SNEWS2 TG5
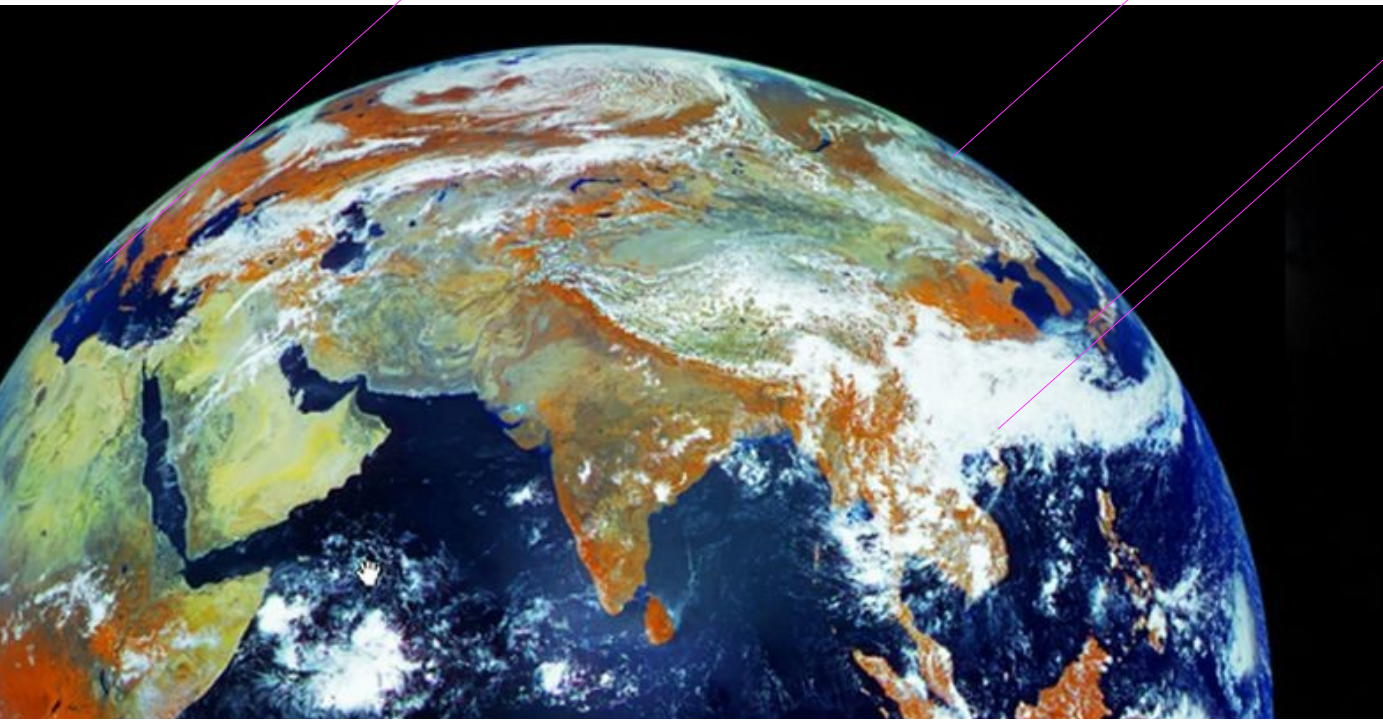# Pointing

Conveners:
K Scholberg,
J Tseng

20 June 2020

Architecture

- From 10 March meeting + slack discussions

- Seems broad agreement that plugin structure is desirable
  - Can run multiple algorithms
    - Different algorithms may work better with different features
    - Quicker/rougher algorithms can be followed by slower but more precise ones
  - Common input/output formats
    - e.g., JSON spec, start from SNEWS1 datagram for input
    - Follow GW practices for output
  - Updates to experiment data replace old data
    - Possibly too complicated to allow for incremental updates

- Work in Python in first instance?

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What data is needed?

- A range of possibilities:
  - Experiment aggregates: t_0, first (few) event times
  - Full time series, channel id
  - Something in between? Template fits?
- Usually assumed experiments don't like to publish information quickly
  - On the other hand, we only get O(1) chance in a generation
  - If there is a scientific case to be made to release more information quickly, SNEWS should make it
    - Turn-around time, successive localization
    - Other time-sensitive physics (esp that which affects subsequent observation)?
  - Can MoU (or addendum) cover it?
    - Note: >3000 authors/paper has already been done

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Other questions

- Systematic uncertainties / biases
  - It would be unfortunate to mis-direct
  - Discussion later in session
    - Compile list
    - How to start addressing now?
- How to evaluate algorithms?
  - Speed, resolution, biases, robustness vs features
  - When do we cull?
    - e.g., redundant information

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Presentations

- Pointing based on anisotropic interactions
  - K Scholberg
- Pointing confidence area estimation
  - V Kulikhovskiy, M Colomer
- Time measurements from individual experiments
  - C Virtue
- Pointing with shape information
  - J Wang
- Systematic uncertainties discussion
  - Because it would be unfortunate to know we're pointing in the wrong direction!
- Summation

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