

Thanks very much for your interest.

Hi, Line 361, Formula (5):

1. What is the unit of $(P * S \lambda, \varphi)$? In the dataset of FY-3D active fire product (Provided by NSMC), there is a field of AreaFire. Does "AreaFire" equal to $(P * S \lambda, \varphi)$?

R: In formula (5), $(P * S \lambda, \varphi)$ stands for the area of burning fire, so its unit is m^2 . And yes, Areafire equal to $(P * S \lambda, \varphi)$.

2. The FRP value of each point was not provided by the raw dataset directly. Could you show the FRP value of some pixels or provide the table of fire point FRP used to generate Fig8b with the FY-3D active fire product (2019)?

3. How about the spatial distribution of fire FRP?

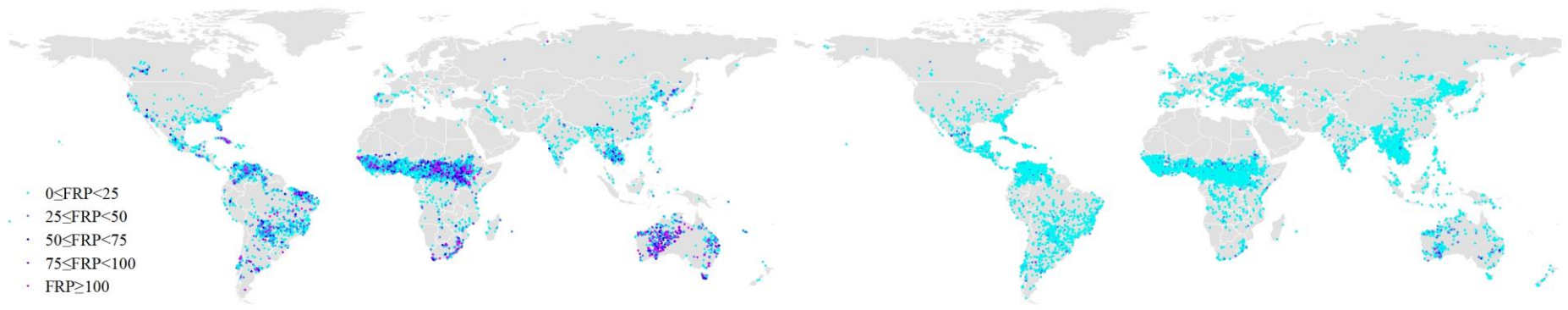
R: Thanks so much for your interest in FRP. Actually, the sole demonstration of pixel-level FRP provided limited information. Instead, for Fig 8, by comparing FRP between MODIS and FY-3D products, two major findings were identified based on the comparison between FY-3D and MODIS fire products in terms of fire intensity: Firstly, the higher the credential of the identified fire, the higher consistence between FY-3D

and MODIS fire products. When the credential was larger than 65%, both FY-3D and MODIS could effectively identify the candidate pixel as fire pixel. In other words, the parameter of credential in MODIS fire product provides important reference for fire detection. Secondly, FRP is an index for the heat radiation of the fire. The larger FRP, the larger consistence between FY-3D and MODIS was, indicating a higher accuracy of fire detection.

So in the manuscript, we did not demonstrate the distribution of FRP. Here, we could present the monthly distribution of global FY-3D FRP in 2019 for your reference. Thanks again for your interest.

January

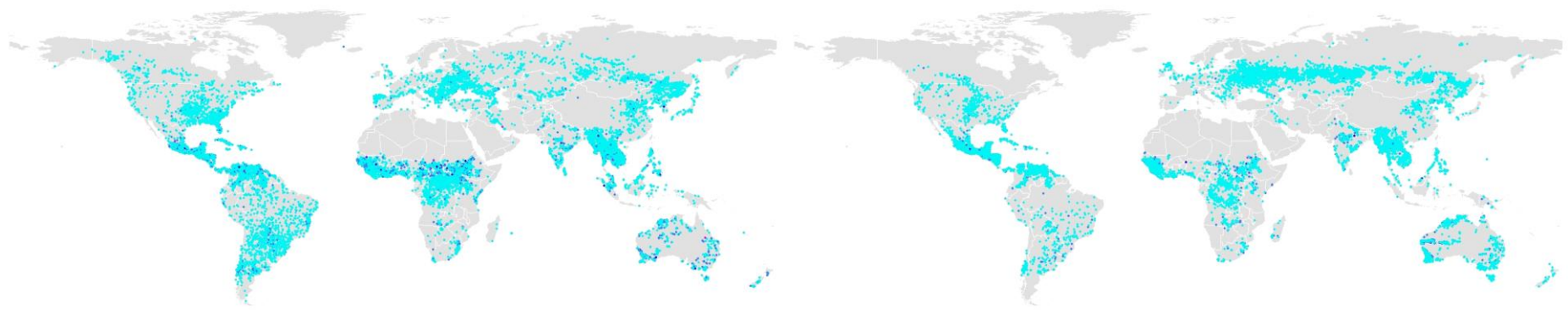
February



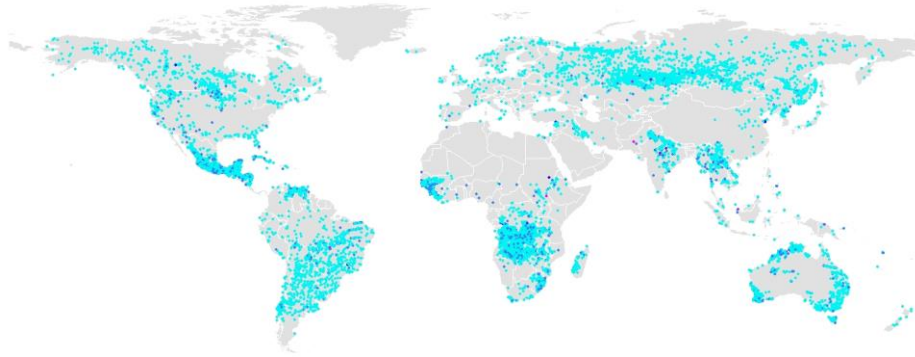
- $0 \leq \text{FRP} < 25$
- $25 \leq \text{FRP} < 50$
- $50 \leq \text{FRP} < 75$
- $75 \leq \text{FRP} < 100$
- $\text{FRP} \geq 100$

March

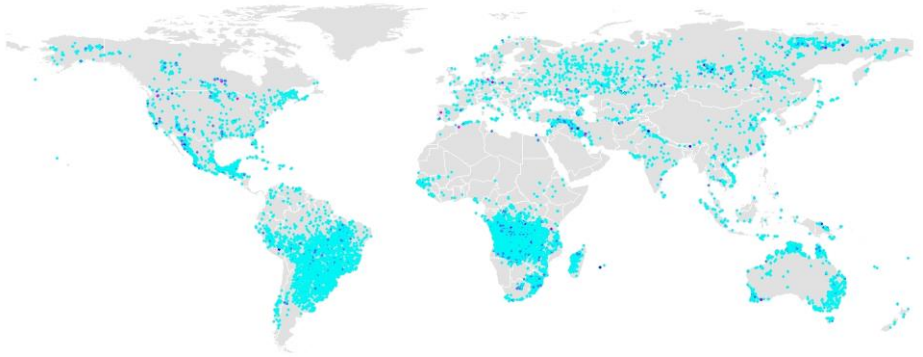
April



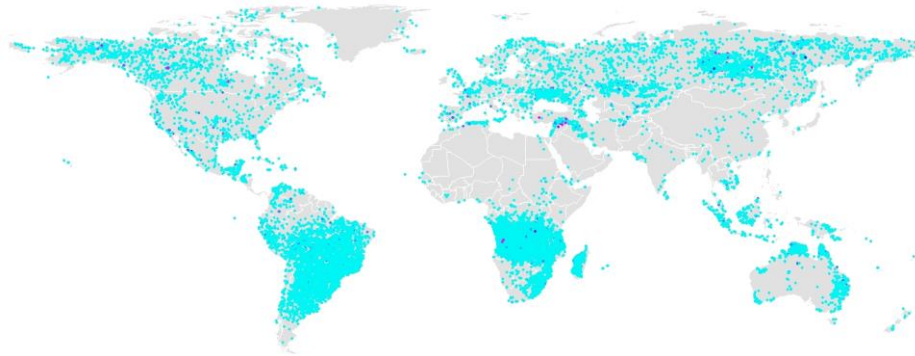
May



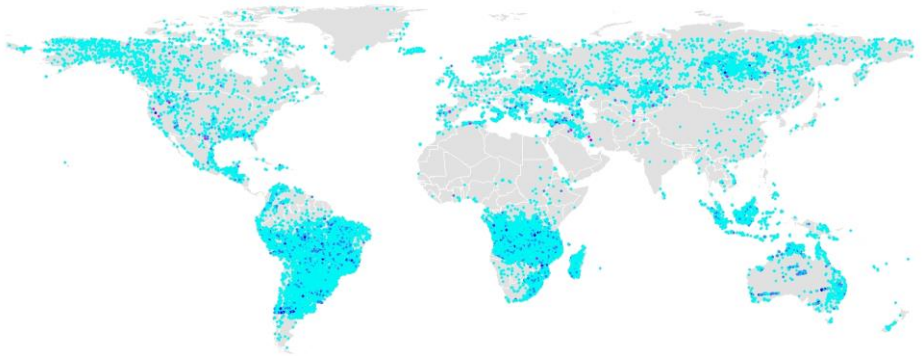
June



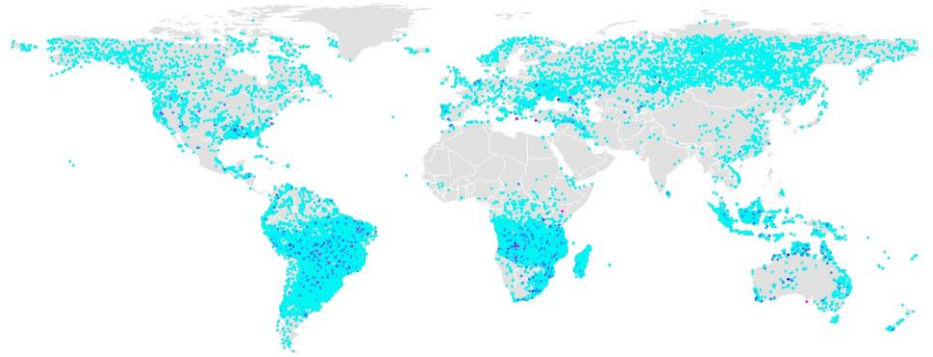
July



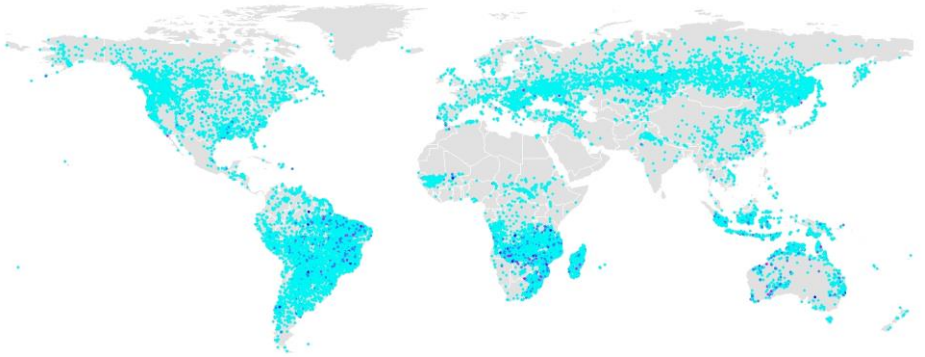
August



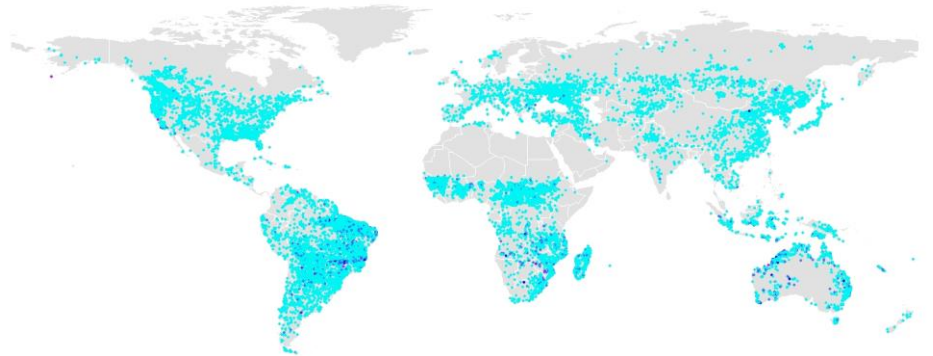
September



October



November



December

