

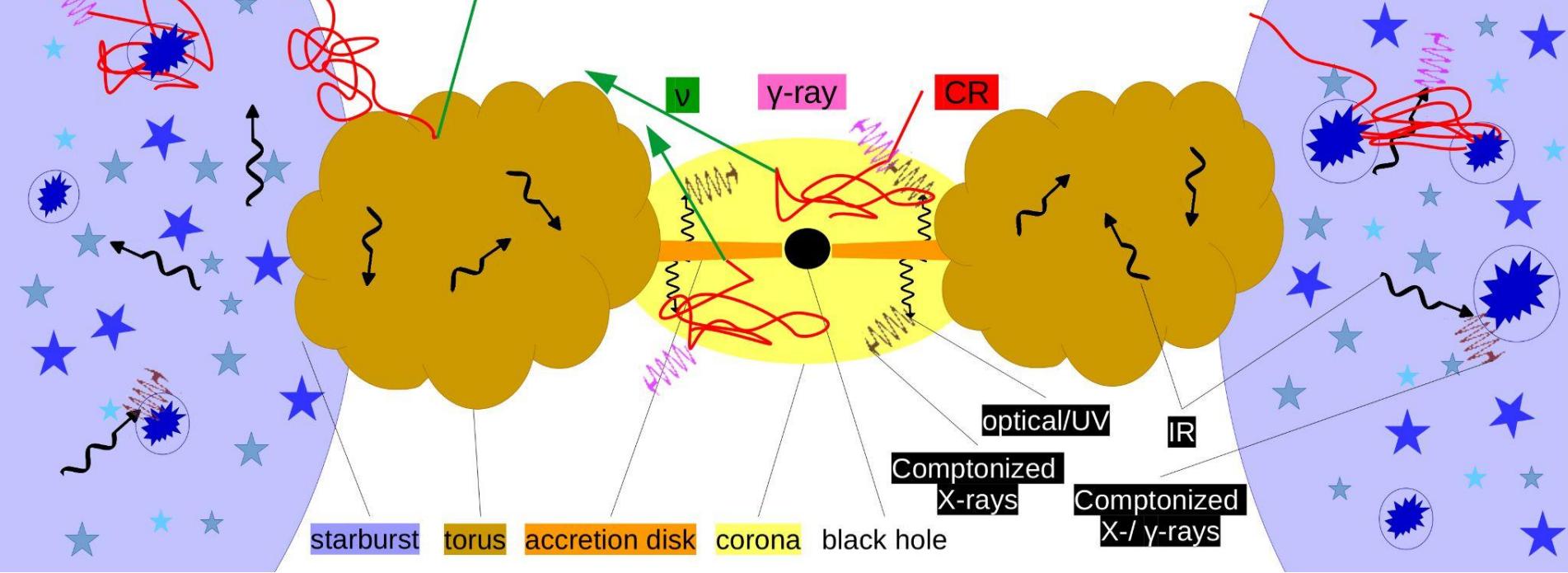
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# An AGN-starburst composite multi-messenger model of NGC 1068

**Björn Eichmann | Ralf-Jürgen Dettmar | Julia Tjus**

**ICRC2021: Berlin | Germany, 12. - 23. Juli 2021**



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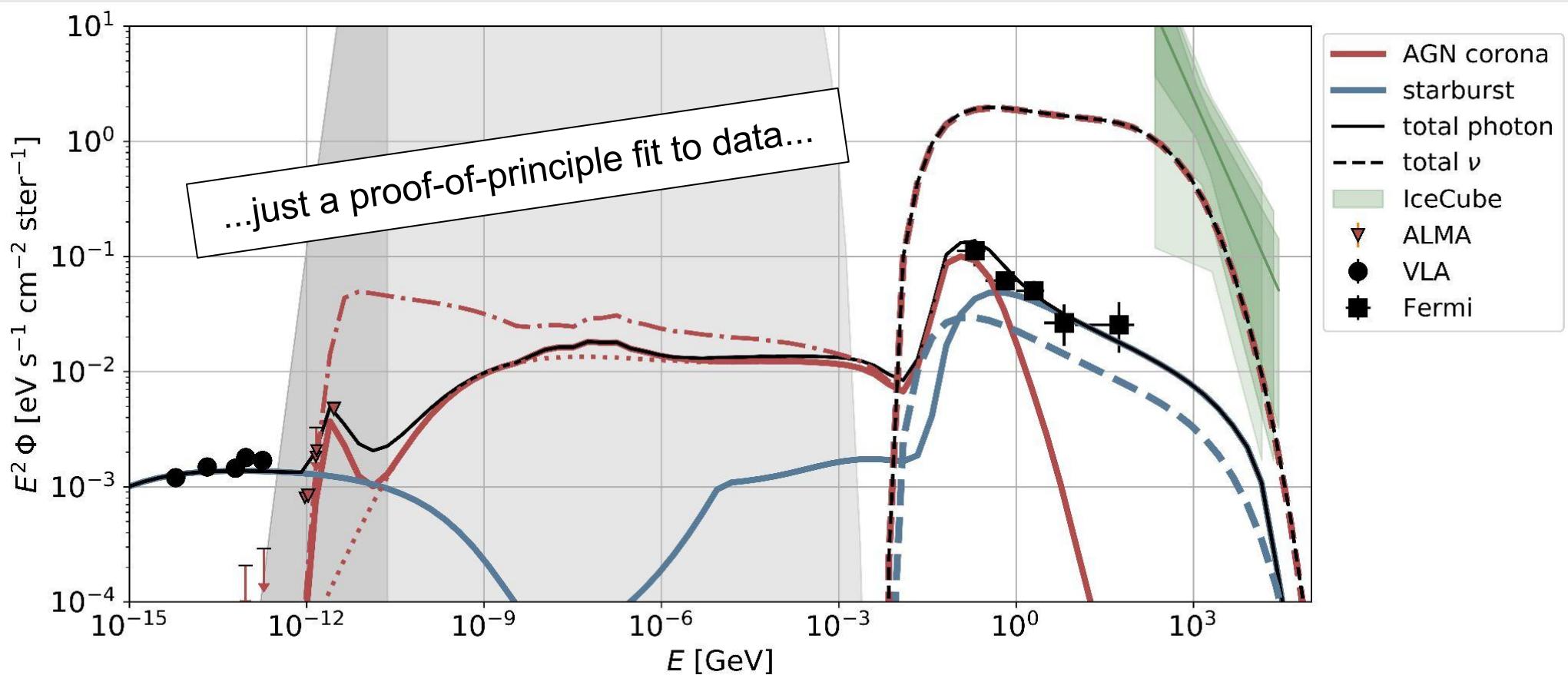


**An AGN-starburst composite**  
multi-messenger model of NGC 1068 ...in a flash  
Björn Eichmann | Ralf-Jürgen Dettmar | Julia Tjus  
ICRC2021: Berlin | Germany, 12. - 23. Juli 2021

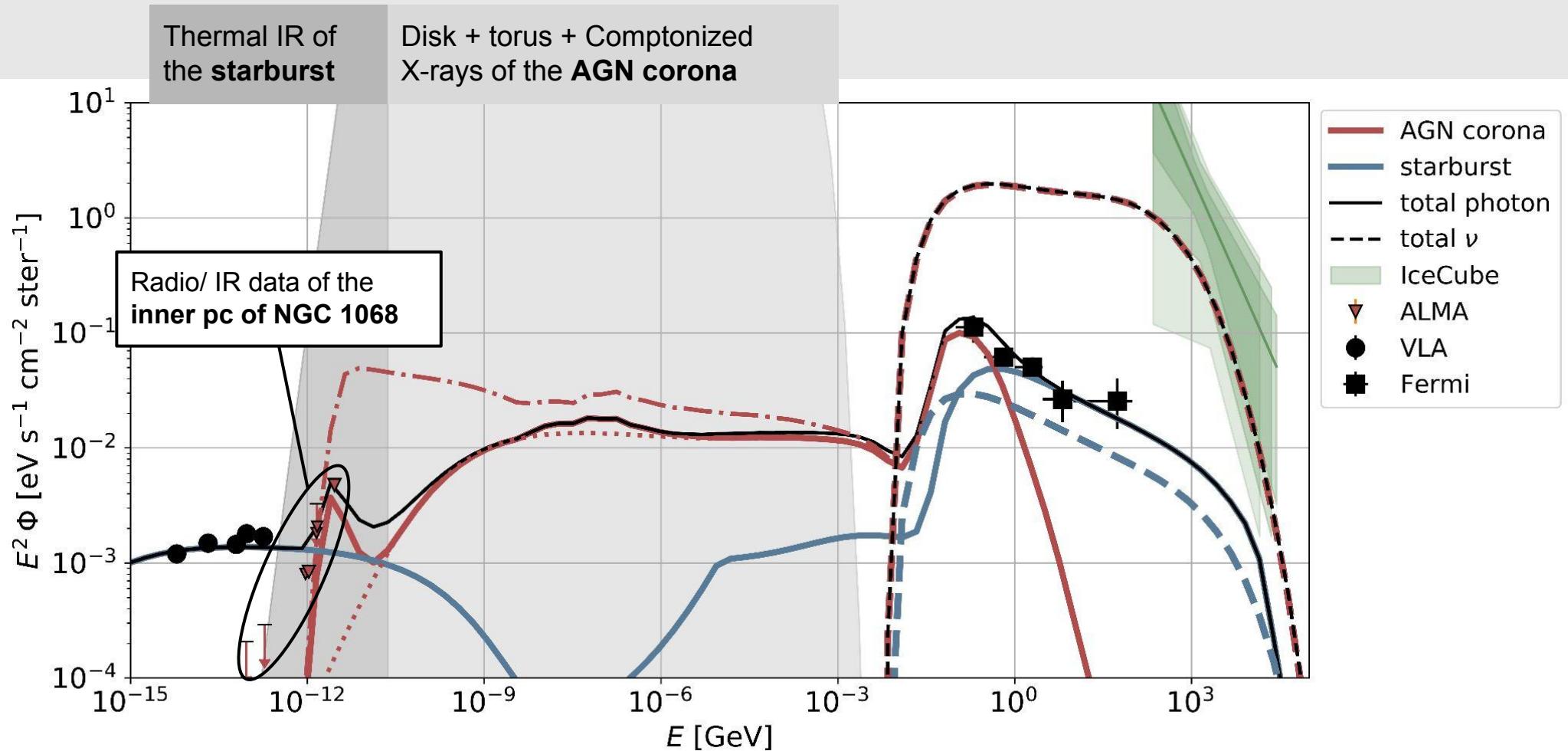
# Both starburst and AGN corona are needed to understand the emission from NGC 1068

Leptonic & hadronic emission including:

- maximal energy constraints from timescale analysis;
- same total number of injected protons and electrons;
- secondary electrons/ positrons from hadronic interactions;
- optical thickness of the AGN corona



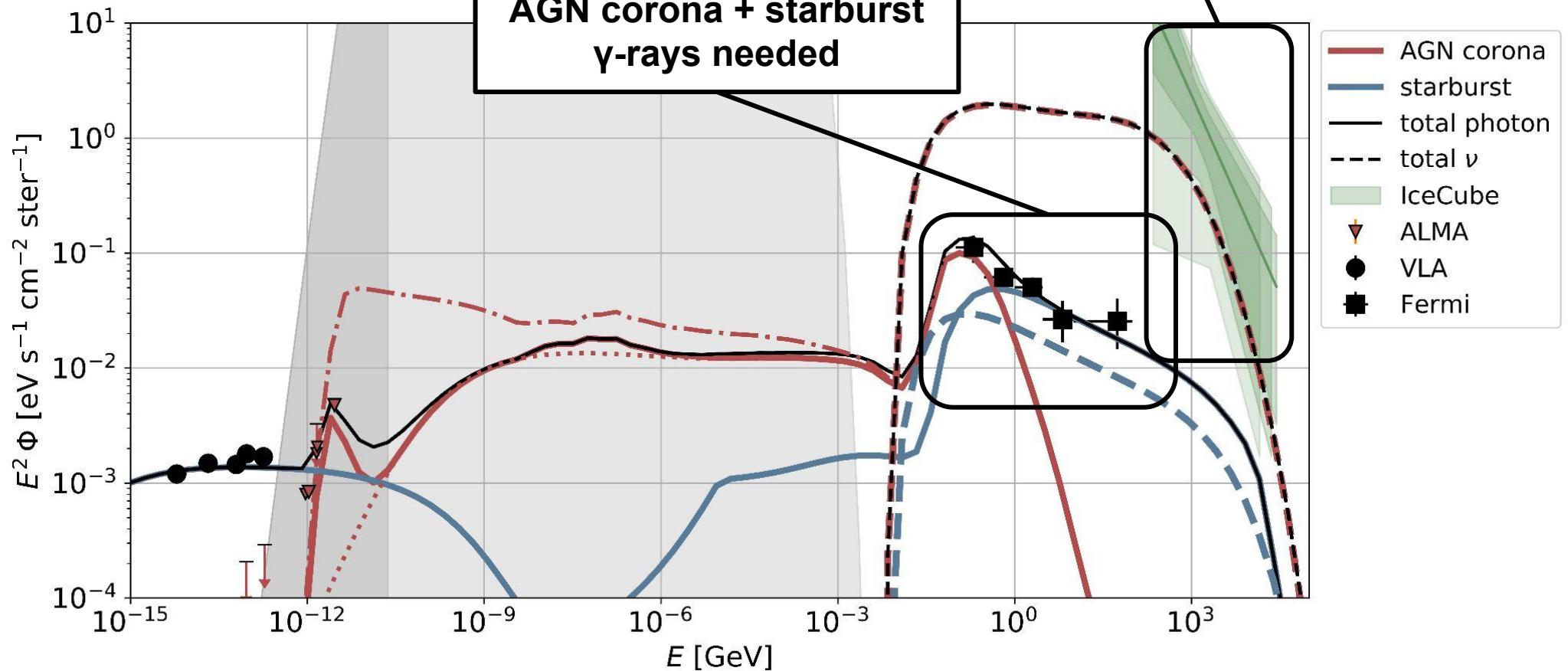
# Both starburst and AGN corona are needed to understand the emission from NGC 1068



# Both starburst and AGN corona are needed to understand the emission from NGC 1068

**AGN corona provides neutrinos  
(by hadronic pion production)**

**AGN corona + starburst  
 $\gamma$ -rays needed**



# Both starburst and AGN corona are needed to understand the emission from NGC 1068

