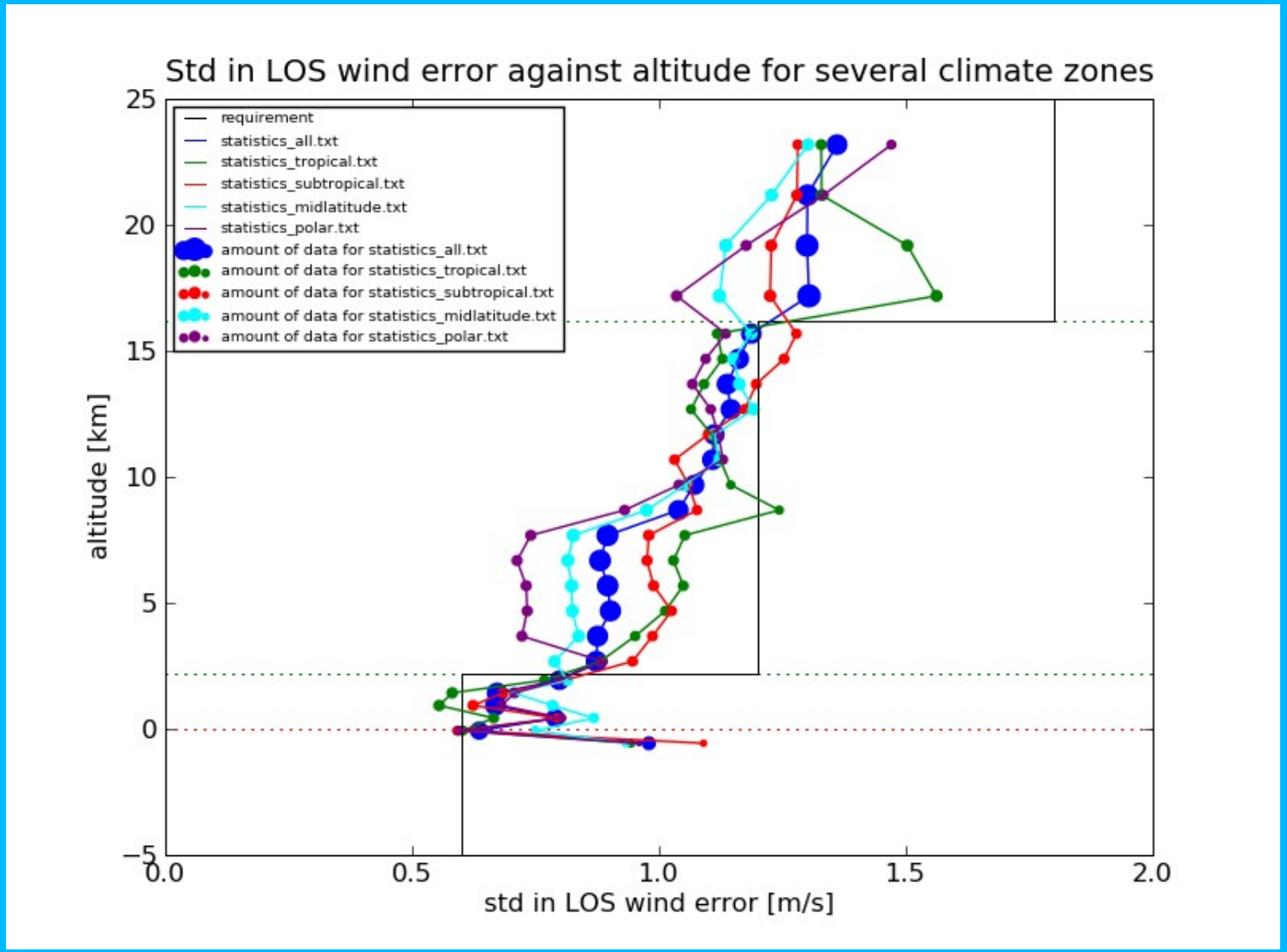
MieCore testing program

- reviewed program and found 2 problems
  - bug in signal level calculation
  - tuning problem in the background signal and related noise
- rerun 10 nighttime half CALIPSO orbits of data
- regenerated all CALIPSO related plots and tables for TN3
- general outcome remains mostly the same, although noise is increased so SNR lowered.

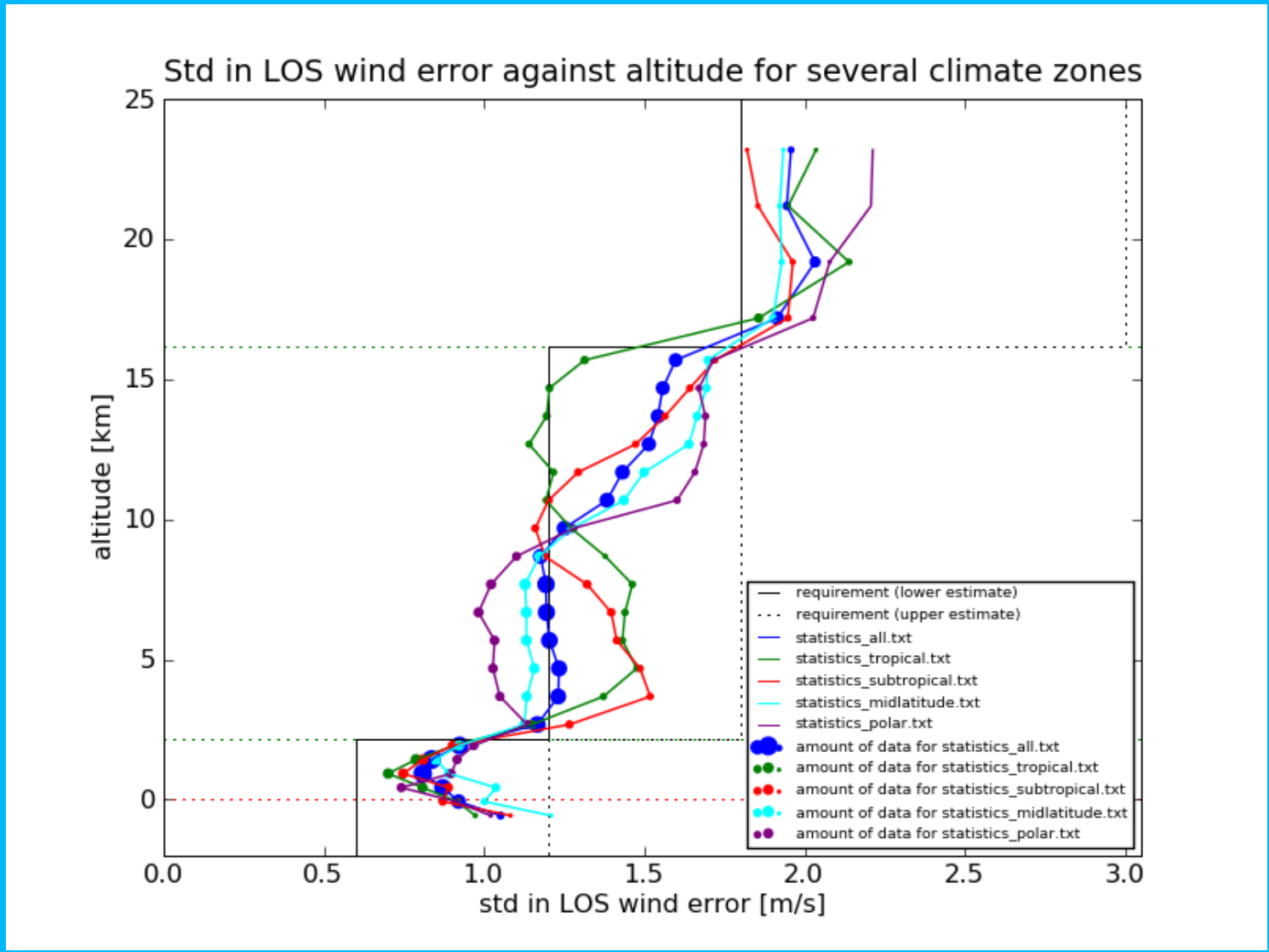
Wind Requirements

	Altitude range	Instrument requirement (without representa-tiveness error)	Total requirement, including represen-tativeness error
PBL	0-2 km	1 m/s hlos	2 m/s
Mid Troposphere	2-16 km	2 m/s hlos	3 m/s
UTLS	16-30 km	3 m/s hlos	5 m/s

latitude/altitude dependency (wrong)



latitude/altitude dependency (new)



Recommendations to L1B/L2B

- SNR>10, ValidityFlag=True
- Outer loop threshold can be set to about 12
- inner loop thresholds seem already optimal
- residual error threshold of 0.013
  - will improve std in LOS winderror to 0.65 m/s
  - will select only 51% of data points passing the SNR/ValidityFlag criterium

Recommendations to L1B/L2B

- climate zones
  - each climate zone needs additional filtering at some specific altitude ranges to meet the requirement lower boundary
  - filtering on Residual Error seems the easiest solution
  - threshold values will depend on altitude and latitude