# HEC Status

Sven Menke (with slides from on Peter Schacht)

- HV Status Endcap C
  - multiple new shorts found during HV test in July in the pit
  - almost all shorts in upper phi sectors -> dirt?
  - not clear if single sub-gap or multi sub-gap shorts
  - most sectors can run on 2 good HV lines
  - a few have to be operated with bad HV

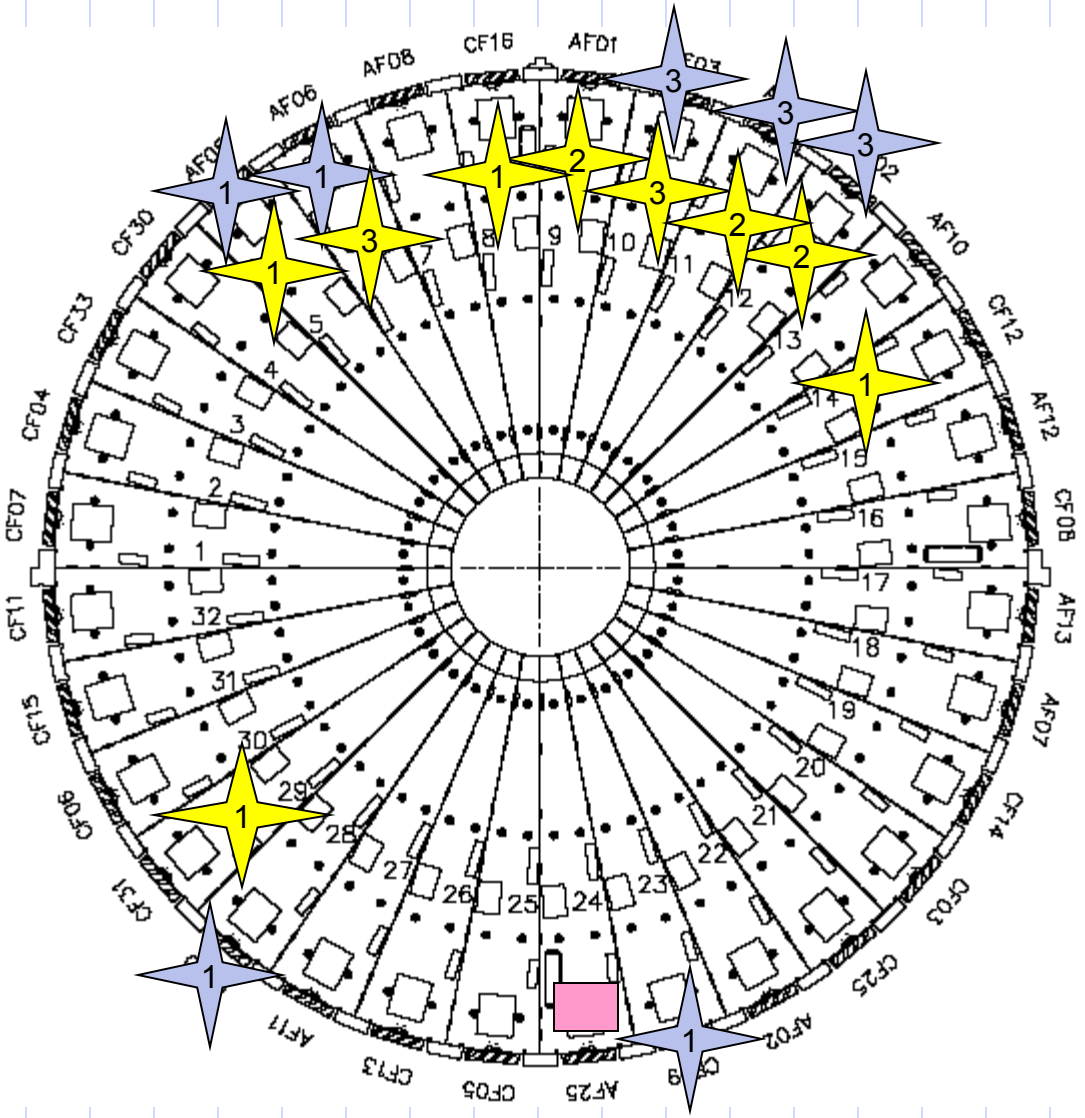
# HEC Endcap C ATLAS Pit: HEC1 HV Status

Number of problems section 1

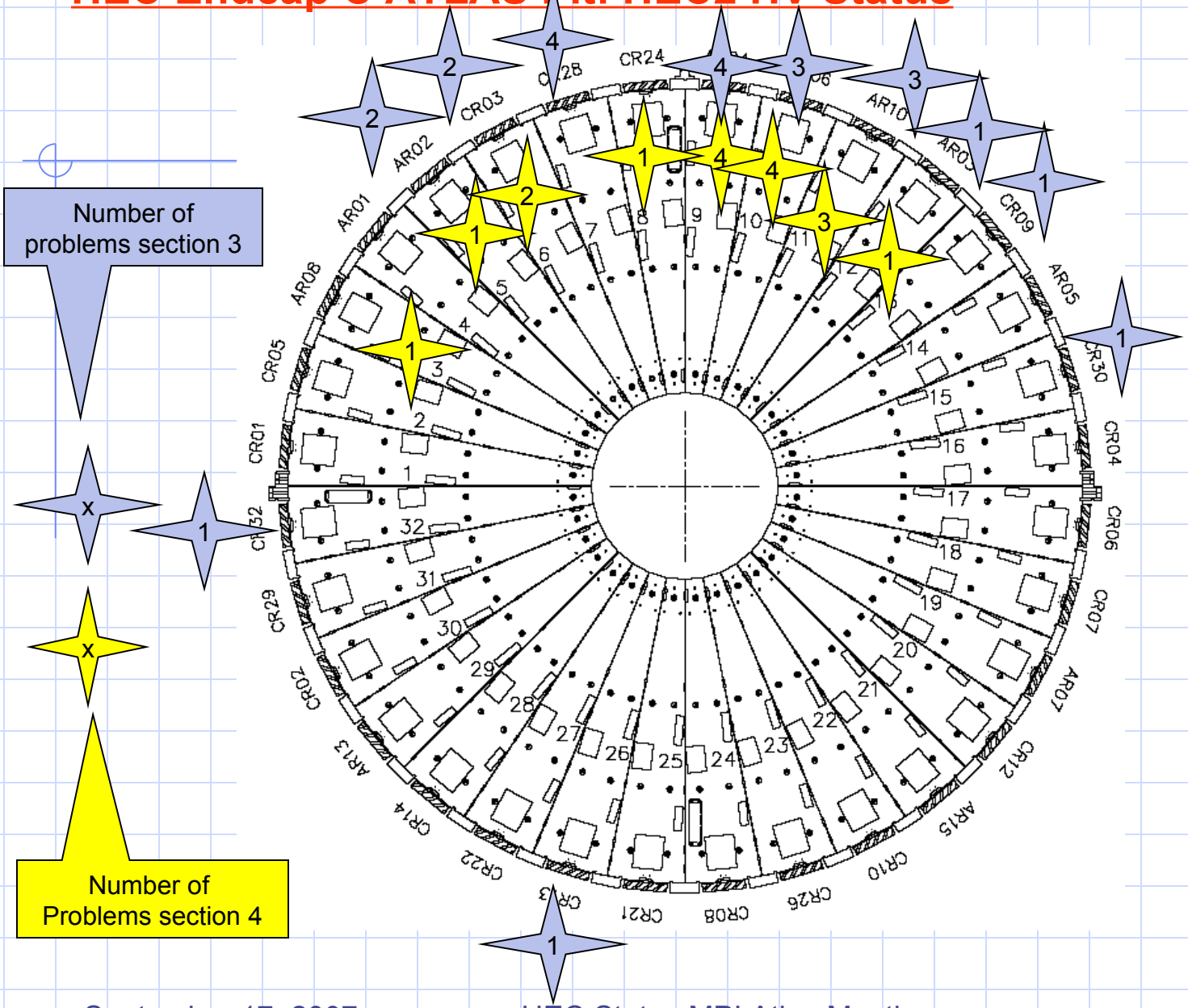
x

x

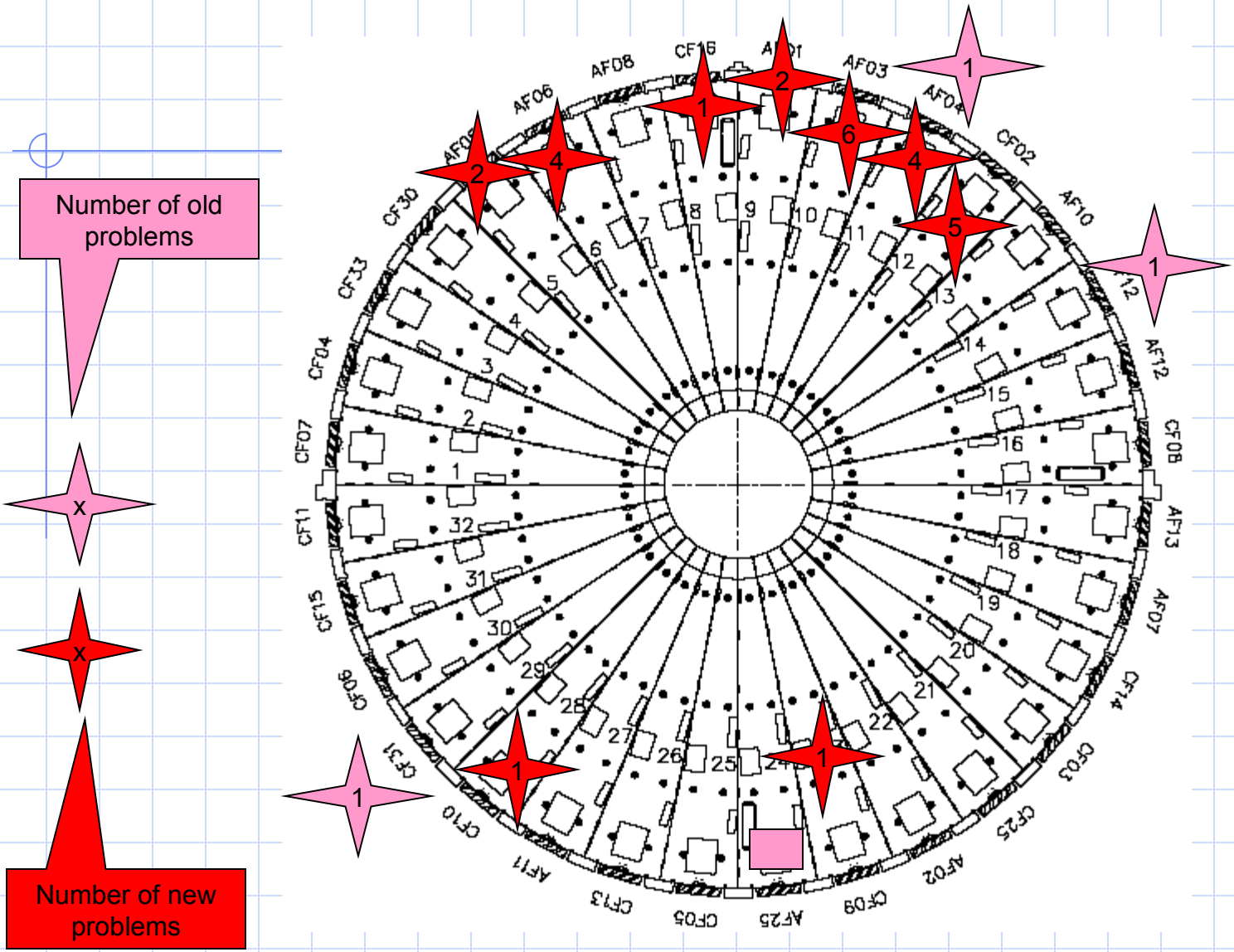
Number of Problems section 2



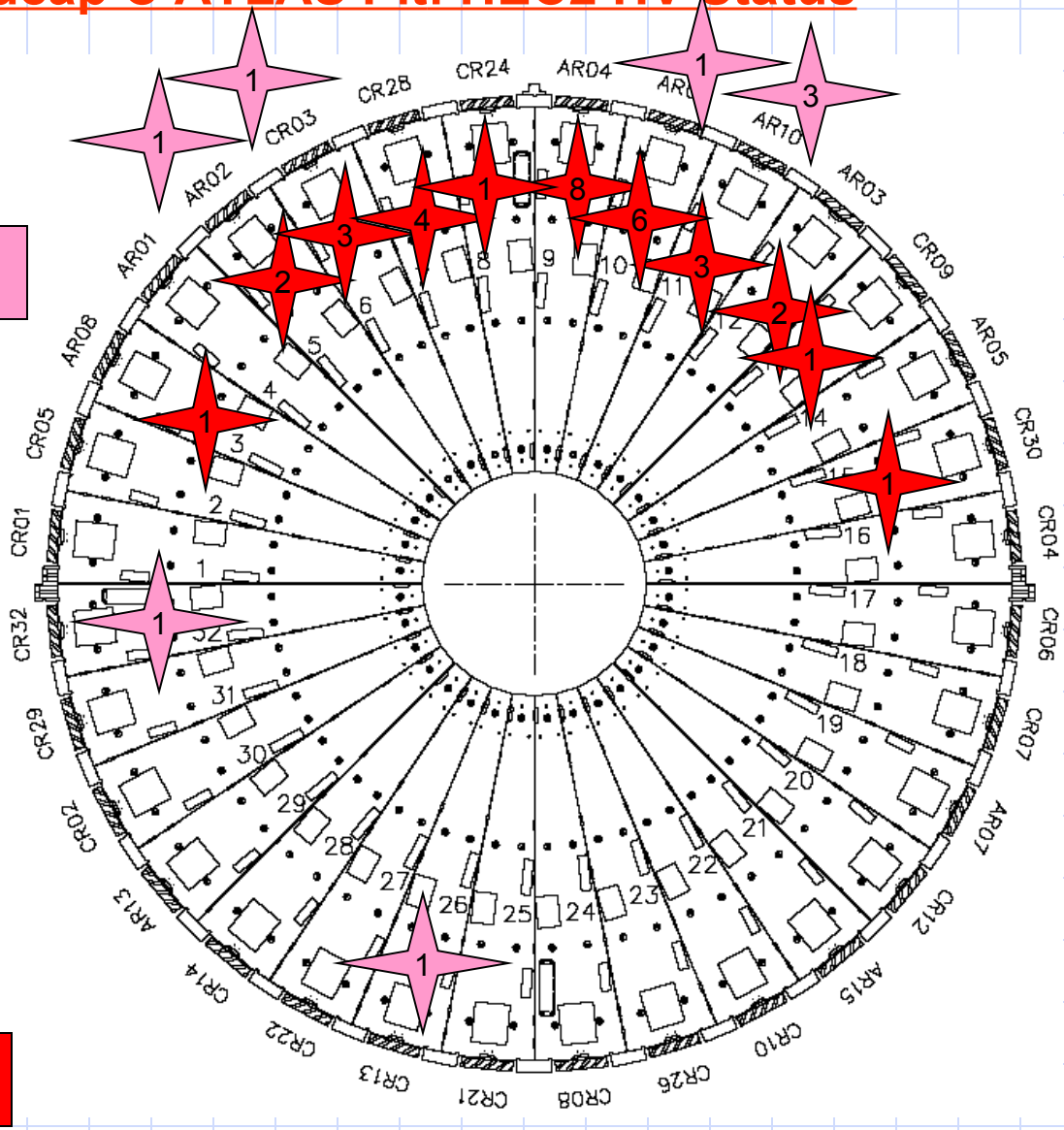
# HEC Endcap C ATLAS Pit: HEC2 HV Status



# HEC Endcap C ATLAS Pit: HEC1 HV Status



# HEC Endcap C ATLAS Pit: HEC2 HV Status



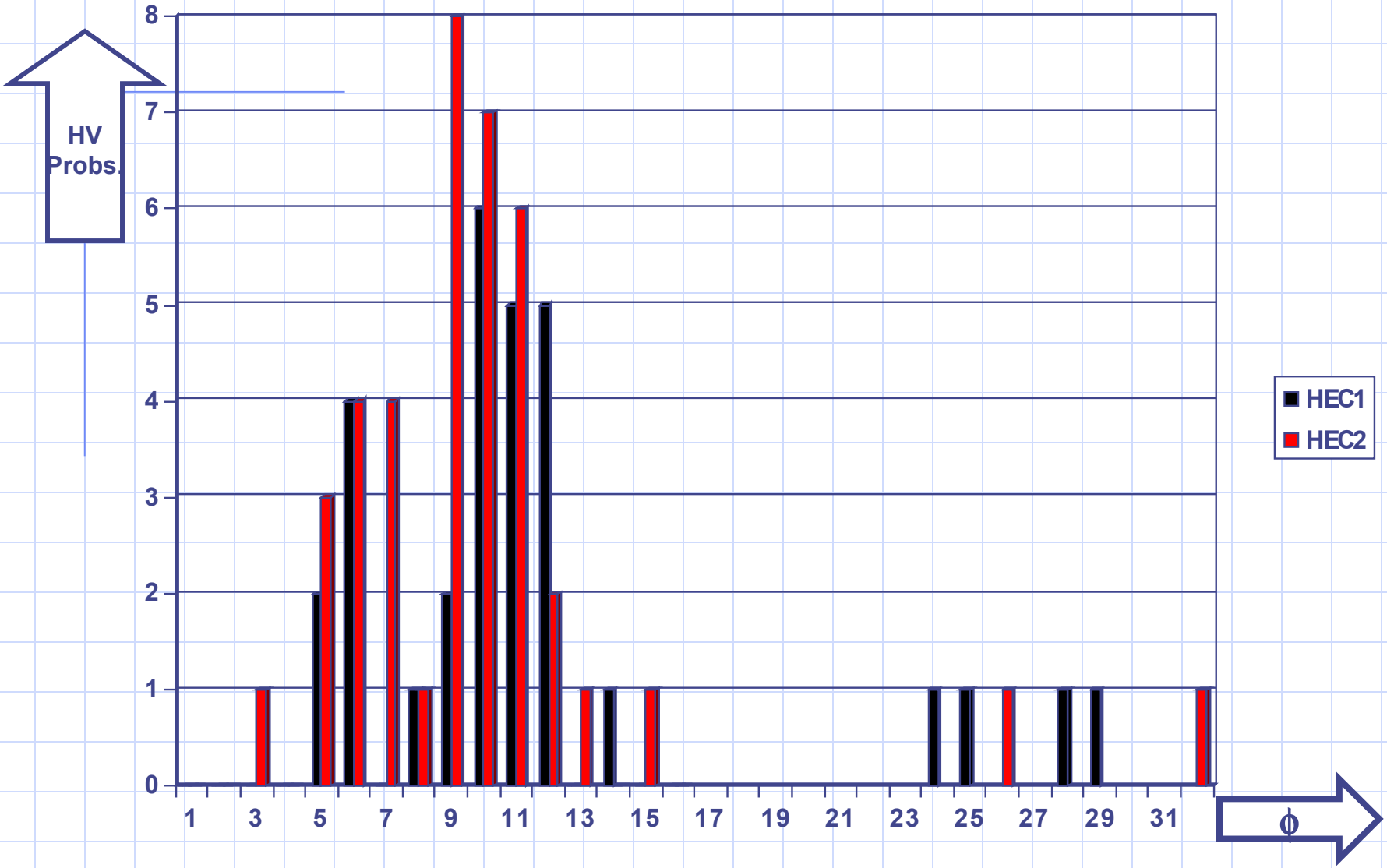

Number of old problems

x

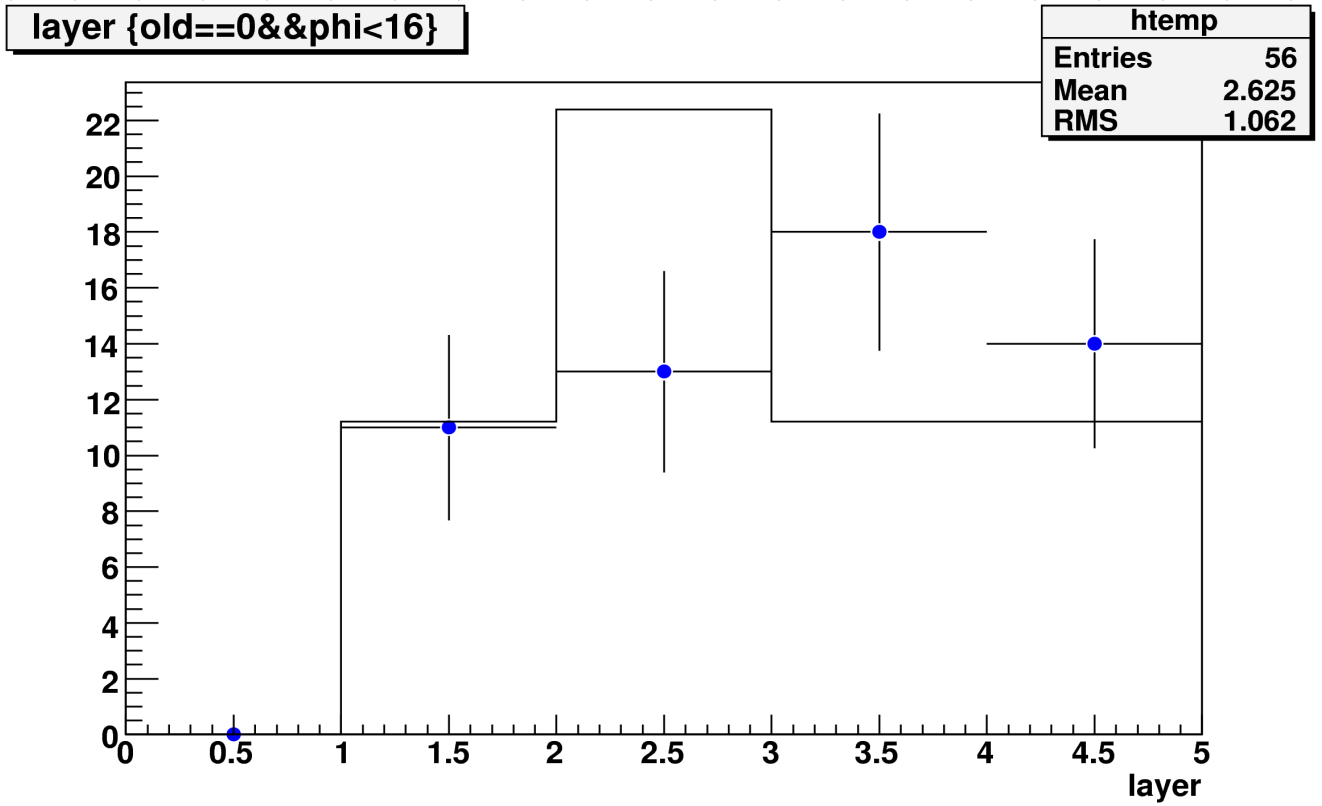
x

Number of new problems

# HEC Endcap C ATLAS Pit: HV Status



# shorts as function of layer




- points show number of shorts per layer
- open histogram is expected number for flat distribution of dirt

## HEC Endcap C ATLAS Pit:

- **We have 30 problems (4 old, where 1 is disconnected) in HEC1 and 40 problems (8 old) in HEC2; most are shorts with a resistivity of few MΩ typically;**
- **Cables and filterbox checked ⇒ OK;**
- **High resistance means that most likely electrodes are involved;**
- **Problems cluster at top, density per gap dropping from HEC2 to HEC1 somewhat;**
- **Need to run with (larger) currents;**
- **In critical region we can use ISEG modules up to 500 μA; assuming we are running up to 400 μA, we can ramp up 40 channles up to 1500 V (instead of 1800 V);**
- **Additional 18 channels have to be operated with hospital modules up to 1 mA;**

## HEC Endcap C ATLAS Pit:

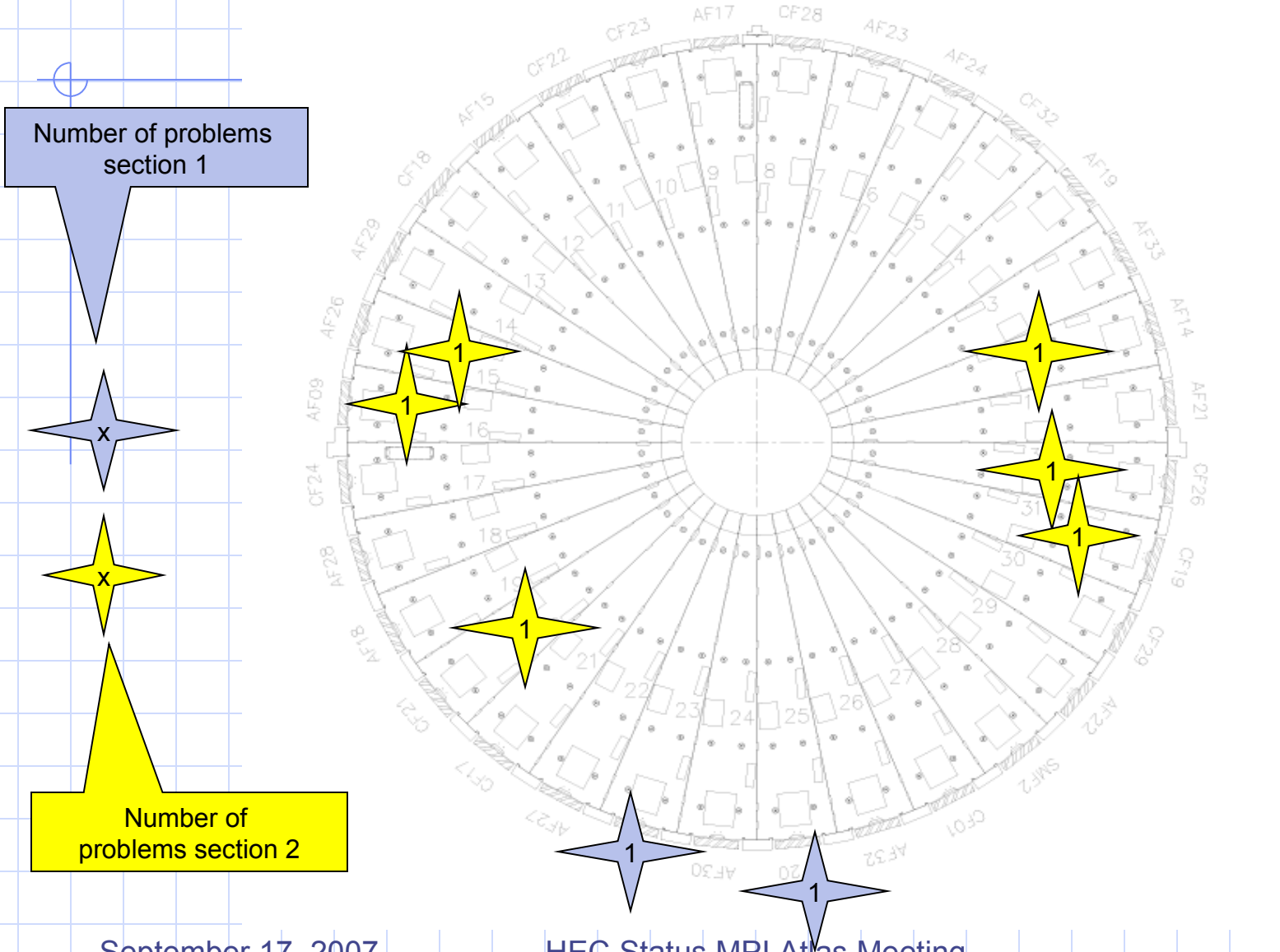
- **If we stick to the normal operation mode wherever possible, i.e. disconnect up to 2 HV lines per section and correct signal by factor 2, we need to operate following sections with currents:**

| front | φ | sections |
|---|---|---|
| | 6 | 2 |
| | 10 | 1,2 |
| | 11 | 1 |
| | 12 | 1 |
| rear | | |
| | 7 | 3 |
| | 9 | 3,4 |
| | 10 | 3,4 |
| | 11 | 3,4 |
| **Total** | | **12** |

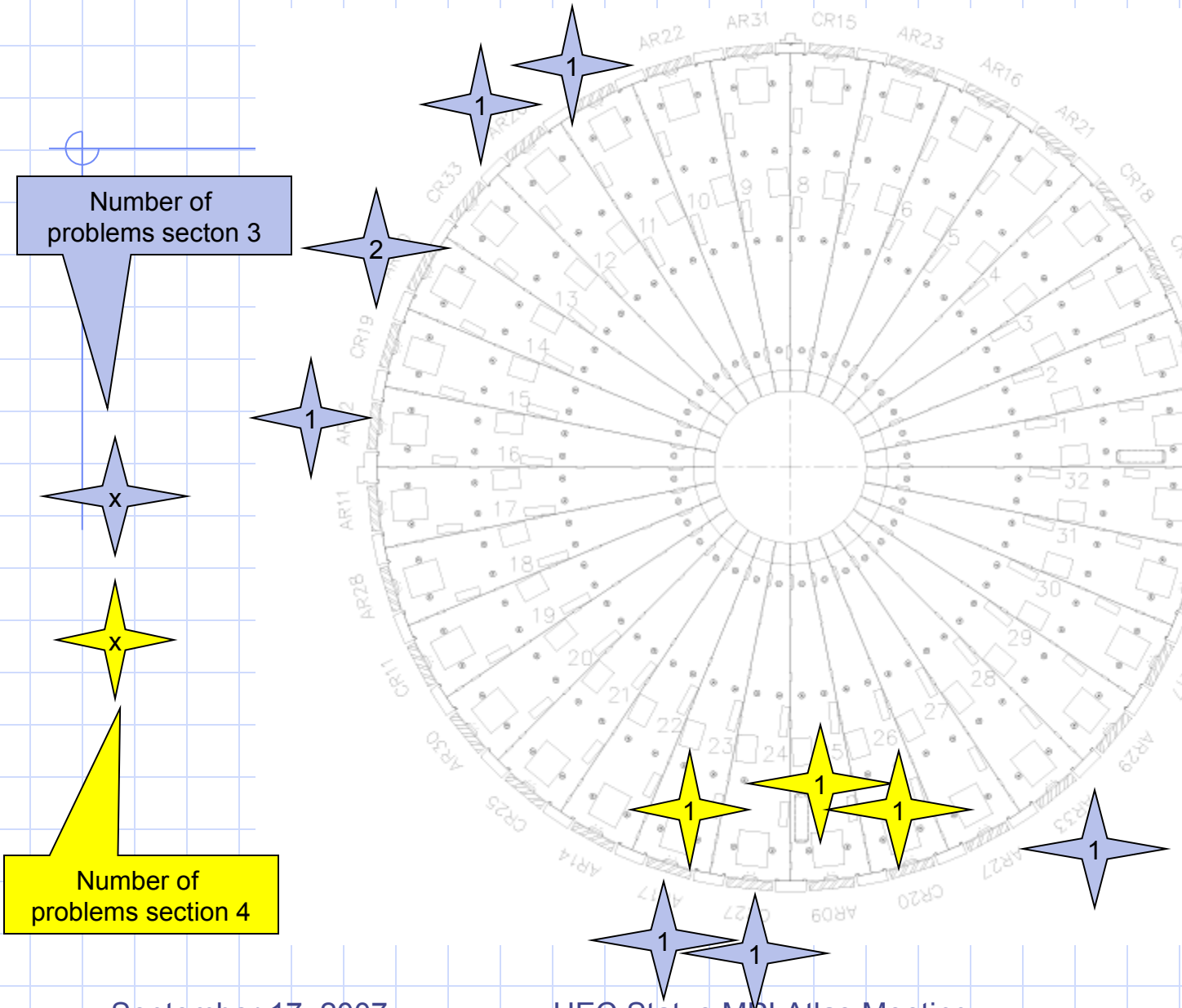
# Backup

- HV Status of Endcap A for comparison
  - much fewer shorts
  - only one section with 2 bad HV lines
  - most shorts not new in the pit

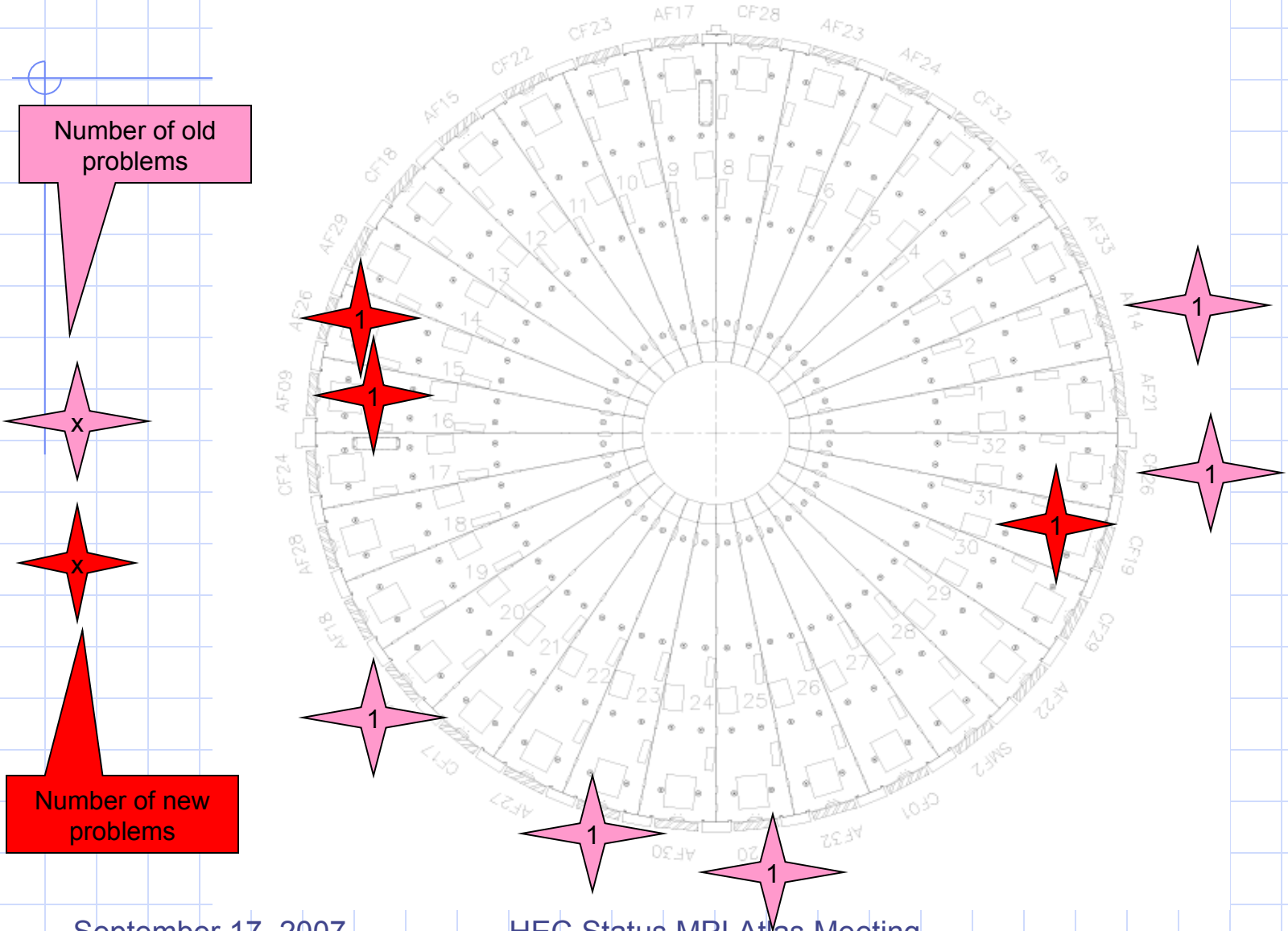
# HEC Endcap A ATLAS Pit: HEC1 HV Status



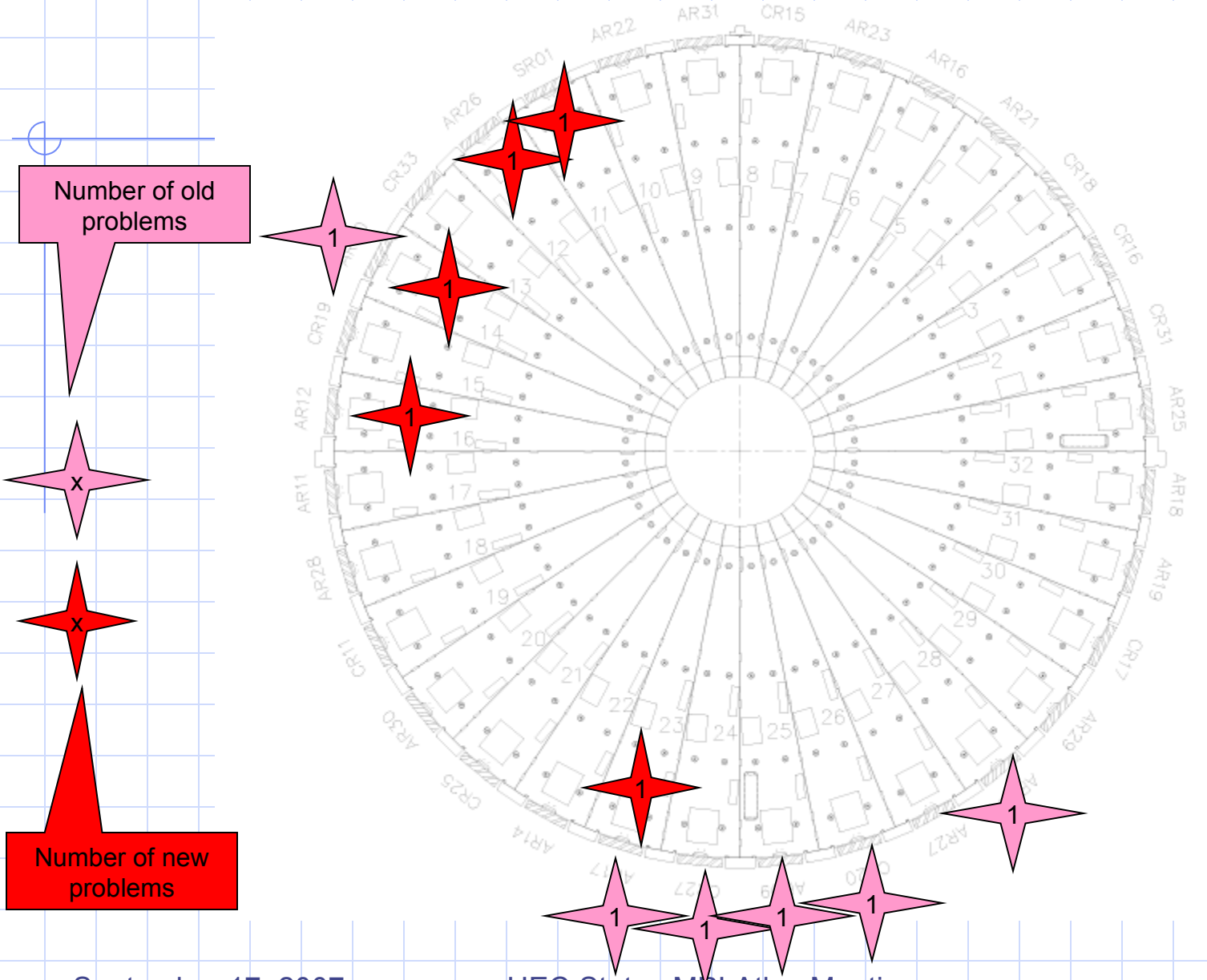
# HEC Endcap A ATLAS Pit: HEC2 HV Status



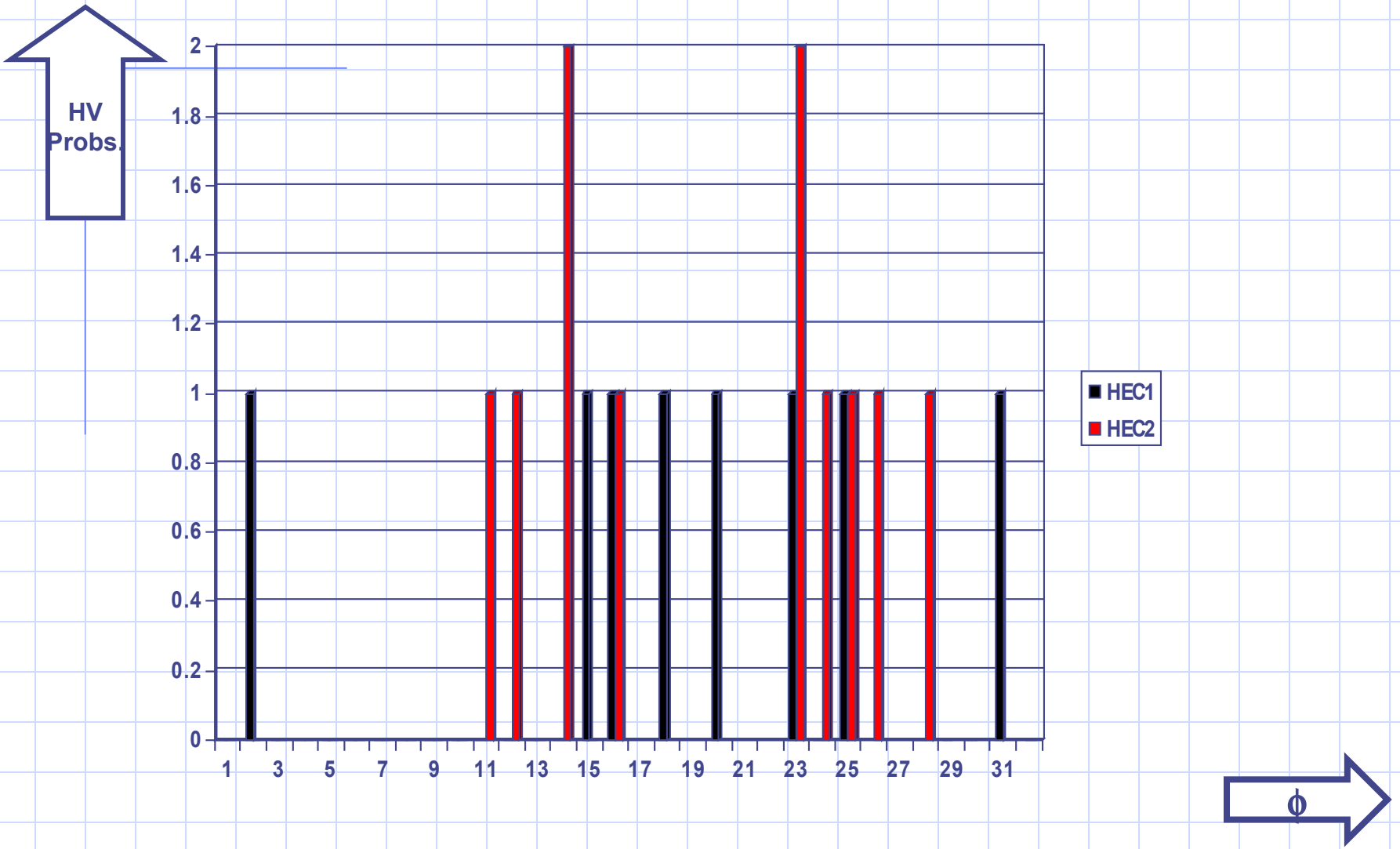
# HEC Endcap A ATLAS Pit: HEC1 HV Status



# HEC Endcap A ATLAS Pit: HEC2 HV Status



# HEC Endcap A ATLAS Pit: HV Status



## HEC Endcap A ATLAS Pit:

- We have 8 problems (6 old +2 larger currents) in HEC1 and 11 problems (6 old) in HEC2;
- Only 1 longitudinal section with 2 HV problem, all others at most 1 problem;