

A New Lightning Climatology for Cape Canaveral Air Force Station and NASA Kennedy Space Center

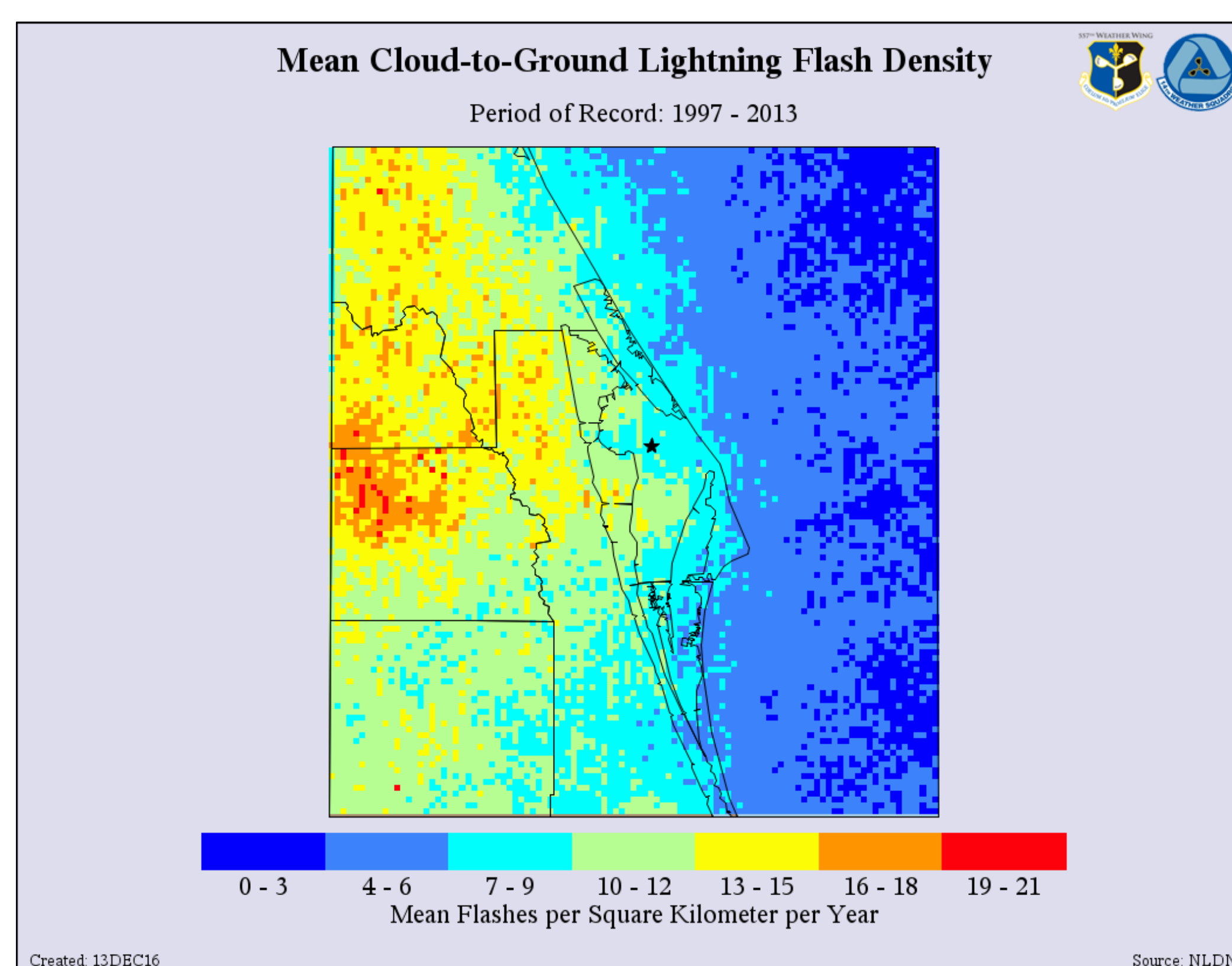


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- **New Lightning Climatology for Mission Planning and Risk Assessment**
- **'Ground Strike' Density: A Better Tool than Flash or Stroke Density**

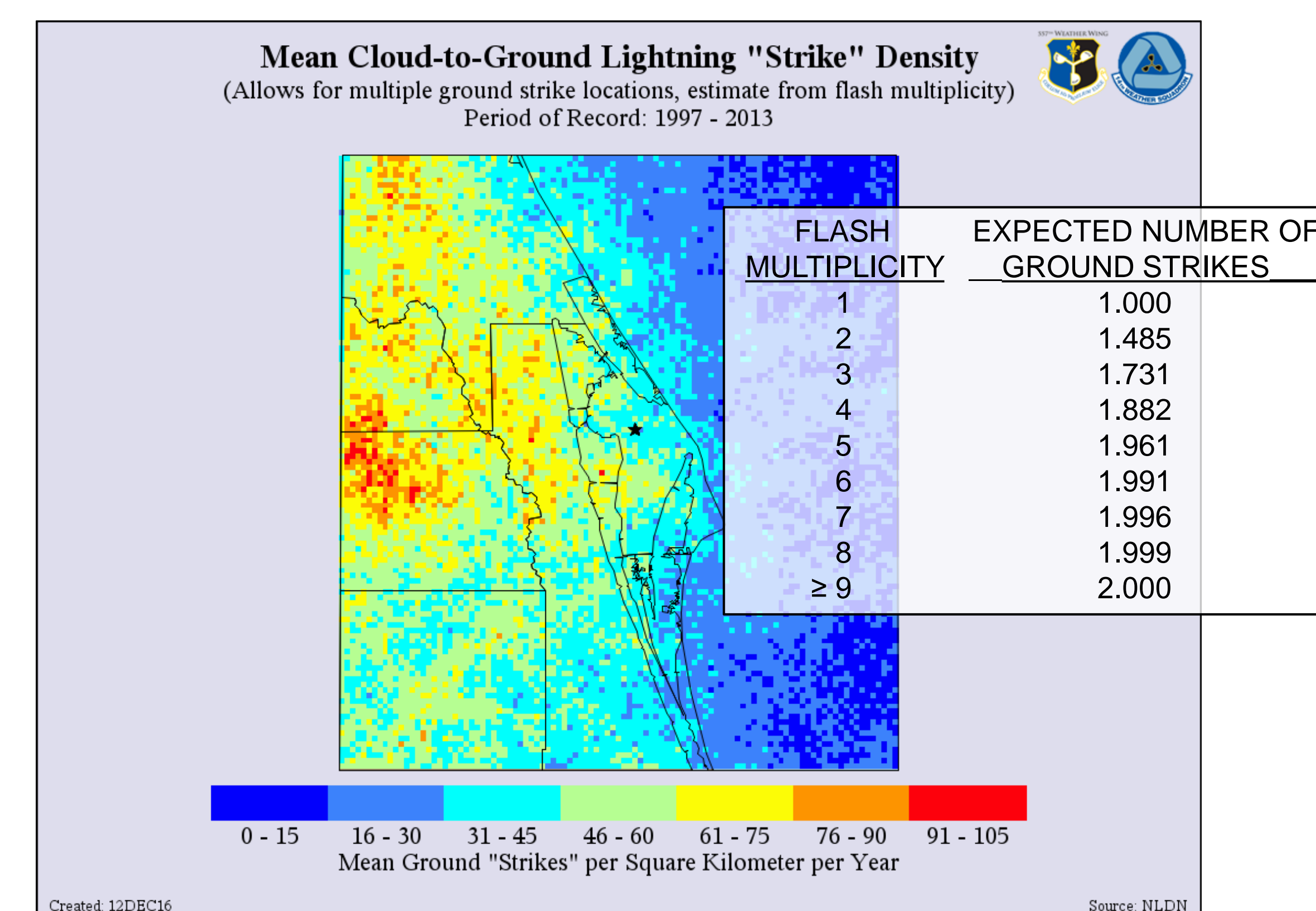
DATA:

- **CG-Lightning:**
 - Source: NLDN
 - POR: 1997-2013
 - Resolution: 1 x 1 km
- **Lightning Aloft:**
 - Source: ENTLN
 - POR: 2010-2015
 - Resolution: 1 x 1 km



Annual CG Flash Density

- Mission planning
- Risk assessment to personnel & facilities

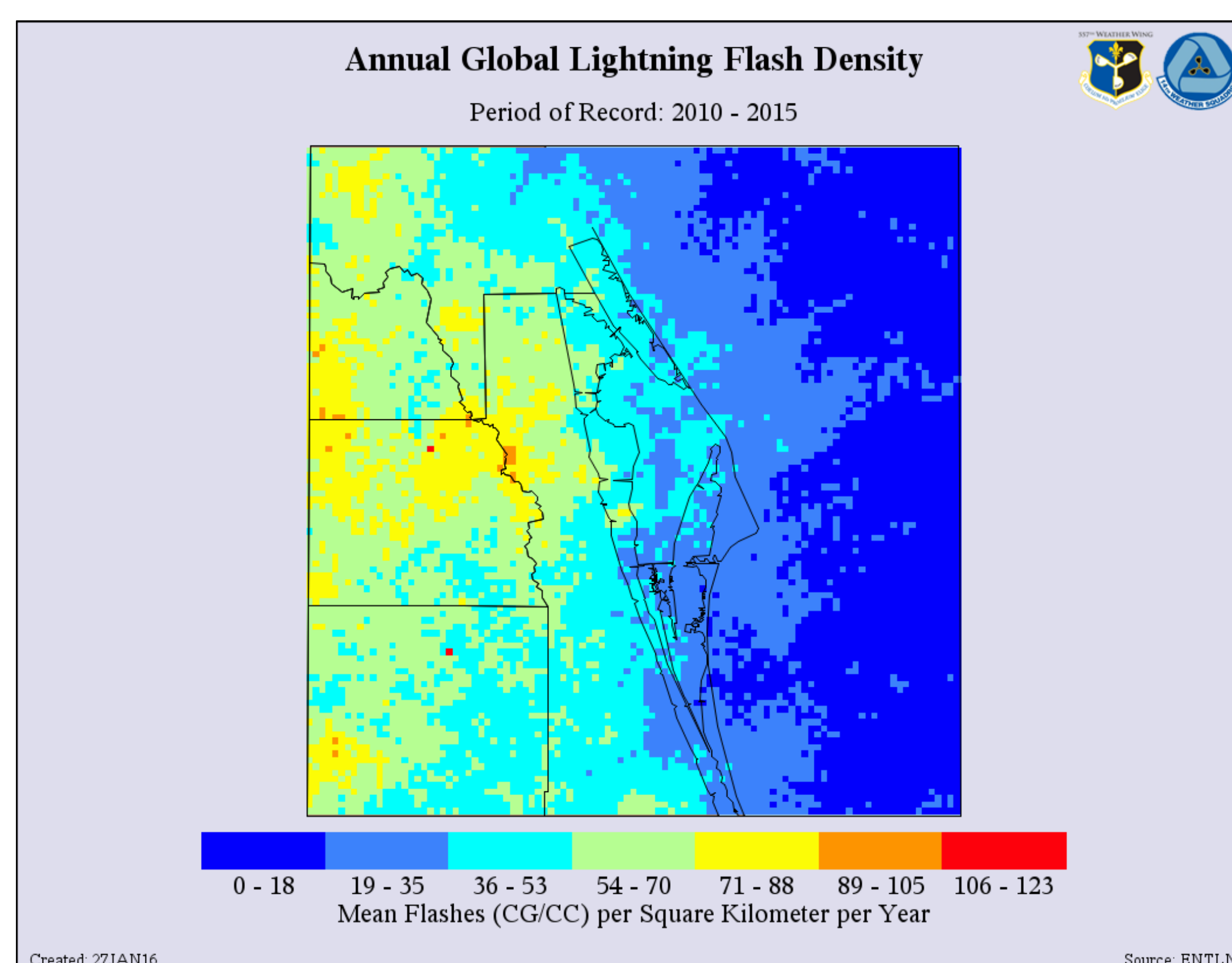


Annual CG 'Ground Strike' Density

- A better tool than flash or stroke density
- Is limit of 2 ground strikes per flash reasonable?

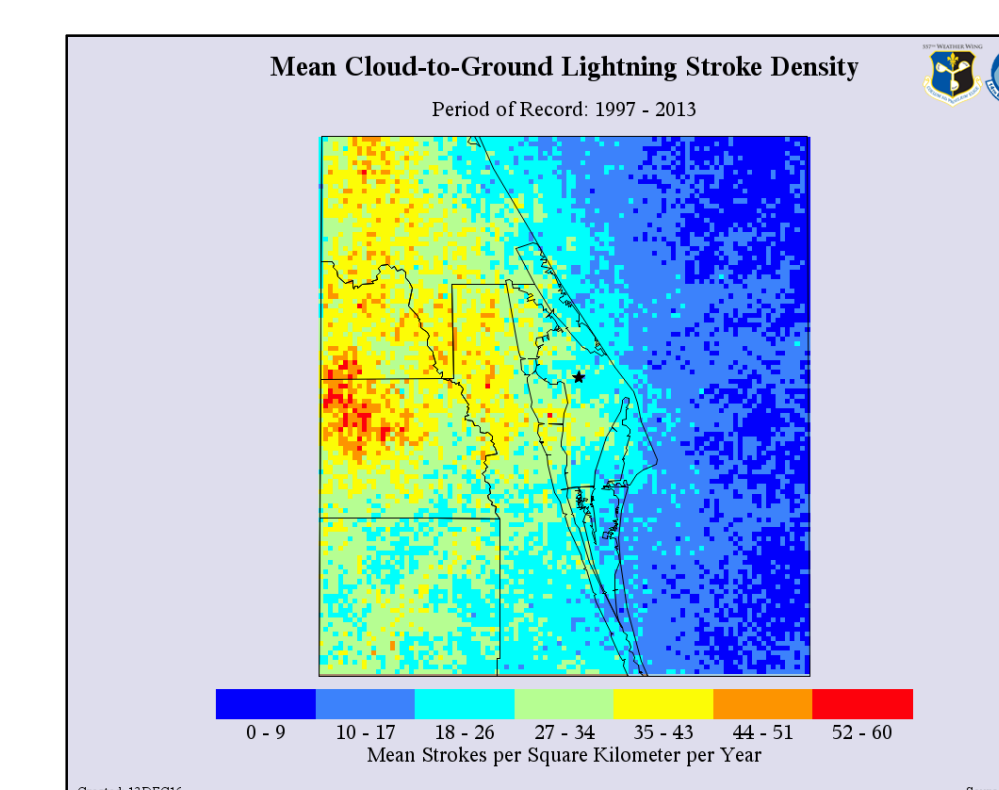
PRODUCTS:

- **CG-Lightning**
 - Flash Density
 - Stroke Density
 - 'Ground Strike' Density
 - Mean Peak Current
 - Mean Multiplicity
 - Frequency Negative Polarity
 - Frequency Positive Polarity
- **Total Lightning:**
 - Flash Density

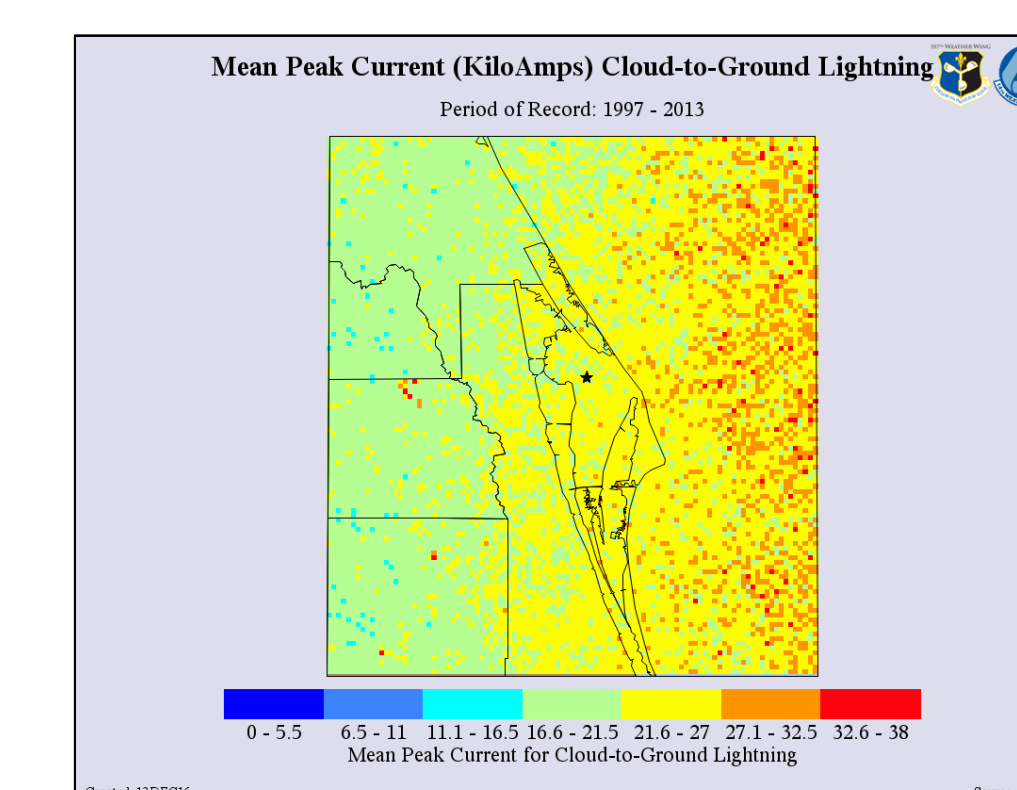


Annual Total Lightning Flash Density

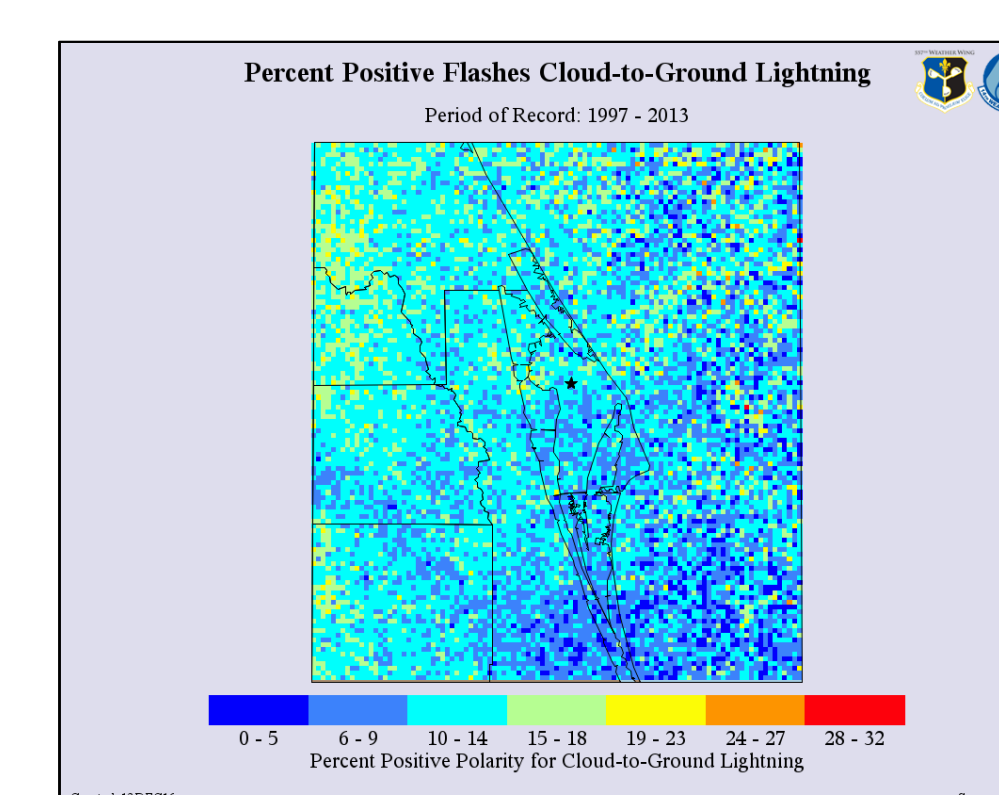
- Risk assessment to space launch & aviation



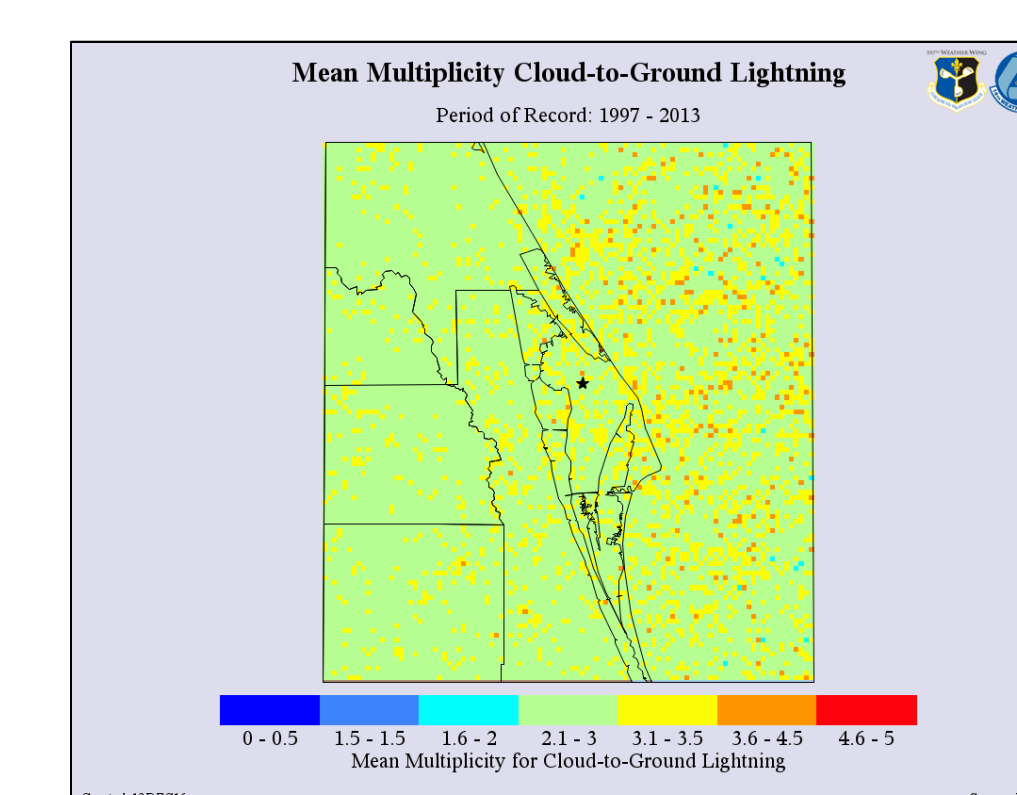
Stroke Density



Mean Peak Current



Frequency Positive Polarity



Mean Multiplicity