the CFHT Director as soon as possible so that we can provide additional information on the camera's characteristics and operational procedures. Proposals to use the camera will be reviewed for scientific merit and technical feasibility according to our normal practice. CFHT and the DESPA team will make their best effort to support as many highly-ranked proposals as possible, but because of the special circumstances it may be necessary to limit the number and timing of runs. Observers are asked to be as flexible as possible in their requests.

R. McLaren

Table 1: CIRCUS Characteristics

Detector material	InSb	
Operating temperature	4 K (LHe)	
Format	32x32 array (5 dead pixels)	
Pixel size	0".5x0".5 at CFHT	
Geometrical Filling Factor	72%	
Effective Quantum Efficiency	20% @ 3.5μm	
	8% @ 2μm	
Overall system read-out noise	1800 e^- r.m.s.	
Charge storage capacity	$2x10^6$ e^-/pixel	
Maximum integration time	600 seconds	
Response uniformity	σ = 10%	
Filters	J	(1.25 μm)
	H	(1.65 μm)
	K	(2.2μm)
	L	(3.6 μm)
	M	(4.8 μm)
	CVF*	(R=60, 2.2-5.5 μm)

* *Circular variable filter*

Band	Limiting Magnitude	N	Tmax
J	22.6	60 (a)	60
H	21.1	60 (a)	60
K	20.6	60 (a)	60
L	17.3	18,000 (b)	0.2
M	15.7	36,000 (b)	0.1

Limiting magnitudes for 1 hour equivalent integration with S/N = 1. The noise (3300e^-) is the "spatial" noise, based on a sky-minus-sky image. N represents the number of co-added frames necessary to obtain an integration time of 1 hour. Integration time per frame (Tmax, in seconds) may be limited by either dark current (a) or background emission (b).

CFHT FILTER LIST

In an ongoing effort to keep an accurate record of all the CFHT interference filters we are publishing this list of available filters. They are grouped in different sets according to their use : Comet, Mould BVRI, DDO, Corion and General Purpose. The central wavelength, band width (full width at half maximum), maximum transmission and the dimensions are given for each filter with the F ratio (when available) at which the CW and BW are specified and the date of purchase. The central wavelength, band width and peak transmission are specified for an ambient temperature of 0°C.

A small shift in the central wavelength and in the band width can be expected when using a filter specified for a collimated beam, in an F/4 or F/8 beam. The relation between the shift and the angle is given by :

$$\lambda' = \lambda_0 \left[1 - \frac{\theta^2}{4\, n\star^2} \right]$$

where θ is the half cone angle of the in coming beam, and n* is the effective index of the filter. This term is dependant on the substrate, the dielectric materials and the number of layers used. For interference filters used in the visible the effective index varies between 1.8 and 2.35 with a value around 2.0 commonly obtained.

The band width is affected by the incident beam angle in the following manner:

$$(BW')^2 = BW^2 + \left[\frac{\lambda^2\ \lambda_0}{2\, n\star^2} \right]^2$$

where BW'and BW are the resulting and original band width respectively.

The peak transmission is also affected according to this relation:

$$T = \frac{T_0}{1 + \left[\frac{2\,(\lambda' - \lambda_0)}{BW} + \frac{\lambda_0 \theta^2}{BW\ n\star^2} \right]^2}$$

The position of the transmission peaks will also shift linearly toward longer wavelengths with an increase in temperature, the magnitude of the shift depends largely on the material. For materials commonly used in the visible region of the spectrum, the shift is of the order of 0.003% per °C.

At this time the filter wheel used for CCD imaging will only accept 50.8 mm square filters no thicker than 6.0 mm. All those filters that will not fit in FOCAM are in italics in the table.

A binder containing this list with the transmission curve of each filter will be kept in the Waimea library and at the summit at all times.

S. Béland

Table 2: CFHT Interference Filter List

Set	C.W. (Å)	B.W. (Å)	%T max	Size (mm)	@=round #=square	F ratio (comments)	Date
Comet	3650	80	23	50.8 #	x 5.0	(blue)	11/84
"	3871	50	38	"	x 5.0	(CN)	11/84
"	4060	70	44	"	x 5.0	(C3)	11/84
"	4260	70	55	"	x 5.0		11/84
"	4845	60	68	"	x 5.0	(mid)	11/84
"	5139	90	66	"	x 5.0	(C2)	11/84
"	6840	90	73	"	x 5.0	(red)	11/84
"	7025	230	81	"	x 5.0	(H2O)	11/84
Mould B#	4420	1129	74	50.8 #	x 2.90		10/81
" V #1	5485	908	72	" #	x 3.05		10/81
" R #1	6485	1267	81	" #	x 2.90		10/81
" I #1	8325	1975	77	" #	x		10/81
" V #2	5450	874	76	" #	x 2.90		10/81
" R #2	6460	1235	81	" #	x 2.95		10/81
" I #2	8310	1967	74	" #	x 3.20		10/81
DDO	*4166*	83	60	25.4 @	x		4/81
"	*4257*	73	70	"	x		4/81
"	*4517*	76	71	"	x		4/81
"	*4886*	186	71	"	x		4/81
UBVRI U	3540	770	72	50.8 #	x 6.0	UG2+$CuSO_4$	06/87
" B #1	4471	842	75	50.8 #	x 5.0	Parallel	12/87
" B #2	4471	828	75	50.8 #	x 5.0	"	12/87
" V	5430	901	80	"	x 5.25	"	12/87
" R	6475	900	80	"	x	"	*
" I	8333	873	85	"	x 4.7	"	12/87
Corion	4058	610	65	50.8 #	x 5.0	Parallel	1/83
"	4517	560	66	"	x 3.5	"	1/83
"	5082	660	68	"	x 3.85	"	1/83
"	5600	540	60	"	x 3.3	"	1/83
"	6056	652	67	"	x 4.25	"	1/83
"	6496	800	62	"	x 3.9	"	1/83
"	7085	720	61	"	x 4.5	"	1/83
"	7487	810	63	"	x 4.2	"	1/83
"	8060	700	60	"	x 3.85	"	1/83
"	8558	754	69	"	x 3.75	"	1/83
"	8914	412	61	"	x 3.75	"	1/83
"	9492	1000	66	"	x 3.85	"	1/83
"	10092	796	71	"	x 4.4	"	1/83

** This filter is on order*

Set	C.W. (Å)	B.W. (Å)	%T max	Size (mm)	@=round #=square	F ratio (comments)	Date
General	3723	96	45	50.8 #	x 6.0	Parallel	10/87
Purpose	4864	99	80	"	x 5.0	" Hβ	10/87
"	*5005*	10		"	x 7.0		
"	5007	96	73	"	x 5.0	Parallel	12/87
"	*5209*	40		"	x 7.0		
"	6175	90	80	"	x 5.25	Parallel	05/87
"	*6493*	40		"	x 7.0		
"	*6555*	50	83	"	x 7.0	F/8	11/84
"	6561	100	85	"	x 5.0	Parallel	12/87
"	6563	100	85	"	x 5.0	"	12/87
"	6580	112	57	"	x 4.6		10/84
"	*6590*	100		50.8 @	x 7.2		5/87
"	*6615*	50	83	50.8 #	x 7.2	F/8	11/84
"	*6620*	10	50	50.8 @	x 8.35		9/85
"	*6628*	10	54	"	x 8.4		9/85
"	*6653*	20	59	"	x 7.1		9/85
"	*6670*	20	68	"	x 7.2		9/85
"	*6686*	20	68	"	x 7.0		9/85
"	7750	180	89	50.8 #	x 4.7	F/8 (TiO)	8/85
"	8120	200		"	x 4.6	F/8 (CN)	8/85
"	*4861*	15	56	75.0 @	x 9.8	F/8	1/85
"	*5007*	15	66	"	x 9.85	"	1/85
"	*6563*	10	67	"	x 9.4	"	1/85
"	*6570*	10	65	"	x 9.4	"	1/85
"	*6577*	10	67	"	x 9.4	"	1/85
"	*6584*	10	63	"	x 9.4	"	1/85
"	*6591*	10	66	"	x 9.65	"	1/85
"	*6598*	10	66	"	x 9.6	"	1/85
"	*6605*	10	57	"	x 9.6	"	1/85
"	*6615*	20	77	"	x 9.5	"	1/85
"	*3729*	35	32	120.0 @		F/4	12/80
"	*4519*	75	57	"		"	6/80
"	*5012*	35	80	"		"	10/80
"	*5090*	40	82	"		"	8/82
"	*5130*	40	79	"		"	8/82
"	*5170*	40	79	"		"	8/82
"	*5210*	40	81	"		"	8/82
"	6070	175	72	"		"	6/80
"	*6565*	50	77	"		"	6/80
"	*6572*	20	85	"		"	6/80
"	*6726*	40	95	"		"	6/80

CANADIAN AGENCY
Canadian Applications Committee CFHT
c/o Director Herzberg Institute of Astrophysics
National Research Council Canada
Ottawa, Ontario
CANADA K1A 0R6

DEADLINES (Postmark date)
For time in first semester — August 15
For time in second semester — February 15

FRENCH AGENCY
Institut National des Sciences de l'Univers
M. le Directeur
77, avenue Denfert-Rochereau
75014 Paris
FRANCE

DEADLINES (Date of receipt):
For time in first semester — September 1
For time in second semester — March 1

UNIVERSITY OF HAWAII
Director
Institute for Astronomy
2680 Woodlawn Drive
Honolulu, Hawaii 96822
U.S.A.

DEADLINES (Date of receipt):
For time in first semester — September 1
For time in second semester — March 1

Requests for observing time on the Canada–France–Hawaii Telescope are made to the member agencies. There are two competitions per year—one for the first semester (January–June) and the other for the second semester (July–December). The mailing addresses and deadlines for proposal submission are given below for each of the three agencies.

Les demandes de temps d'observation avec le Télescope Canada–France–Hawaii doivent être soumises aux agences associées. L'attribution de temps, sur une base compétitive, est effectuée deux fois par année: une fois pour le premier semestre (janvier à juin) et une fois pour le deuxième semestre (juillet à décembre). Les adresses postales et les délais de soumission sont indiqués ci-après pour chacune des trois agences.

AGENCE CANADIENNE
Comité canadien de demandes CFH
c/o M. le Directeur
Institut Herzberg d'astrophysique
Conseil national de recherches Canada
Ottawa, Ontario
CANADA K1A 0R6

DATES LIMITES (cachet de la poste):
Pour le premier semestre —15 août
Pour le deuxième semestre — 15 février

AGENCE FRANÇAISE
M. le Directeur
Institut National des Sciences de l'Univers
77, avenue Denfert-Rochereau
75014 Paris
FRANCE

DATES LIMITES (date de réception):
Pour le premier semestre —1er septembre
Pour le deuxième semestre — 1er mars

UNIVERSITE D'HAWAII
Director
Institute for Astronomy
2680 Woodlawn Drive
Honolulu, Hawaii 96822,
U.S.A.

DATES LIMITES (date de réception):
Pour le premier semestre — 1er septembre
Pour le deuxième semestre — 1er mars