IGN/JPL Analysis Center Model and analysis standards

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GIPSY/OASIS software (JPL)
Filter approach (free-network)

2 types of computations

- Automated solutions for IDS (cron command) = weekly free-network solution + derived products (geocenter, EOP,…)

---> IGN/SGN = production

- Specific computations :
  - Single / multiple satellites
  - POD (30-hour data) or station coordinates (24-hour data)

---> IPGP = research

Models and corrections

- Gravity field = GGM02C ---> ? + annual signal?
- Atmospheric density = DTM94 ---> DTM2004?
- Tides: Ocean (FES2004)
- Atmospheric loading : not applied --> 1/day ?
- Troposphere:
  - Dry = P(h) --> GPB?
  - Wet mapping function: Niell ---> GMF, VMF ?
- Ionosphere: 2st order --> higher order?
- PCV : No PCV --> time tag bias for SPOTs?
- Satellite physical model = IDS --> UCL for SRP?
- Solar pressure : no infra-red --> Y-bias?
- New data format?

Estimation strategy

- Troposphere:
- time constrains for ZTD
- Same for different satellites

---> Horizontal gradients?

---> data donweigthing at low elevation?

Elevation cutoff = 15 deg --> 7 deg?

- EOP: polar motion and polar rate

---> do not estimate polar rate?

A priori = Bulletin B --> IERSC04?

- UT1 rate   --> none?

- Drag : automatic handling of geomagnetic storms (reset period, time constraints)