# REFLECTIVITY CLIMATOLOGY FOR CENTRAL SÃO PAULO

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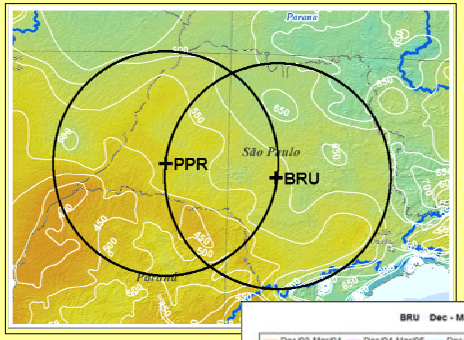
## OBJECTIVE

**Build a climatology of the cumulative probability P(Z´>=Z/Zo)**

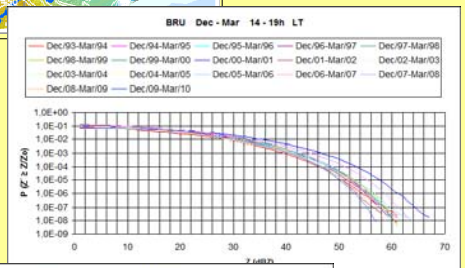
## DATA

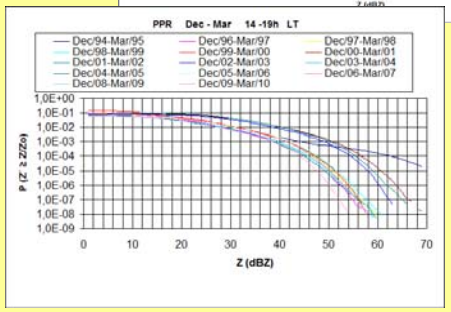
**Reflectivity @ 2 x 2 km² on 120 x 120 matrix CAPPI at about 3.5 km height AGL for the period 1994 - 2010**



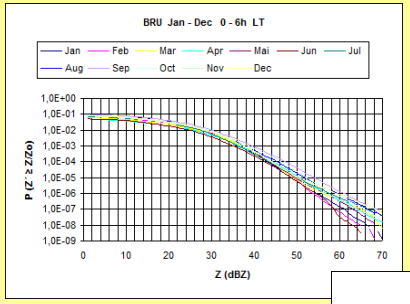

**Rain gage network based rainfall climatology for January-March (mm), from the period 1977-2006, and a sketch of the approximate positions and 240 km radar range for BRU and PPR.**

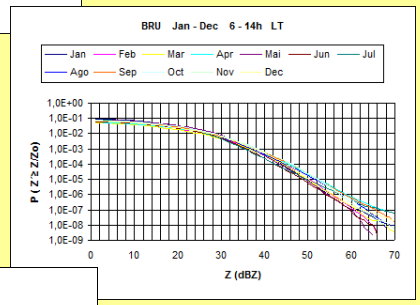
## RESULTS

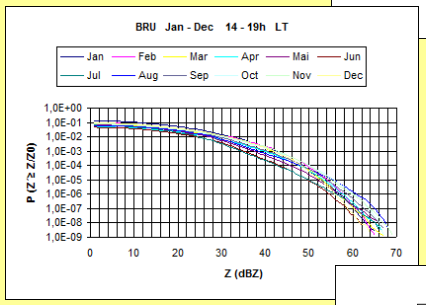


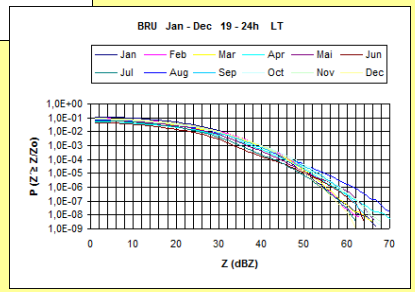




**Cumulative probability curves for the critical rainy season December-to-March, for 1994 to 2010, and for 14-19h, for BRU and PPR, respectively.**

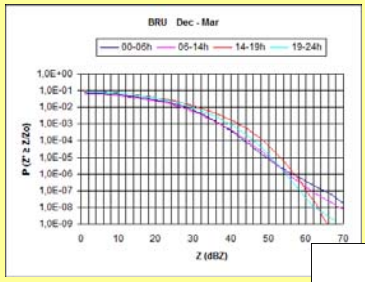


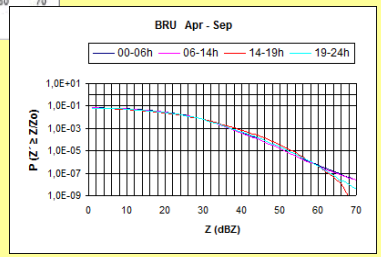



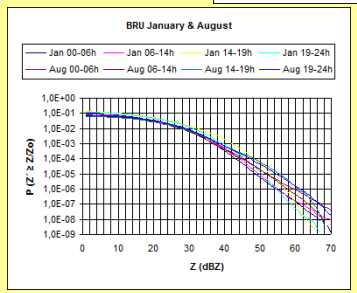




**Monthly cumulative probability curves for the daily intervals for 0-6h, 6-14h, 14-19h and 19-24h, respectively.**




**Cumulative probability curves for the critical rainy period December-March and the dry period April-September**




**Cumulative probability curves for the "peak" months: January (rainy period) and August (dry period), and all daily intervals, respectively.**

## CONCLUSIONS

- **The structure of precipitation in the area is relatively stable for most of its dynamic range;**
- **Consistency of the cumulative probability curves for BRU and PPR, compared to the rainfall climatology for the area is a validation of quantitative use of radars;**
- **Peak summer convective activity is well characterized in the 14-19h LT daily interval;**
- **Daily intervals 0-6h and 6-14h do not show significant stratification in the critical rainy period (Dec-Mar);**
- **Curve for January is more representative of the critical rainy period than August is of the dry period.**