# 2021年3月1日

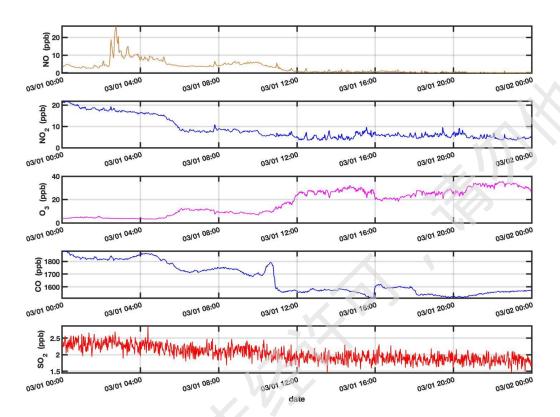
# NUIST 站点

# 大气-气溶胶-边界层-云综合观测实验日报

注:以下观测结果均为观测数据初步处理结果,仅做参考,不能代表最终观测结果。对观测感兴趣者,可联系:王玉莹

(yuyingwang@nuist.edu.cn)

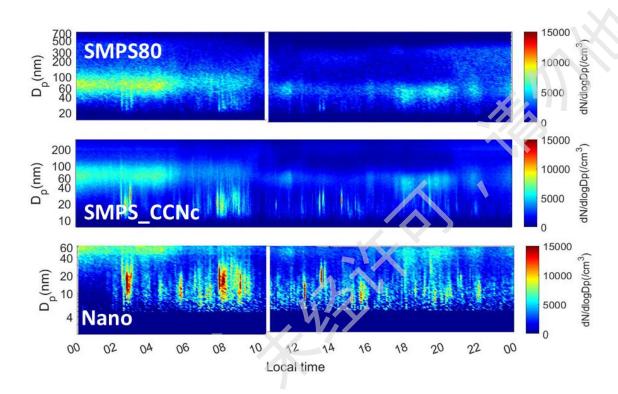
### 1. 污染气体测量结果



作图: 杨子谦

#### 2. 气溶胶数浓度粒子谱分布测量结果

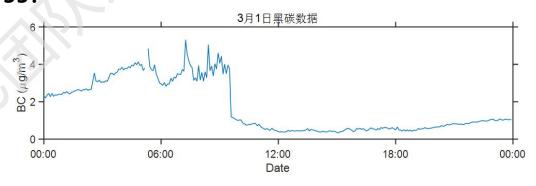
APS仪器故障



作图: 高颖

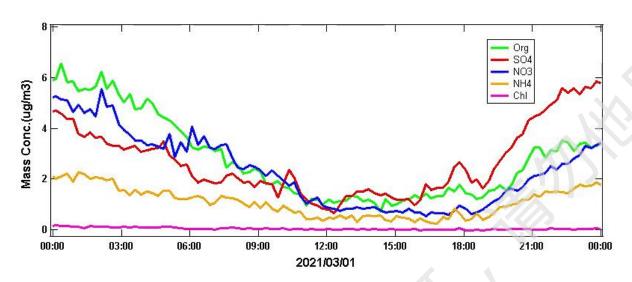
### 3. 气溶胶化学组分测量结果

#### **AE-33**:



作图: 许嘉璐

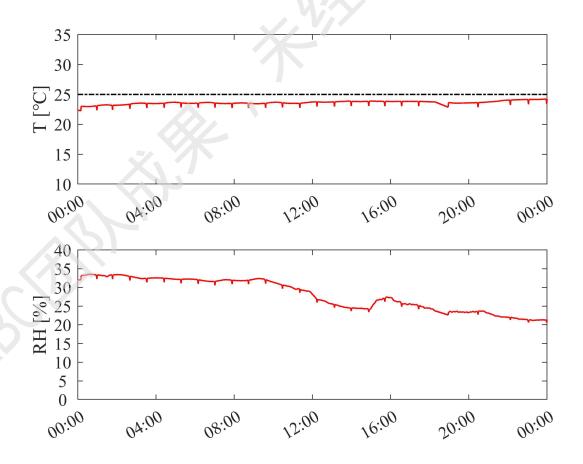
#### ACSM:



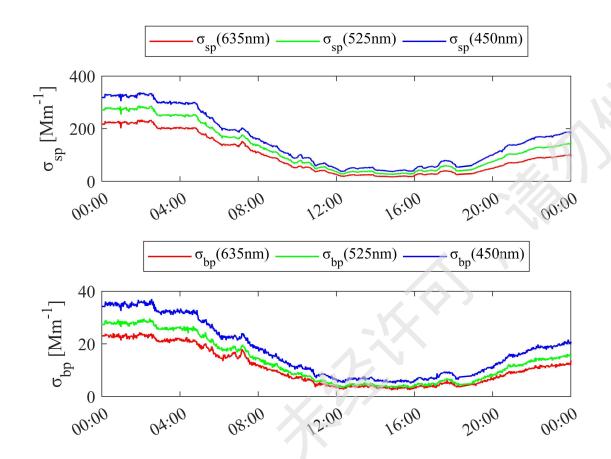
作图: 曾思琪

#### 4. 双浊度仪

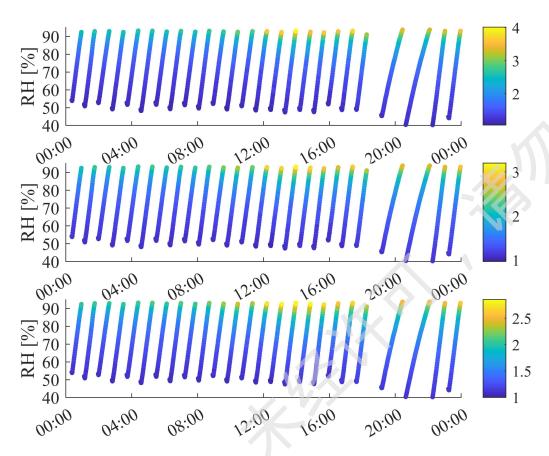
### 4.1 样气温湿控制



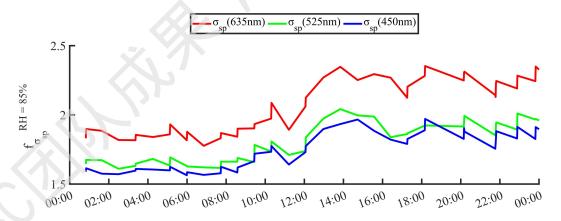
### 4.2 散射系数及后向散射系数



#### 4.3 气溶胶散射系数吸湿性增强因子



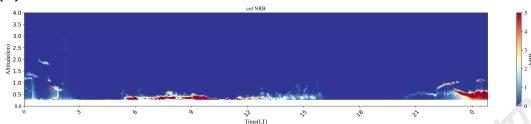
### 4.4 气溶胶散射系数吸湿性增强因子 (RH=85%)



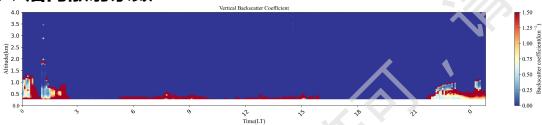
作图: 胡嵘

### 5. 微脉冲激光雷达 (MPL)

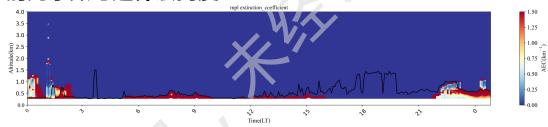
### (1) **NRB**



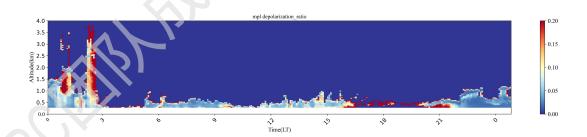
### (2) 后向散射系数



### (3) 消光系数与边界层高度



### (4) 退偏振比



作图: 张寒

#### 6. **3D** 雷达 · 🐼 🕒 💾 💪 🛗 消光系数 4.0e+0 3.3e+0 2.7e+0 高度(km) 2.0e+0 1.3e+0 0.0e+0 03:00 2021/03/01 15:00 06:00 09:00 12:00 18:00 21:00 km<sup>-1</sup> 时间 湿偏比 1.0e+0 8.3e-1 6.7e-1 高康(km) 5.0e-1 -3.3e-1 1.7e-1 -0.0e+0 03:00 2021/03/01 06:00 09:00 12:00 15:00 18:00 21:00 a.u. 时间 **PBL** 污染边界层 4.0e+4 A通道距离平方 ▼ 3.3e+4 2.7e+4 高厥(km) -2.0e+4 1.3e+4 6.7e+3 0.0e+0 03:00 06:00 09:00 12:00 15:00 18:00 21:00 2021/03/01 photon·s-1·km<sup>2</sup> 时间 1.0e+2 8.3e+1 -6.7e+1 -5.0e+1 -3.3e+1 1.7e+1

作图: 张寒

-0.0e+0

ug/m³

15:00

18:00

21:00

12:00

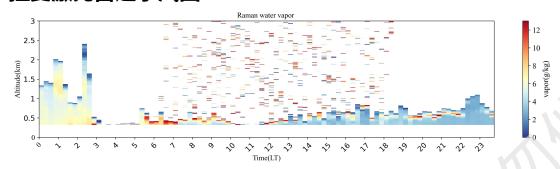
时间

03:00 2021/03/01

06:00

09:00

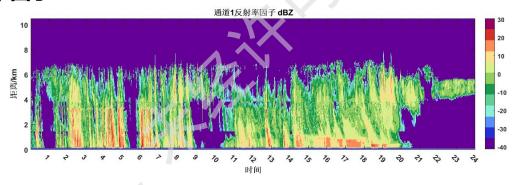
#### 7. 拉曼激光雷达水汽图



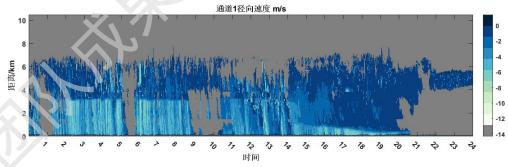
作图: 张寒

### 8. 云雷达:

### (1) 反射率因子



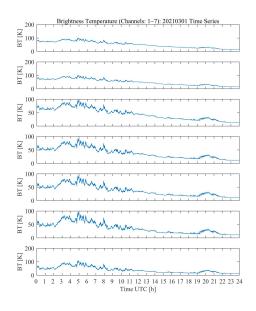
### (2) **径向速度**

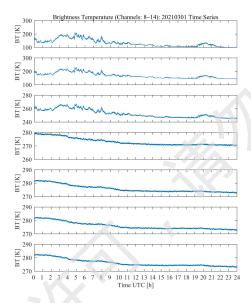


作图: 吴懿璇

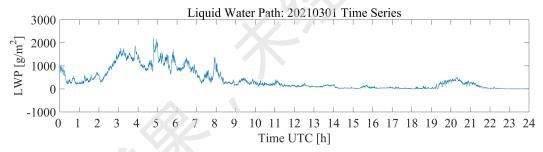
#### 9. 微波辐射计

## (1) 亮温 (14 通道) 时序:

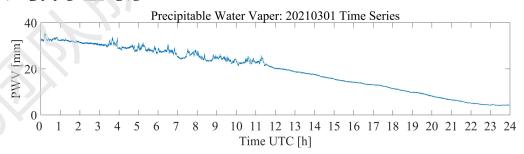




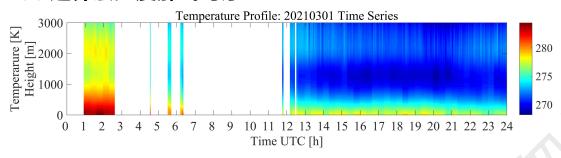
#### (2) 液水路径时序:



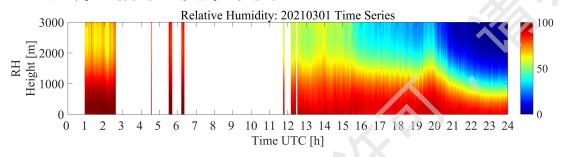
#### (3) 可降水量时序:



#### (4) 边界层温度廓线时序:



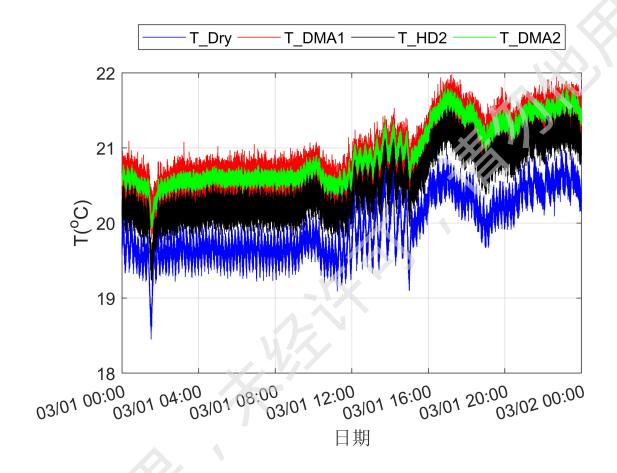
#### (5) 边界层相对湿度廓线时序:



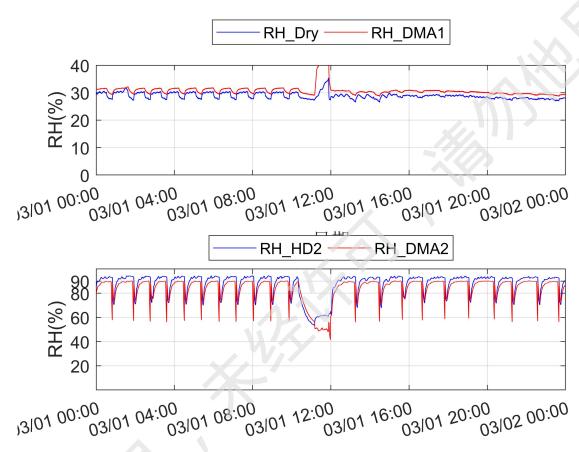
作图: 赏益

#### 10. 气溶胶加湿迁移差分分析仪

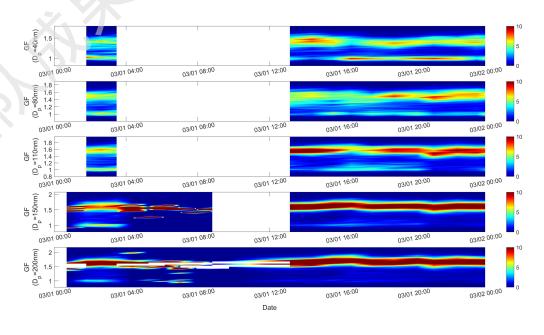
### (1) 仪器温度控制



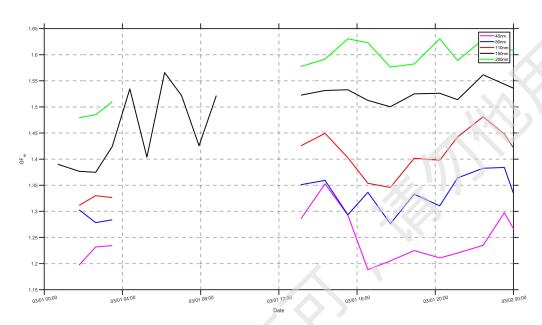
#### (2) 仪器湿度控制



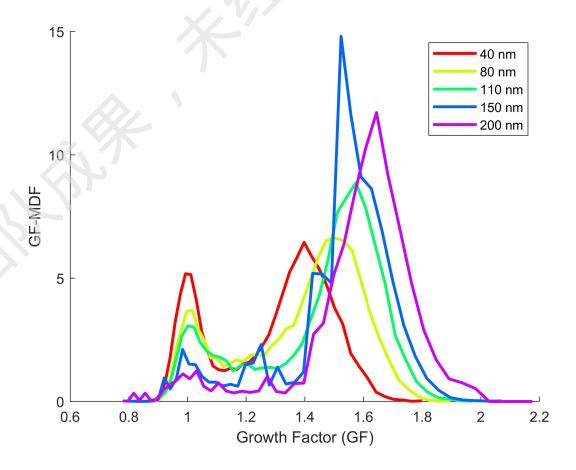
#### (3) 吸湿性生长因子测量谱分布



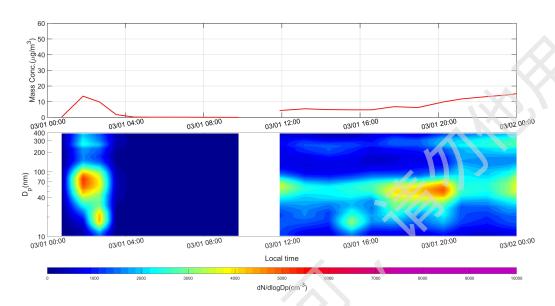
### (4) 谱平均吸湿性生长因子



### (5) 时间平均吸湿性生长因子



### (6) 气溶胶数浓度粒子谱分布



作图: 胡嵘