

CASSINI PROJECT SCIENCE GROUP MEETING #72  
ESTEC, Netherlands  
June 6-9, 2017

**AGENDA**

**NASA VoTS Toll-Free Telecon Call-in Numbers:**

from Netherlands: 0800-020-0351

from U.S.: 877-951-7311

from Italy: 800-977-455

from France: 080-510-2765

from Germany: 0800-800-1421

from Sweden: 0200-899-946

from U.K.: 0808-238-9817

For other numbers, please ask Monica Martin at [Monica.J.Martin@jpl.nasa.gov](mailto:Monica.J.Martin@jpl.nasa.gov)

Then ENTER the meeting's **Telecon Participant Code** to join.

**Webcast: WebEx:** <https://jpl.webex.com>, then ENTER the meeting's **WebEx ID number**

(Do NOT use the WebEx audio connection. Use the VoTS telecon number as listed above.)

(WebEx support center <https://support.webex.com/MyAccountWeb/supporthome.do> or contact Jo Pitesky at [joeliza.pitesky@jpl.nasa.gov](mailto:joeliza.pitesky@jpl.nasa.gov) or Nora Alonge at [nora.j.kelly@jpl.nasa.gov](mailto:nora.j.kelly@jpl.nasa.gov) .

**MONDAY, June 5, 2017**

*No meetings – Holiday closure*

**TUESDAY, June 6, 2017**

RSS Team

9:00 a.m. – 3:00 p.m.

Room: Newton

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 980 918 079

Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 2772675 / Leader Code: 38347

09:00 – 09:05	Welcome and overview – Dick French
09:05 – 10:20	OTL and Engineering Team report – Aseel Anabtawi and her team
10:20 – 10:30	Break/Setup for Essam's presentation
10:30 – 11:00	Proximal Orbit/Periapse ring occultations – Essam Marouf
11:00 – 11:30	Interior models of Saturn - Naor Movshovitz
11:30 – 12:15	Proximal Orbits update – Gravity Science (Luciano/Paolo)
12:15 – 13:30	Lunch
13:30 – 13:45	Helium abundance – Mike Flasar
13:45 – 14:15	Science Archive by EOM - Dick French/Kathryn Weld/Linda Spilker
14:15 – 14:30	Executive Session (if needed)
	Adjourn

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RADAR Team  
9:00 a.m. – 5:00 p.m.  
Room: Ba030  
WebEx: <https://jpl.webex.com/> / WebEx ID Number: 908 745 635  
Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311  
Participant Code: 8089357 / Leader Code: 76335

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INMS Team  
12:00 p.m. – 5:00 p.m.  
Room: Db124

Meeting link:  
<https://swri15.webex.com/swri15/j.php?MTID=m360edf9d15888df70ca00e9844aeb3e2>  
Meeting number/Access Code: 804 379 166  
Meeting password: Science1  
US toll free: 1-866-469-3239  
Netherlands toll free: 0800-022-3587

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ISS Team  
2:00 p.m. – 5:00 p.m.  
Room: Einstein  
WebEx: <https://jpl.webex.com/> / WebEx ID Number: 983 565 265  
Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311  
Participant Code: 9991926 / Leader Code: 16904

2:00	Welcome	West (10)
2:10	Cassini status	Spilker(10)
2:20	Main Rings Imaging	Tiscareno(40)
3:00	New high phase images	Hedman (20)
3:20	Break	(15)
3:35	Small-satellite update	P. Thomas (15)
3:50	A Further Update on Recent Small Satellite Images	P. Helfenstein(15)
4:05	Enceladus book	Verbiscer/Schenk(5)
4:10	Mimas maps	Roatsch (10)
4:20	Satellites update	Denk (20)
4:40	Titan update	Turtle (15)
4:55	Titan surface maps	McEwen (10)
5:05	Adjourn	

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**WEDNESDAY, June 7, 2017**

Ring Grazing/Grand Finale Science Teasers  
9:00 a.m. – 11:30 a.m.  
Room: Newton

*No Remote Access (WebEx or Audio) will be provided for this unique Grand Finale Teasers session.  
Please contact the presenters directly if you would like more information.*

<b>Time</b>	<b>Title</b>	<b>Presenter</b>
9:00	VIMS Spectral Imagery of Saturn's Poles on the First Grand Finale Pass	Kevin Baines
9:12	Ring-Associated Energetic Particle dropouts observed by MIMI-LEMMS during the Ring-Grazing Orbits	Geraint Jones, Elias Roussos, Norbert Krupp
9:24	Brief overview of RPWS observations	William Kurth
9:36	Dust Compositional Measurements by CDA in the First Proximal Orbits	Frank Postberg
9:48	Preliminary Results from Cassini Radar Ring Observations	Zhimeng Zheng / Richard West
10:00	COFFEE BREAK	20 min.
10:20	Preliminary First Interpretation of Saturn's Interior Structure from Gravity Field Measurements	Naor Movshovitz
10:32	MIMI INCA at Grand Finale Periapsis— Auroral and Mid-Latitude ENA Emissions	Don Mitchell
10:44	Last Views from Saturn's Shadow, Images and Spectra from Eclipse Observations in Revs 260-272	Matt Hedman
10:56	INMS First Proximal Results	Hunter Waite
11:08	<i>Margin for late-breaking results and walk-ons</i>	<i>TBD</i>
11:30	Adjourn	

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PLENARY SESSION

1:00 p.m.

Room: Newton

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 983 914 876

Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 3932047 / Leader Code: 71519

Welcome, Introductions, and Objectives	L. Spilker	20 min	1:00
Local Arrangements	M. Riemens	10 min	1:20
Program Scientist's Report	C. Niebur	20 min	1:30
Cassini Program Status	E. Maize	15 min	1:50
Spacecraft Status	E. Maize	10 min	2:05
ESA News and Updates	N. Altobelli	15 min	2:15
Mission Planning Updates	E. Sturm	10 min	2:30
Science Planning and Sequencing Status	W. Heventhal	5 min	2:40
<i>Coffee Break</i>		<i>20 min</i>	<i>2:45</i>
<i>Group Photo</i>		<i>10 min</i>	<i>3:05</i>
Media/Public Outreach/EOM Guest Operations	P. Dyches	25 min	3:15
Capturing Cassini's Legacy: Mission Close Out			
Close Out Status	E. Maize	10 min	3:40
Shutdown Dates for JPL Ground System Services & Tools	L. Morales	10 min	3:50
Life after CIMS: Archiving Options	B. Heventhal	10 min	4:00
Non-Science (Science Support) Data Discussion	A. Connell	30 min	4:10
Archiving Status	K. Weld	15 min	4:40
Science Talks			
The Surprising Gravity Field of Saturn	L. Iess	20 min	4:55
The Gravity Signature of Saturn's Zonal Flows	Y. Kaspi	15 min	5:15
Dust Measurements of CDA in the 1st Proximal Orbits	R. Srama	15 min	5:30
(TBD other science talks)			5:45
<i>ADJOURN</i>			<i>~6:00</i>

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**~ Welcome Drink ~**

6:00 p.m.

Wintergarden South area (ESTEC)

Bus back to Noordwijk: 7:30 p.m.

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**THURSDAY, June 8, 2017**

**Icy Satellites WG**

9:00 a.m. - 12:00 p.m.

Room: Newton 2

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 985 607 418

Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 2088213 / Leader Code: 69701

1. Key results since last PSG 15 minutes
2. Review Grand Finale Progress 15 minutes
3. Identify Future PSG or Other Science Workshops 15 minutes
4. Science talks 60 minutes
5. Review and Prioritize Discipline Legacy Products 15 minutes
6. Discuss Non-Science (Science Support) Data Archive Tools 15 minutes
7. Plan Science Talks: Decide on science talks for your discipline for presentation at Thursday's plenary session. 15 minutes
8. Provide Science Nuggets: Gather and draft one or more nuggets for your discipline. In particular, focus on especially notable/interesting Lasts and Bests or a themed nugget for your discipline science across the mission. 30 minutes

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**MAPS WG**

9:00 a.m. - 4:00 p.m.

Room: Einstein

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 988 884 399

Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 8886721 / Leader Code: 28744

1. Meet the Project Manager and Scientist (Maize/Spilker)
2. Mission closeout (Burton)
  - a. Review legacy products, estimated work effort, and priority.

- b. Add additional legacy products as necessary.
  - c. Provide a prioritized list for legacy products.
3. Software needs for closeout and last year of Cassini funding (Gombosi, Mitchell)
4. Review Grand Finale Progress: *Last chance!*
  - a. Review the progress being made in your discipline's Grand Finale science, and flag any issues.
  - b. Report on any not-business-as-usual details or other issues encountered that may be useful to other teams or working groups.
5. Identify Future PSG or Other Science Workshops:
  - a. Kevin Baines' second meeting in Madison, WI (about the second book) Dates?
  - b. AOGS (Singapore, August 6 – 11, 2017)
  - c. IAGA (Cape Town, August 27 – September 1, 2017)
  - d. EPSC (Riga, September 17 – 22, 2017)
  - e. AGU New Orleans, December 11 – 15, 2017)
  - f. EGU (Vienna, April 8 – 13, 2018)
  - g. MAPS WS (Toulouse, April 16 – 18, 2018)
  - h. COSPAR (Pasadena, July 14 – 22, 2018)
  - i. EPSC (Berlin, ?)
6. Gather and draft one or more nuggets for MAPS
7. Science presentations
  - a) Laurent Lamy: HST observations coordinated to Cassini polar passes
  - b) Gabby Provan: Latest MAG results from the F-ring orbits (via webex)
  - c) Ed Sittler: Discovery of protons within the F ring – G ring gap
  - d) Geraint Jones: The Ubiquity of Negative Ions in Saturn's Inner Magnetosphere
  - e) Jan-Erik Wahlund: First in-situ measurements of Saturn Ionosphere with RPWS
  - f) Ingo Mueller-Wodarg: Energy transport in Saturn's upper atmosphere
  - g) Frank Crary: The Enceladus plume, particle impact ionization and Langmuir probes: How dusty is the plasma in the plume?
  - h) Ralf Srama: F-ring and proximal orbit results from CDA
  - i) Tom Cravens: Ice grains from rings – impact on Saturn's ionosphere (mind the gap)
  - j) reg Hunt: Field-aligned current observations during the F-ring orbits
  - k) Tom Krimigis: New Shape of the Heliosphere
8. Decide on MAPS science talks for Friday's plenary session
9. Non-Science (Science Support) Data Archive Tools (Trina's traveling team)
  - a. Discuss the prototypes and software presented during the plenary session.
  - b. Use the presented tools as examples to discuss how MAPS could use these types of interfaces and any desires or requirements for these interfaces and their search capabilities.
  - c. Identify additional ways you would want to be able to use these types of tools ("use cases")
  - d. Identify additional search capabilities that would be beneficial
  - e. Evaluate whether the prototypes meet your top needs in terms of search requirements
  - f. Identify priorities for user interfaces and search capabilities
  - g. From your discipline's perspective, prioritize the presented tools
10. AOB

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Saturn WG

9:00 a.m. - 2:00 p.m.

Room: Ba030

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 983 216 740

Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 9783236 / Leader Code: 14150

- 9:00 – 9:15 (15 min) Meeting Setup & Overview
- 9:15 – 9:45 (30 min) Discuss Non-Science (Science Support) Data Archive Tools
- 9:45 – 10:30 (45 min) Review and Prioritize Discipline Legacy Products
- 10:30 – 11:00 (30 min) SAMWG
- 11:00 – 11:40 (40 min) Review Grand Finale Progress
  - TWT Segment Status Report
  - Identify any issues
  - Show and Tell
- 11:40 – 11:50 (10 min) Nugget Status
- 11:50 – 12:00 (10 min) Discipline Workshops, Books, and Special Journal Issues
  - Planned workshops/meetings (Anything for the next PSG?)
  - Status of the Saturn book
- 12:00 – 12:20 (15 min, 5 min Q&A) Naor Movshovitz - Using the gravity field to infer Saturn's interior structure
- 12:20 – 12:30 (10 min) Planning for Thursday Plenary
  - Review
  - Choose a Science Talk
- 12:30 Adjourn

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Rings WG

9:00 a.m. - 5:00 p.m.

Room: Newton 1

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 984 394 363

Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 5484382 / Leader Code: 47661

- 9:00 Discussion of implementation/spacecraft issues (teams, RTWT)
- 9:15 ISS: New science I (Matt T)
- 9:45 RSS: The fastest RSS occs ever (Essam)
- 10:00 Discussion of Discipline Legacy products
  - (Mike E and Project roadshow with Trina)
- 11:00 CDA: Ring Plane Crossing results: (Nozair/Frank)
- 11:20 ISS/VIMS: Surprises at high phase (Matt H)
- 11:40 RSS: Status of gravity passes & ring mass (Luciano)

.... lunch break whenever ESTEC wants us to take it

After-lunch: More new Science and/or new results from old observations  
(20 min each).

RADAR: Status of 1D Active radar scans (Richard West)  
ISS: Update on Peggy & friends (Carl)  
VIMS: High Res spectral scans (Phil)  
VIMS: Stellar occ update (Phil)  
CIRS: Radial scans (Shawn)  
CIRS: etaCar occs (Stu)  
VIMS: Update on ring spectral variations (Gianrico)  
ISS: New science II (Matt T)

Select Rings talks for Thursday Plenary.

Other issues?

Adjourn

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Titan WG  
2:00 p.m. - 5:00 p.m.  
Room: Newton 2  
WebEx: <https://jpl.webex.com/> / WebEx ID Number: 986 497 724  
Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311  
Participant Code: 2425935 / Leader Code: 92203

1. Review and Prioritize Discipline Legacy Products, 15 minutes, Trina
2. Discuss Non-Science (Science Support) Data Archive Tools, 15 minutes, Trina & Andrea Connell
3. Review Grand Finale Progress (& TOST Report), 15 minutes, Trina
4. Identify Future PSG or Other Science Workshops 15 minutes
5. Science talks. 75 minutes total, 15 min each
  - a. Olivier Witasse, Modelling Titan's lower ionosphere
  - b. Rosaly Lopes and the radar team, T126 SAR results
  - c. Radar team (names TBD), The T126 altimetry results - the lake depths and implications
  - d. Jason Soderblom, Small-scale liquid exposures in Titan's north polar region
  - e. Zibi Turtle, Jason Perry, John Barbara, Tony Del Genio, Bob West, Alfred McEwen  
Sunny weather in the Lake District
6. Plan Science Talks: Decide on science talks for your discipline for presentation at Thursday's plenary session. 15 minutes
7. Provide Science Nuggets: Gather and draft one or more nuggets for your discipline. In particular, focus on especially notable/interesting Lasts and Bests or a themed nugget for your discipline science across the mission. 30 minutes

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**Group Social Event & Dinner**  
Bus from ESTEC: 5:15 pm  
Dinner: Stadsherberg de Mol, Delft  
Bus to Noordwijk: 10:00 pm

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**FRIDAY, June 9, 2017**

PLENARY SESSION

9:00 a.m.

Room: Newton

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 985 133 351

Telecon\*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 3572200 / Leader Code: 71403

Discipline WG Reports

Icy Satellites WG Report	J. Lunine/L. Soderblom	15 min	9:00
Rings WG Report	P. Nicholson	15 min	9:15
Saturn WG Report	K. Baines	15 min	9:30
MAPS WG Report	T. Gombosi	15 min	9:45
Titan WG Report	D. Strobel/J. Lunine	15 min	10:00

Science Presentations & Discussion

Titan		30 min	10:15
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*Coffee Break* 20 min 10:45

Science Presentations & Discussion (cont.)

MAPS		30 min	11:05
Saturn		30 min	11:35
Rings		30 min	12:05
Icy Satellites		30 min	12:35

*LUNCH* 85 min 1:05

Discussion and Action Items	L. Spilker/ S. Edgington	15 min	2:30
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Other Science Presentations (TBD) 2:45

*Adjourn & Coffee*

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Executive Session

3:45 p.m

Room: Newton

JPL WebEx and NASA Telecon info provided as required

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**Instructions on running WebEx on your laptop.** The key basics are highlighted yellow.

**Joining a PSG WebEx meeting on your personal computer:**

1. Go to <http://jpl.webex.com>
2. Enter the meeting number found on the agenda after clicking on “Join By Number” on the upper right hand side, or log in.
3. When asked to give your name and email, use your JPL/NASA email if you have one.
4. We use separate phone numbers for the audio portion of the meeting, so remember to call the audio number shown on the agenda.

**Presenting from your personal computer:**

- Have the room host make you the presenter
- Click on "Share My Desktop" or ("Share Application") button (click on “Quick Start” tab at top, if you don't see the share button at center)
- Begin projecting meeting presentations as you normally would (e.g.-- open the PPT file, put screen into slideshow mode for in-person viewers)(or PDF, use "full screen").

**During your presentation:**

- Use the laptop cursor as a pointer—helps those online.
- Speak into the microphone, and repeat/summarize any questions from the room so those online can hear.

**When your presentation is finished:**

- "Stop sharing" the room computer desktop (click on the colored banner at the top)
- Hand control of the presentation to the next presenter, if you wish (otherwise, the next presenter can grab control)

**Troubleshooting**

**Getting rid of green “You are sharing your desktop” bar at the top:**

- On Mac - command + option/alt + shift + h (all at same time)
- On PC - control + alt + shift + h (all at same time)
- You will be asked if you want to start clear-view mode. Click “Start”
- ESC gets you back out of the hide menu bar mode.

**Audio interference/background noise:**

- If the culprit isn't muting/hanging up, bring up a text application and type in large letters “WHOEVER JUST CALLED IN HANG UP”.

**Setting up Powerpoint so screen is mirrored (no presenter mode)**

- On Mac – in Powerpoint, click on “Slide Show” on the tan band towards the top of the screen, then click on “Mirror Show” under the “Setting for Two Displays” towards the right hand side.