

W.M. Keck Observatory

Observing Proposal Coversheet for Semester2006B

Allocating Institution: UC

No. of nights Requested: 4

No. of nights estimated to complete the program
in addition to those requested here: 4

Is this the first application for this program? N

Keck Proposal Numbers

LRIS 2006B_U108L

For UC proposals only

PI Position: Research

INVESTIGATOR INFORMATION

Principal Investigator: Dr. David J Schlegel

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OBSERVING TEAM AND LOCATION

Co-Investigator(s): Prof. Saul Perlmutter, Kyle Barbary, Kyle Dawson, Vitaliy Fadeyev, Prof. Gerson Goldhaber, Marek Kowalski, Natalia Kuznetsova, Chris Lidman, David Rubin, Tony Spadafora, Nao Suzuki
E-mail(s): saul@lbl.gov, kbarbary@berkeley.edu, kdawson@lbl.gov, VAFadeyev@lbl.gov, G_Goldhaber@lbl.gov, MPKowalski@lbl.gov, NVKuznetsova@lbl.gov, clidman@eso.org, rubind@berkeley.edu, ALSpadafora@lbl.gov, NSuzuki@lbl.gov

Observer(s) projected to acquire the data: David Schlegel, Kyle Barbary, Kyle Dawson, David Rubin

E-mail(s): DJSchlegel@lbl.gov, kbarbary@berkeley.edu, kdawson@lbl.gov, rubind@berkeley.edu

Observer location: Waimea-HQ

Location Justification: We plan to have two remote observers at LBNL working in tandem with two observers at Waimea-HQ.

PROGRAM

Title: Decelerating and Dustfree: Type Ia SNe in High Redshift Galaxy Clusters

Summary of program (less than 100 words, for general distribution):

We are in the midst of a 219 orbit HST program to study low-extinction Type Ia SNe in the decelerating regime of universal expansion and address the dominant systematic uncertainties, those due to dust extinction. By observing massive galaxy clusters at $z > 0.9$, we target high redshift SNe hosted by elliptical galaxies. These galaxies are expected to be free of dust and provide a well-understood host galaxy

environment. The data will make a significant improvement on cosmological constraints derived from SNe, and much larger improvement on systematic uncertainty. Spectroscopic observations using LRIS are essential in order to obtain redshift of the host galaxy and typing of SNe.

OBSERVING TIME PREFERENCE AND INSTRUMENT SELECTION

	Moon	G-DL	B	G-DE	D	G-DL	B	G-DE	D	G-DL
	DATES	1-3 Aug	4-13 Aug	14-18 Aug	19-29 Aug	30 Aug - 2 Sep	3-12 Sep	13-16 Sep	17-27 Sep	28 - 1 Oct
Instrument	LST @midnight	20:25	20:50	20:20	21:50	22:20	22:50	23:15	23:45	00:15
	Nights									
LRIS	4	X	X	X	P	X	X	X	P	X
	Moon	B	G-DE	D	G-DL	B	G-DE	D	G-DL	B
	DATES	2-11 Oct	12-15 Oct	16-26 Oct	27-30 Oct	31 - 9 Nov	10-14 Nov	15-24 Nov	25-28 Nov	29 Nov - 8 Dec
Instrument	LST @midnight	00:45	1:10	1:40	2:10	2:40	3:10	3:35	4:05	4:30
	Nights									
LRIS	4	X	X	P	X	X	X	P	X	X
	Moon	G-DE	D	G-DL	B	G-DE	D	G-DL	B	
	DATES	9-14 Dec	15-23 Dec	24-28 Dec	29 Dec - 7 Jan	8-12 Jan	13-22 Jan	23-26 Jan	27-31 Jan	
Instrument	LST @midnight	5:05	5:35	6:00	6:30	7:00	7:30	7:55	8:15	
	Nights									
LRIS	4	X	P	X	X	X	P	X	X	

Target Information

RA range: 0 hr - 24 hr

Dec range: -36 - +54

Additional Information on Observing Time Preferences and Instrument Needs

Specific Dates required:

Dates to avoid:

Details of Special Requests: The Keck SN candidate spectroscopy must be coordinated with the HST search cadence, so please contact us before scheduling. We are asking for 4 nights, two nights for the remainder of our currently active cycle 14 HST program and two nights for the beginning of our cycle 15 HST program, pending approval.

Instrument Specific Requests:

Slitmask Requests: