Aerosol Climate Interactions

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We summarize links between BSOA as it relates to aerosol climate impacts. We identify:

- **aerosol properties**
- **physical processes**

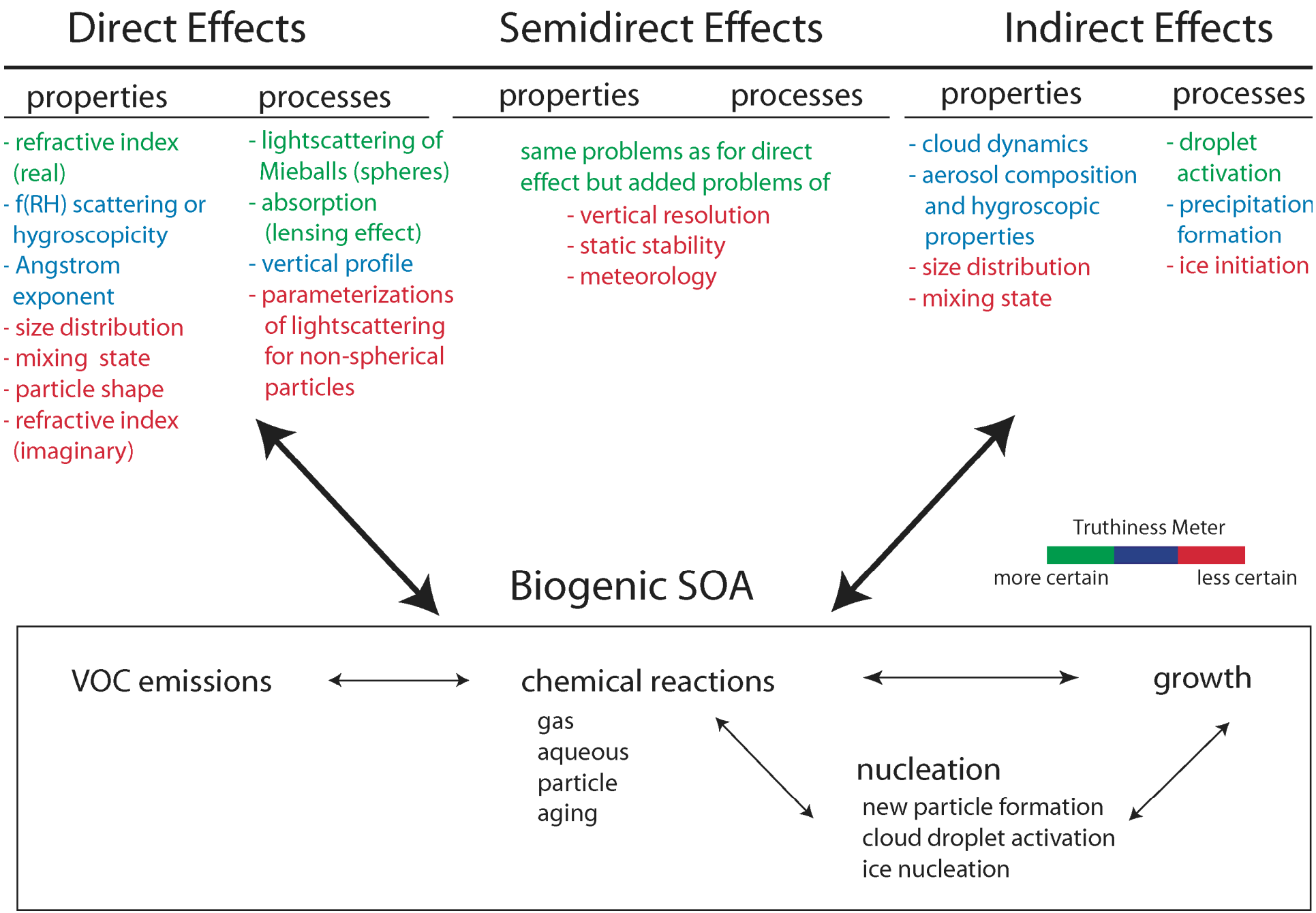
We rate our understanding

- **using colors** green blue red (color did not work)

based on the application to the process and do not identify the uncertainty of any particular measurement or model. The uncertainties are meant to guide various courses of action, depending on your personal issues.

Individual results may vary.

Disclaimer: The following do represent the opinions of the authors and do not necessarily reflect the opinion of BACCI, the organizing committee or the National Science Foundation.


Direct Effects
Semidirect Effects
Indirect Effects
properties
processes
properties
processes
properties
processes
- refractive index (real)
- f(RH) scattering or hygroscopicity
- Angstrom exponent
- size distribution
- mixing state
- particle shape
- refractive index (imaginary)
- lightscattering of Mieballs (spheres)
- absorption (lensing effect)
- vertical profile
- parameterizations of lightscattering for non-spherical particles
same problems as for direct effect but added problems of
- vertical resolution
- static stability
- meteorology
- cloud dynamics
- aerosol composition and hygroscopic properties
- size distribution
- mixing state
- droplet activation
- precipitation formation
- ice initiation
Truthiness Meter
more certain
less certain
Biogenic SOA
VOC emissions
chemical reactions
gas
aqueous
particle
aging
growth
nucleation
new particle formation
cloud droplet activation
ice nucleation