

Form 312 Schedule S (NGSO example) screenshots

S1. Satellite Information

Not Yet Approved by OMB  
Estimated Time Per Response: 0.5-80 hrs  
April 2024  
OMB Control Number 3060-0678

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Satellite  
DRAFT-SAT-MOD-20240320-00076

...

Schedule S Review

Form 312

Schedule S Instructions

Save Record

File Number

ⓘ

Call Sign

S1. Satellite Information

a. Space Station or Satellite Network Name

disk

b. Orbit Type

Geostationary (GSO)

c. Estimated Operational Lifetime of Space Station(s) From Date of Launch (yrs)

30

d. Will the space station(s) operate on a Common Carrier basis?

No

e. Application Description

Just another test

Schedule S Review

Form 312

Schedule S Instructions

Save Record

S2. Operating Frequency Bands (2)

S3. GSO Orbital Information (1)

S4. Earth-to-Space (Receive) Beams (1)

S5. Space-to-Earth (Transmit) Beams (1)

S6. Space-to-Space (Receive) Beams

S7. Space-to-Space (Transmit) Beams

S8. Attachments (5)

⋮

⚙

—

Actions on selected rows...

New

<input type="checkbox"/>	a. Type of Service ▲	b. If a. is Other, provide a service description	c. Satellite Frequency Band (MHz)	d. Satellite Frequency (Lower Band Edge) (MHz)	e. Satellite Frequency (Upper Band Edge) (MHz)
	FSS		11700 - 12500	11700	
	FSS		29500 - 30000	29500	

S2. Operating Frequency Bands

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Operating Frequency Band  
DRAFT-SAT-MOD-20240320-00076

...

Return to Main Menu

Schedule S Instructions

Save Record

Delete Record

Form 312 Number

DRAFT-SAT-MOD-20240320-00076

i

Call Sign

File Number

DRAFT-SAT-MOD-20240320-00076

i

S2. Operating Frequency Bands

a. Type of Service

FSS

Q

i

f. Direction of Transmission

Space-to-Earth (Transmit)

▼

b. If a. is Other, provide a service description

g. Non Conforming Indicator

☐

c. Satellite Frequency Band (MHz)

11200 - 11450

Q

i

If your Frequency Band is not listed, click the magnifying glass and select "Other" to manually enter the Frequency Band.

d. Satellite Frequency (Lower Band Edge) (MHz)

11200

e. Satellite Frequency (Upper Band Edge) (MHz)

11450

Return to Main Menu

Schedule S Instructions

Save Record

Delete Record

i

S3. NGSO Orbital Information

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NGSO Orbital Information

...

Return to Main Menu

Schedule S Instructions

Save Record

↑

↓

File Number

DRAFT-SAT-LOA-20240328-00090

i

Call Sign

S3. NGSO Orbital Information

a. Total Number of Simultaneously Operating Satellites in Constellation

64

\* b. Total Number of Satellites Deployed During the License Term

\* c. Orbit Epoch Date

\* d. Celestial Reference Body

-- None --

e. If d. is "Other", provide the name of celestial body being referenced

f. Total Number of Orbital Planes

8

Click the "Save Record" button to generate a table to enter the associated orbital plane information under the "g. Orbital Plane Information" tab.

Return to Main Menu

Schedule S Instructions

Save Record

≡

g. Orbital Plane Information

⚙

—

Actions on selected rows...

▼

New

<input type="checkbox"/>	(i) Orbital Plane No. ▲	(ii) Number of Satellites in Plane	(iii) Inclination Angle (°)	(iv) Inclination Angle Tolerance (+/- °)	(xi) Right Ascension of Ascending Node (°)	(xii) Rig
	11	15	1	1	1	
	11	5	98	0.5	19	
	11	5	98	0.5	19	
	11	5	98	0.5	19	

S3g. Orbital Plane Information

File Number

Call Sign

g. Orbital Plane Information

(i) Orbital Plane No.

\* (ii) Number of Satellites in Plane

\* (iii) Inclination Angle (°)

\* (iv) Inclination Angle Tolerance (+/- °)

\* (v) Orbital Period (seconds)

ⓘ \* (vi) Apogee (km)

\* (vii) Apogee Tolerance (+/- km)

ⓘ \* (viii) Perigee (km)

\* (ix) Perigee Tolerance (+/- km)

\* (x) Argument of Perigee (°)

\* (xi) Right Ascension of Ascending Node (°)

\* (xii) Right Ascension of Ascending Node Tolerance (+/- °)

\* (xiii) Active Service Arc Begin Angle with Respect to Ascending Node (°)

\* (xiv) Active Service Arc End Angle with Respect to Ascending Node (°)

\* (xv) Is additional info on the active service arc provided in the application?

-- None --

\* (xvi) Satellite Spacing

-- None --

(xvii) Phase Angle Spacing (°)

(xviii) First Satellite Initial Phase Angle (°)

\* (xix) Maximum Orbital Eccentricity

Click the "Save Record" button to generate a table to enter the associated initial phase angle information under the "h. Initial Phase Angle Information" tab.

S4. Earth-to-Space (Receive) Beams

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Earth to Space Receive  
New record

...

Schedule S Instruction

File Number

DRAFT-SAT-MOD-20240320-00076

i

Call Sign

S4. Earth-to-Space (Receive) Beams

\* a. Beam ID

R25

\* b. Beam Frequency (Lower Band Edge) (MHz)

29500

\* c. Beam Frequency (Upper Band Edge) (MHz)

30000

\* d. Polarization

LHCP

Q

i

\* e. Can the space station vary the channel bandwidth with on-board processing?

No

▼

f. Is this a command beam? (Check box if Yes)

☐

g. Is the beam shapeable? (Check box if Yes)

☐

h. Is the beam steerable? (Check box if Yes)

☐

i. Is the beam fed into transponders? (Check box if Yes)

☐

\* j. Maximum G/T (dB/K)

52

n. Beam Peak Flux Density at Command Threshold (dBW/m²)

o. Peak Isotropic Antenna Gain (dBi)

49

p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)

84

q. Antenna Pointing Error (°)

0.5

r. Antenna Rotational Error (°)

0.5

s. Will a GIMS container file containing all antenna contour data be provided?

No

▼

t. Under what rules will the associated antenna contours be submitted?

🔒

u. Provide a list of each orbital plane in which this antenna beam is used.

v. Are all space stations in the NGSO constellation identical?

-- None --



S4x. Receive Channels

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≡

Channel  
Channel ID 25

...

Return to Beam Information

Return to Main Menu

Schedule S Instructions

Save Record

Delete Record

↑

⊗ There are error/errors on the form or missing mandatory fields, go through the tabs to correct the data before finalizing the Schedule S.⌵

File NumberDRAFT-SAT-LOA-20240328-00090 ⓘ

Call Sign

x. Channels

Beam ID ⓘ

Beam Frequency Band (MHz)15 - 30

\* (i) Channel IDChannel ID 25

(ii) Channel Bandwidth (MHz)

\* (iii) Center Frequency (MHz)3

Based on the center frequency for this channel, the channel will not fit within the associated Beam Frequency Band.

(iv) Channel Frequency (Lower Band Edge) (MHz)

(v) Channel Frequency (Upper Band Edge) (MHz)

\* (vi) Channel TypeFeeder Link ▾

Return to Beam Information

Return to Main Menu

Schedule S Instructions

Save Record

Delete Record

S5. Space-to-Earth (Transmit) Beams

<

≡

Space to Earth Transmit  
b2

...

Return to Main Menu

Clone Beam

Schedule S Instructions

Clone Beam with Channels/PFDs

Create Channels in Bulk

Save Record

Delete Record

↑

File Number

DRAFT-SAT-MOD-20240320-00076

①

Call Sign

S5. Space-to-Earth (Transmit) Beams

\* a. Beam ID

b2

\* b. Beam Frequency (Lower Band Edge) (MHz)

19800

\* c. Beam Frequency (Upper Band Edge) (MHz)

19900

\* d. Polarization

RHCP

🔍

①

e. Can the space station vary the channel bandwidth with on-board processing?

No

▼

f. Is this a command beam? (Check box if Yes)

☐

g. Is the beam shapeable? (Check box if Yes)

☒

h. Is the beam steerable? (Check box if Yes)

☒

i. Is the beam fed into transponders? (Check box if Yes)

☒

① \* j. Maximum Transmit EIRP Density (dBW/Ref BW)

34

\* k. Maximum Transmit EIRP (dBW)

35

l. Minimum Cross-Polar Isolation within Service Area (dB)

40

m. Minimum Saturation Flux Density (dBW/m²)

n. Beam Peak Flux Density at Command Threshold (dBW/m²)

o. Peak Isotropic Antenna Gain (dBi)

56

p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)

47

q. Antenna Pointing Error (°)

0.5

r. Antenna Rotational Error (°)

0.5

s. Will a GIMS container file containing all antenna contour data be provided?

No

▼

t. Under what rules will the associated antenna contours be submitted?

🔒

u. Provide a list of each orbital plane in which this antenna beam is used.

v. Are all space stations in the NGSO constellation identical?

-- None --

w. What information will be provided with the predicted antenna gain contours?

-- None --

Please click the "Save Record" button to generate a table to enter the associated channel information under the "x. Transmit Channels" tab, the maximum power-flux density information under the "y. Max. Power-Flux Densities" tab, and to attach the required §25.114(c)(4)(vi) or §25.114(c)(4)(vii) documentation under the "z. Beam Attachments" tab.

Return to Main Menu

Clone Beam

Schedule S Instructions

Clone Beam with Channels/PFDs

Create Channels in Bulk

Save Record

Delete Record

x. Transmit Channels (1)

y. Max. Power-Flux Densities (1)

z. Beam Attachments (1)

Actions on selected rows... <div>New</div>					
<input type="checkbox"/>	(i) Channel ID ▲	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)
	ch2	50	19850	19825	19875



S5x. Transmit Channels

<

≡

Channel  
ch2

...

Return to Beam Information

Return to Main Menu

Schedule S Instructions

Save Record

Delete Record

↑

↓

File Number

DRAFT-SAT-MOD-20240320-00076

i

Call Sign

x. Channels

Beam ID

b2

i

Beam Frequency Band (MHz)

19800 - 19900

\* (i) Channel ID

ch2

\* (ii) Channel Bandwidth (MHz)

50

\* (iii) Center Frequency (MHz)

19850

(iv) Channel Frequency (Lower Band Edge) (MHz)

19825

(v) Channel Frequency (Upper Band Edge) (MHz)

19875

\* (vi) Channel Type

Service Link

▼

Return to Beam Information

Return to Main Menu

Schedule S Instructions

Save Record

Delete Record

S5y. Max. Power-Flux Densities

<

≡

Power Flux Density  
4 kHz

...

Return to Beam Information

Return to Main Menu

Schedule S Instructions

Save Record

Delete Record

↑

↓

File Number

DRAFT-SAT-MOD-20240320-00076

i

Call Sign

y. Max. Power-Flux Densities

Beam ID

b2

i

Beam Frequency Band (MHz)

19800 - 19900

(i) Beam Sub-Frequency (Lower Band Edge) (MHz)

19850

(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)

19870

- Enter the applicable maximum power flux density (PFD) values for the transmit beam. Enter all associated data in the displayed fields. Power Flux Density values must be between -1000.0 and -50.0 dBW/m²/BW.
- a.) Bandwidth: From the drop down list, select a reference bandwidth of 4 kHz, 1 MHz or 200 MHz appropriate to the transmission band, as specified in Section 25.208.
- b.) For all satellite services and frequency bands covered and not covered by the following two cases, provide the maximum PFD values at angles of arrival of 0-2°, 2-5°, 5-15°, 15-20°, 20-25° and 25-90° above the horizon in dBW/m²/BW.
- c.) For NGSO/FSS sharing with MVDDS in the 12200-12700 MHz frequency band, provide the maximum PFD values at angles of arrival of 0-2°, and 2-5° above the horizon in dBW/m²/BW.
- d.) For DBS or 17/24 GHz BSS, and/or service within any portion of the 17300-17800 MHz frequency band, provide the maximum PFD values in each of the Southeastern, Northeastern, Western and Other geographic regions in dBW/m²/BW, as defined in § 25.208(w).

Reference Bandwidth

(iii) Reference Bandwidth (BW)

4 kHz

▼

### Angles of Arrival PFD

(iv) 0-2° (dBW/m²/BW)		-100
(v) 2-5° (dBW/m²/BW)		-105
(vi) 5-15° (dBW/m²/BW)		-106
(vii) 15-20° (dBW/m²/BW)		-107
(viii) 20-25° (dBW/m²/BW)		-108
(ix) 25-90° (dBW/m²/BW)		-109

### Geographic Region PFD

(x) Southeastern Region (dBW/m²/BW)	
(xi) Northeastern Region (dBW/m²/BW)	
(xii) Western Region (dBW/m²/BW)	
(xiii) Other Region (dBW/m²/BW)	

### Energy Dispersal Bandwidth

(xiv) Energy Dispersal Bandwidth (kHz)		40
---	--	----

[Return to Beam Information](#)[Return to Main Menu](#)[Schedule S Instructions](#)[Save Record](#)[Delete Record](#)

S5z. Beam Attachments

<

≡

Attachments  
New record

...

Return to Beam Information

Schedule S Instructions

Save Record

File Number

Call Sign

Attachments

Beam ID

b2

Q

i

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

(i) Document Type

-- None --

(ii) If Document Type is "Other", provide short description

Direction of Transmission

-- None --

(iii) File Name

Click to add...

Return to Beam Information

Schedule S Instructions

Save Record

S6. Space-to-Space (receive) Beams

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Space to Space Receive Beam ID 28

...

Return to Main Menu

Clone Beam

Schedule S Instructions

Clone Beam with Channels/PFDs

Create Channels in Bulk

Save Record

Delete Record

File Number

DRAFT-SAT-LOA-20240328-00090

①

Call Sign

S6. Space-to-Space (Receive) Beams

\* a. Beam ID

Beam ID 28

\* b. Beam Frequency (Lower Band Edge) (MHz)

\* c. Beam Frequency (Upper Band Edge) (MHz)

\* d. Polarization

🔍

\* e. Can the space station vary the channel bandwidth with on-board processing?

-- None --

▼

f. Is this a command beam? (Check box if Yes)

☐

g. Is the beam shapeable? (Check box if Yes)

☐

h. Is the beam steerable? (Check box if Yes)

☐

i. Is the beam fed into transponders? (Check box if Yes)

☐

\* j. Maximum G/T (dB/K)

n. Beam Peak Flux Density at Command Threshold (dBW/m²)

o. Peak Isotropic Antenna Gain (dBi)

p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)

q. Antenna Pointing Error (°)

r. Antenna Rotational Error (°)

s. Will a GIMS container file containing all antenna contour data be provided?

-- None --

▼

t. Under what rules will the associated antenna contours be submitted?

🔒

u. Provide a list of each orbital plane in which this antenna beam is used.

v. Are all space stations in the NGSO constellation identical?

-- None --

▼

k. Minimum G/T (dB/K)

l. Maximum Saturation Flux Density (dBW/m²)

m. Minimum Saturation Flux Density (dBW/m²)

w. What information will be provided with the predicted antenna gain contours? 

-- None --

Please click the "Save Record" button to generate a table to enter the associated channel information under the "x. Receive Channels" tab, and to attach the required §25.114(c)(4)(vi) or §25.114(c)(4)(vii) documentation under the "z. Beam Attachments" tab.

- [Return to Main Menu](#)
- [Clone Beam](#)
- [Schedule S Instructions](#)
- [Clone Beam with Channels/PFDs](#)
- [Create Channels in Bulk](#)
- [Save Record](#)
- [Delete Record](#)

- x. Receive Channels
- z. Beam Attachments

<div><div></div><div></div><div></div><div></div><div></div></div>				
(i) Channel ID ▲	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)

S6x. Receive Channel

<

≡

Channel  
New record

...

Return to Beam Information

Schedule S Instructions

Save Record

File Number

Call Sign

x. Channels

Beam ID

Beam ID 28

i

Beam Frequency Band (MHz)

-

(i) Channel ID

(ii) Channel Bandwidth (MHz)

(iii) Center Frequency (MHz)

(iv) Channel Frequency (Lower Band Edge) (MHz)

(v) Channel Frequency (Upper Band Edge) (MHz)

(vi) Channel Type

-- None --

▼

(vii) Point of Communication

Return to Beam Information

Schedule S Instructions

Save Record

S6z. Attachments

<

≡

Attachments  
New record

...

Return to Beam Information

Schedule S Instructions

Save Record

File Number

Call Sign

Attachments

Beam ID

Beam ID 28

🔍

ℹ

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

(i) Document Type

-- None --

▼

(ii) If Document Type is "Other", provide short description

Direction of Transmission

-- None --

(iii) File Name

Click to add...

Return to Beam Information

Schedule S Instructions

Save Record



S7. Space-to-Space (Transmit) Beams

<

≡

Space to Space Transmit

...

Return to Main Menu

Clone Beam

Schedule S Instructions

Clone Beam with Channels/PFDs

Create Channels in Bulk

Save Record

Delete Record

File Number

DRAFT-SAT-LOA-20240328-00090

i

Call Sign

S7. Space-to-Space (Transmit) Beams

\* a. Beam ID

\* b. Beam Frequency (Lower Band Edge) (MHz)

\* c. Beam Frequency (Upper Band Edge) (MHz)

\* d. Polarization

Q

\* e. Can the space station vary the channel bandwidth with on-board processing?

-- None --

▼

f. Is this a command beam? (Check box if Yes)

☐

g. Is the beam shapeable? (Check box if Yes)

☐

h. Is the beam steerable? (Check box if Yes)

☐

i. Is the beam fed into transponders? (Check box if Yes)

☐

\* j. Maximum Transmit EIRP Density (dBW/Ref BW)

\* o. Peak Isotropic Antenna Gain (dBi)

\* p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi)

q. Antenna Pointing Error (°)

r. Antenna Rotational Error (°)

s. Will a GIMS container file containing all antenna contour data be provided?

-- None --

▼

t. Under what rules will the associated antenna contours be submitted?

🔒

u. Provide a list of each orbital plane in which this antenna beam is used.

v. Are all space stations in the NGSO constellation identical?

-- None --

▼

w. What information will be provided with the predicted antenna gain contours?

-- None --

m. Beam Peak Flux Density at Command Threshold (dBW/m<sup>2</sup>)

Please click the "Save Record" button to generate a table to enter the associated channel information under the "x. Transmit Channels" tab, the maximum power-flux density information under the "y. Max. Power-Flux Densities" tab, and to attach the required §25.114(c)(4)(vi) or §25.114(c)(4)(vii) documentation under the "z. Beam Attachments" tab.

[Return to Main Menu](#)

[Clone Beam](#)

[Schedule S Instructions](#)

[Clone Beam with Channels/PFDs](#)

[Create Channels in Bulk](#)

[Save Record](#)

[Delete Record](#)

x. Transmit Channels

y. Max. Power-Flux Densities

z. Beam Attachments



New

(i) Channel ID ▲

(ii) Channel Bandwidth (MHz)

(iii) Center Frequency (MHz)

(iv) Channel Frequency (Lower Band Edge) (MHz)

(v) Channel Frequency (Upper Band Edge) (MHz)

## S7x. Transmit Channels



Channel  
New record



[Return to Beam Information](#)

[Schedule S Instructions](#)

[Save Record](#)

File Number

Call Sign

## x. Channels

Beam ID



Beam Frequency Band (MHz)

(i) Channel ID

(ii) Channel Bandwidth (MHz)

(iii) Center Frequency (MHz)

(iv) Channel Frequency (Lower  
Band Edge) (MHz)

(v) Channel Frequency (Upper Band  
Edge) (MHz)

(vi) Channel Type

-- None --



(vii) Point of Communication

[Return to Beam Information](#)

[Schedule S Instructions](#)

[Save Record](#)

S7y. Max. Power-Flux Densities

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≡

Power Flux Density  
New record

...

Return to Beam Information

Schedule S Instructions

Save Record

File Number

Call Sign

y. Max. Power-Flux Densities

Beam ID

i

Beam Frequency Band (MHz)

-

(i) Beam Sub-Frequency (Lower Band Edge) (MHz)

(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)

Enter the applicable maximum power flux density (PFD) values for the transmit beam. Enter all associated data in the displayed fields. Power Flux Density values must be between -1000.0 and -50.0 dBW/m²/BW.

a.) Bandwidth: From the drop down list, select a reference bandwidth of 4 kHz, 1 MHz or 200 MHz appropriate to the transmission band, as specified in Section 25.208.

b.) For all satellite services and frequency bands covered and not covered by the following two cases, provide the maximum PFD values at angles of arrival of 0-2°, 2-5°, 5-15°, 15-20°, 20-25° and 25-90° above the horizon in dBW/m²/BW.

c.) For NGSO/FSS sharing with MVDDS in the 12200-12700 MHz frequency band, provide the maximum PFD values at angles of arrival of 0-2°, and 2-5° above the horizon in dBW/m²/BW.

d.) For DBS or 17/24 GHz BSS, and/or service within any portion of the 17300-17800 MHz frequency band, provide the maximum PFD values in each of the Southeastern, Northeastern, Western and Other geographic regions in dBW/m²/BW, as defined in § 25.208(w).

Reference Bandwidth

\* (iii) Reference Bandwidth (BW)

-- None --

▼

Angles of Arrival PFD

(iv) 0-2° (dBW/m²/BW)

(v) 2-5° (dBW/m²/BW)

(vi) 5-15° (dBW/m²/BW)

(vii) 15-20° (dBW/m²/BW)

(viii) 20-25° (dBW/m²/BW)

(ix) 25-90° (dBW/m²/BW)

Geographic Region PFD

(x) Southeastern Region (dBW/m²/BW)

(xi) Northeastern Region (dBW/m²/BW)

(xii) Western Region (dBW/m²/BW)

(xiii) Other Region (dBW/m²/BW)

Energy Dispersal Bandwidth

(xiv) Energy Dispersal Bandwidth (kHz)

S7z. Attachments

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Attachments  
New record

...

Return to Beam Information

Schedule S Instructions

Save Record

File Number

Call Sign

Attachments

Beam ID

🔍

ℹ️

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

(i) Document Type

-- None --

(ii) If Document Type is "Other", provide short description

Direction of Transmission

-- None --

(iii) File Name

[Click to add...](#)

Return to Beam Information

Schedule S Instructions

Save Record

## S8. Attachments

S7. Space-to-Space (Transmit) Beams (1)

S8. Attachments

New

(i) Document Type	(ii) If Document Type is "Other", provide short description	(iii) File Name	Beam ID	Direction of Transmission ▲
<div></div>				

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Attachments

New record

...

Schedule S Instructions

Save Record

File Number

DRAFT-SAT-LOA-20240328-00090

Call Sign

### Attachments

Beam ID

Use this field to link the attachment directly to a beam. (Optional for all other attachments.)

Direction of Transmission

-- None --

(i) Document Type

-- None --

(ii) If Document Type is "Other", provide short description

(iii) File Name

Click to add...

Schedule S Instructions

Save Record