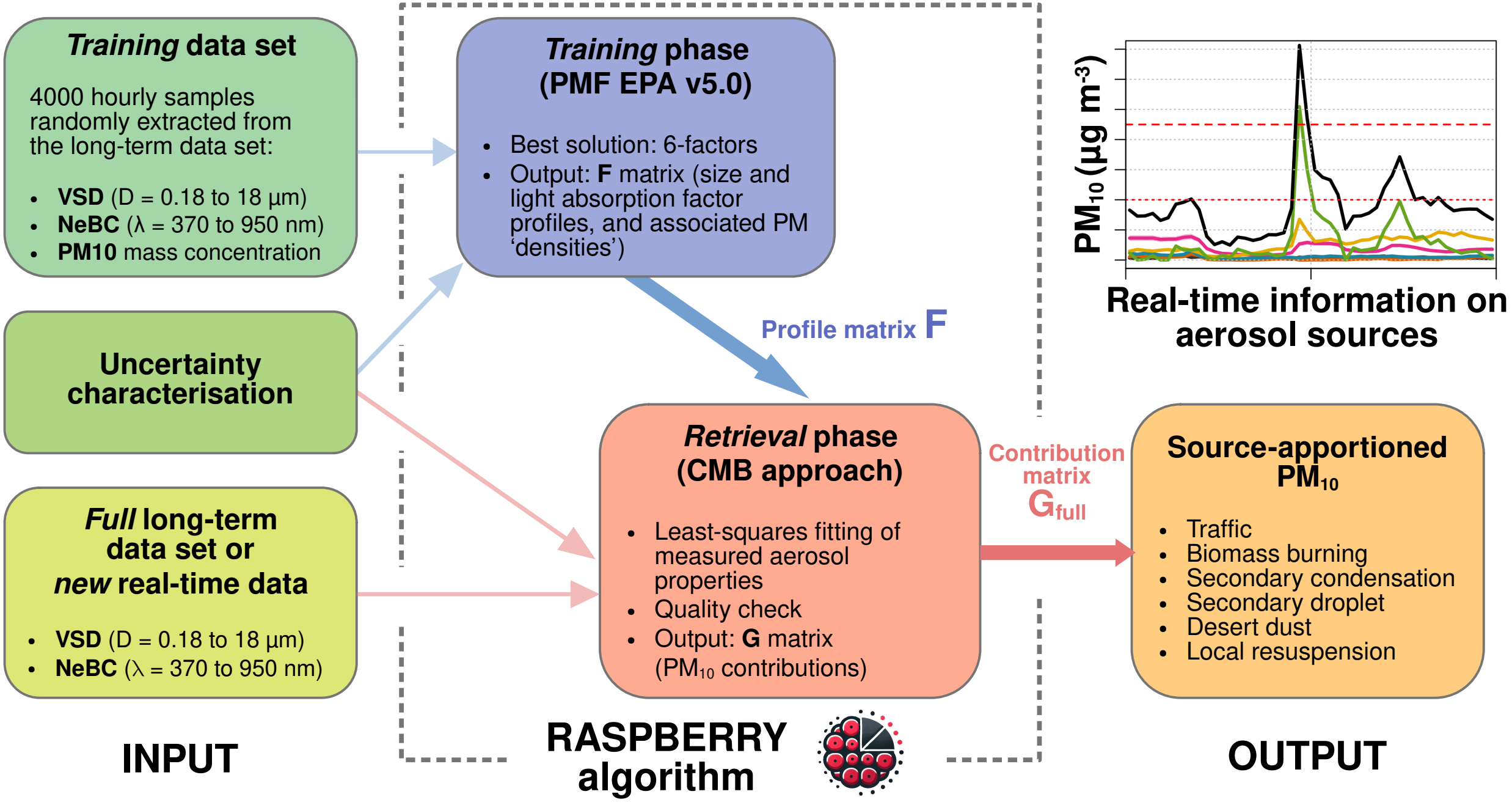
Training data set
4000 hourly samples randomly extracted from the long-term data set:
• **VSD** (D = 0.18 to 18 µm)
• **NeBC** (λ = 370 to 950 nm)
• **PM10** mass concentration
Uncertainty characterisation
Full long-term data set or *new* real-time data
• **VSD** (D = 0.18 to 18 µm)
• **NeBC** (λ = 370 to 950 nm)
INPUT
Training phase (PMF EPA v5.0)
• Best solution: 6-factors
• Output: **F** matrix (size and light absorption factor profiles, and associated PM 'densities')
Profile matrix F
Retrieval phase (CMB approach)
• Least-squares fitting of measured aerosol properties
• Quality check
• Output: **G** matrix (PM_{10} contributions)
RASPBERRY algorithm
Contribution matrix G_{full}
Source-apportioned PM_{10}
• Traffic
• Biomass burning
• Secondary condensation
• Secondary droplet
• Desert dust
• Local resuspension
OUTPUT
PM_{10} (µg m^{-3})
Real-time information on aerosol sources