Remarkable consensus
- High resolution
- Multiple colors
- Wider than deeper

Why? People want to count things accurately
- Precision cosmology → ±10°
  *links epochs!!!*

clear priorities
- Galaxy evolution
  - AGNs
- Added value programs
  - Weak lensing
  - Supernovae
  - Stars/Galactic structure

A "new" element: other wavebands
  other instruments

Total SEDs
A SUMMARY OF PARAMETERS + CRITERIA

FILTERS
  PHOTO Z'S
  FIT WITH WF3
  WIDE SED
  WIDE Z-RANGE

EXPOSURE TIMES

TIMING SEQUENCE
  SUPERNOVAE, VARIABLES

AREA
  TOTAL: STATISTICS
  SUB AREAS: COSMIC VARIANCE
  OBSERVABILITY FROM GROUND
  BUT... NK LENSING CONTIGUOUS

AREA SHAPE
  WEAK LENSING (ROUND)
  GALAXIES/LSS (LONG & THIN)
  DITHERS/COSMIC RAY EXPOSURES/ROTATED PAS

CALIBRATIONS
  PSF/GLOBULAR CLUSTER
  PHOTOMETRY/ZEROPONTS
  ASTROMETRY/FIELD DISTORTION
  CTE

SAMPLE LSS < HARD!
COORDINATES
LOW CIRRUS
SOME EQUATORIAL FIELDS
$\delta > 20^\circ$ VLA
AVOID BRIGHT RADIO SRC
AVOID BRIGHT STARS $\leftrightarrow$ HAVE SOME, FOR AO $m < 15$
AVOID BRIGHT GALAXIES?
QSO IN FIELD

CHANDRA
XMM
8-10 m telescopes (N/NO)
VLA
SIRTF
ALMA

*
HST LEGACY FIELDS FOR COSMOLOGY

- A unique moment: HST, Chandra, XMM, SIRTF

- Pick best fields ... other data will come

Minimum program
- No. of fields: \( \text{10} \)
  - Cosmic variance
  - Ground observability
  - Early return

Field area: 100-200 \( \Omega \) not all same \( \uparrow \) chandra DD time?

- No. filters: 4 (griz)

- No. orb/filter: 1-2

- No. orb/pointing: 6

- Total orbits: \( \text{10 areas} \times \frac{15 \text{ point}}{\text{area}} \times \frac{6 \text{ orb}}{\text{point}} = 900 \text{ orbits} \)

  - Add: 1 HDF level/area
    A filters \( \times \) orb/filter = \( 10 \times 4 \times 8 = 320 \text{ orbits} \)

  - Add: WF3
    Total coverage is \( 1500 \text{ orbits} \) scale back a bit
IMPLEMENTATION

- Urgent: homogeneity is paramount
  "surveys" start this cycle

- Whole thing too big for DD time
  - DD time kick off?
  - How to get community buy-in

- Other legacy datasets may be needed
  in other fields - cosmology seen as
  getting special treatment?

- KEY PROJECTS? ← revive an old idea?

DECIDE SOON!