71 MHz
VCO
80
÷ 2
40
PFD
f^{Y}_{beat}
+40
"0"
PLLY Board
Slow ADC
YARM Laser
+40
+80
24 MHz
EOM
DELAY
TMSY
f^{Y}_{trans}
f^{Y}_{refl}
PDHY Board
ADC
DAC
To PSL VCO
COMM Offset
Slow ADC
DIFF
ETMY
CARM Board
COMM
SUMMING NODE
1a 1b 2a 2b
Σa
Σb
ADC
4 km
71 MHz
ADC
71 MHz
VCO FDD
80
x2
160
f^{D}_{beat}
PLL
PFD
160
PLL
PFD
VCO FDD
80
71 MHz 71 MHz
f^{C}_{beat}
-80
SHG
$2f_r$
-80
+80
f_x
f_y
f_r
IMC Board
To PSL VCO
f^{MC}_{refl}
DELAY
24 MHz
IM1
IM4
MC3
MC1
PR3
PR2
PRM
IM2
IM4
FI
MC2
DAC
ITMY
y
BS
x
ITMX
4 km
Laser
f^{REC}_{refl}
21.5 MHz
EOM
9 MHz
24 MHz
DELAY
21.5 MHz
"0"
EOM
160
±21.5
160
AOM
80
80
From IMC
VCO
From COMM
71 MHz
FAOM
-160
x2
"0"
FBS
4 km
71 MHz
VCO
80
÷ 2
40
PLLX Board
PDHX Board
S F
1 2
2 1
F S
PFD
-40
Slow ADC
XARM Laser
f^{X}_{beat}
-40
"0"
TRX
ADC
f^{X}_{trans}
DIFF
DAC
f^{X}_{refl}
DELAY
-40
-80
24 MHz
EOM
TMSX
ETMX