

Ground based observation strategy

Multi scale strategy

Multi parameters strategy including Thermodynamic & Chemistry

Include existing stations, product from operational agencies, ...

...

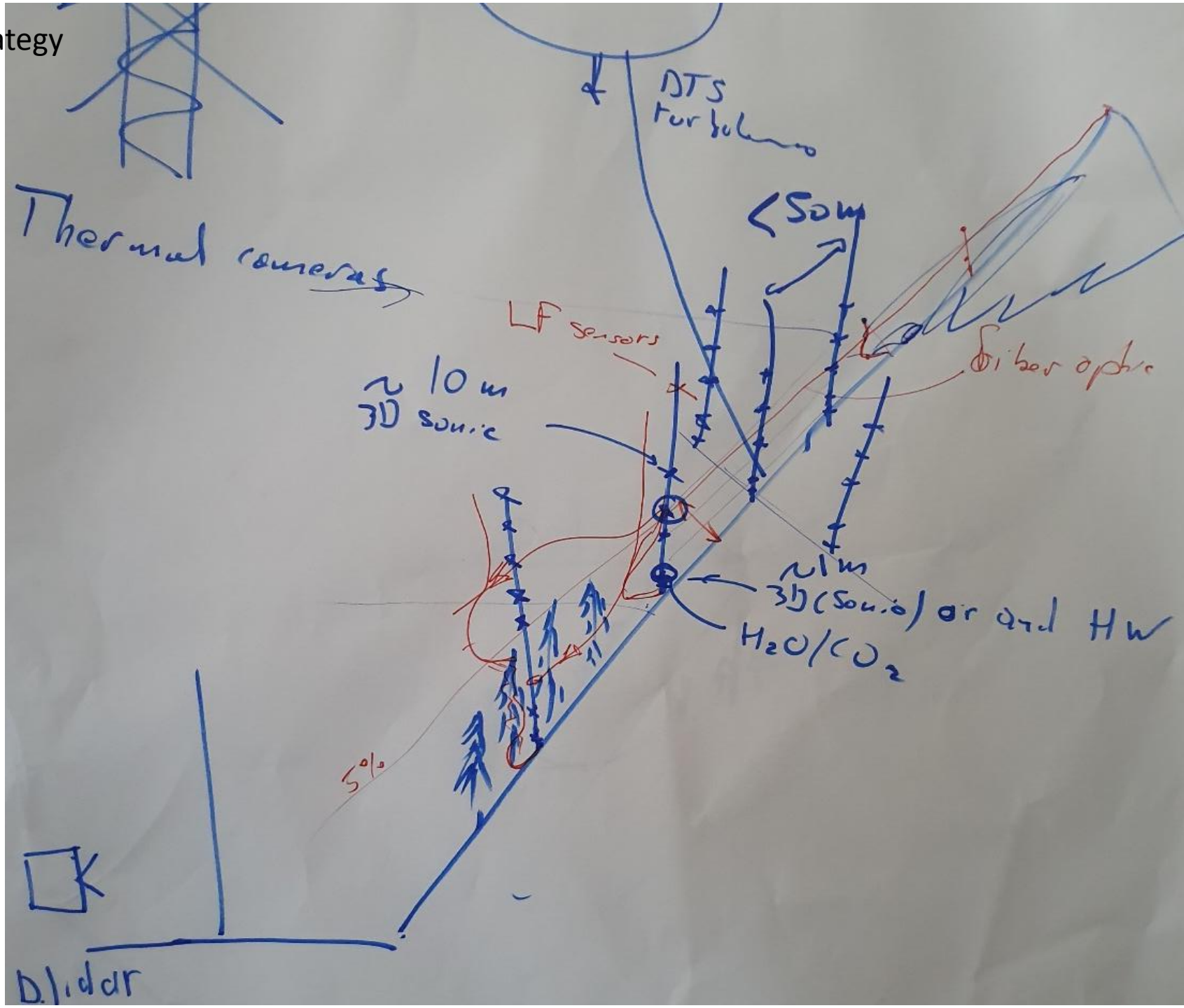
Unfinished picture from the group

To be completed together with other observation & modelling groups

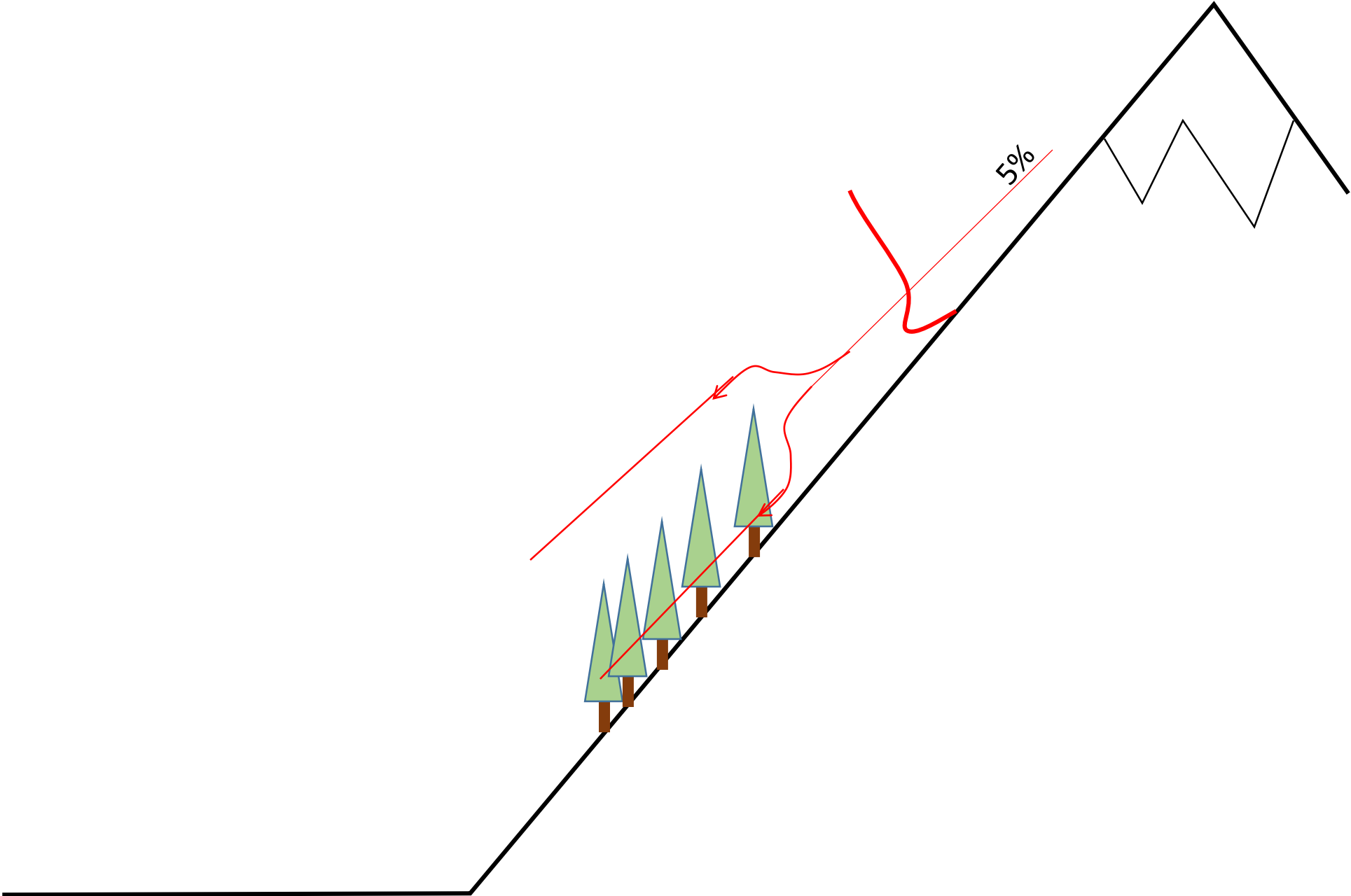
Group members

K. Babic, C. Charondière, J-M. Cohard, W. Eugster, M. Furger, M. Galvagno, M. Lehner,
L. Montagnoni, H. Oldroy, N. Patton, I. Stiperski, H. Ward, G. Wohlfarth,
Silvana di Sabbatino, ...

Ground based observation strategy

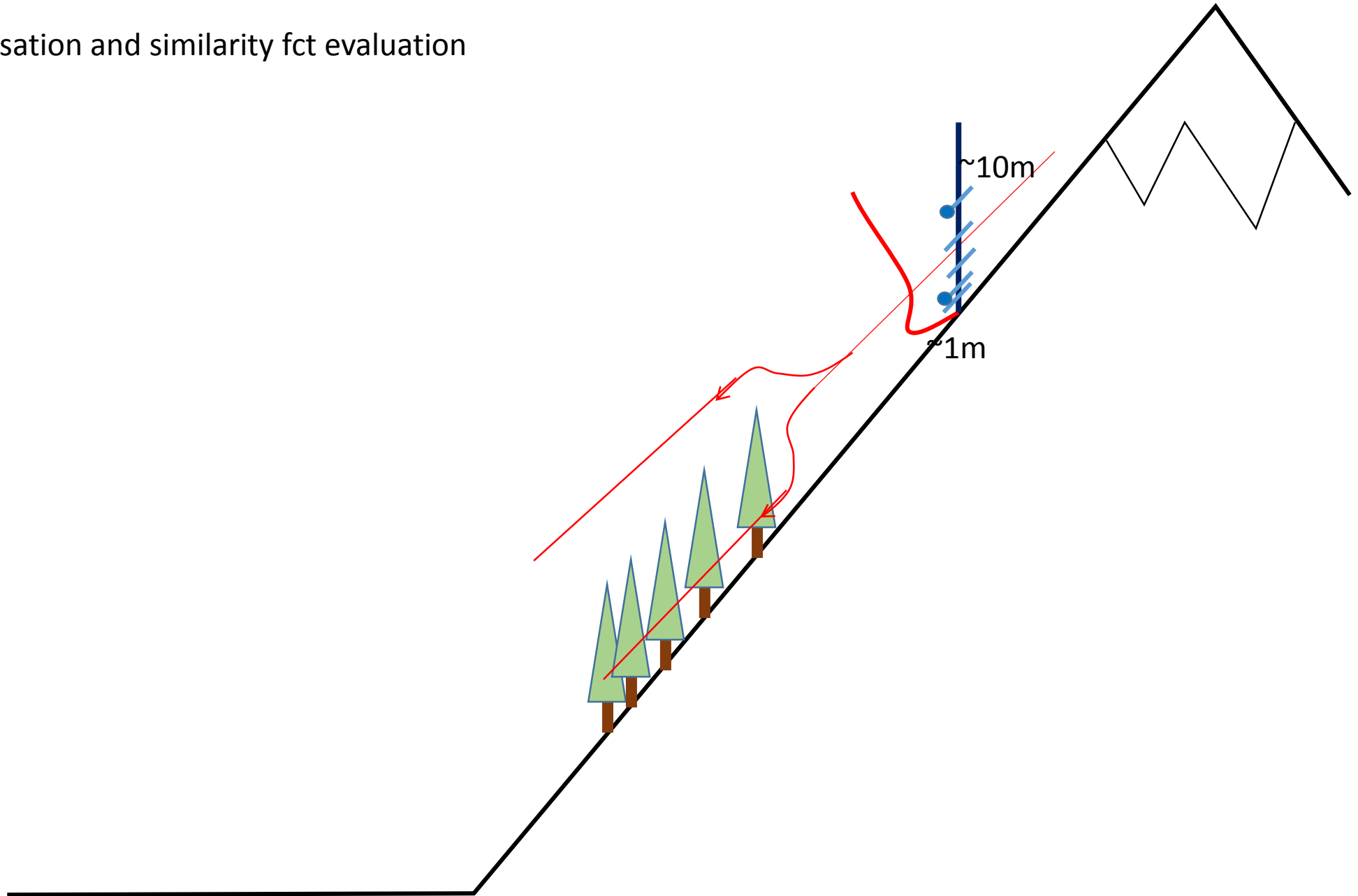


Ground based observation strategy



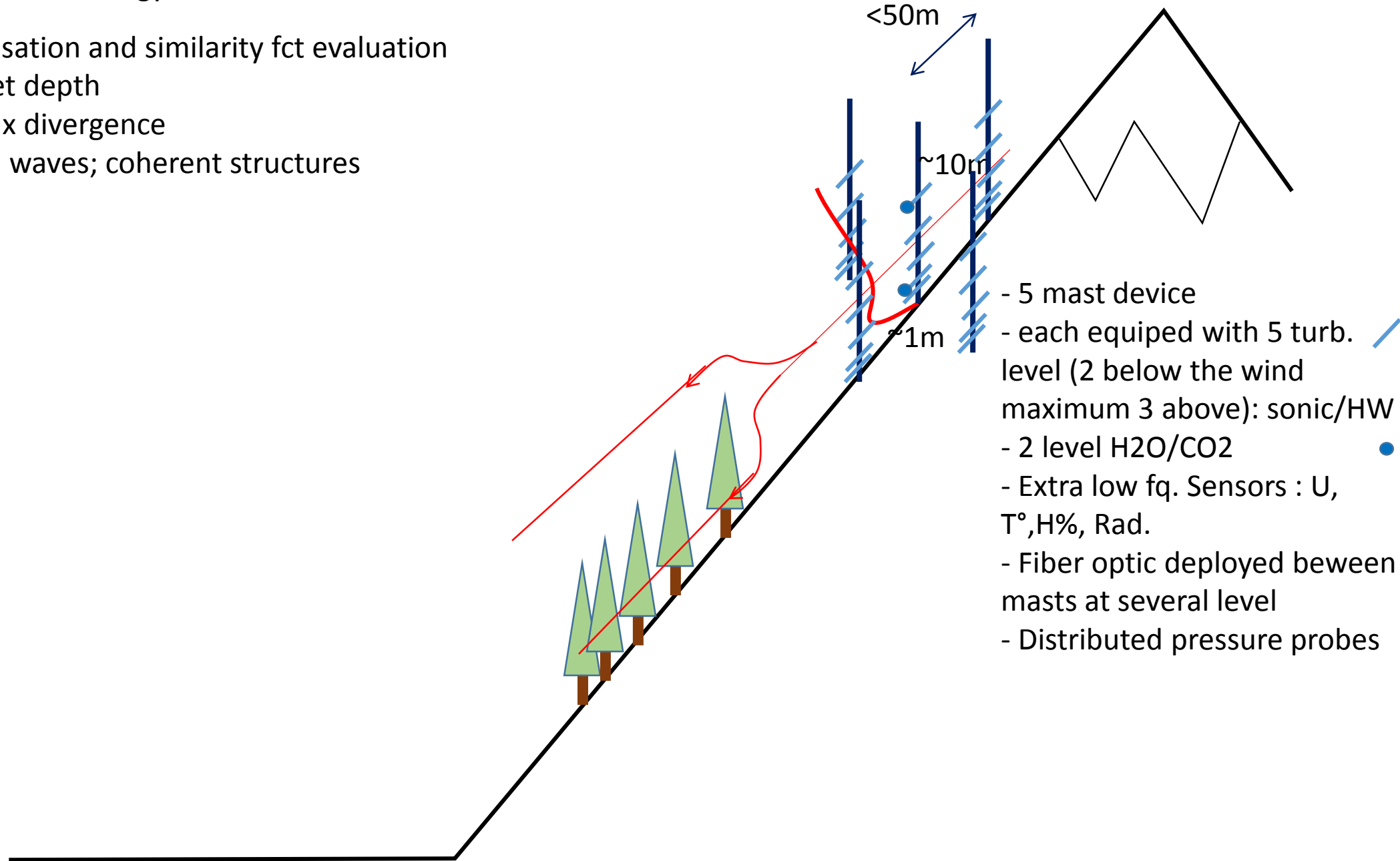
Ground based observation strategy

- $K(z)$ parameterisation and similarity fct evaluation



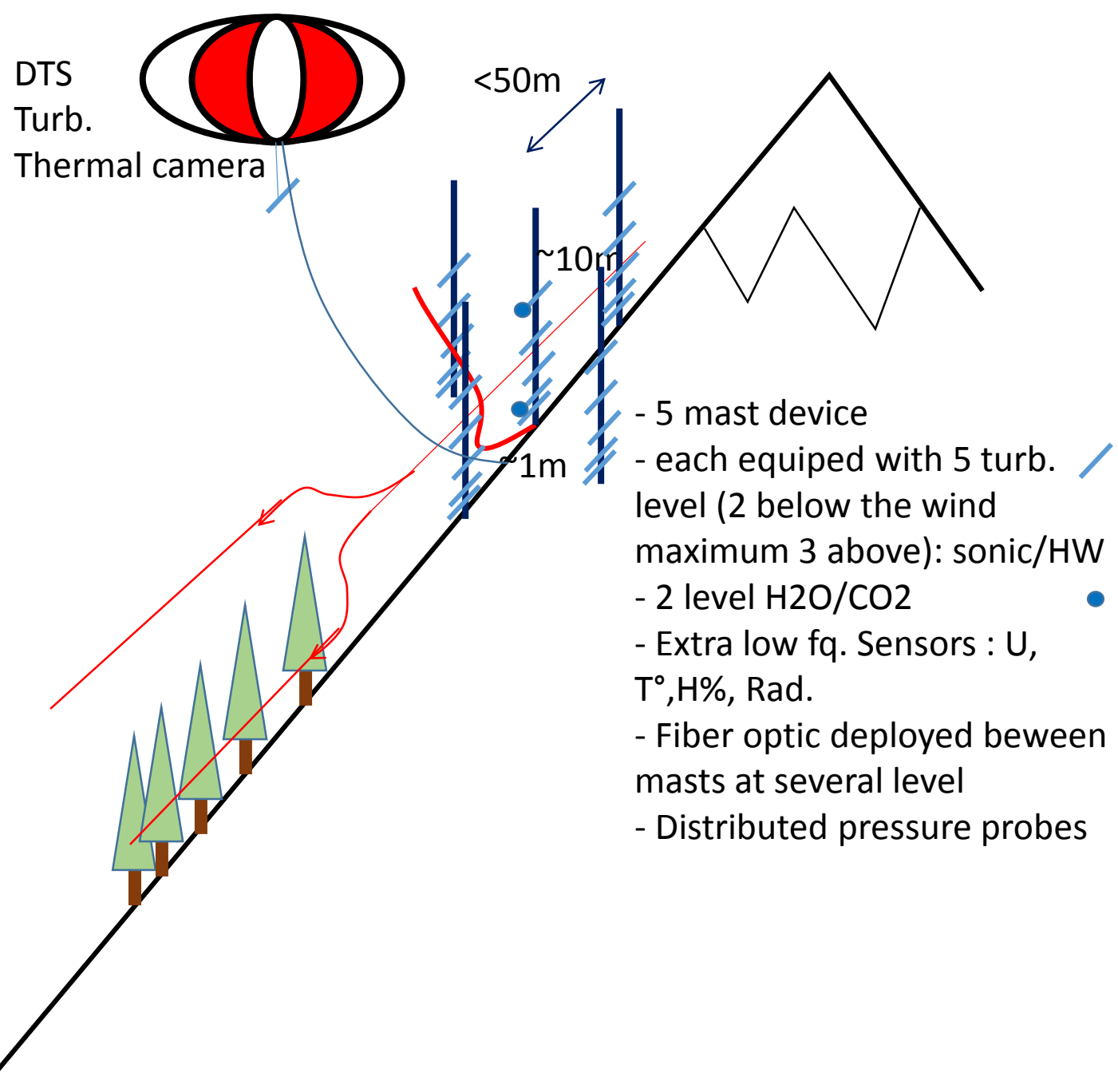
Ground based observation strategy

- $K(z)$ parameterisation and similarity fct evaluation
- 5% growth of jet depth
- Advection & flux divergence
- gravity/internal waves; coherent structures



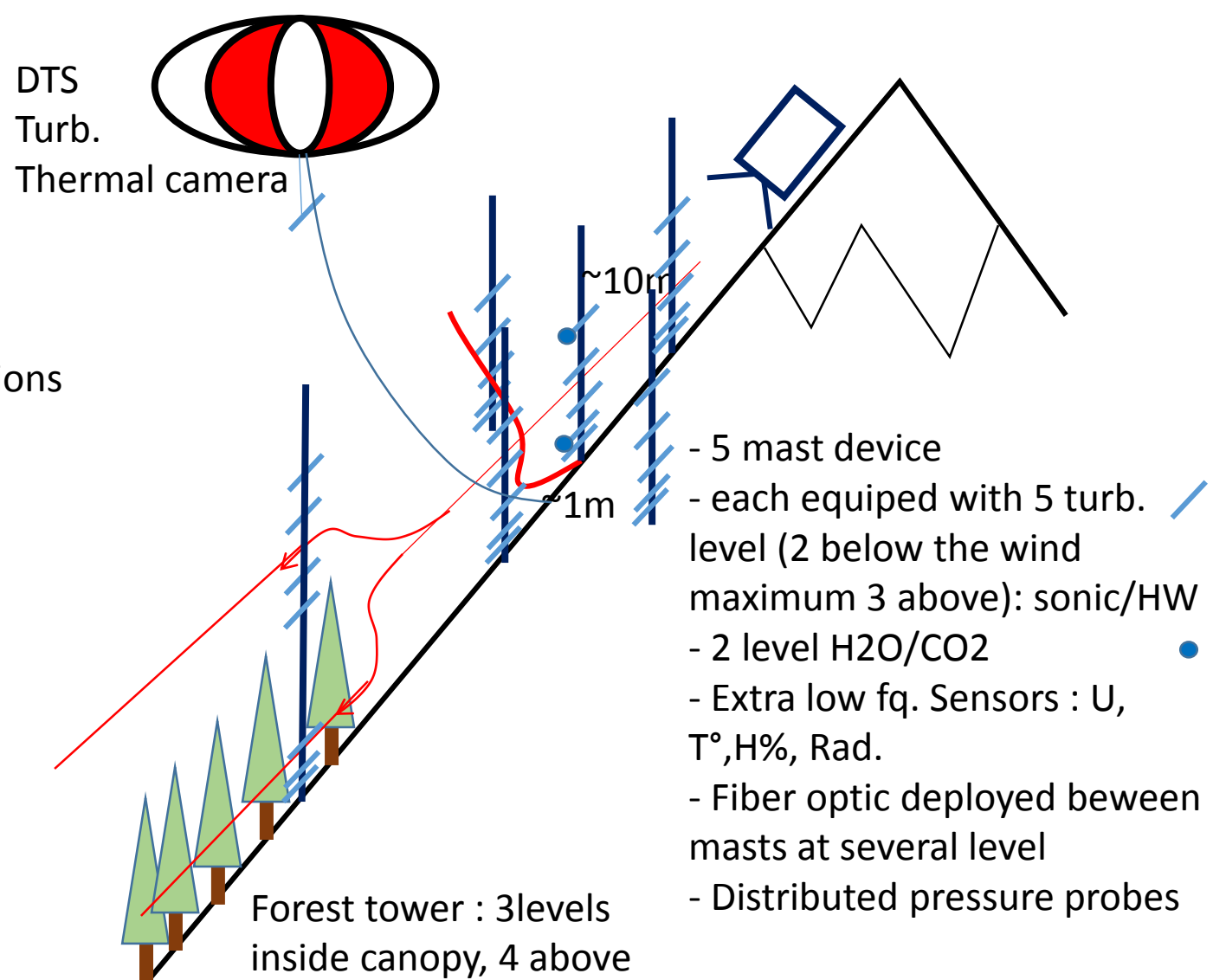
Ground based observation strategy

- $K(z)$ parameterisation and similarity fct evaluation
- 5% growth of jet depth
- Advection & flux divergence
- gravity/internal waves; coherent structures
- Interaction with valley wind/external flows



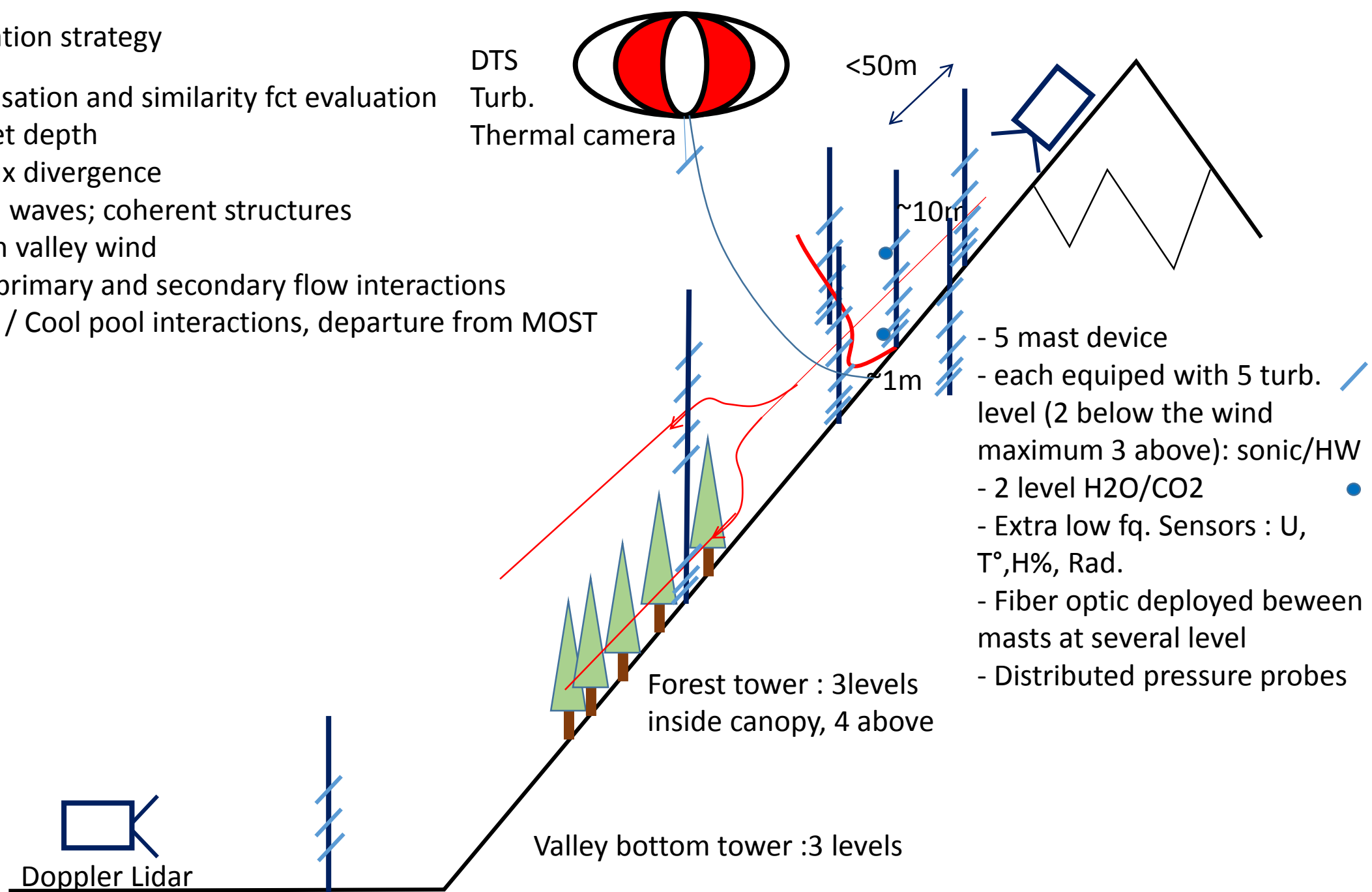
Ground based observation strategy

- K(z) parameterisation and similarity fct evaluation
- 5% growth of jet depth
- Advection & flux divergence
- gravity/internal waves; coherent structures
- Interaction with valley wind
- Forest impact, primary and secondary flow interactions



Ground based observation strategy

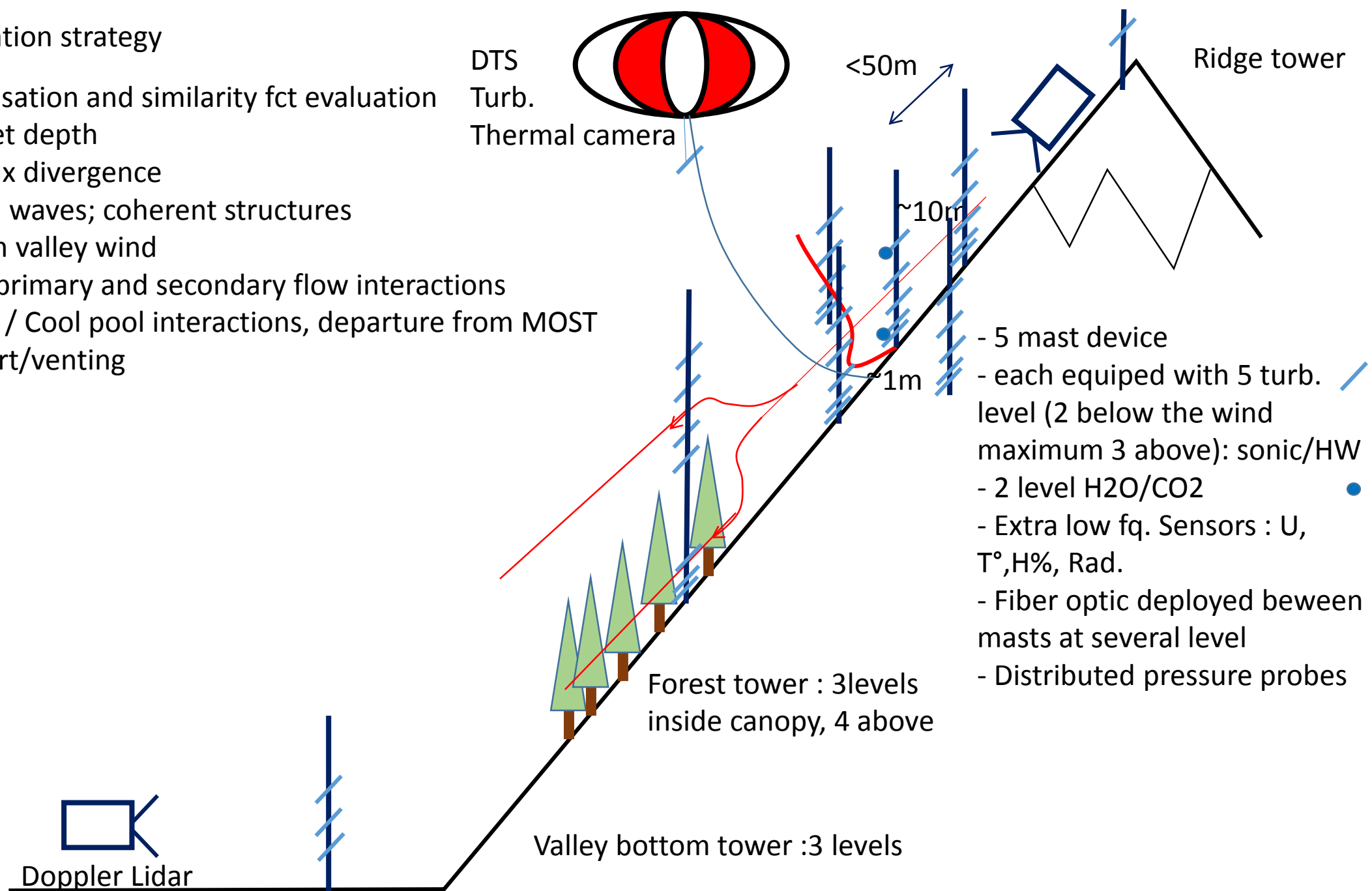
- $K(z)$ parameterisation and similarity fct evaluation
- 5% growth of jet depth
- Advection & flux divergence
- gravity/internal waves; coherent structures
- Interaction with valley wind
- Forest impact, primary and secondary flow interactions
- Katabatic flows / Cool pool interactions, departure from MOST



- 5 mast device
- each equipped with 5 turb. level (2 below the wind maximum 3 above): sonic/HW
- 2 level H₂O/CO₂
- Extra low fq. Sensors : U, T°, H%, Rad.
- Fiber optic deployed between masts at several level
- Distributed pressure probes

Ground based observation strategy

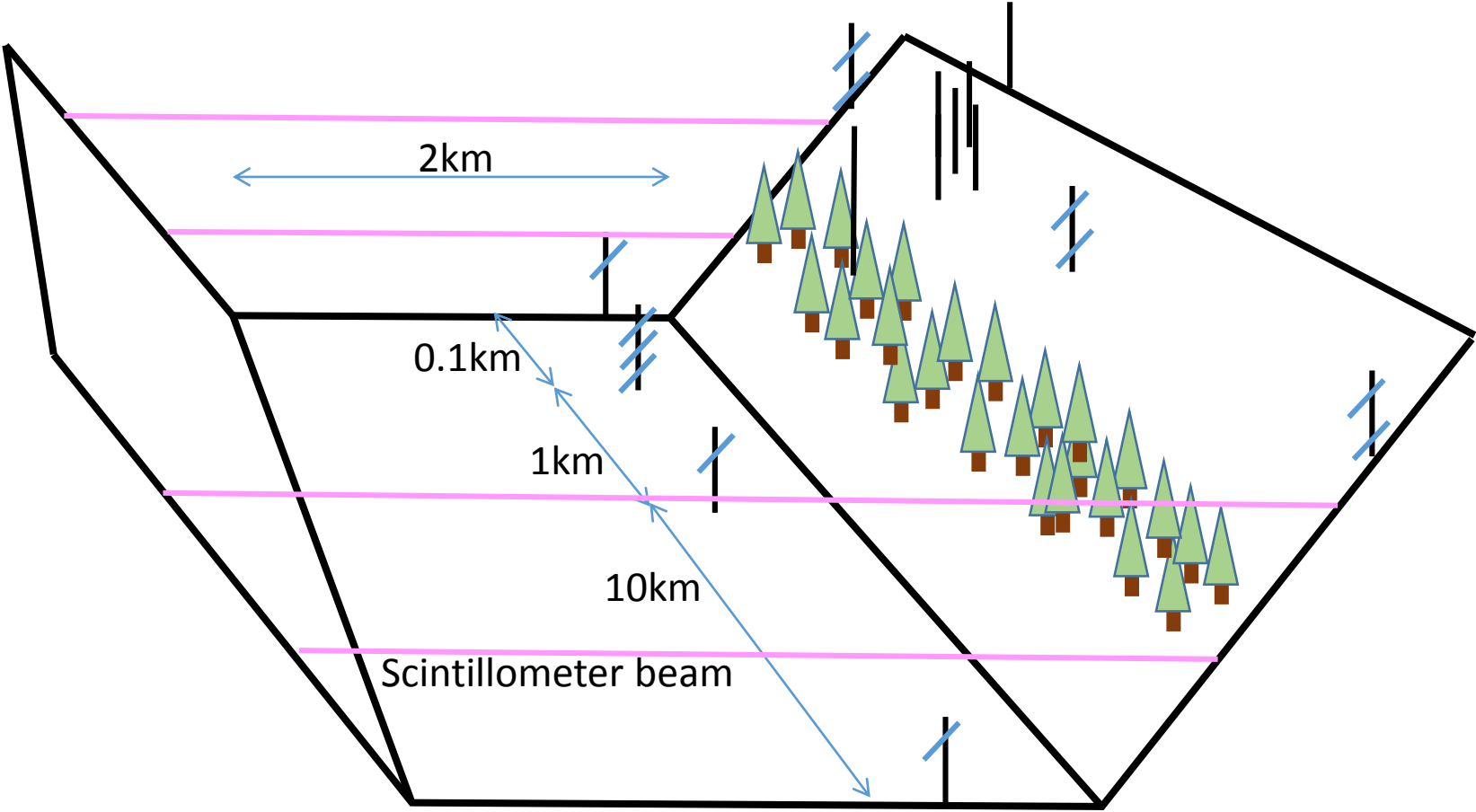
- K(z) parameterisation and similarity fct evaluation
- 5% growth of jet depth
- Advection & flux divergence
- gravity/internal waves; coherent structures
- Interaction with valley wind
- Forest impact, primary and secondary flow interactions
- Katabatic flows / Cool pool interactions, departure from MOST
- Turbulent export/venting



Ground based observation strategy

- Multiscale Logarithmic distribution
- Along valley fluxes variability
- Valley budgets estimation
- Average valley wind calculations

Surface parameters to be documented at ~100m scale:
Soil moisture, roughness length, hydrodynamic and thermal soil properties, vegetation properties, ...)



Ground remote sensing to be added
Chemistry sensors to be added