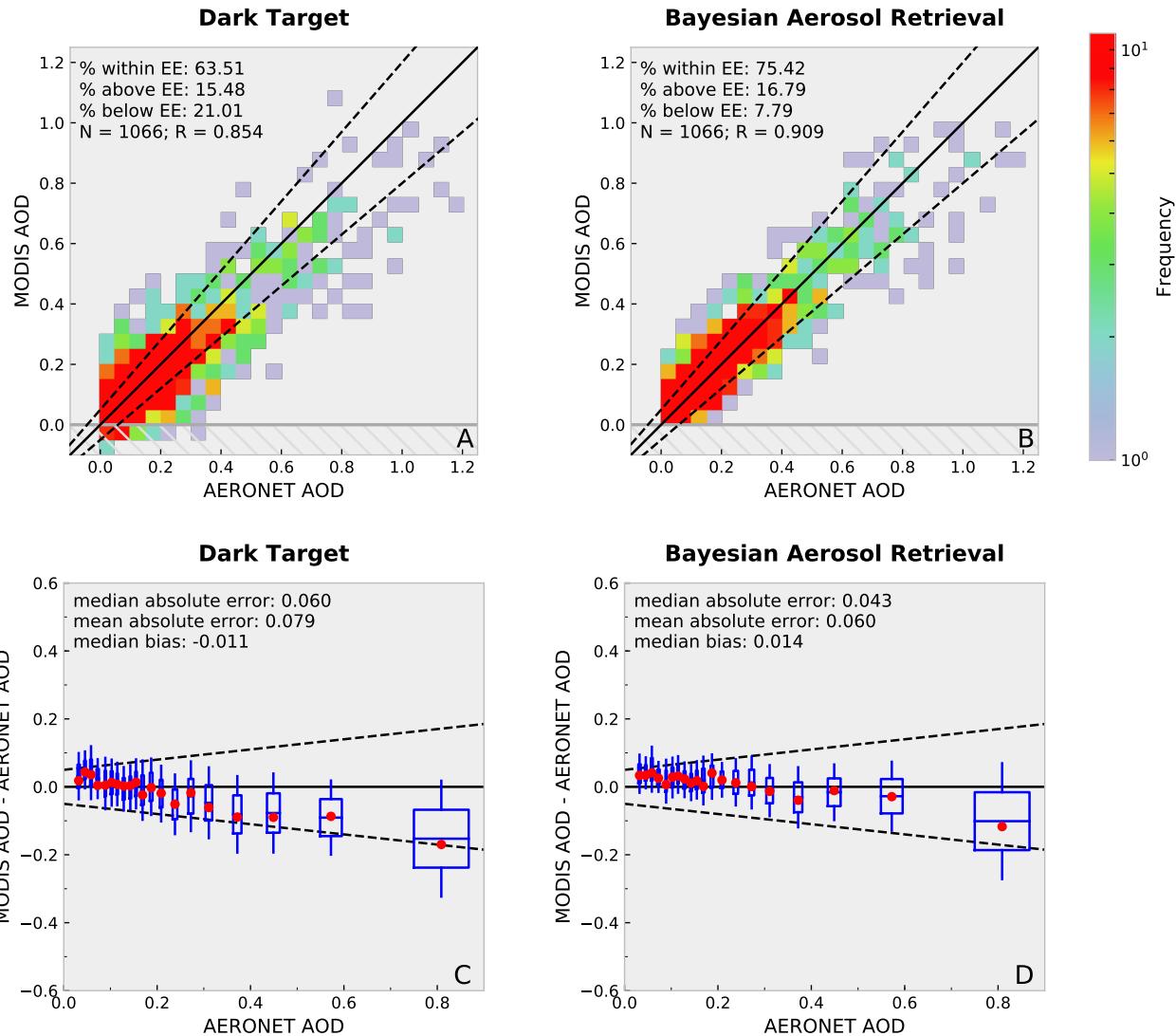
NAME



All pixels used for retrieval

1.6 South Africa

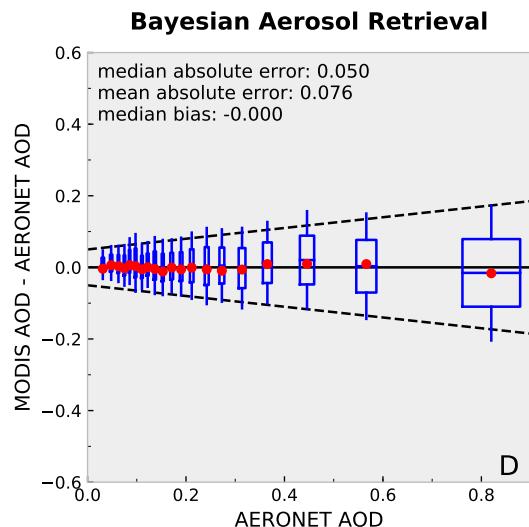
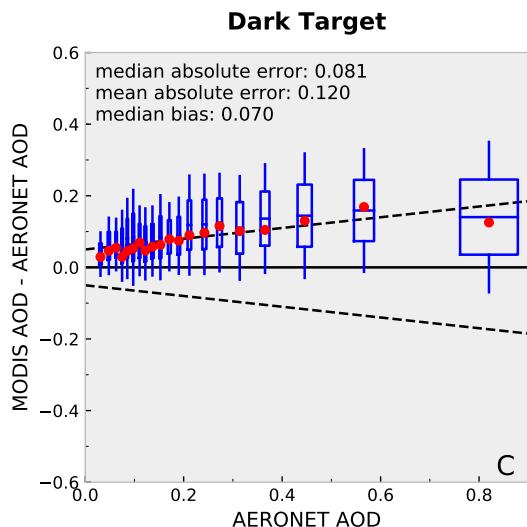
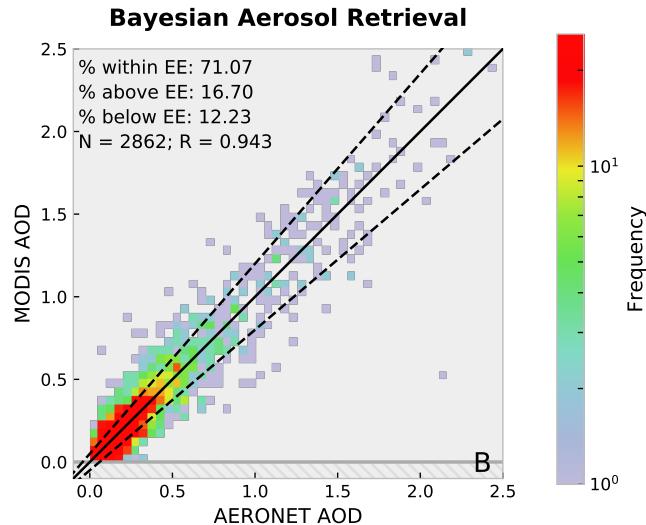
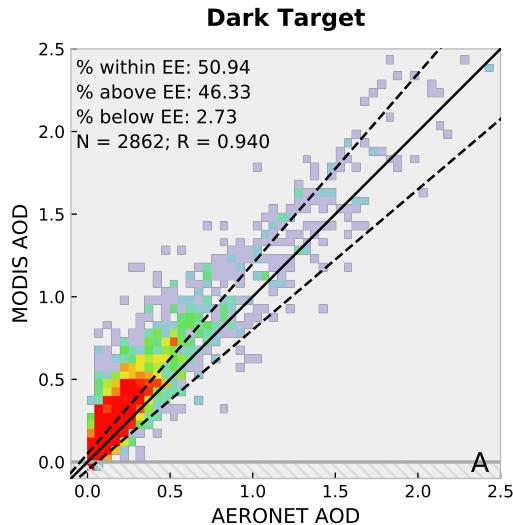
SA



All pixels used for retrieval

1.7 Northeast Asia

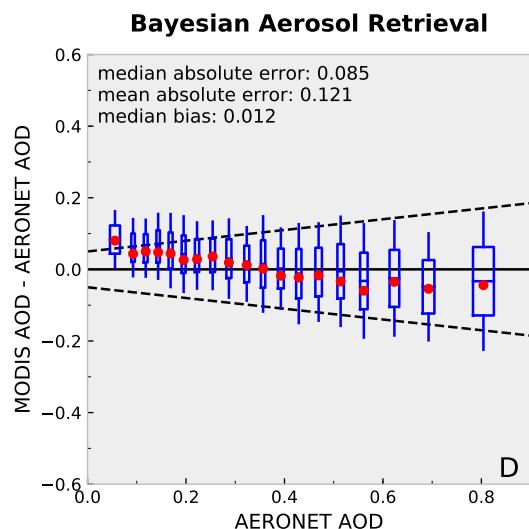
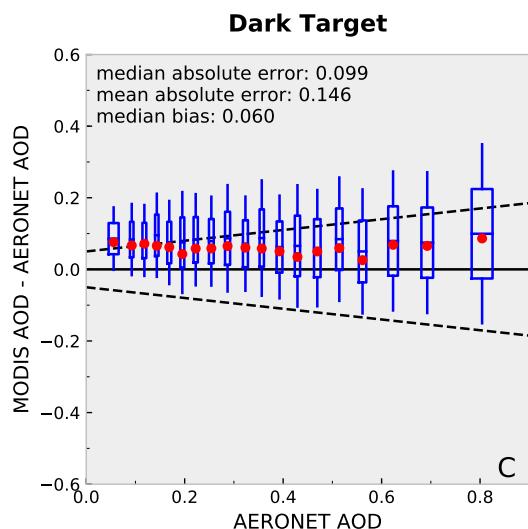
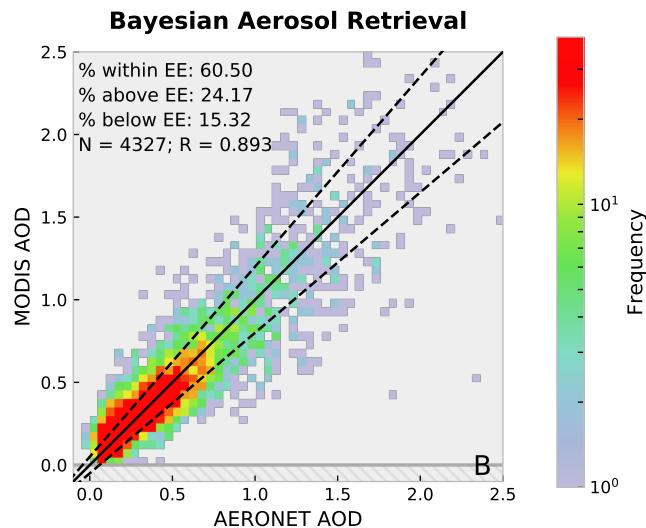
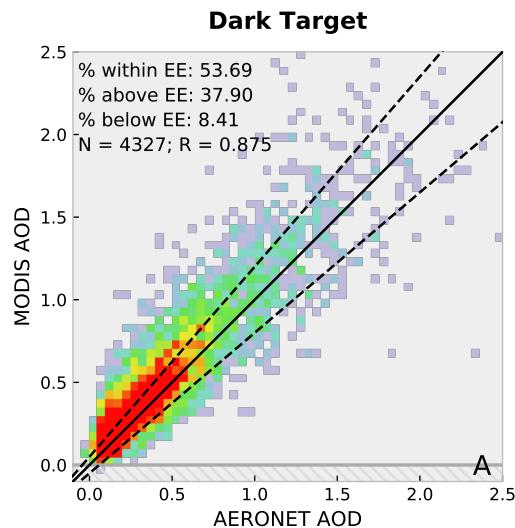
NEA



All pixels used for retrieval

1.8 Southeast Asia

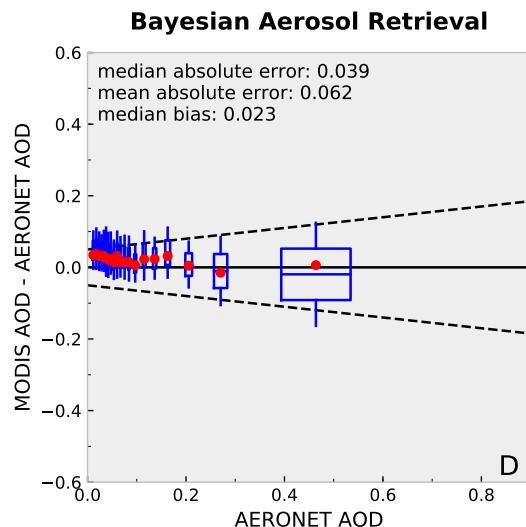
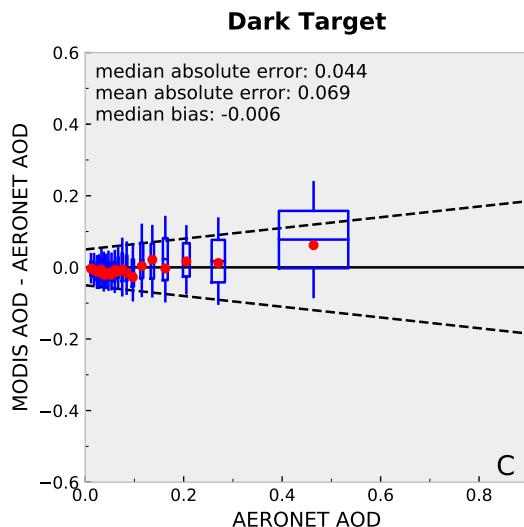
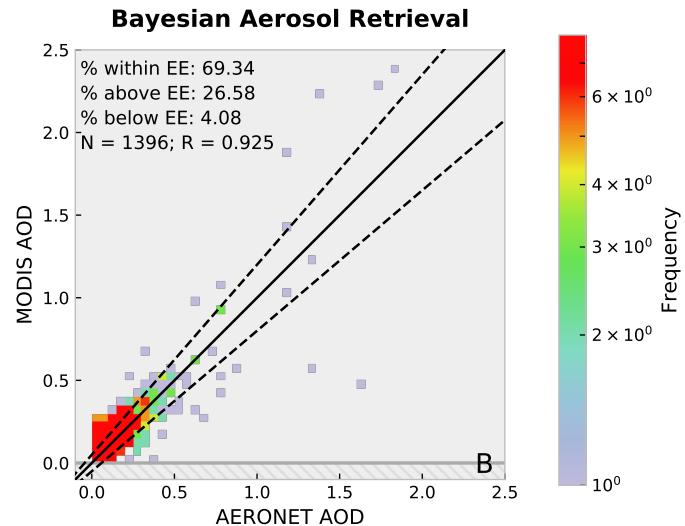
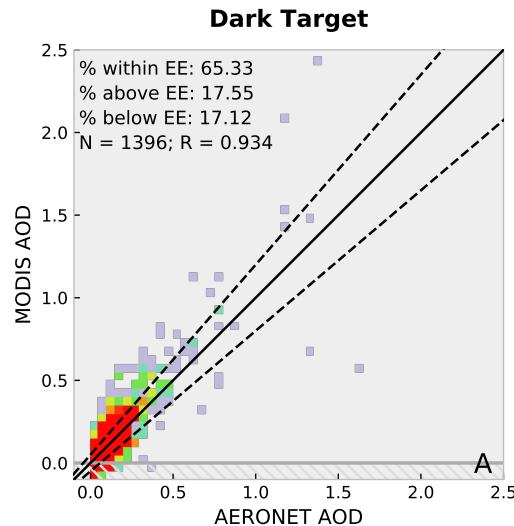
SEA



All pixels used for retrieval

1.9 Oceania

OCE

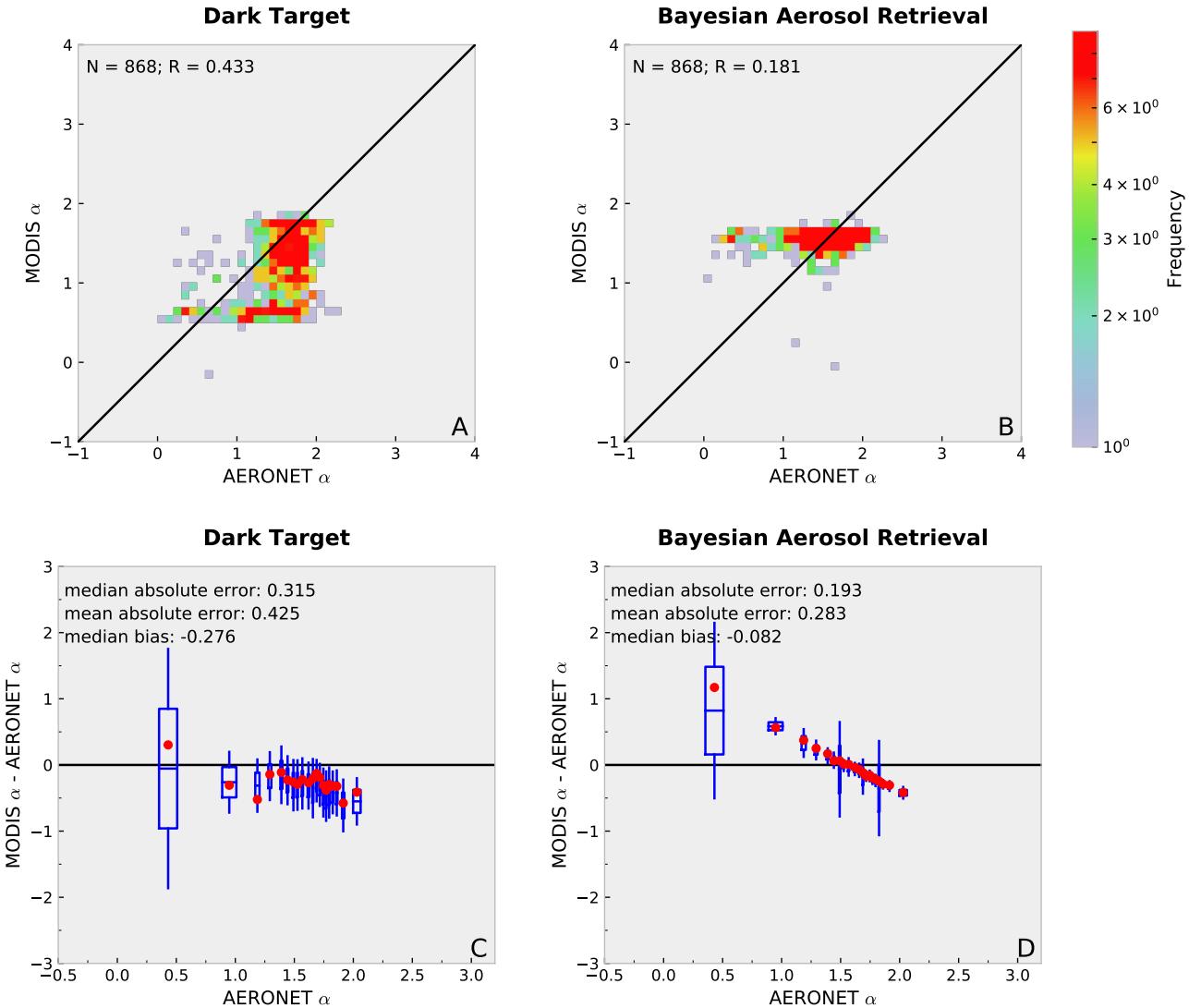


All pixels used for retrieval

2 Angstrom exponent retrieval results: Dark Target vs. Bayesian Aerosol Retrieval

2.1 East North America

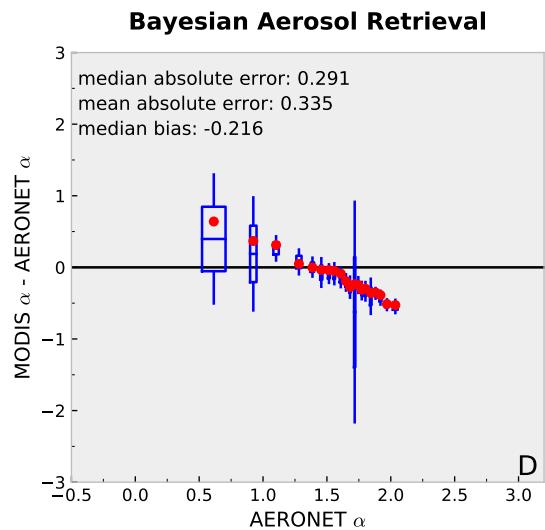
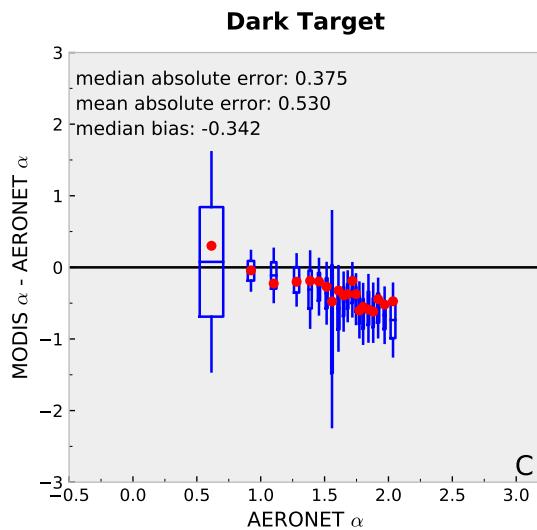
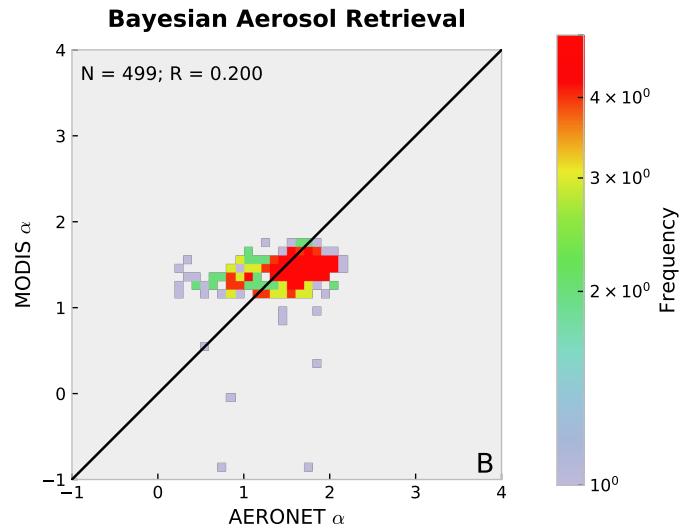
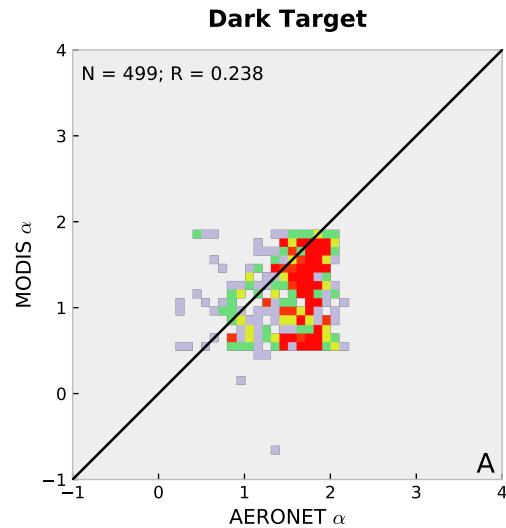
ENA



All pixels used for retrieval

2.2 West North America

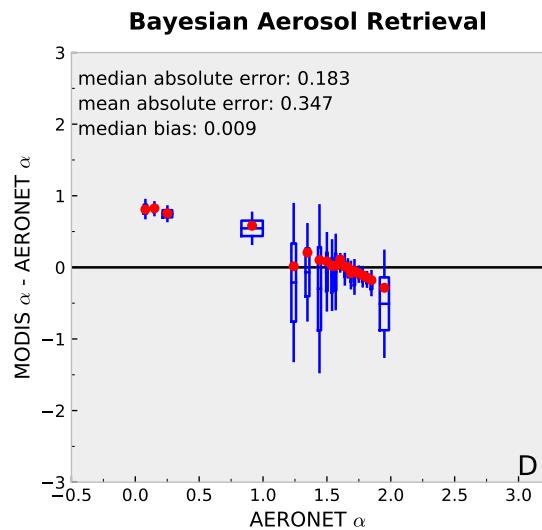
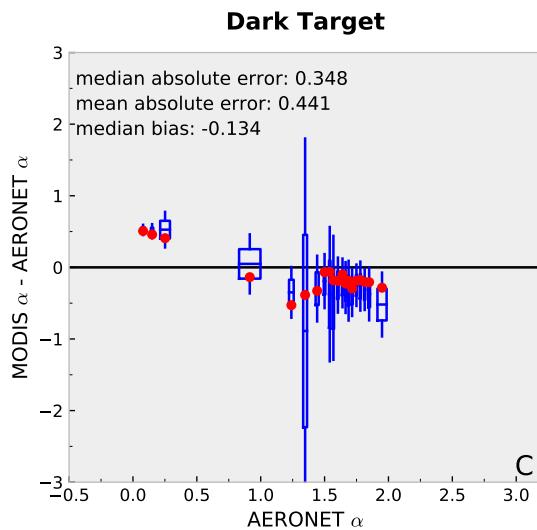
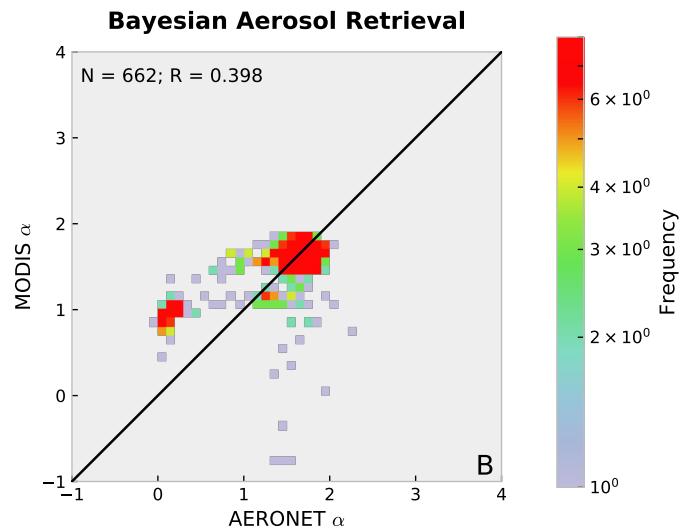
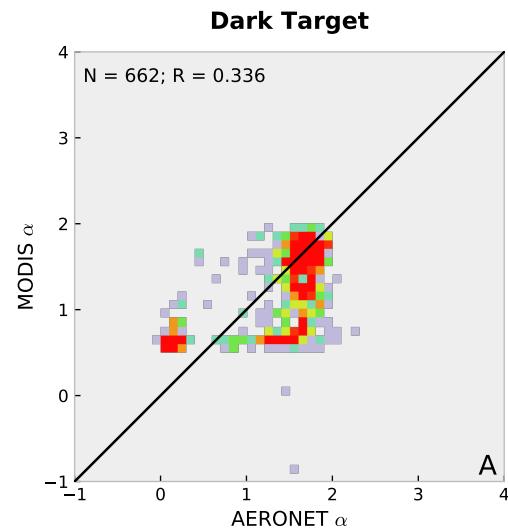
WNA



All pixels used for retrieval

2.3 Central and South America

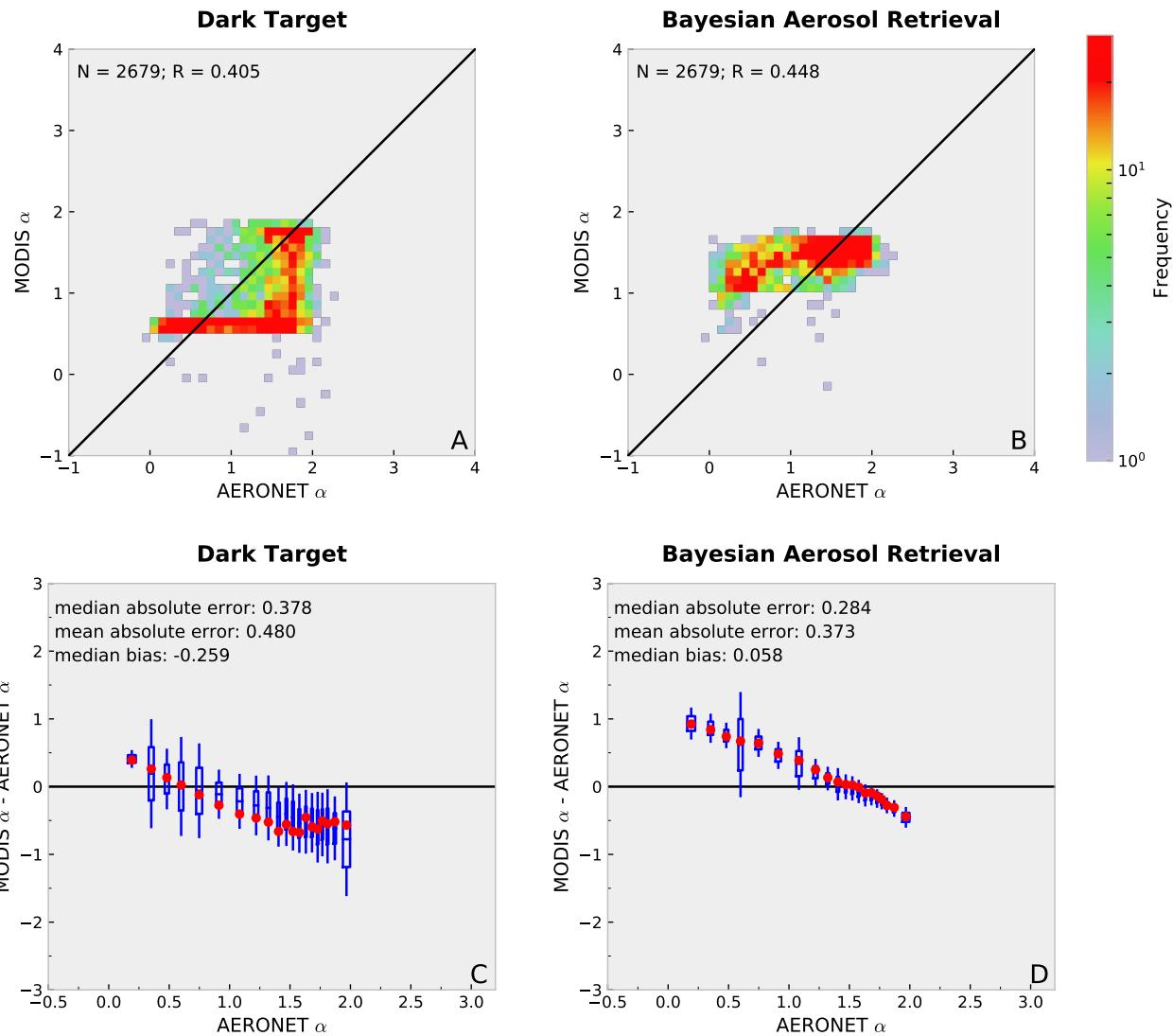
CSA



All pixels used for retrieval

2.4 Europe

EUR

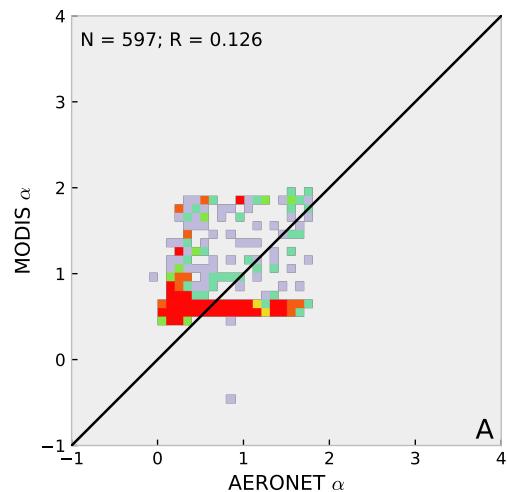


All pixels used for retrieval

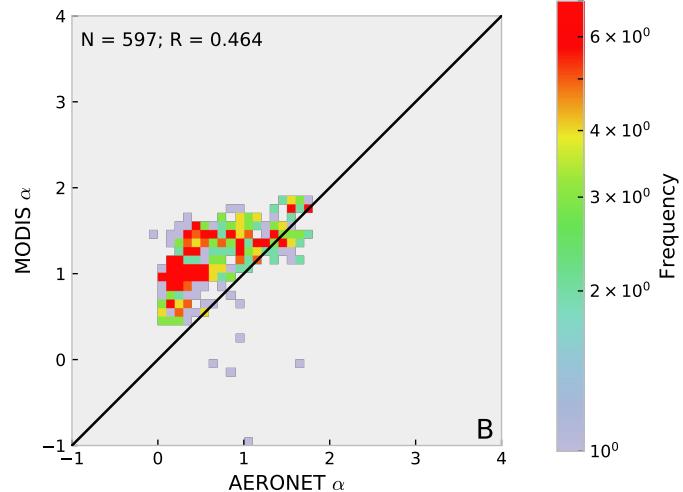
2.5 North Africa and Middle East

NAME

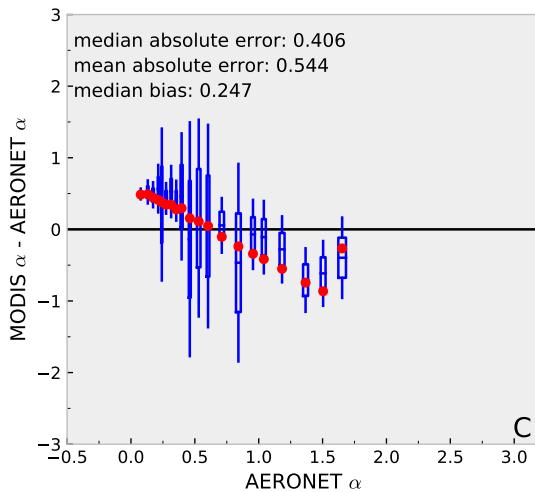
Dark Target



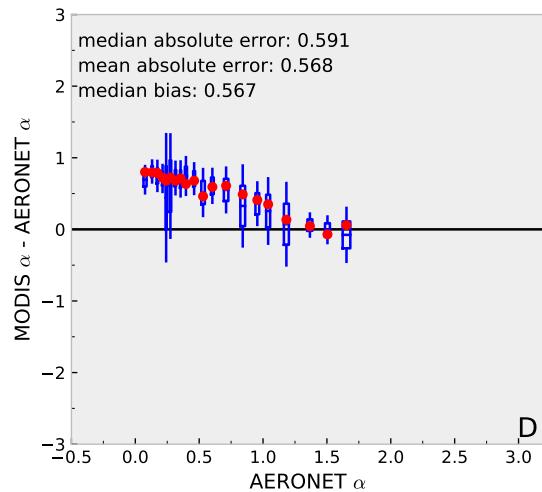
Bayesian Aerosol Retrieval



Dark Target



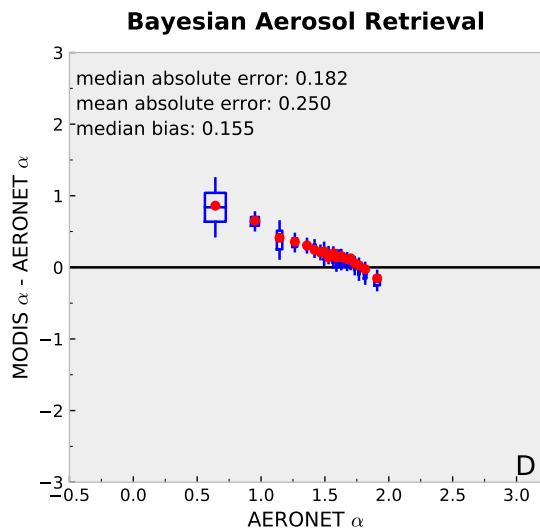
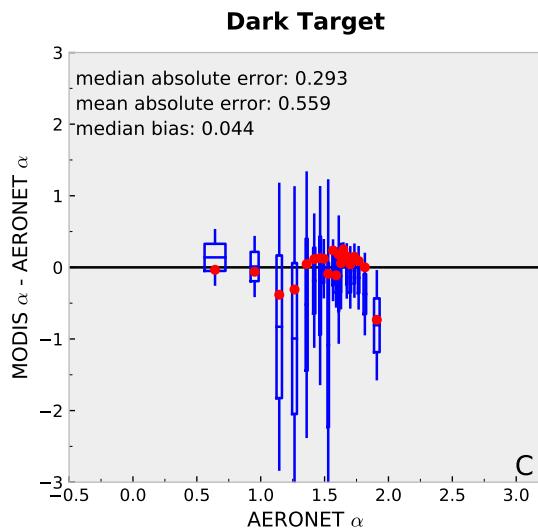
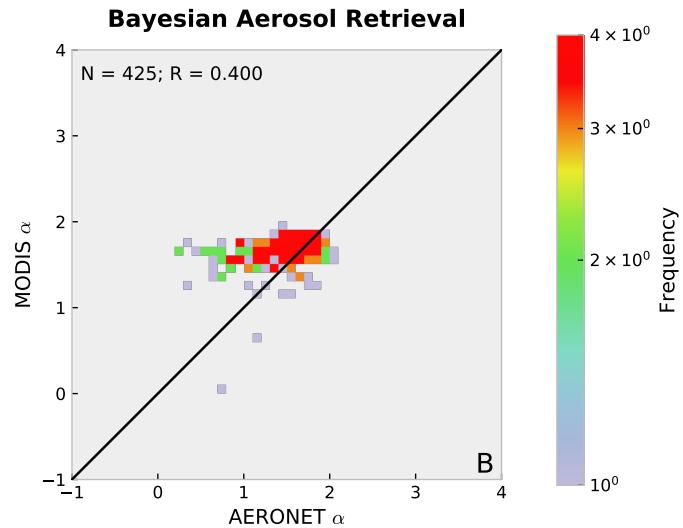
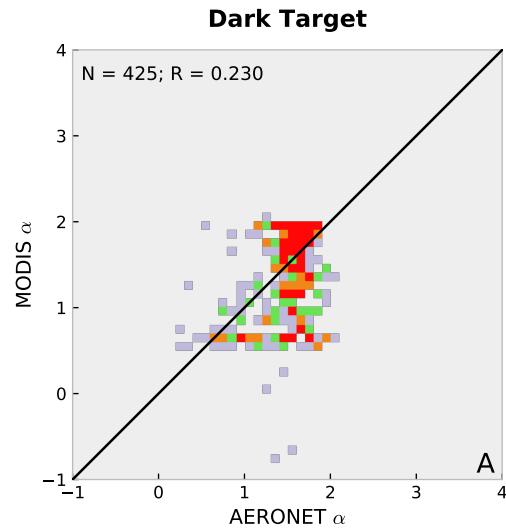
Bayesian Aerosol Retrieval



All pixels used for retrieval

2.6 South Africa

SA

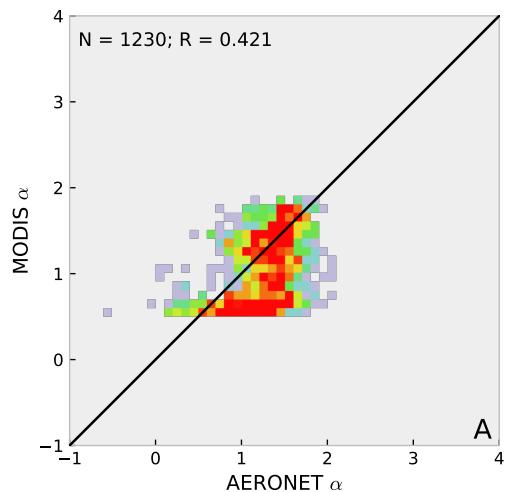


All pixels used for retrieval

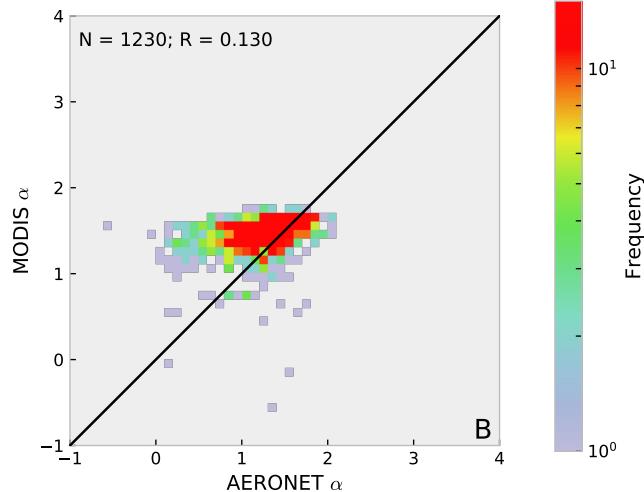
2.7 Northeast Asia

NEA

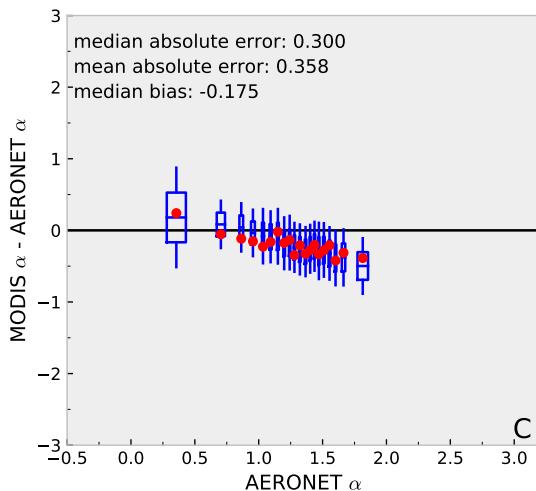
Dark Target



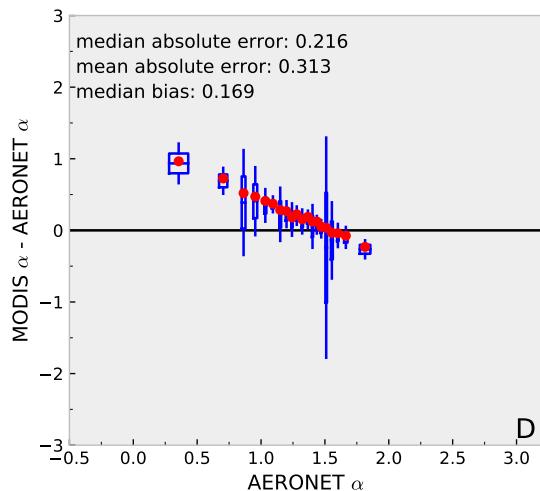
Bayesian Aerosol Retrieval



Dark Target



Bayesian Aerosol Retrieval

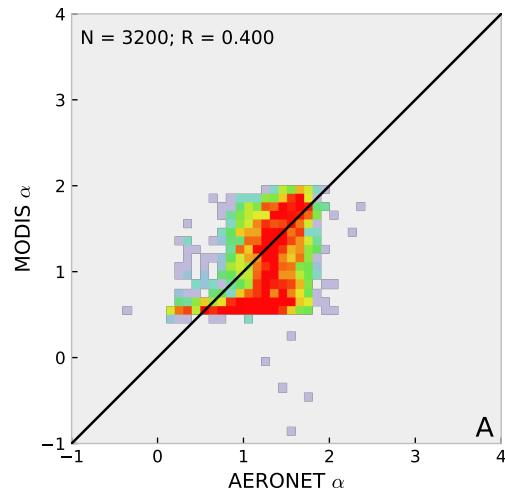


All pixels used for retrieval

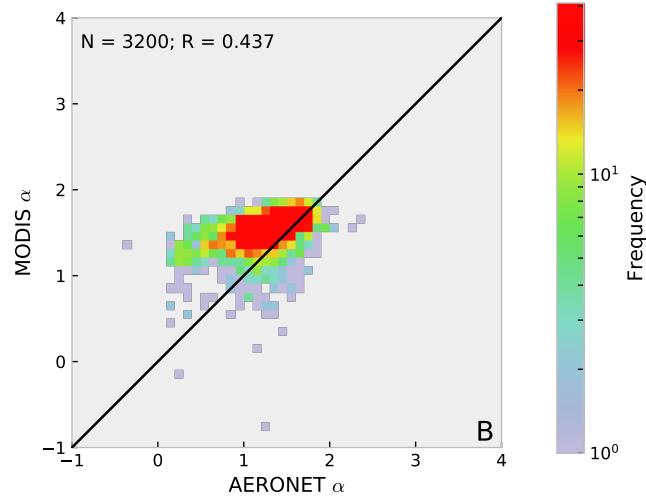
2.8 Southeast Asia

SEA

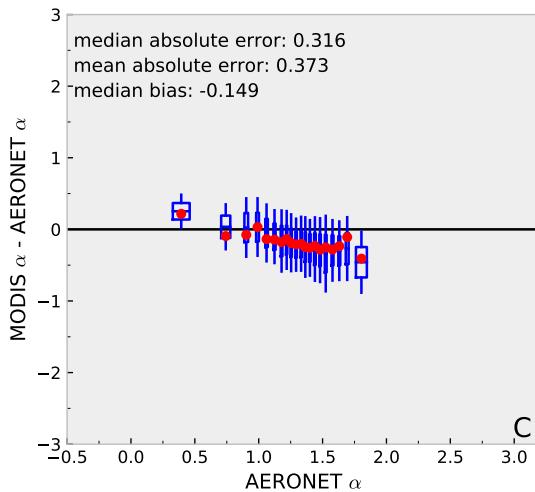
Dark Target



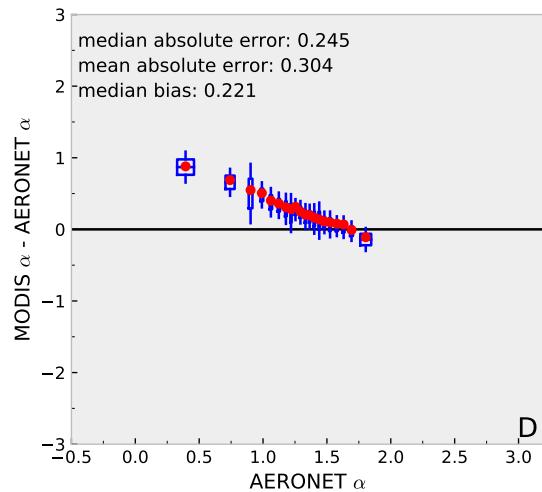
Bayesian Aerosol Retrieval



Dark Target



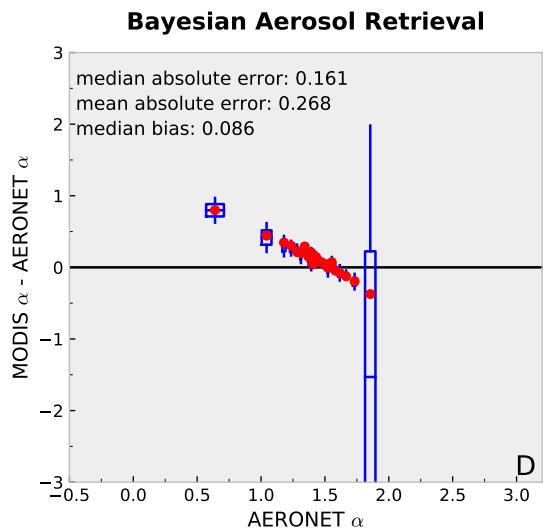
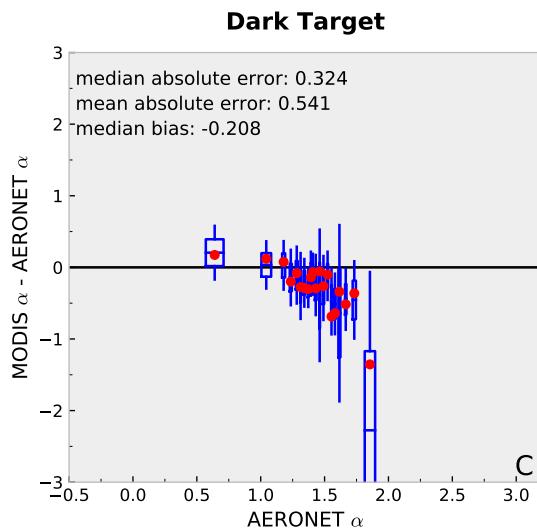
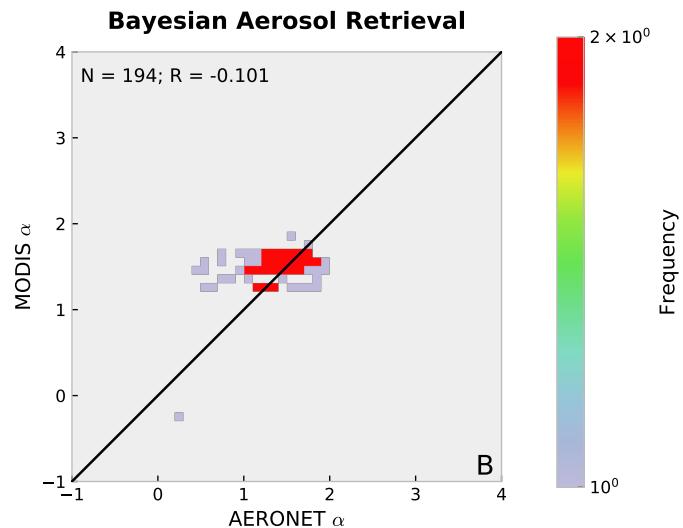
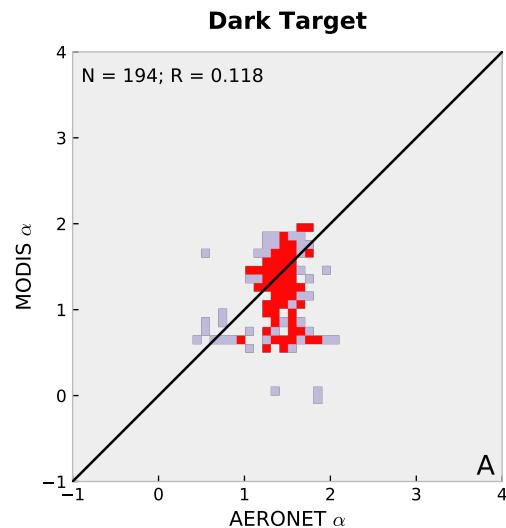
Bayesian Aerosol Retrieval



All pixels used for retrieval

2.9 Oceania

OCE

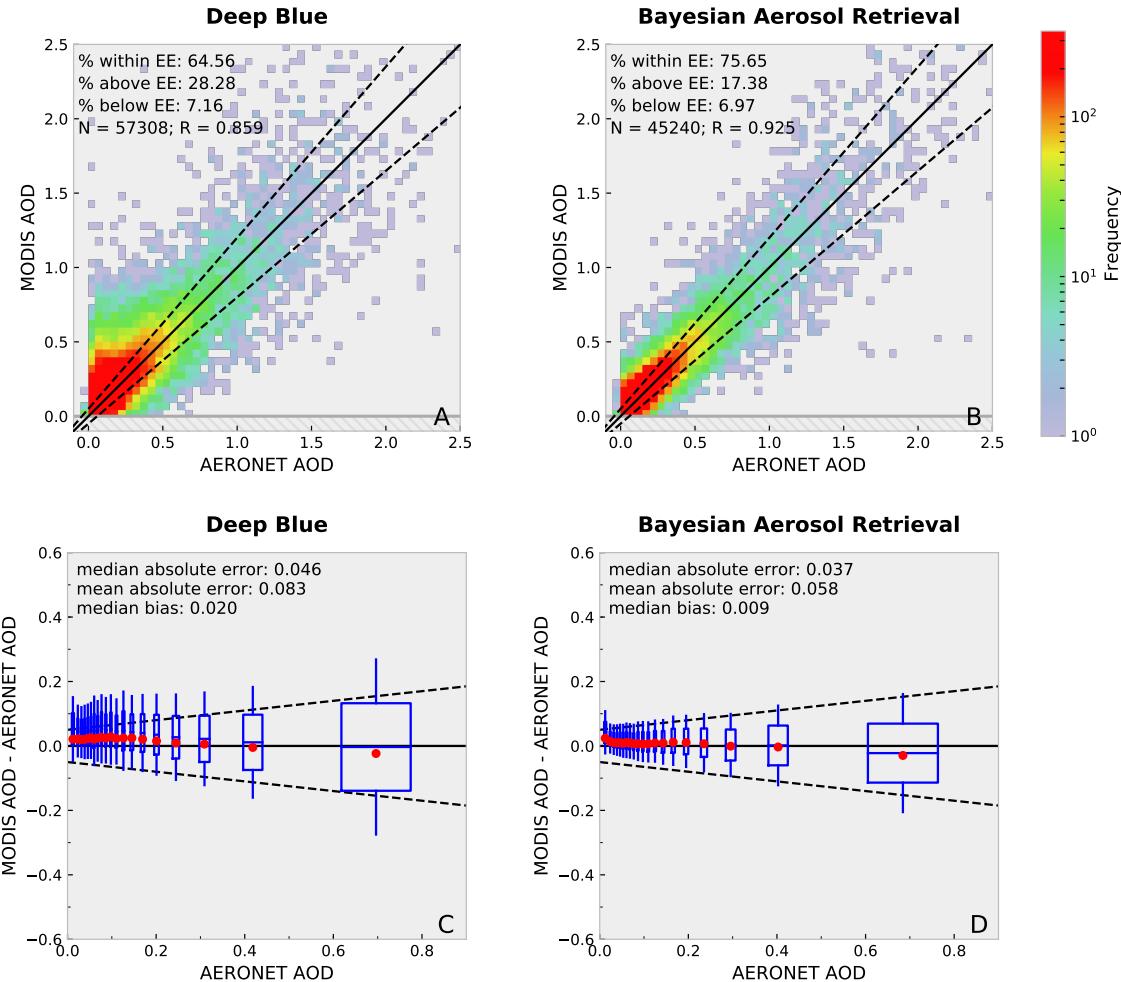


All pixels used for retrieval

3 AOD retrieval results: Deep Blue vs. Bayesian Aerosol Retrieval

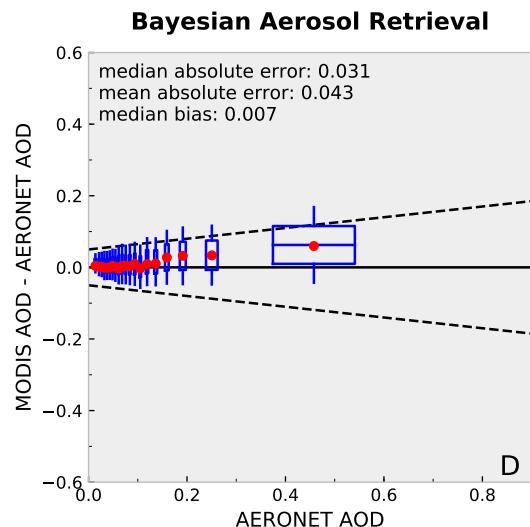
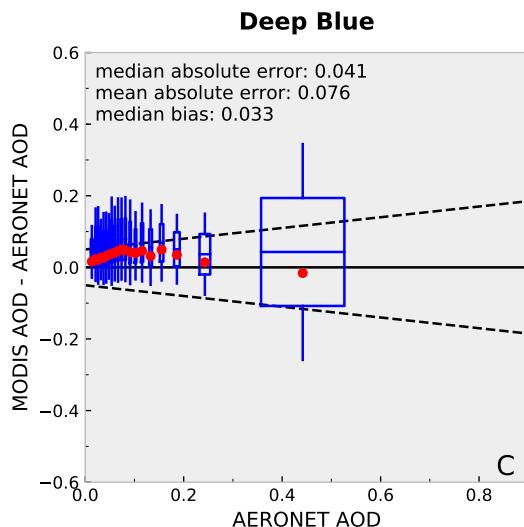
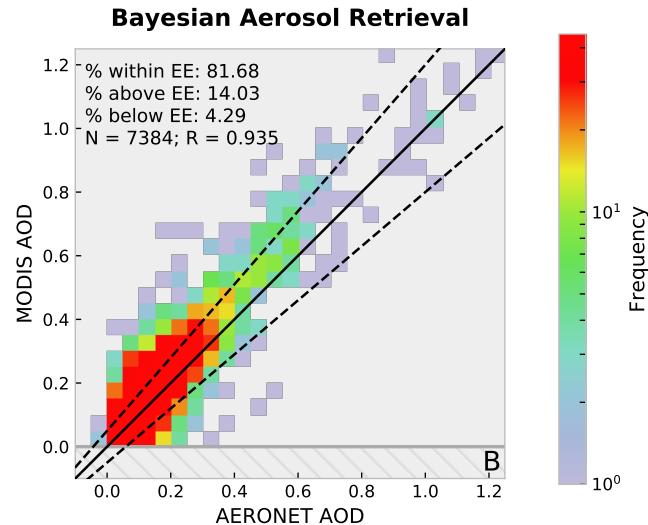
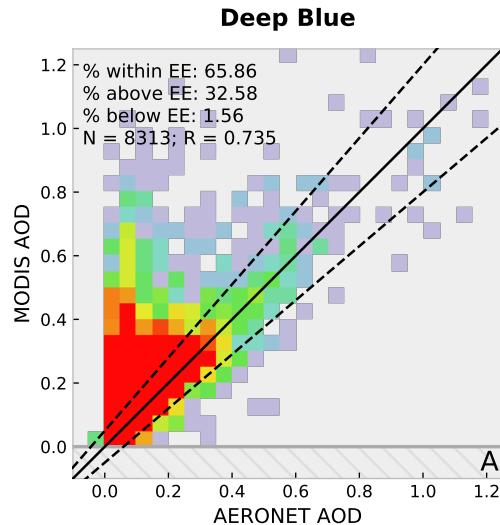
3.1 Global

Global



3.2 East North America

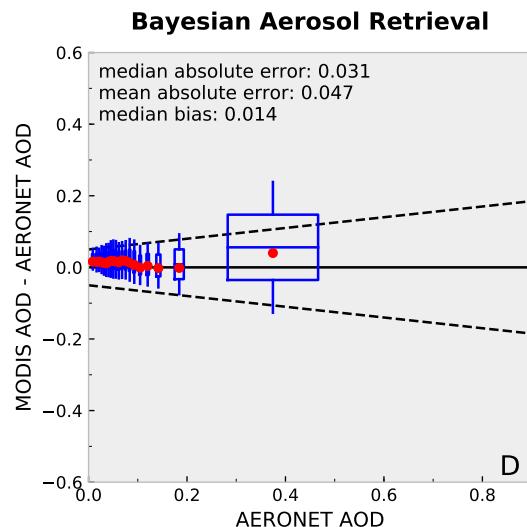
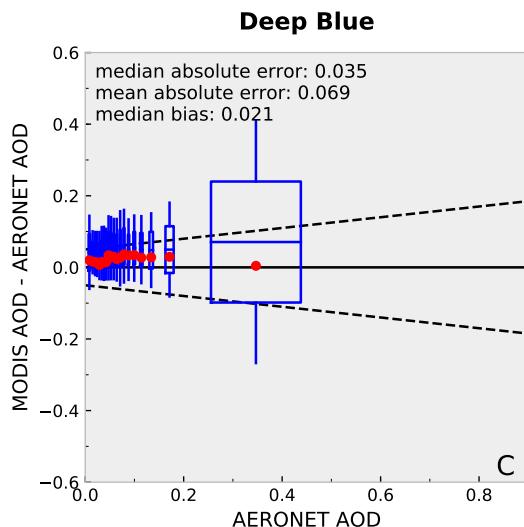
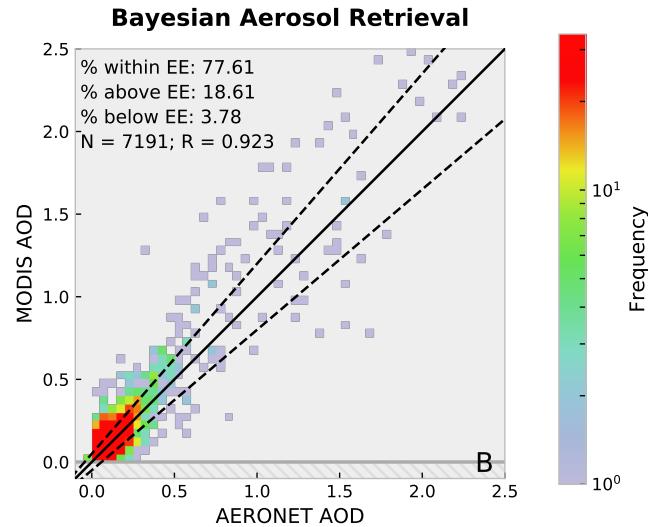
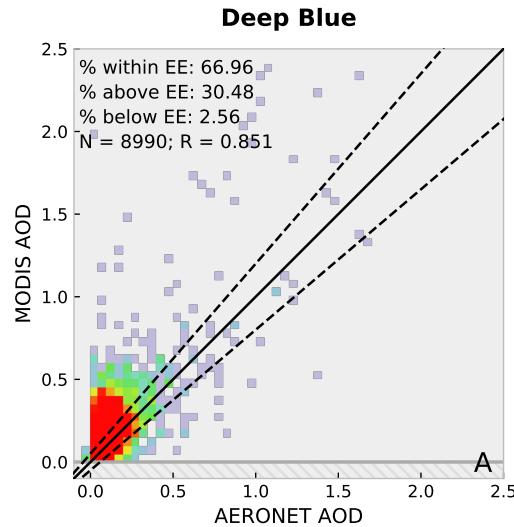
ENA



All pixels used for retrieval

3.3 West North America

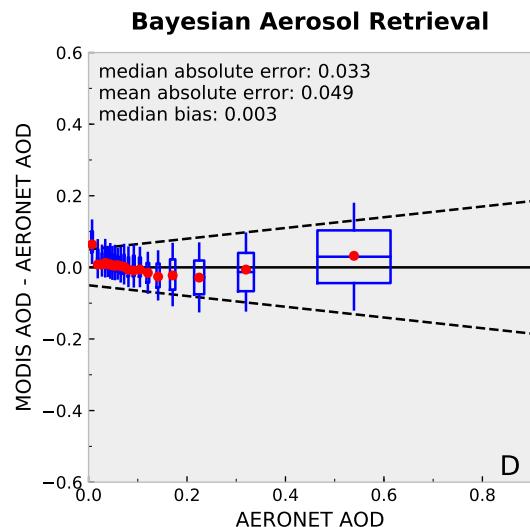
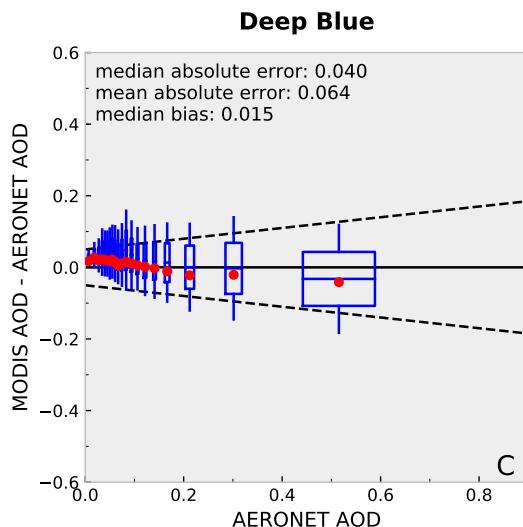
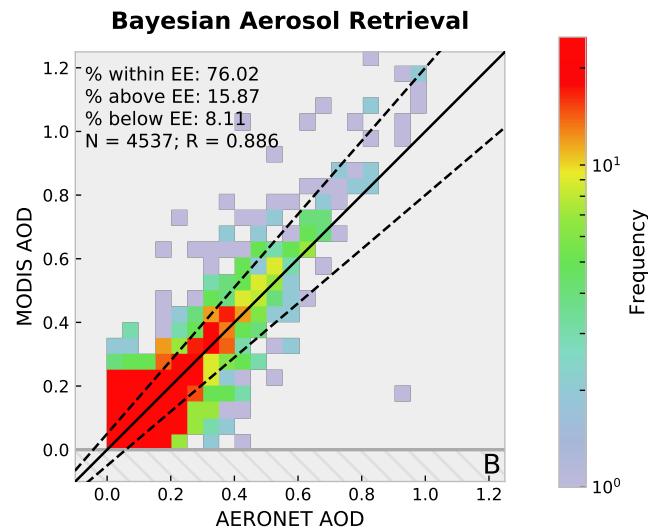
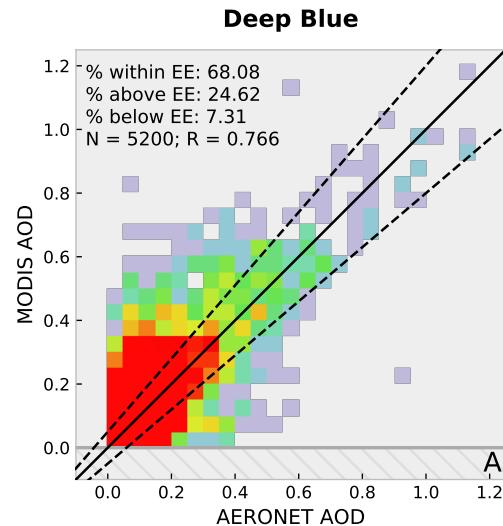
WNA



All pixels used for retrieval

3.4 Central and South America

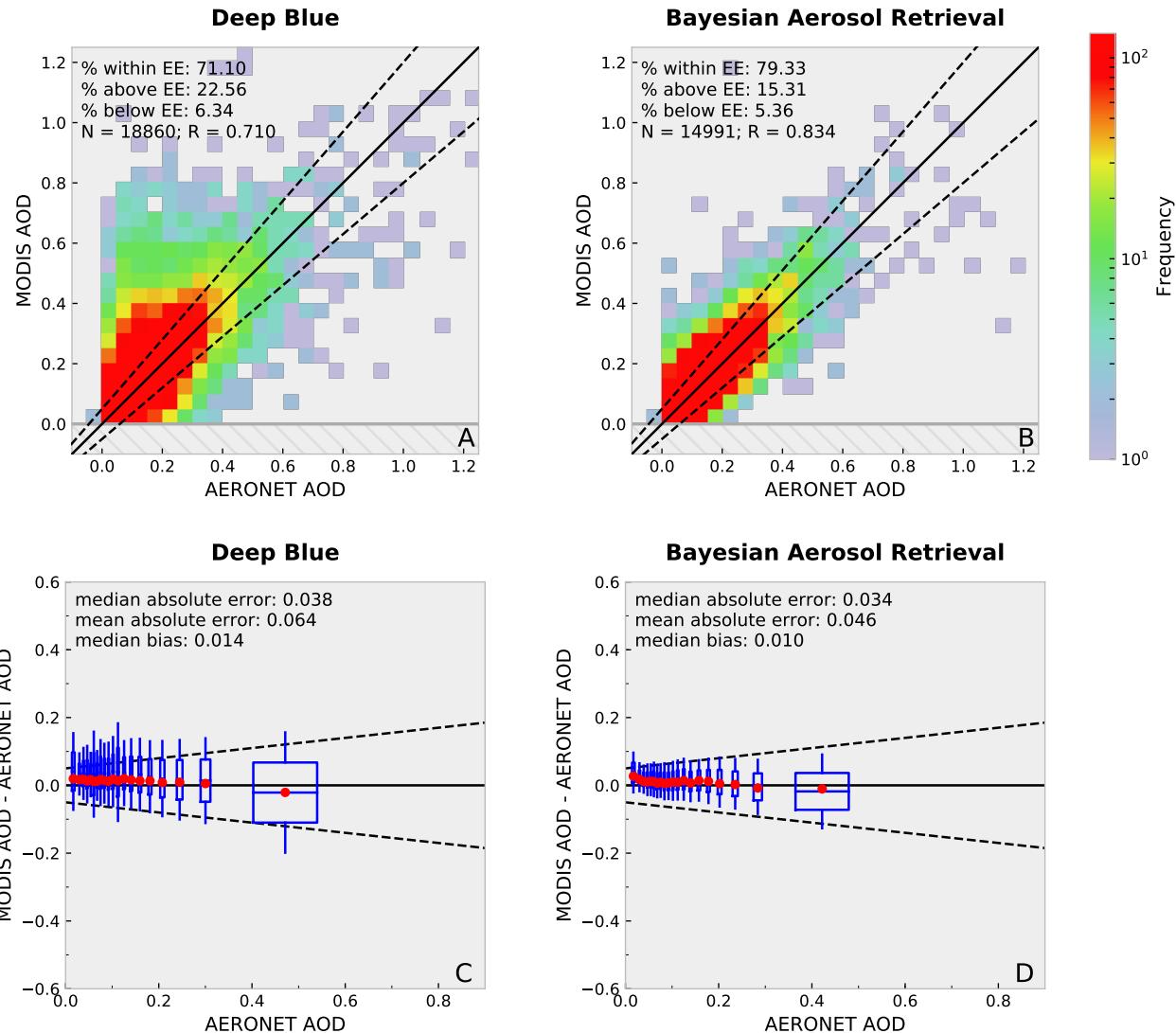
CSA



All pixels used for retrieval

3.5 Europe

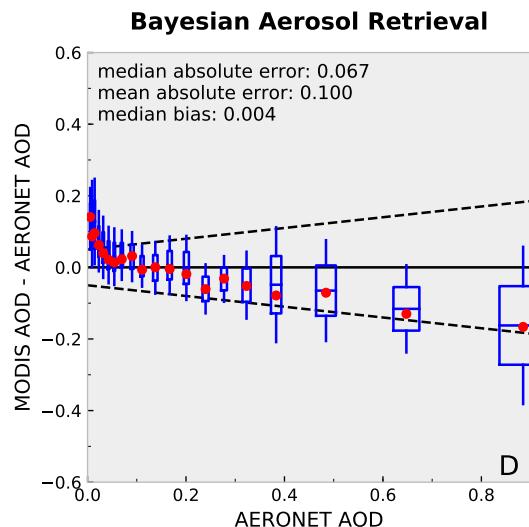
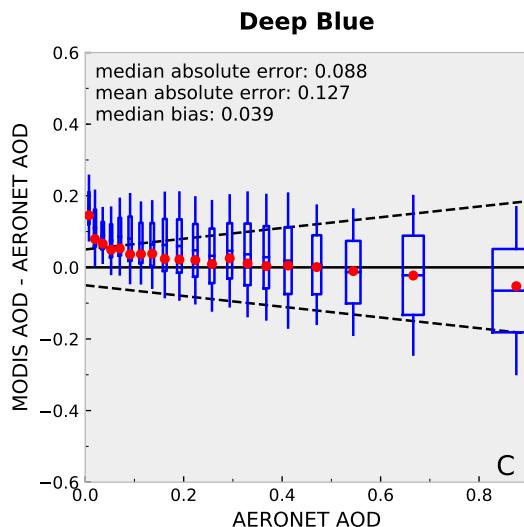
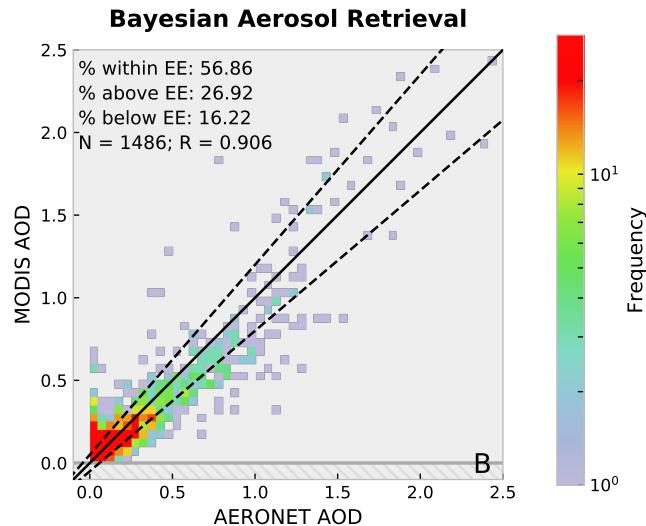
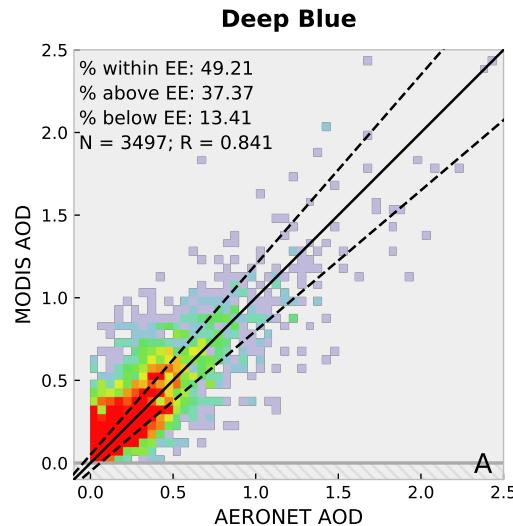
EUR



All pixels used for retrieval

3.6 North Africa and Middle East

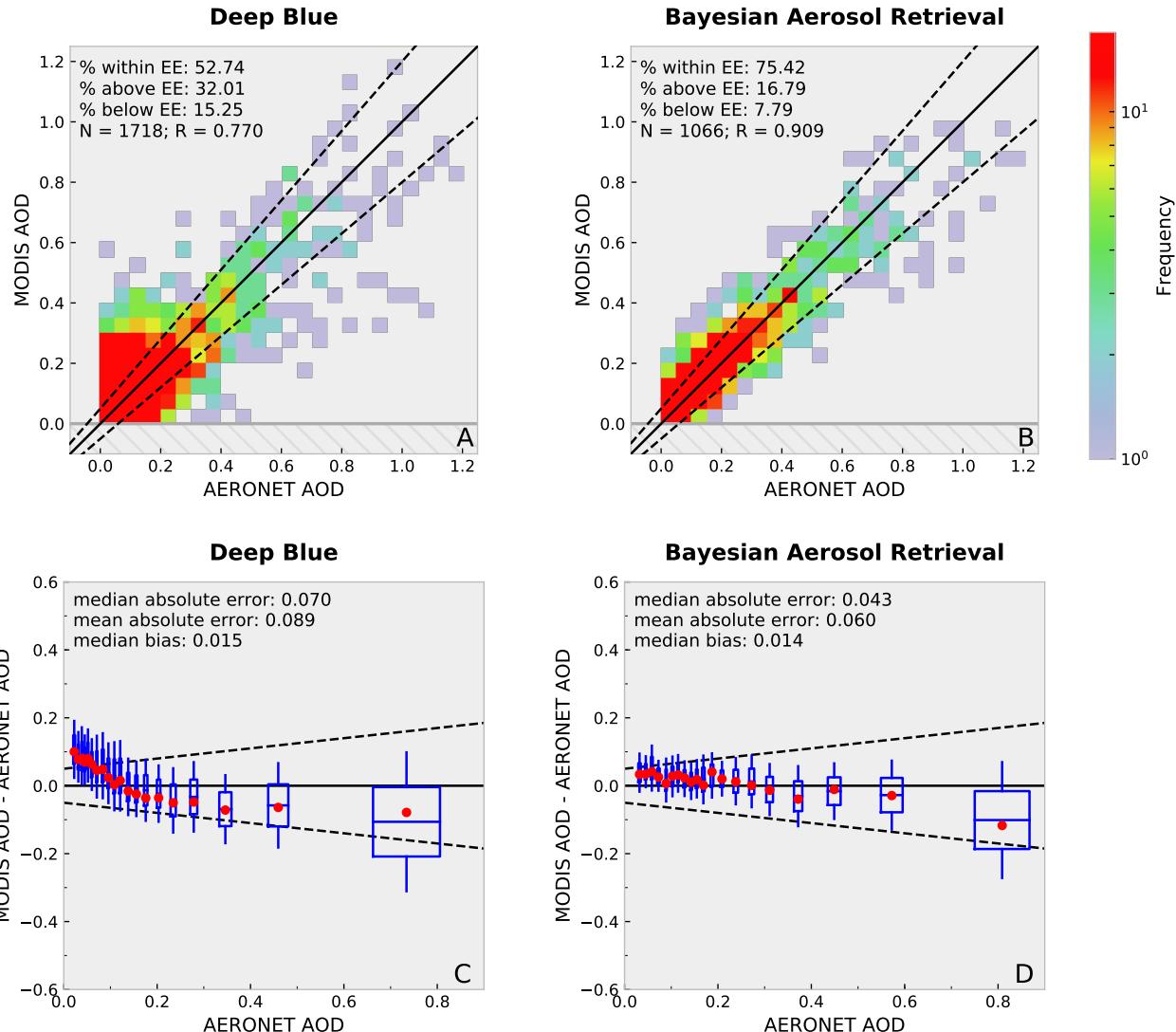
NAME



All pixels used for retrieval

3.7 South Africa

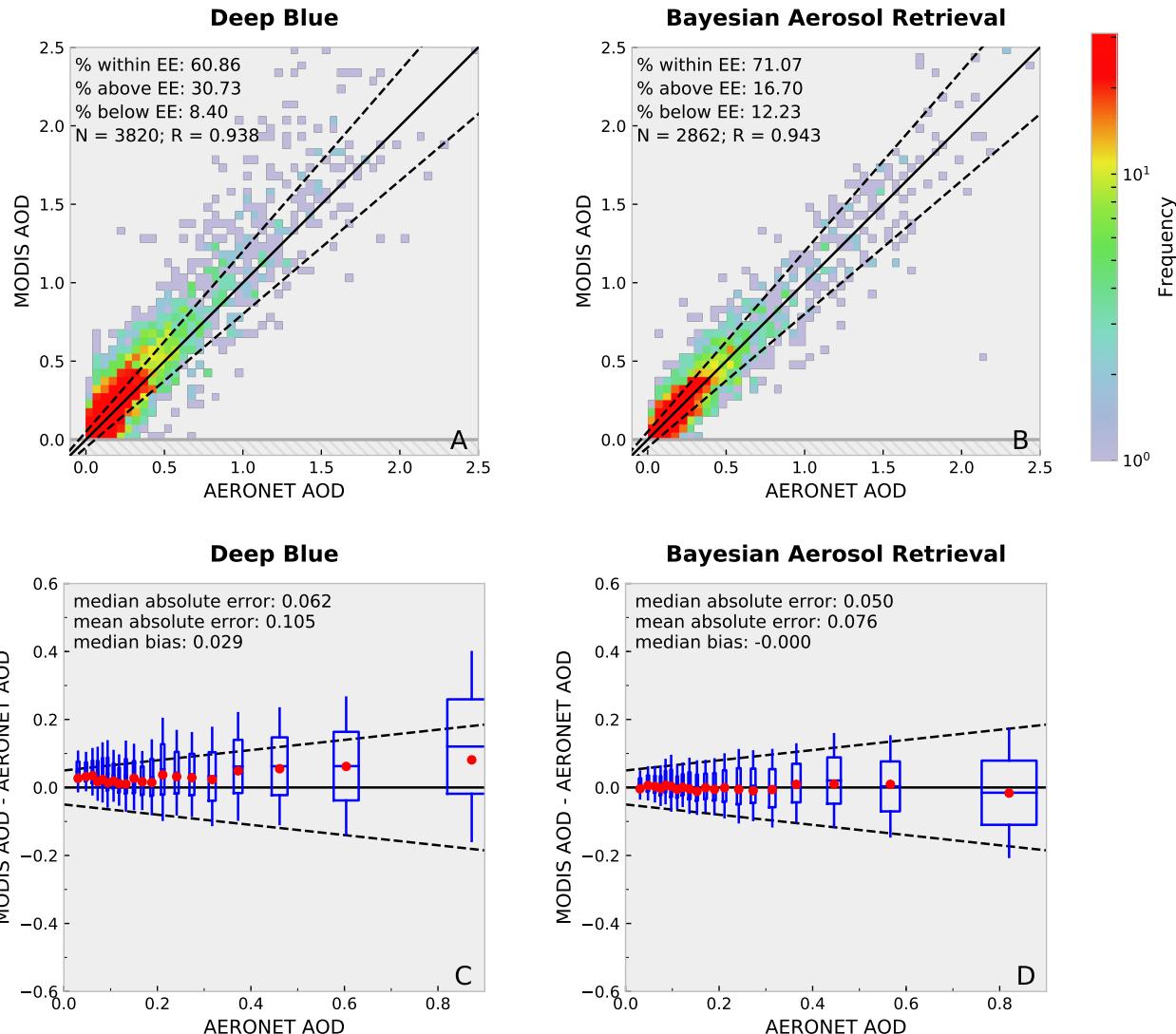
SA



All pixels used for retrieval

3.8 Northeast Asia

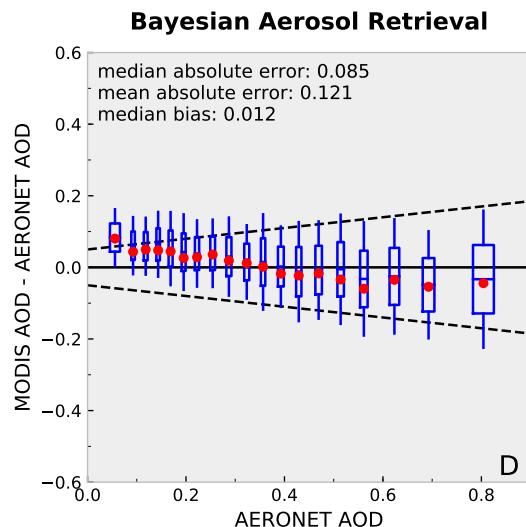
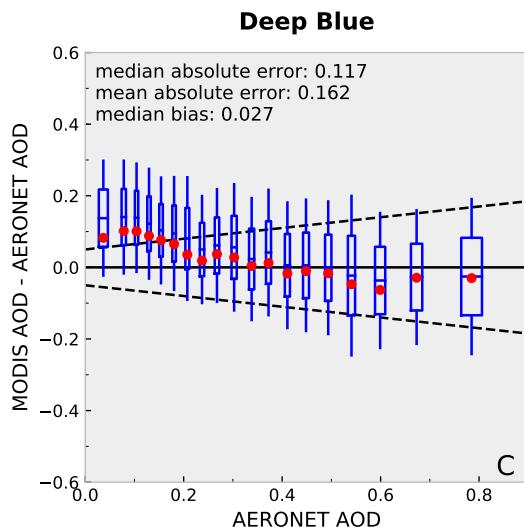
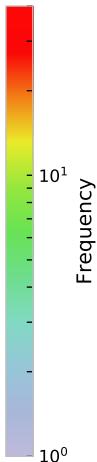
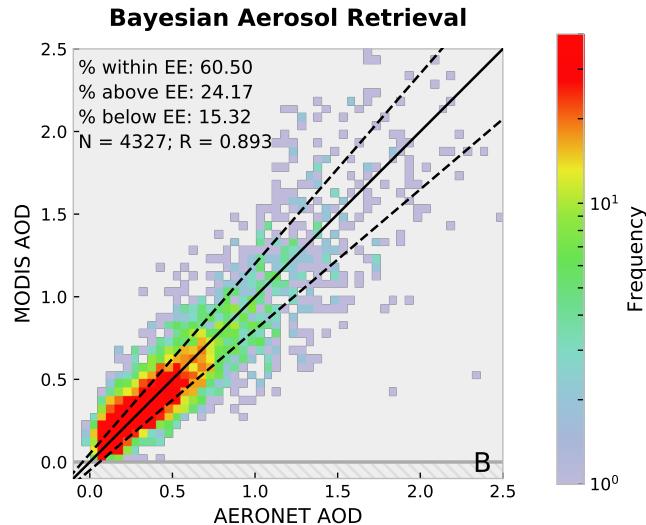
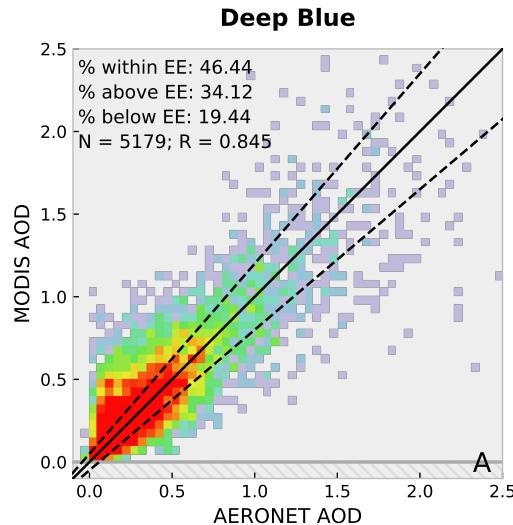
NEA



All pixels used for retrieval

3.9 Southeast Asia

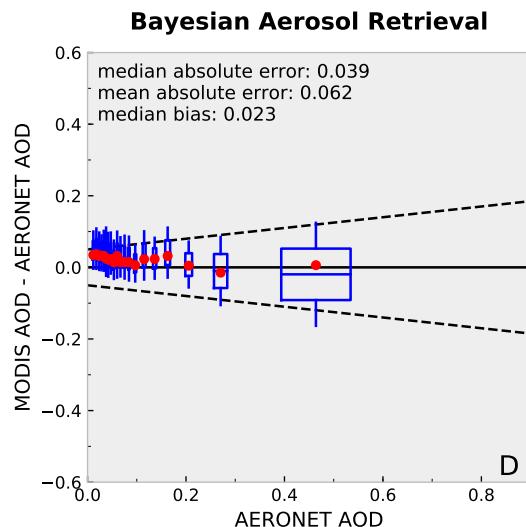
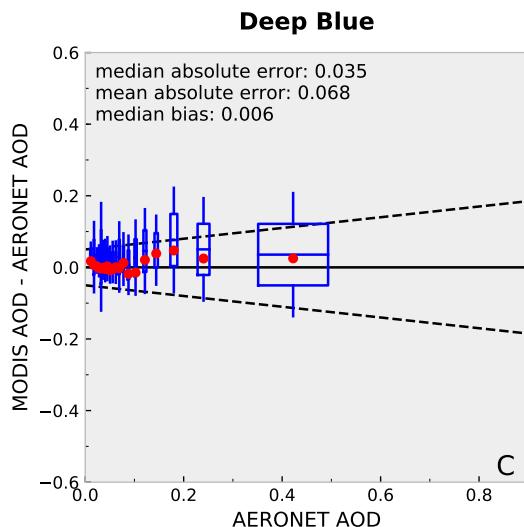
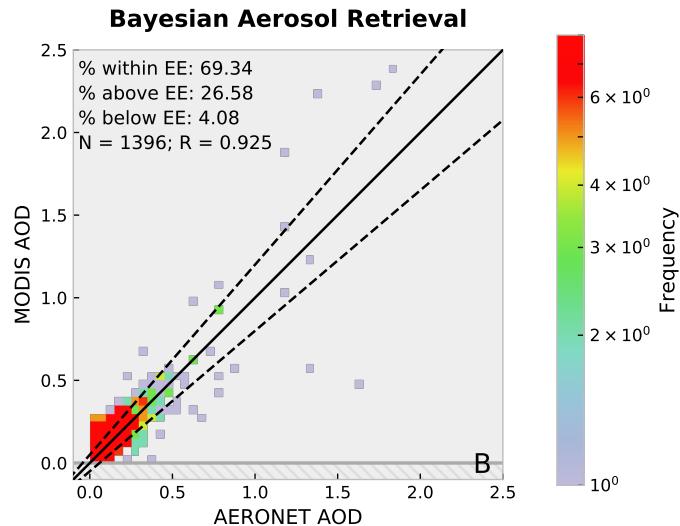
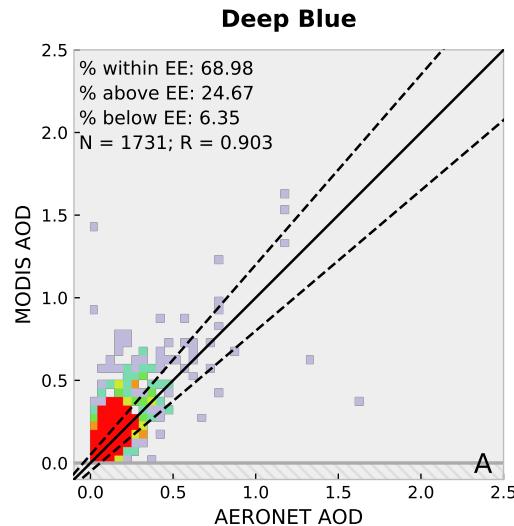
SEA



All pixels used for retrieval

3.10 Oceania

OCE

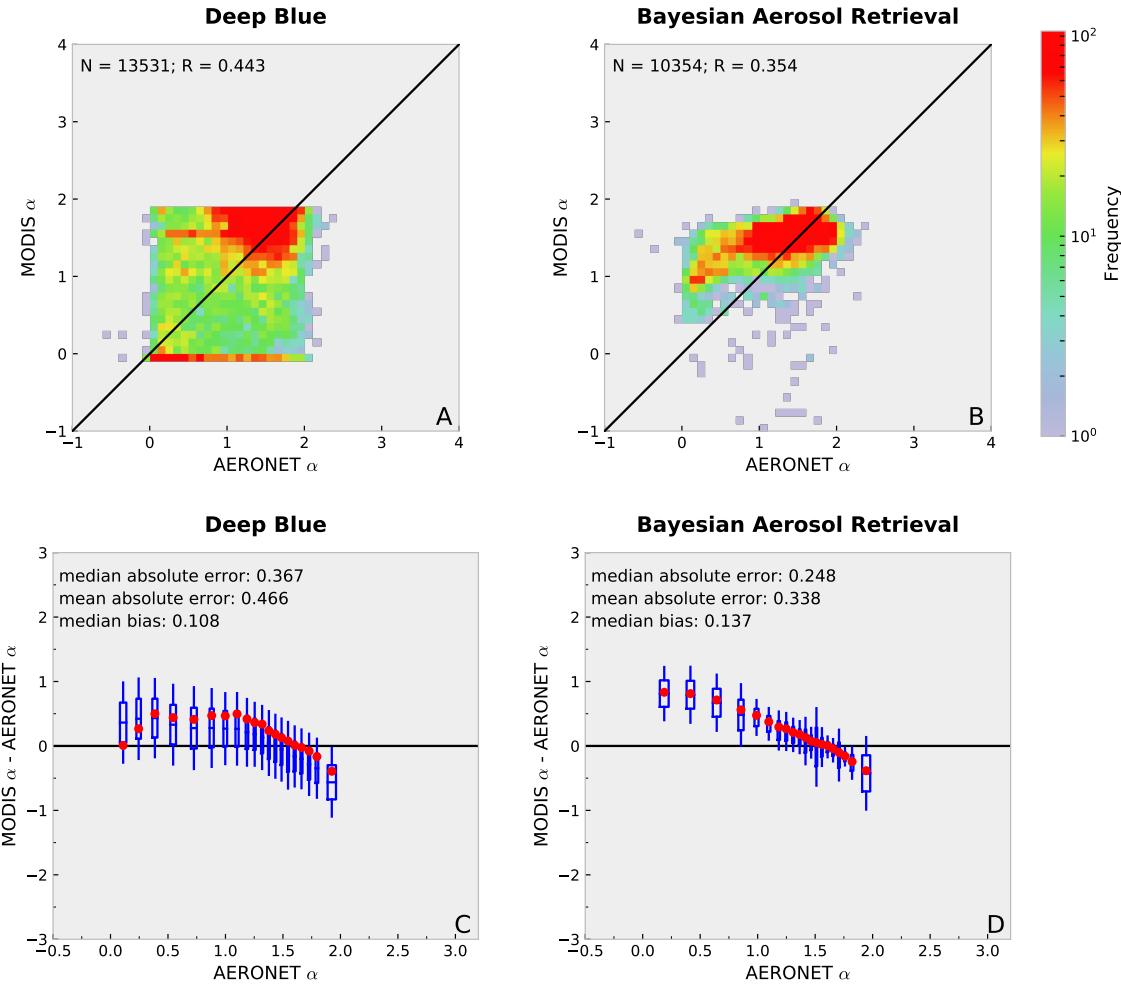


All pixels used for retrieval

4 Angstrom exponent retrieval results: Deep Blue vs. Bayesian Aerosol Retrieval

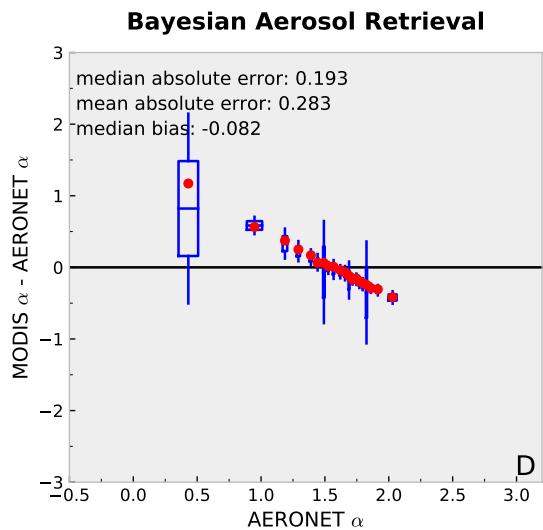
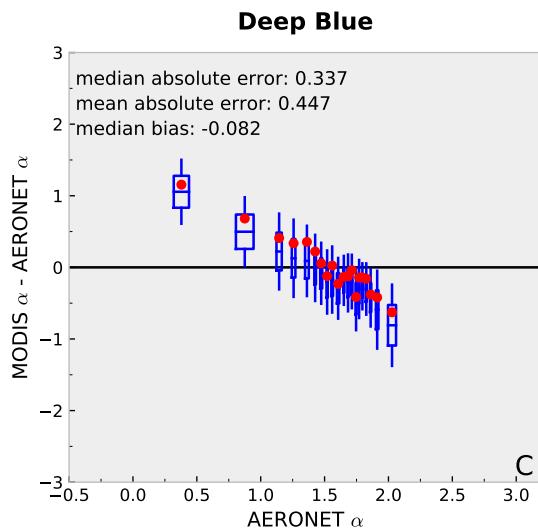
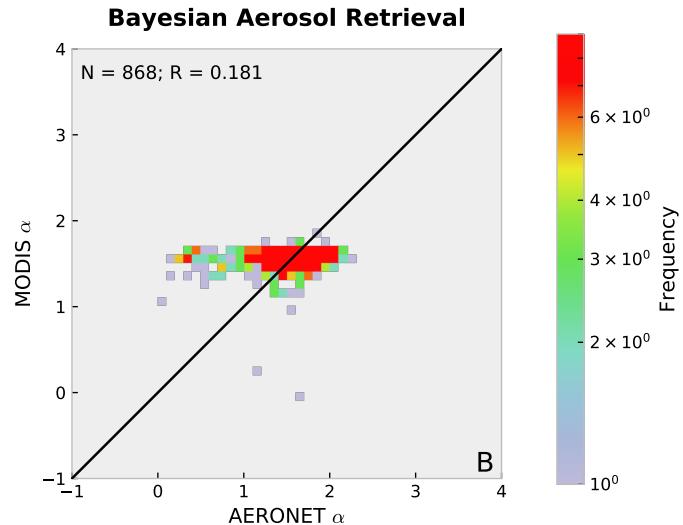
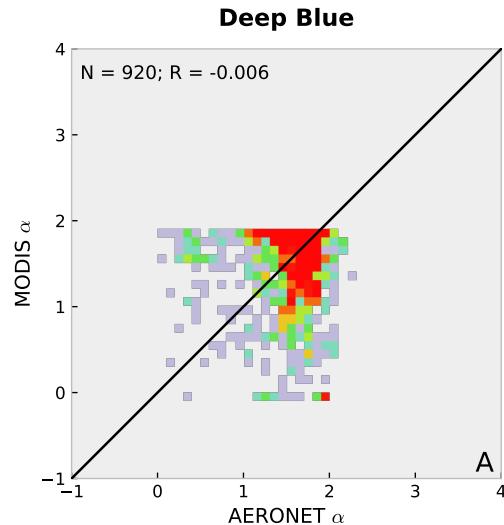
4.1 Global

Global



4.2 East North America

ENA

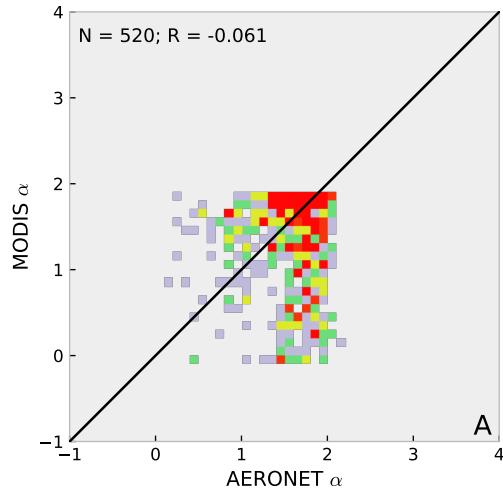


All pixels used for retrieval

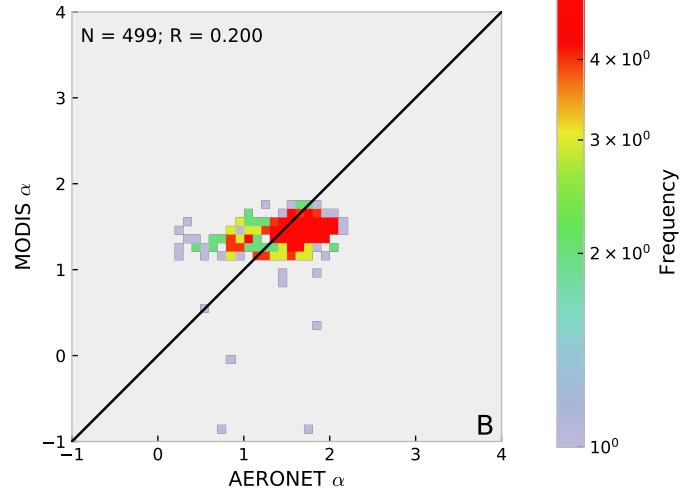
4.3 West North America

WNA

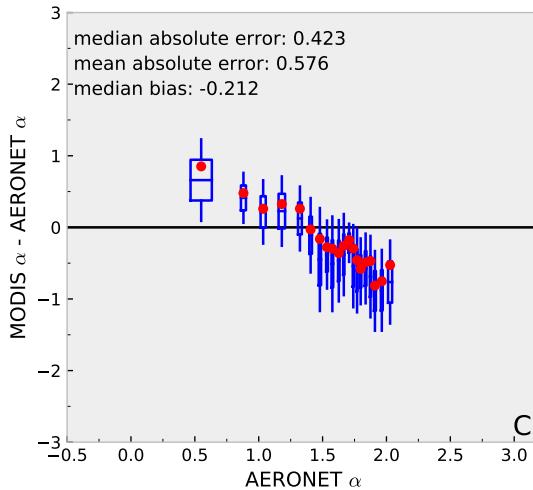
Deep Blue



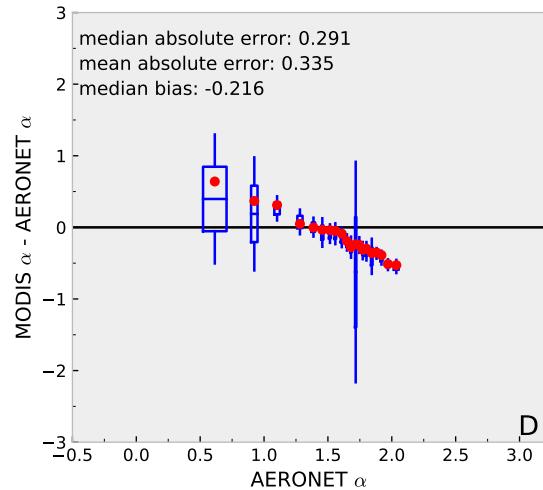
Bayesian Aerosol Retrieval



Deep Blue



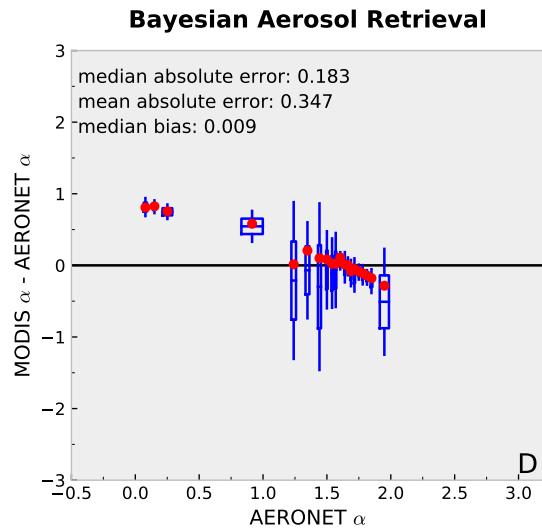
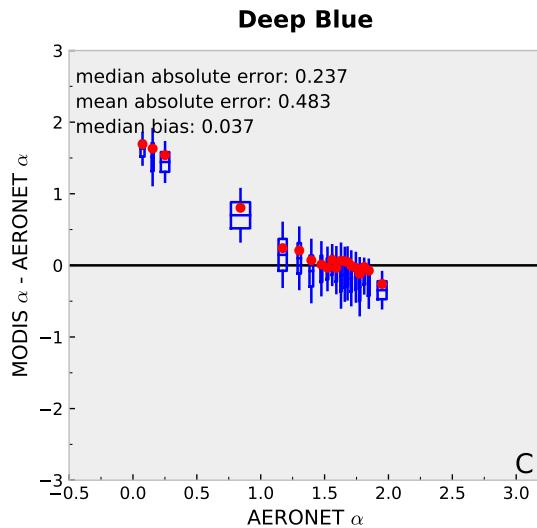
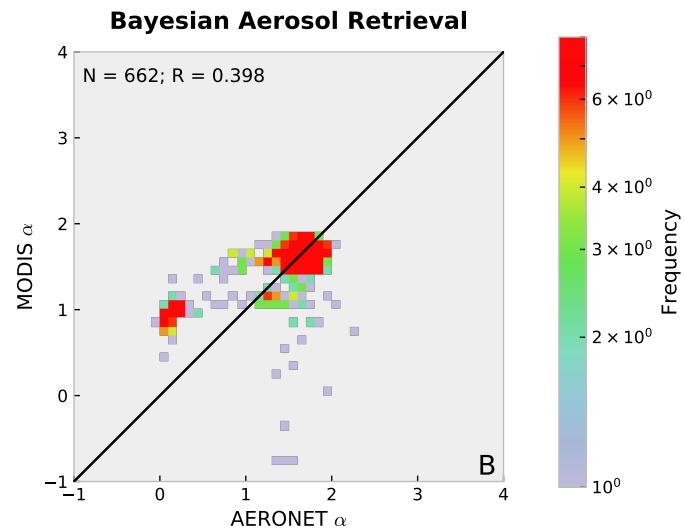
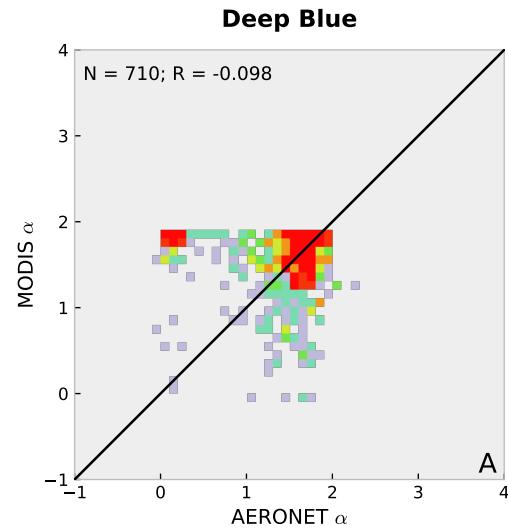
Bayesian Aerosol Retrieval



All pixels used for retrieval

4.4 Central and South America

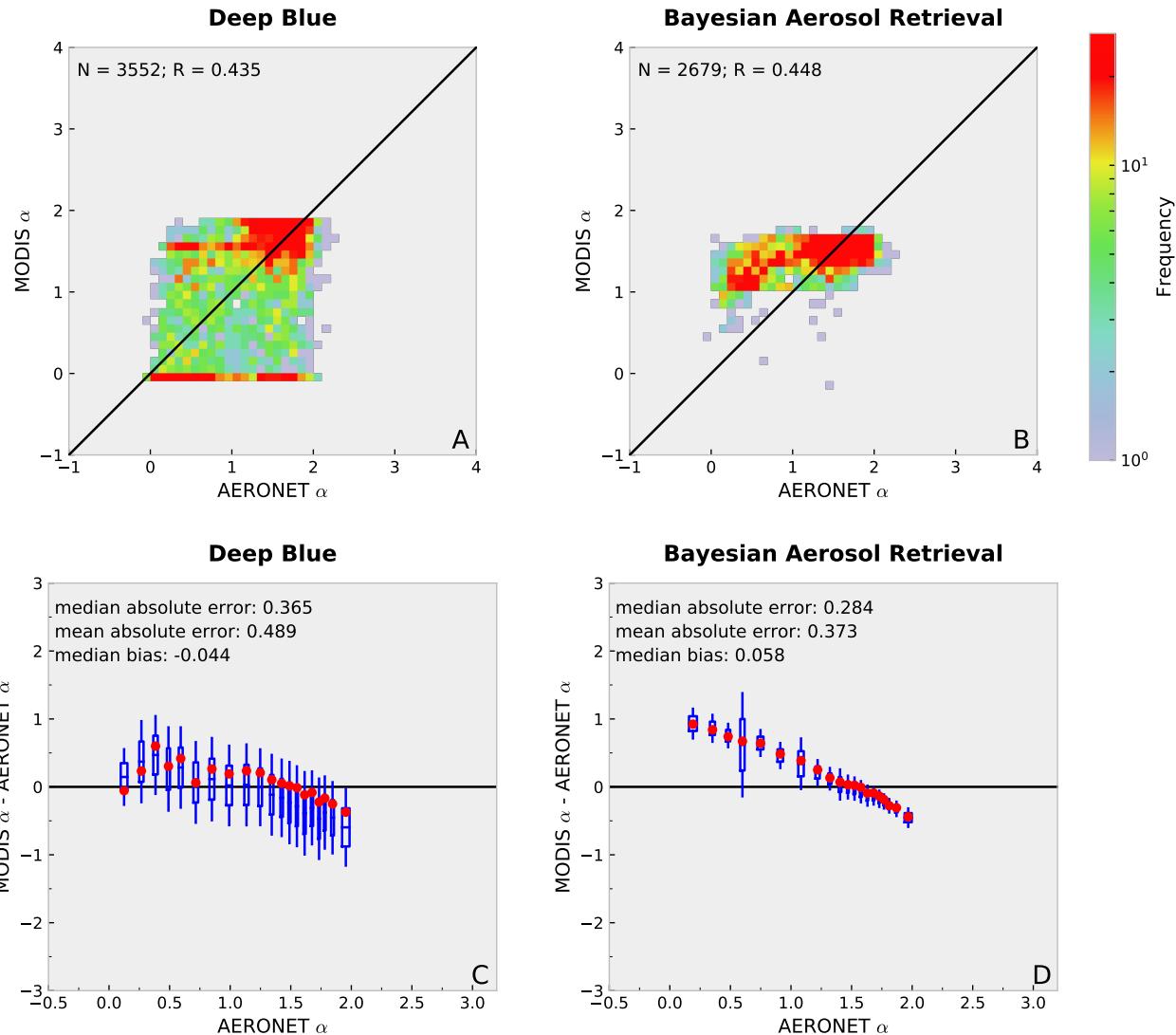
CSA



All pixels used for retrieval

4.5 Europe

EUR

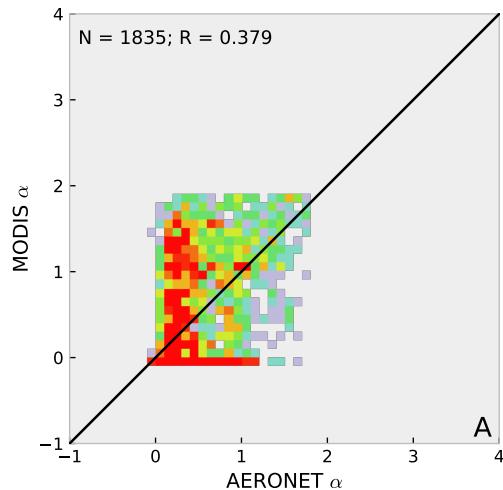


All pixels used for retrieval

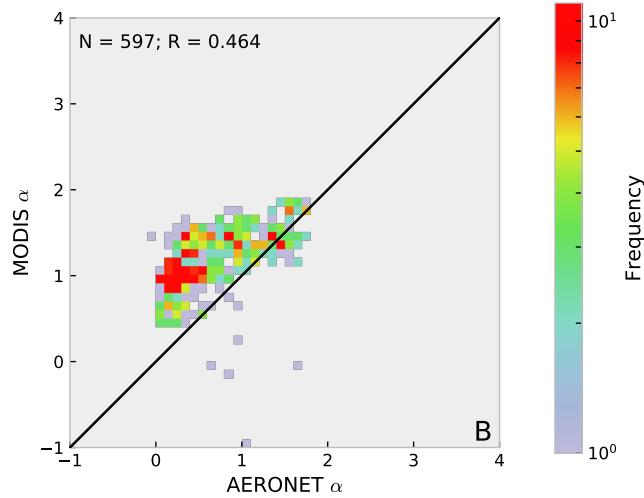
4.6 North Africa and Middle East

NAME

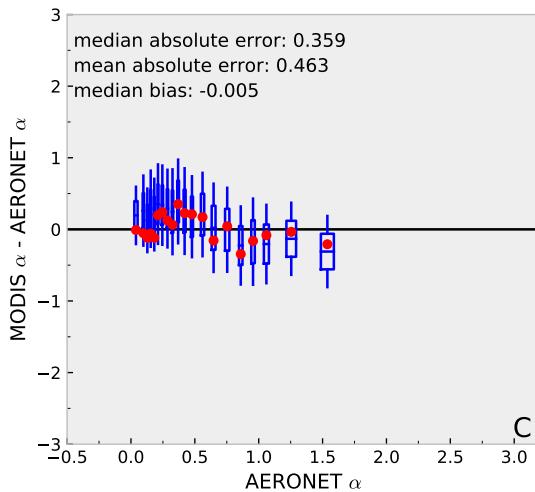
Deep Blue



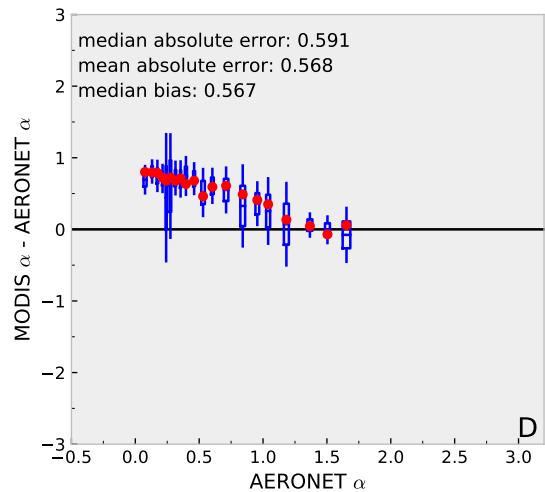
Bayesian Aerosol Retrieval



Deep Blue



Bayesian Aerosol Retrieval

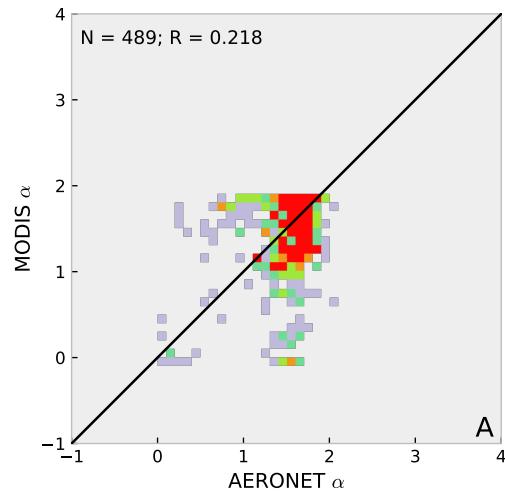


All pixels used for retrieval

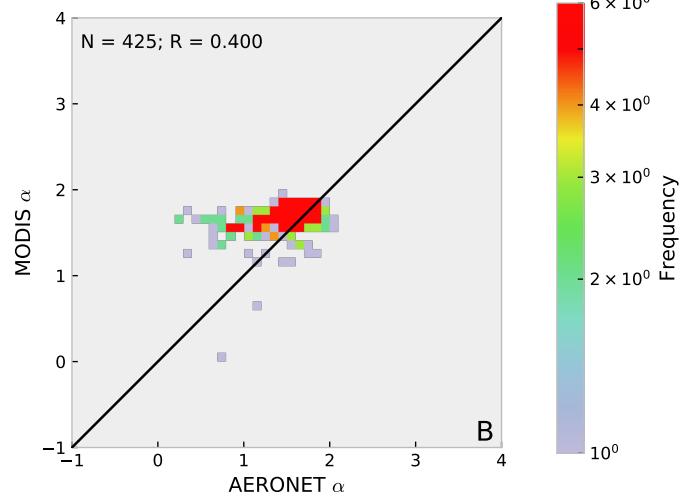
4.7 South Africa

SA

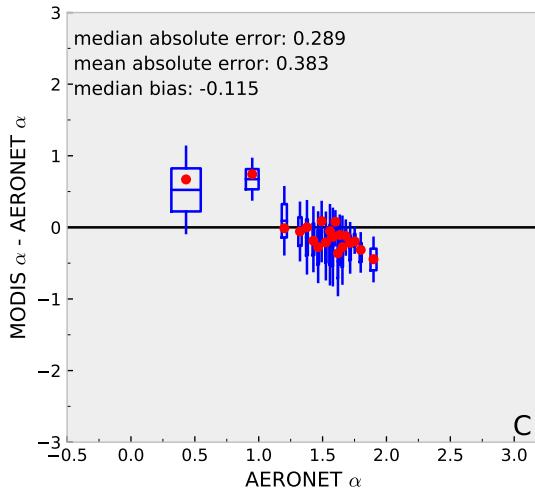
Deep Blue



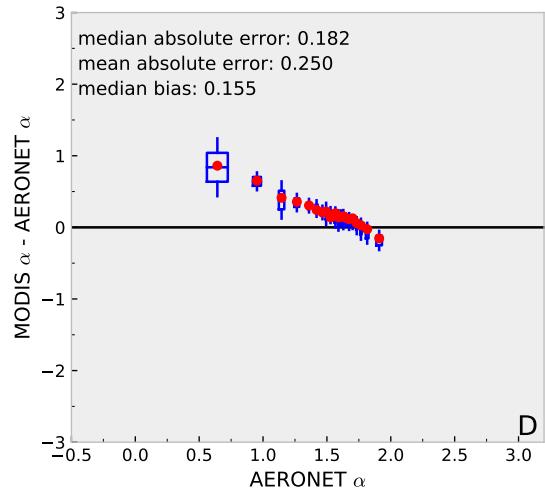
Bayesian Aerosol Retrieval



Deep Blue



Bayesian Aerosol Retrieval

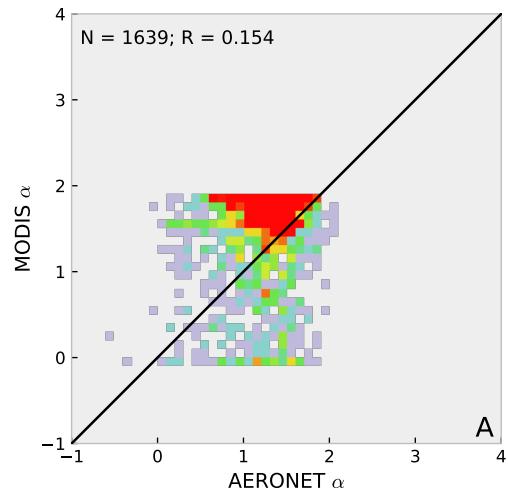


All pixels used for retrieval

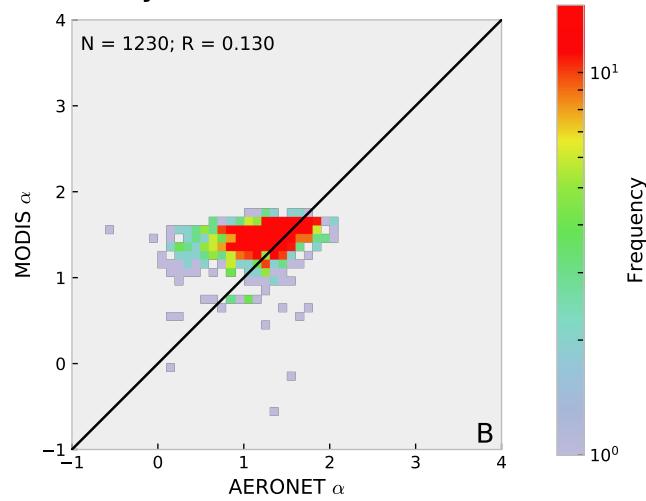
4.8 Northeast Asia

NEA

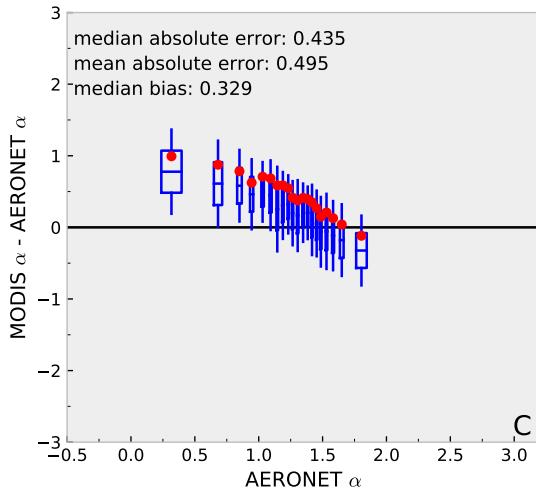
Deep Blue



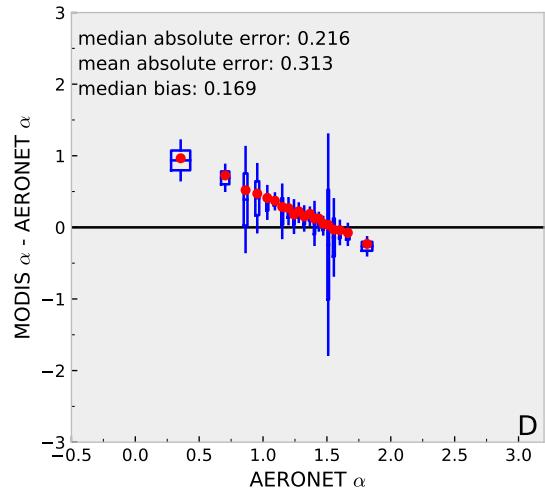
Bayesian Aerosol Retrieval



Deep Blue



Bayesian Aerosol Retrieval

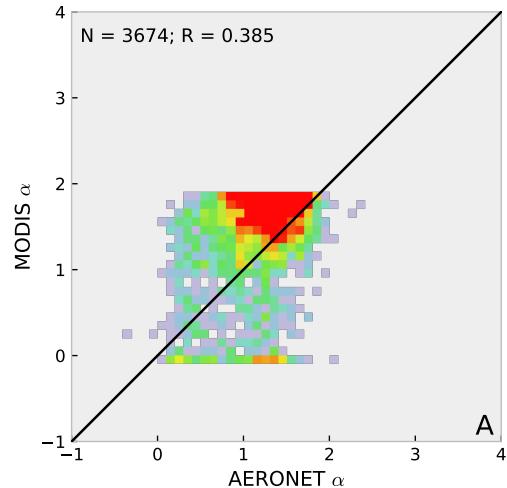


All pixels used for retrieval

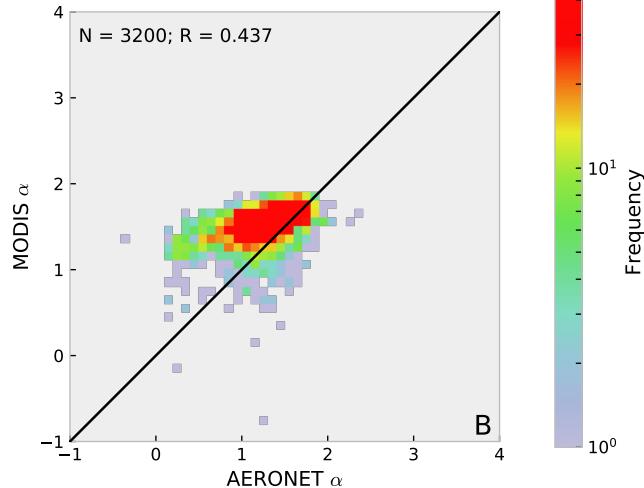
4.9 Southeast Asia

SEA

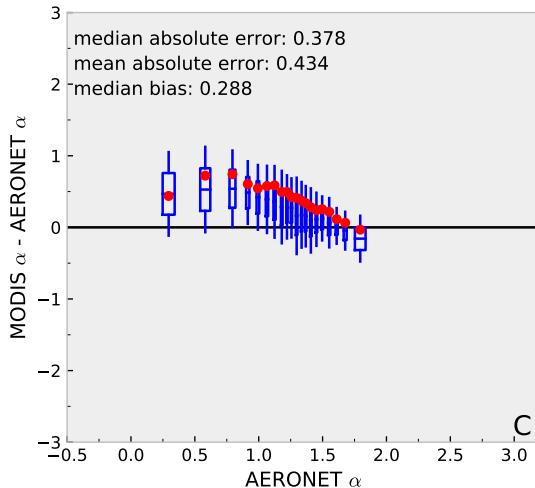
Deep Blue



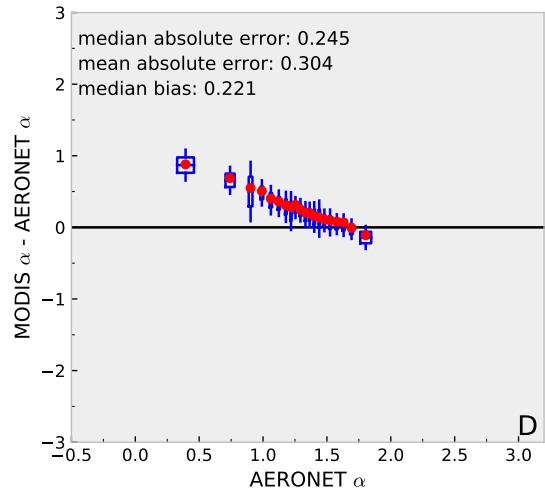
Bayesian Aerosol Retrieval



Deep Blue



Bayesian Aerosol Retrieval

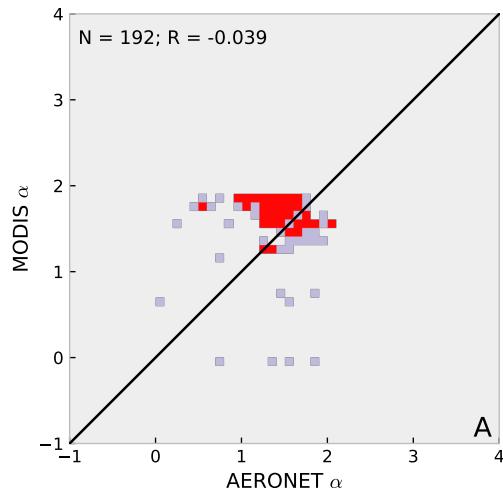


All pixels used for retrieval

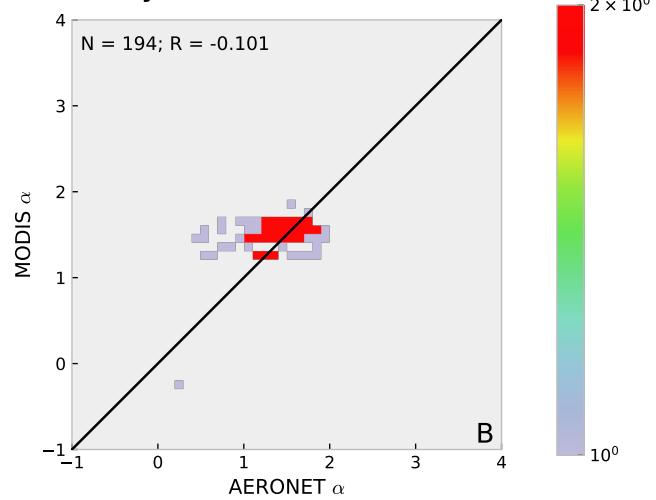
4.10 Oceania

OCE

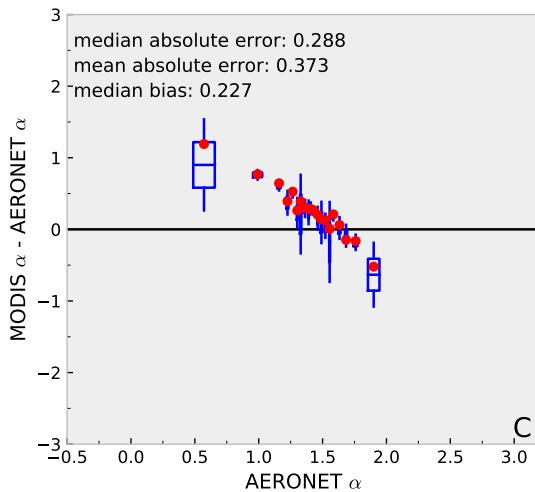
Deep Blue



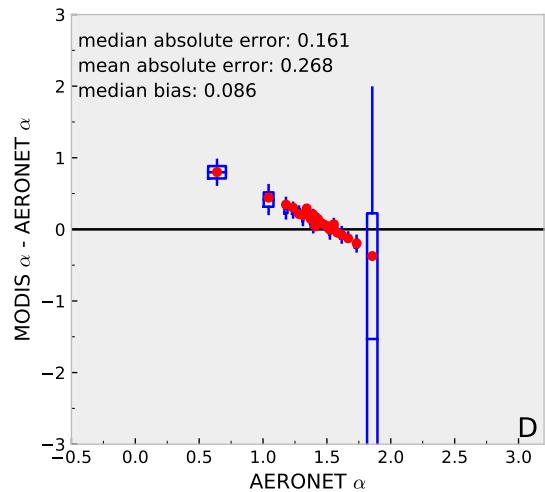
Bayesian Aerosol Retrieval



Deep Blue



Bayesian Aerosol Retrieval



All pixels used for retrieval