



Committee on Earth Observation Satellites

What More Can/Should AC-VC do to support a rapid response to future high interest events?

Ben Veihermann¹, Jay Al-Saadi², Hiroshi Tanimoto³,
David Crisp⁴, Shobha Kondragunta⁵, Diego Loyola⁶

¹ ESA

² NASA

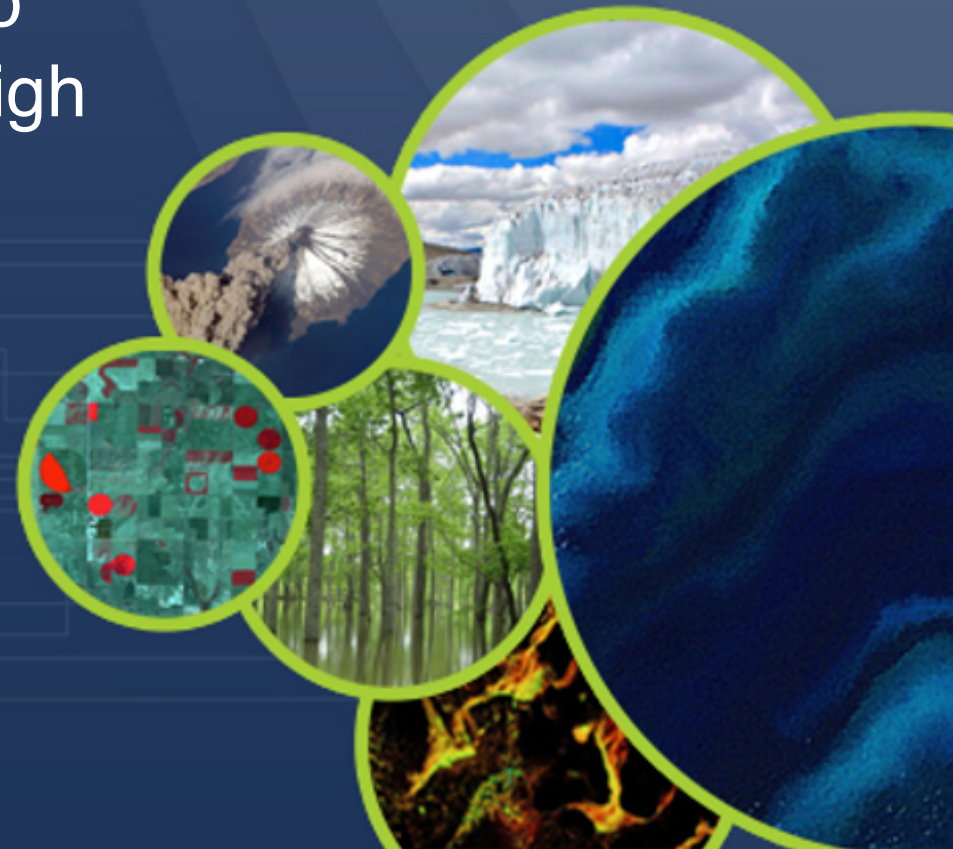
³ NIES

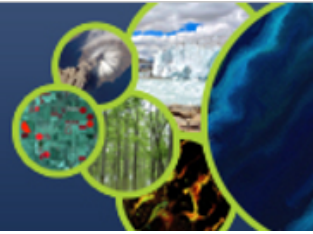
⁴ CalTech/NASA-JPL

⁵ NOAA

⁶ DLR

CEOS AC-VC-16, 08 – 12 June 2020, Agenda Item # 5.04





- **The COVID-19 pandemic was accompanied by a dramatic economic slowdown**
 - Lockdowns caused significant temporary reductions in fossil fuel use for transportation, manufacturing, public buildings, and commerce
 - Introducing large (~50%) reductions in short-lived air pollutants, such as NO₂ and aerosol
 - Reducing CO₂ growth rates, but producing only very small localized reductions in atmospheric CO₂
 - Up to 90% fewer condensation trails due to reduced air traffic
- **There is great interest by CEOS agencies to use space-based observations to help track the progression and recovery from the pandemic**
 - Some impacts were immediately apparent in observations of short-lived species such as NO₂ and aerosols
 - The impacts on CO₂ are much more subtle and difficult to detect – this was a research project, right at the limit of our capabilities
- **What can AC-VC do to help CEOS agencies to be better prepared to support future time-critical, high-interest events?**
 - Fires, droughts, floods, pandemics, and other large-scale economic disruptions