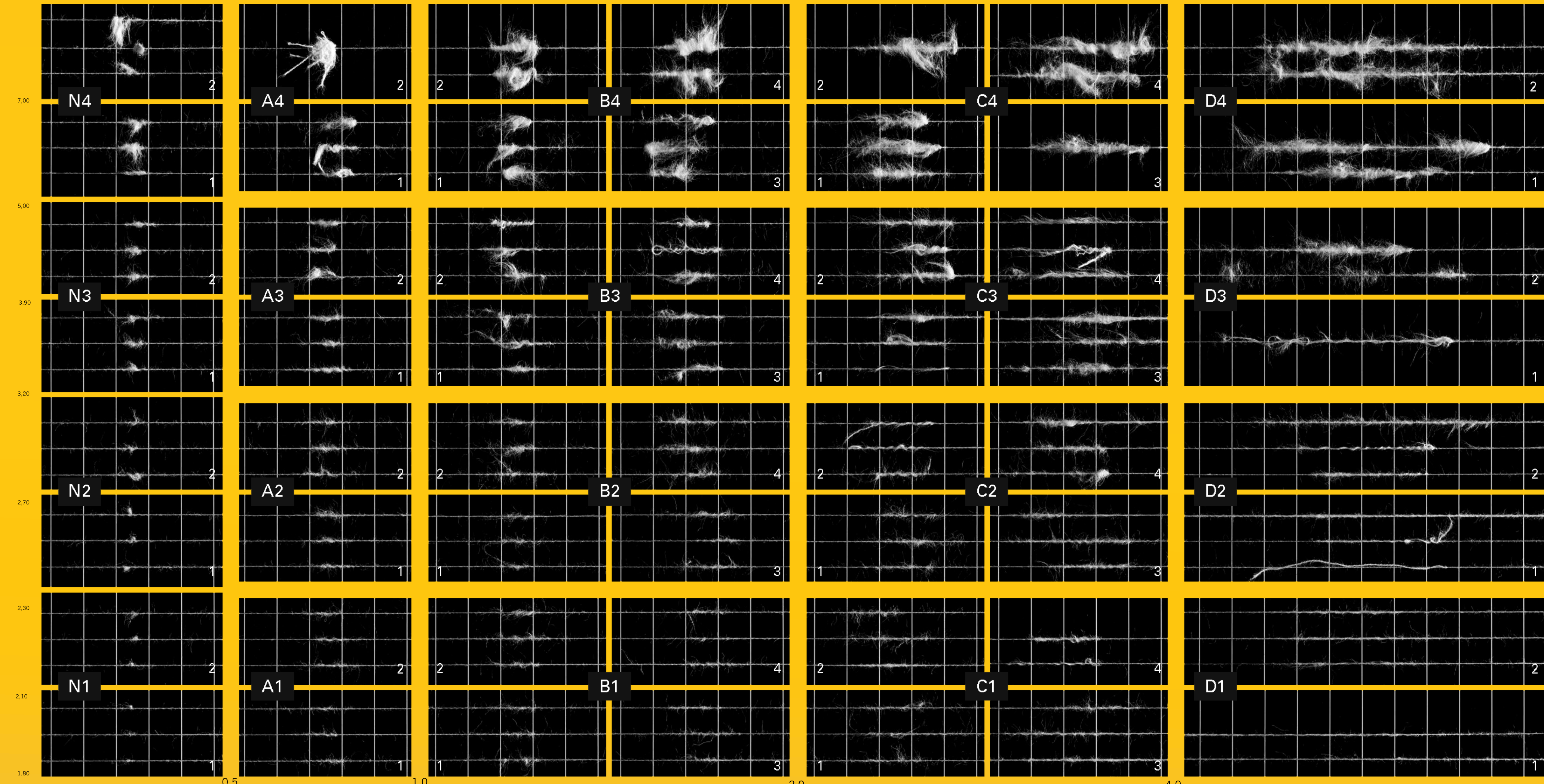


<p>N4</p> <ul style="list-style-type: none"> ++ Fiber fly in yarn ++ Poor relative humidity in spinning ++ More fiber rupture in carding ++ Small spun-in fly of yarn - Dirty drafting unit at spinning - Improper delivery speed in carding - Improper setting between card cylinder and flats - Top comb damage or higher short fiber content in combing - Improper fan speed in blow-room 	<p>A4</p> <ul style="list-style-type: none"> ++ Fiber fly in yarn ++ Poor relative humidity in spinning ++ More fiber rupture in carding ++ Improper flat rate removal % ++ Improper fan speed in blow-room + Dirty drafting unit at spinning - Improper delivery speed in carding - Improper setting between card cylinder and flats - Top comb damage or higher short fiber content in combing 	<p>B4</p> <ul style="list-style-type: none"> ++ Roller cot damages on ring spinning frame ++ Floating fibers in drafting unit of ring spinning frame ++ Higher delivery speed in drawing ++ Top roller pressure variation in ring spinning frame - Twist variation in ring spinning frame - High twist on thin yarn - Higher breaks in ring spinning frame 	<p>C4</p> <ul style="list-style-type: none"> ++ Improper selection of roving fineness ++ Drafting faults ++ Fluff accumulation in clearer roller in ring spinning frame ++ Improper roller setting in ring spinning frame ++ Top roller pressure variation in ring spinning frame - Roller piecing in spinning - Poor handling of material by operator - Missing of spacer in ring spinning and roving frame 	<p>D4</p> <ul style="list-style-type: none"> ++ Ring spinning drafting faults ++ Improper roller setting in draw frame ++ Improper roller setting in roving frame ++ Higher 1 mtr CV% in sliver and roving ++ Top roller pressure variation in ring spinning frame ++ Top roller pressure variation in roving frame - False roving draft - Improper spacer used in ring spinning frame - Poor parallelization in comber lap
<p>N3</p> <ul style="list-style-type: none"> ++ Fiber fly in yarn ++ Blowing pressure in overhead travelling cleaner ++ Fiber fly at traveler ++ Small spun-in fly of yarn ++ Micronaire variation between lots + Improper fiber transfer from cylinder to doffer - Improper synchronization in blow-room - High breakages in ring spinning frame - Too aggressive cleaning in blow room than carding, resulting in fiber rupture 	<p>A3</p> <ul style="list-style-type: none"> ++ Fiber fly in yarn ++ Fiber fly at traveler ++ Micronaire variation between lots + Improper fiber transfer from cylinder to doffer - Blowing pressure in overhead travelling cleaner - Too aggressive cleaning in blow-room than carding, resulting in fiber rupture - Improper synchronization in blow-room - Small spun-in fly of yarn - High breakages in ring spinning frame 	<p>B3</p> <ul style="list-style-type: none"> ++ Fiber fly at spinning triangle ++ Improper break draft in ring spinning frame ++ Unclean drafting unit at ring spinning frame ++ Worn-out top roller cots - Piecing fault - Unsuitable travellers - Improper blowing pressure in overhead travelling cleaner - High twist on thin yarn - Missing of aprons 	<p>C3</p> <ul style="list-style-type: none"> ++ Drafting faults ++ Improper piecing at detaching rollers of combing ++ Accumulation of fluff and fly on material passages ++ Damaged top roller cots in roving frame ++ Damaged top roller cots in draw frame ++ Damaged top roller cots in comber - Wrong number of ends feed in draw frame - Higher creel breaks in roving frame - Improper roving tension 	<p>D3</p> <ul style="list-style-type: none"> ++ Improper twist in roving ++ Draft selection from drawing to spinning ++ Drafting faults due improper setting in spinning & roving frame ++ Improper piecing at detaching rollers of combing - Wrong number of ends feed in draw frame - Higher unevenness % at comber - Improper spacer used in ring spinning frame
<p>N2</p> <ul style="list-style-type: none"> ++ Inferior carding ++ Low micronaire, immature fibers ++ Improper card wire grinding + Rough beating elements in blow-room + Blow-room stop-go-ratio + More tuft weight produced in blow-room - Insufficient noil reduction at combing - Improper RH% in blow-room line - Bad house keeping (dirty production floor) 	<p>A2</p> <ul style="list-style-type: none"> ++ Low micronaire, immature fibers ++ Inferior carding ++ Improper card wire grinding + Rough beating elements in blow-room + More tuft weight produced in blow-room + Blow-room stop-go-ratio - Insufficient noil reduction at combing - Improper RH% in blow-room line - Bad house keeping (dirty production floor) 	<p>B2</p> <ul style="list-style-type: none"> ++ Piecing faults ++ Damaged aprons ++ Unclean drafting unit at ring spinning frame ++ Fiber fly accumulation due to improper maintenance in spinning ++ Eccentricity of apron rollers ++ Improper piecing at detaching rollers of combing - High speed on ring spinning frame - Higher short fiber content in combing preparation - Low noil % reduction in combing - More tuft weight 	<p>C2</p> <ul style="list-style-type: none"> ++ Improper roller setting and break draft in ring spinning frame ++ Drafting faults in ring spinning frame ++ Spacers size selection in spinning - Piecing faults - Higher unevenness in roving - Improper cleaning of drafting unit of ring spinning frame - Improper combination of ring & traveller 	<p>D2</p> <ul style="list-style-type: none"> ++ Improper roving frame gauge setting ++ Ring spinning drafting faults ++ Draft selection from drawing to spinning ++ Fluff accumulation in clearer roller in ring spinning frame ++ Improper break draft in roving frame ++ Improper break draft in ring spinning frame ++ Selection of coils/inch in roving bobbin - Improper spacer setting in ring spinning frame - Sliver piecing fault - Overpiecing
<p>N1</p> <ul style="list-style-type: none"> ++ Low micronaire & immature fibers ++ Blunt beating points in cotton ++ Inferior degree of opening in blow-room and carding ++ Beater conditions at blow-room ++ Blunt wire points in carding + More soft waste in fiber mixing - More short fiber content in cotton - Ring damage on ring spinning frame - Insufficient noil reduction in combing - Higher trash content in cotton 	<p>A1</p> <ul style="list-style-type: none"> ++ Low micronaire & immature fibers ++ Inferior degree of opening in blow-room and carding ++ Blunt beating points in cotton ++ Beater conditions at blow-room ++ Blunt wire points in carding + More soft waste in fiber mixing - More short fiber content in cotton - Ring damage on ring spinning frame - Insufficient noil reduction in combing - Higher trash content in cotton 	<p>B1</p> <ul style="list-style-type: none"> ++ Higher licker-in speed ++ Improper carding segment (cylinder-flats) ++ Fiber damage in process due to improper setting between feed plate and licker-in + More variation in cotton properties - Higher short fiber content in combing - Unsuitable travellers - Low noil % reduction in combing - More waste in draft zone area of ring spinning frame - Beater conditions at blow-room 	<p>C1</p> <ul style="list-style-type: none"> ++ Improper fineness of roving ++ Drafting faults due to improper roller setting in spinning ++ Higher 1 meter CV% in roving ++ Improper front roller pressure at draw frame - Eccentric rollers at draw frame - Improper cleaning of drafting unit of ring spinning frame - Poor lap weight (g/m) - Improper piecing at detaching rollers of combing - Damaged cots 	<p>D1</p> <ul style="list-style-type: none"> ++ Drafting faults ++ Break draft and roller setting selection in ring spinning frame ++ Fluff accumulation in clearer roller in ring spinning frame ++ Improper spacer selection in roving frame ++ Improper twist selection in roving frame - Presence of waste in sliver path - Dirty drafting zone in roving frame - Improper piecing in sliver - Overpiecing

++ More probability for the origin of faults

+ Less than 50% probability for the origin of faults

- Insignificant occurrence



Loepfe

CLASSIFICATION OF YARN FAULTS AND THEIR SOURCE OF ORIGIN

F

- ++ Improper cylinder to doffer transfer at carding
- ++ Top arm load variation in draw frame
- ++ Off-centered spindle on ring spinning frame
- + Improper table draft in comber
- + Higher creel breaks in draw frame, lap former & roving frame
- More web breaks in comber
- Incorrect settings & more sliver breaks in roving frame
- Lower relative humidity in spinning department and return air
- Improper maintenance schedule of all machines
- Improper licker-in speed in carding

G

- ++ Roller eccentricity in draw frame, comber etc.
- ++ Poor roller setting and draft in draw frame, comber etc.
- ++ Sliver splitting in roving frame
- ++ Improper table draft in comber
- ++ Fineness (count) variation in draw frame
- Improper cleaning of all machines
- Bottom roller lapping in ring spinning frame
- Lower relative humidity in spinning department and return air
- Improper fineness (count) selection in carding
- Missing spacer or condenser in roving frame

H1

- ++ Sliver splitting in roving frame
- ++ Broken roving guide at ring frame
- ++ Variation in wraps on flyer pressure arm
- ++ Draw frame break draft and its setting
- ++ Higher creel tension draft on sliver of roving frame
- + Incorrect tension on winding machine
- Higher creel breaks in draw frame due to higher delivery speed
- Improper bobbin rotation or damaged bobbin holder on ring spinning frame
- Poor relative humidity and temperature in spinning
- Defective tension assembly

I1

- ++ Running over pin spacer
- ++ Poor roller setting and draft in draw frame, comber etc.
- ++ Eccentric top or bottom rollers
- ++ High false draft in whole process
- + Malfunctioning /incorrect settings/ defective ballon control
- High spindle speed on ring spinning frame
- Wrong spacer selection ring spinning frame
- Creel stop motion not working or late functioning
- Roving frame bobbin size
- Poor handling of material through operation
- Higher break draft in draw frame
- Incorrect tension on winding machine

H2

- ++ Improper false twister
- ++ False draft in sliver while unwinding
- ++ A % variation in draw frame
- ++ Web breakage in carding
- ++ False draft in spinning while unwinding
- Variation in mixing of cotton properties
- Wrong traveler selection and mix up of traveler
- Wobbling spindle
- Improper selection of carding hank & weight (g/m) in combing preparation

I2

- ++ Variation in top roller pressure
- ++ Incorrect bottom roller setting in all machines
- + Roving frame draft
- Improper drive to bottom rollers in draw frame
- Twist and all tension and break draft selection in each machine
- Improper yarn tension selection in winder
- Roving frame bobbin size
- Selection of roving tension in roving frame